

Multi-year Expert Meeting on Transport, Trade Logistics and Trade Facilitation

Sustainable Freight Transport Systems: Opportunities for Developing Countries

14-16 October 2015

INTRODUCING MSC TO UNCTAD

by

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CSO Environmental and Social Business Affairs

Mediterranean Shipping Company (MSC)

15 October 2015

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Introducing MSC to UNCTAD

15/10/2015

m
SC for the real world



The vision of the Aponte family brought MSC exponential growth in terms of both volume and fleet capacity which now serve customers all over the world.

Over the past 45 years, Mr Aponte has led MSC from a one vessel operation to become a world leader in global container shipping.

Today, our focus remains on establishing long-term partnerships with customers ensuring our joint success.



CAPTAIN GIANLUIGI APONTE
Group Executive Chairman



DIEGO APONTE
President & CEO

MV PATRICIA WAS WHERE IT ALL BEGAN FOR MSC

The origins of the Aponte's family are in the peninsula of Sorrento, south of Naples, a region with a very long maritime tradition going back to ancient times.

MSC was created in Brussels, in 1970 with a single general cargo vessel, the Patricia.



MV PATRICIA
1970, CONVENTIONAL CARGO SHIP

MSC OSCAR, THE WORLD'S LARGEST CONTAINER SHIP

In January 2015, MSC introduced its flagship container vessel, the largest ever built.

- 395.4 m long
- 59 m wide
- Record-setting capacity of 19,924 TEU
- Approx. 2,76 g/t.km



MSC OSCAR
2015, FULLY CELLULAR CONTAINER SHIP



OVER
2.5
MILLION
TEU

OVER
450
OFFICES

OVER
150
COUNTRIES

OVER
24000
STAFF

OVER
465
VESSELS

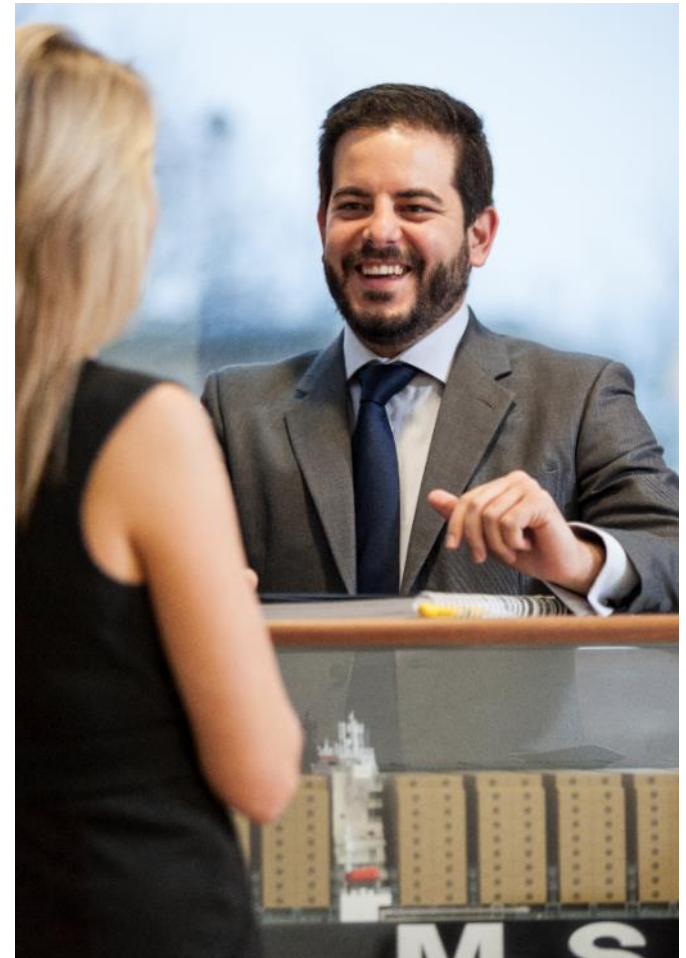
OVER
200
ROUTES

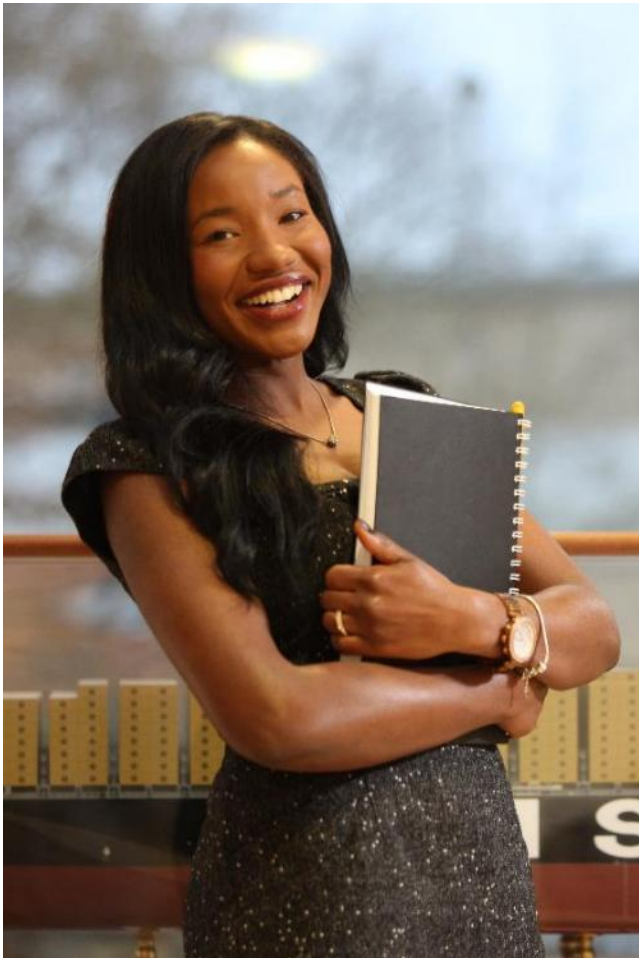
OVER
315
PORTS OF
CALL

Our shipping expertise has been built over the past 30 years by carrying people and goods all over the world.

In a global economy, our mission is to offer reliable and sustainable transport solutions by sea, road and rail to customers in all industries.

We will achieve this, as a family-owned business, by building long-term relationships founded on knowledge, professionalism and care.





We aim to become the most sustainable, technologically-advanced and customer-focused shipping line in the industry.

We will continue to enrich people's daily lives by facilitating global trade with integrity, responsibility and respect for the environment.

Our global team will deliver market-leading customer service by being experts in their field, motivated and proud of what they do.



for the real world

WHY MSC?

WE'RE ALL ABOUT PEOPLE & RELATIONSHIPS

We pride ourselves on offering global transport solutions in a way that is right for you and your business.

We're passionate about what we do, which means you can expect the very best customer service.

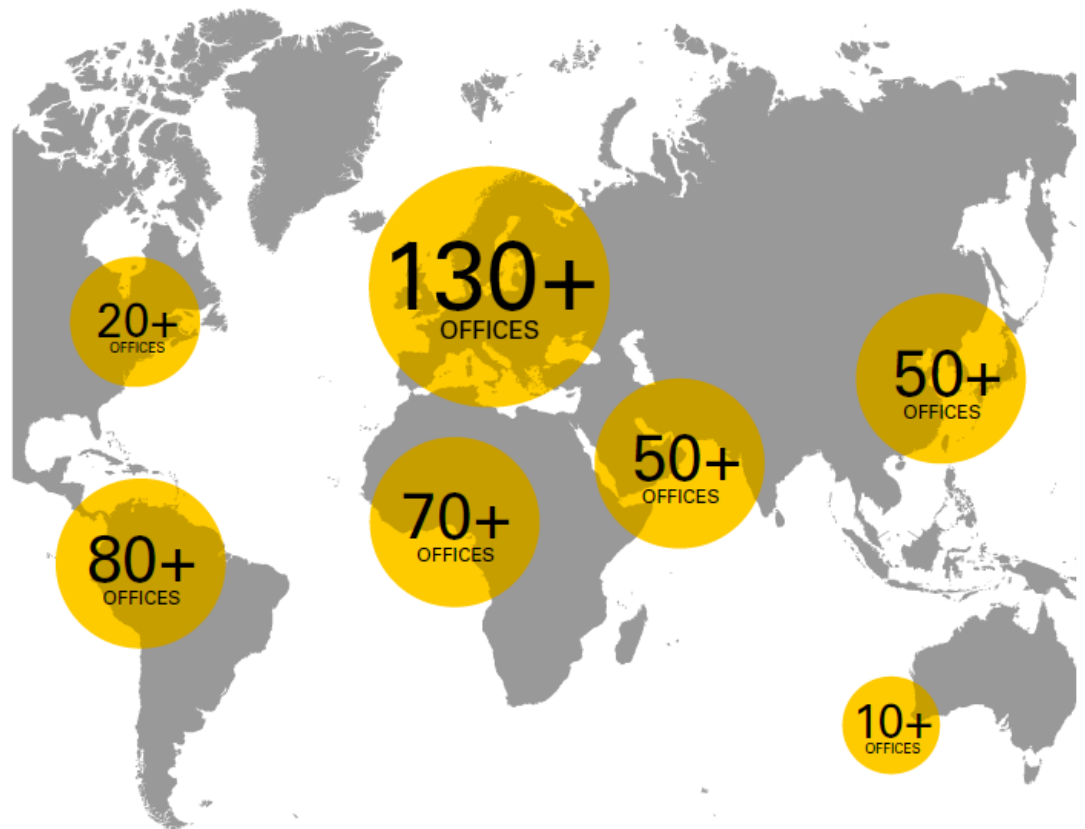


GRACE CHIA
MSC Asia

WE MIGHT BE GLOBAL, BUT OUR SERVICE IS DELIVERED BY LOCAL PEOPLE

We know that each country has its own challenges and its own way of doing business.

Over the past 45 years, MSC has built our global network based on a local, personal approach.



**“OUR CUSTOMERS
CAN RELY ON
EXPERT ADVICE
AND SUPPORT
THAT IS RIGHT FOR
THEM AND THEIR
BUSINESS.”**

DONNA CHIDLOW

MSC Export National Sales Manager
United Kingdom



CORPORATE SOCIAL RESPONSIBILITY

“ We recognise the world's oceans are precious and must be protected from pollution. That is why MSC is committed to the development of positive ethical and environmental change within our company.”

DIEGO APONTE

President & CEO

MSC Mediterranean Shipping Company S.A

MSC will improve its environmental performance through:

- Research & Development
- Maximum vessel utilisation
- Vessel retrofitting
- Slow steaming
- Network optimisation
- Low sulphur fuel (ECA compliant)
- Ship recycling (IHM compliant)



MSC OSCAR

MSC Code of Business Conduct defines clear standards of ethical and responsible behaviour. These apply to each of our 24,000 employees and our suppliers.

The full policy can be found on [MSC.com](https://www.msc.com)



MSC works with foundations and charities of all sizes in nations around the world.

We are equally proud of our major global initiatives (such as our support of UNICEF) and the many local programmes undertaken by our personnel locally.



Memberships and Associations



www.wpci-esi.org



www.cleanshippingindex.com



www.cinsnet.org



www.bsr.org

Clean Cargo Working Group



www.ecovadis.com



www.cdp.net

Carbon Disclosure Program



www.ecotransit.org

OUR SERVICES

Global Services

Enhanced East-West Network

Dry Cargo

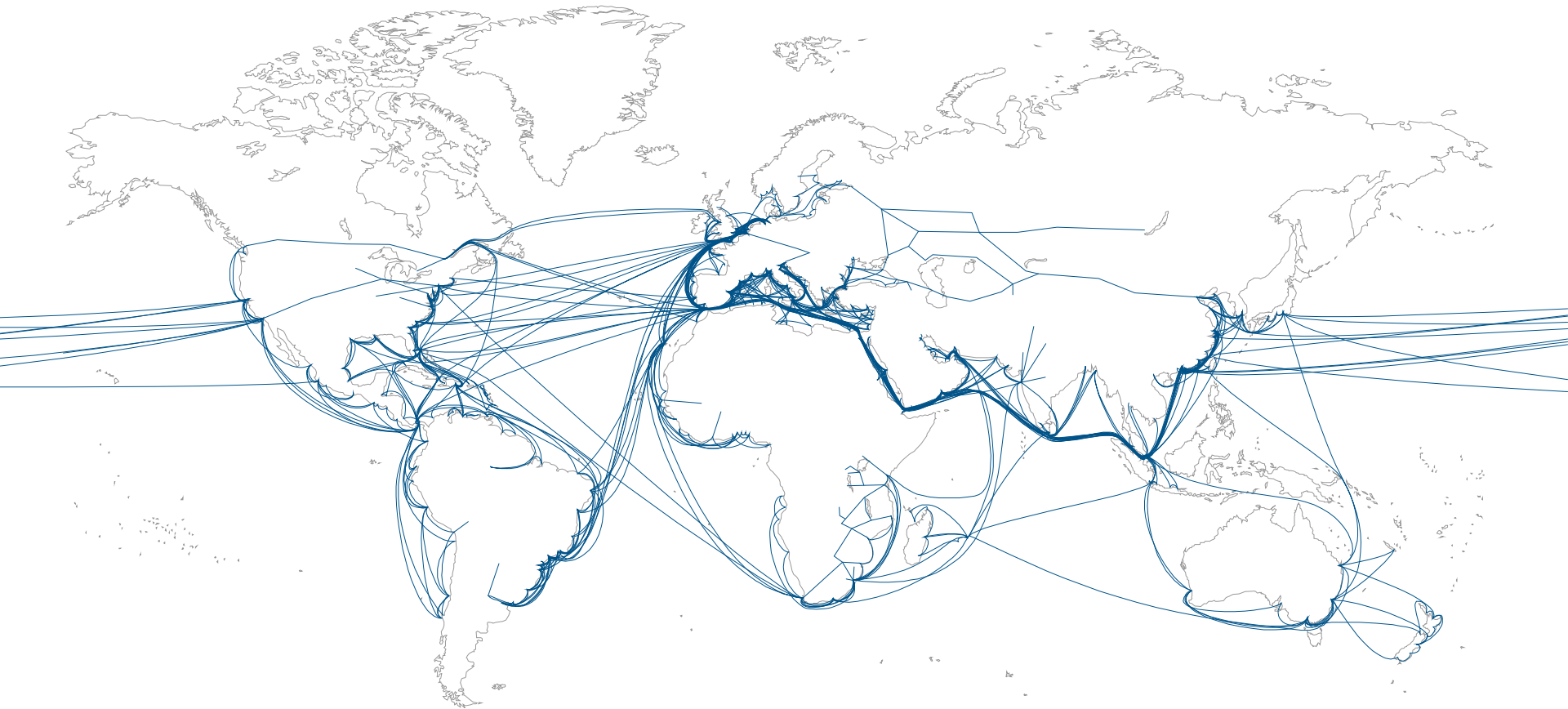
Oversized & Breakbulk Cargo

Intermodal

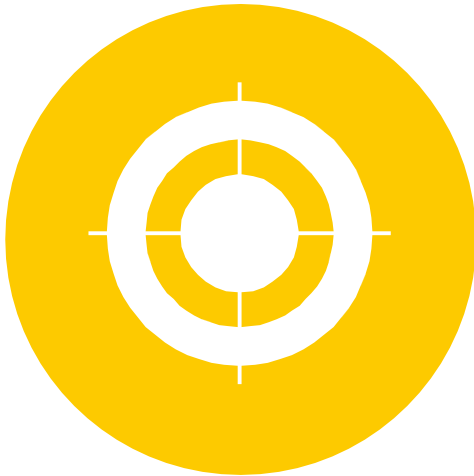
Cross Trading

Warehousing & Storage Solutions

MSC brings its customers outstanding global coverage, connecting all of the world's trade centres.



EFFICIENT



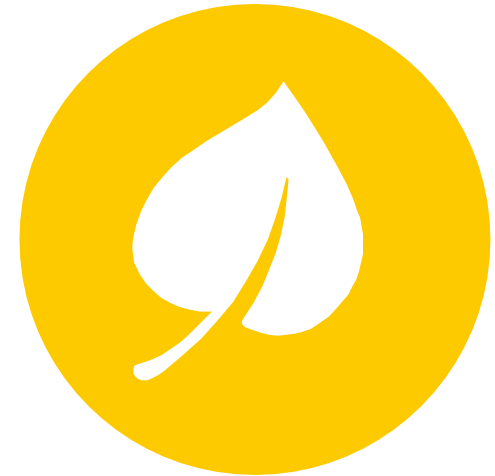
Enhanced Transit Times
More Direct Port Pairs
Larger Scope of Ports

RELIABLE



More Weekly Departures
Improved Schedule Integrity

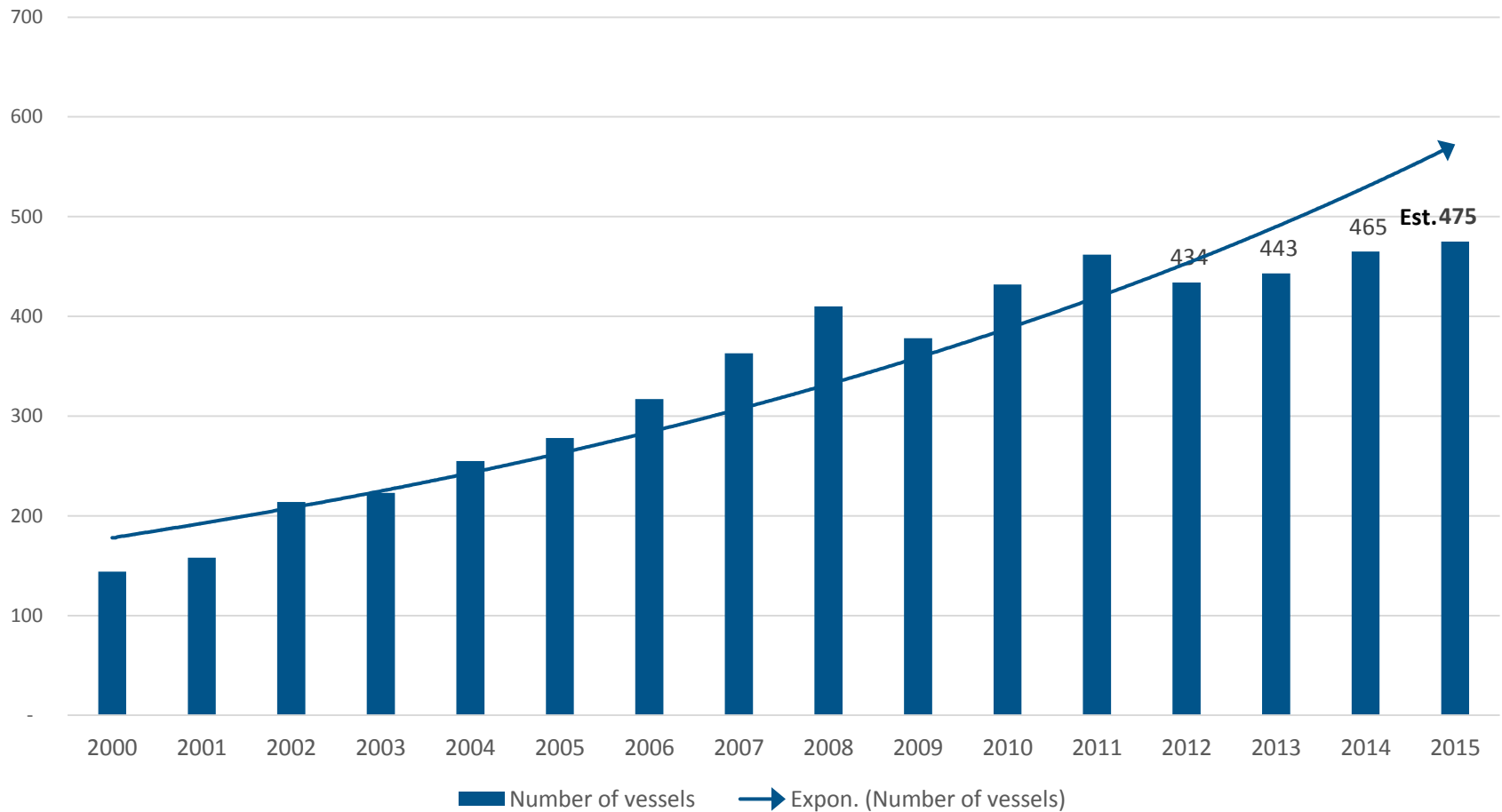
SUSTAINABLE



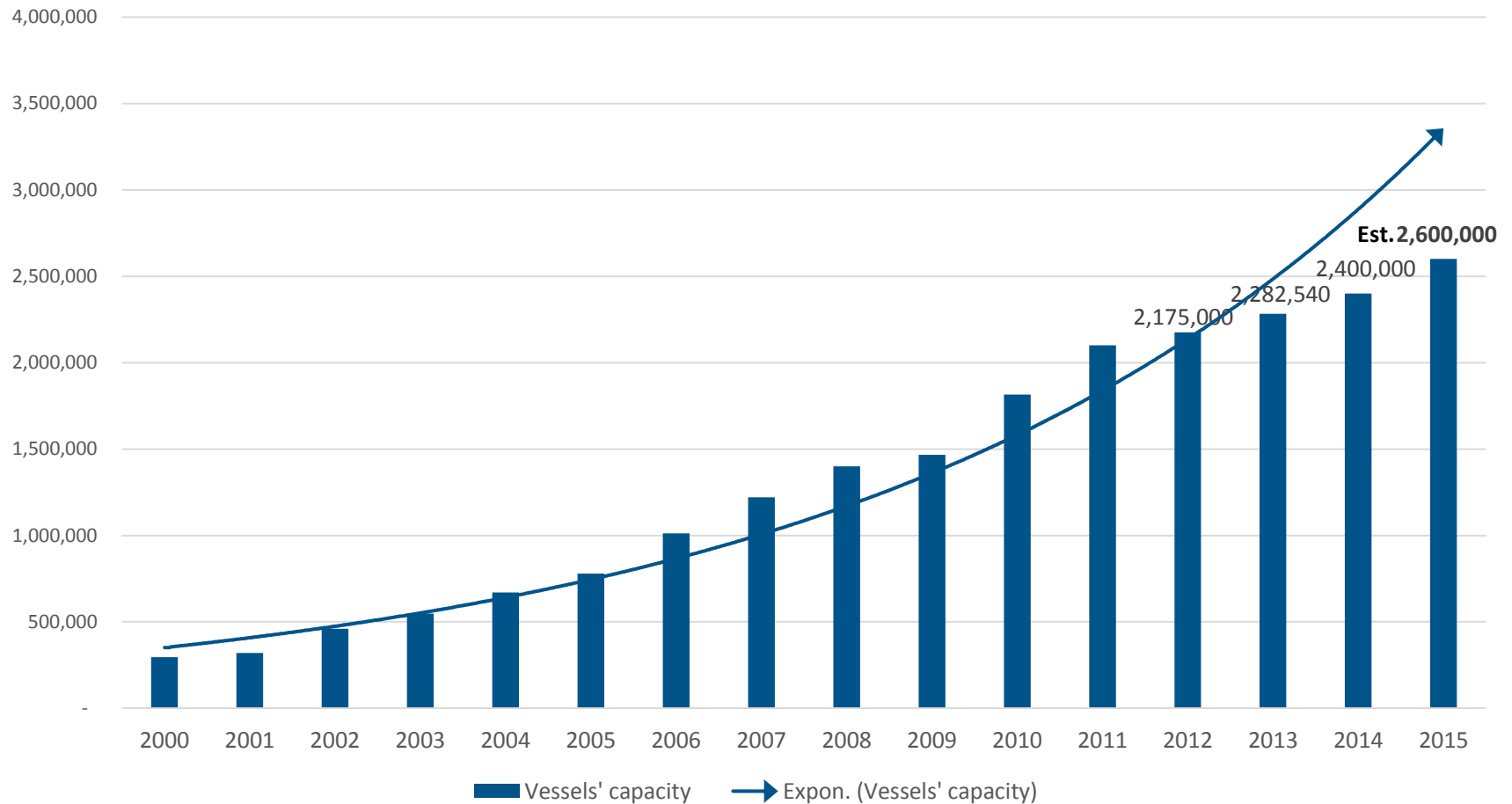
Fewer Vessels
Slower Steaming
Over 10% less CO²

SOME FACTS & FIGURES

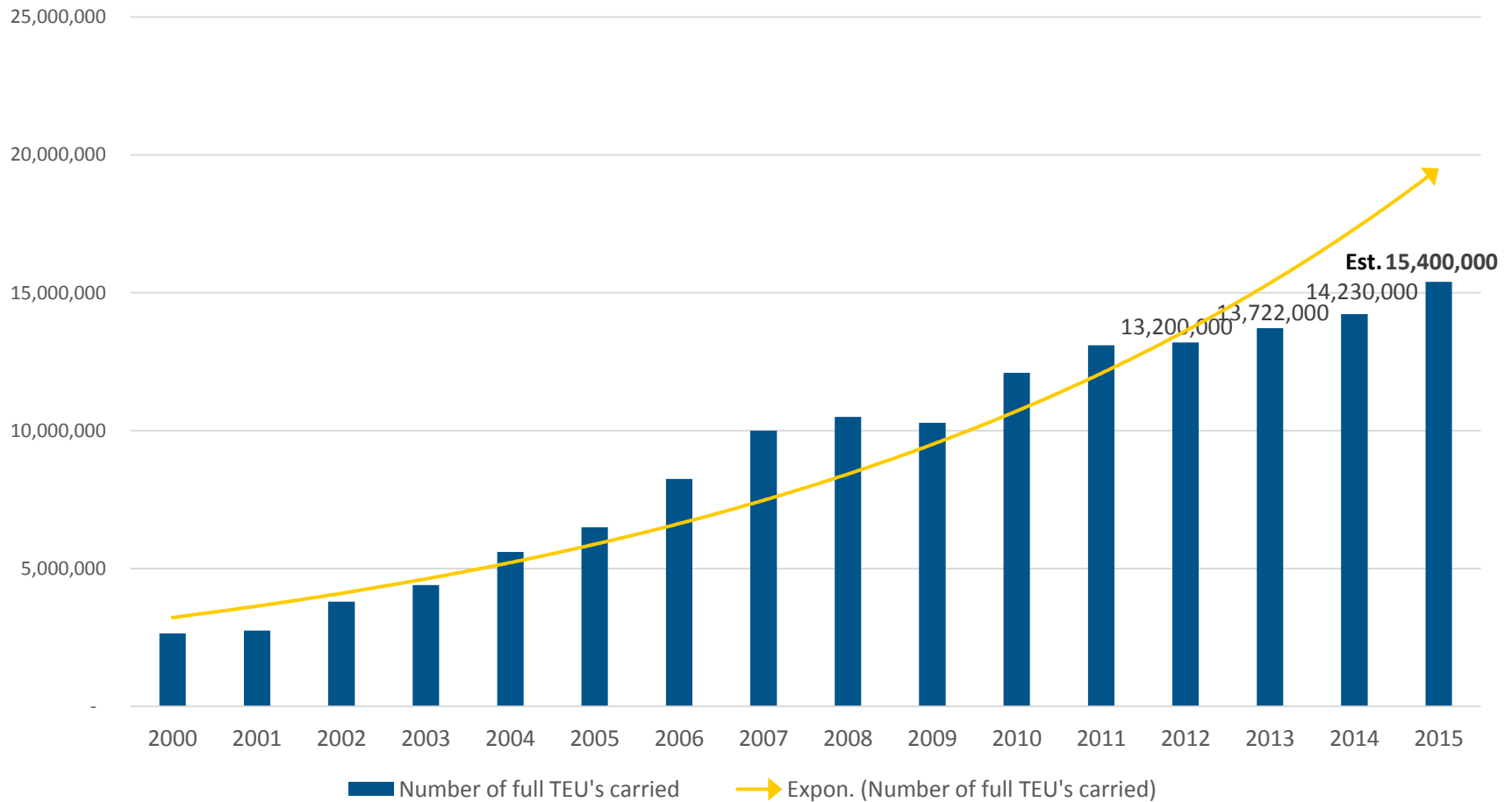
MSC Fleet - Growth 2015



MSC Intake Capacity - Growth 2015



MSC Throughput Capacity - Growth 2015

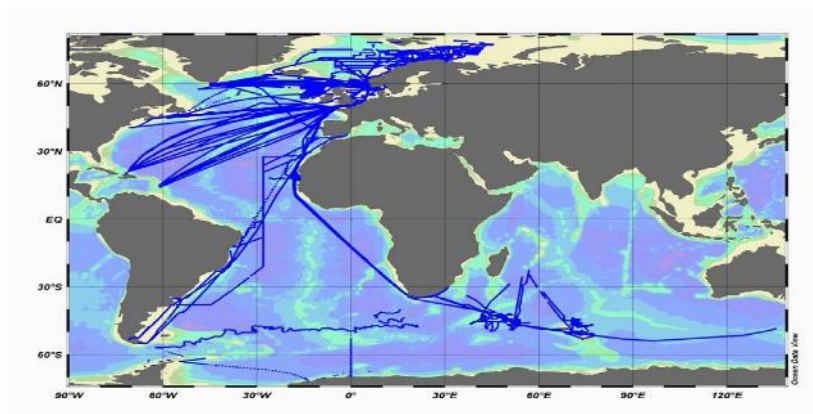


- 1. Partnerships with other Carriers, UNCTAD, UNITAR, UNDP, ITC,...
- 2. Use of exact sciences and methodologies
- 3. Own Maritime Technology Research and Design
- 4. Increased Training Programs (hi-tech systems)
- 5. Integrated Energy Management

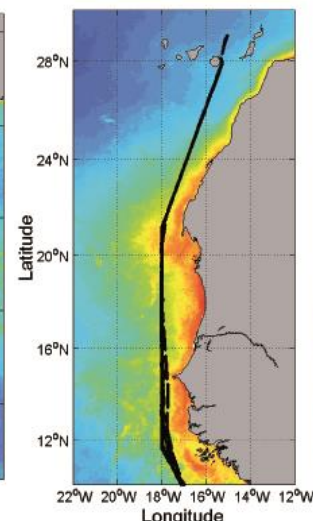
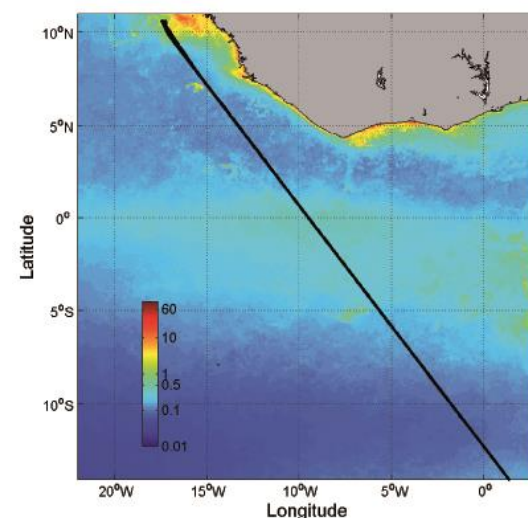
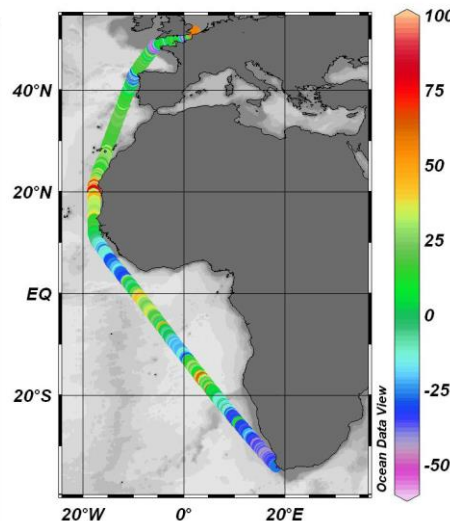
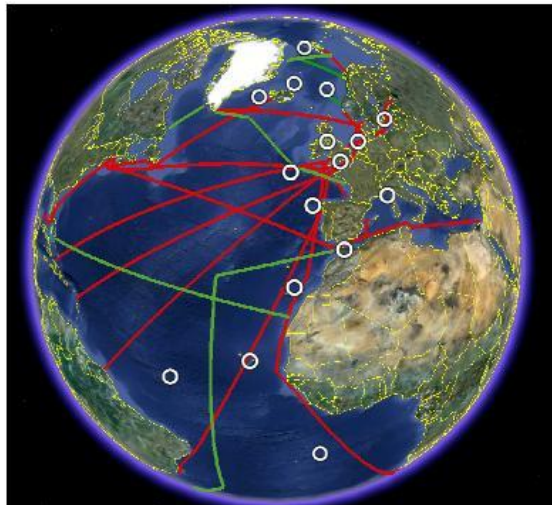
The ocean currently absorbs one fourth of anthropogenic CO₂ emissions, reducing the increase in atmospheric CO₂ that would otherwise occur because of fossil fuel combustion.

While atmospheric CO₂ determination is relatively easily, the complexity of the ocean physics and biogeochemistry, the high CO₂ variability in the different ocean basins and the high cost of its observation, makes the commercial ships community the most efficient source of ocean carbon data providers when they are fixed with autonomous CO₂ sensors.

The Voluntary Observing Ship network (Carbon—VOS) is essential for providing the global observation system for the ocean CO₂ sink. They form the backbone of the global ocean observation system.



- As it is indicated in the Atlantos proposal, the VOS line crossing the East Atlantic from North Europe to South Africa is essential for our knowledge about the role played by the oceans and how they are being reacting again the increase in the atmospheric CO₂ concentration.
- The **Mediterranean Shipping Company** is, therefore, one of the most important contributors for the continuous monitoring of the surface ocean carbon dioxide concentration, being the only company crossing the East Atlantic in a constant route
- Below tracking emissions research by MSC Martine, MSC Gina and MSC Benedetta



Energy Efficiency Retrofit - Joint Projects

Eco-Bow



Propeller



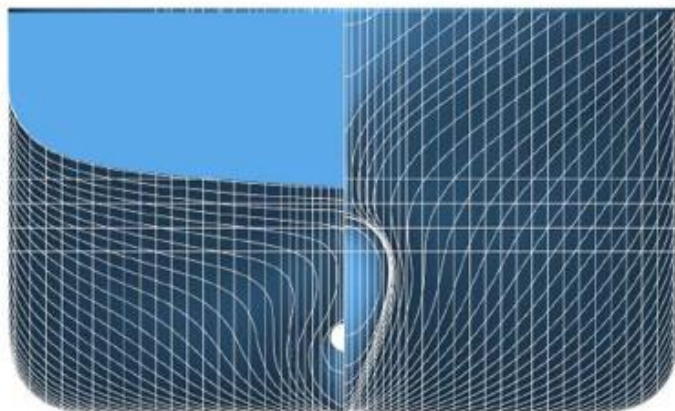
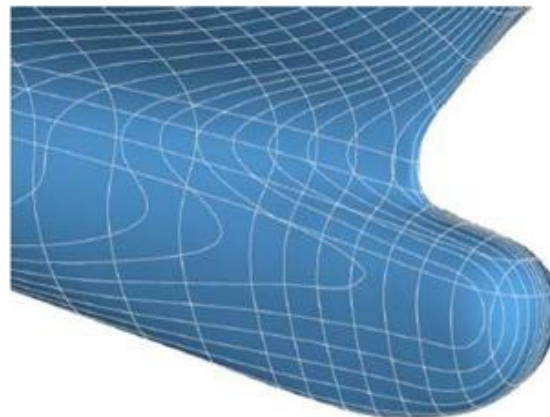
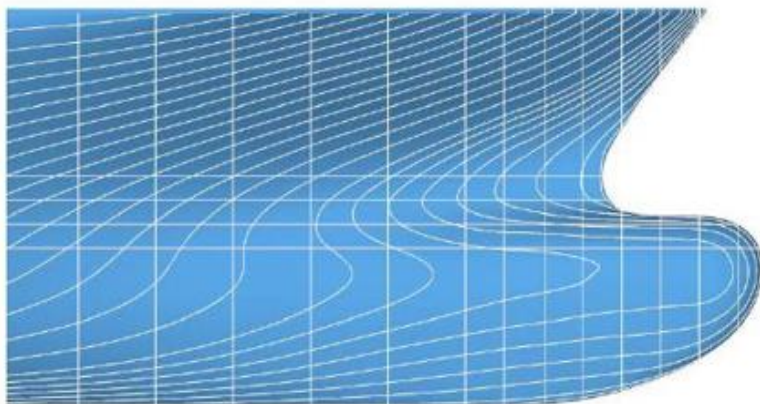
For a total of 448,000 TEU and 8,615,000 tdw

Overview Eco-Bow & Propeller Projects

Bulbous Bow			Propeller	
T EU	Study	Modification	Study	Modification
4.300	4,0%			
4.800	4,2%			
5.000	3,9%			
5.600	3,1%			
5.900	2,2%		7,7%	work in progress
8.300	13,5%	done	to be verified %	
8.400	14,9%			
8.600	14,0%	done		
9.200	9,2%	done	7,3%	done
9.700	8,8%			
13.100	5,2%		to be verified %	work in progress
14.000	4,2%	done	10,60%	done

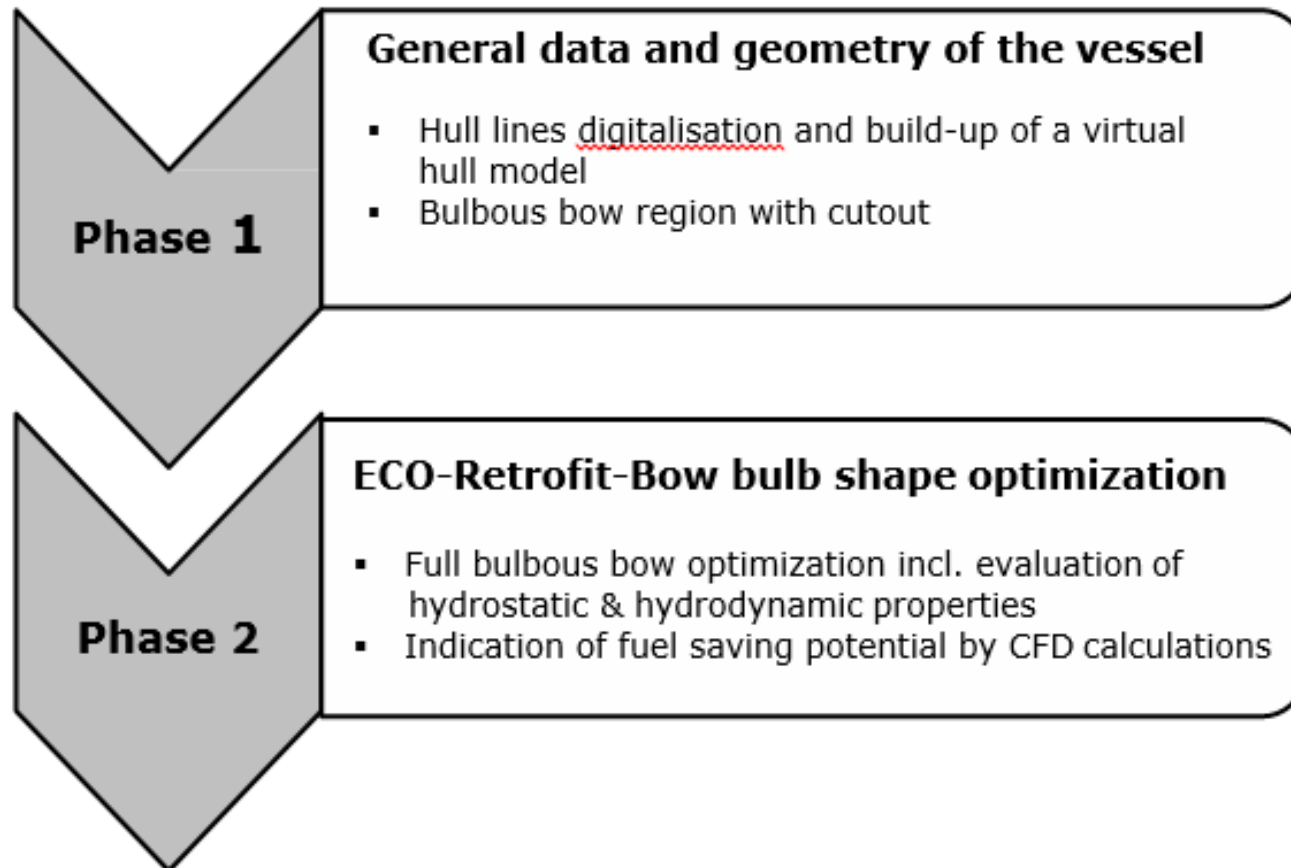
- **Motivation:** Improving the ships performance in terms of fuel consumption at off-design points while sailing in slow steam conditions.
- For 8,300 TEU container vessels a bulb shape optimization was carried out.
- Offen Ship, MSC and DNV-GL Study is based on parametric modeling and fluid dynamic analysis (CFD) identifying the optimum bulbous bow shape for the re-defined operational profile.

Eco-Bow Project – baseline hull geometry



Baseline particulars:	
LOA	324.8 m
LPP	309.2 m
BOA	42.8 m
Draft	13.0 m

Eco-Bow Project with focus on a 8,300 TEU – Process Overview



Eco-Bow Project – operational profile & expected savings

Operational Profile

Draft / Speed	A (23 kn)	B (22 kn)	C (19 kn)	D (16 kn)
A (14.5 m)	AA (0%)			
B (13.0 m)		BB (3.5%)	BC (14.0%)	BD (17.5%)
C (11.5 m)		CB (4.0%)	CC (16.0%)	CD (20.0%)
D (10.0 m)		DB (2.5%)	DC (10.0%)	DD (12.5%)

Expected Savings

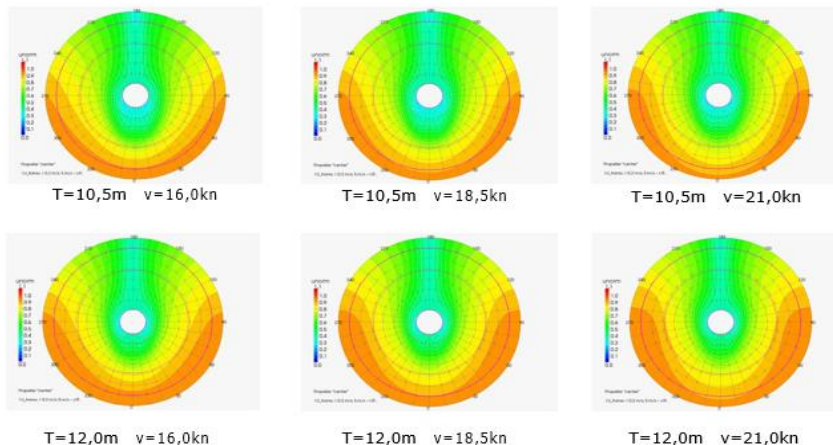
Draft / Speed	A (23 kn)	B (22 kn)	C (19 kn)	D (16 kn)
A (14.5 m)	AA (-6.5%)			
B (13.0 m)		BB (-1.9%)	BC (4.8%)	BD (11.3%)
C (11.5 m)		CB (4.9%)	CC (13.1%)	CD (20.4%)
D (10.0 m)		DB (9.4%)	DC (15.7%)	DD (22.3%)

Propeller Project

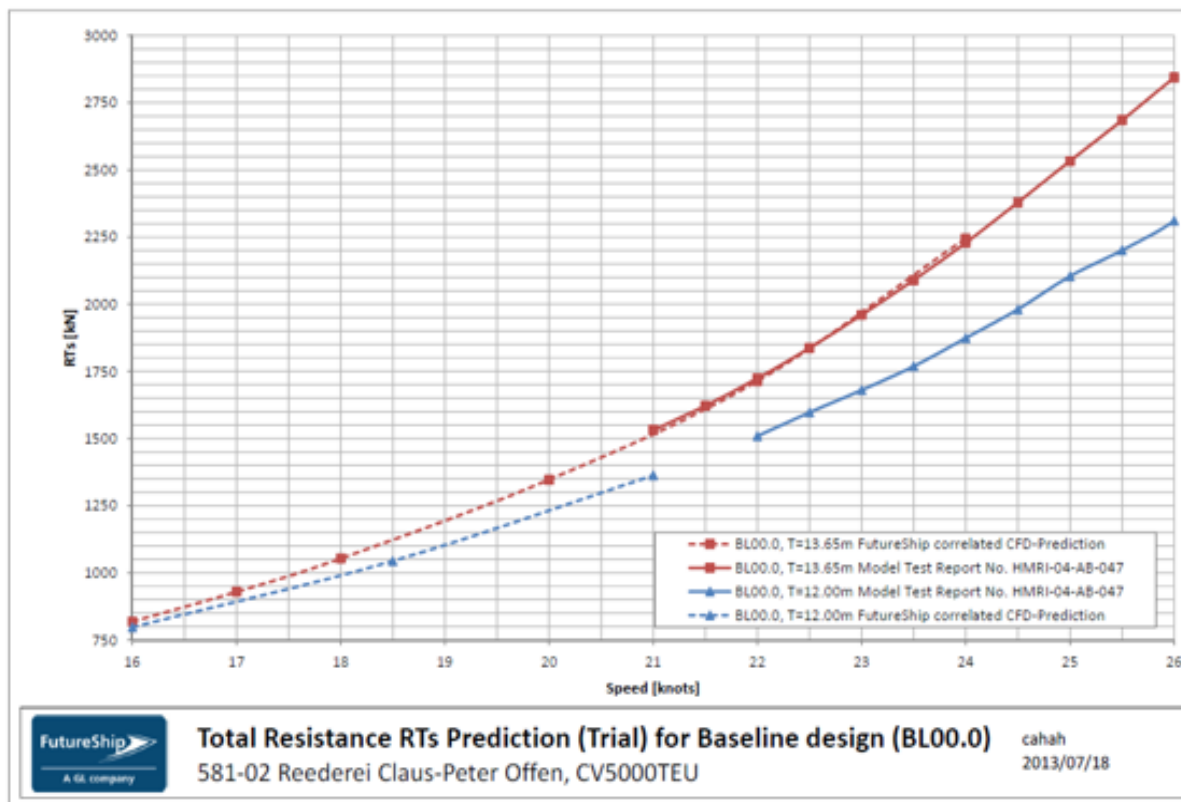
DNV-GL and MMG was offering the following analysis necessary for power requirement determination:

- Nominal wake fields for different drafts and speeds
- Total resistance prediction

Propeller Project – Nominal Wake Plots



Propeller Project – Total Resistance Prediction



Hull Resistance Special Paintings

Computer Fluid Dynamics Technology

Integrated Energy Management

Weather Routeing Technologies

Trim Optimisation

Dear Mr. Chairman,

Dear Excellencies,

Dear Ladies and Gentlemen,

Thank you for your attention.



for the real world