

Green Shipping Programme

- a public-private partnership programme

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What I will talk about

1. Green shipping programme, vision and how we work
2. Service center for green fleet renewal
3. Pilot examples



Grønt Skipsfartsprogram

The Green Shipping Programme in short



Public-private
partnership



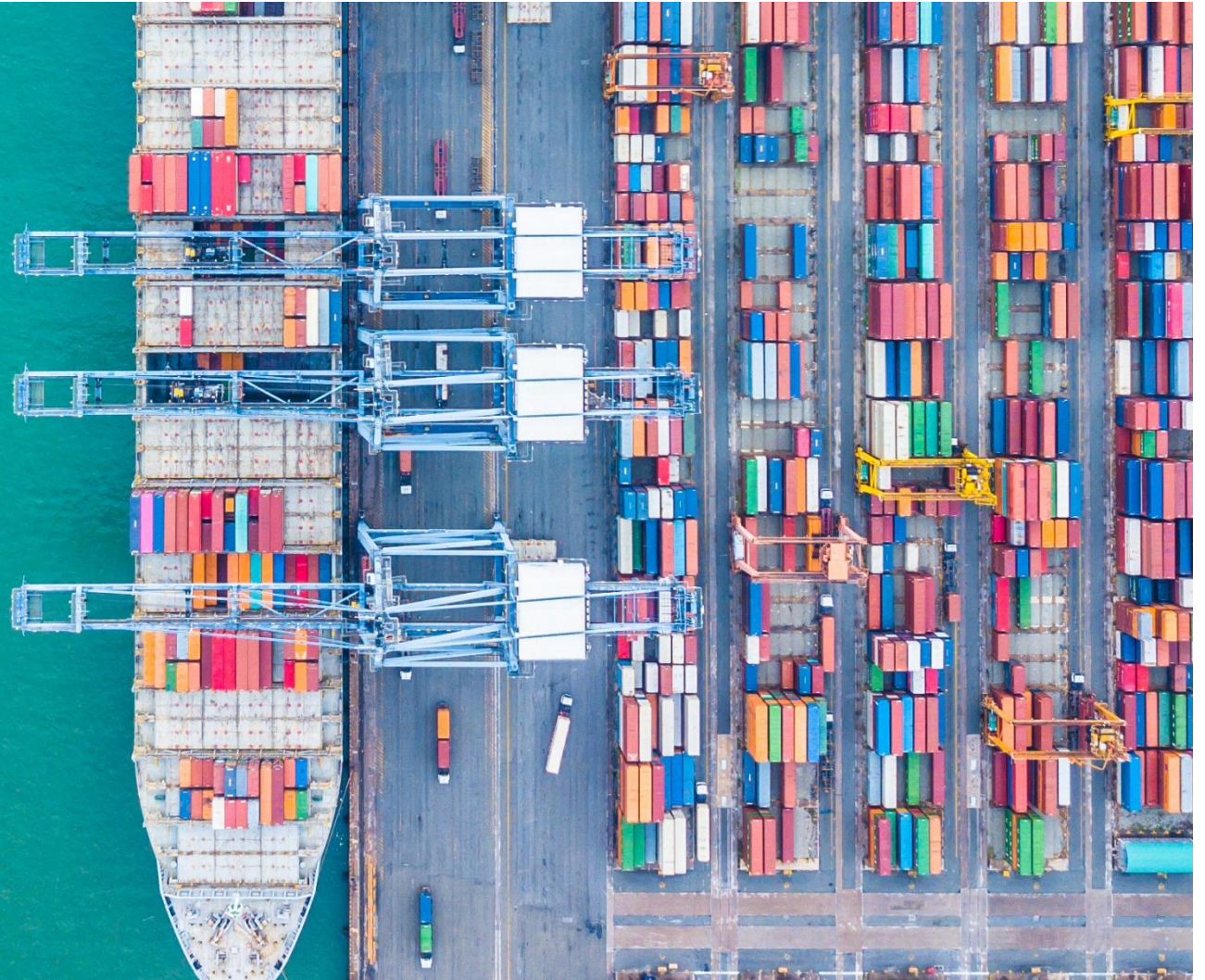
100+ partner
organisations



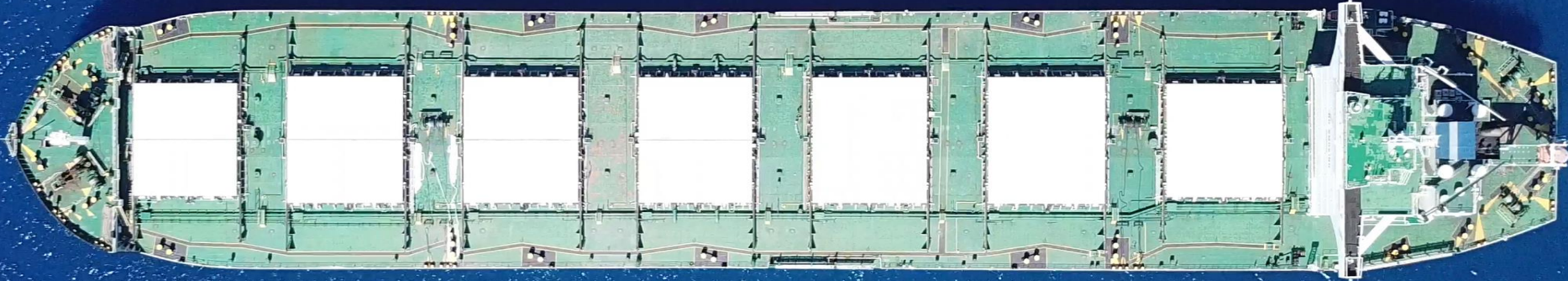
Facilitated by DNV

Green Shipping Programme - vision

**The world's most
efficient and
environmentally
friendly shipping**



Green Shipping Programme vision



**Profitable
emission
reductions**

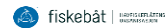
**Sustainable
logistics
solutions**

Green jobs

**Increased
competitive
advantage**

**Front runner
in green
shipping**

Green Shipping Programme



Motivation for members to join the Shipping Programme



Collaboration

Competitive advantage



Influence future policies and incentives

Learn from each other

Partner meetings - connecting



Grønt Skipsfartsprogram

GSP in a Nutshell



Pilot overview – 44 pilots

Pilot Legend:

Under realization

Maturing

In progress

Other activities:

Cargo owner forum

Tech. radar

Pilot owner

Cargo owner

Greenbulk

Logistics 2030

Public procurement

Ammonia deep-sea tanker

Ship owner

Yara Birkeland

Fish farm vessel

LNG bunker vessel

Hydrogen cargo-ship

Ammonia deep-sea bulker

Ammonia sea trawler

Shuttle tanker

Transport of fish

Sail in a box

Bio-gas

Zero-emission high speed ferry

Smart ships

Autonomous drone

Battery HSLC

Bio-diesel ferry

Cruise roadmap

On board CCS

Cargoferry

Fishing vessels

Hydrogen HSLC

Ammonia ferry

Methanol new build

Methanol Retrofit

Infrastructure

Green port

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Hydrogen infrastructure

LOHC infrastructure

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Transition of LNG infrastructure

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Financing 2^o shipping

Green finance

Transition financing shipping

Green infrastructure

Transition financing ports

Transition financing fishery

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Next generation bulker

Autonomous ferries

Circular economy

Reuse offshore vessels

Battery ferry Greece

 Green Shipping Programme

Service Center for green fleet renewal

Service Center for green fleet renewal

Lubricates the fleet renewal machinery



THE FUEL

Public and private funding
powers the change

THE ENGINE

Industry and business
drive the change


THE LUBRICANT

Service Center lubricates
the machinery

THE BRIDGE

Government and Parliament
set the direction

Service Center Facts



Full name: Service Center for Green Fleet Renewal
Established: February 2020
Administrator: DNV
Clients: Norwegian cargo owners and shipping-companies
Financing: Ministry of Climate and Environment

Service Center Projects

- 39 ships in 22 projects
- Some started as pilots
- Most are based on compressed hydrogen or ammonia
- Most driven by cargo owners



Grønt Skipsfartsprogram

Pilots Green Shipping Programme examples

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Ammonia powered bulk carrier

**Technical and
economical
feasibility**

**Identify safety
and regulatory
barriers**

**Partners include
many important
parts of the value
chain**

**Goal: World's
first offshore
"open hatch"
bulk carrier**

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27 MAY 2021

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Retrofit of existing container ship to methanol

Techno-economic assessment and safety-related study

Identify availability of methanol, locally and globally

Identify financing opportunities

Goal: a retrofit of a ship for use of Methanol

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Ammonia powered trawler

Feasibility study

Technical solutions, risk aspects and cost effectiveness

Barriers to implementation and impact on operational conditions

Goal: facilitate the first trawler to use ammonia as fuel

GSP learnings from Norwegian domestic shipping

Piloting for scaling - Coastal shipping can pave the way

Collaborate and engage

Make the green markets work

Identify and resolve barriers

Influence future requirements, policies and incentives



Thank you for your attention!

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Any questions?