CSC HELPS MARITIME CLIENTS NAVIGATE THE DIGITAL JOURNEY

The smart ships of the future are ready to sail.

Improved satellite connectivity, a network of sensors and next-generation computing power allow vessels to capture and analyse information. Weather, ocean current data, engine performance and location info can be combined and analysed to dramatically improve vessel capacity, profitability and regulatory compliance.

Just as digitisation is dramatically transforming every industry today, maritime transport organisations have an opportunity to embrace proven digital tools to create and sustain a competitive advantage. But first they must modernise legacy systems and digitise paper processes to allow for innovation.

The way forward can be challenging to chart, but CSC offers clear navigation for the digital journey.

THE BENEFITS OF A CONNECTED EXPERIENCE

To make better and faster decisions and to improve productivity and efficiency, today’s most progressive businesses are leveraging technologies that put highly contextualised information in the hands of their employees, partners and clients.

This demand for the right information at the right time forces key shifts in the ways companies deliver IT, especially in light of rapidly changing regulatory requirements and external threats to private information.

In the maritime industry, shore-based operators now have the ability to collaborate in real time with a broad ecosystem of stakeholders. New and existing systems can be integrated to manage shipping routes, human resources info, financial data, supply chains and other business drivers. Cloud technology enables data to be integrated and accessed in new, agile ways. Data analytics provides deep business insights that, for instance, can help deliver a more intelligent, satisfying passenger travel experience than has ever been possible before.

THREE PILLARS OF SUCCESS

To begin to implement such innovative processes, maritime transport organisations must gain command over three pillars of the connected experience: assets, business intelligence and compliance.

**Connected Assets Drive Operational Efficiency By:**
- Providing a single source of truth for all assets, including part conditions and maintenance status
- Leveraging single-source information to proactively allocate work
- Ensuring best-practice business accounting and workforce processes
- Delivering mobile access to applications and information in variety of convenient formats
- Accurately reflecting costs and budgets through a reporting function embedded within the general ledger
**KEY MARITIME BUSINESS CHALLENGES**

**Vessel Overcapacity.** Since the economic collapse of 2008, the travel and transportation industry has been saddled with overcapacity of 12 per cent against an annual growth rate of 4 to 5 per cent. This imbalance has driven down shipping rates.

**Increasing Operation Costs.** Though oil costs are lower than normal, prices will eventually recover, accounting for more than 60 per cent of operational costs. Crew wages, repairs and insurance costs continue to grow. Overall, cost increases average nearly 3.5 per cent across the offshore, tanker and container ship sectors.

**Growing Safety and Security Concerns.** In 2010, 544 seafarers were held hostage by pirates. Growing piracy concerns are causing vessels to take longer, more costly routes to avoid piracy zones. A new threat is coming from sophisticated adversaries who seek to penetrate systems to commandeer vessels, alter manifests or shut down ports and terminals, hence the cyber threat is greater than ever before.

**Challenges in Recruiting and Retaining Skilled Seafarers.** Growing fleets continue to outpace the supply of experienced seafarers who have the proper certifications and qualifications to operate their vessels. A lack of centralised governance over certification processes makes crewing more costly for organisations that operate side-by-side on the same vessels.

**More Demanding Customers.** Customers are demanding cost and compliance reports and detailed information pertaining to the seafarer crews who will handle their cargo — demands that are difficult to meet with legacy systems and paper processes.

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**Assets**

Innovative technologies offer new opportunities for maritime organisations to connect their assets — their people, business processes and systems — in new and efficient ways to enable collaboration and drive operational success.

Consider a recent report from the Swedish Club that shows incorrect maintenance and repair processes continue to be the most frequent causes of main engine damage. Lubrication failure is a common and expensive cause of failure that occurs when a disjointed supply chain fails to connect maintenance people with the real-time information needed to make informed maintenance decisions.

By modernising disjointed legacy systems and integrating formerly disparate information sources with a modern Asset Lifecycle Management system, ship mechanics can gain deeper insights into historical patterns. These can be analysed to determine the optimum time to lubricate engines to prevent failure. Maintenance processes can shift from routine scheduling to preventive scheduling that builds on historical data to maximise engine performance and longevity.

Based on CSC’s experience in the maritime transport industry, we have created blueprints and developed automated tools that help organisations assess, implement and improve asset interconnectedness to support operational efficiency.

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**Business Intelligence Improves Business Decisions By:**

- Receiving a variety of data types in real time to support better and faster business decisions from day to day and at the board level
- Drilling down from cost statements to source transactions and supporting documents to improve business insights
- Gaining better visibility of business functions, performance and supply chains across multiple geographies and business units
New technologies allow data to be captured and analysed from multiple sources to improve business insights and dramatically boost performance and productivity.

As the maritime industry immerses itself in the interconnected and automated world of sensors and devices, the next order of business is to mine the resulting data for business intelligence.

For example, consider the benefits of having easy access to one system that connects data and processes from human resources, finance, customer relationship management and shipping operations.

Such a system could be used to optimise vessel speed to reduce fuel costs and determine precisely when a vessel will arrive in port. Another use may be to contact and assemble a crew of seafarers with the right certifications and clearances to manage the cargo. Automated ship manifests may be used to speed the unloading process and get the next shipment loaded more quickly, which minimises in-port expenses.

In the next 5 to 10 years, automated processes like these will become commonplace. The mandatory adoption of Electronic Chart Display and Information System (ECDIS) processes, as well as approaching European Union monitoring, reporting and verification (EU MRV) of CO2 emissions, will drive increased transparency, greater ship-to-shore connectivity, automated reporting and stringent data security policies.

CSC can help organisations understand their data, determine its value and learn how to overlay it with additional sources of information to draw out the insights needed to drive the business forward.

Due to the global nature of boat shipping, maritime transport organisations are forced to comply with an increasingly complex mix of environmental, security and safety regulations. Audits and paperwork, coupled with the complexity of maintaining international crews, cargo, suppliers and clients, are time consuming and costly — and there is no tolerance for error.

Proactive compliance, as well as environmental and security procedures, ensures safer and better-regulated working environments. In coming years, increasing influence by the International Maritime Organisation and a focus on safety and security through regulations like SOLAS, MARPOL and ISPS will mean that organisations need an integrated approach to effectively and efficiently manage audits, assessments and compliance requirements in real time.

CSC has developed an ecosystem of partners who provide expertise and solutions in risk, compliance and health and safety. Our approach helps businesses with the adoption, maintenance and oversight of systems, data management and security.

Maritime transportation organisations are under increasing pressure to sell more, waste less, deliver better, faster results and lose less time to incidents, all while using fewer resources and complying with stricter regulations.

CSC can help you meet these demands.

We deliver innovative business and technology solutions that enable organisations to modernise. To start, we can help you determine the best opportunities to drive competitive advantage and develop a business opportunity statement that creates the foundation of an action plan.
We will measure your transformation progress against a baseline to make sure you realise continual competency improvements across multiple dimensions.

We will provide:

• Organisational development to align your technology with the business
• Asset utilisation strategies and policies to improve asset performance and uptime
• Performance management solutions to deliver a systematic approach to measure and report on relevant key performance indicators (KPIs)
• Supplier management processes to define service level agreements (SLAs) that maximise the potential of each partnership
• Operational effectiveness strategies to deploy proven technology innovations to standardise processes, reduce cycle times and improve response times

We believe now is the optimum time for maritime organisations to accelerate their modernisation journeys, and we are uniquely positioned to help you navigate yours.

Why CSC?
We have a rich portfolio of business solutions across industries, including the related industries of rail, aviation and energy. We are the only global technology provider that has a specific maritime business dedicated to addressing these key business challenges.

Our global delivery teams combine with a network of subject matter experts and partner ecosystem to deliver industry-best maritime solutions addressing short- and long-term challenges.

Specifically, we can help you:

• Optimise assets and modernise legacy infrastructure to drive operational efficiency
• Enable informed business decisions through improved information support
• Efficiently navigate and automate a complex web of regulations

Ultimately, with CSC, you can better serve customers, while gaining a competitive advantage in the rapidly changing maritime transportation industry.

Contact Us

For more information, visit csc.com/travel_and_transportation.

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**About CSC**
CSC (NYSE: CSC) leads clients on their digital transformation journeys. The company provides innovative next-generation technology services and solutions that leverage deep industry expertise, global scale, technology independence and an extensive partner community. CSC serves leading commercial and international public sector organizations throughout the world. CSC is a Fortune 500 company and ranked among the best corporate citizens. For more information, visit the company’s website at [www.csc.com](http://www.csc.com).