Combined Efforts for Safer, Greener and More Fuel Efficient Ships

By Valdemar Ehlers, Technical Director of Danish Maritime

Nordic Marina
4th October 2016

About Danish Maritime

- Danish Maritime is a trade organization founded in 1919 for Danish shipyards and maritime equipment manufacturers
- Our members are involved in all facets of the industry – innovation, research, development, production, technical support, repairs and service
- Through policymaking, our aim is to collectively safeguard the common interests of businesses in the Danish maritime industry and to facilitate cooperation with other countries' industry

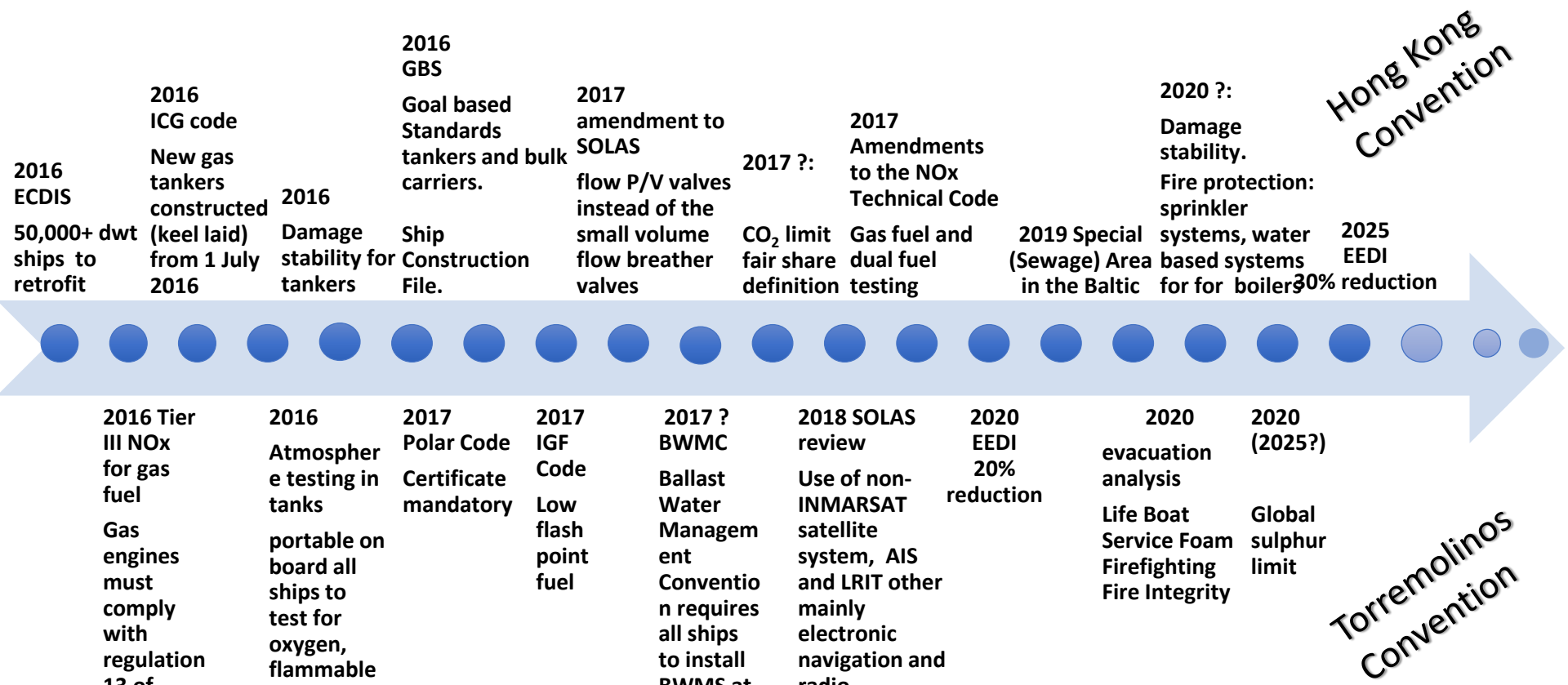
The Danish maritime industry

- is an innovative and competitive industry
- is at the forefront of creating green technology and maritime safety solutions for all. Many businesses are first movers
- invests in education and know-how for a highly skilled workforce
- supplies components and equipment to virtually all ships in service worldwide

The Global Environmental confrontation

- Climate change poses a major challenge
- Growth in transport intensifies challenges
- Barriers to energy efficient shipping
- New solutions with competitive advantage
- High pace in technology, development and application
- Competing investments in less efficient technology

IMO future rules:



IMO MEPC 70 – October 2016

- Data Collection System for fuel approved.
- Additional CO_2 emissions measures be taken, based on DCS.
- Ballast Water: Entry into force expected 2017
- Sulphur global limit value of 0,5% date to be conformed at MEPC 70
- Decision to revise guidelines for scrubbers.

A local Danish initiative
Green ferry vision

Local yard Søby Værft has commenced construction of Ærøs new electrical ferry. Planned delivery and in operation by summer 2017. The project has received DKK 120 millions support from EU.

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Short and medium distance operations. Ferry routes up to 13 nautical miles (24 kilometers)

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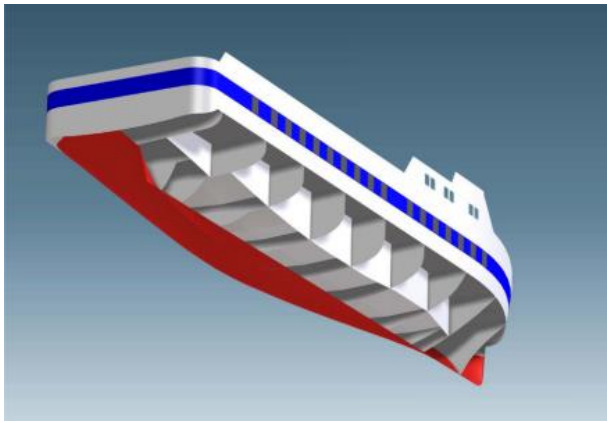
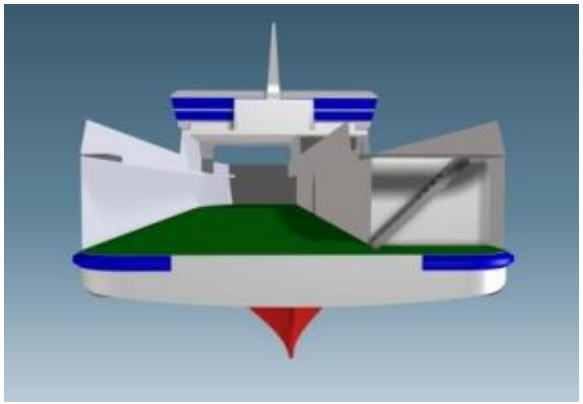
Energy efficient design concept by
Consulting Naval Architects Jens Kristensen ApS





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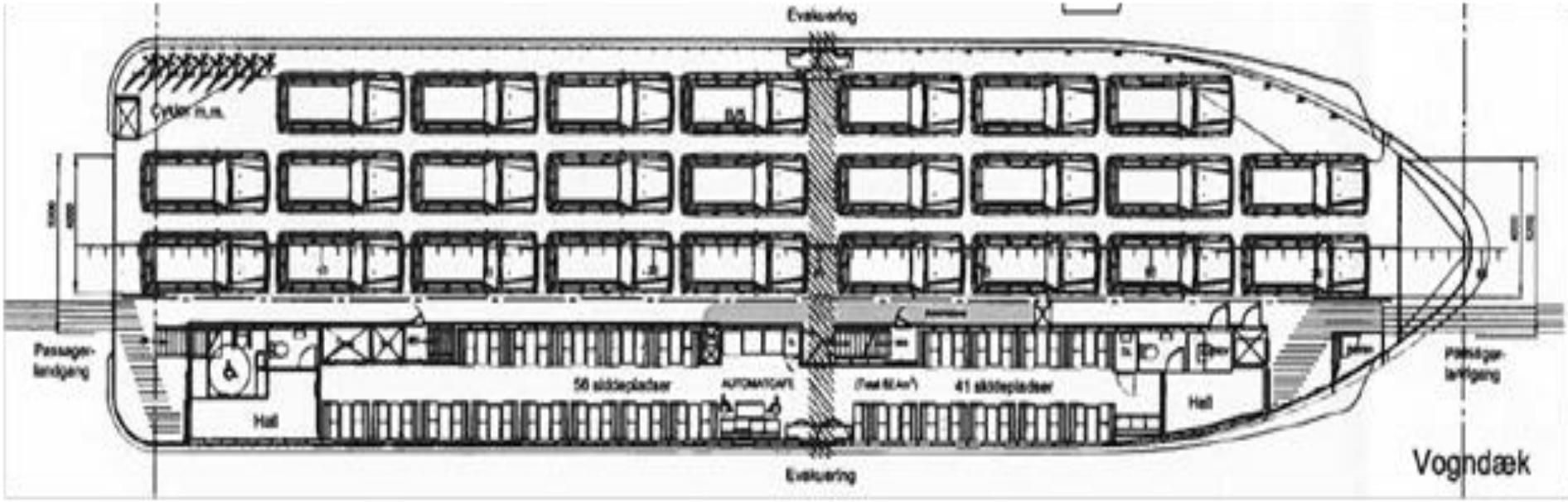
Interior design which reduces weight and minimize crew



Electricity from sustainable energy sources

Projektpartners

Marstal Navigationsskole
Søby Værft
Tuco Marine
Jens Kristensen Rådgivende Skibsingeniør
Ærø Kommune, Udvalget for Bæredygtig Energi
SIMAC
Syddansk Universitet
Siemens
Force Technology
DNV GL
SE
Søby Skibselektro
Transportens Innovationsnetværk

Industry preferences

1. Maintain 2020 entry into force of 0.5% global sulphur limit.
2. Incentives to ensure First Movers being rewarded.
3. New regulations for safety and improved Polar code
4. Green Technology encouraged.
5. Research on sustainable global maritime transport.
6. Increase business innovation, productivity and competitiveness
7. greater governance coherence, better coordination and less uncertainty
8. Even stronger ties between Danish maritime industry a companies abroad

Academia / Industries Cooperation

- https://www.interreg-baltic.eu/home.html grant to international research network on green shipping
- Builds on best practice efficiencies from producers to shippers, shipowners, customers, ports, and local communities
- Sustainability expectations are growing in shipping, - together we must explore opportunities for progress

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GREEN SHIP OF THE FUTURE

’Green Ship of the Future’ is a Danish joint industry project for innovation and demonstration of technologies and methods that makes shipping more environmental friendly.
It was conceived as an industry contribution to the COP 15 in Denmark

A GSF project is

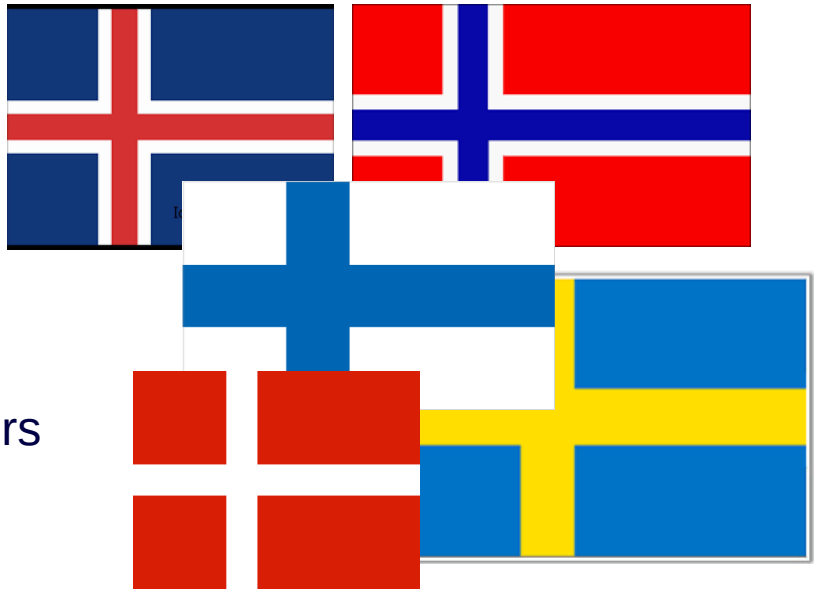
A collaboration between several GSF partners
Presents ambitious goals for innovation
Considers the business case at an early stage
Cutting edge green solutions for and beyond compliance

Its is a Danish initiative but foreign companies have participated in GSF projects and studies

Cooperation Opportunities

- Already strong common focus on maritime technology.
- Future shipbuilding technology projects for greener ships and ships with unique capabilities.
- A cooperation agreement at industry and government level
- Industry events, supplier development tours and B2B meetings.

Thank you!
Questions?



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