

Fleet Intelligence - Asset Health Center

A customizable and integrated solution for digitalization of onshore operations



With ABB Software, remote connections, and service built around the solution, we enable customers to digitalize their operations.

A holistic solution for asset vessel risk issues analysis and actions

ABB's Fleet Intelligence, part of ABB Ability™ Collaborative Operations, is a standardized and customizable maintenance management tool for usage within the ship-owners onshore operation center. The application runs on ABB's industry proven Asset Health Center technology. Asset Health Center combines ABB's industry and software expertise with Microsoft Cortana Intelligence and Azure cloud platform to provide actionable intelligence. The application uses predictive and prescriptive analytics, as well as customized models incorporating decades of industry expertise, to identify and prioritize emerging maintenance needs based on probability of failure and asset criticality. The system connects to the planned maintenance system system in order to create work orders to resolve possible issues and to process feedback coming from the planned maintenance system in its analytical models. Asset Health Center is a key component of ABB's lifecycle management approach to deliver a holistic solution for managing the complete asset lifecycle. The

technology can either be deployed two times on Deploy in the Microsoft Azure cloud or locally on customer site.

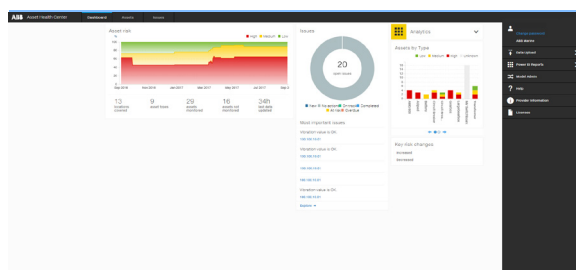
Flexible & scalable collection of data and estimation of asset risk & health

Within the maritime industry, Fleet Intelligence is used to perform equipment health & risk assessments and customer-defined & developed analytics and visualizations. When utilizing ABB's Fleet Intelligence software, vessel operators have access to a state of the art digital solution that enables them to use an integrated application for analysis of vessel performance, condition monitoring and vessel automation data. Furthermore, the platform can be integrated with the maintenance planning of an individual vessel, or fleet wide. It is possible to collect data from multiple data sources, such as equipment (ABB or 3rd party), operational data, customer's own data or any 3rd party data, therefore offering seamless data exchange between different equipment vendors and less room for data conflicts and errors because the number of monitoring systems is limited.

Easy configurable dashboards and spot-on presentation of illustrative graphics

Users can Login to Fleet Intelligence by using their Company Office365 account as the application runs within the Microsoft Azure environment. The main dashboard is configurable to customer specific needs and the included modules. The configuration of dashboards is user-friendly and they are fully configurable, since it is PowerBi based; similar to

The landing dashboard allows easy configuration by the usage of widgets



creating a powerpoint presentation. Various data streams can quickly be transferred to appealing presentations, in conjunction with any supporting illustrations. If further analysis is needed, vessel data can be calculated in the PowerBi. Data can also be processed within the more advanced Azure cloud function to create performance analytics. Furthermore, the customer can connect self analytics from Microsoft Azure functions directly in to the dashboard and asset health calculations.

Dashboard examples

The dashboard functions work in several ways. The user can for instance generate a simple overview of basic vessel Key Performance Indicators with for example Gas, MDO or HFO flow. In addition to zooming in to an individual vessel, the system offers direct drilldown possibilities for a detailed fleet overview. Taking it further; extra calculations can be done on vessel data in cloud to add more details and dedicated engine operation analytics.

Benefits

- Simple and effective user interface
- Minimizing the need for different analysis tools, and therefore reducing the risks of data flaws
- Enabling users to collaborate on multiple data streams, issues and messages
- Integrated to Microsoft Azure Active Directory
- Available on any device with an Office 365 account
- Integrated with data streams from onboard systems
- Integrated with existing onshore databases
- Digitalizing data from inspections and service suppliers reports through simple Excel sheet input
- Allows customized users analytics through Microsoft Azure technologies
- Integration to Planned Maintenance system
- Integration to Microsoft PowerBI for customized dashboards and reports
- Enables uploading of customized PowerBi reports to be shared with all users.
- Easy integration to ABB Ability™ System 800xA, ABB Ability™ Marine Remote Diagnostic System and ABB Ability™ Marine Advisory System – OCTOPUS

Integration to ABB Ability™ software

The Fleet Intelligence – Asset health center solution is integrated to a number of typical ABB's Digital Solution offerings, such as ABB Ability™ System 800xA, ABB Ability™ Marine Remote Diagnostic System and ABB Ability™ Marine Advisory System – OCTOPUS .

The total offering from ABB's digital portfolio is the most comprehensive suite available within the maritime industry and provides seamless exchange of data, full integration of sensors, automation, and ship software and cloud solutions. Important elements within the suite are decision support software for safety and comfort and energy efficient operations, and remote diagnostics technology that preventatively and continuously monitors critical equipment onboard of a ship. ABB optimizes the day-to-day shipping industry in many ways. Whether is increasing the efficiency, safety or workability of a ship, or helping ship-owners to comply with increasing demands from environmental regulations such as the IMO Ship Energy Efficiency Management Plan (SEEMP) and future European Union Monitoring, Reporting and Verification (MRV) rules.

Global support, whenever, wherever

In addition to ABB's Digital offering, ABB has invested heavily in shore side expertise, analytics firepower and engineering availability to provide 24/7 support from our ABB Ability™ Collaborative Operations Centers that support troubleshooting, maintenance planning, benchmarking, and interventions based on predictive diagnostics. With these Centers now open in Singapore, Norway, and USA, we cover the world with up-to-speed support for any issues that might occur whilst at sea.

