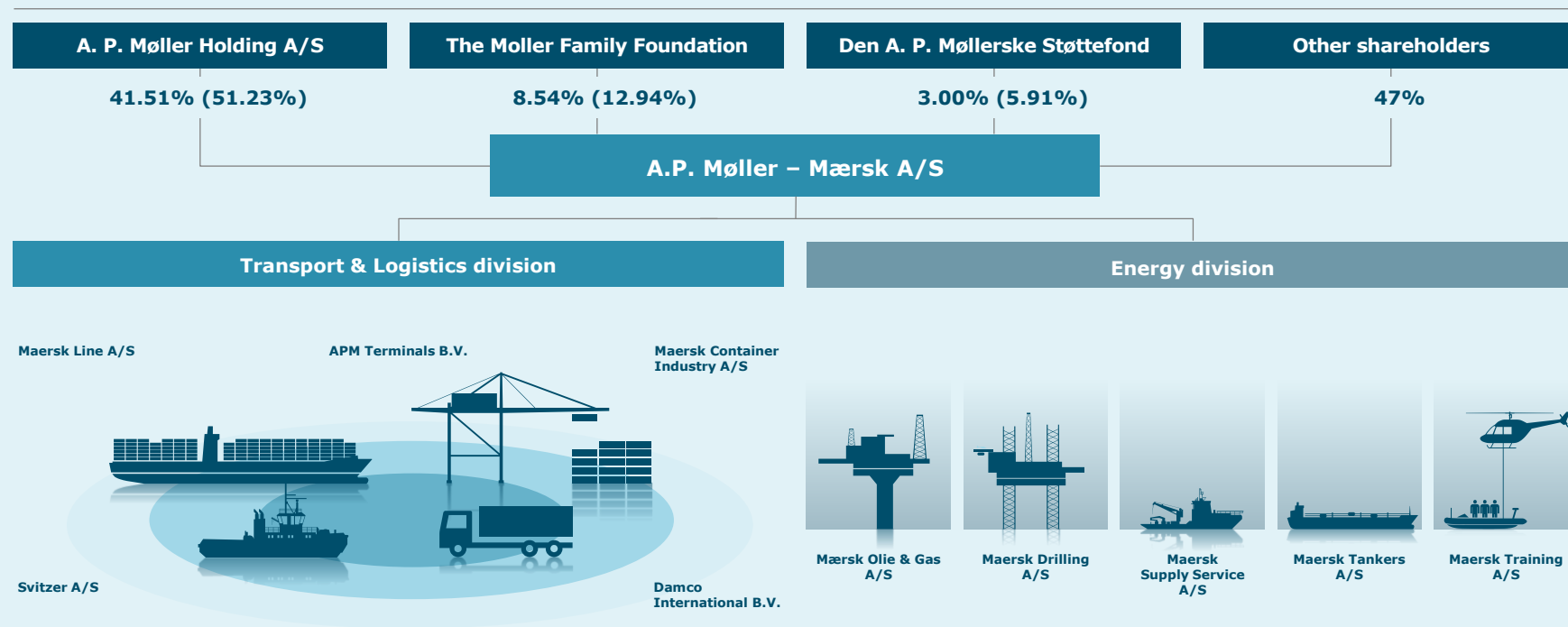




The future fuel challenge of shipping

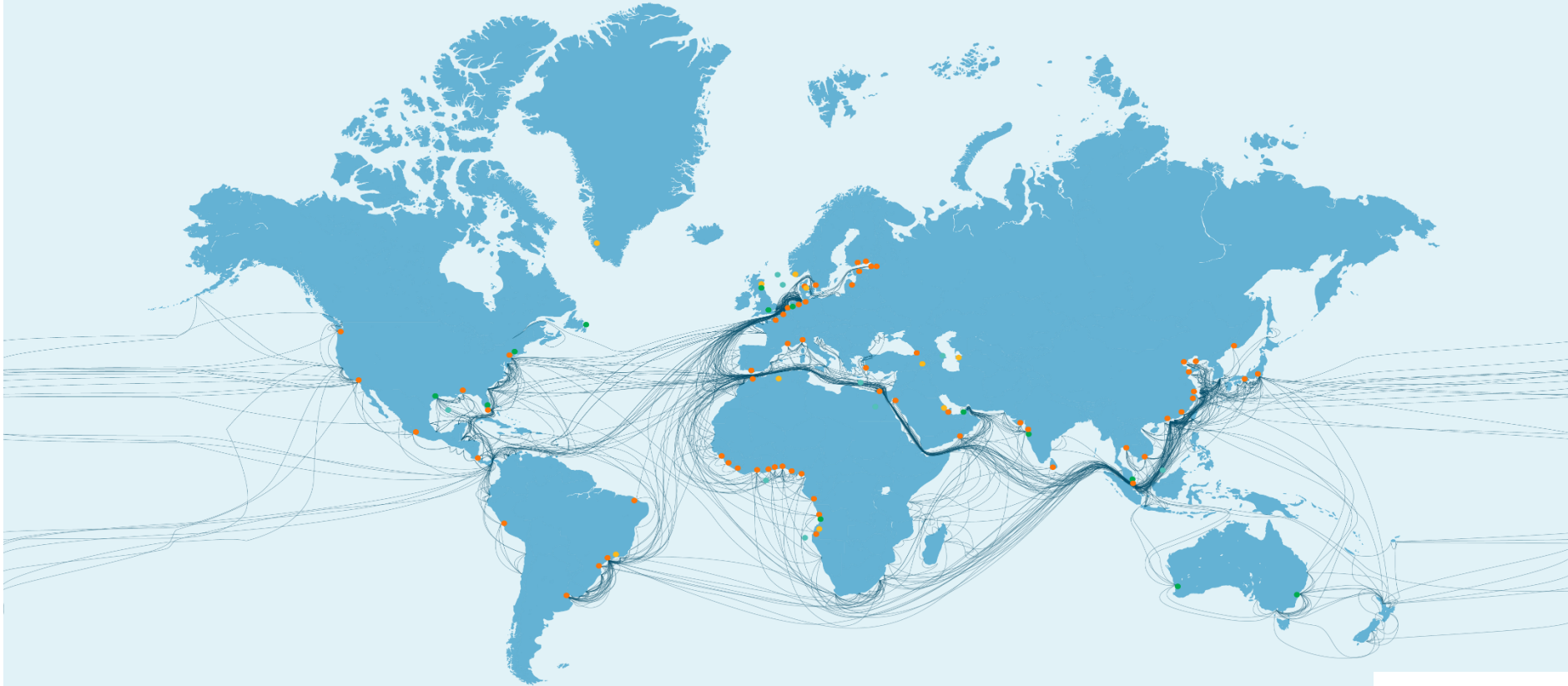
Niels Henrik Lindegaard
Managing Director, Maersk Oil Trading

Ownership structure



Share capital in %
Percentages in () = Votes

A.P. Moller – Maersk at a glance



Transport & Logistics division



MAERSK LINE

Revenue
USD 20,715m

Underlying profit
USD -384m

Employees
31,858



APM TERMINALS

Revenue
USD 4,176m

Underlying profit
USD 433m

Employees
22,615



SVITZER

Revenue
USD 642m

Underlying profit
USD 89m

Employees
2,870



DAMCO

Revenue
USD 2,507m

Underlying profit
USD 31m

Employees
11,292



MAERSK CONTAINER INDUSTRY

Revenue
USD 564

Underlying profit
USD -53m

Employees
5,381

Numbers are from full year of 2016

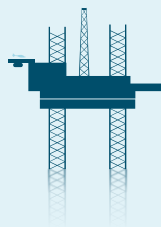
*The underlying profit is equal to the result of continuing businesses excluding the net impact from divestments and impairments.

Energy division



MAERSK OIL

- Revenue
USD 4,808m
- Underlying profit
USD 497m
- Employees
4,405



MAERSK DRILLING

- Revenue
USD 2,297m
- Underlying profit
USD 743m
- Employees
3,325



MAERSK SUPPLY SERVICE

- Revenue
USD 386m
- Underlying profit
USD -44m
- Employees
1,726



MAERSK TANKERS

- Revenue
USD 877m
- Underlying profit
USD 58m
- Employees
2,415



MAERSK TRAINING

- Revenue
USD 40m
- Underlying profit
USD -4m
- Employees
256

Numbers are from full year of 2016

*The underlying profit is equal to the result of continuing businesses excluding the net impact from divestments and impairments.



The global sulphur cap entering into force in 2020

The International Transport Forum at the OECD said:

*"The total increase in container shipping costs due to the **2015 requirements amounts to USD 500 million**"*




*"The **2020 requirements could add annual total cost in the order of USD 5 billion to USD 30 billion** for the container shipping industry"*



What are the **compliance options** from a ship owners point of view?



Compliance options

	LNG	OIL	
	LNG propelled vessels 	Gas oil/ 0.5% fuel 	Scrubbers 
Ease of implementation	--	+++	--
CAPEX for newbuilds	--	+++	-
OPEX	+	X	-
Fuel price	?	-	++
Operational feasibility	-	++	-

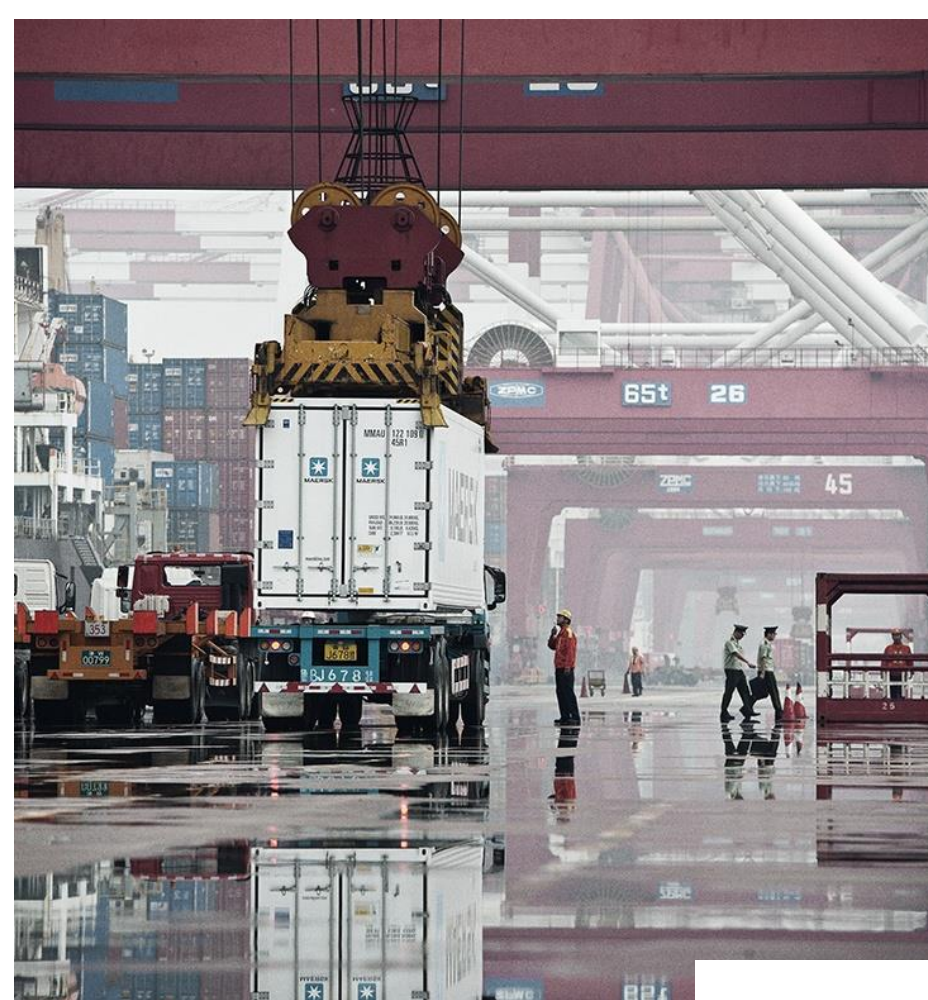
LNG Option:

- **Environmental:** Clear benefits
- **Implementation:** Best suited for new builds. CAPEX intensive, 2-stroke solution yet to be matured
- **Infrastructure:** Few high capacity supply locations
- **Regulation:** Design requirements, bunkering safety procedures unclear



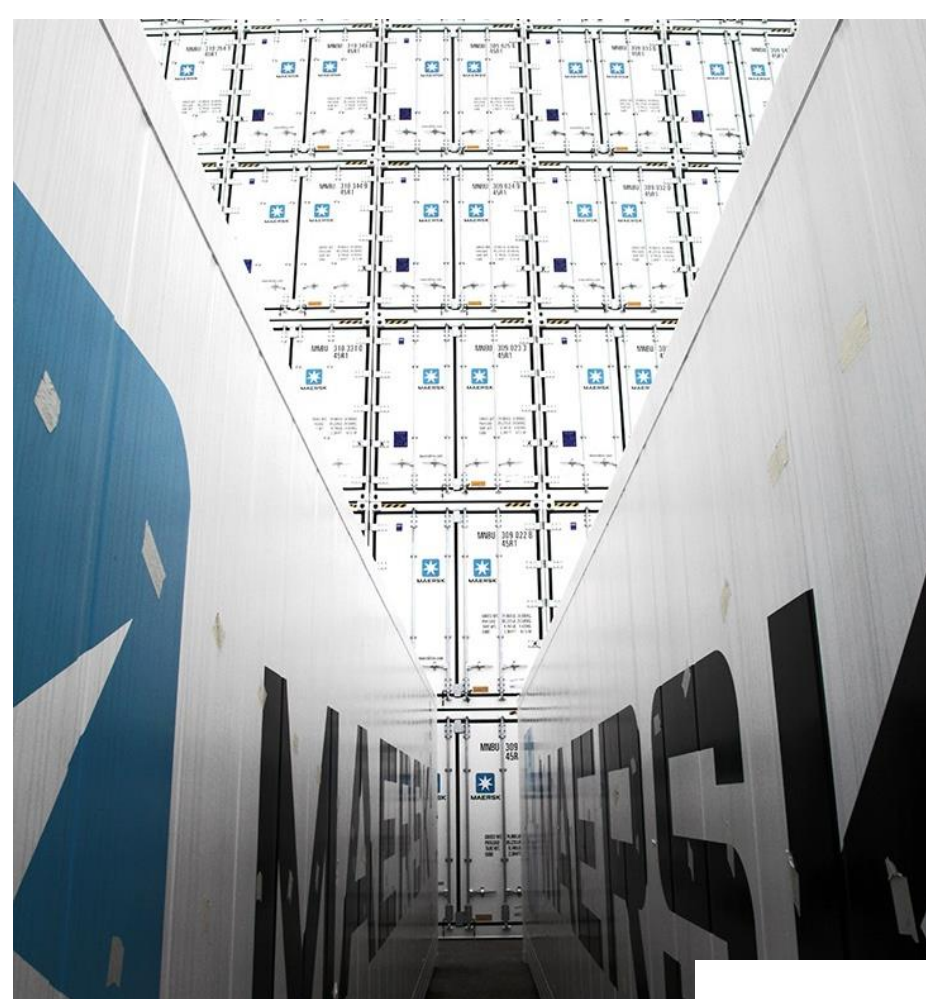
Scrubber Option:

- **Economics:** Business case looks appealing
- **Implementation:** Complex piece of equipment, considerable space requirement, CAPEX demanding
- **Operational:** power intensive, operation & maintenance, specialized personnel, consumables
- **Infrastructure:** How to get rid of chemical waste from scrubbing process
- **Regulatory:** what will happen to open loop scrubbers?



What next?

- **Challenge:** Very significant fuel cost impact irrespective solution. CAPEX a constraint
- **Considerable uncertainty:** The choice that looks obvious today may not be the one in 2020
- **Safe bets:** Gas oil/0.5% seems to be the least risky choice at the moment. ML will not go the scrubber way.





Thank you!

Niels Henrik Lindegaard
Managing Director, Maersk Oil Trading