High Performance Decision-Making

High frequency data is twice as accurate as noons– even with the best logs and manual reporting

Manual noon data has been the reporting standard in shipping for decades. But while these snapshots have provided once-a-day observations, they have never (and never will) take into account real-time weather changes and environmental conditions—for actionable voyage optimization.

Without high frequency data, owner/operators are unable to make decisions that adhere to charter party agreements, maximize profitability, and impact ETAs at the most meaningful moments in a voyage.

Nautilus Platform combines noon reports with onboard sensor data, Baltic Index values, weather, and predictive analytics—for owner/operators and captains to make contextualized decisions that maximize TCE, help mitigate losses and claims, more accurately maintain each vessel, and ultimately support capturing the next fixture.

In comparing accuracy between noon and high frequency data, Nautilus Labs found that noon data exhibited an average error of 16% (in prediction of propulsion efficiency)—while high frequency data cut that margin of error in half (8%). This was validated by a separate Energy Institute (University College London) study that found comparable results as presented at the Low Carbon Shipping Conference in London. And, in terms of real-world performance, deviation in data uncertainty yielded an 18% differential in predicted shaft horsepower required to meet a given speed, in a 2017 analysis by Hyundai Heavy Industries.

Sole reliance on noon-based data prevents owner/operators from making meaningful decisions while underway–optimize for routing, TCE rates, maintenance events, and ETAs–or help mitigate losses and claims in the future.

High Performance Decision-Making

- Real-time S&C curves based on high frequency data reported every 30 seconds
- RPM recommendations to maximize TCE across one or multiple voyages
- Instantaneous charter party monitoring and voyage reporting to mitigate claims

- Data visualization to identify stoppages at sea and costly RPM modulations
- ROI-maximizing maintenance planning (in place of expensive diving observations)
- Rapid bunker quality evaluation to support supplier claiming

Continuous decision-making support, every 30 seconds.

Seamlessly unify, analyze, and weaponize every dataset that's important to your shipping organization. By contextualizing accurate vessel performance profiles with forward-looking weather, routes and commercial data, Nautilus Labs is the leading maritime platform for operational recommendations that ensure maximum profitability.

Legend: Performance Model (Based on Nov 24th, 2018 - Nov 24th, 2019); All Sensor Data; All Noon Data; Defined Sensor Data; Defined Noon Data. Y-axis: Main Engine Fuel... X-axis: Speed Through Water (kt)