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# The human side of operational efficiency in shipping



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## Executive summary

Operational efficiency is one of the most immediate and scalable levers available to improve fuel savings, resilience, and decarbonisation in the maritime sector. As zero-emission fuels increase voyage costs, efficiency gains will be essential for maintaining competitiveness and meeting regulatory and customer expectations. However, despite proven tools and well-understood optimisation levers, most companies are still only capturing a fraction of the available value.

The reason for this is not a lack of technical solutions, but rather challenges around leadership, culture, and incentives. Current commercial structures make many inefficient behaviours entirely rational. For example, the “sail fast then wait” approach, withholding information, buffer-heavy planning, and siloed decision-making are all reinforced by separate profit-and-loss structures, demurrage exposure, fragmented key performance indicators (KPIs), and a strong preference for individual certainty over system-wide optimisation. These longstanding dynamics repeatedly stall the adoption of cost-effective operational improvements.

These barriers were also on display in an interactive operational efficiency workshop hosted by the Global Maritime Forum in Copenhagen in November 2025, which focused on how incentive structures, decision rights, and organisational norms shape day-to-day operational behaviour. Through facilitated discussions and a custom voyage simulation game, workshop participants explored why value chain actors often act defensively, protect local incentives, and delay decisions even when system-wide efficiency gains are available. The exercise enabled participants to reflect on the split incentives, siloed working, and risk aversion so often present in current structures. When incentives were reframed around a shared outcome, however, behaviours shifted notably. Information was shared earlier, decisions became more proactive, and optimisation occurred across the group rather than as individual actors. The experience underscored the importance of aligning incentives and outcomes.

To unlock this change at scale in the real world, three enablers must be in place:

1. Clear vision and strategic alignment within an organisation to ensure that efficiency is framed as a strategic priority, supported by KPIs that reflect operational reality.
2. Cross-departmental collaboration to break down siloed decisions, enabling chartering, operations, technical, and sustainability teams to co-own the voyage.
3. Cross-value-chain collaboration to align cargo owners, shipowners, operators, ports, and terminals around shared expectations, data, and benefits.



## Leadership and cultural actions to implement operational efficiency

### Short term

- Establish a clear narrative linking efficiency to fuel savings and emissions reduction within companies
- Launch targeted cross-functional pilot projects
- Adopt initial set of shared performance metrics

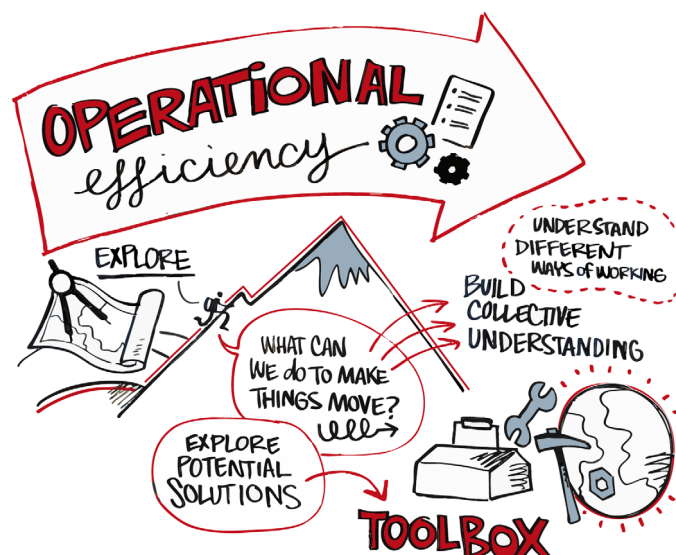
### Medium term

- Align internal KPIs and incentives
- Scale pilots into structured improvement programmes
- Strengthen value chain collaboration through benefit-sharing and early contractual coordination
- Cargo owners driving operational efficiency measures with ports and terminals implementing it

### Long term

- Embed efficiency into governance, fleet strategy, investment decisions, and digital infrastructure
- Make demurrage an exception, not a default mechanism, under an evolved port call optimisation scenario.
- See acceleration by emerging regulatory frameworks

Operational efficiency in shipping is not a technical challenge; it is a systemic one. When strategic alignment, internal collaboration, and cross-value-chain incentives reinforce one another, efficiency becomes a measurable, scalable driver of both commercial performance and decarbonisation.





## Introduction:

# Why leadership and culture matter

Improving the operational efficiency of maritime voyages is often viewed as a technical challenge. However, discussions with industry actors and supporting research reveal that leadership, culture, and incentives, both within individual organisations and across the sector, significantly influence whether efficiency measures are implemented.

Across the maritime value chain, commercial structures reward many inefficient practices. Under current incentives, demurrage,<sup>1</sup> buffer-heavy planning, siloed profit-and-loss structures, and bonus arrangements make behaviours such as “sail fast then wait” [not accidental, but rational](#). These dynamics are not unique to individual companies. A recent [World Bank analysis](#) showed how split incentives and risk-averse commercial norms systematically favour predictability and individual optimisation over system efficiency, helping explain why even cost-effective operational improvements often fail to gain traction.

Within the maritime sector, information sharing is often viewed as a commercial risk or a loss of leverage. As a result, data is routinely held back between organisations, directly undermining energy-efficient arrivals that rely on early and reliable information to be shared, particularly between ports, terminals, and the vessel.

Within companies, KPIs and incentive schemes often pull teams in different directions, making internal collaboration difficult and diluting ownership of the overall voyage so that no single actor feels responsible for end-to-end performance.

This matters, not only for improving today’s operations, but also for the maritime sector’s decarbonisation goals. Operational efficiency is one of the few levers that can immediately cut fuel use, emissions, and costs, creating both the savings and the confidence companies need as they transition to more expensive zero-emission fuels. The ability to align internally, collaborate externally, and shift cultural norms will be a critical foundation of that transition.

### What is operational efficiency?

Operational efficiency refers to improving how a ship is operated, allowing it to use less energy without altering the vessel’s physical design. While technical efficiency focuses on physical equipment and retrofits, operational efficiency is about decisions, behaviours, and coordination across multiple actors in day-to-day operations such as optimising routes, speeds, arrival times, and port calls. It targets well-known barriers such as the “sail fast then wait” dynamic, fragmented responsibilities and misaligned incentives across actors, and cultural or governance gaps that hinder better coordination. In short, within the broader context of energy efficiency, operational efficiency is the practice of changing how the system operates to improve energy use, predictability, safety, and overall performance.

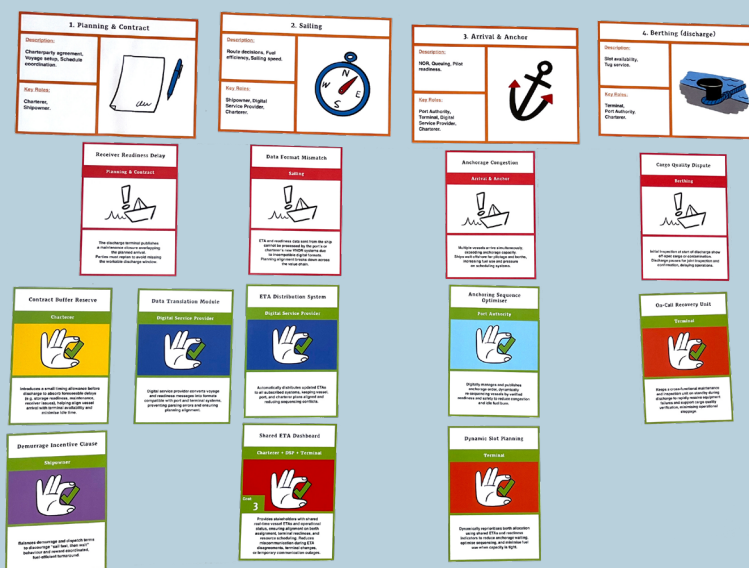
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<sup>1</sup> A charge payable to the owner of a chartered ship on failure to load or discharge the ship within the time agreed. It refers to the time that a shipowner has lost because the charterer was unable to complete the required cargo operations within the agreed-upon time frame.



## The voyage simulation game

The Global Maritime Forum designed a custom voyage simulation game to explore the human and organisational dynamics that shape the effectiveness of operational efficiency measures. The game places participants in the roles of shipowners, charterers, ports, terminals, and digital service providers as they collectively navigate a fictional but realistic laden voyage from planning to arrival.



The premise is simple: each actor begins with a limited set

Figure 1: An image of the voyage simulation game board

of “strategy cards” representing operational levers, constraints, and decisions. These cards cannot solve problems alone, as progress depends on conversation, negotiation, and coordination across the value chain. Players face delays, shifting conditions, incentive misalignments, and incomplete information—much like a real voyage. The mechanics intentionally keep rules light and interactions human. Cards act as prompts, not prescriptions, encouraging players to use judgment, share perspectives, and make trade-offs together.

The purpose of the game is not to “win”, but to surface the habits, assumptions, and behaviours that shape decision-making. By simulating a voyage in a safe, playful setting, participants can experiment with choices they might hesitate to try in real operations. This format brings to life the real-world tensions around speed, scheduling, transparency, demurrage exposure, and contractual constraints, while allowing teams to test what happens when those incentives change.

In the first round of the game, participants typically act in ways that mirror current industry practice. This includes protecting their own incentives, waiting for certainty, withholding information, or defaulting to “sail fast then wait”. In the second round, when incentives are reframed to reward shared efficiency rather than individual advantage, behaviours shift markedly. Participants collaborate more openly, adjust speeds earlier, align expectations, and exchange information more freely. The contrast between the two rounds provides a vivid illustration of how quickly behaviour can change when the system enables it.

The game is therefore a learning tool more than a technical one. Its value lies in creating a structured space where people can see the system through each other's eyes, understand how others experience constraints and pressures, and practice the kind of cross-value-chain collaboration that operational efficiency requires. By gamifying complex industry dynamics in a safe space, participants are able to translate abstract barriers into tangible, actionable insights.



## Behavioural insights and organisational dynamics

In November 2025, the Global Maritime Forum hosted a multistakeholder workshop in which participants explored the leadership and cultural barriers to operational efficiency. The workshop centred around a simulation game in which participants played the roles of charterer, shipowner, port authority, terminal, and digital service provider, trying to optimise a laden voyage in a competitive way. Please see [page 7](#) for more details about how the game was run.

Throughout the workshop, participant interactions reinforced that the most persistent barriers to operational efficiency stem from human behaviour and organisational norms. The game itself, as well as the discussions, sticky notes, and plenary reflections that followed, highlighted a pattern of incentives and behaviours that shape real-world decision-making far more than the availability of data or digital tools.

A recurring theme was the perceived link between transparency and the loss of competitive advantage. Participants noted that during the development of the International Maritime Organisation's (IMO) Carbon Intensity Indicator (CII), some actors resisted proposals involving actual cargo mass because they feared it would expose commercially sensitive information. Yet, several people pointed out that companies participating in the [Sea Cargo Charter](#) already publish their emissions intensity data, which incorporates cargo mass, and that this information enters the public domain each year without any reported competitive consequences.

The contrast was used to illustrate the gap between the perceived risk of transparency and the reality, which is that many companies already disclose far more than they realise without losing strategic advantage. One might even argue that the companies participating in the Sea Cargo Charter are more competitive than their peers precisely because they measure more than their peers.

Another pattern that emerged repeatedly during the workshop was incentive-protective behaviour. Participants reflected frankly on how internal KPIs, compensation structures, and commercial hierarchies influence operational decisions. In several discussions, teams described how trading desks hold the decisive power and are unwilling to take actions that might introduce uncertainty, even when operational buffers were large enough to allow a slower or more efficient voyage.

Participants captured this dynamic clearly, highlighting the risks of personal exposure, the need to protect bonuses, and a feeling that the organisation was "optimising for the wrong thing". The workshop reinforced that people tend to follow the incentives they are evaluated against, even when they privately recognise that the system could be optimised.

The game didn't model demurrage, but participants repeatedly referenced it, highlighting how protecting commercial incentives often takes precedence over acting on efficiency opportunities. Current contractual structures still reward certain forms of delay, making it rational for shipowners to maintain the status quo rather



than collaborate on voyage optimisation. This behaviour was described as familiar and deeply embedded. People are reluctant to give up a potential financial upside, even if doing so would improve system performance.

Within that culture, decisions involving speed adjustments or arrival timing carry personal accountability. Therefore, many operators prefer to rely on experience rather than information that feels incomplete, unverified, or at odds with established norms. A closely related behavioural dynamic described by participants was the tendency to wait for certainty rather than act early, not because early action is impossible, but because committing too soon feels professionally risky. Sticky notes captured this with phrases such as “better to wait for confirmation” and “I don’t want to commit too early”.

During the discussion, participants suggested that this behaviour could shift if the system placed less blame on individuals and made early communication safer. Several groups proposed practical ideas such as clearer tolerance bands, expectations around early updates, shared confidence thresholds, and predetermined escalation paths that remove the sense of personal exposure.

Perhaps the most powerful theme running through the workshop was the role of trust, and importantly, its absence. Participants pointed to low trust between shipowners and charterers, between ship operators and terminals, and even between internal departments with overlapping responsibilities. The lack of trust was repeatedly described as the reason rational efficiency opportunities are not taken up, even when the tools exist.

The most striking insight from the workshop came from comparing behaviours in the first round, in which participants adopted a business-as-usual approach, and the second, when they were challenged to focus on how the whole voyage could be optimised. During the debrief, participants noted that they acted very differently once the incentives were aligned around a shared objective rather than individual interests. In round two, they shared information more readily, collaborated more openly and made decisions with less hesitation. The emotional tone also shifted. Participants described feeling less defensive, more willing to experiment, and more confident that others at the table would reciprocate their actions.

These behavioural shifts were closely tied to another theme: organisational culture. Many participants spoke about internal silos, hierarchical decision-making, inconsistent priorities, and the absence of clear internal messages about the value of efficiency. Participants who came from companies where internal alignment work was already underway noted that decisions in round two felt more natural and less fraught.

Together, these insights indicate that the core obstacles to operational efficiency are not technical. They lie instead in perceptions of competitive risk, incentive structures, habitual decision-making, emotional responses to uncertainty, and deeply ingrained cultural norms. Yet the workshop also showed that behaviour can change quickly when incentives align, when individual exposure is reduced, and when people feel safe to collaborate.

## The three enablers of leadership and culture for operational efficiency

At the workshop, three core elements emerged as enablers of an organisational environment that would allow operational efficiency to be implemented, scaled, and sustained.

### Clear vision and strategic alignment

Leadership sets the tone. In practice at an organisation, this means moving beyond aspirational statements to clear, actionable visions. Workshop participants repeatedly noted that high-level ambitions and buzzwords often feel disconnected from the realities of operational teams, failing to inspire engagement and deliver change.

For example, one company shared how top-level decarbonisation targets were considered abstract and superficial by operations. The disconnect arises not from a lack of commitment, but from misaligned KPIs and competing incentives. Charterers measure success by cost per tonne, while operators and claims teams track entirely different P&L metrics. Without coherent alignment, one department's efficiency effort can inadvertently penalise another.

Effective leadership translates vision into actionable steps and benchmarks. Teams need data-driven KPIs that reflect operational realities, giving them visibility not only into what decisions were made, but also the missed opportunities of decisions not taken. There have been promising signs from pilot programmes where new incentive structures are tested across a company's departments. These initial pilots provided evidence of potential gains and demonstrated that collective alignment produces net benefits for the organisation.

Leadership also signals cultural norms. When executives model collaboration and communicate transparently about priorities, teams are more likely to follow. A vision that is credible, actionable, and supported by measurable KPIs creates the foundation for the next step: breaking down silos within the company.

### Cross-departmental collaboration

Large shipping and commodity trading companies often operate in departmental silos. Charterers, operators, sustainability teams, and trading departments pursue their own goals, rarely accounting for the broader organisational impact. Workshop participants highlighted that conflicting bonus structures and separate profit and loss measurements can lead to teams protecting their own metrics at the expense of overall efficiency.



Cross-departmental collaboration requires deliberate intervention. Internal pilot projects, joint workshops, and shared KPIs allow teams to experiment with integrated processes without penalising individuals for stepping outside their traditional roles. One participant noted that carbon intensity reduction initiatives only succeed when charterers, operators, and sustainability teams jointly understand the trade-offs, from speed optimisation to cargo spoilage risk.

Trust and transparency are critical. Business units need reliable data to make informed decisions, whether around bunker timing, cargo readiness, or berth availability.

In the simulation game, participants initially pursued solo strategies before realising that only collaborative actions (sharing information and aligning actions across departments) unlocked the full points and outcomes. Operational efficiency becomes a shared objective when internal culture supports co-ownership, transparency, and joint accountability.

## Cross-value chain collaboration

If the wider supply chain is misaligned, even perfect internal alignment won't enable operational efficiency. Shipping operates in a fragmented environment where cargo owners, ports, terminals, and ship operators all influence different operational outcomes. For example, cargo owners often dictate the commercial priorities for voyages, hence the mantra "cargo is king".

Workshop discussions revealed the importance of incentives, transparency, and trust across the value chain. Stakeholders are reluctant to share data or adapt behaviours without a tangible benefit, whether financial, operational, or reputational. This is not just the case between shipowners and charterers. In ports, for example, sharing information on readiness or queues can enable better planning, but the parties need to trust that benefits will be equitably distributed.

Initiatives like just-in-time arrival<sup>2</sup> to priority berthing for green ships illustrate how cross-value-chain collaboration and incentives can reduce waiting times, emissions, and costs. The most successful initiatives are not isolated pilots but systemic, incentivised solutions. Financial alignment, whether through shared savings or carbon pricing mechanisms, ensures that all parties co-own the outcomes. As one participant put it, "if incentives are not aligned, nothing else matters."

Importantly, collaboration across the value chain also relies on cultural shifts at an industry level. Transparency, pre-competitive data sharing, and joint planning can overcome systemic barriers like demurrage incentives and commercial secrecy. Policy and regulation can catalyse change, but the driving force must come from within the value chain itself. Workshop participants agreed that cargo owners who see tangible benefit in collaboration will need to play a leading role.

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<sup>2</sup> An encompassing principle designed to optimise a vessel's speed throughout its voyage, ensuring it arrives at the pilot boarding place only when the berth, fairway, and relevant nautical services are ready.

## From internal alignment to industry impact

The three enablers described above form a continuous cycle. Strategic leadership defines the purpose and direction, cross-departmental collaboration embeds the culture and processes internally, and cross-value-chain collaboration scales the impact beyond the organisation.



*Figure 2: The three enablers of leadership and culture in operational efficiency*

This cycle is reinforced by trust, transparency, and incentives at every level. Leaders must model collaboration, internal teams must share data and co-own efficiency initiatives, and value chain partners must align priorities to create systemic change. Only when all three enablers operate together does operational efficiency go from a theoretical ambition to a measurable, actionable outcome.



# Leadership requirements and priority actions

The following section highlights possible actions under each of the three enablers arranged in terms of the short term, medium term and long term – timeframes deliberately left vague.



## Clear vision and strategic alignment

Clear vision and strategic alignment require leadership to articulate how efficiency connects to long-term organisational goals, translate that vision for teams, and ensure KPIs and incentives across departments support it. Without an overarching narrative, efficiency remains a technical fix rather than a strategic lever.



Figure 3: Priority actions for clear vision and strategic alignment

### Short term

Short-term priorities include defining a clear leadership narrative on operational efficiency. Why does it matter, what is the business case, and what does success look like? Leaders need to position efficiency not as cost-cutting but as part of the company's long-term strategic direction. Workshop participants emphasised the value of concise "efficiency principles" that guide day-to-day decisions.

Early steps also include translating the leadership vision into team-level language, clarifying the contributions of each department, and identifying where current targets fail to reinforce the vision. Several companies have begun to [explicitly integrate operational efficiency](#) into their decarbonisation roadmaps, offering examples of how vision-setting can work. For example, Viterra (pre-merger with Bunge) established a working group to build a shared understanding of shipping decarbonisation initiatives, assess which measures can be adopted and integrated into its broader roadmap, and actively disseminate this knowledge across business teams to raise awareness and align action throughout the organisation.

### Medium term

Medium-term priorities involve aligning KPIs with the strategic vision across departments. This includes integrating efficiency metrics into performance reviews, quarterly business processes, and budgeting cycles. It also includes getting ports and terminals on board through bilateral partnerships that reinforce the company's strategic direction.



A second medium-term action is expanding cross-company communication mechanisms like town halls, road-mapping sessions, and learning interventions that allow teams to internalise the strategy, not merely receive it.

Long term

Long-term transformation requires embedding operational efficiency into corporate identity, culture, and incentives. Participants envisioned a real shift where efficiency performance shapes strategy cycles, digital investment decisions, and even future fleet renewal plans. This can be done through rolling multi-year efficiency programmes, leadership pipelines trained on systems thinking, and integrated efficiency and decarbonisation dashboards.

Emerging examples include companies linking efficiency improvements to reinvestment in alternative fuels and digital optimisation tools—a signal that efficiency is becoming part of the long-term capital strategy rather than an operational side project.

Cross-departmental collaboration

Cross-departmental collaboration is about breaking down silos between operations, commercial, technical and sustainability teams so that decisions on speed, routing, contracts and port calls are made against a shared picture of cost, risk and emissions.

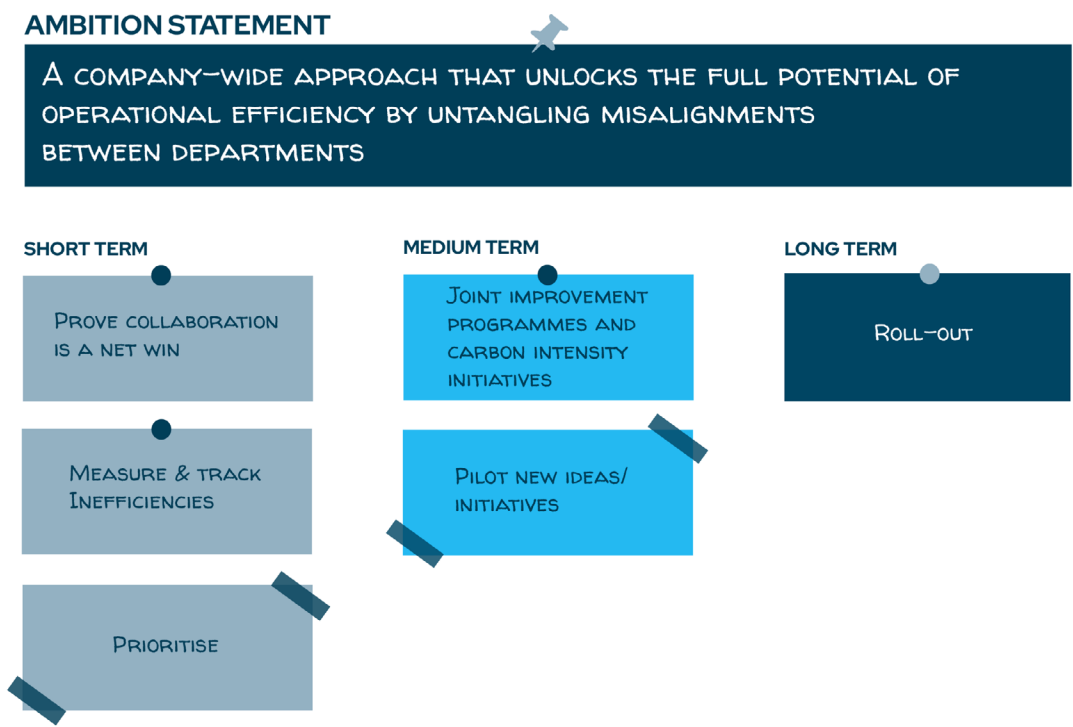


Figure 4: Priority actions for cross-departmental collaboration

## Short term

Delivering on this ambition begins with proving that collaboration is a net win. Departments will not change if they fear losing out in the short term. Leaders therefore need early evidence that efficiency creates value for everyone, whether that's lower bunker costs, fewer off-hire days, safer and more predictable port calls, or better CII ratings. Industry analyses already show that voyage optimisation and better coordination across the port call can cut fuel use and waiting times, delivering a triple win of lower costs, lower emissions, and better service. Short-term internal pilots can surface these net benefits and build a coalition of supporters—for example, forming a cross-functional team from operations, chartering, and digital to run a [just-in-time arrival](#) or virtual notice of readiness trial on a selected trade.

The quickest way to demonstrate that collaboration benefits everyone is through targeted pilots where operations, chartering, technical, and sustainability teams jointly optimise a voyage (or portfolio of voyages) and share the gains. A [previous Global Maritime Forum study](#) showed that companies already using pilots and collaborative speed optimisation report lower fuel use, better CII performance, and reduced waiting times at anchor—a tangible triple win that can be communicated internally.

At the same time, leaders must measure and track inefficiencies in a way that all departments recognise. [The World Bank notes](#) the absence of comprehensive data and common information standards as a major barrier to efficiency uptake. A practical first step could be establishing a small, shared metric set, such as hours at anchor, schedule reliability, voyage fuel use, and CII impact, and reviewing it across departments. Maersk Tankers' monthly performance meetings, which bring vessel performance managers and operators together to review past voyages, provide an example of this type of joint review culture.

## Medium term

Once the value is visible, companies can move from ad-hoc pilots to joint improvement programmes that deliberately mix departments and incentive structures. Demonstration projects are essential to overcoming organisational resistance and proving that operational efficiency measures, such as port call optimisation or speed management, work in practice.

Workshop participants highlighted carbon intensity initiatives as a natural focal point for these programmes. They emphasised that as CII requirements and regional carbon pricing systems become stronger, it can be valuable to create internal 'CII taskforces'. Together, commercial, fleet, and sustainability teams can jointly redesign planning rules, charterparty templates, and routing practices, rather than leaving responsibility with a single group. An example of what aligned incentives can look like would be [BP's virtual arrival pilot](#), where an owner, charterer and terminal jointly agreed to reduce speed based on expected congestion to avoid unnecessary anchorage.

## Long term

A long-term rollout of cross-departmental collaboration would require embedding it into governance, tools, and culture so that it endures even if leadership changes.

For shipowners and operators, this can mean mandating cross-functional voyage



reviews and aligning technical and commercial targets with energy efficiency and reliability. Charterers and cargo owners can support collaborative pilots and adopt contract clauses that reward on-time, low-emission voyages rather than pure speed. Ports and terminals can take the lead in building the data and governance infrastructure that internal teams can plug into. Digital providers can design solutions around shared metrics and interoperability, rather than relying on siloed dashboards. Regulators and policymakers can reinforce these efforts by recognising port call optimisation and collaborative efficiency initiatives in policy frameworks and encouraging pre-competitive data spaces.

## Cross-value chain collaboration

This enabler centres on a coalition of willing stakeholders led by cargo owners working together to unlock efficiency gains that no single actor can achieve alone.

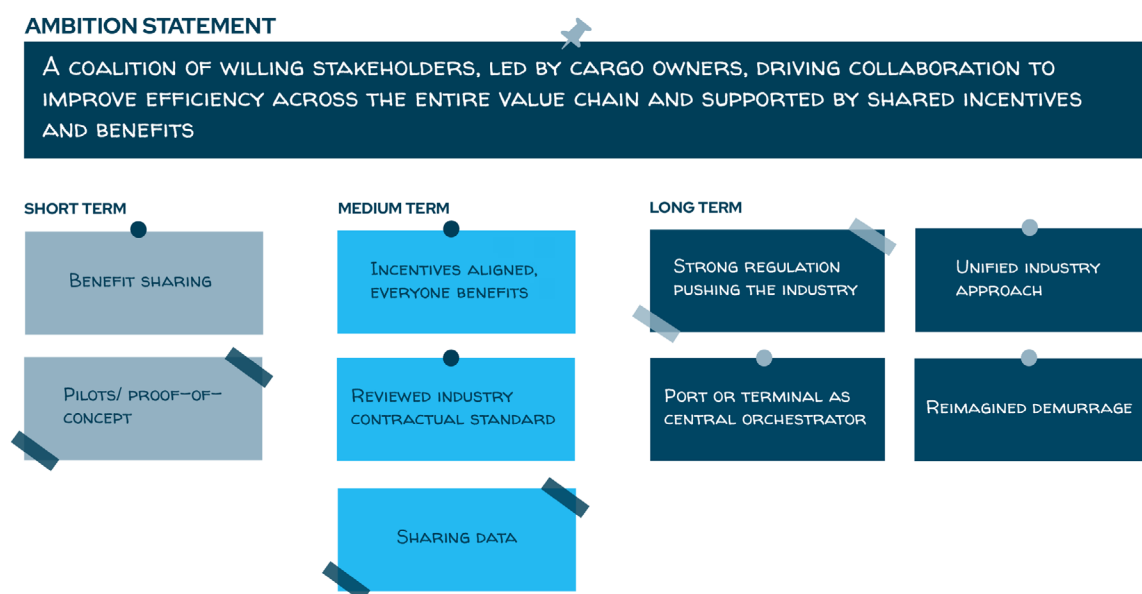


Figure 5: Priority actions for cross-value chain collaboration

### Short term

In the early stages, the focus is on building trust between actors and demonstrating tangible shared value. Two themes repeatedly emerged in the workshop: fair benefit sharing and practical pilot projects that demonstrate what coordinated action can achieve.

Short-term collaboration often begins with small, contained experiments. This could be pairing a cargo owner with a shipowner, or a shipowner with a port, to test data-sharing agreements, explore aligned arrival windows, or trial simple operational adjustments that reduce waiting time or fuel use. Both the [DYNAPORT](#) and [MISSION](#) projects started with small pilot programmes. Pilots are a powerful accelerant because they create shared evidence, decrease perceived risk, and build internal momentum.

Early benefit-sharing mechanisms, even informal ones, help stakeholders see that collaboration can produce mutual wins rather than shifting cost or responsibility from one actor to another.

### **Medium term**

As trust builds, collaboration can expand beyond one-off pilots into more structured and durable frameworks. In the medium-term horizon, it is important to align incentives and develop common contractual standards that reinforce efficiency rather than undercut it.

When incentives are misaligned, like when a port gains nothing from a vessel arriving just-in-time, or when a shipowner absorbs all the downside of schedule changes, operational efficiency breaks down. Over the medium term, stakeholders can begin formalising shared-benefit structures, co-developing templates for data-sharing clauses, or creating operational agreements that reduce friction at the interface between ports, berths, and terminals.

[Previous research](#) points to the importance of standardisation. Developing a common language, common expectations, and common rules of engagement makes collaboration scalable rather than one-off and helps move the value chain from goodwill to governance.

### **Long term**

In the long run, full value chain collaboration becomes embedded not only through voluntary coordination but also through strong regulatory signals, with ports acting as central orchestrators and a unified industry approach to operational efficiency. Participants consistently noted that systemic change requires more than isolated partnerships. Over time, regulation can create the level playing field necessary for the widespread adoption of best practices. As this regulatory landscape matures, ports and terminals are well-positioned to evolve into operational hubs that can coordinate data flows, berth allocation, and arrival planning across multiple actors. A key element of this long-term evolution is a reimagined approach to demurrage. Rather than functioning as a default penalty (or reward) for “sail fast then wait” scenarios, commercial risk-sharing can be shifted so that compensation for delays reflects actual operational disruption.

The long-term vision is an industry where collaboration is the default, supported by shared digital infrastructure, aligned incentives, and a collective commitment to efficiency as a strategic and environmental priority. This is where the coalition of the willing becomes an industry norm, backed by policy, platforms, and common standards.

## Translating insights into action

The following phased approach outlines how organisations can turn understanding into measurable action, building momentum from internal alignment to systemic industry change:

### 1. Short term

- » Articulate a clear leadership narrative connecting operational efficiency to both fuel savings and emissions reductions.
- » Establish a small set of shared metrics (e.g., time at anchor, fuel consumption, voyage emissions) to track performance against an identified counterfactual in order to highlight opportunities.
- » Launch targeted internal pilots that bring together cross-functional teams (e.g., operations, chartering, technical, and sustainability) to demonstrate the tangible benefits of collaboration, supported by clear and aligned KPIs that reinforce shared objectives rather than siloed performance.
- » Strengthen cross-value-chain collaboration through joint operational trials such as port call and voyage optimisation.

### 2. Medium term

- » Expand pilots into structured improvement programmes for broader uptake.
- » Work with neutral industry bodies and associations to develop common data-sharing protocols and governance structures to enable reliable and transparent information flow among stakeholders.
- » Develop common contractual standards (such as data-sharing clauses) between members of the value chain, as well as benefit-sharing mechanisms that reinforce operational efficiency and create mutual wins.



### 3. Long term

- » Embed operational efficiency into corporate strategy, culture, and governance, making it a core element of decision-making and investment prioritisation.
- » Support systemic industry change through aligned regulatory frameworks and shared digital infrastructure, with ports acting as central orchestrators.
- » Foster an industry-wide norm where transparency, collaboration, and shared incentives are the default, enabling measurable efficiency and decarbonisation gains.
- » Shift commercial risk-sharing so that delay compensation reflects real operational disruption. Under an evolved port call optimisation scenario, demurrage remains available for true exceptions but not as a default mechanism.

The workshop and supporting insights make clear that operational efficiency is not a technical problem, but a human and organisational one. Incentives, habits, risk perception, and trust shape decisions at every level, often more than data or tools. However, behaviour can change quickly when leadership sets a clear vision, teams collaborate across departments, and stakeholders align across the value chain.

By systematically translating insights into action (through pilots, aligned incentives, shared metrics, and cross-value-chain collaboration), organisations can move from isolated improvements to systemic transformation. The result is an industry where operational efficiency is embedded, measurable, and a driver of both fuel savings and emissions reduction.