



# ARE YOU READY FOR BIG DATA?

INNOVATE YOUR BUSINESS MODEL BY USING  
THE TRUE POWER OF BIG DATA ANALYTICS



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# THE STORY OF BIG DATA

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“ We’re entering a world beyond markets where we are learning how to live together collaboratively and sustainably. ”

Jeremy Rifkin

Sharing is the new black. Hoarding information to use it later on for profit or leverage is simply not a sustainable way forward. Isolated information quickly becomes stale and irrelevant. As the Internet of Things (IoT) weaves itself into an increasing part of our lives, there’s better information elsewhere. Everywhere.

Information that grows, that fluctuates, that adapts to the waves of big data flowing, and that adds value to itself every second. This information becomes alive because of the collaboration of humans around a system. It’s the story of big data.

Our maritime industry is part of that story. Nanosatellites

and cloud technologies are already able to connect vessels and help transfer immense amounts of data from assets all over the world. We have all the opportunities we need to truly analyze how to use this big data intelligently and apply it to business models and supply chains. We are ready to embark on this journey of digitalization.

## OUR JOURNEY BEGINS WITH COLLABORATION

New technologies are what enable connectivity within the maritime industry, but the dynamics of collaboration are what truly enable unprecedented opportunities for all parties in the supply chain to create innovative business models. We believe that we have to work together as an industry in order to bring everyone on board. That being able to share information in real time is a key aspect of collaboration. OEMs, vessel owners, charterers and ports have to combine their strength to reap the full benefits of rising digital technologies.

Onboard built its award-winning platform with unification and collaboration in mind. We want to connect vessels, machinery, systems, sensors, crew and the entire supply chain, make use of the collected big data, and turn it into KPIs. We want to engage the sharing of information, and to increase its value for the maritime industry.

Our philosophy is not ground breaking. Humanity has learned to thrive in communities. What is new is the connectivity solution we have developed, that we can use to achieve a better and more efficient way of collaborating across the vast oceans we navigate.

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**WELCOME** to our first Onboard magazine. Get a glimpse of how we view current challenges in the maritime industry, and how we have started turning them into disruptive business models. We invite you to challenge your own approach to maritime business and join us on our journey.

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# EMBRACING THE RIPTIDE

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ONBOARD

The maritime industry is overall advanced when it comes to technological progress. Automation is vastly established, and vessels, platforms, ports and terminals are filled with sensors. However, it still lags behind in accepting new forms of digital technologies that allow the flow of information to reach all enterprise systems.

There are a number of significant challenges to look at. The current collection of outdated connectivity and multifaceted infrastructures both on land and on assets at sea, create a formidable hurdle for data to flow and to make sense to anyone. Remote and moving assets are very hard to reach physically, if at all. They are in constant operation and cannot afford any downtime. There's an incredible diversity of

systems and machines on board, and often, no trained personnel to maintain them. The list goes on.

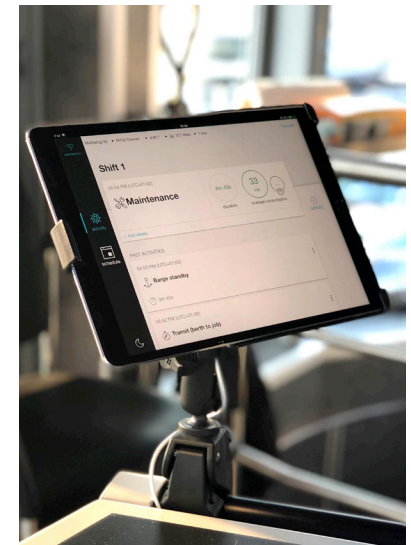
Nothing is stopping us from moving forward however. First, the digitization of things needs to happen completely and everywhere in our industry to enable the flow of big data. Secondly, industry players need to want to embrace new technologies, by understanding

their true value. Or rather, by wanting to explore what more is out there. Finally, the way we use data should become an iterative process in which value is constantly measured and reassessed both by machines and people. This will make the data life cycle itself incrementally more powerful and the businesses it serves, more efficient.

Let's begin.

# WELCOME ONBOARD

Onboard has come up with an unpretentious yet artful approach to solving the industry's connectivity problems and complex infrastructure puzzles. With our own proprietary maritime software technology, we have developed the first platform connecting the maritime industry to the IoT. It connects to sensors, machines, systems, and the supply chain, opens the information flow to the IoT, and integrates advanced analytics real time, while continuously monitoring and testing data quality. Onboard applications use this dynamic big data and turn it into KPIs for customers.



With our platform, we're not looking to reinvent the IoT. We want to help build a new, connected industry by using what's already in place and bringing it to the IoT. The Onboard platform awakens big data analytics and automates all processes between shore and sea by means of applications.

## THE ONBOARD PLATFORM

Two main components make up our platform: the Onboard server and the Onboard cloud. The server is installed on an asset and connects it to shore and to the cloud.

Onboard's SaaS applications and the platform are managed by the Onboard team. Applications run on the Onboard platform and can be accessed on board and in the cloud.

The Onboard Cloud is equipped with state-of-the-art cybersecurity. Data and applications are under the customer's ownership, and authorized users get access to their relevant data. Data owners are in total control of their data and decide what to share with business partners.

Our platform opens up opportunities for developers,

customers and business partners, to create a bridge between data ownership and being part of a commons of big data. As businesses understand the value of sharing data and how their operations can become more efficient, they can choose to fully integrate their systems, and even develop their own apps to run on what will become a shared platform. Sharing data has never been so future proof.

The Onboard platform is part of the great infrastructure that will shake and reshape how the maritime industry operates with applications that run big data analytics.

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ONBOARD

## DISCOVER OUR APPLICATIONS



### ENERGY EFFICIENCY

Save on fuel costs and monitor all other aspects of your vessel's journey by applying analytics to data.



### SAILING PAPERLESS

Keep your crew happy and committed, and help them work more efficiently by automating a large part of the paperwork.



### SAFETY AND CREW

Increase crew safety measures and security with real-time monitoring safety systems.



### CONDITION MONITORING

Increase crew safety measures and security with real-time monitoring safety systems.



# OUR FIRST SUCCESS STORY ALONG THE JOURNEY

Koos Smoor Manager Fleet Performance & Innovation of KOTUG International BV shares his experience with Onboard



KOTUG International BV. is the first operator to work with Onboard. Its fleet of four vessels in the Bahama's – jointly owned by Seabulk Towing Inc.– connects to the Onboard platform and uses the Energy Efficiency application. The application gives KOTUG full insight into their vessels operations and provides total control over fleet planning. This includes a complete report of every activity, vessel performance, fuel efficiency, and tools to optimize it.

**WHAT CHALLENGE WERE YOU TRYING TO SOLVE?** Managing fuel consumption was a challenge on the tug boats. That's not an easy task as tug boats are engaged in several activities of various nature. We wanted a specific fuel consumption indicator for each activity, and ways to manage and reduce it.

The reasoning behind the application is being able to make an informed decision: you can't manage what you don't measure. Measure the important metrics, reward people by met and exceeded performance. The application pinpoints activities with high fuel consumption, an easy filter for the fleet manager to start with.

**WHAT WERE YOUR MEASURABLE RESULTS?** We connected our whole fleet to the platform. We could measure that we reduced fuel consumption by 16% already in the first quarter. More optimization by data analysis is possible, though. The platform is ready for a lot of innovative applications It's future-proof already.

The crew on board is equipped with a bridge display and can receive their planning from their on-shore site. They also have access to real-time feedback on their fuel efficiency and can log and communicate all their operational activities with their colleagues on shore.

**HOW DOES WORKING WITH THE PLATFORM BENEFIT THE CREW?**

Crew members are very happy. There's no more administration for them. We're a paperless bridge. With the Onboard system, all activities are logged on the server and available on the iPad.

**WORKING BETTER TOGETHER**

Onboard promotes working together and provides the tools to drive business performance for the whole supply chain.

**HOW DOES THIS PROMOTE COLLABORATION FOR YOU?** Our customers like that. They have access to the system with their login credentials and can see the fuel consumption and manage it themselves. In some activities, where they've been able to reduce consumption, this means money back in their pocket. As they have access to the platform, they have access to reports and gain insight on the operations. They can

look at ways to improve. Collaboration is a lot better. Instead of just paying the bill, they know exactly what it costs.

The value of data becomes evident as we understand the use case for it. Applying it requires investment and research. The key to Onboard's approach is being able to start small, and then grow exponentially.

Begin by creating added value already from the first use of data and expand, once new insight leads to new efficiencies, revenue streams and opportunities, and new requirements. In the practical sense, this infrastructure adapts to the changing situation on board and to new necessary features.

**HOW DO YOU ENVISION FUTURE COLLABORATION WITH ONBOARD?**

I see a lot of collaboration with many more companies, each in their detailed field of expertise. Because of Onboard, we can already think of expanding our fleet to 25 tugs in the next few years. The platform can be used for a multitude of applications.

We're already thinking of a detailed vibration analysis. So we'd be working together with a specialist to develop the app and combine data using the Onboard system. By testing certain frequency tolerances, we could already analyze when maintenance is due. So we're already moving into predictive maintenance. That's the future.

**OUR INVITATION TO YOU**

Onboard wants to continue its journey with its customers. In the same way that the value of data increases during its continuous life cycle, collaboration becomes stronger as more people join in. The new IoT can very well be the major facilitator as well

as driver in this collaborative workforce, but the true spark that will make it fly is our desire to progress towards the constant betterment of knowledge. Together, we create an unequalled chemistry of connections, way above and ahead of the most sophisticated nanosatellite.

**WHAT ATTRACTED YOU TO WORKING WITH ONBOARD?** They seemed to have the right solution for us. The founders have particular in-house knowledge of the maritime industry, which is rare in our niche.

**HOW WAS THE COOPERATION WITH ONBOARD?** Really good from the start. Clear communication and consistent management style, the whole time. Their way of handling the project was very valuable in itself, making timelines, keeping me updated all the time, it made it easier for me. I could work on my other projects.

Onboard has the right attitude. They won the Duke award, which confirms that we're on the right track, working together with them. These guys don't go for short-term. They go for long-term investment.

**Let's have a chat.** We'd love to meet you and work with you towards changing the maritime industry. Contact us directly or send us your info and we will reach out to you.

## AWARDS



## IT'S BEEN REWARDING SO FAR

Onboard is thrilled to share with you that we won the Duke's Choice Award.

We are incredibly honored to have received this award at Oracle's JavaOne, the largest Java technology conference in the world. The Duke's Choice Award celebrates extreme innovation using Java technology

and goes to entrepreneurs who use it in a groundbreaking manner. We received the Duke's Choice Award because of the innovative technologies that run our Onboard platform.



**CONNECT WITH US!**  
**LET'S FUTURE-PROOF**  
**YOUR MARITIME BUSINESS**  
**TOGETHER.**

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