



# Capital Link Decarbonization in Shipping Forum

"Moving from Discussion to Delivery"

Digital Conference

Wednesday & Thursday, April 14 & 15, 2021

## Energy Efficient Technologies – Improving Fleet Performance



**Christos Chryssakis**

Business  
Development Manager  
DNV

While low carbon fuels will be an important element towards achieving the industry's decarbonization goals, energy efficiency technologies will be key to reducing the carbon intensity of the fleet in the short term and the fuel bill in the long term.

Performance monitoring and the role of advanced artificial intelligence tools were highlighted as one of the key enablers towards reducing fuel consumption and assessing the efficiency gains of other technologies.



**Tom Strang**

Senior Vice President,  
Maritime Affairs  
Carnival Corporation

Reducing our energy consumption in our operations is a critical element in addressing this challenge while we continue to work on long term net-zero fuels and energy conversions. We continue to investigate new technologies and operational aspects that will help us reduce our energy consumption.

Harnessing these technologies with itinerary/route planning, weather and condition monitoring to name but a few has allowed us to reduce our carbon footprint by some 30% since 2005.

The challenge remains to keep improving and working together with like minded companies and equipment suppliers to learn what works and perhaps more importantly what doesn't is key to success.



**Roberto Coustas**

CEO & Co-Founder  
DeepSea Technologies

"As a co-founder of a performance optimization company, I have learnt that every vessel is unique, and therefore there isn't a recipe that will work on all vessels.

From our experience, in terms of return on investment, Optimization Technologies are ranked first by a large margin, then hull coating, and ducted propellers third. Artificial intelligence is a very powerful tool to capture the complexity of vessel behavior under many different conditions.

We've proven a 10% decrease in fuel consumption just with a better route, speed and trim combination – no other investment needed. Any other technology that even claims these results requires dry-docking and makes economic sense primarily for newbuilding vessels.



**Richard Gilmore**

Executive Vice President  
Maran Gas Maritime

MGM is working with International Universities, Class and Shipyards to study and explore additional technologies, in existence or under development, that may further reduce CO2 emissions for its fleet." MGM uses digital technology to monitor vessel performance in real time and uses an onboard waterproof camera, which is lowered into the water while the vessel is idle/at anchor, to provide a visual check on the state of the coatings on a periodic basis confirming when the time is right to perform a hull cleaning."



**Steve Brown**

Manager of Shipping  
Technology  
Shell

Shell has for some years developed and deployed energy efficient technologies on Owned and Chartered vessels. Development of these technologies has been both internal and through collaboration with industry partners, technology providers and ship owners. In addition to immediate emissions reductions and savings, reducing the total power required narrows the technology gap for future fuels and new technologies. Energy efficient technologies are essential in enabling these for all decarbonization pathways and can be deployed now.