

# **MAKING OUR BUSINESS MORE SUSTAINABLE EVERY DAY**







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# INTRODUCTION

Growing old is inevitable. As the years pass on, one is expected to assume an increasing number of responsibilities, particularly towards the environment. Wagenborg has led the way in fulfilling these obligations and was one of the first shipping companies in the world to gain ISO 9001, ISM Code and ISO 14001 certifications. Naturally, we are proud of our successes in this field, but that does not make us complacent. Far from it. The effects of climate change are clearly visible around us with more extreme weather conditions. The good news is that shipping is by far the most environmental friendly transportation mode. Our company - as well as the entire logistic industry - is committed to further reduce her impact on the environment.

Decades ago, Wagenborg set revolutionary energy efficient reduction targets for our new build vessels. Our comprehensive focus on the Energy Efficiency Design Index (EEDI) reduction combined with the latest technology resulted in over 60% saving in CO<sub>2</sub>-emissions with our award-winning EasyMax vessel type. This amount of reduction exceeds the 50% reduction target set by IMO for the year 2050! The past year we started the construction of a second EasyMax vessel, that is even more efficient and in its segment will be the greenest and most environmentally friendly multipurpose type of vessel in the world.

One of the easiest ways to decrease our carbon footprint is to reduce our fuel consumption. We steadily make progress here. The second path is to use alternative fuels. This is why we switched to electricity, Hydrotreated Vegetable Oil (HVO) or Gas To Liquid (GTL) fuel for our mobile cranes, ferries, tugs and offshore vessels. In addition, we investigate the possibilities of hydrogen, methanol and ammonia.

We all still have a long way to go and we regard our achievements so far merely as first steps in the right direction. For us the environment is top priority, not only today but also for the future – and for our next generations.

Egbert Vuursteen

CEO Royal Wagenborg

Jeroen Seyger

CFO Royal Wagenborg







# SUSTAINABILITY STRATEGY, GOALS AND TARGETS

## 2.1 Sustainability strategy

We are continuously aware of our impact on the environment and people around us. Our drive is to make our business more sustainable every day and to pass this on to future generations.

In 2020, we also renewed our long-term sustainability objectives, which we aim to achieve by 2030. The objectives support the UN Sustainable Development Goals to which we can most contribute and will help to guide us in prioritizing our sustainability related effort and work.



1

### WAGENBORG IS COMMITTED TO ACHIEVE A BETTER CLIMATE AND ENVIRONMENT

Wagenborg takes active part in the shipping and transport de-carbonizing energy transition. Together with our stakeholders - authorities, clients, investors, public, employees, suppliers - we accept sustainability challenges to reduce our environmental footprint.

- Fuel savings and energy efficiency
- Reduce fuel emissions with transition fuels
- Carbon neutral shipping and transport
- Modifications of the existing fleet
- New design & building leading fuel efficient vessels



2

### WAGENBORG WORKS SAFELY WITH TALENTED PEOPLE

As a family owned company we optimize employee health and well-being. Engaged employees are critical for our business. People are encouraged to develop skills and consider new roles and/or responsibilities.

- Safety first
- Long term employability
- Personal development



3

### WAGENBORG CREATES NEW SOLUTIONS BY USE OF INNOVATION

We improve customer needs, costs and procedures by use of innovation. Together with our stakeholders, we transform opportunities and processes into next generation solutions.

- Cost competitive solutions
- Digitalization
- Leading vessel design & new building



## UN Sustainable Development Goals

Sustainability is part of everything we do. The foundation of our sustainability work consists of three themes covering all our operations. With the strong commitment to our new strategic sustainability 2030 objectives we are building a path to a climate neutral society. Our sustainability work supports reaching the global Sustainable Development Goals (SDGs) set by the United Nations.

**The UN Sustainable Development Goal**
**Wagenborg's strategic focus area**
**Wagenborg's contribution**

**Good health and well-being**

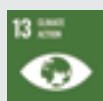
Employees are our key 'assets'. That is why we invest in our people and their 'Wagenborg DNA'.

- We promote lifelong working and learning.
- We embrace a vision of zero accidents. Our health, safety and environment policy supports the campaigns to reach that goal.


**Affordable and clean energy**

We are committed to achieve carbon neutral transport by investigating/testing potential new fuels.

- Shipyard Niestern Sander has delivered the first fully electric utility vessel in the Netherlands in 2019.
- We use GTL fuel on board our W2W vessels.


**Climate action**

Wagenborg has the objective to reduce CO2 emissions by 6% per year.

- New technologies and design have reduced the CO2 emissions in 2020 per ton-mile by 15% compared to 2008.
- Using electric mobile cranes and fork lifts reduces CO2 emission.
- Our ferries use HVO as a first step to reduce CO2 emission
- Our ferry terminals make use of solar energy


**Life below water**

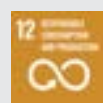
At Wagenborg we consider the health of the ocean as very important.

- As early adopters Wagenborg started using ballast water treatment systems since 2013. We increase the number of installations by 20 per year and expect to complete in 2024.
- Wagenborg minimizes antifouling coatings to protect the sea life.


**Decent work and economic growth**

We promote sustainable, economic growth and decent working conditions for all employees.

- We create apprenticeship positions for young people. It gives valuable work experience resulting in high retention rates.
- Wagenborg supports employment in the North of the Netherlands. Inside the divisions and through the preferred supplier network.


**Responsible consumption and production**

We aim to reduce our footprint year by year.

- We construct vessels in a responsible way and we are committed to sustainable scrapping.
- On board our ferries we recycle all garbage and have the ambition to move towards a plastic-free ferry line.
- At Wagenborg Shipping we focus on fuel consumption reduction, saving 6% per annum.


**Life on land**

At Wagenborg we reduce our emissions at our land-based activities.

- Wagenborg Nedlift reduces the impact on the local environment by the introduction of electric cranes.
- We use dedicated filter systems on our shipyard to prevent antifouling and oily water to enter the environment.
- To reduce particular matters in IMO polar regions, we do not use heavy fuel oil or VLSFO in these areas.


**Partnerships for the goals**

We believe our world can only meet the Paris agreement if we cooperate.

- Together with customers and suppliers we are looking for ways to improve entire logistic chains.
- We invite independent organizations to audit our environmental performances, such as Clean Shipping Index.



## 2.2 Sustainability goals and targets

In order to give meaning to our sustainability strategy, various goals and targets have been formulated for each theme.

### 2.2.1 Wagenborg is committed to a better climate and environment

Wagenborg takes active part in the shipping and transport de-carbonizing energy transition. Together with our stakeholders - authorities, clients, investors, public, employees, suppliers - we accept sustainability challenges to reduce our environmental footprint. In chapter 3 you can read more about related topics, such as eco-friendly ship designs, fuel efficiency initiatives and environmental performance monitoring.



#### GOALS

##### Fuel savings and energy efficiency

We aim to reduce fuel consumption with 6% a year by 2020 by using available new technologies on board and ashore. We aim to minimize fuel consumption per shipped ton cargo. Wagenborg has several ISO 14001 and CSI certified vessels.

##### Reduce emissions with transition fuels

In collaboration with our stakeholders we aim to use transition fuels to reduce emissions for the transition period towards carbon neutral shipping. We take measurements to prevent pollutions, reduce our CO<sub>2</sub> footprint and protect life under water.

##### Carbon neutral shipping and transport

We are committed to achieve carbon neutral shipping and investigate and test potential new carbon neutral fuels, such as green methanol and green hydrogen.

##### Existing vessel modifications

We will convert our fleet by applying new propulsion and energy systems in order to reduce the carbon footprint.

##### New design & building leading fuel efficient vessels

We will gradually replace the existing fleet by carbon neutral vessels.

#### TARGETS

- + Reduce CO<sub>2</sub> emissions with min. 20% in 2024, 40% in 2030 and 70% in 2050 versus 2008
- + Do not use heavy fuel oil or VLSFO in IMO polar regions to reduce particular matters by 40%
- + Sail on MGO or VLSFO because of 6% lower CO<sub>2</sub> emissions than scrubber installations
- + Apply hard cleanable coatings and minimize the use of anti-fouling to reduce emission of toxic chemicals by 5%
- + Install 20 USCG and IMO approved ballast water treatment systems per year to reduce the distribution of invasive species.
- + Every new vessel design has an improved CO<sub>2</sub> footprint with a EEDI improvement of 5% compared to the previous design
- + Equip 100% of the owned fleet with smart shipping tools for fuel consumption and real time tracking by 2021
- + Increase the number of vessels certified by CSI
- + Publish an annual sustainability report by June

### 2.2.2 Wagenborg works safely with talented people

As a family owned company we optimize employee health and well-being. Engaged employees are critical for our business. People are encouraged to develop skills and consider new roles and responsibilities. In chapter 4 you can read more about related topics, such as our leadership programme 'WATER' and safety results.



#### GOALS

##### Safety first

We want people to return home safely after work. We offer a safe working environment for everyone involved: employees, subcontractors, suppliers and other parties concerned. Our HSEQ policy aligns with applicable Safety Management Systems and ISO 9001.

##### Long term employability and personal development

We invest in our people to keep them fully motivated, healthy and satisfied. We have an active absence prevention policy. We offer voluntary medical checks for our personnel

##### Personal development

We aim to promote lifelong working and learning. Our well-trained employees are better able to contribute to the organization's objectives and business opportunities through their professional development.

#### TARGETS

- + Zero accidents
- + Increasing situational awareness amongst our employees in order to prevent harm to persons, equipment and environment.
- + Improve Risk Management by training and coaching of personnel to recognize, acknowledge and minimize risks.
- + Be a good employer and aim for lifetime employment by sourcing at academies and continuous training during employment. Average employment of seafarers is 10 year and retention rate of seafarers is min. 94%
- + Strive for satisfied customers in sustainable open relationships. Average relationship with COA customers is 10 years.
- + Invest in leadership on board and ashore to create a strong connection between the people. Leadership program in 2020/2021 for 450 participants.
- + Continuously focus on 'Good Seamanship at Wagenborg' principles in communication and training programs.

### 2.2.3 Wagenborg creates new solutions by use of innovation

We improve customer needs, costs and procedures by use of innovation. Together with our stakeholders, we transform opportunities and processes into next generation solutions. In chapter 5 you can read more about related topics, such as remote support to our fleet, the implementation of new ERP software and our participation to various researches to alternative fuels.





## GOALS

### Cost competitive solutions

We help our customers to develop new solutions, delivering shared value from an innovative idea to implementation. We do this through a unique innovation engine, which is a symbiosis of our fleet development, business development and shipyard engineering teams.

### Digitalization

We achieve operational excellence and cost reductions by collecting data, predicting performances and adjusting targets. We call this smart shipping. We challenge ourselves to develop new (IT) technologies to accelerate our smart shipping philosophy.

### Leading vessel design & new building

We use our knowledge to improve every new design for our fleet.

## TARGETS

- + To be recognized as one of the most innovative shipping companies of Europe by cooperating in relevant projects in the industry.
- + Develop new customer solutions, improve carbon footprint by use of innovation.
- + Actively participate in min. 3 R&D projects every year in relation to the sustainability policy of Wagenborg
- + Strive to operate a hydrogen or methanol MPP vessel in by 2025
- + Install Live-data systems on the fleet in 2020. Use the data and real-time information for predictive maintenance, reduction of workload and to share knowledge.
- + Develop state-of-the-art ERP software before 2023 to support current and future workflow processes including smart shipping, client and employee portals.

## 2.3 Stakeholders

Wagenborg has always taken her responsibilities, particular towards the environment, and takes active part in the shipping and logistic decarbonizing energy transition. In close cooperation with our stakeholders - authorities, clients, investors, public, employees, suppliers - we accept sustainability challenges to achieve our sustainability goals and targets.

We are glad to notice more of our customers are increasingly asking for Wagenborg's CO<sub>2</sub>-footprint, transparency on our sustainability strategy and our progress versus set targets becomes a relevant differentiator. Only with united forces the shipping and logistic industry will be able to achieve the ambitious environmental objectives. That is why Wagenborg is working on projects with other companies within the sector, suppliers, shipyards and research institutes on a variety of subjects.

In 2019 Wagenborg was a partner / member of the following organizations: BIMCO, Wista, Ecovadis, KVR.

# WAGENBORG IS COMMITTED TO ACHIEVE A BETTER CLIMATE AND ENVIRONMENT

## Our goals beyond the horizon

In April 2018, the UN IMO formalized its ambition to significantly reduce CO<sub>2</sub> emissions across the sector, resulting in a 70% reduction by 2050 if compared to 2008. Wagenborg adopts these targets but realizes we cannot achieve this overnight. That is why we defined a term road map with clear milestones along the way.

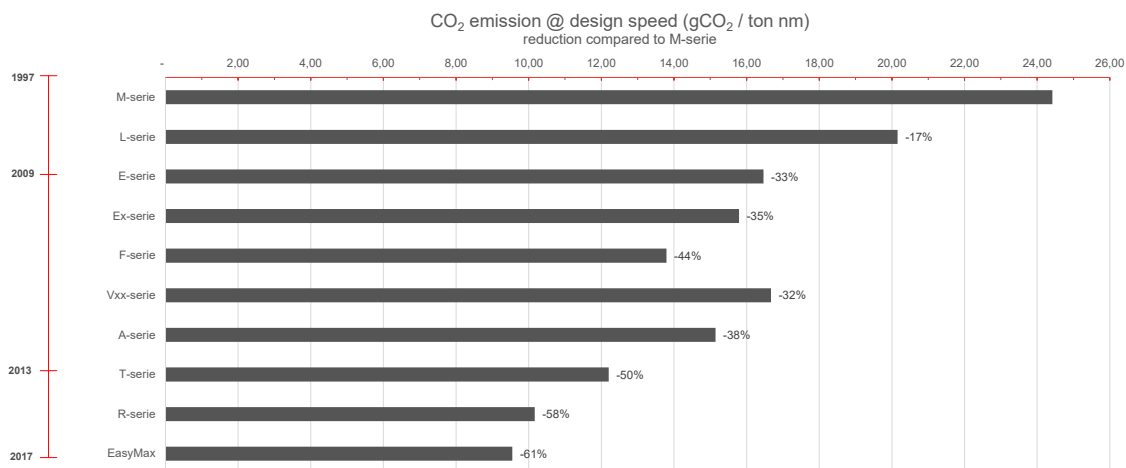


## Sequence of steps towards carbon neutral shipping

To achieve a 70% CO<sub>2</sub> reduction, Wagenborg set a sequence of steps towards carbon neutral shipping.

1. Savings: Reduce fuel consumption by using available tools and improve logistic chain
2. Transition: Use of transition fuels which have less emission (drop in fuels, such as GTL or HVO)
3. Research: Investigate and test potential new carbon neutral fuels (methanol, hydrogen, electric)
4. Conversion: Convert the current fleet towards carbon neutral vessels (new propulsion and energy systems)
5. Renewal: Renew the existing fleet by carbon neutral vessels (new design emission free and new energy systems)





### Fleet comparison 2008 – 2019

In addition to the IMO CO<sub>2</sub> reduction targets in maritime shipping, Wagenborg has expressed its ambition as part of the Green Deal agreed amongst the Dutch maritime sector to go one step further. For example, the parties involved aspire to have at least one zero-emission seagoing vessel put into service in 2030. In addition, we aspire to achieve an absolute CO<sub>2</sub> reduction of 70% by 2050 compared to 2008 by maritime shipping. The ultimate ambition: to achieve climate-neutral shipping as soon as possible after 2050 and in any case before the end of this century.

To determine whether Wagenborg is operating in line with these objectives, we periodically monitor our fleet. Below is a comparison of our fleet on December 31, 2019 versus 2008.



Wagenborg takes active part in the shipping and transport de-carbonizing energy transition. Together with our stakeholders - authorities, clients, investors, public, employees, suppliers - we accept sustainability challenges to reduce our environmental footprint.

### 3.1 Fuel savings and energy efficiency

We aim to reduce fuel consumption with 6% a year by 2020 by using available new technologies on board and ashore. We aim to minimize fuel consumption per shipped ton cargo. Wagenborg has several ISO 14001 and CSI certified vessels.

Subject	Progress
Weather routing	Wagenborg updated her weather routing software MeteoGroup (SPOS) and installed it on the bridge of all 82 Wagenborg owned vessels. With this software update, voyages can be planned more accurately by using weather conditions in the most optimal way and thus unnecessary fuel consumption. Although every vessel has an unique sailing profile, fuel savings up to 8% are noted.
Fuel efficiency reporting	As a tool to change behavior on board of our vessels, Wagenborg distributes a monthly fuel efficiency report. This report compares per vessel type and per vessel various key figures to give insights in the fuel consumption. By comparing vessels per type, differences could be noticed resulting in spreading lessons and actions to get vessels back in line, such as hull cleaning. Saving up to 7%.
Monitoring systems	To monitor real time fuel consumption of the vessels, physical fuel meters will be installed on board of all 82 Wagenborg owned vessels and at the head office in Delfzijl. These systems help office and vessels optimize their voyage based on real time data. So far, 42 vessels are implemented; expected completion is by end 2020.
Trim optimization	To support our fleet in determining an optimal trim and added resistance, a trim table per vessel type will be developed. In 2019 Wagenborg tested dynamic trim sensors for the A-series with savings up to 5%. Expected completion of all Wagenborg owned vessels is by end of 2022.
Combinator sailing	Some of the Wagenborg owned vessel have the possibility of combinator sailing. The speed/consumption curve per vessel type allow optimization of combinator sailing (i.e. different shaft rotation speed) when sailing lower / eco-speed. In 2019 Wagenborg implemented combinator sailing on A, F and E series. The rest of the fleet will follow in 2020.

### 3.2 Reduce emissions with transition fuels

In collaboration with our stakeholders we aim to use transition fuels to reduce emissions for the transition period towards carbon neutral shipping. We take measurements to prevent pollutions, reduce our CO2 footprint and protect life under water.



Subject	Progress
HVO WPD	On July 1, 2019, WPD switched to Change XL fuel. This fuel is more sustainable, cleaner and results in 30-40% less NoX emissions, less lubricating oils and usage of filters. In addition, CO2 emissions are reduced by 8-10%.
Gas to Liquid fuel	In 2015, with the launch of Walk to Work vessel Kroonborg, we were the first to introduce GTL on a seagoing vessel. Ever since our fleet of Walk to Work vessels on the Southern North Sea is sailing on GTL fuel.
Shore power connection	In 2000, Wagenborg was the first shipping company to use shore power for our seagoing RORO vessels. Ever since, 33 vessels have been equipped with a shore power connection.

### 3.3 Carbon neutral shipping and transport

We are committed to achieve carbon neutral shipping and investigate and test potential new carbon neutral fuels, such as green methanol and green hydrogen.

Subject	Progress
Coatings & anti-fouling	During special survey Wagenborg carries out various "green" improvements to reduce emission of toxic chemicals by further improving the green character of our vessels. For instance, for the cooling installations, the refrigerant was changed by a harmless alternative for the ozone layer. In addition, a new ultrasonic system was installed to remove biofilm, which makes the use of toxic copper unnecessary. Finally, a special type of stern tube seal was placed which reduces the risk to an oil spill is enormous.
Ballast water treatment systems	To comply with rules and regulations, Wagenborg will install USCG and IMO approved ballast water treatment systems on 20 vessels a year to reduce the distribution of invasive species. Starting with our own research and installation of the first trial systems in 2013, we have installed nine compliant systems by the end of 2019.
Clean Shipping Index	The Clean Shipping Index (CSI) is used to independently test the environmental performance of the different types of Wagenborg ship types. Clean Shipping Index is a Swedish independent and holistic labeling system for the environmental performance of ships, in which CO2, sulfur and nitrogen emissions, onboard chemical use and waste and water management are assessed. With 26 Wagenborg ships in the CSI database, Wagenborg has confirmation that it is taking the right steps in terms of the environment. In this way transport buyers can also select high-performance shipping companies in the field of environmental criteria.



## Wind propulsion ventifoils on board MV Ankie

Two Econowind ventifoils were installed in the MV Ankie, a 3.600 DWT vessel. Fuel savings on the MV Ankie are expected to be around 15%, depending on her exact sailing routes and actual wind conditions. Under ideal circumstances, the Ventifoils could generate 25 - 30% of her propulsion.

**-15%**  
fuel

## Our latest 100% electric compact crane: Hoeflon C30e



Wagenborg is continuously making her equipment more green. This applies not only to ships, but also to her equipment on land. For example, the fully electric Hoeflon C30e compact crane is a valuable addition to the existing crane fleet. Equipped with a 12 kW electric motor, the Hoeflon C30e has a maximum capacity of no less than 9,000 kg. The crane is very suitable for carrying out work in tight locations or in commercial buildings.

In addition, a number of (partly) electric telescopic cranes and mobile tower cranes are expected in the upcoming period.

**100%**  
electric

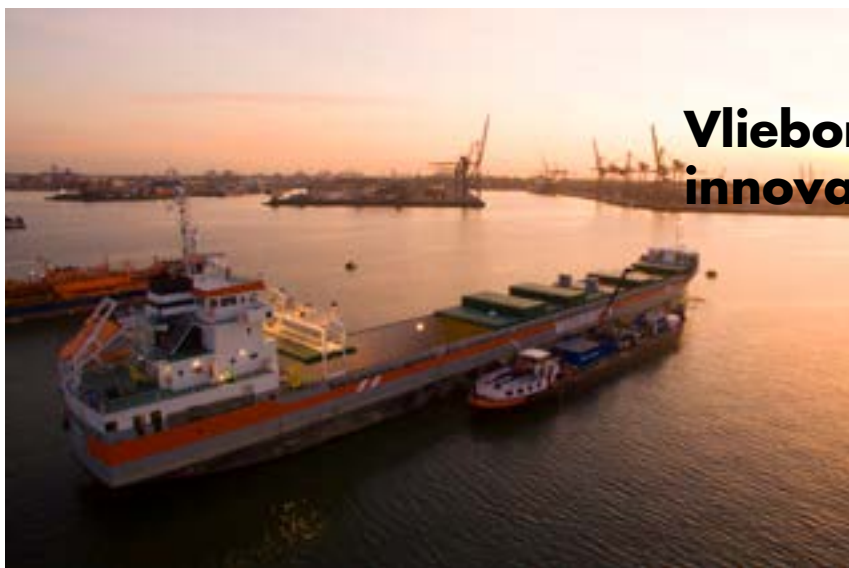
During surveys, various Wagenborg vessels are planned to install a ballast water treatment system. In 2019, 5 installations were executed successfully. In total a number of 9 vessels are currently equipped with a USCG and IMO approved system.



**9**  
**BWT**  
**installations**

## Vlieborg receives innovative hull cleaning

The MV Vlieborg has been cleaned above and under water using safe and sustainable robot technology. The vessel was heavily fouled with slime and algae, which were all removed from the hull and captured by the installation. The collected wastewater was carefully filtered in order to comply with environmental regulations.



**zero**  
**dumping**



## WAGENBORG WORKS SAFELY WITH TALENTED PEOPLE

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As a family owned and managed company we want to create well-being. Having engaged employees is critical for our business. In our global, culturally diverse organization, our people are encouraged to develop skills and consider new roles and responsibilities. Maritime transport requires qualified workers and experienced professionals, our 2.599 employees are our most important asset.

### 4.1 Safety first

We want people to return home safely after work. We offer a safe working environment for everyone involved: employees, subcontractors, suppliers and other parties concerned. Our HSEQ policy aligns with applicable Safety Management Systems and ISO 9001.

Subject	Progress
Zero accidents	<ul style="list-style-type: none"> <li>There were no fatal accidents in 2019, but there were three major accidents on board. We closely investigated the root causes and took fitire preventive measures from the lessons learned.</li> <li>Regular meetings of Corporate Safety Board, consisting of the end-responsible executives of all divisions</li> <li>Use of certified HSEQ-management systems under best practice market standards.</li> </ul>
Increasing situational awareness amongst our employees in order to prevent harm to persons, equipment and environment.	<ul style="list-style-type: none"> <li>Adoption of the Safety Ladder methodology, that aims to measure our Safety Culture</li> <li>Monitoring, reporting and reviewing our HSEQ performance</li> <li>Investigation of accidents, incidents, near misses and follow-up for improvements and prevention and reoccurrence.</li> <li>Communicating companywide about HSEQ performance &amp; learnings during regular meeting involving the HSEQ representatives of all divisions</li> </ul>
Improve Risk Management by training and coaching of personnel to recognize, acknowledge and minimize risks.	<ul style="list-style-type: none"> <li>VCA (Safety, Health and Environment Checklist for Contractors) certification for all Wagenborg Shipping employees, including office staff.</li> </ul>

### 4.2 Long term employability and personal development

We invest in our people to keep them fully motivated, healthy and satisfied. We have an active absence prevention policy. We offer voluntary medical checks for our personnel

Subject	Progress
Be a good employer and aim for lifetime employment by sourcing at academies and continuous training during employment.	<p>With a fleet review, as part of our strategic personnel planning, we have insight into the knowledge, competences and talents of our employees. We actively translate this into individual development, training and education programs, in order to train potential managers internally on the one hand and to offer employees perspective on the other.</p> <p>We prefer to fill vacant positions on board from the pool of trainees. Six out of ten trainees are hired, higher ranks are fulfilled by promoting colleagues.</p>
Strive for satisfied employees in sustainable open relationships.	<p>Preventing absenteeism is important to us, which is reflected by individual coaching, a confidential advisor and / or company doctor, reintegration places on an individual basis, workplace inspections, the purchase of standing desks and the provision of Preventive Medical Examination. Thanks to our Sustainable Employability Policy, our employees can deduct private health costs from their salary.</p> <p>In order to keep the vitality of seafarers as high as possible, we work with flexible sailing and leave schedules tailored to individual needs, if possible. Partly as a result of this, we see that the absenteeism figures on board are extremely low and that failure due to physical limitations or reduced mental resilience hardly occurs, if at all.</p>

#### 4.3 Personal development

We aim to promote lifelong working and learning. Our well-trained employees are better able to contribute to the organization's objectives and business opportunities through their professional development.

Subject	Progress
Invest in leadership on board and ashore to create a strong connection between the people.	To have enough healthy, motivated and competent employees, a first group of employees will start in 2020 with an in-house developed Personal Development Program. The program will last one year and at least three groups will participate until 2022
Continuously focus on 'Good Seamanship at Wagenborg' principles in communication and training programs.	Our (senior) officers will also work on leadership in a custom made development program as from 2020. This program was designed in cooperation with Lloyds Register and focuses on leadership, efficient ship management and safe working.



## Personal journeys

Individual development, training and education programmes are coordinated each year based on of the organisation's strategic goals, departmental objectives and/or personal ambitions. Managers and employees agree on a course of action. We offer career coaching, career choice tests, personality tests, interest and competence tests and information on job opportunities to help our employees make the right choices.

**573k**  
training  
expenses

## Successful first trial of the WATER programme

To personally experience and shape the WATER program, 12 colleagues from both fleet and the various office-departments got together in Paterswolde, the Netherlands. It became very intense and interesting days. Some quotes of participants:

- I gained a lot of insight into how to motivate people and achieve better results with less effort. You don't learn things like this at the maritime academy.
- I have met many interesting people. We have learned from each other's experience, attitude and interaction in the field of people management.
- Started as individuals, ended as a team, ready to tackle all challenges.



**1st**  
group



# WAGENBORG CREATES NEW SOLUTIONS BY USE OF INNOVATION

We improve customer needs, costs and procedures by use of innovation. Together with our stakeholders, we transform opportunities and processes into next generation solutions.

21

## 5.1 Cost competitive solutions

We help our customers to develop new solutions, delivering shared value from an innovative idea to implementation. We do this through a unique innovation engine, which is a symbiosis of our fleet development, business development and shipyard engineering teams. We strive to be recognized as one of the most innovative shipping companies of Europe by cooperating in relevant projects in the industry.

Subject	Progress
Develop new customer solutions, improve carbon footprint by use of innovation.	Our projects & newbuilding is constantly looking for modifications to deploy our fleet more effectively by allowing these vessels to load more cargo with the same assets. For instance, a series of twelve 6.000 DWT vessels are deepened resulting in 10% more cargo capacity. In addition, also modifications to the bulb, propeller and the lengthening of vessels are investigated for various vessels types.
Actively participate in min. 3 R&D projects every year in relation to the sustainability policy of Wagenborg	Shipyard Royal Niestern Sander – a wholly owned subsidiary of the Wagenborg Group – has delivered the first Dutch fully electric utility vessel to the Province of Groningen.  A consortium of leading international maritime companies including Wagenborg, supported by Maritime Knowledge Centre, have joined forces to further investigate the feasibility of methanol as a sustainable alternative transport fuel in the maritime sector.
Strive to operate a hydrogen or methanol MPP vessel in by 2025	In close cooperation with various clients, the possibilities of a methanol or hydrogen vessel are investigated with the intention to operate an MPP vessel in the Baltic region.

## 5.2 Digitalization

We achieve operational excellence and cost reductions by collecting data, predicting performances and adjusting targets. We call this smart shipping. We challenge ourselves to develop new (IT) technologies to accelerate our smart shipping philosophy.

Subject	Progress
Develop state-of-the-art ERP software before 2023 to support current and future workflow processes including smart shipping, client- and employee portals	<p>In 2019 Wagenborg Shipping worked in 'Project Dolfijn', an ERP system that will have an impact on (almost) everyone within Wagenborg Shipping and sometimes even outside of Shipping. After identifying 12 main processes - such as fixing, procurement, planning, execution and maintenance - a large number of colleagues from all departments identified a lot of potential to work in smarter ways, working more efficiently.</p> <p>Implementation and construction will start mid 2020. Before that, some steps have to be taken: finishing the architecture and the final choice on which platform to use for connecting the systems and developing custommade software, formulating procurement requirements followed by selection and negotiation as well as putting together a project team with the right expertise and experience.</p>

### 5.3 Leading vessel design & new building

We use our knowledge to improve every new design for our fleet. Every new vessel design needs to have an improved CO2 footprint with a EEDI (Energy Efficiency Design Index) improvement of at least 5% compared to the previous design. In other words: every new type of vessel has to emit 5% less gram CO2 per ton cargo / nautical mile.

The best example of our focus on EEDI, is the EasyMax ship type. The Egbert Wagenborg (award-winning multi-purpose vessel built in 2017) is a good example. Compared to the 9,000 ton of 20 years ago, we are reducing the carbon emission footprints by over 60% per tonne x nautical mile. With this EasyMax ship design, Wagenborg leads the EEDI league table in her segment.

In 2021 a sister vessel of Egbert Wagenborg will be delivered.

Shipyard Royal Niestern Sander, a division of Wagenborg, has delivered the first Dutch fully electric utility vessel. In addition to the electric propulsion, choosing this vessel also means choosing sustainable materials and energy recovery.



**100%**  
electric



## Construction of second EasyMax has started

Planned to be delivered to Royal Wagenborg, shipyard Niestern Sander has started the construction of yard number 851. This second EasyMax is an ice-classed open top multipurpose vessel of 14.000 DWT. The combination with an installed power of 2.999 kW, makes this type of vessel the most energy efficient vessel in its segment.

**2nd**  
EasyMax  
vessel

# PERFORMANCE DATA

2019

## SOCIAL DATA WAGENBORG GROUP

Number of employees (headcount)	2.917
Employees (FTE)	2.599
Seafarers	1.655
Breakdown per gender (male / female)	2.664 / 253
Breakdown per contract (permanent/fixed term)	1.827 / 1.090
Average employee age	44
Average years of service	13
Absenteeism	1,90%
Lost time injury frequency (*)	27
Number of fatalities	0

## FLEET DATA

### MPP FLEET

#### GHG <sup>(1)</sup>

CO <sub>2</sub> emission	[t]	1.100.364
CO <sub>2</sub> emission per ton mile	[gr]	26,64
Relative CO <sub>2</sub> emission per ton mile vs. 2008		-17%

#### MRV RELATED DATA <sup>(2)</sup>

##### Energy consumption

HFO consumption	[t]	105.791
LFO consumption	[t]	15.980
Gasoil consumption	[t]	90.207

##### Other resource consumption

Luboil consumption	[ltr]	759.534
Hydraulic oil consumption	[ltr]	14.156
Produced sludge	[m <sup>3</sup> ]	4.837
Delivered garbage	[m <sup>3</sup> ]	3.501
Consumption CFK's	[kg]	573
Use of paint	[ltr]	129.995
Use of shore power	[MWh]	578

### FERRY FLEET

Fuel consumption	[ltr]	4.560.477
CO <sub>2</sub> emission	[t]	14.709

(1) Figures related to all vessels, including owned vessels and affiliated owners

(2) Figures related to all Wagenborg vessels applicable to MRV regulation.



**CRANE & TRUCK FLEET****2019**

Fuel consumption	[ltr]	1.586.462
CO <sub>2</sub> emission	[t]	5.127
AdBlue (SCR)	[t]	34.000
No of cranes Euro 2		1
No of cranes Euro 3		39
No of cranes Euro 4		18
No of cranes Euro 5		17
No of cranes Euro 6		10
% of (part) electric cranes		10%
No of trucks Euro 3		1
No of trucks Euro 4		5
No of trucks Euro 5		42
No of trucks Euro 6		52

**CAR FLEET**

Gasoil consumption	[ltr]	34.203
% of fully electric cars		0%
CO <sub>2</sub> emission	[t]	85

**OFFSHORE FLEET**

Fuel consumption	[m <sup>3</sup> ]	5.538
CO <sub>2</sub> emission	[t]	15.736
Luboil consumption	[ltr]	14.998
Hydraulic oil consumption	[ltr]	1.148
Delivered garbage	[m <sup>3</sup> ]	960
Consumption CFK's	[kg]	31
Use of paint	[ltr]	1.735

**OTHER DATA****HOUSING GAS & ELECTRICITY**

Electricity	[KWh]	586.000
Gas	[m <sup>3</sup> ]	42.500
Water	[m <sup>3</sup> ]	1.021
Paper waste	[kg]	18.938
CO <sub>2</sub> emission	[t]	484



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