



WORK
ABILITY



SAFETY



SUSTAIN
ABILITY



PERFORM
ANCE

 **MO4** ANALYTICS



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A need for smart operations

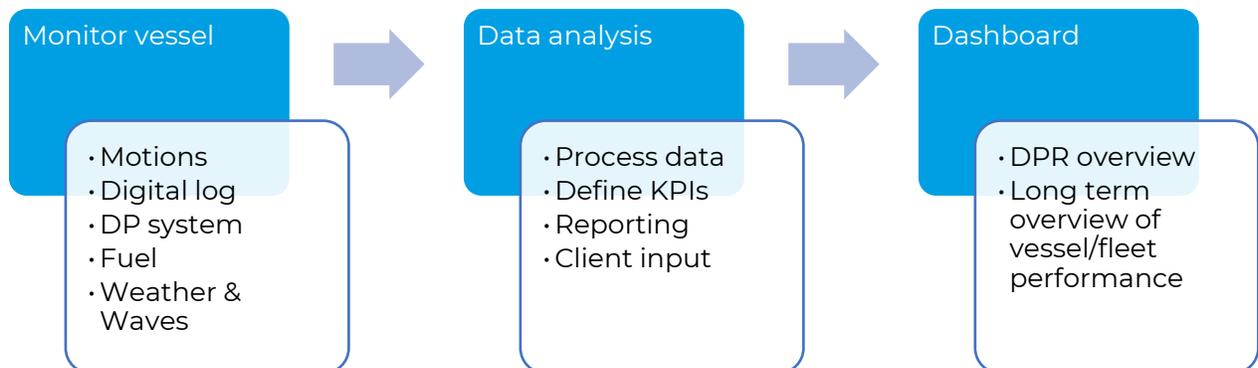
Managing costs of offshore operations is becoming increasingly important. A clear driver exists in the offshore wind industry to push operational costs lower and deliver power more economically. The same applies to traditional oil and gas market activities such as decommissioning and late-life operations – a clear incentive for low-cost solutions. However, offshore operations are inherently expensive due to the specialized vessels and risks that are not present onshore. It's simply more difficult to perform a lift on water than on solid ground. Risk is another important item: constantly changing weather and waves is a given in any offshore location. The cost impact of not being able to access a platform or turbine, install a component or perform a lift can be immense.

Managing weather critical operations, weather downtime and minimizing operational costs are tasks that call for digitalization. MO4 provides innovative services that enable the next step in optimizing offshore operations.

The main benefits of digitalization of offshore operations:

- ✓ Higher uptime of vessels
- ✓ Lower fuel consumption and emissions
- ✓ Safer operations
- ✓ Transparency in critical decisions

There are many solutions on the market that promise to deliver these benefits. But it is crucial for the success that a solution fits well into the daily business. MO4 therefore offers *Data Analytics*, a service that measures and visualizes the performance of your offshore operations. A vessel is outfitted with various sensors and existing systems are connected to a datalogger. Important metadata such as weather data and operational data from the crew is added to the dataset. The collected data is processed by our software and is made easily accessible via the MO4 Data Analytics dashboard.



Data Analytics

The first step within our Data Analytics product is connecting the vessel or fleet to the network. It is possible to interface with existing vessel hardware or supply our own. After the measurement data stream is set up, the raw data is transformed into useful information and KPI's. This is done by our in-house developed algorithms. A few examples of KPI's that are extracted from the raw measurement data are:

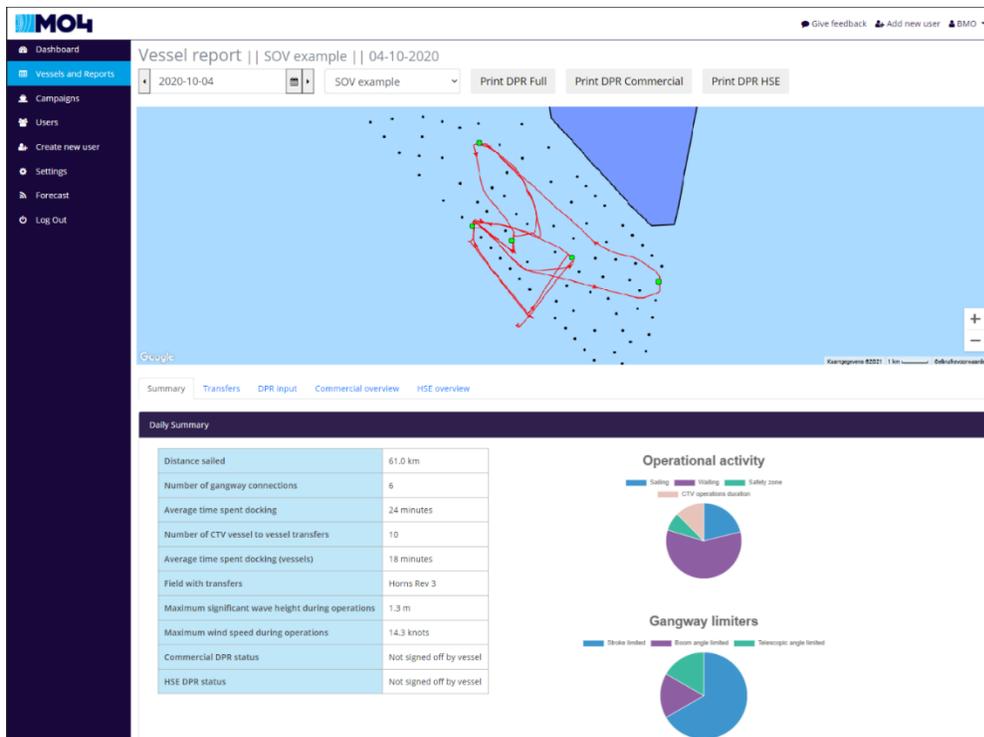
- Impact force on a CTV boat landing
- Slip during personnel transfer by a CTV
- Cycle times of a SOV
- Fuel consumption during DP or transit
- Gangway utilization during personnel transfer

The KPI's are visualized in a clear and intuitive dashboard. The dashboard is accessible for different parties, for example

a vessel master, OIM or client representative. The dashboard also allows manual data input. In this way the dashboard serves as a digital DPR. The KPI's are presented in both a daily and long-term overview. This enables the user to monitor the performance of a vessel or fleet at different time scales. By using these overviews, one can answer questions like:

- Is it possible to reduce fuel consumption and carbon footprint?
- Can we reduce weather downtime and needless sailing?
- Which vessels in my fleet are under or overperforming and why?
- Is it possible to make operations safer by leveraging data into daily use?

MO4 Data Analytics enables you to fully optimize your vessel or fleet performance.



Screenshot of the Data Analytics dashboard for an SOV