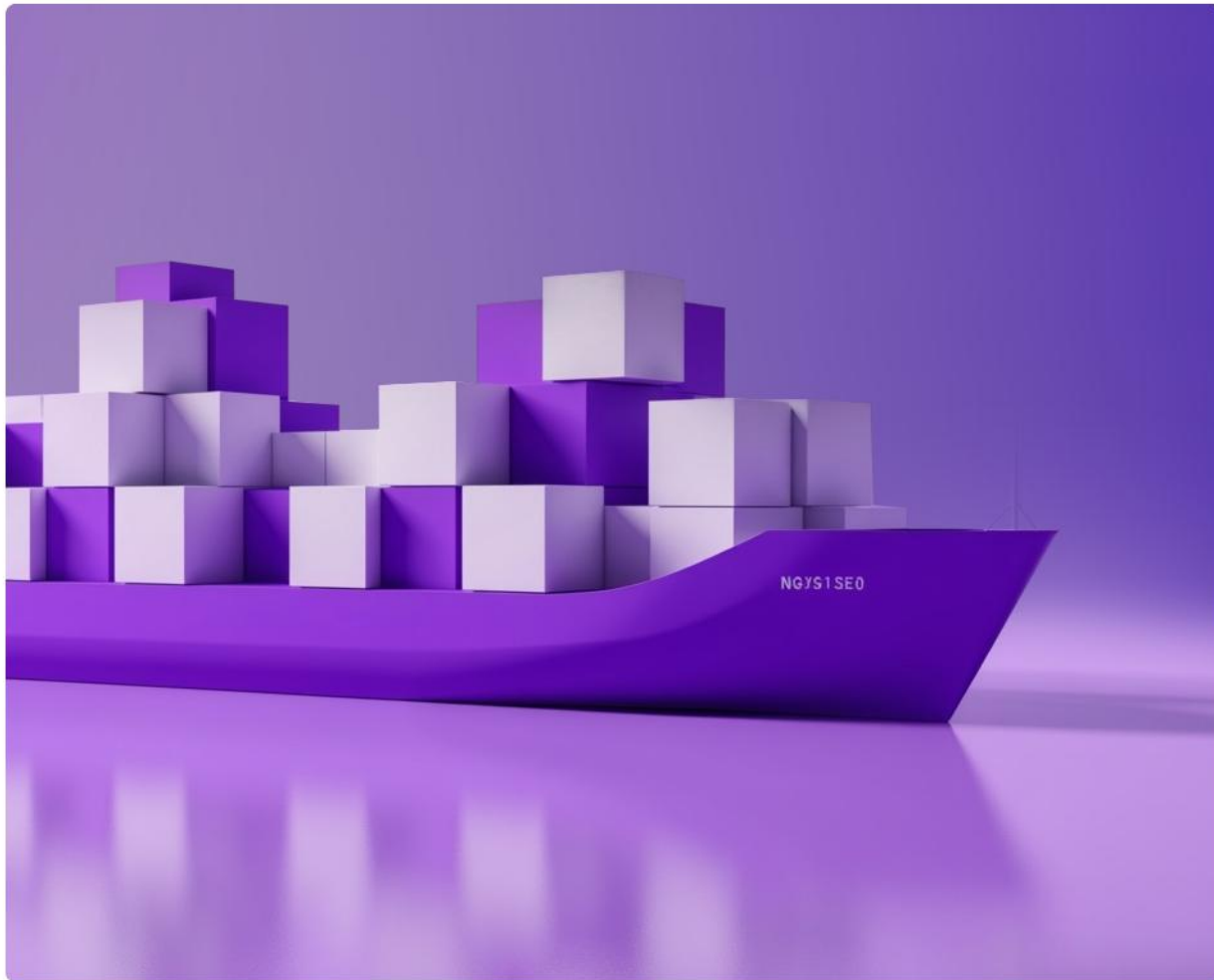




Whitepaper

Smarter Shipbuilding. Stronger Fleet Operations.

lamaempowers.nl

How LAMA Empowers and DMMS
transform the Maritime sector with
Asset Lifecycle Management

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1 Introduction

The maritime sector is undergoing an accelerating digital transformation. Whereas the focus used to be on building and delivering ships, the emphasis is increasingly shifting toward long-term support, maintenance, data-driven optimization, and compliance throughout the entire lifecycle of a vessel.

Customers expect more than ever in terms of insight, flexibility, and reliability. At the same time, shipbuilders and fleet managers face strict regulations (such as IMO, CLASS, and ISM), rising operational costs, and increasing pressure to minimize unplanned downtime.

In this landscape full of complexity and opportunity, there is a clear need for a solution that goes beyond merely collecting data: a system that truly connects, predicts, and supports.

That's why LAMA Empowers, as an official IBM Business Partner, has developed the Dynamic Maritime Management System (DMMS) — a powerful maritime Asset Lifecycle Management solution built on the proven IBM® Maximo® Application Suite.

DMMS enables shipbuilders, OEMs, and fleet operators to:

- Digitally manage the entire maintenance and service process
- Monitor assets and components in real time
- Align maintenance strategies with condition and usage
- Manage certifications and inspections easily and audit-proof
- Extend customer relationships from delivery to long-term collaboration

DMMS is not just a software package; it is a strategic platform that helps companies gain control over their maritime assets — from keel laying to decommissioning. In this whitepaper, we explore the challenges within the industry and show how DMMS helps organizations become future-proof: smarter, safer, and more profitable.



2 De maritime transformation

The maritime industry is at a tipping point. Globalization, technological innovation, and stricter regulations are forcing shipbuilders, OEMs, and fleet managers to radically rethink the way they operate. Customers demand greater transparency, faster service, and continuous support. At the same time, the pressure is increasing to reduce operational costs, mitigate risks, and comply with increasingly complex regulatory requirements.



Traditional, project-based models in which involvement ends after a vessel's delivery are no longer sustainable. The future of maritime success lies in the ability to manage the entire lifecycle of a vessel — from design and construction to maintenance, upgrades, and eventual replacement.

Digitalization plays a crucial role in this transformation. But it requires more than just technology: it demands a new way of thinking, organizing, and serving. In the next section, we will explore how these developments impact different segments of the industry — and what they need to remain competitive in this changing world.

“From the drawing board to dry dock — maritime success now depends on lifecycle excellence.”

Shipbuilding and fleet management are increasingly intertwined with data-driven processes, strict regulations, and the need for proactive service delivery.

Four forces are shaping the future:

- Changing customer expectations
- Stricter compliance requirements
- Rising costs of downtime and maintenance
- The need for real-time asset insights

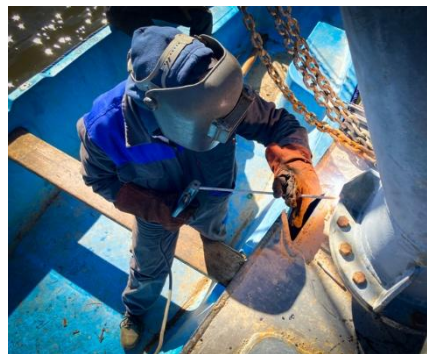
The future belongs to organizations that manage the entire lifecycle of their assets — not just construction, but also maintenance, upgrades, certifications, and eventual replacement.

3 Target Groups and Segments

3.1 Shipbuilders & OEM's

"From product to partnership"

For shipbuilders and OEMs, delivering a vessel is no longer the endpoint of the customer relationship. The market demands sustainable partnerships in which service, maintenance, and post-delivery support are just as important as the construction process itself. Customers expect continuity, predictability, and rapid response — and are increasingly choosing partners capable of managing the entire lifecycle.



Challenges:

- Transition from delivery to long-term service contracts
- Managing post-delivery maintenance and upgrades
- Building and maintaining customer relationships
- Complying with CLASS, IMO, and other regulations
- Lack of visibility into performance after delivery

How DMMS helps:

As an IBM Business Partner, LAMA empowers DMMS based on IBM® Maximo® to help shipbuilders transform their role from supplier to lifecycle partner.

DMMS enables shipbuilders and OEM's to:

- Provide long-term customer support through maintenance and service programs
- Deliver predictive support based on real-time data
- Centrally manage certificates and inspections
- Offer visibility and transparency to the customer

3.2 Vessel Operators

For fleet managers, every day at sea is a delicate balance between availability, safety, cost control, and regulatory compliance. Unplanned downtime can have major financial and operational consequences, while compliance with international maritime regulations is becoming increasingly complex. At the same time, the real-time insight needed to operate efficiently and proactively is often lacking.



Challenges:

- Unexpected downtime with high costs
- Difficult-to-predict maintenance budgets
- Complex compliance requirements (ISM, SOLAS, etc.)
- No up-to-date overview of fleet condition
- Limited tools for crew onboard

How DMMS helps:

DMMS is designed to provide full control over fleet maintenance, performance, and safety.

How DMMS empowers operators:

- Tools for condition-based and predictive maintenance
- Mobile access for crews and technicians
- Real-time fleet dashboards
- Built-in modules for audit, inspection, and certification
- Reduced maintenance costs and increased availability

4 The challenges of today

The maritime industry operates in an environment that is becoming increasingly complex, fast-paced, and demanding. Organizations face a wide range of challenges — from customer retention and inefficient processes to compliance, cost control, and the lack of real-time asset insight. These challenges affect both shipbuilders and fleet managers, hindering growth, reliability, and continuity. In this chapter, we highlight the most common pain points and show how smart software solutions like DMMS help address them in a sustainable way.

Question	Challenge	DMMS Solution
How do I keep customers engaged after delivery?	Traditionally, the relationship ends once the vessel is delivered	Lifecycle management, maintenance alerts, end-of-life notifications
How can I improve my processes?	Manual systems and inefficiencies	Integration of maintenance, inventory, certification, and reporting
How do I ensure compliance with regulations?	Fragmented documentation and processes	Digital compliance tools, inspection logs, audit trails
How can I reduce my costs?	Unexpected failures, oversized inventories	Condition-based maintenance, optimized inventory management
How do I make my processes auditable?	No centralized logging or historical record	Transparent, fully digital, ready for inspection and reporting

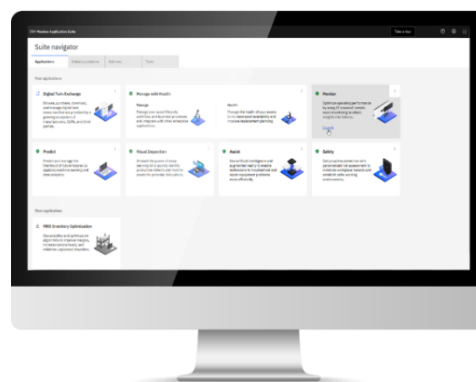
5 DMMS – the solution for Smart Asset Management

Dynamic Maritime Management System (DMMS) is an industry-specific, modular solution developed by LAMA empowers as an IBM Gold Business Partner, built on the globally proven IBM® Maximo® platform. The solution provides not only full control over asset and maintenance processes but also powerful support for compliance with complex maritime regulations.

DMMS combines technical depth, ease of use, and compliance support in one central platform. It enables shipbuilders, OEMs, and fleet managers to manage maintenance, certification, and documentation fully digitally and in a verifiable manner.

Core functionalities of DMMS:

- Asset & maintenance management
- Parts & inventory control
- Certificate & compliance management
- Real-Time performance dashboards
- Mobile tools for onboard and onshore use
- Document management & inspections



“DMMS combines the reliability of IBM Maximo with deep maritime expertise.”

Key benefits of DMMS:

- Enhanced customer engagement through lifecycle service
- Lower Total Cost of Ownership (TCO) through smart, predictive maintenance
- Increased uptime through condition-based planning
- Complete audit trail for all compliance requirements
- Real-time insight into fleet and asset performance
- Faster decision-making through integrated data
- Easy onboarding and user-friendly tools for technical teams



With DMMS, LAMA empowers organizations with a powerful and scalable solution that makes a difference both operationally and strategically — providing control over assets and full compliance management.

6 Application of DMMS at Damen Shipyards

As a globally operating shipbuilder with over 90 years of experience, Damen Shipyards is continuously seeking ways to enhance and modernize its



services. To elevate configuration management, asset management, and service processes to a higher level, Damen partnered with IBM Business Partner LAMA empowers to implement the Dynamic Maritime Management System (DMMS) — a solution based on the IBM® Maximo® Application Suite.

“Digital Control Over a Global Fleet”

With thousands of vessels and related components under management, Damen needed a centralized, future-proof solution. Thanks to DMMS, Damen now operates a single platform through which more than 2,700 vessel configurations are digitally managed. This provides deep insight into operational costs, maintenance needs, and customer-specific configurations across the globe.

“DMMS powered by IBM Maximo is really maturing in our organization. It’s becoming increasingly essential to asset identification and management — not only within Damen Services, but across our global business.”

Thijs van Dorssen, Lead of Digital Tooling, Damen Services

Tangible benefits for Damen:

- Central data infrastructure for configuration and asset management
- Proactive maintenance planning and cost calculation per vessel
- New service revenue through improved insights and cross- & upselling opportunities
- Scalable technology powered by IBM Maximo Manage, Mobile, and AI capabilities via watsonx™

By implementing DMMS, Damen is transforming from a traditional shipbuilder into a digital lifecycle partner. The solution is not only strategically important for the service division but is now being adopted more broadly across the entire global Damen network.

7 Future Vision

“Smarter operations through AI and automation”

The future of asset management in the maritime industry lies in intelligent automation and AI-driven decision-making. Organizations are seeking not only greater insight but also faster and more efficient ways of working — with less manual effort and reduced error margins.



Many processes within maintenance and configuration management are still labor- and data-intensive today — such as entering asset information, creating inspection reports, or planning maintenance activities. By leveraging AI technologies like IBM watsonx™, in which LAMA empowers specializes, these tasks can be largely automated or significantly accelerated.

As an IBM Gold Business Partner, LAMA empowers integrates IBM watsonx™ directly into DMMS. This enables organizations to:

- Automatically enrich asset data or check for inconsistencies
- Trigger predictive maintenance without human intervention
- Generate reports and documentation using generative AI
- Support crew members and engineers through natural language interfaces

IBM watsonx™ reduces workload, improves data quality, and enables maritime organizations to operate faster, smarter, and at greater scale.

“Less input, more insight — that is the promise of DMMS combined with Watsonx.”

DMMS is more and more evolving from a registration system into an intelligent platform that automates tasks, prevents errors, and creates value — both in the office and on board.

8 Over LAMA empowers

LAMA empowers is a leading provider of digital solutions for asset and maintenance management in the maritime sector. As an IBM Gold Business Partner, we combine the power of IBM Maximo with deep domain expertise.

With our Dynamic Maritime Management System (DMMS), we help shipbuilders, OEMs, and fleet operators worldwide to:

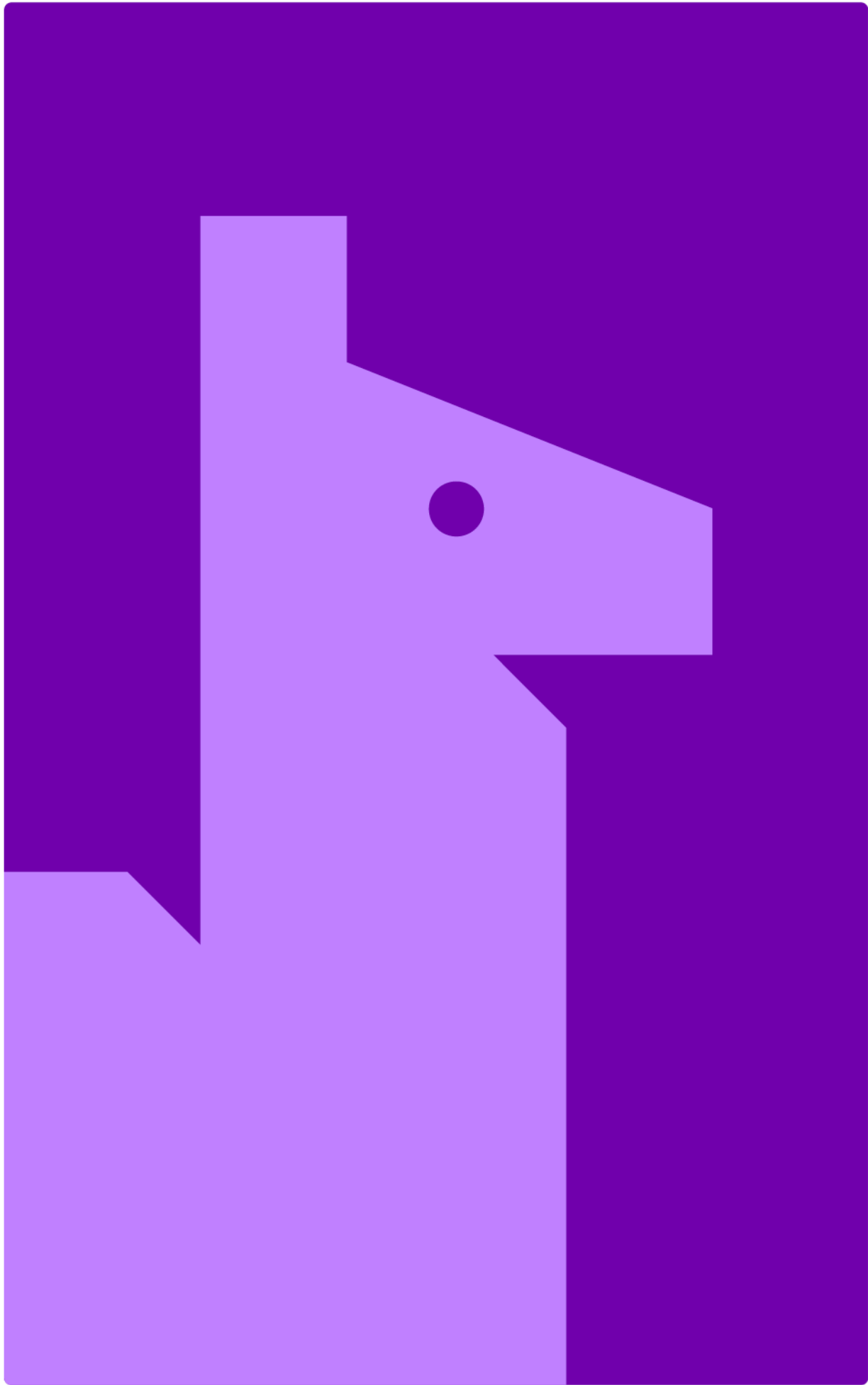
- Digitalize their processes
- Serve customers proactively
- Reduce risks
- Operate in a future-proof way

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