SUTHERLAND®

CHARTING THE FUTURE

Accelerating Digital Transformation Across the Ocean Liner Value Chain

Executive Summary

Global trade is under strain - and ocean liners are feeling it first.

Fluctuating freight rates, capacity constraints, regulatory mandates, and rising customer expectations are reshaping the industry, forcing carriers to adapt faster than ever. As the backbone of international commerce, **ocean liner companies face massive operational pressure.**

To remain competitive, they must take decisive action. Many are increasingly investing in platforms and vessel technology to gain the agility, intelligence, and automation the modern shipping landscape demands. In fact, the maritime software market is projected to grow at a double-digit rate annually, reaching nearly USD 3 billion by 2028.[1]

Yet for most carriers, **significant gaps remain in digitizing operational and customer experience layers,** creating a widening, costly divide between leaders and laggards. Early adopters of digital transformation are already cutting costs and improving service, while slower movers continue to struggle with inefficiency and margin erosion.

The result is a snowball effect: without digital foundations, carriers lack the data and operational insights needed to tap into new trends, comply with evolving mandates, and safeguard against growing risks.

This POV explores how ocean liner companies can embrace intelligent process transformation to address persistent friction points across:

- Booking
- Documentation
- Vessel scheduling
- Customer service
- Financial operations

[1] Growth opportunities in the software market

Navigating the **Market's Headwinds and Opportunities**

Ocean shipping is entering its most transformative decade in generations. The opportunity is enormous, but the path forward is laced with complexity.

The industry must overcome decades of underinvestment, as longstanding inefficiencies are now colliding with an accelerated global pace of change, geopolitical shocks, and intensifying competition – forcing carriers to rethink how they operate.

The result is a complex mix of pressures that carriers navigate today.

Port Congestion and Equipment Imbalances

Vessels are frequently late or impacted by poor weather, and a lack of real-time data makes tracking vessels and containers unreliable – raising labor and fuel costs.

Volatile Freight and Fuel Costs

Ocean freight rates can swing dramatically within weeks, and fuel remains one of the largest operating expenses. This unpredictability makes it hard for carriers to plan and protect (already slim) margins.

Digital Standardization Mandates, Such as eBL Adoption and DCSA-Driven Protocols

Regulators and industry groups are pushing for shared protocols, like eBLs and APIs, to improve interoperability. Without adoption, carriers risk higher costs, slower workflows, and lost business with global shippers.

Environmental Requirements, Like Decarbonization Targets and Strict ESG Reporting

The International Maritime Organization (IMO) and European Union (EU) set strict regulations for carriers to improve environmental performance and cut emissions, including measuring and reporting on energy and carbon efficiency. Vessel owners and operators that fail to comply face penalties, restricted port access, and reputational damage with ESG-focused customers.

Competition From Asset-Light, Digital-First Forwarders

These new competitive players don't own ships but offer digital-first platforms, increased flexibility, and transparent pricing. They're solving many of the friction points that traditional carriers historically have struggled with – and, as a result, attracting high-value customers.

Tariff Fluctuations and Trade Policy Uncertainty Across Major Economies

Trade wars, tariff volatility, and changing customs rules add layers of unpredictability. For example, in August 2025, container imports from China to the U.S. fell 10.8%, following tariff policy shifts.[2] Carriers lack flexible digital systems to recalculate costs, reroute shipments, and update customers in real time, so they can minimize revenue loss and maintain service reliability.

Geopolitical Disruptions

Geopolitical disruptions, including regional conflicts, sanctions, and diplomatic tensions, can instantly close trade lanes. Uncertainty in global supply chains isn't going anywhere. Carriers must invest in digital agility to proactively change plans, adjust capacity, and protect revenue.

Pandemics and Health Crises

As seen during COVID-19 and other health crises, regional health events can abruptly disrupt port labor availability, shipping routes, or trigger cross-border restrictions. Carriers must have systems in place to pivot in the face of future outbreaks.

Together, these forces are squeezing margins, disrupting cash flow, and eroding customer satisfaction across the value chain. The winners will be those that **turn volatility into visibility** and build the resilience to thrive in constant disruption.

[2] US container imports up in August, tariff turmoil dims year-end outlook

The Processes
Holding Carriers Back

Despite advancements in digital platforms and vessel technologies, operational workflows across ocean shipping are frequently siloed and fragmented. This creates inefficiency, limits visibility, and raises costs.

Major pain points and opportunities to remove friction span every stage of the shipping journey, from booking to delivery.

Booking and Contracting

The Challenge

Booking and contracting processes remain largely manual, time-intensive, and siloed. Most carriers still use email-heavy workflows to allocate space and negotiate rates.

The Consequence

Tedious, back-and-forth processes create bottlenecks and scatter critical information across inboxes or spreadsheets. It becomes difficult to validate rate accuracy or capacity commitments, leading to disputes, reduced profitability, and undermined customer confidence. And it's not uncommon – as much as 20% of booked cargo never actually arrives,[3] complicating just-in-time planning and forcing vessels to depart underutilized.

The Opportunity

A centralized system that retains communications and updates, enabling real-time decision-making.

[3] Growth opportunities in the software market

Documentation (eBL, Customs, and Other Trade Filings)

The Challenge

Documentation is one of the most costly sources of inefficiency in ocean shipping. In 2021, only 1.2% of bills of lading were electronic, despite nine major carriers – representing roughly 74% of global trade – committing to 100% eBL adoption by 2030.[4]

The Consequence

Paper-based bills of lading (BLs), customs filings, and other necessary documents introduce delays, duplications, and errors across the supply chain. These legacy processes slow cargo release, increase administrative overhead, and expose carriers to fraud risks.

The Opportunity

Moving away from paper documentation is a huge opportunity for differentiation. Switching to digital bills of lading could save USD 6.5 billion in direct costs across the industry.[5]

Customer Experience

The Challenge

Manual processes, limited visibility, and siloed systems wreak havoc on customers' experience.

The Consequence

Without real-time shipment updates, carriers must communicate back and forth with customer service teams, leading service reps' time to be spent on high volumes of repetitive inquiries that add little value. Carriers clinging to outdated processes risk losing ground and customers.

The Opportunity

Meeting the customer where they are. Omnichannel, AI-powered platforms with real-time updates and self-service options can free agents for high-value tasks and improve customer satisfaction.

[4] DCSA's member carriers commit to a fully standardised, electronic bill of lading by 2030
[5] DCSA's member carriers commit to a fully standardised, electronic bill of lading by 2030

Vessel and Port Operations

The Challenge

Poor berth visibility, reactive scheduling, and disconnected terminal systems create costly inefficiencies, particularly around allocating labor and resources.

The Consequence

Ships frequently arrive without accurate estimated times of arrival and may wait idly for berth availability, burning fuel and eating up profitability.

The Opportunity

Simply stated: more efficient vessel and port operations means supporting more customers and making more profits

Invoicing and Collections

The Challenge

Financial operations (particularly invoicing and collections) are another area bogged down by manual processes and fragmented tools.

The Consequence

Carriers often use multiple systems and manually match invoices with payments, triggering disputes and lengthy audits. These disputes increase days sales outstanding (DSO) and tie up working capital, leading to weaker liquidity and strained customer relationships.

The Opportunity

When margins are everything, accelerating cash flow is the goal of every ocean carrier.

Compliance and Sustainability

The Challenge

Sustainability is now a regulated mandate. The IMO and EU both set forth frameworks, requiring carriers to track and report greenhouse gas emissions. But for many carriers, this data isn't easy to come by. Emission data might be logged in a combination of spreadsheets, audits, and outdated systems, with no single source of truth.

The Consequence

The lack of real-time visibility creates compliance risks and reputational exposure.

The Opportunity

As regulators tighten enforcement, shippers are increasingly prioritizing partners to help them improve ESG reporting, maintain compliance, and minimize risk.

These inefficiencies aren't isolated – they compound across the value chain, making transformation urgent.

Six Digital Levers
Driving Transformation

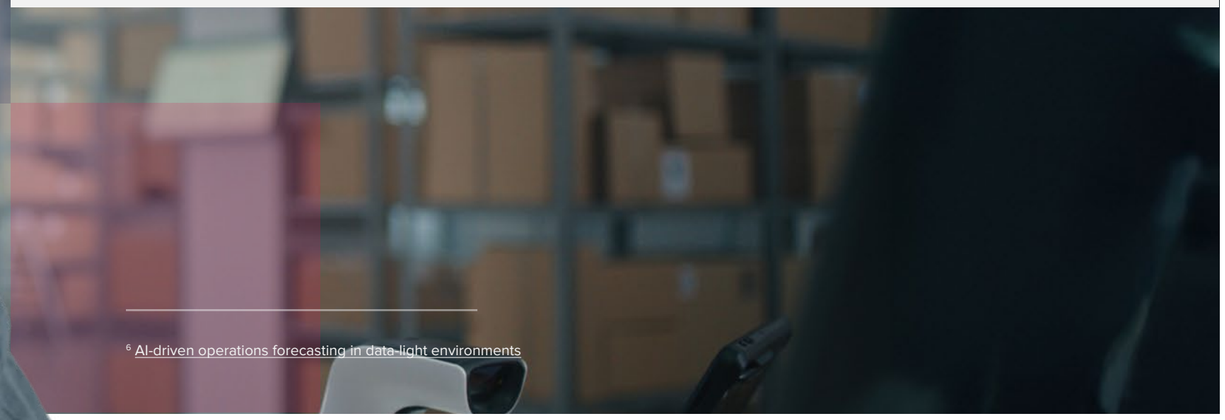
Ocean liners are under pressure to modernize not only vessels but the processes that power them. By targeting six digital levers, carriers can cut costs, boost efficiency, and turn real-time data into better customer experiences and smarter operational planning.

1. AI and ML Forecasting

Predictive analytics, powered by AI and machine learning (ML), will transform how carriers manage dwell times, port congestion, and booking no-shows. Carriers go from being reactive – responding to delays or excess capacity as it occurs – to proactive – **anticipating disruptions and adjusting routes, staffing, or asset allocation in advance.**

It's a massive opportunity for innovation and operational improvement, especially as AI-enabled supply chain forecasting has been shown to reduce errors by 50% and administration costs by 40%.[6]

By intelligently incorporating AI into systems and processes, ocean carriers can automate or replace inefficient legacy practices. They can minimize wasted idle time, improve berth utilization, and deliver more reliable ETAs to customers, **lowering operating costs and improving customer sentiment.**



[6] AI-driven operations forecasting in data-light environments

2. Intelligent Document Processing (IDP)

Manually maintaining documentation, like bills of lading, customs forms, packing lists, and invoices, is inefficient and prone to error and delay.

IDP solutions, powered by AI, solve these challenges and improve overall accuracy by **automating extraction, validation, and routing of key trade documents.**

When shipping companies already spend up to 10% of operating costs on admin work, digitizing documentation directly impacts cost-savings.[7] In fact, The World Economic Forum estimates that digital trade facilitation could reduce trade costs by up to 25%, potentially unlocking $10 trillion in new trade value globally.[8]

For ocean liners, **IDP reduces processing time from days to hours, lowers error rates, and accelerates cargo release**, while ensuring visibility across every handoff.

3. Agentic AI Assistants

Customer service teams are inundated with questions about shipment status, documentation requirements, or payment updates – most of which Agentic AI assistants could be handling autonomously, freeing staff to focus on exceptions and higher-value interactions.

For carriers, the value is twofold: lower service overheads and a more responsive customer experience.

Beyond front-line interactions, AI assistants can guide shippers through documentation requirements, proactively notify customers of delays, and even trigger automated payment reminders, directly reducing dispute volumes and DSO.

[7] Growth opportunities in the software market
[8] This initiative could cut the cost of global trade by 25%

4. Workflow Orchestration

Terminals, depots, and vessel systems each operate independently, using different scheduling tools and data standards. This fragmentation leads to missed connections, idle assets, costly delays, and reactive decision-making.

Workflow orchestration platforms synchronize these moving parts by connecting disparate systems into a unified, real-time view – ensuring all stakeholders are operating from the same information. They can proactively make better decisions, like **rerouting vessels, reallocating labor, and adjusting depot operations in real time.**

This universal source of truth improves visibility, reduces bottlenecks, and speeds up vessel turnaround times, while reducing idle fuel consumption and wasted labor costs.

5. CX Modernization

Customers now expect the same transparency from carriers that they get from e-commerce platforms.

Leading carriers are modernizing their customer experience (CX) to improve visibility and response times, while offering customers more ways to receive updates and support (e.g., via chatbot, voice search, email, and mobile).

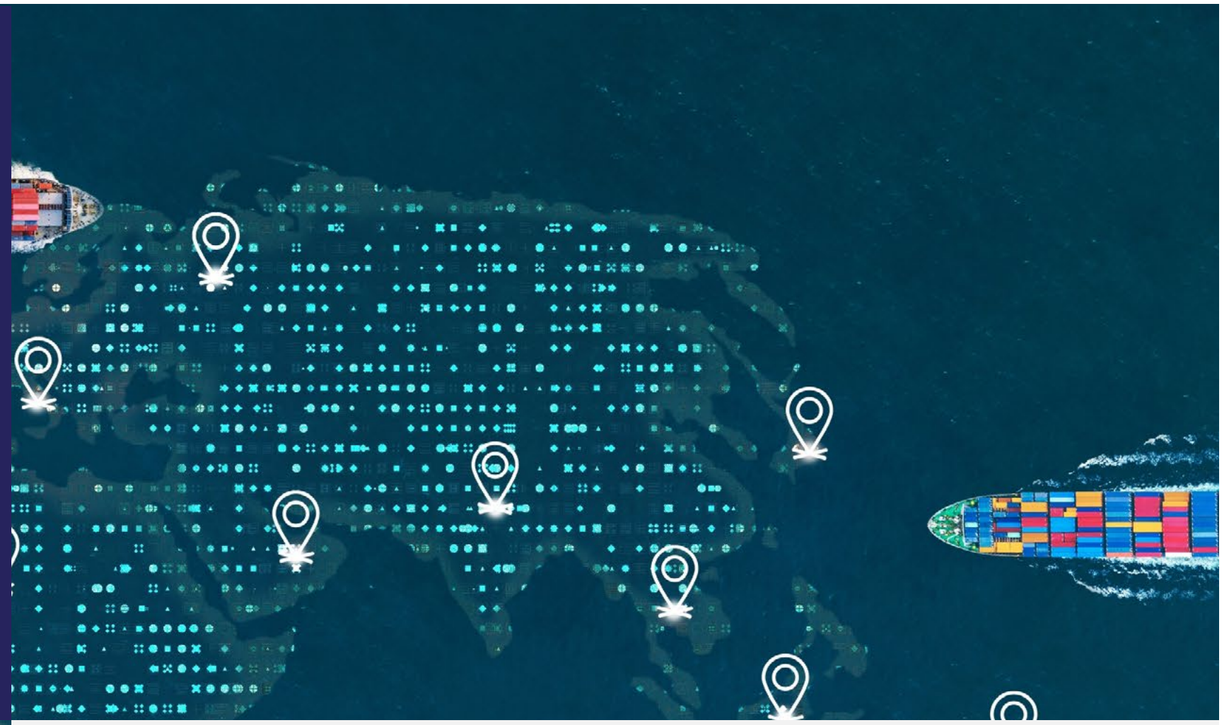
Omnichannel platforms integrated with real-time data feeds allow carriers to provide timely updates and transparent service. **Improved CX leads to reduced call center volume, higher satisfaction scores, and competitive differentiation.**

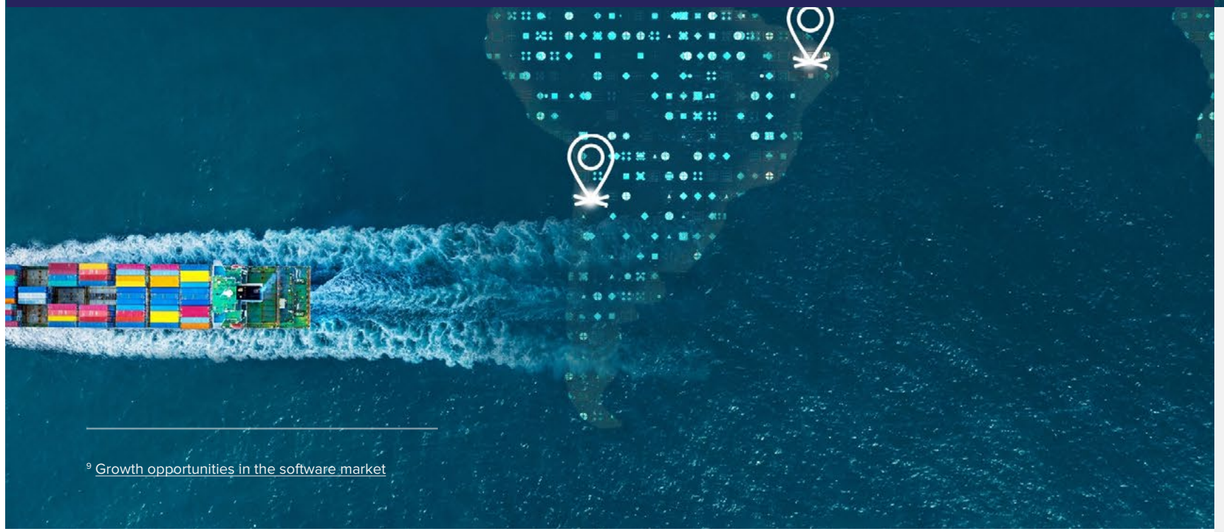
6. Emissions Reporting Dashboards

Emissions control and ESG compliance are a regulatory and commercial requirement. But manual tracking of greenhouse gas (GHG) emissions creates delays and compliance risks.

Automated reporting dashboards deliver real-time visibility and audit preparedness. And with fuel making up 40 to 50% of a shipping company's expenses,[9] software solutions **enabling optimized fuel usage, route efficiency, and emissions reporting can directly reduce operating costs.**

Carriers that digitize ESG tracking meet compliance requirements and become a more attractive partner to customers seeking support in sustainability initiatives.





[9] Growth opportunities in the software market

Ultimately, digital transformation is not just a path to efficiency, but a prerequisite for resilience and competitiveness in the next decades of ocean shipping.

The Sutherland Approach:
Turning Maritime Pressures into Measurable Outcomes

With decades of transformation experience and deep logistics expertise, Sutherland helps ocean liners tackle the operational, financial, and customer challenges reshaping the industry. Our model combines AI-first automation with domain knowledge to deliver measurable outcomes and improved customer experiences - without the disruption of rip-and-replace.

Sutherland brings a unique blend of:

38+ years of experience in business process and CX transformation.

Logistics domain expertise, with live shipping, ports, and 3PL clients, giving carriers proven methods to modernize with confidence.

AI-first automation frameworks to reduce operational effort and cost at scale.

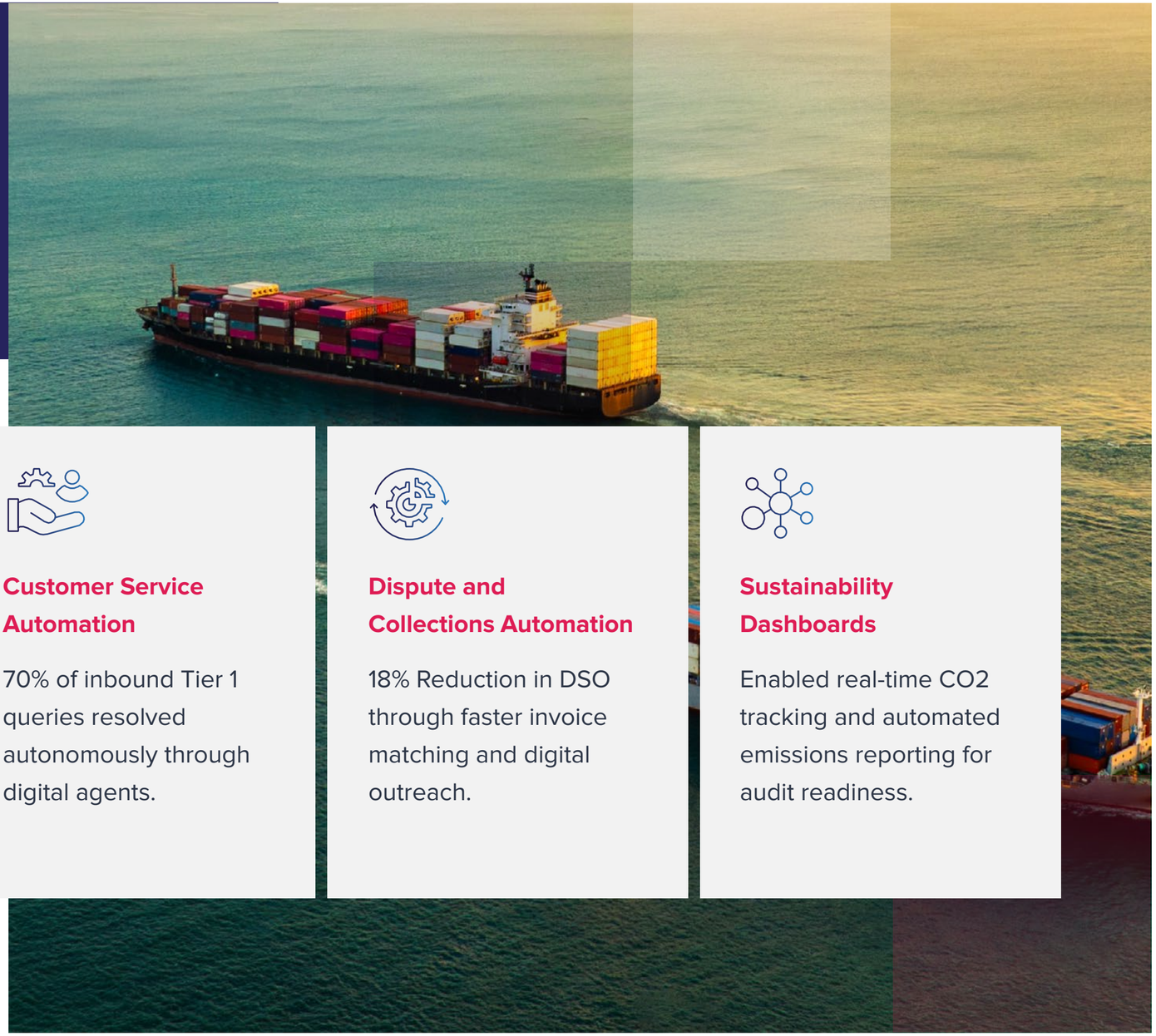
Global delivery capability, including 24/7 multilingual support.

Modular services, that integrate seamlessly into existing platforms, accelerating results while protecting prior investments.

Proven Results with Leading Carriers

At Sutherland, we help carriers modernize core operations to streamline port operations, improve customer service, strengthen financial resilience, and deliver measurable outcomes.

Proven outcomes include:



IDP for Shipping Docs

50% Reduction in processing time of BLs and invoices by across Asia-Europe routes.

Port and Vessel Coordination

Enhanced berth scheduling using AI-driven ETA forecasting.

Customer Service Automation

70% of inbound Tier 1 queries resolved autonomously through digital agents.

Dispute and Collections Automation

18% Reduction in DSO through faster invoice matching and digital outreach.

Sustainability Dashboards

Enabled real-time CO2 tracking and automated emissions reporting for audit readiness.

Sutherland Capabilities and Tools

Sutherland's digital transformation approach is backed by a broad portfolio of capabilities tailored for ocean liner and logistics companies. Our suite of proprietary platforms, deep domain expertise, AI-first automation, and digital engineering services make us a trusted transformation partner across the entire shipping value chain. Below is a snapshot of the tools and services we bring to the table.

Robility® Hyperautomation Platform
End-to-end automation with AI-driven document extraction, business process orchestration, real-time monitoring dashboards, and bot performance analytics. Robility supports both front- and back-office functions with high scalability and security.

Extract.AI – Intelligent Document Processing
AI-enabled OCR/ICR platform for automating the extraction, classification, and validation of complex documents such as bills of lading, commercial invoices, packing lists, and customs forms with 95%+ accuracy.

CX360 & Conversational AI
Customer experience modernization suite enabling omnichannel engagement (voice, chat, email), automated response management, and multilingual support. Integrated with CRM and real-time shipment data to ensure resolution of repetitive Tier 1 queries.

ServiceNext Automation Factory
A modular automation model that blends platform, infra, and human services to accelerate deployment, manage digital workers, and deliver measurable ROI. Comes with 24/7 support and outcome-based pricing.

Transformation and Innovation Group (TIG)
Consulting and advisory-led transformation framework powered by Sutherland Labs, focused on experience design, process consulting, and future-state journey mapping.

Digital Business Services (DBS)
Finance and accounting transformation services spanning invoicing, billing, collections, order-to-cash, and disputes management. Proven to reduce DSO and increase invoice accuracy through intelligent automation and analytics.

IoT+ Predictive Maintenance
Real-time asset monitoring across cold chains, reefer containers, and equipment. AI-enabled models help predict failures, reduce downtime, and improve SLA adherence.

Supply Chain Visibility and Orchestration
Modular tools for shipment orchestration, track and trace, ETA forecasting, and control tower dashboards that integrate seamlessly with ERPs, TMS, and WMS platforms.

Sustainability & ESG Dashboards
AI-driven dashboards for automated CO2 tracking, voyage-level GHG emissions reporting, and real-time ESG compliance management.

Charting What Comes Next:
Transforming Together

In a market defined by volatility and rising expectations, standing still is no longer an option for ocean liners. While platform investments have paved the way, the next wave of differentiation will come from integrating intelligence and automation across every touchpoint.

The industry challenges are many, spanning from fragmented documentation, and inconsistent customer experiences, to rising compliance obligations, and relentless cost pressures.

But the opportunity is clear: by digitizing critical workflows, automating low-value tasks, and sharing data across the value chain, **carriers can unlock billions in savings, accelerate cash flow, and strengthen their competitive position.**

It's time to embrace holistic transformation and reap the benefits. Carriers who act decisively will set the new benchmarks for speed, transparency, and sustainability – and cement their role as the backbone of global trade.

Sutherland partners with shipping companies to co-innovate around:

- **Process diagnostics and transformation roadmapping**
- **Proof-of-concept deployments in key operational functions**
- **Long-term partnership to enable digital shipping at scale**

Let's chart the future of ocean logistics – together.

Artificial Intelligence. Automation. Cloud Engineering. Advanced Analytics.
For Enterprises, these are key factors of success. For us, they're our core expertise.

We work with global iconic brands. We bring them a unique value proposition through market-leading technologies and business process excellence. At the heart of it all is Digital Engineering – the foundation that powers rapid innovation and scalable business transformation.

We've created over 200 unique inventions under several patents across AI and other emerging technologies. Leveraging our advanced products and platforms, we drive digital transformation at scale, optimize critical business operations, reinvent experiences and pioneer new solutions, all provided through a seamless "as-a-service" model.

For each company, we provide new keys for their businesses, the people they work with, and the customers they serve. With proven strategies and agile execution, we don't just enable change – we engineer digital outcomes..

SUTHERLAND®
digital outcomes.

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