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FLEET MANAGEMENT SYSTEMS 2018

AN INTERNATIONAL MARKET REVIEW OF CURRENT SOFTWARE APPLICATIONS FOR SHIPPING COMPANIES

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Hamburg, November 2018

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FOREWORD
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The shipping industry, like all other industries, is undergoing major changes due to the digitalization of almost all processes. It is obvious that these also offer great potential for streamlining processes, enabling better capacity utilization and increasing the overall efficiency of the industry. There is immense pressure on maritime shipping companies to follow the opportunities available and exploit their potential. For the first time in 2011, Fraunhofer CML provided an overview of the market of fleet management software, asked for trends and analyzed the complex situation of the global software market in order to provide assistance for the orientation and selection of suitable and sensible systems. Since then, the study has been published every two years and we find that it is the only one of its kind.

As in every new issue, we have also identified new focal points and performance components of the software solutions this year: data integration and condition-based maintenance. 95 % of the software developers consider the importance of integrating external data into a fleet management system to be important or very important. And more than half (56 %) of the providers already offer condition-based maintenance functionality.

I wish you interesting insights, may our study be a good basis for your decisions!

Your Carlos Jahn

Prof. Dr.-Ing. Carlos Jahn
Head of Fraunhofer Center for Maritime Logistics and Services CML

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Introduction and executive summary

Fleet Management Systems (FMS) developed by maritime software specialists are powerful management tools for shipping companies. There is a huge variety of providers and a very broad range of functionalities. This study provides insight into the latest market developments and gives an overview of the current providers, products and their respective features.

The study has already been published in 2011, 2013 and 2015. Thanks to the great interest in the previous years, this fourth edition is an extensive update of the earlier versions, now considering of 38 providers of fleet management software. These providers form a heterogeneous market. Some smaller companies offer highly specialized software solutions, while large vendors can offer their products in all planning tasks of the FMS.
As in the last market reviews, the participants are still actively striving for and developing new partnerships, especially with providers of satellite communications.

The functions Voyage Management/ Operations and Quality/ Risk & Compliance are generally most important features in FMS. This might be attributed to the companies' endeavor to meet profitability, efficiency and ecology goals.
In addition to the classic tasks of fleet management, functions in the field of Condition-based Maintenance and Data Integration are highlighted in this year's edition:

Trends in Condition-based Maintenance:

- The integration of functions for Condition-based Maintenance into Planned Maintenance systems is a core trend among providers, more than half of the providers (56 %) offer functions for CBM in their FMS, all other providers are planning an introduction in the future.

Trends in Data Integration:

- 95 % of respondents consider the integration of external data into FMS software to be important or rather important.
- Integration of data provides opportunities for new business areas and models; 50 % of providers already offer additional services based on the data collected.
- Approximately 50 % of the providers offer additional interfaces to integrate external data into their systems.

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About Fraunhofer CML

The Fraunhofer Center for Maritime Logistics and Services CML (Fraunhofer CML), located at the Hamburg University of Technology, is part of the Fraunhofer-Gesellschaft. Fraunhofer CML conducts professional contract research for private and public sector clients with a focus on the maritime industry. Target customers include shipping companies, government agencies and authorities, ports and port authorities, terminal operators, and logistics service providers. For its clients the Fraunhofer CML develops and implements innovative, customer focused problem solutions that span the entire maritime supply chain. The core activities in ship management are focused on innovative use of information and communication technologies, mathematical optimization for management decisions and development of decision support systems. Fraunhofer CML applies its detailed knowledge in the maritime domain to improve clients' procedures and prepares studies for private and public customers, providing them with reliable information on which to base strategic decisions.

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 72 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of 25.500, who work with an annual research budget totaling 2.3 billion euros. Of this sum, 2.0 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. International collaborations with excellent research partners and innovative companies around the world ensure direct access to regions of the greatest importance to present and future scientific progress and economic development.

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