Improve your fleet performance

TRITON - DAMEN'S IOT PLATFORM

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Insights into fleet and vessel performance

Triton is Damen's award-winning, centralised Internet of Things platform (IoT), which puts your vessel's data to work in an easy-to-use digital environment.

The platform collects and analyses asset data that provides the crew and fleet managers with regular updates on system and overall asset health, enabling you to gain valuable insights into fleet and vessel

performance. Additionally, Triton eases maintenance tasks by giving the crew accurate instructions that help keep systems in optimal condition.
By obtaining data-driven insight you have timely information on the utilisation and efficiency of your ship's operations, in turn leading to substantial cost savings and ultimately, a competitive advantage.

Damen Digital Solutions also provides its services for any kind of vessel, Damen built vessel or from another shipyard.

» Vital insights
Crucially, Triton provides insight into the vessel's performance via the dashboard and later through in-depth reports. The first step in gaining efficiency is to have insight, and this knowledge can then be used for more effective operations. For example, if the crew is made more aware about fuel consumption and make the required changes following a Triton report, an impressive 15% reduction in fuel costs can be achieved.

» Optimal operations
Triton provides data indicating fuel consumption, temperature, power output, speed, the load moved and more. It takes into account the operational profile of the vessel, enabling the crew to adjust these variables to achieve optimal efficiency, and it makes it possible to perform monitoring and analysis ashore.

» Improving maintenance and fleet performance
Triton makes your fleet more efficient, more effective and more sustainable, helping you to improve maintenance and fleet performance. Remote Access to systems on your ship can be used to support you when troubleshooting or running updates.

» Financial benefits
The way Triton predicts the need for maintenance, while motivating the crew and shipowner to operate at the optimal output, reduces downtime and provides constant insight into the vessel's condition and value. Investors have more security about their return on investment too.

Remote monitoring
Triton gathers information generated by your vessel's systems and compiles it into a single, secure, easy-to-use visual platform. Smart sensors enable Triton to detect changes in performance at an early stage and shares this data with the crew and fleet operations. The dashboard provides real-time visualisation of onboard systems, reduces data overload and gives access to expert OEM knowledge.

Operators at the shipowners' office can log in to their vessel in real time and see the specifics of the vessel's performance and condition.
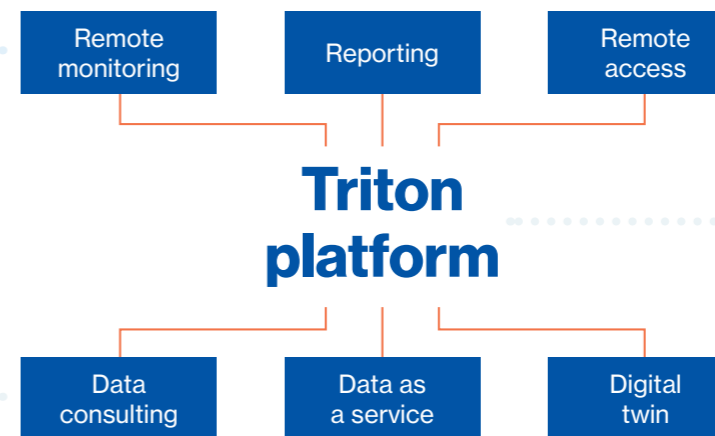
Reporting
Triton can generate a wide variety of reports that give you valuable insight into your operations. These include:
› Emission report - Important for the Energy Efficient Existing Ship Index (EEXI) or Carbon Intensity Indicator (CII).
› Fuel report - Fuel consumption is combined with the operational profile of the ship, helping to show where efficiencies can be gained.
› E-Ship report - Energy use in relation to the available power of the battery bank. Is it possible to have a fully electrically driven ship?

Remote access
Triton gives you the possibility to access the ship from shore. A single-entry system gives you control of security and access into your ship systems. Multi Factor Authorisation is also in place via our "Defence in depth" model. This means that only authorised persons can access the ship after passing multiple security layers and following approval from the correct stakeholders.

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        Remote          Reporting         Remote
       monitoring                         access

                     Triton
                    platform

        Data          Data as          Digital
      consulting     a service          twin
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Data consultancy
The Damen team can also analyse the data for you, providing advice about how best to make your operation more efficient. Support can be provided via reports, meetings or remotely.

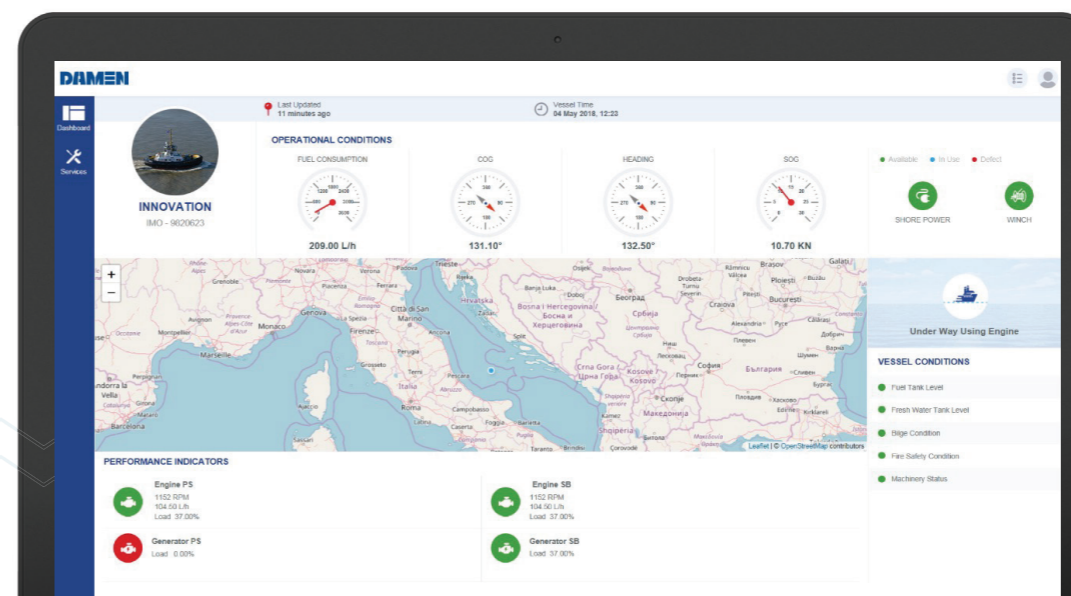### Data as a service – a single point of access
Triton can be used as the central 'data collector' on board. This takes away the need to have many different systems aboard and several data connections to the shore, improving security. Additionally, having a single system is extremely cost effective.

Digital twin
Damen can build a digital twin of your vessel, which realistically reflects the critical systems of the ship. This enables shipowners to test critical systems, critical updates or vessel upgrades, for example when considering hybrid propulsion. A digital twin is not only a copy of the design, it can also be connected to all of the sensors in the actual ship.

Triton platform – Security is a priority
The utmost care is taken to protect security and the encrypted data connection of the vessels. We understand that protection from cyber criminals is absolutely vital. We ensure the safety and confidentiality of information, secure software and data access, as well as the reliability and stability of our systems. Triton security is based on international standards and conforms to IEC, IACS and IMO rules and recommendations.
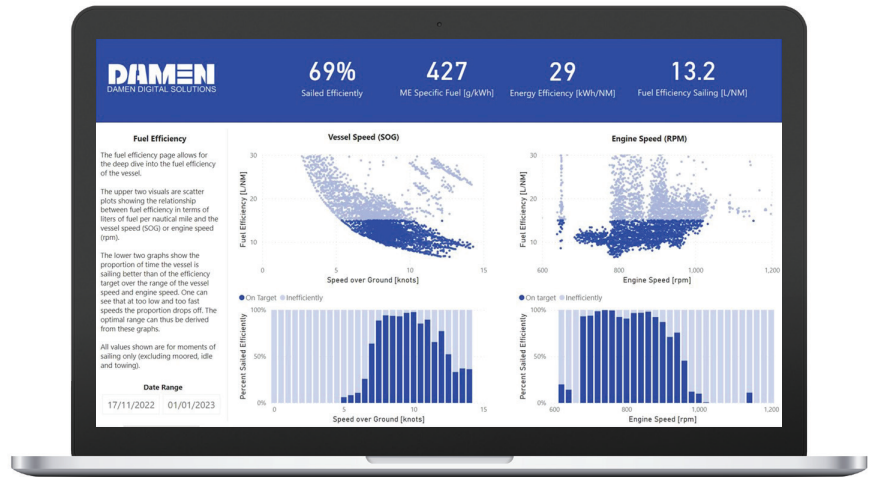
" Dashboard remote monitoring"

Fuel & Operations Report
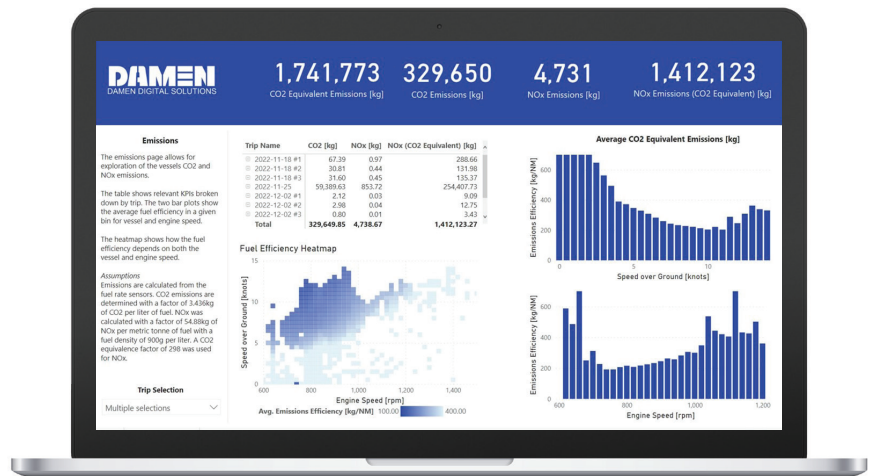
Receive Fuel insights

Fuel consumption is a critical key performance indicator when it comes to monitoring your asset's operational health. Monitoring fuel consumption provides insight into a vessel's operating efficiently and maintenance needs, which, when properly addressed, can reduce CO2 emissions, fuel consumption, and fuel costs over time. Triton fuel monitoring uses onboard engine data, combined with data analytics to present insights and information into fuel usage and vessel efficiency.
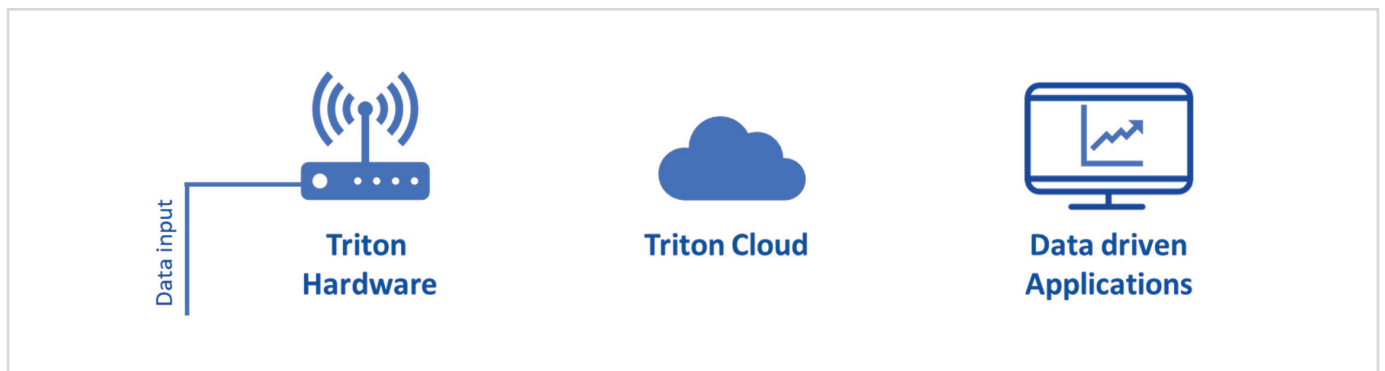

Example of one of the Triton Fuel Report pages.

Vessel Emissions Reports

Triton reports are based on ship design parameters and operational data and therefor based on factual situations. Our emission report combines the sensor data with the design knowledge, resulting in various automated reports, focused on emissions. Triton provides you with valuable insights, creates awareness and stimulates to reduce emissions.

Example of one of the Triton Emission Report pages, interfacing solutions to make sure that we can retrieve most data from your systems.

Triton fixed Hardware

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