Uncharted waters for maritime industry

Data, digital services and new business models bring a sea change
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With enormous amounts of goods and people transported by sea every day, the maritime industry is at the heart of the global economy. The globalization of trade has increased the demand for material and people flows, and the maritime industry continues to play a critical role in helping companies and nations prosper. Now digital transformation is changing the industry.

For a long time, the maritime industry focused on large vessels, powerful engines, radio signals, manual labor and seafaring craftsmanship. The situation has now changed. A technological shift is pushing companies to transform their ways of working, seek new ways to operate and take advantage of solutions in automation, sensors, robotics, AI and analytics. The fact that business models are shifting towards services also has a big impact.

At the same time, environmental concerns are being raised by governments, organizations and individuals. New, powerful technologies offer new opportunities for renewal, efficiency, growth and waste reduction. The maritime industry could have a beneficial influence on what kind of world future generations live in and retain its profitability, with data-driven technology delivering greener solutions while reducing operating costs. For example, choosing optimal weather conditions and routes for reduced fuel consumption not only saves costs, but has a real impact on the environment.

Changes in the maritime industry have a major impact on land, too. The people and cargo it transports eventually arrive at harbors and often continue their journey on land transportation. No one single company can fulfil the needs of the maritime industry. The logistics, processes and systems used connect with other relevant parties can form collaborative ecosystems with end-to-end optimised flows.
Maritime companies face many of the same issues

Futurice was founded in 2000 and over the last 18 years, we’ve worked extensively with companies in or tangential to the maritime industry ecosystem, including cargo handling companies, ship motor and equipment manufacturers, container & passenger shipping companies and harbor operators. We’ve helped them execute programs that boosted innovation, leveraged new business concepts and sparked a cultural change towards new ways of working.

Our operations have given us a unique perspective on how the industry is developing and the challenges maritime companies face when responding to the needs of a rapidly changing market. While each company is unique, they do share some of the problems they have to contend with:

CUSTOMER-CENTRICITY: Typically, maritime companies are rich in engineering skills, but lacking a culture of customer-focused thinking. The question is: How to turn from an internal engineering focus towards external customer focus?

SERVICE BUSINESS: Large vessels have provided a satisfactory solution to basic people and material flows for decades, if not centuries. Now customers are learning to demand comprehensive service offerings that rely on automation, predictability and continuous improvement. Maritime companies must shift from a product, technology and equipment business towards a sustainable and scalable service business with completely new revenue streams. The question is: What changes will help maritime companies succeed with new services?

ANALYTICS: Both vessels and harbors are potentially massive data collection points where the flow of goods and people can be tracked, measured and optimized. To build intelligence into their operations, products and services, companies need to find ways to build up their data analytics capabilities. The question is: How to harness data to optimize business and build intelligence into products and services?

AUTOMATION: In the future, traffic on the seas will be managed by powerful computers that steer autonomous ships globally or regionally. Maritime companies need to prepare for this eventual and adjust their operations accordingly. The question is: How to build fully automated marine traffic and harbor operations, manage fleets as well as repair and maintain automated equipment?

SPEED: The age of long IT projects, heavy and monolithic systems and long development cycles is over. Now it’s “fast eat slow” and businesses are increasingly dependent on digital solutions and IT. Maritime companies, too, need to learn about rapid experimentation and iterative approaches to development projects. The question is: How to apply lean and agile methodologies when building modern digital services?

WAYS OF WORKING: The market the maritime industry operates in is changing, as is the technology landscape. Companies need to make sure that their capability for change is adequate and they can move fast enough from early ideas to full-blown new business as well as innovate at scale. The question is: How to renew ways of working to cater to new business that encompasses services, software and data?

PARTNERSHIPS: Both harbors and large ships are very complex environments, and the best possible results are achieved through partnerships and collaboration where the data, services and tools of various players are in sync. Effective partnering is a skill that maritime companies need to master. The question is: How to build ecosystems, partnerships and alliances in the maritime industry?

TALENT: All the issues mentioned above mean that maritime companies need to renew their skill set, capabilities and know-how as well as bring in some fresh new thinking via e.g. innovation, data analytics, service design, business model thinking and co-creation. The question is: How do maritime companies attract digital talent and ensure their leadership style and company culture enable these people to succeed?
Getting the problem-solving fundamentals together

For maritime companies to tackle these issues, a few fundamentals need to be in place. The development and digitalization of the industry boils down to three essential things that, when in sync, help companies and leaders create real impact:

**STRONG TEAMS:** Success in a digital transformation isn’t defined on an individual, corporate or industry level - it’s all about the team. The stronger the teams working on a specific challenge, the more impact they’ll have. A team should bust silos, consisting of people from a variety of functions, with complementary competences and experience. The teams should be entrepreneurial, curious, driven, enthusiastic, committed and have a solid understanding of customer-centric agile and lean methodologies. Leaders of maritime companies must invest in and nurture high-performance teams, making sure that they have enough time, resources and guidance to properly do their job. Teams, on the other hand, need to show that they can really perform, as well as spread the word, educate people and leverage their impact across the corporation.

**HOLISTIC APPROACH:** Digital transformation is a many-splendored thing. It calls for both incremental improvement in current operations as well as radical new concepts and transformative businesses. The innovation funnel must work end-to-end, from ideation and idea validation all the way to successful launches of products and business growth. It is about renewing what is visible to the customers, like service concepts and websites, while honing the backend stuff like IT systems, processes, data flows and the organization. It’s about the hard, concrete stuff - like facts, initiatives, KPIs and numbers - but it’s also about the softer stuff like digital culture, competence, mindset and leadership. All actions need to be coherent on a strategic level, in sync, supported by the management, regularly monitored, adequately funded, and generally moving full speed ahead. The best maritime companies know how to do all this. The not-so-good companies do a little here and a little there, but are unable to connect the dots.

**PERSISTENCE:** The transformation of the maritime industry or even a single company is not a sprint - it’s a marathon. The sector has many large corporations that operate internationally, with long-term investments and commitments as a major part of their business. Change is no walk in the park. To drive it, companies may organise hackathons, innovate with customers, apply agile methodologies, iterate and learn fast, but unfortunately not much happens in weeks or months. The only successful approach is a long-term one. Pushing through a transformation year after year requires a lot of persistence. Let’s look at that word, persistence. What does it mean here? It means seeing the big picture in an industry context, showing direction, influencing and encouraging people to act, providing support and saying “yes we can” in the face of doubts or obstacles. For many maritime companies, digital transformation is not a technology challenge, but a people management challenge. The maritime industry has already taken significant steps in its digitalization journey, but the major transformation is yet to come. There are still plenty of manual processes and operations in place, work that is typically dull, dirty and dangerous. The corporate cultures of large maritime companies have yet to make a major change towards agility, empowerment of teams, a stronger customer focus and increased collaboration and partnering. New technologies are emerging and developing rapidly, providing new opportunities for nimble companies in the coming years. Environment-related regulation and global competition will force companies to push harder and speed up their transformation.
The saying “ideas are cheap, execution is everything” rings truer than ever. All companies in the industry are racing to find their competitive edge in new technologies. Many of the ingredients for success are not really a question of the operating environment, but in the hands of the companies and their management. If they invest in strong and capable teams, drive the transformation in a holistic manner and work persistently towards their goals, they have a good chance of succeeding. If, in addition to all this, they learn to build stronger industry-wide partnerships, a major revolution in technology-enabled sea traffic is just that much closer.

What does your digital maritime forecast promise: smooth sailing or stormy waters? We can help make it the former.
Help taking high-level strategies towards tangible initiatives and offerings

Unleashing end-to-end innovation, taking new ideas quickly to concepts and businesses, significantly speeding up time-to-market

Support for innovation teams in their daily work, bringing in a hands-on and can-do approach that helps them move ahead quickly

Boosting cross-competence approach and multidisciplinary teams that ensure success in new business creation

Co-creating new service concepts together with the customers of maritime companies

Boosting a culture change towards customer-centricity, agility, modern ways of working and autonomous teams that deliver results

Turning data into new new offerings and commercial propositions

Bringing together large corporations with startups and maritime industry ecosystems
Futurice is an international digital engineering and innovation consultancy. We unleash a culture of innovation and build digital products and services that make our clients future capable.

Since 2000, we have helped our clients in industries ranging from energy, retail and construction to media, finance and automotive develop their business practices, ways of working and culture to meet the challenges of digital disruption. We experiment and co create with our clients.

We are 500 people in Berlin, Helsinki, London, Munich, Oslo, Stockholm and Tampere.

2017 Turnover: 50.2 million euros  
2017 EBIT: 13.5%  
Growth from 2016: 30.7%

Lean Service Creation
The best way for a maritime company to get started on the road to transformation is to find problems worth solving. Lean Service Creation is a methodology and a curated set of canvases that walk you through the steps needed for creating successful services and products. LSC is based on experiences from thousands of service creation projects and helps you reach business objectives in an iterative and human-centric way. It was created by Futurice, it’s open source and free to use.

To talk about what we can offer the maritime industry specifically, please contact:

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