

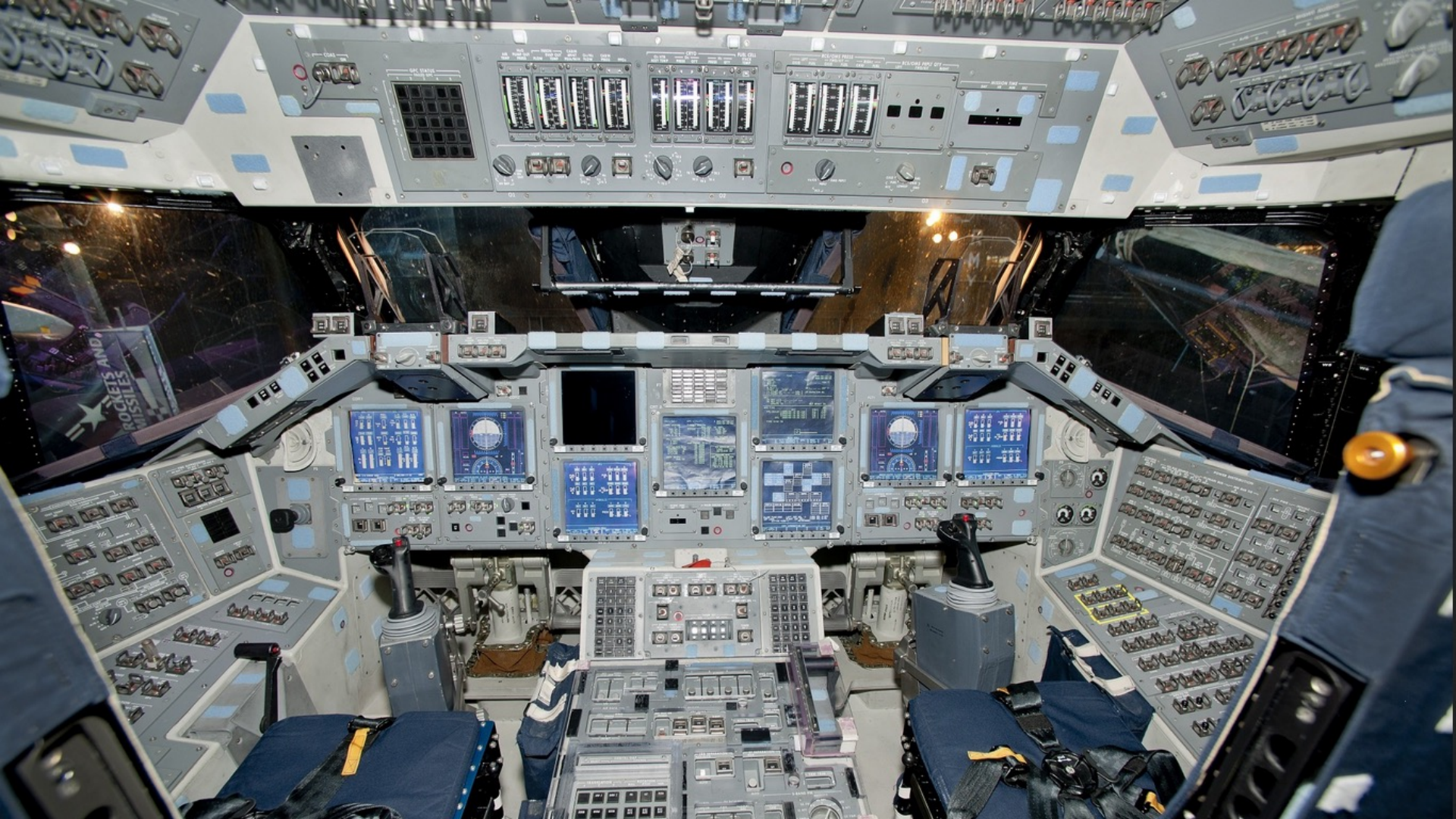


# The Digital Fleet Project; improving operations and reporting with sensor data



Lars V. Solbakken,  
SVP Information & Technology, DOF  
Digital Ship Conference,  
Bergen – November 2023







5

Item	Time
1. Monitor status for low right altitude (low-ROD) pending.	
2. After launch GO for donut, verify entry is available.	
3. After entry is available, Dragon berthing to Clear.	
4. Separation Prep when station clear and trajectory meet target values. Donut burn will begin 8 min later.	

MISSION NAME: Donut Coast

MISSION TIME: T-01:04:46

MISSION STATUS: 7.67km/s 408.8km 430.1km 383.5km 51.65°

### Count to Tank Jettison

Donut Burn - 0 min

1st Donut Burn - 3 min

2nd Donut Burn - 18 min

Donut Burn Count

Autonomous Control

Altitude/Height

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# The transformation in Offshore Shipping

## Changing Markets



## Green Shift



IMO ACTION TO  
**REDUCE GREENHOUSE  
GAS EMISSIONS FROM  
INTERNATIONAL SHIPPING**

IMPLEMENTING THE INITIAL  
IMO STRATEGY ON REDUCTION  
OF GHG EMISSIONS FROM SHIPS



imo.org

## 13 CLIMATE ACTION



## 14 LIFE BELOW WATER

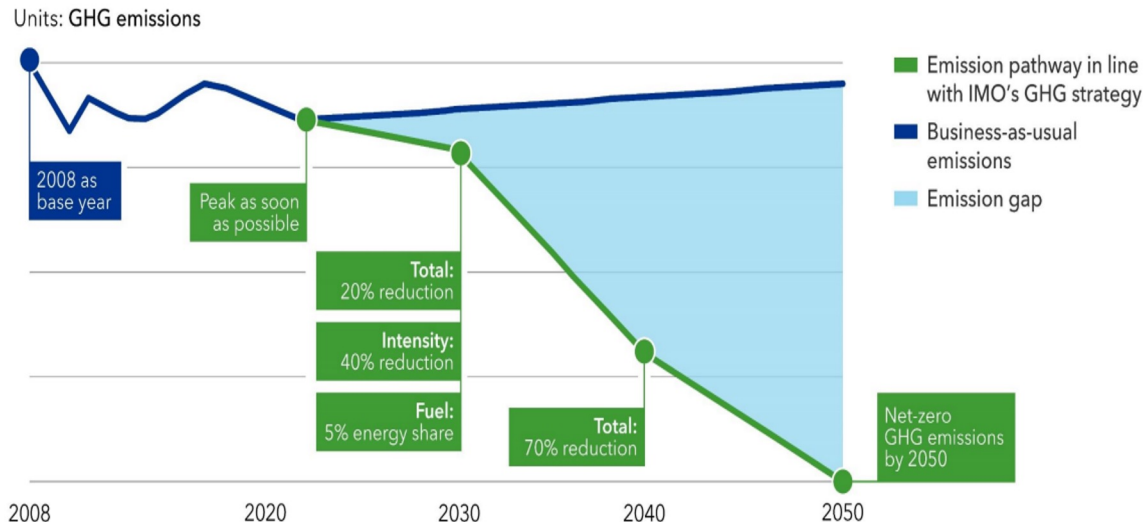


## Technology Shift





# The Green Shift is coming



Total: Well-to-wake GHG emissions; Intensity: CO<sub>2</sub> emitted per transport work; Fuel: Uptake of zero or near-zero GHG technologies, fuels and/or energy sources

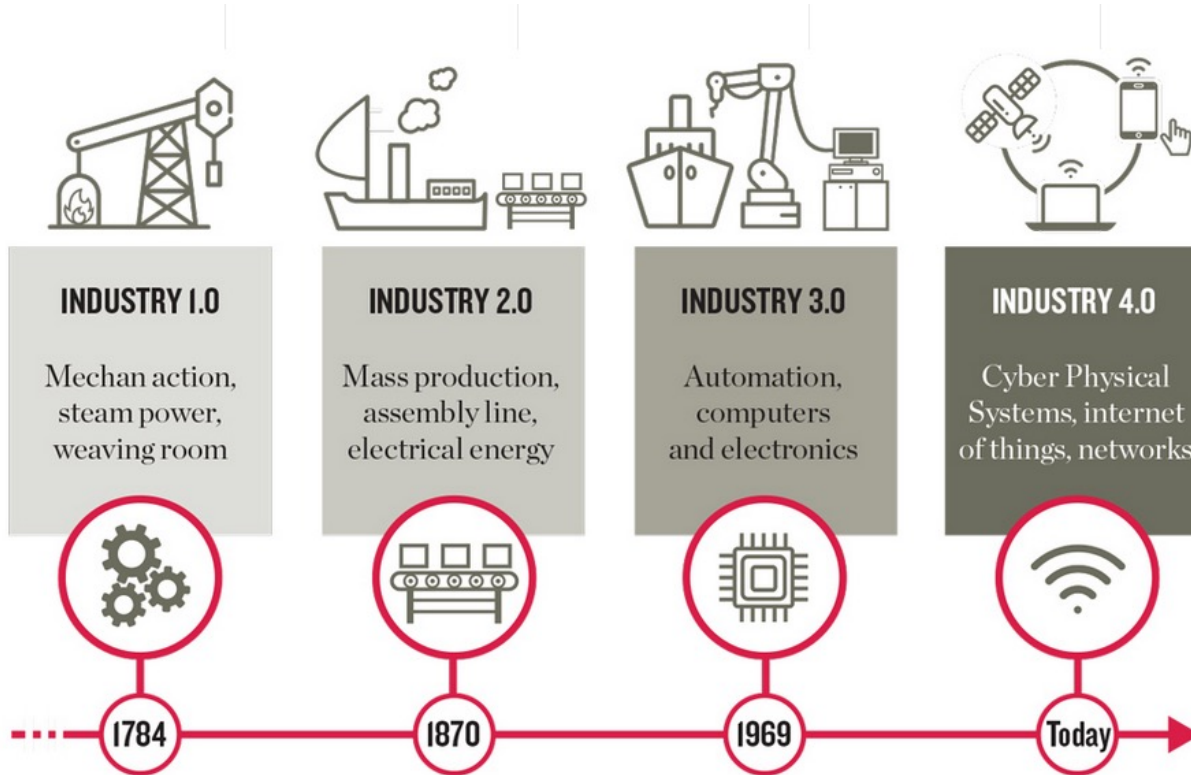
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Regulators, clients, banks, shareholders, employees and your grandchildren, are all demanding Ship Owners to take part in the **Green Shift**.

We need to **balance what we can do** to improve today's fleet with the technologies and fuels available in the future.

Source: DNV

# The age of Maritime 4.0 is here



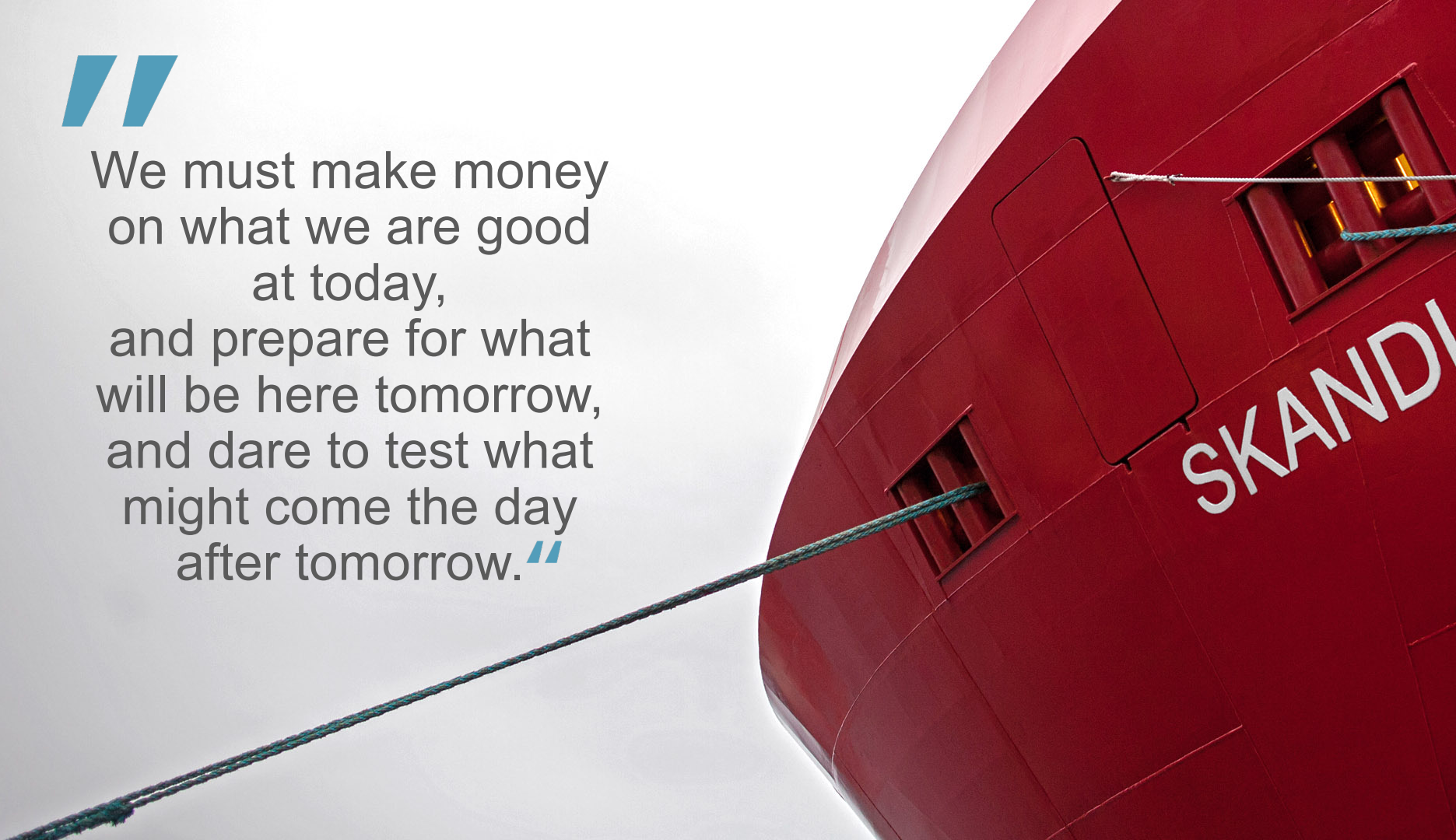
Ship owners are looking to make the leap from today's vessels to the interconnected and automated ships of tomorrow.

To safely achieve this, owners need access to the latest digital technologies, smart ship solutions and cyber security measures.



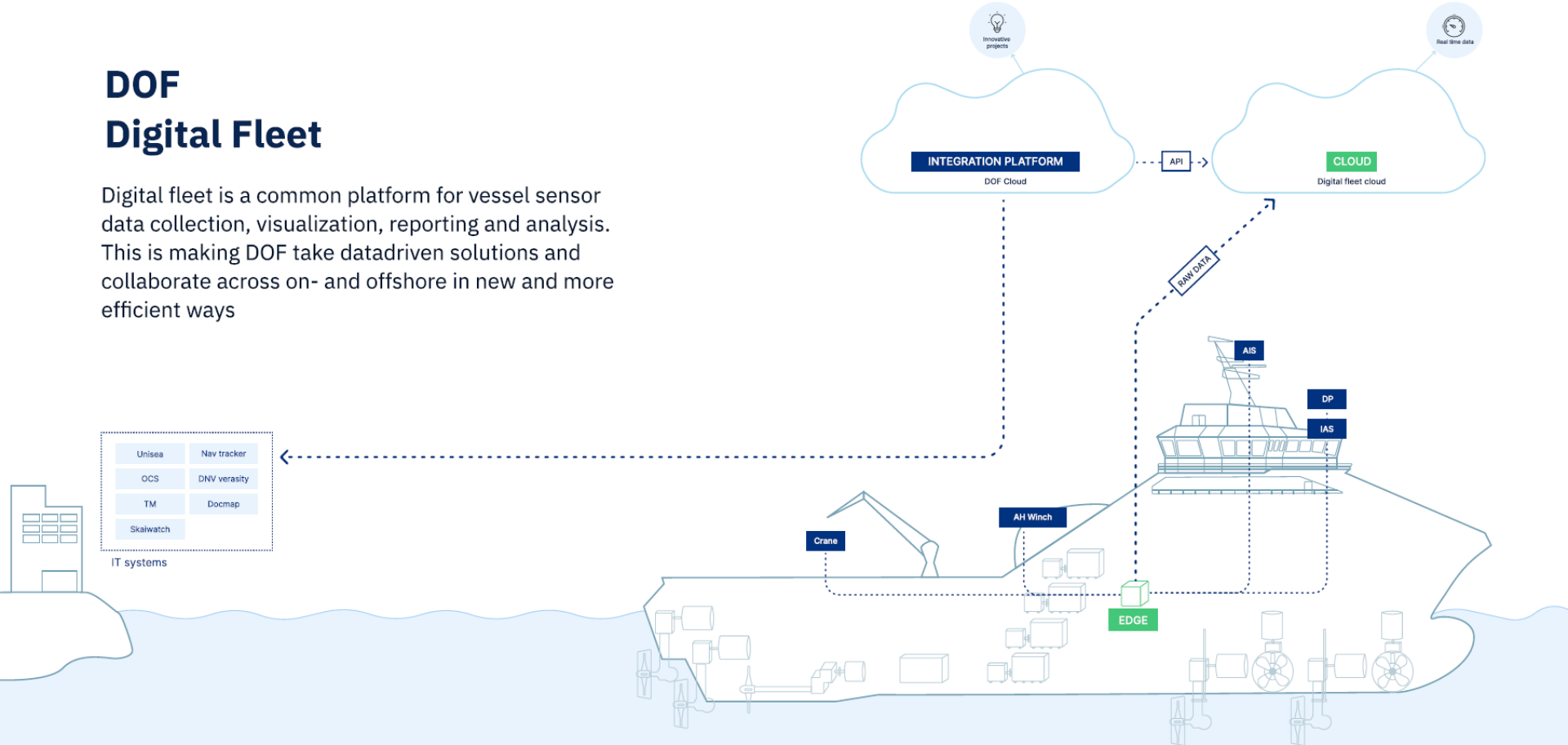


We must make money  
on what we are good  
at today,  
and prepare for what  
will be here tomorrow,  
and dare to test what  
might come the day  
after tomorrow."



# DOF Digital Fleet

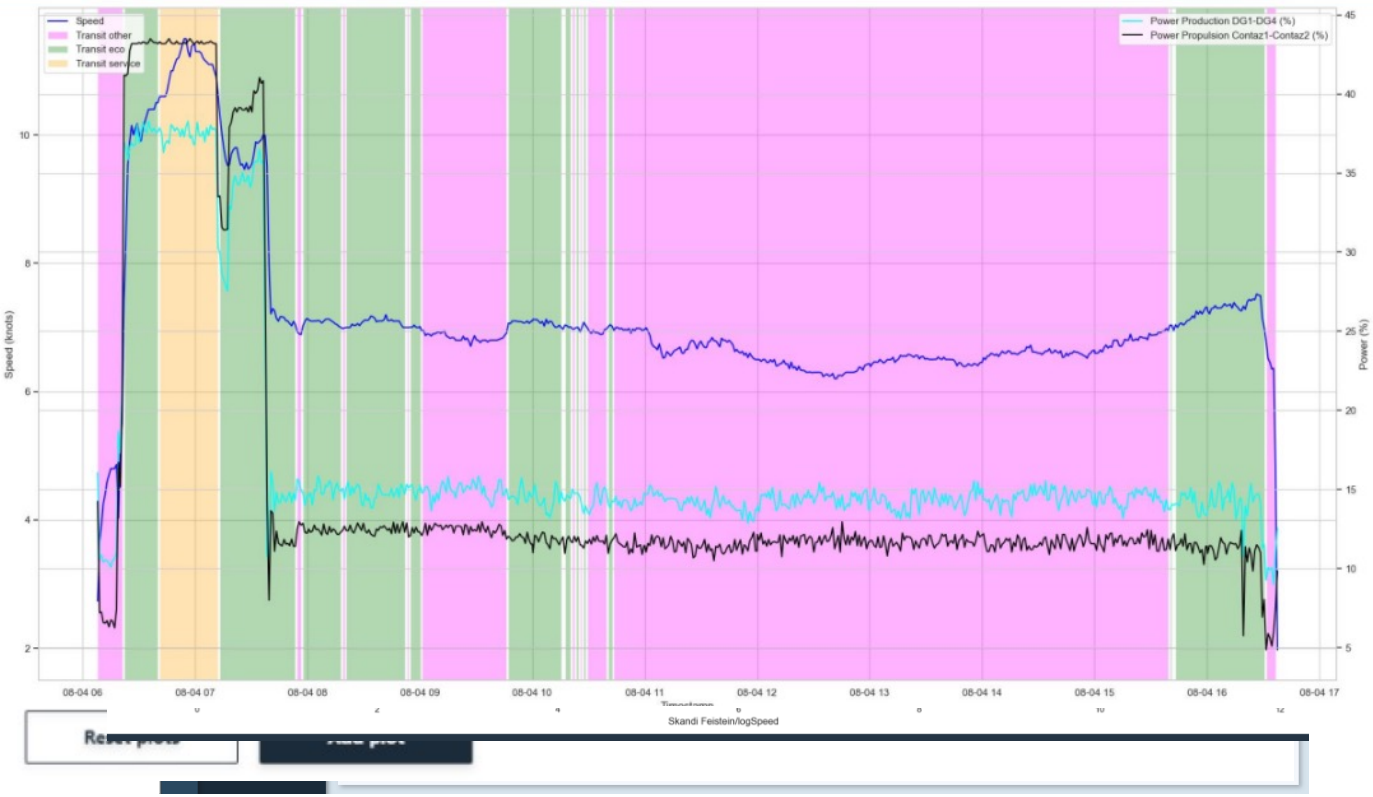
Digital fleet is a common platform for vessel sensor data collection, visualization, reporting and analysis. This is making DOF take datadriven solutions and collaborate across on- and offshore in new and more efficient ways



# Digital Fleet collect, analyze, visualizes and advise



d. Vessels Live Operation Mode ● DP



Live Operation Mode

Fuel consumption

Mode calculation

Condition-based maintenance

Emission analysis

Voyage planning

Historical data

Activity reporting and ecometer

Enhance todays processes

Introduce new ways of working

7

**Autonomous**  
Decisions made by smart data

6

**Control**  
Control remotely through real-time data

5

**Predict**  
Get advice through aggregated and predicted data

4

**Advice**  
Get advice through predicted data

3

**Analyze**  
Based on aggregated data

2

**Visualize**  
View simple data presentation

1

**Collect**  
Enable infrastructure

0

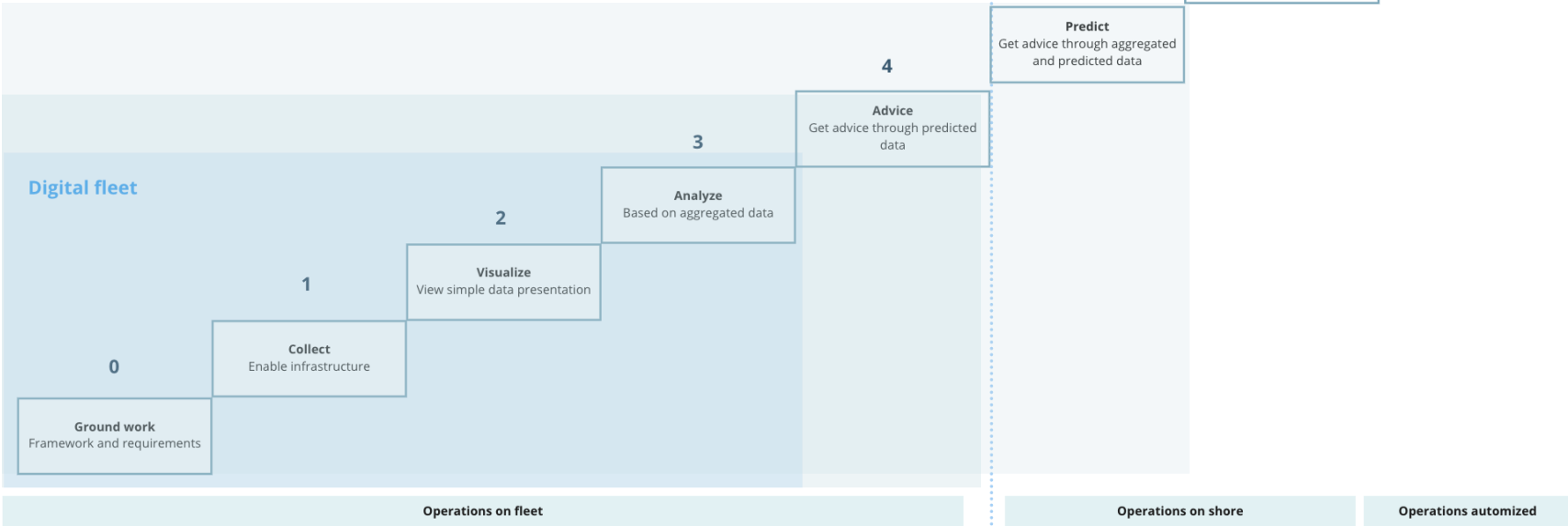
**Ground work**  
Framework and requirements

Digital fleet

Operations on fleet

Operations on shore

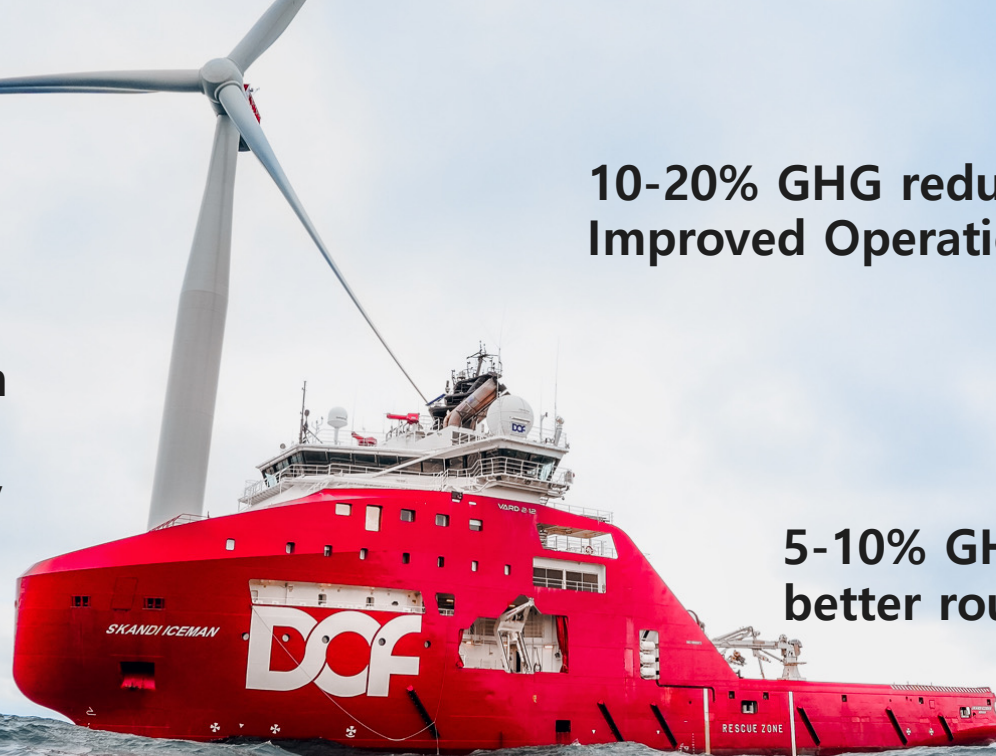
Operations automated



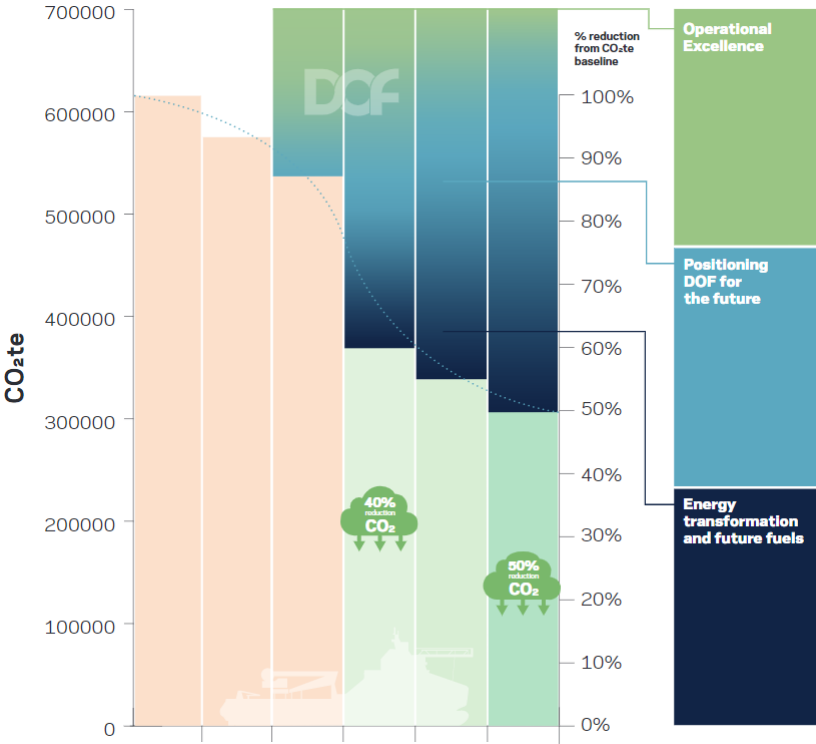
**5-15% GHG  
reduction from  
hull, propeller  
and machinery  
actions and  
maintenance**

**10-20% GHG reduction from  
Improved Operations**

**5-10% GHG reduction from  
better route planning**



# DECARBONATION STRATEGIES



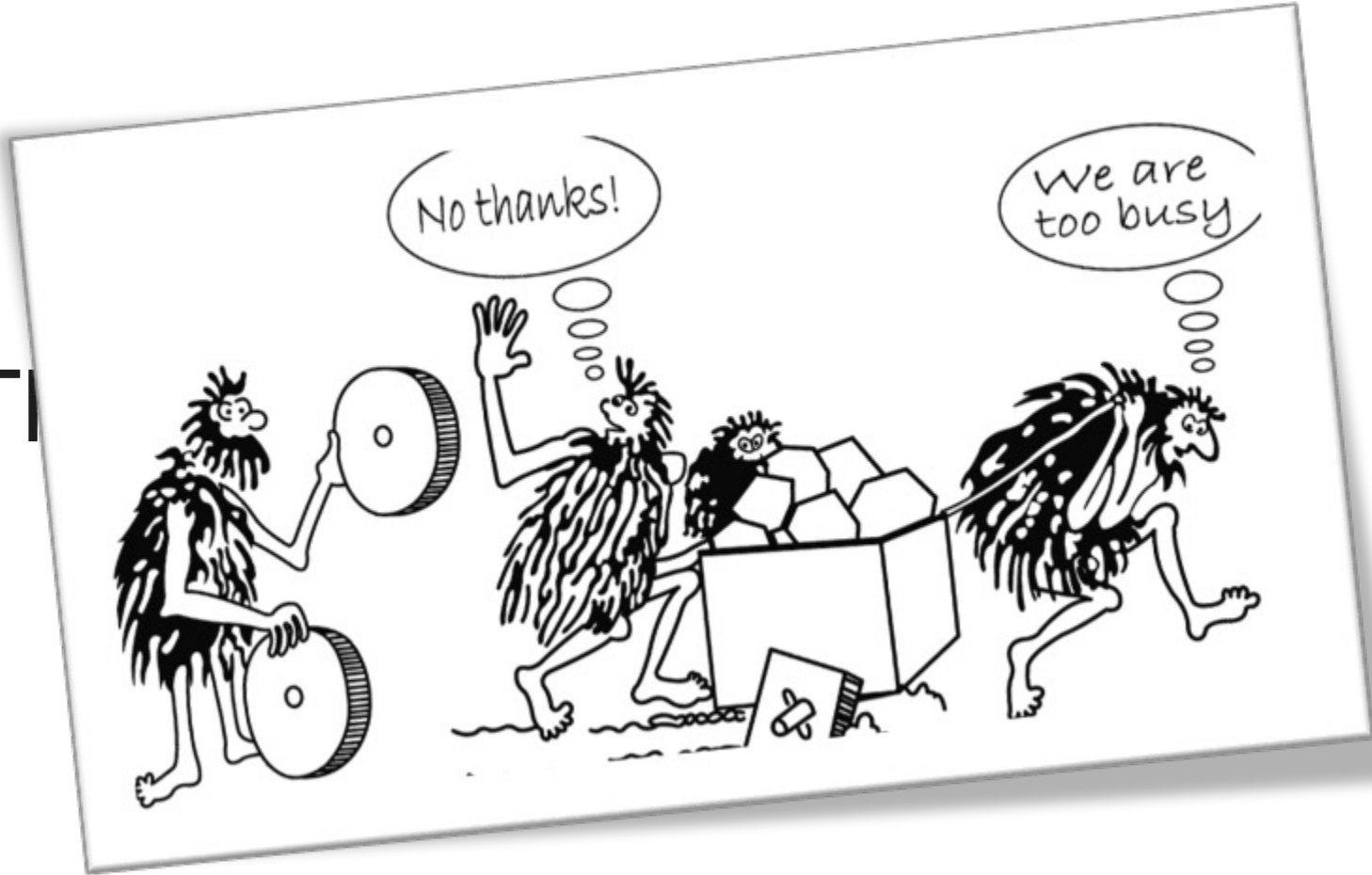
Phase 1: 'Doing more with less' and optimising our fleet

Phase 2: Aligning our decarbonisation actions with strategy and fleet management

Phase 3: R&D, Investment and utilisation of Green Technologies and Future Fuels

# This is Change Management

TI





**Banks, shareholders, clients, regulators,  
on- and offshore teams all need to work  
together to achieve common targets**



# A trusted partner for offshore operations

## Positioned globally

- Operating from 6 continents
- 20 offices near key O&G markets
- 55 vessels (7 on management / chartered in)
- Head office in Norway

## Total of 4,072 employees \*

- Offshore 3,190
- Onshore 882

## Vessels & subsea equipment \*

- Subsea 30
- AHTS 14
- PSV 11
- **Total fleet 55**
- ROV / AUV 72

\* All totals as of 30.06.2023

**“No matter where DOF operates in the world, safety is held as the highest priority.”**

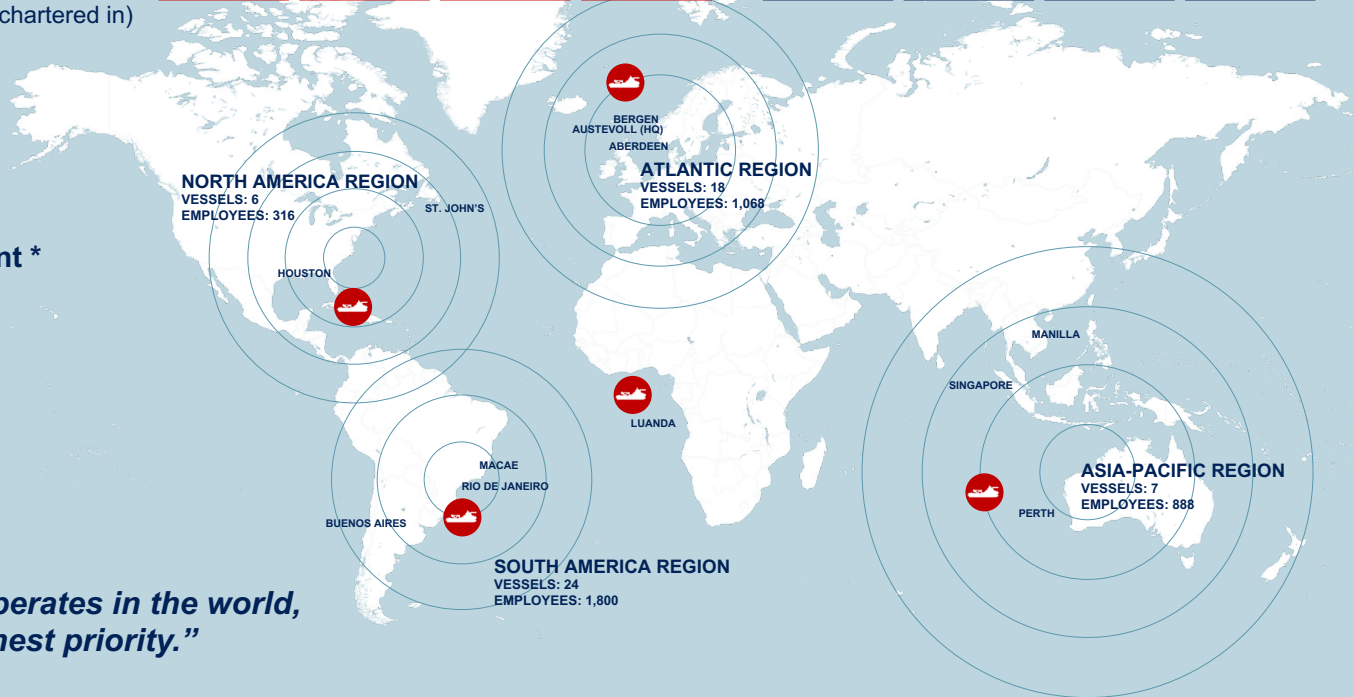
### Marine services

Bringing award-winning capability to the offshore sector.



### Subsea services

Integrated subsea services; wherever, whenever you need them.



# Maintaining ESG segment leader status



DOF named Financial Times  
"Europe's Climate Leaders"

**2023**

Third year in a row



DOF has reported to CDP  
since 2011

**A-**

DOF result



SLAVE-FREE ALLIANCE  
Working Towards a Slave-free Supply Chain

DOF is partnered with  
Slave-Free Alliance  
to fight modern slavery  
and labour exploitation  
in global supply chains



DOF in top-5 Nordic  
companies for human rights  
and responsible employers

**2021**

Second year in a row



For comments and questions, feel free to contact:  
[lars.solbakken@dof.com](mailto:lars.solbakken@dof.com)