ESG Playbook for Shipping

The essentials
Content of the ESG Playbook for Shipping

- Why ESG is important to you
- ESG topics in the shipping industry & your segment
- Key components of your ESG Strategy
- Contact information
Why ESG is important to you

Explore ESG Playbook for Shipping
What is ESG?

A company's environmental impact includes sub-topics such as CO₂ emissions, pollution, waste, biodiversity, and natural resource management incl. circularity. A company’s performance on the environmental dimension is increasingly being scrutinized by investors, regulators, and customers.

Health and safety of employees, product liability and the assumption of responsibility within a company’s environment shape its public image.

Corporate governance such as leadership's orientation on ESG-aligned company policies and supply chain management are steering mechanisms of ESG implementation.
Purpose of the ESG Playbook for Shipping
Unlock the value proposition of ESG through concrete tools and processes tailored for the shipping industry

Industry transition through ESG
Now, more than ever, the integration of environmental, social, and governance (ESG) standards in business and investment decisions can act as enabler for the transition towards a more sustainable shipping industry and amplify decarbonization efforts

For businesses, environmental, social, and governance (ESG) is an increasingly critical component of their value propositions to stakeholders including investors, customers, and employees. ESG involves setting clear targets, developing roadmaps for meeting targets, and reporting progress. Therefore, it has the potential to drive climate action and more sustainable behavior, including, but not limited to, reducing GHG emissions by improving the reliability, comparability, and transparency of company ambitions and actions.

There is a growing number of voluntary ESG frameworks and methodologies which has made the ESG reporting landscape increasingly complex to navigate. This document is not an attempt at yet another framework or methodology. Rather, we encourage the use of those already out there in combination with an observant eye on the most ambitious upcoming regulation. There is good reason to believe that this along with the ongoing work for an international standard will define future requirements from your main stakeholders including investors and customers.

Guide to a credible ESG strategy
Our ambition with this Playbook is to make ESG more accessible, easy to distribute, and actionable – also for those new to ESG

The Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping and Boston Consulting Group (BCG) want to increase the ESG maturity level and understanding of ESG value proposition among shipowners. Because we believe that ESG is an enabler for more sustainable behavior, we want to provide an easy and clear pathway for shipping SMEs to set ambitious targets and act on them across E, S, and G. We hope to reach as many shipping companies as possible across geographies.

Decarbonization is at the core of what the Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping does, but we strongly believe that a successful decarbonization strategy is closely related to a comprehensive ESG strategy with ambitious target setting across E, S, and G. This transition is not just about ships and technology, we have to ensure a people-centered approach.

In our experience, specific elements characterize a solid and credible ESG strategy:
- Set time-bound long-term and ambitious ESG commitments with interim targets
- Develop a strategy for how to achieve targets
- Invest in initiatives and governance
- Track progress and report using a global standard

Good luck!
Call to action
Now is the time to act!

We are running out of time, transformative action is required
- Within 7 years the carbon budget for a 1.5 °C scenario is depleted
- To stay within the 1.5 °C, shipping must cut emissions by 45% in 2030

Changing shipping dynamics are amplifying the need for ESG
- Global supply chains are continuously being disrupted by global crises
- New roles and alliances emerge in shipping as the race to zero continues

Regulators, investors and customers are demanding change
- Shipping is facing a wave of new ESG regulation e.g., EU ETS, CSRD & CII
- 80% of US investors plan to reallocate capital to ESG short term

The scope of expected sustainability is widening in shipping
- Carbon tunnel vision must be avoided, shipping has a wider ESG role
- Shipping is lagging behind on ESG and must speed up for a just transition

Source: Mercator Research Institute on Global Commons and Climate Change; Earth Overshoot Day; Stockholm Resilience Centre; Financial Times; Demand for ESG Investments Outstrips Supply (2022); MMM/20/CS Ready, Set, Decarbonize (2022); BCG analysis; BCG: The Road Ahead for Low-Carbon Fuels (2022)
Value of ESG

ESG can be deployed to capture new sustainable business value and mitigate current and future business risks.

The ESG imperative

- Value creation captured
- Value destruction avoided
- Current business value
- Captured new profits
- Mitigated business risk
- Business value with ESG
- Business value without ESG

Source: BCG & MMCI+CS analysis
Capture new sources of profits
by participating in growing sustainable markets or increase margins through green premium pricing

- **Premium pricing**: Capture higher prices by exploring customers' willingness to pay for sustainable solutions e.g., 82% of shipping customers are willing to pay a green premium.

- **Reduction of operational costs**: Capture operational cost reductions e.g., through fuel efficiency and speed optimization e.g., 20-30% of CO₂ reductions are consistent with cost reductions.

- **Customer loyalty**: Foster superior customer loyalty by building a strong value proposition to key customers e.g., 71% of customers indicate they will be more loyal to zero-carbon shippers.

- **New revenue streams**: Go beyond core business and build new revenue streams based on emerging green markets.

- **Talent attraction and retention**: New top talent demands credible ESG targets and actions to be attracted and retained.

- **Increased investor access**: Attract new investors through ESG as they reallocate capital to sustainability to be future-fit.

- **Lower cost of capital**: Finance company transition through access to cheaper capital linked to ESG performance.

Source: BCG & MMMCZCS analysis; IMO GHG Study 2020.

Value of ESG
ESG can be deployed to capture new sustainable business value and mitigate current and future business risks.

The ESG imperative

Value creation captured

- Current business value
- Mitigated business risk
- Business value with ESG
- Business value without ESG

Value destruction avoided

- Capture new sources of profits by participating in growing sustainable markets or increase margins through green premium pricing
- Source: BCG analysis; The Strategic Race to Sustainability; BCG & MMMCZCS analysis; IMO GHG Study 2020

- Foster superior customer loyalty by building a strong value proposition to key customers e.g., 71% of customers indicate they will be more loyal to zero-carbon shippers.

- Go beyond core business and build new revenue streams based on emerging green markets.

- Capture operational cost reductions e.g., through fuel efficiency and speed optimization e.g., 20-30% of CO₂ reductions are consistent with cost reductions.

- New top talent demands credible ESG targets and actions to be attracted and retained.

- Attract new investors through ESG as they reallocate capital to sustainability to be future-fit.

- Finance company transition through access to cheaper capital linked to ESG performance.

Source: BCG & MMMCZCS analysis.
Value of ESG
ESG can be deployed to capture new sustainable business value and mitigate current and future business risks.

The ESG imperative

Source: BCG & MMMCZCS analysis

Value creation
captured

Current business value
Mitigated business risk
Business value with ESG
Business value without ESG

Captured new profits

Value destruction
avoided

Value destruction

Source: BCG analysis; The Strategic Race to Sustainability; BCG & MMMCZCS analysis

Mitigate business risks related to material environmental, social and governmental factors

- Reduces stranded assets
  Avoid stranded assets e.g., through proper assessment of emission reduction pathways

- Limit divestments
  Avoid divestments by showcasing a robust ESG transition pathway

- Ensures resilient operation
  Mitigate supply chain risks through the correct set of ESG policies, processes and governance

- Safeguards social license to operate
  Safeguard against social backlashes through the correct set of ESG policies and processes

- Regulatory risks / compliance
  Ensure compliance with ESG regulation through rightful and timely ESG disclosures

- Avoid customer flight
  Mitigate risks of customer flight from supply chain incidents or non-sustainable products

- Avoid divestments by showcasing a robust ESG transition pathway
- Safeguard against social backlashes through the correct set of ESG policies and processes
- Ensure compliance with ESG regulation through rightful and timely ESG disclosures
- Mitigate supply chain risks through the correct set of ESG policies, processes and governance
- Mitigate risks of customer flight from supply chain incidents or non-sustainable products

Safeguards social license to operate

Ensures resilient operation

Avoid customer flight

Reduces stranded assets

Limit divestments

Regulatory risks / compliance

Source: BCG analysis; The Strategic Race to Sustainability; BCG & MMMCZCS analysis
Shipping companies that choose to lead on ESG capture superior value.

**TSR index:**

12/31/2019 = 100

Annualized TSR

1/1/2020-3/31/2022

ESG score:

- Environmental + Social + Governance
- ESG score ≥ median
- ESG score < median

ESG score: Environmental + Social + Governance commitment and effectiveness

TSR: Total Shareholder Return (share price return and dividend yield)

---

Note: 1. Median rebalanced monthly total return of a set of 40 Marine Transport players; 2. ESG score measure a company’s relative material Environmental (e.g., Toxic Waste & Emissions, Carbon Emissions), Social (e.g., Health & Safety) and Governance (e.g., Corporate Governance, Corporate Behavior) performance, commitment and effectiveness.
A new mindset is required

ESG accountability requires a new mindset focusing on collective action across the value chain.
## Vessel owner point of view (simplified)

Vessel owners should consider ESG collaborations with (at least) 6 stakeholder groups:

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Dependencies</th>
<th>Potential ESG actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor</td>
<td>- Vessel owner needs investor buy-in for ESG strategy and capital</td>
<td>- Ensure investor buy-in to begin own ESG journey and capital allocation towards prioritized ESG bets</td>
</tr>
<tr>
<td></td>
<td>- Investor depends on vessel owner’s ESG performance to reach ESG targets for portfolio companies</td>
<td></td>
</tr>
<tr>
<td>Debt provider</td>
<td>- Vessel owner depends on capital lending to invest in ESG initiatives such as vessels running on low-carbon fuels</td>
<td>- Fund ESG bets through beneficial lending opportunities provided by debt providers</td>
</tr>
<tr>
<td></td>
<td>- Debt provider depends on demand for ESG loans to reach own targets</td>
<td></td>
</tr>
<tr>
<td>Cargo owner</td>
<td>- Vessel owner depends cargo owners WtP to invest in ESG bets</td>
<td>- Begin to develop position as ESG partner to whom freight forwarder and vessel operator can rely on for solutions fit for cargo owner’s increasing ESG requirements</td>
</tr>
<tr>
<td></td>
<td>- Cargo owner push for green logistics to reach own ESG commitments</td>
<td></td>
</tr>
<tr>
<td>Vessel oper.</td>
<td>- Vessel owner depends on vessel operator for operations aligned with ESG targets and WtP for ESG compliant ships</td>
<td>- Build ESG solutions fit for vessel operator’s needs and engage operators with aligned ESG strategy for long-term charter to ramp-up capacity effectively</td>
</tr>
<tr>
<td></td>
<td>- Vessel operator depends on vessel owner for access to green vessels</td>
<td></td>
</tr>
<tr>
<td>Technical manager</td>
<td>- Vessel owner depends on licensed crew to reach ESG targets e.g., accidents/injuries onboard merchant vessels</td>
<td>- Engage with crew suppliers and ensure convergence towards common ESG targets such as accidents/injuries targets</td>
</tr>
<tr>
<td>Fuel supplier</td>
<td>- Vessel owner depends on access to green fuel supply from fuel suppliers</td>
<td>- Begin to build off-take agreements with relevant fuel suppliers when long-term charter agreements are secured</td>
</tr>
<tr>
<td></td>
<td>- Fuel supplier depends on vessel owner for green fuel demand</td>
<td></td>
</tr>
</tbody>
</table>

1. WtP: Willingness to Pay. Source: BCG & MM/CSC analysis
A new mindset is required

ESG accountability requires a new mindset focusing on collective action across the value chain

Vessel owner & operator point of view (simplified)

6 stakeholder groups are relevant for companies that own and operate vessels

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Dependencies</th>
<th>Potential ESG actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor</td>
<td>- Vessel owner/operator needs investor buy-in for ESG strategy&lt;br&gt;- Investor depends on vessel owner/operator’s ESG performance to reach ESG targets for portfolio companies</td>
<td>- Ensure investor buy-in to begin own ESG journey and capital allocation towards prioritized ESG bets</td>
</tr>
<tr>
<td>Debt provider</td>
<td>- Vessel owner/operator depends on capital lending to invest in ESG initiatives such as vessels running on low-carbon fuels&lt;br&gt;- Debt provider depend on demand for ESG loans to reach own targets</td>
<td>- Fund ESG bets by beneficial lending opportunities provided by debt providers</td>
</tr>
<tr>
<td>Cargo owner</td>
<td>- Vessel owner/operator depends WtP from cargo owners to invest in ESG bets&lt;br&gt;- Cargo owner push for green logistics to reach own ESG commitments</td>
<td>- Develop position as ESG partner who freight forwarder &amp; vessel op. can rely on to fit cargo owner’s increasing ESG req.&lt;br&gt;- Offer ESG compliant services and seek for long-term freight contract to support investments in ESG</td>
</tr>
<tr>
<td>Freight forward</td>
<td>- Vessel owner/operator depends on demand for sustainable shipping solutions from freight forwarders&lt;br&gt;- Freight forwarder depends on vessel owner/operator for supply of sustainable shipping solutions</td>
<td>- Build ESG solutions fit for freight forwarder’s needs and lock-in long-term contracts to ramp-up capacity effectively</td>
</tr>
<tr>
<td>Technical manager</td>
<td>- Vessel owner depends on licensed crew to reach ESG targets e.g., accidents/injuries onboard merchant vessels&lt;br&gt;- Tech. manager relies on vessel owner/operator with vessel employments &amp; ops. aligned with ESG targets to achieve targets</td>
<td>- Engage with crew suppliers and ensure convergence towards common ESG targets such as accidents/injuries targets</td>
</tr>
<tr>
<td>Fuel supplier</td>
<td>- Vessel owner/operator depends on access to green fuel supply from fuel suppliers&lt;br&gt;- Fuel supplier depends on vessel owner/operator for green fuel demand</td>
<td>- Begin to build off-take agreements with relevant fuel suppliers when long-term charter agreements are secured</td>
</tr>
</tbody>
</table>

1. WtP: Willingness to Pay. Source: BCG & MM/MCZCS analysis

Source: BCG & MM/MCZCS analysis
A new mindset is required for ESG accountability, focusing on collective action across the value chain.

### Vessel operator point of view (simplified)

To build a favorable position in the value chain, vessel operators should consider engaging 5 stakeholder groups on ESG.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Dependencies</th>
<th>Potential ESG actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Investor</strong></td>
<td>- Vessel operator needs investor buy-in for ESG strategy and capital</td>
<td>- Ensure investor buy-in to begin own ESG journey and capital allocation towards prioritized ESG bets</td>
</tr>
<tr>
<td></td>
<td>- Investor depends on vessel operator’s ESG performance to reach ESG targets for portfolio companies</td>
<td></td>
</tr>
<tr>
<td><strong>Cargo owner</strong></td>
<td>- Operators rely cargo owner’s demand for ESG product offerings</td>
<td>- Demonstrate ambition and capability in ESG and attract cargo owners who are committed to ESG and willing to pay for sustainable services</td>
</tr>
<tr>
<td></td>
<td>- Cargo owner relies on vessel operators to achieve own ESG value chain targets</td>
<td></td>
</tr>
<tr>
<td><strong>Vessel owner</strong></td>
<td>- Vessel operator depends on vessel owner for access to green vessels</td>
<td>- Demand greener vessels or partner w. vessel owners who are committed to ESG with solutions e.g., green vessel fleet</td>
</tr>
<tr>
<td></td>
<td>- Vessel owner depends on vessel operator for operations aligned with ESG targets and WtP1 for ESG compliant ships</td>
<td>- Offer ESG compliant services and seek for long-term freight contract to support investments in ESG</td>
</tr>
<tr>
<td><strong>Technical manager</strong></td>
<td>- Vessel operator depends indirectly on licensed crew to reach ESG targets e.g., accidents/injuries onboard merchant vessel</td>
<td>- Engage with crew suppliers and ensure convergence towards common ESG targets such as accidents/injuries targets</td>
</tr>
<tr>
<td></td>
<td>- Tech. manager indirectly relies on vessel operator with vessel employments and operations aligned with ESG targets to achieve the ESG targets</td>
<td>- Influence and inspire tech. manager with ESG targets, and support tech. manager on delivering their ESG targets</td>
</tr>
<tr>
<td><strong>Fuel supplier</strong></td>
<td>- Vessel operator depends on access to green fuel supply from fuel suppliers</td>
<td>- Indicate clear demand for green fuel and support with long term commitment when it is possible</td>
</tr>
<tr>
<td></td>
<td>- Fuel supplier depends on vessel operator for green fuel demand</td>
<td></td>
</tr>
</tbody>
</table>

Source: BCG & MMMCZCS analysis
A new mindset is required for ESG accountability, focusing on collective action across the value chain.

**Environmental example**

To reduce emissions in the supply chain, cross-company collaboration is key as suppliers’ scope 1 & 2 is upstream scope 3.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Supply chain emissions</th>
<th>Stakeholder dynamic (simplified)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel producer</td>
<td>Fuel production</td>
<td>Emissions from fuel production spills-over to vessel owner as scope 3</td>
</tr>
<tr>
<td>Vessel owner</td>
<td>Fuel production</td>
<td>Vessel owner accounts for emissions related to both fuel production and consumption</td>
</tr>
<tr>
<td></td>
<td>Fuel consumption</td>
<td></td>
</tr>
<tr>
<td>Vessel operator</td>
<td>Chartered vessels</td>
<td>Emissions from vessel owner spills-over to vessel operator as scope 3</td>
</tr>
<tr>
<td></td>
<td>Own vessels</td>
<td></td>
</tr>
<tr>
<td>Cargo owner</td>
<td>Transportation and logistics</td>
<td>Emissions from vessel operator spills-over to cargo owner as scope 3</td>
</tr>
<tr>
<td></td>
<td>Cargo production</td>
<td></td>
</tr>
<tr>
<td>End-consumer</td>
<td>Total emissions from purchased goods</td>
<td>Environmentally aware consumers increasingly demand a decarbonized product supply chain</td>
</tr>
</tbody>
</table>

**Scope**

- Scope 1 & 2 emissions
- Scope 3 emissions


Source: BCG & MMICDZC analysis.

Downstream actors’ scope 1 and 2 trickle upstream and become scope 3, enabling vessel owners and operators to 'solve' customers' scope 3.
A new mindset is required

ESG accountability requires a new mindset focusing on collective action across the value chain.

Environmental topics
- Upstream value chain
- Downstream value chain

Social topics
- Cargo owner
- Freight forwarder
- Vessel operator
- Vessel owner

Governance topics
- Cargo owner
- Freight forwarder
- Vessel operator
- Vessel owner

Source: BCG & MWMCCZS analysis

Social example

To succeed with accidents/injuries targets, downstream companies depend on upstream supplier engagements/collaboration.

Stakeholders
- Technical manager
- Vessel owner
- Vessel operator
- Freight forwarder
- Cargo owner

Supply chain emissions
- Accidents/injuries

Stakeholder dynamic (simplified)
- Ship manager’s performance on accidents/injuries spills-over into vessel owner’s performance
- Vessel owner’s ESG performance spills-over into vessel operators’ performance
- Vessel operator’s performance spills-over to freight forwarder
- Freight forwarder’s performance spills-over to cargo owner
- Cargo owners commit to accident/injuries targets and depend on upstream actors to succeed

Downstream actors’ accidents/injuries targets trickle upstream in the supply chain impacting upstream companies.

Source: BCG & MWMCCZS analysis
A new mindset is required for ESG accountability, focusing on collective action across the value chain. The downstream value chain involves stakeholders such as suppliers, freight forwarders, and cargo owners, each with their own anti-bribery performance targets that can spill over to upstream actors.

1. A facilitating payment is a financial payment that may constitute a bribe and is made with the intention of expediting an administrative process. Source: BCG & MMMCZCS analysis.
Environmental, Social & Governance reinforcement

Solid ESG strategies require a holistic approach & awareness of interdependencies of E, S, & G

How integrated thinking creates superior outcomes

How disintegrated thinking creates suboptimal outcomes

Source: BCG & MM/C2S analysis
Environmental, Social & Governance reinforcement

Solid ESG strategies require a holistic approach & awareness of interdependencies of E, S, & G

How integrated thinking creates superior outcomes

How disintegrated thinking creates suboptimal outcomes

Source: BCG & MMICZS analysis

Taking a Holistic Approach is a method of looking at a system as a whole by assessing its integral composing parts and the interconnectedness of these parts. To succeed with ESG, think of each component (E, S and G) as mutually re-enforcing.
Solid ESG strategies require a holistic approach & awareness of interdependencies of E, S, & G

How integrated thinking creates superior outcomes

How disintegrated thinking creates suboptimal outcomes

Source: BCG & MMMCZCS analysis

Integrated thinking example

Vessel owner commit to net zero targets, invests accordingly in efficiency technology and identify relevant future fuels to reduce CO$_2$e emissions...

... the derived need to up- or re-skill seafarers to ensure safe and accurate operations is identified and planned in collaboration with ship manager...

... and data documenting annual progress on emission reductions incl. planned action is collected and shared with customers and investors – and made publicly available

Reducing Emissions + Upskilling/reskilling + Data & transparency

ESG Playbook for Shipping

Why ESG is important to you
Disintegrated thinking example

Vessel owner invests in efficiency technology and future fuels to reduce CO₂e footprint...

... with no training, vessel crew lack skills to operate technology efficiently, leading to less CO₂e reductions as well as expose crew to potential significant safety risks

... insufficient data collection and missing disclosures leading to little credibility in targets and reputational risks among key stakeholders

Reducing Emissions  —  Not addressed  —  Not addressed

Source: BCG & MMMCZS analysis
Strategic approaches
Companies can take one of four approaches to ESG

- Growth explorer: Capturing new sustainable profit pools from material ESG topics
- Future fit: Mitigating key business risks from material ESG topics
- Non-strategic: Low
- Risk mitigator: High

Questions to consider
- Why ESG is important to you
Strategic approaches
Companies can take one of four approaches to ESG

- **Growth explorer**: High growth, high risk.
- **Future fit**: High growth, low risk.
- **Risk mitigator**: Low growth, high risk.
- **Non-strategic**: Low growth, low risk.

**Questions to consider**
- **Non-strategic approach**: Value is bypassed as new profit pools are underexplored and key risks have not been mitigated.

**Mitigating key business risks from material ESG topics**

- **Two-sided approach**: High growth, high risk.
- **One-sided approach**: Low growth, high risk.
- **Non-strategic approach**: Low growth, low risk.

**Notes**
- Capturing new sustainable profit pools from material ESG topics.
Strategic approaches

Companies can take one of four approaches to ESG:

- **Growth explorer**
  - Non-strategic
  - High
  - Capturing new sustainable profit pools from material ESG topics

- **Future fit**
  - High
  - Mitigating key business risks from material ESG topics

- **Risk mitigator**
  - Low
  - Companies focus on mitigating current and future risks in the green transition to avoid value destruction

- **One-sided approach**
  - Non-strategic approach
  - Low
  - Questions to consider

---

**Mitigating key business risks**
from material ESG topics

**One-sided approach**
Companies focus on mitigating current and future risks in the green transition to avoid value destruction
Strategic approaches
Companies can take one of four approaches to ESG

- **Growth explorer**: Companies focus on creating new value by capturing new profit pools.
- **Non-strategic**: Low focus on new value creation.
- **Risk mitigator**: High focus on key business risk mitigation.
- **Future fit**: High focus on capturing new profit pools from material ESG topics.

Questions to consider:

**Growth explorer**
- Why ESG is important to you

**One-sided approach**
- Companies focus on creating new value by capturing new profit pools.

**Two-sided approach**
- Non-strategic approach
- One-sided approach
- Non-strategic approach
Strategic approaches
Companies can take one of four approaches to ESG

Future fit
Companies exploit new emerging profit pools and mitigate material ESG risks

Two-sided approach
Non-strategic
Risk mitigator

Questions to consider
Companies exploit new sustainable profit pools from material ESG topics.

Mitigating key business risks from material ESG topics.
Strategic approaches
Companies can take one of four approaches to ESG

- Growth explorer (High Growth, High Risk)
- Future fit (High Growth, Low Risk)
- Risk mitigator (Low Growth, High Risk)
- Non-strategic approach (Low Growth, Low Risk)

Questions to consider:
- Where is your company currently?
- Where do you want to be a couple of years from now?

Mitigating key business risks from material ESG topics

- Two-sided approach
- One-sided approach
- Non-strategic approach

Capturing new sustainable profit pools from material ESG topics
ESG topics in the shipping industry & your segment

Explore

ESG Playbook for Shipping
Materiality Assessment
Integrated analysis of which ESG topics you should focus on

What is it?
A materiality assessment is a structured process of determining which ESG topics are most important for your company based on an assessment of stakeholder importance and relevance for long-term business success.

How does it work?
It considers your company using a materiality matrix along two dimensions: 1) Business Criticality and 2) Stakeholder Importance. By doing so, it visualizes which topics have the highest importance and potential impact for the company.

Why is it helpful?
A materiality assessment provides an integrated and quantitative view into material topics, helping companies focus and compare themselves to peers and industry standards.
Materiality Matrix

The final output of a materiality assessment is a matrix that highlights the topics most material for your stakeholders and your business.

Materiality matrix is a function of stakeholder importance and business criticality.

Source: BCG’s Materiality Mapping Analytics Product (MMAP)
Materiality Matrix

The final output of a materiality assessment is a matrix that highlights the topics most material for your stakeholders and your business.

Materiality matrix is a function of stakeholder importance and business criticality.

<table>
<thead>
<tr>
<th>Importance to stakeholders</th>
<th>Business criticality - Relevance for long-term business success (X-axis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>- Result of internal inputs gathered from internal interviews across business units</td>
</tr>
<tr>
<td></td>
<td>- Double materiality:</td>
</tr>
<tr>
<td></td>
<td>- Financial materiality: financial risks &amp; opportunities for the business</td>
</tr>
<tr>
<td></td>
<td>- Impact materiality: impacts on society and environment</td>
</tr>
</tbody>
</table>

1. Business Criticality/ Relevance for long-term business success (X-axis)

Source: BCG's Materiality Mapping Analytics Product (MMAP)
Materiality Matrix

The final output of a materiality assessment is a matrix that highlights the topics most material for your stakeholders and your business.

Materiality matrix is a function of stakeholder importance and business criticality.

1. **Business criticality** - Relevance for long-term business success
2. **Stakeholder importance** (Y-axis)
   - Combined result of internal and external input
   - Importance of ESG topics for stakeholders (e.g., investors, customers, NGOs and the public)

Source: BCG’s Materiality Mapping Analytics Product (MMAP)
Materiality Matrices
Each segment has its own materiality matrix encompassing the differences across
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across:

- Ferry
- Offshore vessels
- Cruise
- Special purpose ships
- RORO/Car carriers
- Container
- Bulk
- Tanker

Shipping Industry Matrix

The matrix for the shipping industry shows the importance of Reducing Emissions and Health & Safety.

Note: Includes ESG topics mentioned by at least 10 times by the 47 analyzed companies.

Source: BCG’s Materiality Mapping Analytics Product (MMAP)
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across:
- Ferry
- Offshore vessels
- Cruise
- Special purpose ships
- RORO/Car carriers
- Container
- Bulk
- Tanker

Shipping industry

Consolidated materiality matrix for the tanker segment

- High Importance for stakeholders
- High Relevance for long-term business success

Note: Sample size 6 tanker companies
Source: BCG's Materiality Mapping Analytics Product (MMAP)

- Governance
- Social
- Environmental

ESG Playbook for Shipping
ESG topics in the shipping industry & your segment

Page 35 of 64
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across ferry vessels, cruise ships, special purpose ships, RORO/Car carriers, container ships, and bulk carriers.

Consolidated materiality matrix for the Bulk segment

Relevance for long-term business success vs. Importance for stakeholders

- Governance
- Social
- Environmental

Note: Sample size 8 Bulk companies
Source: BCG’s Materiality Mapping Analytics Product (MMAP)
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across

- Ferry
- Offshore vessels
- Cruise
- Special purpose ships
- RORO/Car carriers
- Container
- Bulk
- Tanker

Shipping industry

Consolidated materiality matrix for the container segment

High

Importance for stakeholders

Corporate ethics
Data governance & privacy
Product quality & safety
Health & safety
Transparency, accountability, & reporting
Corporate governance

Low

Corporate philanthropy

Relevance for long-term business success

Client Experience & satisfaction
Company financial performance
Prevention of major accidents
Systematic risk mgmt
Reducing emissions
Regulatory compliance & reform
Climate Strategy
Low-carbon product portfolio

Note: Sample size 8 container companies
Source: BCG’s Materiality Mapping Analytics Product (MMAP)
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across different types of vessels in the shipping industry:

- Ferry
- Offshore vessels
- Cruise
- Special purpose ships
- RORO/Car carriers
- Container
- Bulk
- Tanker

For RORO/Car Carriers, there is a consolidated materiality matrix for the RORO segment.

- High importance for stakeholders
- Low relevance for long-term business success

Note: Sample size 4 RORO companies

Source: BCG's Materiality Mapping Analytics Product (MMAP)
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across different types of vessels:

- **Ferry**
- **Offshore vessels**
- **Cruise**
- **Special purpose ships**
- **RORO/Car carriers**
- **Container**
- **Bulk**
- **Tanker**

### Consolidated materiality matrix for the ferry segment

- **Importance for stakeholders**
  - **High**
  - **Low**

- **Relevance for long-term business success**
  - **High**
  - **Low**

**Notes:** Sample size 7 ferry companies.
Source: BCG’s Materiality Mapping Analytics Product (MMAP)

---

**ESG Playbook for Shipping**

ESG topics in the shipping industry & your segment

Page 39 of 64
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across

- Ferry
- Offshore vessels
- Cruise
- Special purpose ships
- RORO/Car carriers
- Container
- Bulk
- Tanker

Shipping industry

**Offshore Vessels**

Consolidated materiality matrix for the offshore segment

**Importance for stakeholders**
- High
- Low

**Relevance for long-term business success**
- High
- Low

**Notes:** Sample size 6 offshore vessel companies

Source: BCG's Materiality Mapping Analytics Product (MMAP)
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across Ferry, Offshore vessels, Cruise, Special purpose ships, RORO/Car carriers, Container, Bulk, and Tanker.

Cruise
Consolidated materiality matrix for the cruise segment

Importance for stakeholders

Relevance for long-term business success

Note: Sample size 4 cruise companies

Source: BCG's Materiality Mapping Analytics Product (MMAP)
Materiality Matrices

Each segment has its own materiality matrix encompassing the differences across:

- Ferry
- Offshore vessels
- Cruise
- Special purpose ships
- RORO/Car carriers
- Container
- Bulk
- Tanker

Shipping industry

Special Purpose Ships

Consolidated materiality matrix for the special purpose segment

Importance for stakeholders

Relevance for long-term business success

High

Low

Governance

Social

Environmental

Climate Strategy

Company financial performance

Protecting biodiversity

Diversity & inclusion

Transparency, accountability & reporting

Company governance

Employee recr., dev. & retention

Supply chain mgmt.

Community engagement & impact

Climate Strategy

Systematic risk mgmt.

Waste mgmt. & circularity

Reducing emissions

Water mgmt.

Note: Sample size 4 special purpose ship companies

Source: BCG’s Materiality Mapping Analytics Product (MMAP)
Key components of your ESG Strategy

Explore
What is a credible ESG strategy?
Strategy credibility through long-term and interim target setting, investments in initiatives, and ongoing transparency on progress

Foundation of a credible ESG strategy

1. Set time-bound long-term ESG commitments with interim targets
2. Develop an initiative roadmap for how to achieve targets
3. Invest in initiatives and governance
4. Track progress and report using globally recognized standards such as SASB, GRI, CDP, and TCFD
Building blocks
Five instrumental pieces of your ESG strategy

ESG baseline
- Current state of E, S, and G for your shipping company
- Analytical foundation for the ESG project

Material topics
- Most important topics within E, S, and G for your shipping company
- Benchmark to overall industry and your industry segment

ESG targets
- Prioritized targets across E, S, and G aligned with company priorities
- Ambitions for your shipping company

Main initiatives
- Detailed and tangible initiatives to reach new ESG targets
- Clearly defined actions and roles

ESG roadmaps
- Roadmaps for prioritized initiatives
- Sub-initiative charters describing actions and deliverables

The key pieces constitutes the ESG strategy

Source: BCG and MM/MCS analysis
Building blocks

Five instrumental pieces of your ESG strategy

ESG baseline
Creating a baseline gives the analytical foundation for the ESG strategy project and allows for benchmarking across companies & industries

Why
- Provides the analytical foundation for the ESG project
- Identifies current blind spots in data needed for future target tracking and ESG reporting
- Enables comparison across companies & industries
- Identifies company challenges and strengths
- Secures informed prioritizations based on data
- Builds foundation for future ESG reporting

How
- Gather data for E, S, and G
- Data for E: GHG emissions, air pollution, resource consumption & ecological impact, etc.
- Data for S: diversity, employee tenure & training, health & safety, human rights & community, etc.
- Data for G: mgmt., shareholders & risk, ESG governance & supplier mgmt., etc.
- Setup visualization of data across all three dimensions for your ESG strategy and future reporting

Sanitized examples from playbook project of ESG baseline
Material topics

Identifying material topics gives an integrated view into material topics enabling focus on the most important & critical topic

- Provides an integrated & quantitative view on material topics
- Determines the most material ESG topics for your stakeholders and your business
- Ensures focus on the most important and critical topics
- Enables prioritization and ambition setting in the next step towards formulating of your ESG strategy
- Creates lasting impact by ensuring buy-in of key stakeholders

- Identify long list of the most material topics for the industry by utilizing publicly available reports, e.g., from SASB, GRI, etc.
- Conduct internal assessment of business criticality of topics through interviews & survey
- Conduct external assessment of stakeholder importance through interviews of stakeholders, e.g., core customers, investors, share owners
- Construct materiality matrix with topics plotted based on internal and external assessments
- Compare company matrix to industry and peers to qualify own matrix and be conscious about potentially omitted topics

Sanitized examples from playbook project of materiality assessment
ESG Targets

Deciding on future ambition levels and setting ambitious, yet feasible targets is a cornerstone of a credible ESG strategy

- Helps your company **work in the same direction**
- Fosters **organizational accountability & responsibility**
- Allows for more **conscious resource planning**
- Provides **inspiration** from topic, industry, and segment leaders
- Ensures **deepened focus** on most important & critical topics
- Makes **company ambitions explicit** and based on conscious decision-making processes
- Sets **ambitious and credible targets** for your company

**Why**

- **Perform benchmark of selected industry players** to gauge what ambitious looks like for your top ~10 topics
- **Facilitate discussions** of ambition levels for top ~10 topics
- **Outline targets for all top ~10 topics** across ambition levels
- **Focus your efforts** on a few (2-4) topics in which you will set the most ambitious targets and prioritize your resources
- **Decide on targets & target years** for top ~10 topics with measurable, ambitious, and feasible targets

**How**

Sanitized examples from playbook project of ESG ambitions & targets

Source: BCG and MMMCZCS analysis

ESG Playbook for Shipping

Key components of your ESG Strategy
Main initiatives

Strong main initiatives to accelerate momentum for prioritized topics, enabling your organization to reach your ESG targets

- Describes overall aim and components of company main initiatives
- Sets the company direction for future implementation of ESG initiative to drive change
- Provides tangible overview of organizational expectations
- Sharpens organizational focus even more on a few prioritized topics to ensure capacity to reach ESG targets
- Defines roles of responsibility and sponsorship

- Describe the overall ambition for topics you have chosen as top priority, thus making your main initiatives
- Create long-list of sub-initiatives to comprise your main initiatives gathering inspiration internally & from other comp.
- Conduct high level assessment of sub-initiatives on impact, commercial value, and feasibility
- Facilitate prioritization discussions of sub-initiatives, thereby choosing sub-initiatives to construct your main initiatives

Sanitized examples from playbook project of Main initiatives
Building blocks
Five instrumental pieces of your ESG strategy

- ESG baseline
  - Prioritized targets across E, S, and G aligned with company priorities
  - Ambitions for your shipping company
  - Most important topics within E, S, and G for your shipping company
  - Benchmark to overall industry and your industry segment
  - Current state of E, S, and G for your shipping company
  - Analytical foundation for the ESG project

- ESG targets
  - Material topics
  - Main initiatives
  - ESG roadmaps

ESG Roadmaps
Clear guidance and next steps for prioritized topics will help drive change and implement your ESG strategy

- Details the implementation of sub-initiatives in main initiatives to drive impact
- Anchors sub-initiatives by creating ownership and responsibility in the organization
- Ensures balanced prioritization and resource pull by phasing of sub-initiatives across main initiatives
- Outlines resource need and deliverables for sub-initiatives
- Defines clear actions and next steps for all sub-initiatives
- Construct the overall roadmaps for your main initiatives
- Detail each sub-initiative together with future responsible to make all of them tangible and actionable
- Estimate resources needed to implement each sub-initiative
- Phase sub-initiatives in each main initiative and coordinate across main initiatives, utilizing synergies across initiatives
- Present all main initiatives to ensure buy-in and anchoring across main initiatives broader in the organization

Sanitized examples from playbook project of ESG Roadmaps

Source: BCG and MMMCZCS analysis
Phases
The strategy process consists of 3 phases and 10 key meetings

Phase 1
Why is it important to you?
- Baseline walkthrough
- Kick-off meeting
- Individual materiality topic interviews
- Materiality assessment workshop

Phase 2
What will you prioritize?
- Prioritization & ambition workshop
- Target setting workshop
- Main initiatives workshop
- Sign-off meeting

Phase 3
How do you execute?
- Roadmaps & Anchoring workshop
- Wrap-up meeting
Phases

The strategy process consists of 3 phases and 10 key meetings

**Phase 1**

Baseline walkthrough

**Suggested meeting preparations:**
- Collect data on dimensions of E, S, and G
- Set up baseline visualizations

**Suggested meeting objectives:**
- Assess company performance on dimensions of E, S, and G
- Evaluate data availability

**Phase 2**

**Phase 3**
Phases

The strategy process consists of 3 phases and 10 key meetings

**Phase 1**

**Kick-off meeting**

Suggested meeting preparations:
- Decide on steering committee for ESG project with sufficient senior leadership involvement
- Refine baseline visualizations

Suggested meeting objectives:
- Strong start of ESG project
- Align expectation re. resources, commitment, and outcome
- Share key findings from ESG baseline with broader group

**Phase 2**

**Materiality assessment workshop**

**Main initiatives workshop**

**Target setting workshop**

**Prioritization & ambition workshop**

**Roadmaps & anchoring workshop**

**Wrap-up meeting**

**Phase 3**

**Baseline walkthrough**

**Individual materiality topic interviews**

**Sign-off meeting**
Phases
The strategy process consists of 3 phases and 10 key meetings

**Phase 1**

**Individual materiality topic interviews**

**Suggested meeting preparations:**
- Prepare interview guide
- Share a pre-read interview guide & supporting material with interviewee

**Suggested meeting objectives:**
- Identify what internal and external stakeholders perceive to be the most critical ESG topics for you
- Materiality matrix based on multiple interviews

**Baseline walkthrough**

**Kick-off meeting**

**Individual materiality topic interviews**

**Materiality assessment workshop**

**Phase 2**

**Suggested meeting preparations:**

**Phase 3**

**Suggested meeting objectives:**

**Roadmaps & Anchoring workshop**

**Wrap-up meeting**

**Main initiatives workshop**

**Sign-off meeting**
Phases

The strategy process consists of 3 phases and 10 key meetings

Phase 1

Why is it important to you?

What will you prioritize?

How do you execute?

Baseline walkthrough

Individual materiality topic interviews

Kick-off meeting

Materiality assessment workshop

Phase 2

Suggested meeting preparations:
- Make your materiality matrix
- Gauge the future development of the material topics

Suggested meeting objectives:
- Alignment on the ~10 most material ESG topics for you
- Set the frame for the final ESG strategy

Phase 3

Prioritization & ambition workshop

Main initiatives workshop

Target setting workshop

Sign-off meeting

Wrap-up meeting
Phases
The strategy process consists of 3 phases and 10 key meetings

Phase 1
- Baseline walkthrough
- Kick-off meeting
- Individual materiality topic interviews
- Materiality assessment workshop

Phase 2
- Prioritization & ambition workshop
  Suggested meeting preparations:
  - Find examples of different level of ambitions for each topic
  - Gauge the future development of the material topics
  - Prepare workshop facilitation, e.g., online white boards
  Suggested meeting objectives:
  - Decide ambition levels of all material topics
  - Define a few (2-4) top priority topics to focus your efforts on
- Main initiatives workshop
- Sign-off meeting

Phase 3
- Roadmaps & anchoring workshop
- Wrap-up meeting

Why is it important to you?
What will you prioritize?
How do you execute?
Phases

The strategy process consists of 3 phases and 10 key meetings

- Phase 1
  - Baseline walkthrough
  - Kick-off meeting
  - Individual materiality topic interviews
  - Materiality assessment workshop

- Phase 2
  - Target setting workshop
    - Suggested meeting preparations:
      - Create targets examples of different level of ambitions for each topic for inspiration
    - Suggested meeting objectives:
      - Decide targets & target years for top ~10 material topics
  - Prioritization & ambition workshop
  - Main initiatives workshop
  - Sign-off meeting

- Phase 3
  - Roadmaps & anchoring workshop
  - Wrap-up meeting

Why is it important to you?

What will you prioritize?

How do you execute?
Phases

The strategy process consists of 3 phases and 10 key meetings

---

Phase 1

- Why is it important to you?
- What will you prioritize?
- How do you execute?

- Baseline walkthrough
- Individual materiality topic interviews
- Kick-off meeting
- Materiality assessment workshop

Phase 2

- Main initiatives workshop

  **Suggested meeting preparations:**
  - Describe potential sub-initiatives to comprise the main initiatives
  - Prepare workshop facilitation, e.g., online white boards

  **Suggested meeting objectives:**
  - Define components of main initiatives on lead topics

- Prioritization & ambition workshop
- Main initiatives workshop
- Target setting workshop
- Sign-off meeting

Phase 3

- Roadmaps & anchoring workshop
- Wrap-up meeting
The strategy process consists of 3 phases and 10 key meetings:

**Phase 1**
- Why is it important to you?
- What will you prioritize?
- How do you execute?

**Baseline walkthrough**
- Individual materiality topic interviews
- Materiality assessment workshop

**Phase 2**
- Kick-off meeting
- Materiality assessment workshop
- Main initiatives workshop

**Phase 3**
- Target setting workshop
- Sign-off meeting
- Sign-off meeting

**Suggested meeting preparations:**
- Collect and compile all latest versions of major content pieces from phase 2
- Create first view on ESG roadmaps

**Suggested meeting objectives:**
- Sign-off on all major content pieces of phase 2
- Internal alignment enabling future strategy anchoring
Phases
The strategy process consists of 3 phases and 10 key meetings

Phase 1
Why is it important to you?
What will you prioritize?
How do you execute?

Baseline walkthrough
Individual materiality topic interviews
Kick-off meeting

Phase 2
Materiality assessment workshop

Phase 3
Roadmaps & Anchoring workshop

Suggested meeting preparations:
- Refine ESG roadmaps for main initiatives
- Describe activities and deliverables of sub-initiatives

Suggested meeting objectives:
- Anchor each main initiative with the future responsible
- Adjustments of roadmaps and sub-initiatives as needed
Phases

The strategy process consists of 3 phases and 10 key meetings

**Phase 1**
- Kick-off meeting
- Materiality assessment workshop
- Individual materiality topic interviews

**Phase 2**
- Baseline walkthrough
- Workshop
- Prioritization & ambition workshop
- Main initiatives workshop

**Phase 3**
- Sign-off meeting
- Suggested meeting preparations:
  - Prepare for presentation of the main initiatives with detailed ESG roadmaps and descriptions
  - Collect all deliverables to form your coherent ESG strategy

Suggested meeting objectives:
- Coherent ESG strategy with clear and tangible actions as next step for your organization
Contact

If you want to know more or be assisted in the process of making your ESG strategy - reach out to us!

Tanja Dalgaard
Partnership & Portfolio
Tanja.Dalgaard@zerocarbonshipping.com

Anne Katrine Bjerregaard
Head of Strategy & Sustainability
Anne.Katrine.Bjerregaard@zerocarbonshipping.com

Mikkel Krogsgaard
Managing Director & Partner, BCG CPH
Krogsgaard.Mikkel@bcg.com

Peter Jameson
Partner, BCG CPH
Jameson.Peter@bcg.com

Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping

Read more about the Center

Read more about BCG’s Climate & Sustainability practice
The Center

The Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping is a not-for-profit, independent, and science-based research and development center.

We set the course for a sustainable transition

The Center sets the course for sustainable maritime decarbonization by assessing, informing and guiding the industry transition.

Guided by targets outlined in the Paris Agreement, the Center advocates for sustainable transition pathways that are safe and just for all.

We drive collaborative research, development and innovation

The Center carries out applied research and development activities to produce solutions, concepts and standards.

In collaboration with our industry-leading partners across the shipping value chain we create new knowledge, model viable decarbonization pathways, lower uncertainty, and de-risk decision making to mobilize climate action.

We advocate industry action and regulatory reforms

The Center is recognized as change leader, trusted advisor, and leading knowledge hub for maritime decarbonization.

The Center seeks to influence global, regional, and national decarbonization strategies, advocate for reforms, and collaborate with decision makers to act at scale.

Recommendations for enabling policy frameworks, global standards, and industry actions are based on data, research, and the latest science.

Our vision is sustainable decarbonization of the maritime industry by 2050 & our mission is to be an independent and significant driver of a sustainable maritime decarbonization.