



GREEN SHIFT
THROUGH INNOVATIVE
SOLUTIONS

HAV Group - Company Presentation



The presenting team



Gunnar Larsen
CEO

Gunnar Larsen has experience from various positions within procurement, sales, marketing and management in different shipyards and ship equipment suppliers. Larsen joined Havyard in 2006. He was responsible for building up Havyard's international sales network, and held various positions within sales, marketing, procurement management and business development until he was appointed CEO of Havyard in December 2019



Erik Høyvik
CFO

Erik Høyvik has 15+ years of experience from finance, accounting and financial systems from various positions in industry and Audit & Advisory. Høyvik holds an MSc in Finance and Accounting from NHH and BI (State authorized auditor). Erik joined Havyard in 2020



Contemplated spin-off to unlock values in Havyard



Highlight “green” values in Havyard to enable reorganization

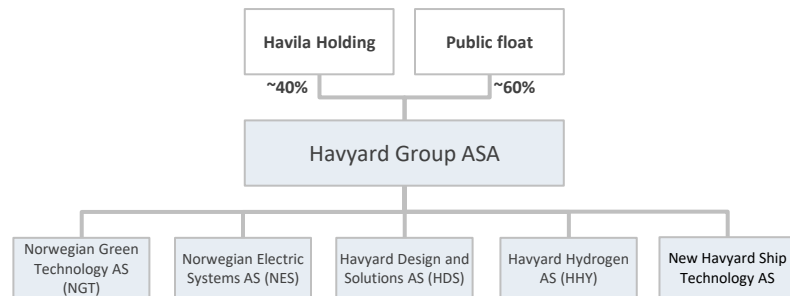


Create investable listed growth company

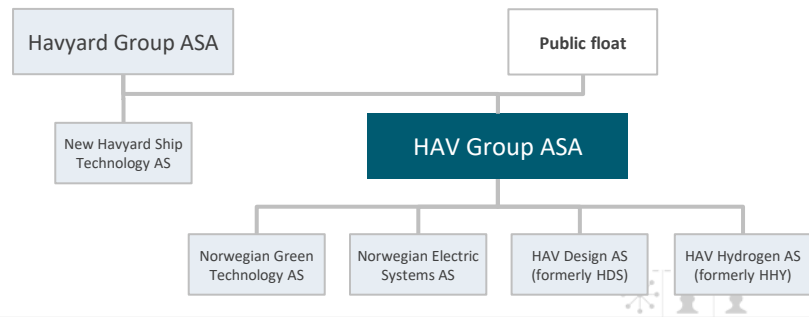


Position HAV for growth in maritime green transition

Current structure



Illustrative new structure



HAV Group – making a positive impact on ocean industries

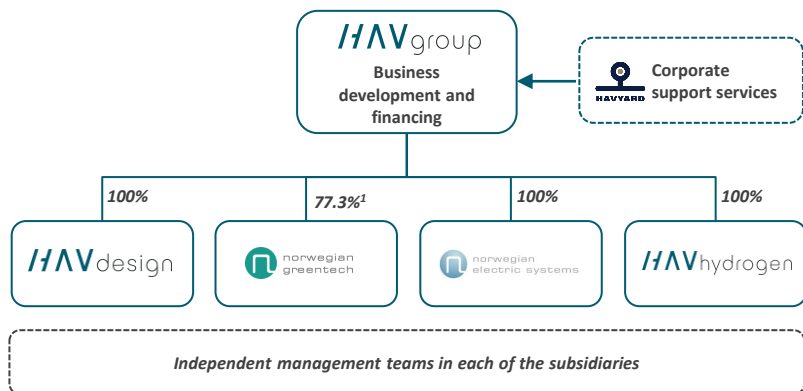
- Maritime industries required by incentives and regulations to reduce the environmental impacts of its operations
- HAV Group is an established provider of solutions and technology to the global marine and maritime industries
- The Group's vision is to contribute to the green shift through innovative solutions and high-end products for the ocean industries





Provider of ocean technologies with focus on ship design, equipment and system solutions

Corporate Structure



HAV Design

A supplier of innovative ship design
- HAV Design is a pioneer in the design and construction of zero-emission vessels

NGT

A supplier of ballast water treatment systems and various other water treatment systems for aquaculture and maritime use

NES

A supplier of sustainable energy design and smart control systems for a wide range of vessels for the global maritime market

HAV Hydrogen

A developer of hydrogen energy systems for ships



HAV Group - active ownership strategy

The Group shall create shareholder value by contributing to its subsidiaries and projects through



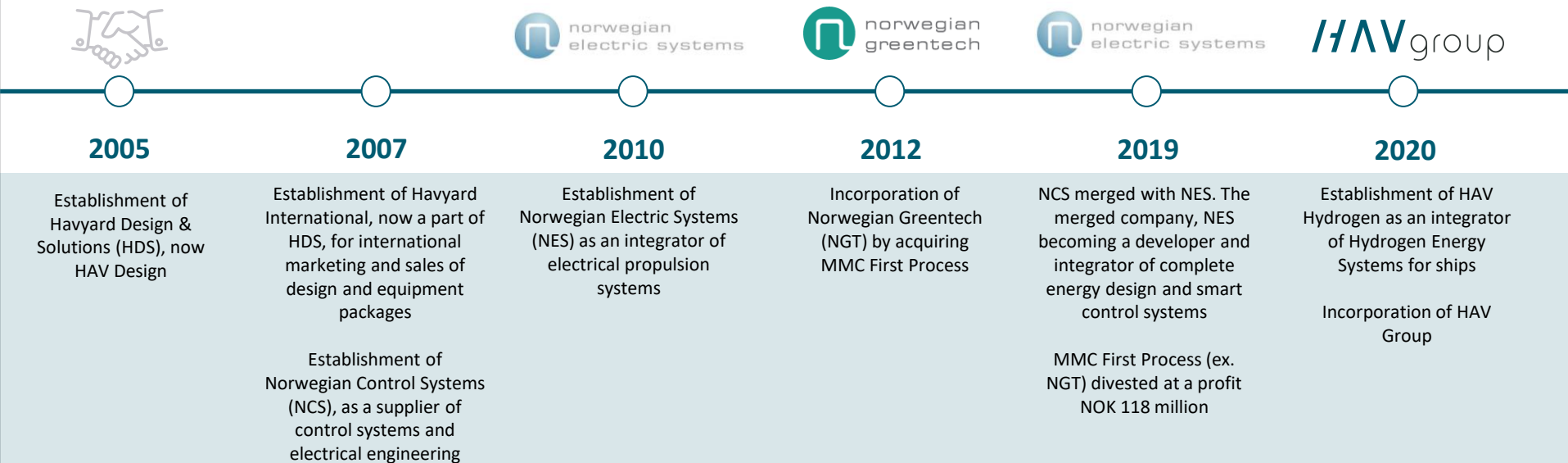
Actively taking part in the companies' strategic development

Stimulating intercompany business development and R&D processes

Extracting synergies through economies of scale, standardization of processes and systems

Pursue value accretive growth, organic and through consolidation

15 year history of innovation





Experienced leadership and sound corporate governance

Executive management



Gunnar Larsen
CEO, HAV Group
34 years of industry experience, 13 years with HAV
Mr. Larsen joined Havyard in 2006. He was responsible for building up Havyard's international sales network, and held various positions within sales, marketing, procurement management and business development



Geir Larsen
Managing Director, NES
29 years of industry experience, 1 year with NES
Mr. Larsen's previous experience includes Vard Aukra, Inpower and ABAS Crane and the AKVA Group. Expertise within electrical engineering and automation, and he is well acquainted with the market for electric and hybrid solutions



Håvard Gjølseth
Managing Director, NGT
25 years of industry experience, 10 years with NGT
Mr. Gjølseth's previous experience includes Managing Director of Vismo AS, Automation Engineer in MMC Tendos/Optimar Herøy and Automation Engineer in ODIM AS



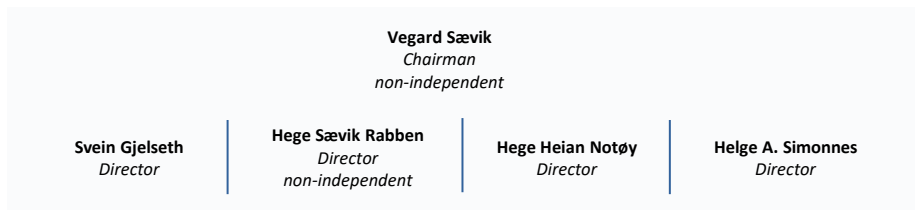
Stig Magne Espeseth
Managing Director, HAV Design
32 years of industry experience, 16 years with HAV Design
Mr. Espeseth worked as a technical assistant for 2 years at Elomatic Ulsteinvik before education as Naval Architect. After education continued 14 year at Leine Maritime as Naval Architect and latest years as Managing Director



Kristian Osnes
Managing Director, HAV Hydrogen
10 years of industry experience, 3 years with HAV
Mr. Osnes has been heading the Hydrogen R&D development in Havyard and has extensive experience as a Project Manager in the Maritime and Offshore sector working with product development, risk analysis and lifesaving systems

Board of Directors and corporate governance

- HAV Group, although not required, intends to follow a high level of corporate governance principles as defined by the Norwegian Code of Practice for Corporate Governance for companies listed on a regulated market with respect to
 - Board composition with respect to independence, shareholder and employee representation and gender equality
 - Remuneration and nomination committees
 - Shares with equal rights and no staggered board, anti-takeover, or blank check preferred share provisions
- Currently, the Board of Directors consists of:



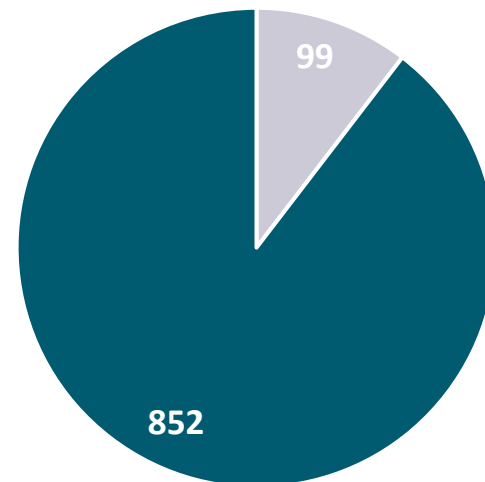


Profitable operations with backlog and growth potential

Pro-forma key financials

NOKm	YTD 3Q'20	YTD 3Q'19	2019	2018	2017
Revenues	500	698	813	599	440
EBIT	43	40	-51*	56	24
Revenue growth	-28%		36%	36%	
EBIT-margin	9%	6%	-6%	10%	5%

~NOK 1bn million backlog



■ Internal ■ External

A large white offshore wind turbine stands in the ocean. In the foreground, a blue and red service vessel with a crane is positioned near the turbine's base. The sky is overcast and grey. In the distance, several other wind turbines are visible on the horizon.

HAV Group | Investor Presentation

Group Subsidiaries & Market Opportunity



HAV Design - designer of environmentally friendly vessels

Description

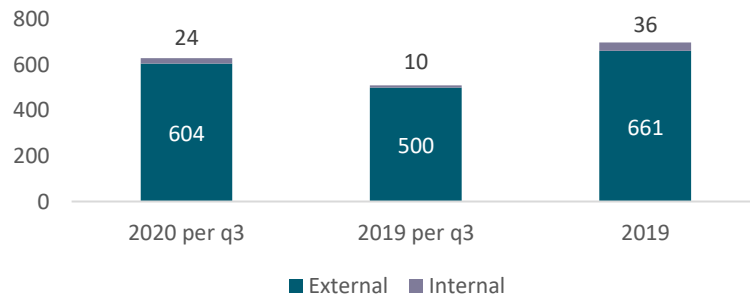
- Through a digital tool-kit, knowledge and innovation HDS offer environmentally friendly, safe and functional designs
- Know-how about hydrogen powered vessels through participation in R&D project
- Well positioned for the further development within low and zero emission vessels within several segments
- Leading positions within offshore wind, electric ferries and aquaculture



Key figures - NOKm

Financials	2020 per q3	2019 per q3	2019	2018	2017
Operating Revenues	229	417	452	355	244
EBIT	49	21	-8	53	21
EBIT-margin	21 %	5 %	-2 %	15 %	9 %

Backlog (NOKm)



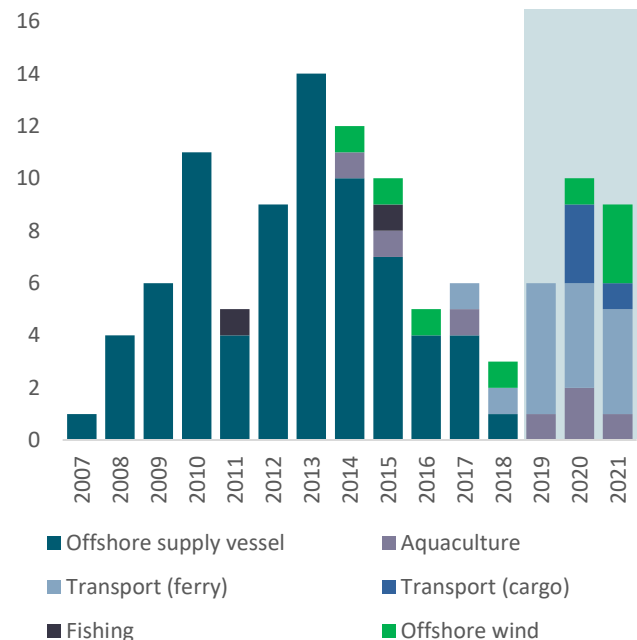
■ External ■ Internal





Established position within growth segments

Designs per vessel category delivered



Preferred supplier amongst industry leaders

- Sold designs for >100 vessels globally
- Delivered 16 zero emission vessel designs and 11 vessels designs for renewable energy
- Recent projects include Windmill SOV's for ESVAGT, CSV for REM Offshore, electric ferries for Fjord1, hybrid-electric hydrogen ready cruise vessels for Havila Kyststruten and live fish carriers for NFT

ESVAGT

NFT
NORSK FISKETRANSPORT AS

HAVILA
The Norwegian Coastal Cruise Specialist



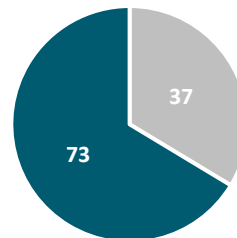
SØLVTRANS

ROYAL ARCTIC

Fjord1

rem

Total designs ordered by owner-group



- Total 'Havila-company' deliveries
- Total Other deliveries



A frontrunner on innovative solutions

HAV Design's approach

Developed its unique design philosophy and design process through years of experience, R&D investments and collaboration with leading ship owners

Proprietary methods for model test and calculation simulators give HDS a strong ability to predict the performance

Extracting expertise within the group companies to deliver system packages of equipment specialized to the customer needs

World leading design process and methods solve complex problems for costumers to meet future emission targets



03 June 2020
Zero-emission sightseeing vessels for cities and fjords

Havyard Design & Solutions (HDS) with a new design concept for zero-emission sightseeing vessels

Emissions from the shipping traffic is a big challenge both in bigger cities and in fjords with many cruise ships. Havyard has designed a zero-emission sightseeing vessel, which may solve this problem in future.

In July 2019, Havyard entered a collaboration with SINTEF to investigate new solutions for a more environmentally friendly shipping industry

HAV Design is a pioneer in the design and construction of zero-emission ferries and draws upon this experience in its new city and fjord sightseeing concept

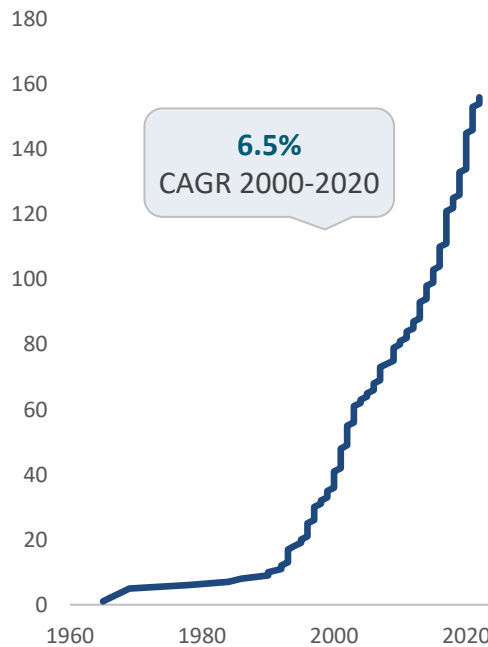


Increasing demand for live fish carriers

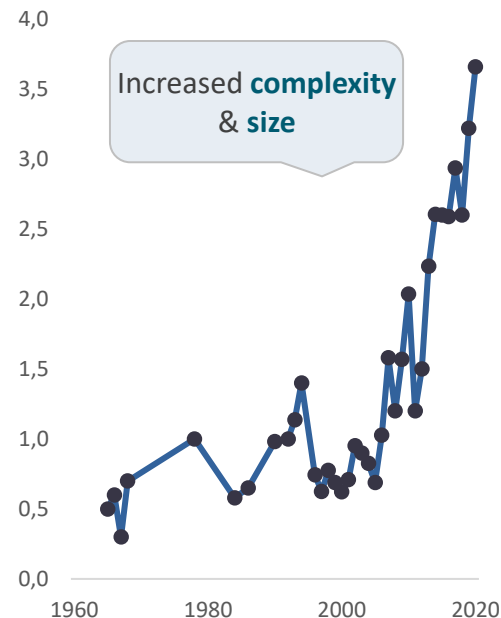
Modern, large vessels replacing current fleet

- More biomass transported per year per license due to trend towards larger smolt
- Government directive requires vessels in Norway to have disinfection or closed systems
- Offshore farming will require specialized tonnage

LFC no of vessels development¹



Average well capacity (000' m3)



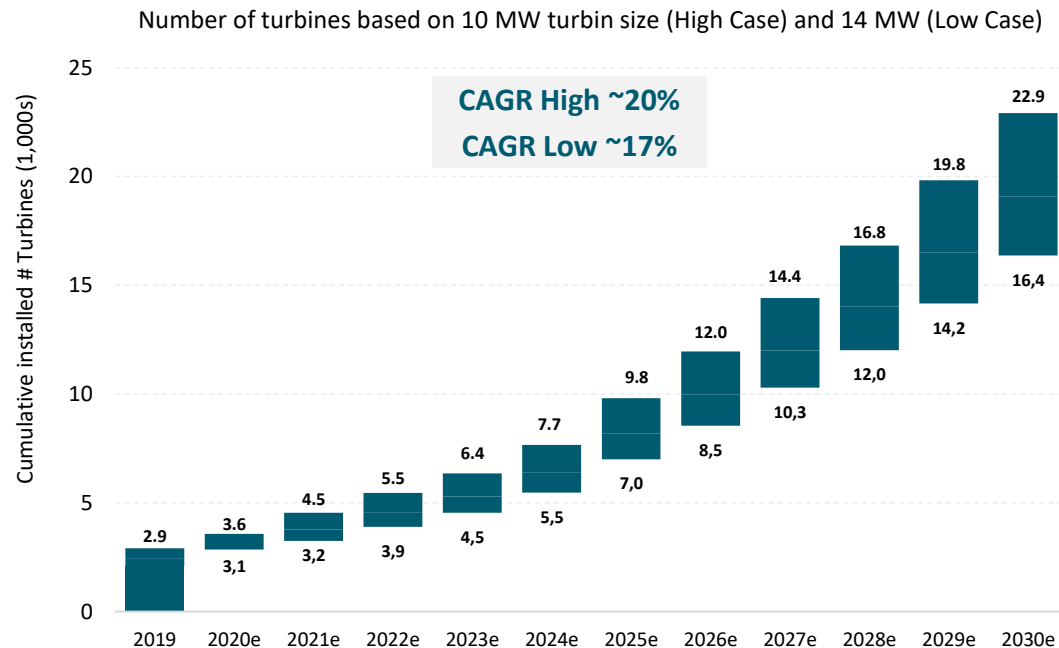


Demand for SOV's expected to grow with offshore wind capacity

SOV market set for growth

- Annual offshore wind capacity is set to double over the next five years and increase about 6-8x by 2030
- Demand for purposed made SOV's driven by
 - Installed capacity
 - Number and size of turbines
 - Size of windfarm
 - Distance to shore
- HDS has established a strong position with providing designs for 10 vessels to world leading operator ESVAGT

Turbines to be serviced expected to grow about 6-8x between 2019 and 2030





Norwegian Greentech: Water Cleansing Systems

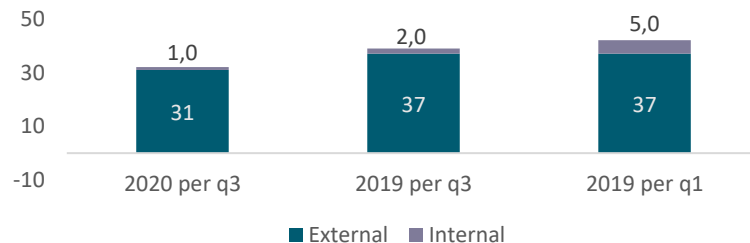
Description

- Norwegian Greentech was established by the present management team in 2010, building on technology and know-how within water treatment for aquaculture and maritime use
- NGT designs, delivers, installs and services highly energy-efficient compact ballast water treatment systems (BWTS)
- The in-house developed BTWS is particularly suited for small and medium-sized vessels, for newbuilds and especially for retrofits due to its small size and flexible installation
- Potential for technology to be applied in other high growth industries, including fish farming water treatment
- NGT also deliver water treatment solutions for land-based aquaculture (control system, particle filters and UV-sterilization)

Key figures - NOKm

Financials	2020 per q3	2019 per q3	2019
Revenues	60	31	67
EBIT	3	3	5
EBIT-margin	5 %	10 %	7 %

Backlog¹ (NOKm)





Implemented regulations will drive demand

The international Ballast Water Management Convention entered into force in 2017

- All newbuild must install ballast water treatment systems
- Huge retrofit market. Sailing vessels must install water treatment systems within 2024
- This represents a market of approx. 60.000 vessels
- NGT has already secured fleet agreements, for delivery of BWMS, with several major ship owners
- Typical revenue potential of NOK 0.5 – 2 million per vessel, plus after market service and parts revenues

Vessel owners are required to act now – reflected in current backlog and pipeline potential from framework agreements with e.g. Wilson ASA's 120 vessel fleet

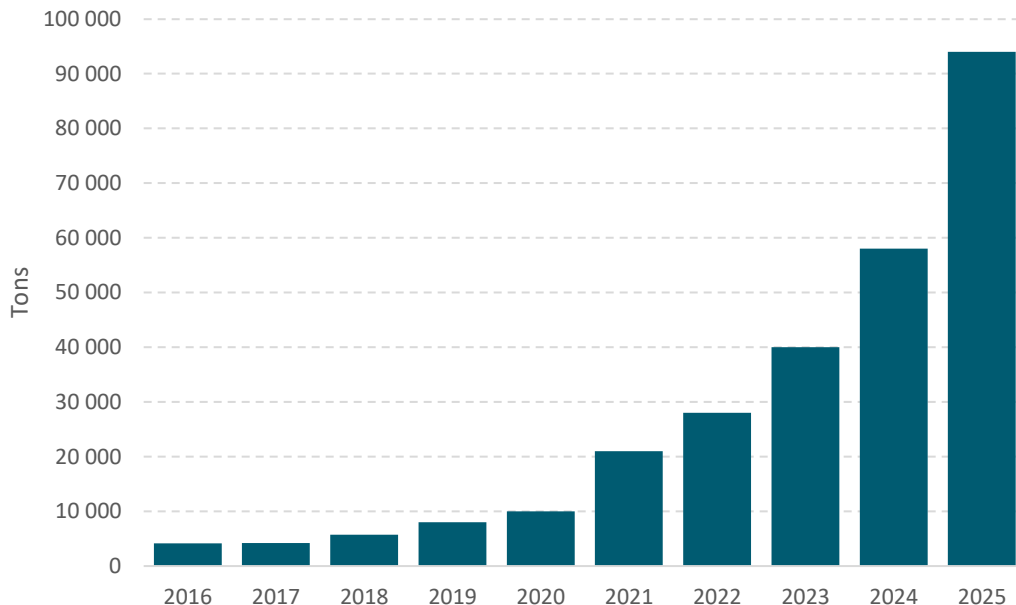




Water cleaning technology to be applied over a wide range of industries – land based fish farming set for massive growth

- NGT has supplied water treatment solutions for more than 10 aquaculture projects
- Land-based salmon is currently niche, but set for stellar growth
 - **About 100,000 annual tons of land-based volumes expected by 2025...**
 - **with that figure potentially multiplying by 3x-7x by 2030**
- Water treatment system is an essential part of land-based fish farming facilities
- NGT is positioned to take part in the massive expected growth in land-based fish farming with a water treatment system developed since 2010 in collaboration with technology leaders

Land based fish farming expected to grow 10x by 2025





Norwegian Electric Systems: Green innovation for the oceans

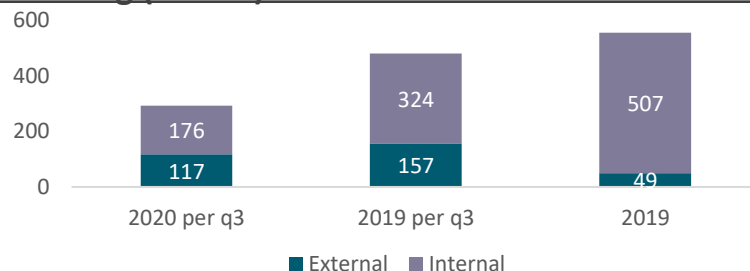
Introduction

- Norwegian Electric System is a world leading supplier of low/zero emission energy, propulsion and control systems for for a wide range of vessels
- Focused on being a collaborator and a system supplier, designing optimal propulsion, energy and control systems to ensure efficiency and safety by smart and easy operation
- The preferred supplier of product and system solutions “from bridge to propeller”
- Expertise, innovation and customer focus – a leading supplier of maritime technology for digitalization and the ‘green shift’
- **NES has delivered 70 MWh of battery systems in zero emissions- and hybrid vessels, which corresponds to battery capacity of 1,400 electricity vehicles**

Key figures - NOKm

Financials	2020 per q3	2019 per q3	2019	2018	2017
Revenues	301	341	405	300	257
EBIT	14	0	-66	-27	20
EBIT-margin	5 %	0 %	-16 %	-9 %	8 %

Backlog (NOKm)





The one stop shop to meet future IMO targets

NES' fully integrated solutions enabling costumers to meet greenhouse gas emission targets



NES delivering fully integrated solutions

NES delivers turn-key solutions for newbuilding or retrofit by utilizing experience within vessel operation and extensive product knowledge. NES delivers to a wide range of vessel types , from workboats for the aquaculture industries, high speed passenger vessels, hybrid and electrical ferries, to offshore vessels, SOVs, live fish-carriers, RoPax vessels, costal bulkers and larger vessels

Marine System Integration

Integration of different energy sources like diesel or gas generator-sets, batteries and hydrogen fuel-cells

Ship Performance Monitor (SPM)

Highly adaptable monitoring software, designed to help manage and improve the ship and fleet efficiencies.

Smart Control systems

Integrated Automation System (IAS), Power Management System (PMS), Black Out Safety System (B.O.S.S) and Remote Assistance System (RAS) enhance the total integration in a safe and optimal way

Hybrid and electric propulsion systems

Required engineering, project management, commissioning and seatrails assistance

Complete charging systems

The system includes both off and onshore equipment, automation system and Wi-Fi communication between the vessel and the charging station on land

The Raven Integrated Navigation System (INS)

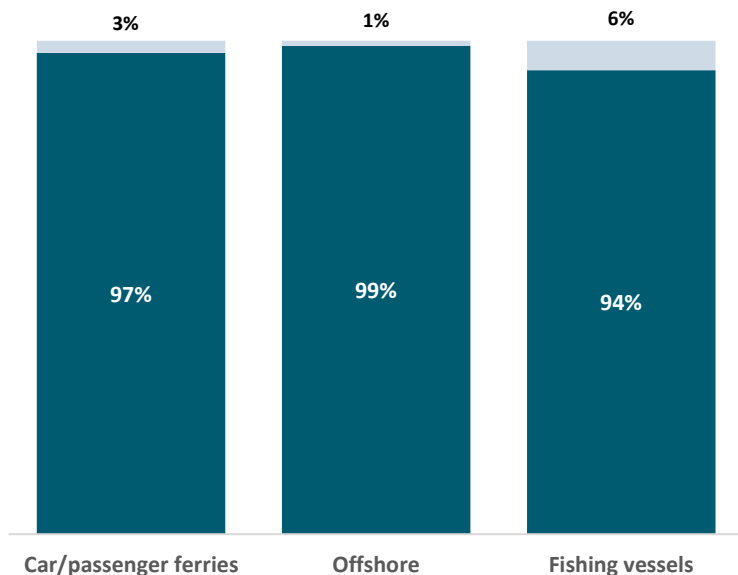
Flexible, safe and user-friendly interface for vessel control and platform for integration of autonomous functionality



Climate goals and political ambition to drive market potential

2019 status of uptake of alternative fuels

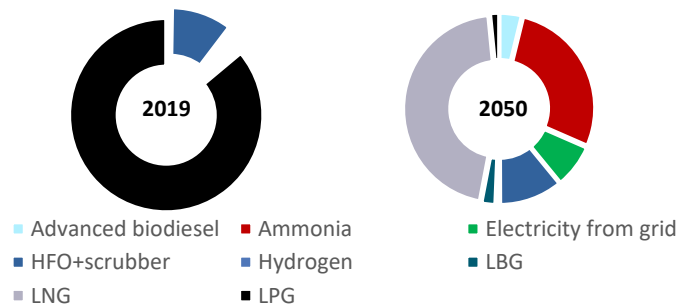
- 2019 status of uptake of alternative fuels by ships in operation and on order
- Conventional ships

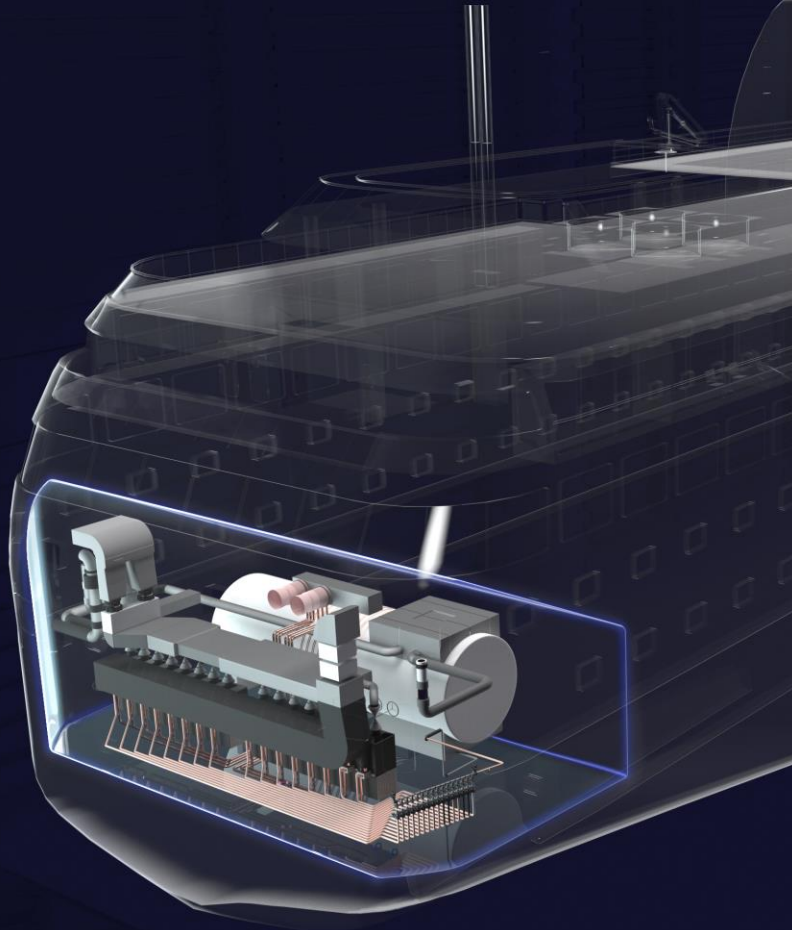


Energy use in 2019 vs 2050

- Full-electric operations or hybrid solutions and optimized ship designs will play an important role in the short-sea segment to meet future IMO requirements.
- Untapped market potential:** Only ~5% of the global fleet (operational + orderbook) have uptake of alternative fuel.

Energy use in 2019 and 2050 by fuel type for the simulated IMO ambitions DR pathway with main focus on design requirements





Background

- Havyard Group ASA through HDS & NES and consortium partners (Havila Kystruten, Prototech, Sintef) was awarded a 95 MNOK Pilot E development project for large scale maritime hydrogen application back in 2018
- The FreeCO2ast will develop a high-capacity hydrogen energy system, approved for zero emission sailing with high speed over longer distances
- The project has been running for 2 years with focus on designing and approving a scalable maritime hydrogen solution
- The first phase of the ground-breaking work is completed, and the company is now entering into the approval stage for the hydrogen system



The Solution

Low-pressure hydrogen storage solution can solve important challenges for seagoing ships, such as **sloshing** effect and pressure drop

The approval will be done on a **3.2 MW fuel cell** system compared to other projects in the **400kW scale**

Safety solutions is designed for **in-hull installation**, not top deck

The system is designed for **high scalability** in both fuel cell size and storage tank. This means that the system can be used on various of sizes and types of vessels

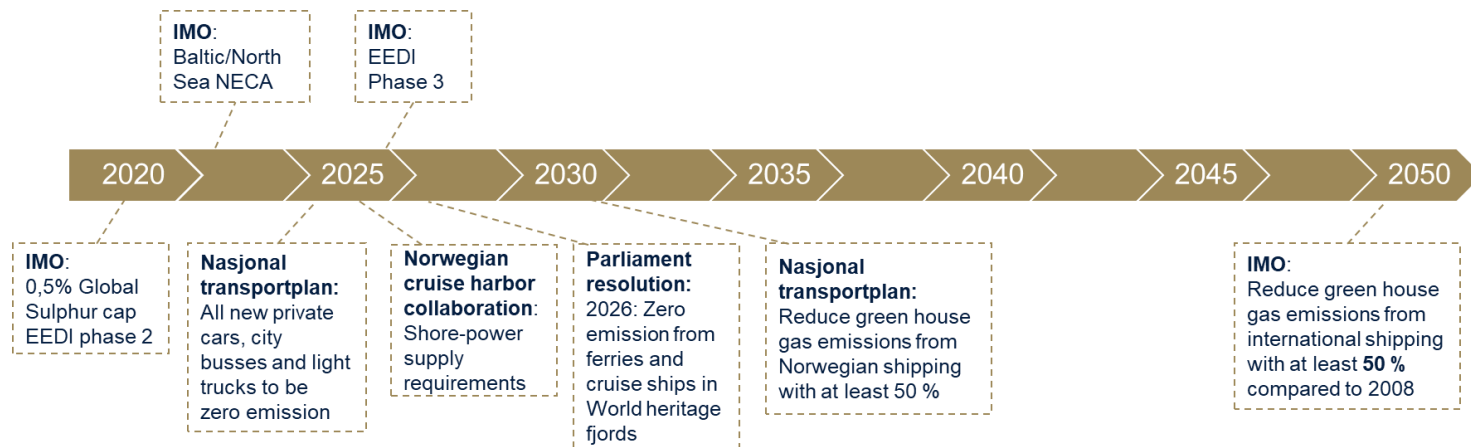
The solutions are design for vessels 4 times heavier and 50% faster than hydrogen ferry projects → **8 times larger fuel cell effect**



Hydrogen emerging as a decisive factor of the energy transition

Timing is right

- Norwegian and international climate goals will require more Zero emission shipping
- Hydrogen is presently the better alternative where batteries come too short
- Increasing market interest for maritime hydrogen solutions
- Several government contracts already specify hydrogen power for vessels
- Time to market in line with foreseeable projects





Norwegian Government demanding hydrogen powered vessels between Bodø and Moskenes

Havyard Hydrogen in pole position to take part in upcoming hydrogen projects:

- Competence in place
- Developed a unique system solution to tackle complex issues
- Established partnerships with industry majors

The government aiming to facilitate emission free solutions along the Norwegian coast - sets requirements for hydrogen ferries on the longest ferry crossing

NCE Maritime CleanTech applauds new hydrogen ferry project

2ND NOVEMBER 2020 | IN NEWS | BY MARIE LAUNES

The Norwegian Government launches another large-scale hydrogen ferry project: The next tender for Norway's longest ferry crossing in Vestfjorden will have requirements for hydrogen operation.

We are very happy to see the Government prioritizing industry development over the lowest possible costs. This decision will have many positive repercussions for the maritime industry, says CEO of NCE Maritime CleanTech, Hege Økland.

The route between Bodø and Moskenes in Vestfjorden is Norway's longest ferry crossing, with some of the roughest weathers. Pure battery operation is thus not an option for this crossing. For the last year NCE Maritime CleanTech has worked intensively to ensure a political understanding of the importance of using the Vestfjorden tender to accelerate the technology development within hydrogen solutions.





HAV Group positioned to capture demand growth for innovative solutions for maritime industries

- Increasing demand for innovative solutions from maritime industries driven by pressure and incentives to reduce the environmental impacts of its operations
- HAV Group is well positioned to capture this demand with existing leading technologies and brands, client relations and innovative culture
- Demonstrated ability of creating and realizing value e.g. through the of MMC First Process, invested in sold in in 2019



