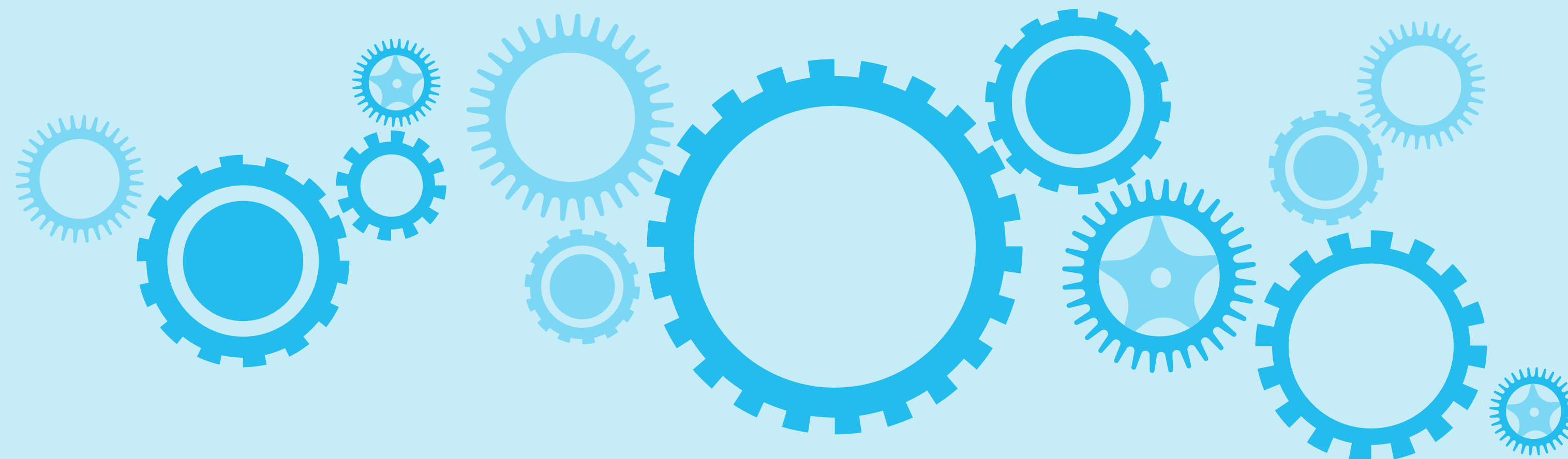




ARUP

Navigating collaboration: Good governance for green shipping corridors

Bringing stakeholders together to turn decarbonisation ambition into action



APRIL 2024

Endorsements



David Dack
Maritime Business Leader
Arup



Green shipping corridors are a vital tool to decarbonise shipping. But bringing together ports, shipping lines, cargo owners, and governments, to achieve the collaboration we need is complex. That means it's vital for maritime leaders to adapt their strategies to build from successful collaboration around the world. We can only achieve the scale of change we need by learning from each other.



Cassie Sutherland
Managing Director, Climate Solutions and Networks
C40 Cities



Urgent action to decarbonise the shipping sector is imperative to keeping global heating within the 1.5°C limit that enables human beings to thrive. As this new report shows, Green Shipping Corridors enable tangible progress in reducing global shipping emissions, but they need clear governance mechanisms to allow these multi-level partnerships advance and achieve concrete outcomes.



Jesse Fahnestock
Project Director, Decarbonisation
Global Maritime Forum



Green Corridors are where shipping will discover its zero-emission future. But on the way, corridor participants will also discover a new way to work: open, collaborative, flexible, and future-oriented. There's no other way to navigate the uncertainties of the next few years, as we prepare for the enormous transition ahead.



Allyson Browne
Founder & Chief Executive Officer
High Ambition Climate Coalition



Navigating Collaboration offers an actionable governance framework for green shipping corridors, highlighting best practices to overcome challenges related to control, power dynamics, trust and equity. High Ambition Climate Collective (HACC) supports C40 and Arup's call for strategic partnerships, holistic governance and cultivating a culture of collaboration and continuous learning. As HACC works to build enduring power for system change in the sector, we stand committed to advancing these practices, and we encourage stakeholders to incorporate these strategies into their climate action plans and broader efforts to transform port cities and the maritime sector for a climate-positive future.



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UN Foundation

US Department of State

Contents

1. Key takeaways	5	4. Governance best practices for Green Shipping Corridors	12
Introduction to climate action collaboration and shipping decarbonisation	5	Introduction	12
Green Shipping Corridor challenges in practice	5	Develop a clear vision and strategy	13
Insights into the governance of Green Shipping Corridors	6	Tailor governance protocols to the corridor's goals and lifecycle stage	14
Our approach to synthesising best practices	6	Select an appropriate partnership structure for effective decision making	15
2. Introduction	7	Protect data and confidentiality	16
What is a Green Shipping Corridor?	7	Understand common approaches across the lifecycle	17
Green Shipping Corridors are central to shipping decarbonisation	8	Identify roles for governments, facilitators, and community	18
The Green Shipping Corridor lifecycle	9	5. Methodology: How this report was shaped	20
3. Navigating the complexity of Green Shipping Corridors	10	Introduction	20
Introduction	10	Engaging with Green Shipping Corridor practitioners	20
Collaborating across the value chain	10	Lessons from other sectors	21
International initiatives	11	6. Conclusions and next steps	22
Ensuring effectiveness in voluntary partnerships	11		
The competitive nature of international trade	11		
Balancing risk and reward	11		

1. Key takeaways

Governance in this report is defined as **the rules and forms that guide collective decision making and the approach required to bring together stakeholders to work effectively as they define common objectives, shape plans for action and implementation.**

This report synthesizes insights into best approaches and practices for the effective governance of Green Shipping Corridor partnerships.

Innovation in collaboration is imperative for addressing climate change challenges.

A decarbonised future relies on the way public agencies and the private sector collaborate and navigate decision making. This particularly applies to shipping decarbonisation, which is an important component of global climate action, with the potential to unlock significant co-benefits for people and planet.

Introduction to climate action collaboration and shipping decarbonisation

Green Shipping Corridors have emerged as a collaborative space for catalysing the technical, commercial, and regulatory feasibility of zero emission shipping, particularly supporting supply and demand development for scalable zero emission fuels. Green Shipping Corridors are key to realising both near- and medium-term global decarbonisation goals.

The 2023 International Maritime Organization GHG Strategy sets clear ambition for the decarbonisation of shipping, requiring a rapid uptake of zero emission fuels in the 2030s. Green Shipping Corridors play an essential role in incubating and maturing solutions to pave the way for this action, but their first mover and often voluntary nature presents challenges.

Various approaches to exploring the feasibility of Green Shipping Corridors have been defined, but **there is a gap in understanding how these voluntary partnerships are run and managed collaboratively and effectively.**

Cross-value chain collaboration is a crucial ingredient in a recipe for a successful Green Shipping Corridor partnership. Given the complex nature of these partnerships, factors like trust-building, developing shared commitments, and co-creating partnership approaches are the foundation of the collaborative nature of the process.



Photo Courtesy of the Port of Long Beach

Green Shipping Corridor challenges in practice

Green Shipping Corridor partnerships involve collaboration that is cross-value-chain, international, and voluntary. The partnerships, variously made up of ports, shipping lines, cargo owners, fuel producers, cities, governments, and other industry representatives across the zero-carbon shipping value chain, are inherently complex but could unlock significant progress if effectively managed.

GSC practitioners are confronted with the following challenges:

- Partnerships are often formed voluntarily by high ambition actors. Maintaining their effectiveness while establishing operating procedures, structure, and goals, can be a challenge.
- Stakeholders familiar in engaging in a commercial and competitive space require new approaches to unlock effective collaboration.
- Most global shipping greenhouse gas emissions are due to international voyages and global trade. To increase their impact, Green Shipping Corridors require a flexible approach that can account for different national contexts and ways of working.
- Competitive markets are linked to various points across zero-emission shipping value chain. Competition law and data security concerns can restrict collaboration and information sharing.
- Green Shipping Corridors stakeholders have varying risk and reward profiles, which can be a challenge to balance as a partnership.

Insights into the governance of Green Shipping Corridors

Effective governance can accelerate the impact of Green Shipping Corridors, catalysing decarbonisation of this globally critical sector and providing a model for international collaboration on other climate challenges.

Figure 1
Key insights for good governance



Our approach to synthesising best practices

Insights for the governance of Green Shipping Corridor partnerships captured in this report are based on Arup and C40's direct experience in these initiatives as well as research and engagement with complex partnerships from other sectors.

Findings and conclusions in this report are built upon a literature review of existing studies on the governance of multi-stakeholder partnerships from other sectors, one-on-one stakeholder interviews with practitioners from industry and non-government organisations, a workshop of Port and City representatives who are currently working in Green Shipping Corridors, and a round table workshop at COP28 with representatives from international public agencies.

The research and stakeholder engagement provides new insights from the wide range of Green Shipping Corridors and action-orientated global partnerships that exist and highlights their need for guidance on best practices. This adds depth and breadth to single facilitators' first-hand experiences working on Green Shipping Corridors. The best practice recommendations have been tailored to maximise applicability across the maritime industry.

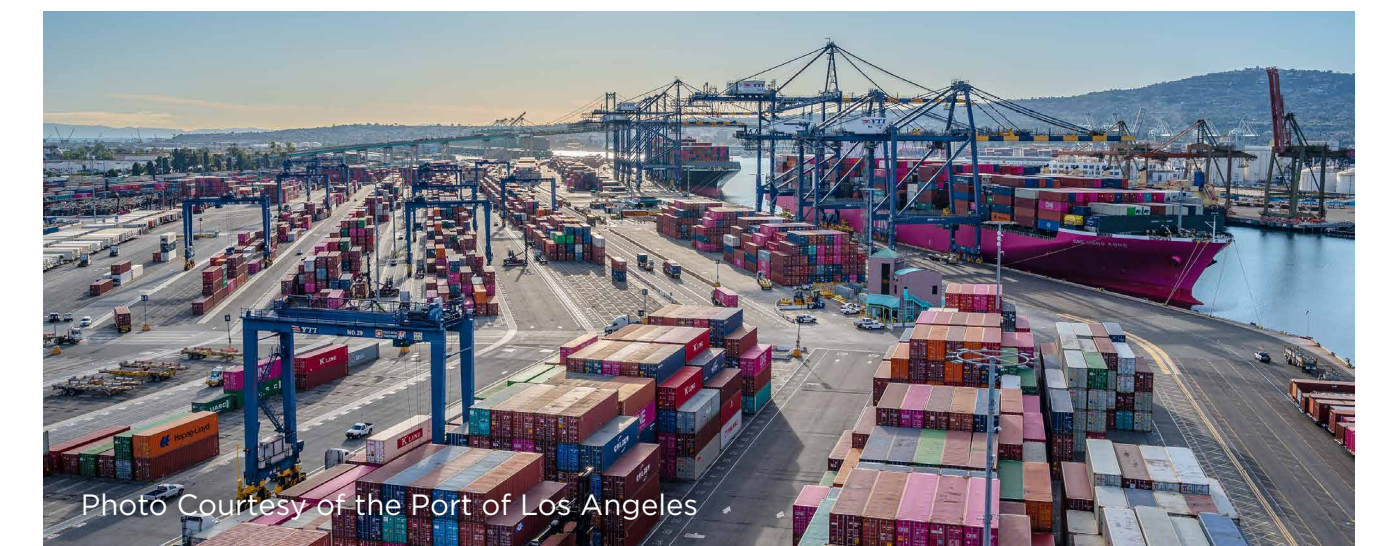


Photo Courtesy of the Port of Los Angeles

Chapter sources:

International Maritime Organization. (2023). *2023 IMO Strategy on Reduction of GHG Emissions from Ships*. <https://www.imo.org/en/OurWork/Environment/Pages/2023-IMO-Strategy-on-Reduction-of-GHG-Emissions-from-Ships.aspx>

2. Introduction

Governance is required to bring together stakeholders to work effectively as they define common objectives, shape plans for action, and implement those plans. This report explores governance in the context of early adopter initiatives for shipping decarbonisation: Green Shipping Corridors.

This report does not extend to approaches for exploring feasibility of initiatives or managing their implementation, which are covered by existing guides and frameworks, but rather the effectiveness of the underlying partnerships that drive these activities forward.

This guidance is intended for stakeholders involved in Green Shipping Corridors, either as conveners, facilitators, active partners, or as external supporters. Stakeholders in this context could be public, private, or third-sector stakeholders.

What is a Green Shipping Corridor?

Green Shipping Corridors, born from the Clydebank Declaration at COP26, are first-mover initiatives for shipping decarbonisation. They aim to “demonstrate that maritime decarbonisation is possible whilst unlocking new business opportunities and socioeconomic benefits for communities across the globe”.

In practice, a range of definitions have emerged to align with this aim, but in general they can be seen as “specific trade routes where the feasibility of zero-emission shipping is catalysed by public and private action”.

A key characteristic of Green Shipping Corridors is cross value chain collaboration – shipping lines working with cargo owners, ports working with fuel producers, etc. – with a focus on enabling the use of scalable zero-emission fuels and in some cases also focussed on operational efficiency initiatives.

At the start of 2024, there are at least 44 Green Shipping Corridor initiatives globally including 171 stakeholders. The initiatives are

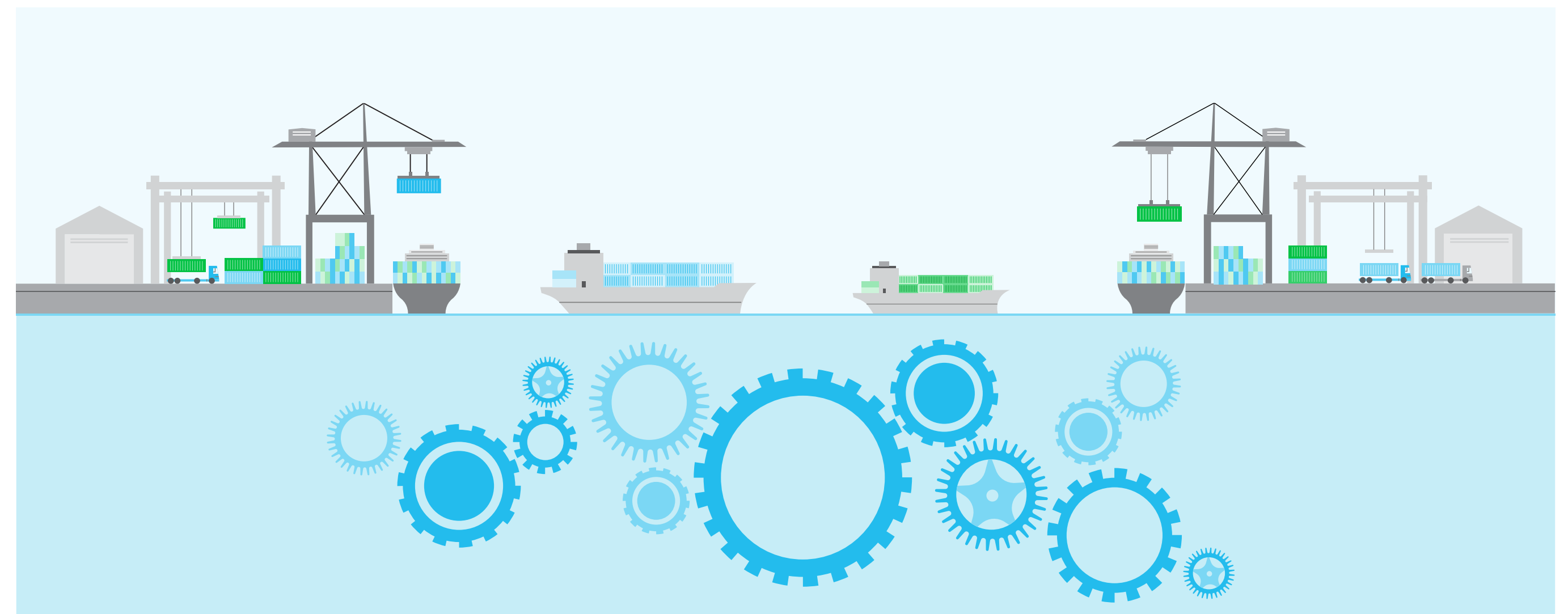
led by a mix of industry/third-sector, governments, ports, and public-private stakeholders. They vary in maturity, with most in the initiation stage, and some moving through the planning stage.

Many challenges are emerging as initiatives mature. Some of these challenges relate to the difficulties ahead in moving from planning to implementation – including significant cost gaps between zero emission and conventional shipping fuels, as well as gaps in regulation and challenges around competition law. Regardless of lifecycle stage, a common challenge is navigating the complexity of governing these partnerships.

Typical partners within GSCs

GSC partnerships take many different forms, but many include the following actors:

- Ports
- Shipping lines
- Cargo owners
- City and national governments
- Fuel and energy producers
- Regulators and classification societies
- Financial institutions



Action this decade is essential to putting the shipping sector on a decarbonisation pathway to reach net zero by 2050.

Green Shipping Corridors are central to shipping decarbonisation

Green Shipping Corridors play a major role in supporting and building on the revised greenhouse gas reduction strategy for global shipping adopted by the International Maritime Organization (IMO) in 2023.

The Revised IMO Greenhouse Gas Strategy includes a commitment to ensure an uptake of alternative zero and near-zero greenhouse gas fuels by 2030: “Uptake of zero or near-zero greenhouse gas emission technologies, fuels and/or energy sources to represent at least 5%, striving for 10% of the energy used by international shipping by 2030.”

Furthermore, the strategy includes an indicative checkpoint: *“To reduce the total annual [greenhouse gas] emissions from international shipping by at least 20%, striving for 30%, by 2030, compared to 2008”.*

The short-term greenhouse gas reduction measures adopted by the IMO, consisting of combined mandatory technical and operational requirements, contribute to these aims but by themselves are not sufficient.

The revised greenhouse gas reduction strategy sets out a timeline for adoption of a basket of ‘midterm’ measures to support the above goals - including both a technical and economic element - with a target for entry into force in 2027.

Given this context, the feasibility of zero emission shipping - covering technical, commercial, and regulatory aspects - must be matured this decade, moving ahead and in anticipation of the midterm measures to provide a springboard for the rapid action which must follow.

Green Shipping Corridors have a vital role to play in this challenge. For example:

- Ports and energy developers addressing technical challenges linked to supply and distribution of scalable zero GHG fuels.
- Shipping lines and cargo owners tackling commercial challenges linked to new business models for zero GHG cargo transport.
- Ports and cities supporting regulatory development to ensure safety and environmental safeguarding.

The complex collaboration between multiple stakeholders underlines both the urgency for Green Shipping Corridors and the need to implement effective working mechanisms that allow them to succeed.

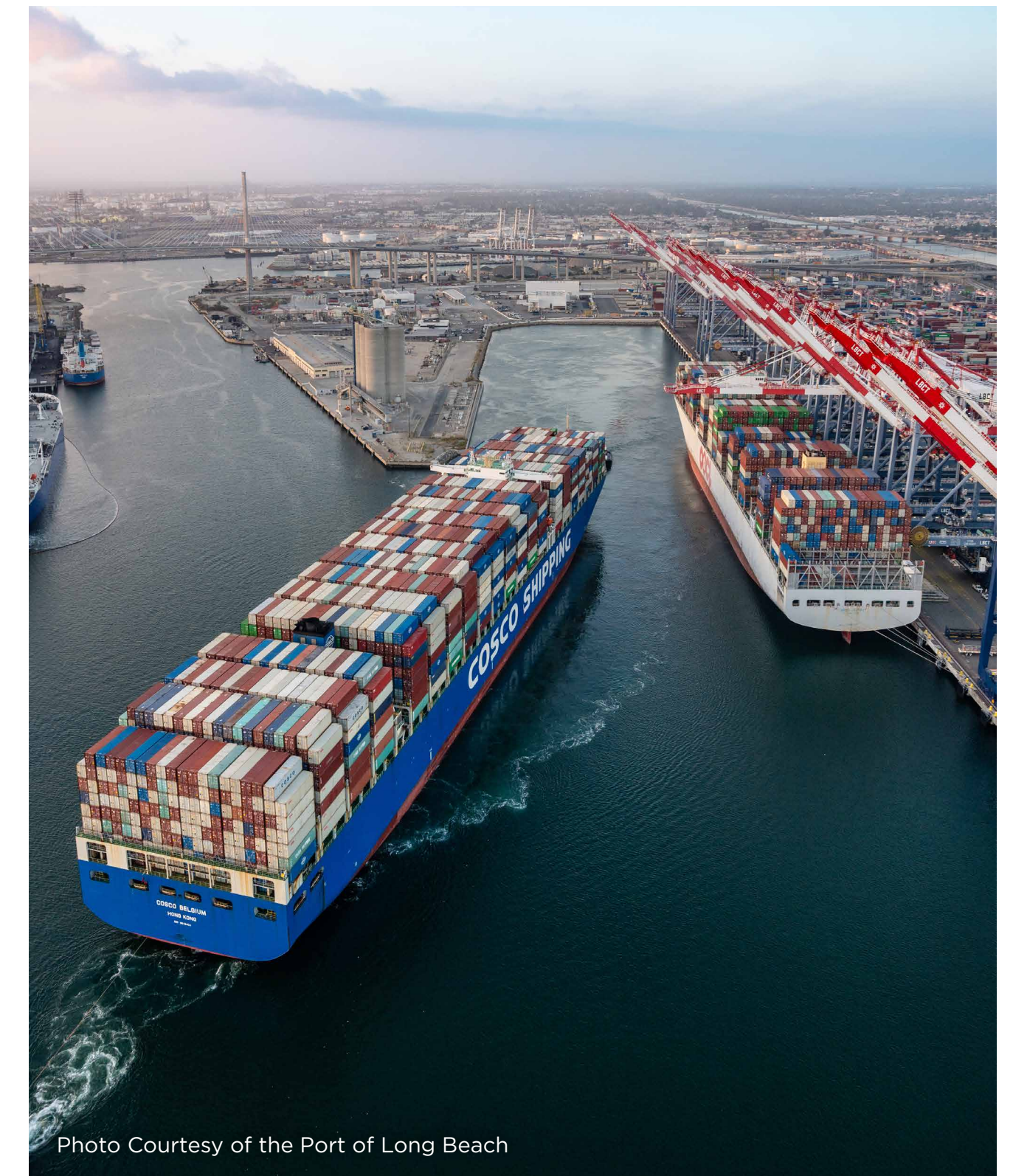


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The Green Shipping Corridor lifecycle

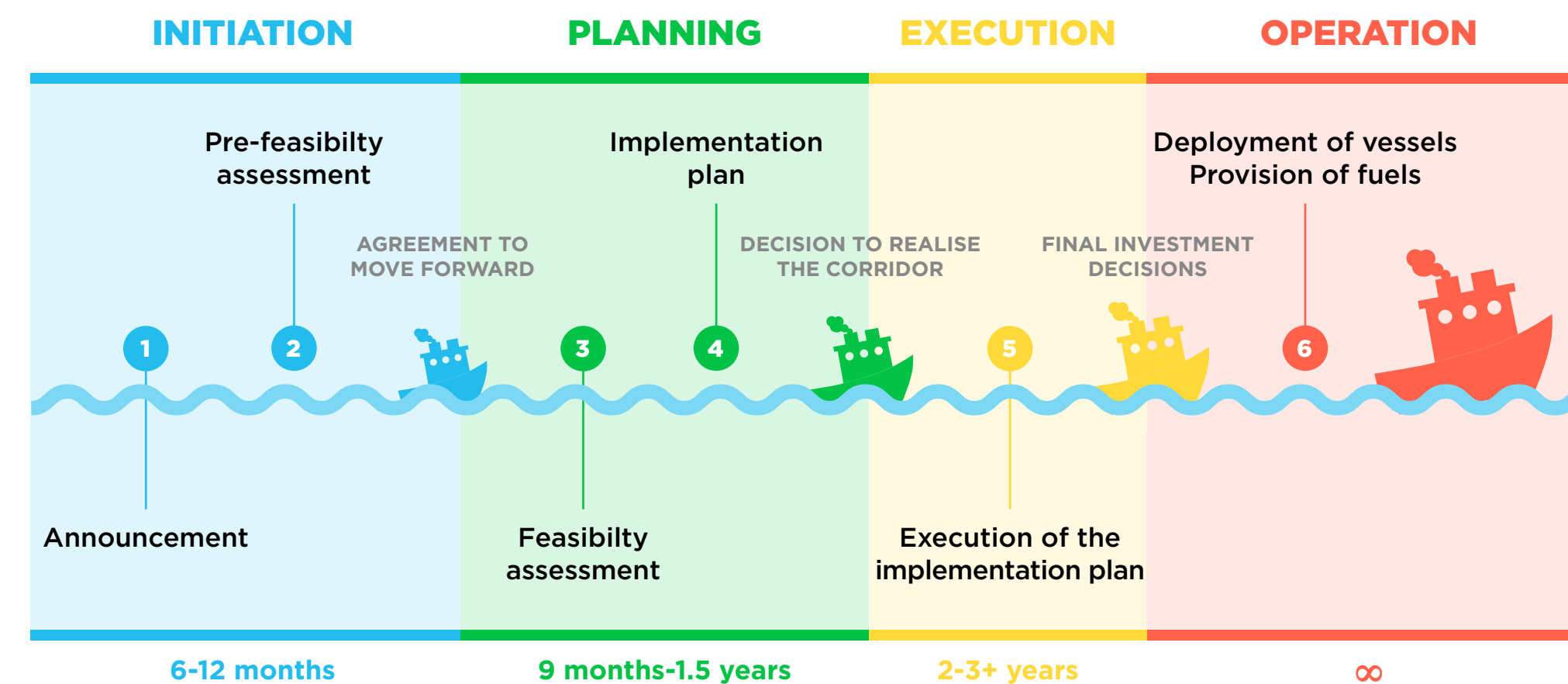
To explore governance of Green Shipping Corridors, it is important to first consider the form and function of these partnerships through their lifecycle. The figure to the right outlines phases, timescales, and broad actions that describe their development.

Key activities in each of these phases are described based on research, experience, and stakeholder engagement. It should be noted that some Green Shipping Corridor partnerships will only ever be involved in the initiation and planning stage due to reaching a decision not to proceed or catalysing wider actions that are discrete from the partnership. Others will more directly lead into the execution and operation phases will require different forms of governance.

This report explores opportunities for good governance through the partnership lifecycle, with a focus on initiation and planning.

Figure 2

Lifecycle phases of a Green Shipping Corridor (adapted from Global Maritime Forum)



Sample actions within each lifecycle phase

INITIATION	PLANNING	EXECUTION	OPERATION
<ul style="list-style-type: none"> Exploring pre-feasibility challenges to shape the form of the corridor. Agreeing on a vision and strategy for the partnership. Core founders as partners. 	<ul style="list-style-type: none"> Developing feasibility of actions across key challenge areas. Onboarding new partners. Engaging with external stakeholders. 	<ul style="list-style-type: none"> Undertaking actions to work towards business case approval, offtake agreements, signed contracts, developed regulatory regime, and design and procurement of infrastructure. 	<ul style="list-style-type: none"> Construction of infrastructure. Deployment of vessels. Use of zero and near zero fuels. Transport of goods.

Chapter sources:

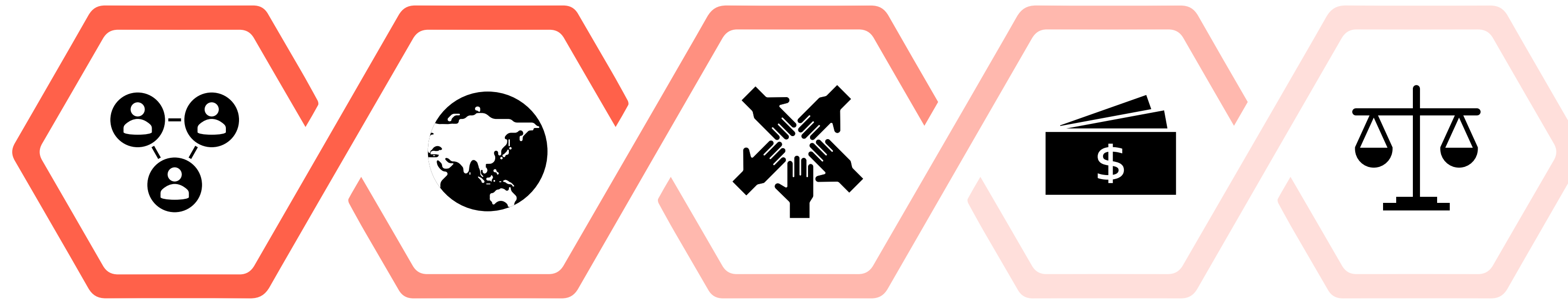
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3. Navigating the complexity of Green Shipping Corridors



Cross-Value Chain Collaboration

Effectively collaborating across ports, shipping lines, cargo owners, cities, fuel suppliers, utilities, community, unions, etc.

International initiatives

Variety of international policy, processes, and culture among countries

Voluntary partnerships

"Coalitions of the willing"
Partnerships can form organically, without rules, structure, roles, responsibilities, accountability

Trade and Competition

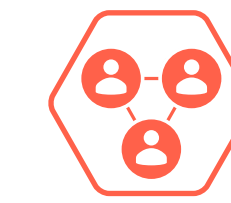
Partners are used to being customers or competitors
Antitrust and competition laws can restrict information sharing and collaboration

Risk vs Reward

Different stakeholders have different risk tolerance and commercial investment capacity
Shipping lines vs. city governments

Introduction

Green Shipping Corridor partnerships involve collaboration that is often cross value-chain, international, and voluntary in nature. The stakeholders that collaborate are often used to engaging within the competitive market-based world of international trade. Green Shipping Corridor stakeholders have varying levels of risk and reward associated with actions linked to the partnerships. This creates a complex environment for voluntary collaboration, which good governance can help navigate.



Collaborating across the value chain

The cross-value chain nature of Green Shipping Corridor partnerships is essential to their success. Information and knowledge must be shared across the ecosystem of zero emission shipping. Generally, a diversity of views will be shared in a non-competitive space.

However, this can present challenges. It can be difficult to break out of the 'customer and supplier' dynamic, which is required for true collaboration. Additionally, stakeholders involved in these partnerships may be new to the shipping sector, so it can be difficult for all actors to align on objectives and priorities.

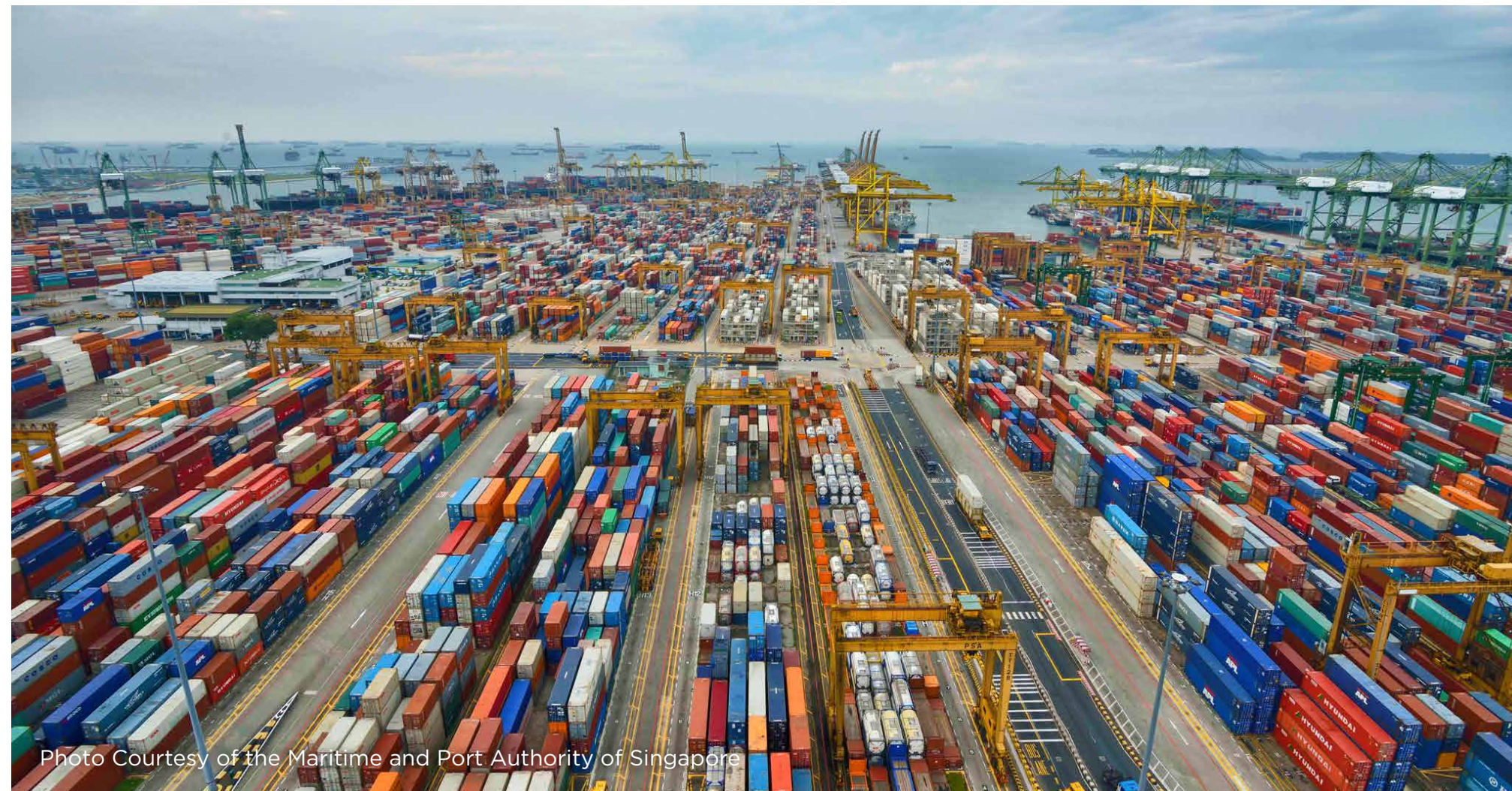
Figure 3
Challenges for Green Shipping Corridors in practice



International initiatives

Most shipping greenhouse gas emissions are linked to international journeys and globalised trade. Therefore, Green Shipping Corridors must demonstrate action on these routes to maximise their impact. This requires a flexible approach that can take account of different national contexts and ways of working.

The governance and working culture of stakeholder organisations themselves – ports, cities, shipping lines, energy providers, cargo owners – varies significantly across international boundaries. This can affect protocol for managing Green Shipping Corridor partnerships, particularly decision making. Many partnership stakeholders are indeed used to working within this international context, but its impact on the workings of a voluntary partnership requires consideration.



Ensuring effectiveness in voluntary partnerships

Green Shipping Corridors have, to date, often been formed organically by ‘coalitions of the willing’, where high ambition actors – from industry and the third sector – come together to explore the feasibility of joint action. These partnerships sometimes involve neutral conveners such as NGOs, research centres, and public agencies, who help to govern and organise activities. Otherwise, partnerships are formed organically and lack formal facilitating organisations. The voluntary and organic nature of these types of partnerships can make them unstructured, with unclear goals, activities, timescales, and responsibilities. Additionally, having many stakeholders involved early in the partnership, before the core strategy of the partnership is clear, can lead to misalignment during subsequent stages.

An example of a more structured partnership enabler is the United Kingdom’s Clean Maritime Demonstration Competition, which included partially funded projects to explore the feasibility of Green Shipping Corridors. Project applications required a formal scope including descriptions of activities and responsibilities. Applications were audited via Innovation UK, a non-departmental public body. The nature of funding of these types of initiatives can limit the stakeholders that get involved, with a lack of representation from some key maritime industry actors.

There is clearly a role for a diversity of organic and formal partnerships, with governance playing a different role in each.



The competitive nature of international trade

There are competitive markets linked to numerous parts of the zero-emission shipping value chain, including: cargo owners contracting shipping lines, shipping lines purchasing fuel, and ports procuring infrastructure providers and operators.

Additionally, Green Shipping Corridor partnerships can, especially during early stages, include stakeholders that are competitors – for example multiple shipping lines.

As Green Shipping Corridor partnerships move into implementation, concerns around competition law and anti-trust can arise. The risks of sharing of commercially sensitive information can be restricting for effective collaboration, even in early project stages.

The international nature of these initiatives also feeds into collaboration techniques, especially for ports and related landside actors. On the seas, global shipping companies and fuel suppliers may limit their focus to a specific route as opposed to thinking about global operations and related opportunities.

Good governance has a key role to play in making clear what collaboration is appropriate responding to these challenges.



Balancing risk and reward

The stakeholders involved in Green Shipping Corridors have varying risk and reward profiles linked to the partnership activities. For some, the activities can present a short-term commercial opportunity, like a fuel producer providing a zero greenhouse gas fuel for a demonstration project. While for others, the activities can require investment to unlock longer term opportunities. For example, a shipping line purchasing higher cost fuels compared to those required under existing regulations.

The risks and rewards are not just commercial. Some stakeholders, such as port authorities, have regulatory responsibilities linked to green corridor activities, whilst city stakeholders must consider community members and local actors, who may have concerns around the consequences of new fuels or economic impacts. Green Shipping Corridor partnerships need to recognise these dynamics and include space for them in their governance structures.

Chapter source:

C40 Cities. (January 2022). *Press Release: Port of Los Angeles, port of Shanghai, and C40 cities announce partnership to create world's first trans-pacific green shipping corridor between ports in the United States and China.* https://www.c40.org/wp-content/uploads/2022/01/LA-SH-Green-Shipping-Corridor-PRESS-RELEASE-012822_FINAL.pdf

4. Governance best practices for Green Shipping Corridors

Introduction

Based on research, stakeholder engagement and direct experience, several governance insights have been shaped and linked to the different Green Shipping Corridor stages. These insights are mapped according to the graphic below.

STAGE	INITIATION	PLANNING	EXECUTION	OPERATION
General Governance Approaches <i>(See page 14)</i>	Pre-commercial engagement. Simple governance structures. Emphasis on consensus-based decision making.	Pre-commercial engagement. More complex governance structure may evolve. Decentralised decision making protocol.	Likely to include commercial collaboration, either as spin-off engagement for specific partners or for a core green corridor partnership. May still be a role for a pre-commercial collaboration forum for wider partnership.	
Type of collaboration agreement <i>(See page 15)</i>	Informal agreements	Memorandums of Understanding (MoU) and Letters of Intent (LOI)	Contractual agreements and Special Purpose Vehicles	
Critical Elements of Governance	Develop a clear vision and strategy <i>(See page 13)</i>	Effective decision making		
	Tailoring governance for corridor strategy <i>(See page 14)</i>			
	Identifying roles for public bodies and facilitators <i>(See pages 18-19)</i>			
	Understand common approaches to ensure effective governance <i>(See page 17)</i>			
	Protect data and confidentiality <i>(See page 16)</i>			

Figure 4
 Governance approaches throughout the corridor's lifespan

In practice, Green Shipping Corridor partnerships may not all follow this lifecycle. These insights should be seen as flexible approaches to be deployed as suited to a particular partnership's needs.

Develop a clear vision and strategy

It is crucial to align on a clear vision and a strategy for a Green Shipping Corridor to be successful. Without this, it is extremely challenging to align and coordinate diverse stakeholders, organisations and work activities.

Although a Green Shipping Corridor's vision may seem obvious (catalysing the decarbonisation of shipping), partnerships may have additional ambitions. For example, they may have a strong focus on a just and equitable transition. Others could look to target multi-modal movement of goods linked to ports, and some might target ambition beyond those described in the IMO's revised GHG reduction strategy.

It is important for partnerships to align on a collective vision statement that all partners can fully endorse, with scope for amendments as the partnership develops. The overall vision should describe the impact that the corridor will have. This does not need to include specifics on levels of ambition or timelines for implementation, as this level of detail may be challenging to reach agreement on in the early stages of the partnership - but it should articulate how the initiative will make a specific change in the industry or wider society.

There must be a line of sight from the vision statement through to the actions undertaken in the partnership. One way of doing this is to link the *activities* of the corridor partnership to activity *outputs* and the associated *outcomes* they look to unlock, which together enable the overall *vision*. See Figure 5.

Using this framework can help to structure discussions around *why* certain activities need to be prioritised, for example, it may prompt the question "is complex monitoring of vessel emissions necessary for the partnership, or can it be approximated?".

Defining a guiding vision and strategy is easier early in a corridor's development among a small group of stakeholders. Then, other aligned partners can be added to the group. It is more challenging to alignment a large group of stakeholders from the beginning. Despite challenges, maximising partner participation in the development or review of the corridor's vision helps to foster a sense of ownership and thus support the longer-term strength of the partnership.

Corridor partnerships should define their overall vision first, with target outcomes, outputs, and activities developing in order as the partnership develops and completes feasibility studies and other planning activities.

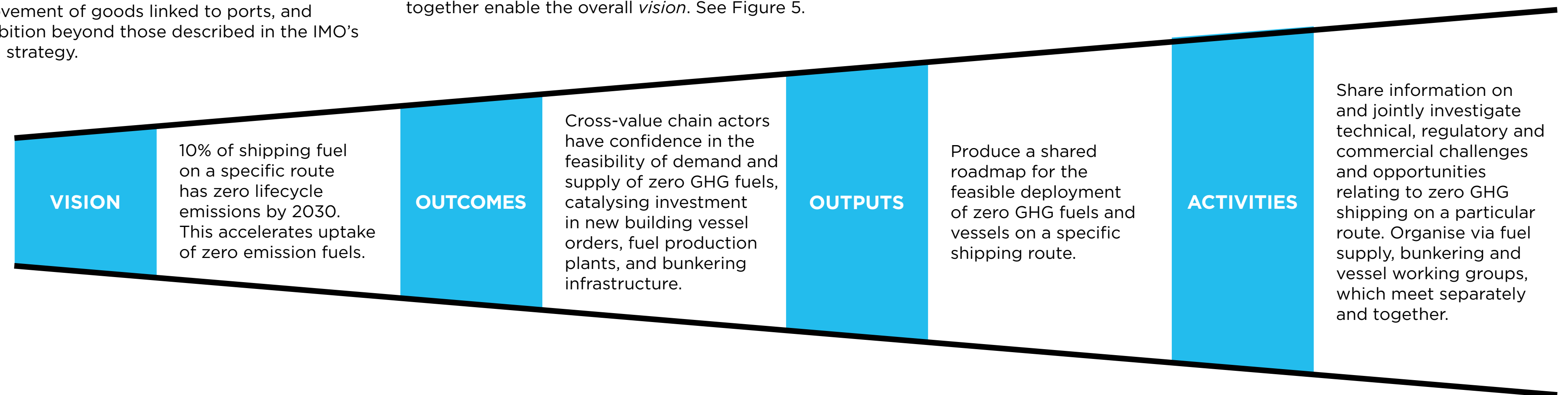
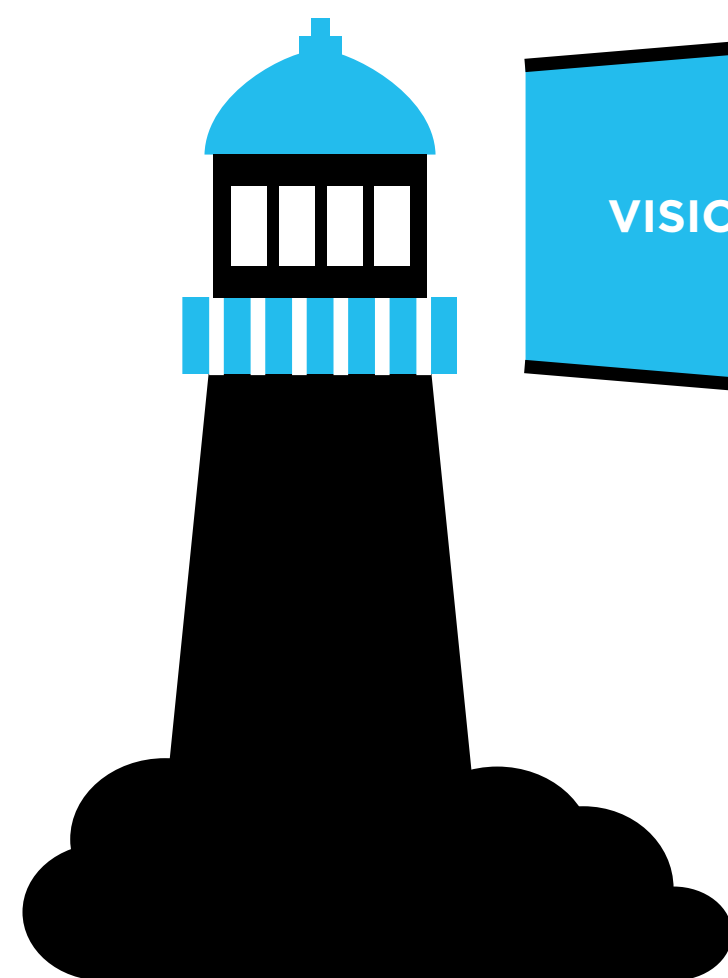


Figure 5
High-level example of a GHG strategy that links to a clear vision

Tailor governance protocols to the corridor's goals and lifecycle stage

While the absence of agreed governance protocols can hamper the effective and efficient functioning of Green Shipping Corridor partnerships, overly complex systems of governance can similarly

absorb scarce resources, slow down decision making, and reduce a partnership's flexibility to adapt over time to changing circumstances.

Governance approaches must be developed considering the specific nature and circumstances of each initiative. Strategies may naturally evolve throughout the corridor's lifespan. This includes the selection of appropriate governance protocols and agreements.

For example, corridor partnerships may only require a common understanding around simple governance protocols during the initiation and planning stages. Corridors progressing into

implementation may require more formal protocols to manage and coordinate infrastructure investments, signing of offtake agreements, or vessel newbuilding orders.

Formalising agreements can provide clarity and transparency of terms while helping to build trust and assurance for the partner organisations and stakeholder groups, like regulators, customers, and local communities. There are several ways in which this can be achieved, ranging from an informal agreement to establishing an incorporated Special Purpose Vehicle (SPV) company, which are discussed in more detail in Figure 6.

Stage	INITIATION	PLANNING	EXECUTION	OPERATION
Typical Type of Agreement	Informal Agreements	Memorandum of Understanding (MOU), Letters of Intent (LOI), or similar documents	Contractual arrangements	Special Purpose Vehicle (SPV)
Key considerations	<p>Could take a range of forms from a simple verbal agreement to a joint press release.</p> <p>Not legally binding.</p> <p>Indicates commitment to collaborate but minimal details on ways of working.</p>	<p>Formal document to record a common understanding between partners.</p> <p>Not typically legally binding but can form the basis of a later legal agreement.</p> <p>May be accompanied by separate agreements on confidentiality or funding arrangements.</p> <p>Provides an opportunity to articulate a vision or strategy and outline governance protocols.</p>	<p>Legally binding agreements with specific commitments from involved parties.</p> <p>May include clauses related to financial arrangements, confidentiality, Intellectual Property, insurance, liability, etc.</p> <p>Could form the basis of an unincorporated Joint Venture (JV).</p>	<p>A separate legal entity, controlled by the partners.</p> <p>Cost of setting up and managing the SPV will be high.</p> <p>Likely to require guarantees from parent companies or shareholders.</p>
Applicability to the development of a green shipping corridor	<p>Almost all partnerships will start with an informal agreement between organisations or individuals. In most cases, this will be adequate to during the initiation stage of a corridor's development, when a limited number of partners are developing its vision, scope, and identifying key stakeholders. At this stage resource commitment is limited.</p>	<p>As Green Shipping Corridors move from initiation to a more in-depth planning phases, there may be value in a more formal agreement such as an MOU.</p> <p>Although not legally binding, by articulating the corridors' vision, strategy and governance protocols in a formal document, the partners can provide assurances on their intention and confirm a common understanding.</p> <p>Such agreements might underpin the delivery of a feasibility study or development of an implementation plan, where a reasonable time commitment is required but financial investment is relatively low.</p>	<p>Operationalising Green Shipping Corridors will require contractual agreements to support fuel offtakes, chartering, and vessel building. Many of these agreements will be familiar to corridor partners and completed as a part of their usual business. However, commercial challenges of a realising first mover Green Shipping Corridor may warrant innovative commercial approaches. For example, stakeholders may seek to pool resources and share risks through JV agreements.</p>	<p>Partnerships may consider forming an JV company or SPV to operationalise a corridor.</p> <p>Much like any contract, clarity on the purpose of an SVP is essential to its success. With no Green Shipping Corridor yet operational, approaches of this nature have yet to emerge. Given the high costs associated with setting up and managing an SPV, they are likely to be more suitable for ongoing ventures rather than time-limited activities.</p>

Figure 6
Types of agreement throughout the corridor's lifespan



Everything has been a sprint. There is always an inherent tension between good process and expediency needed to achieve goals. A clear chain of decision making and protocol is essential. We need to think intentionally, do the right set up, set it up for success from the beginning.



Select an appropriate partnership structure for effective decision making

Green Shipping Corridor partnerships must be able to make efficient and effective decisions to progress at the pace required to achieve global climate targets, while remaining collaborative and representative of all partner needs.

As previously mentioned, Green Shipping Corridors are typically voluntary initiatives in that stakeholders are free to participate as they see fit. Partnership structures can provide clarity on the scope of partner obligations and support efficient decision making.

Ultimately, a partnership's decision making process should reflect the structure, and include roles, responsibilities, and lines of reporting that exist within it.

In the initiation phase of the corridor, decisions will likely be high-level and strategic, while also focused on day-to-day functionality (like agreeing meeting agendas, scoping work activities, or managing project budgets).

According to stakeholders, Green Shipping Corridor partnerships can be organised across a range of structure types, but most fall into either two categories: tiered structures or flat structures. Tiered structures have direct lines of decision making while flat structures are characterised by consensus-based decision making. In reality, partnership may choose elements of either structure to fit their needs.

Both methods have advantages and disadvantages, and should be carefully considered to suit the shape, goals, and timelines of the specific partnership. Ideally, the partnership structure will be defined early, making it easier for the decision making process to follow suit.

'Flat' decision making

One approach is to make partnership decisions via a "flat structure", where every partner or stakeholder has equal decision making power. In this structure, multiple decision makers at the same level are involved, although some may have different spheres of authority. This approach maximises participation, collaboration, agreement among stakeholders, and provides partners with a sense of ownership.

There are two primary approaches to reaching a consensus in decision making:

Full consensus: Full partnership consensus may be ideal, but may be difficult and time consuming to achieve, particularly if there are lots of parties involved. There is also a risk that gaining the approval of a single partner stalls the overall progress of the entire corridor.

Majority consensus: A majority system may make decision making more efficient but may reduce partners' sense of ownership and satisfaction over the decisions that are made.

For both methods, the decision making process and rules must be clearly defined and communicated to all partners in advance to manage expectations. For example, setting deadlines by which to provide feedback, defining a maximum number of revisions, or having an exit strategy in case of a stalemate, can help to overcome this.

In a flat partnership, a neutral convener may play a key role in coordinating inputs from stakeholders and marshalling them towards an unbiased decision.

[On representation and decision making]



A successful partnership must have equitable representation from stakeholders. Those representatives must also be the relevant decision makers to be able to facilitate action.



Tiered decision making

In a tiered partnership structure, different roles have varying levels of responsibility, from leadership to general participation. The responsibility for decision making should suit the level at which the decision pertains to. For example, corridor-wide strategic decisions should be made by the corridor leadership or steering group. On the other hand, decisions pertaining to a subset of the partnership, such as a specific working group, should sit within that working group's terms of reference.

Decentralising certain aspects of decision making allows working groups to be agile and self-governing, independent of the overarching partnership leadership body. This prevents progress from being frustrated by excessive leadership oversight, executive-level reviews, or full-partnership consensus approval. These benefits are especially realised as a corridor's work programme becomes more complex in the execution and operational phases. Establishing a clear guiding strategy for the entire partnership is critical for decentralised decision making and to ensure the partnership continues to work toward the same end goal.

For example, the Rotterdam to Singapore Green and Digital Shipping Corridor partnership has established several working groups to investigate the feasibility of deploying different fuels on the route, with a separate working group to address gaps in regulation and financing.

Tiered partnership structures allow high-level, strategic decisions to be made by a limited number of partners rather than the whole group. Corridor leadership must safeguard the views and needs of all partners when making strategic decisions.

[This information is provided for general information only and is not intended to be legal advice.]

[On data sharing]



For commercially sensitive industry partners, it took rigour, formality, and process to all the partners to feel comfortable sharing information.



Protect data and confidentiality

Data security, confidentiality, and competition law are necessary, but in practice can prevent effective cross-value chain collaboration that is required in Green Shipping Corridor partnerships.

Data security and confidentiality are important to protect the commercial interests of participating organisations and to ensure competition laws are not breached. National and international anti-competition laws exist to promote fair competition between businesses, and to protect consumers from anticompetitive mergers, monopolies, or cartels.

One method for protecting sensitive information is by using a Non-Disclosure Agreement (NDA). However, when industry competitors work together in Green Shipping Corridor partnerships, these practices may not always be compatible with the transparency and sharing of information required for effective collaboration. Partnerships need to prioritise these approaches intentionally.

Some common challenges include:

- Industry partners, such as shipping lines or cargo owners, may require NDAs to be signed before sharing sensitive information, or any information at all, with competitors.

- NDAs are likely to be specific to the organisation requesting them, so each NDA may require separate legal review by the parties prior to signing/accepting. Terms and requirements between NDAs will likely be different, so the corridor must keep track of these conditions and ensure they are all being satisfied.
- Public agencies may be unable to sign NDAs, as their activities must be transparent to the public. This may prevent them from interacting with industry partners who require NDAs, frustrating collaboration and complicating data sharing and security requirements.

Green Shipping Corridor partners should encourage partners to share general, non-specific information on their organisations' activities, plans and lessons learned that are relevant to the activities of the partnership. Partners should not share specific information such as prices, quantities, trends and projections, market share, costs, margins, terms etc.

Partners should also consider their intellectual property rights when novel ideas, products or services are generated.



Photo Courtesy of the Port of Los Angeles

Understand key governance approaches across the lifecycle

Regardless of the lifecycle stage or nature of the Green Shipping Corridor partnership, a few approaches are essential ingredients for essential governance.

Ensuring a clear understanding of **roles, responsibilities and expectations** of each partner is crucial to ensure that all parties are aligned and working towards the same goals. This sounds simple but is not always adhered to. A Green Shipping Corridor partnership should have a single document accessible to all partners and kept up to date describing this information.

Understand each partner's incentives for choosing to participate in the initiative. This could involve commercial incentives, building on their culture of knowledge sharing or the chance to contribute to a cause that aligns with their values or broader decarbonisation objectives. It is particularly useful for a facilitator to understand these drivers and how they influence the dynamics of the partnership.

Resource commitments made by each partner should be **clearly outlined**, including not only financial resources, but also time, expertise, and other non-monetary resources. Even in a voluntary partnership this is important to manage expectations and encourage of accountability.

Transparency is fundamental to fostering trust, accountability, and informed decision making among corridor stakeholders. By embracing **transparency**, prioritising **inclusive governance structures**, building **trust** among stakeholders, and promoting flexibility to adapt to evolving circumstances, Green Shipping Corridors can enhance accountability collaboration, and maximise their effectiveness.

Strong leadership and effective risk management are critical enablers of success within Green Shipping Corridors and the broader transition to a decarbonised shipping industry. Visionary leaders inspire confidence and commitment, mobilizing resources and driving collective action towards shared decarbonisation goals and realising the full potential of GSC initiatives.

The industry can accelerate progress within Green Shipping Corridors by **leveraging** the **power of knowledge sharing**. This can be achieved by encouraging collaboration between Green Shipping Corridors partnerships, supporting capacity-building initiatives, actively engaging in knowledge-sharing platforms, and embracing the culture of learning.

Figure 7
Best practice in voluntary partnerships

Identify roles for governments, facilitators, and community

Roles for national and city governments, external facilitators, and community groups are being developed to enhance Green Shipping Corridor initiation and continuous collaboration.



This process needs to be handled by someone who sits above it all. There must be a clear leader. There must be an instigator.



Photo Courtesy of the Maritime and Port Authority of Singapore

Roles of governments

City and national governments have a key role to play in supporting Green Shipping Corridors, via national and regional policy linked to leadership on climate, energy, or maritime agendas. Their role can support innovation and technology initiatives or strengthen trade partnerships. Public bodies also can play a key role in enhancing the governance of Green Shipping Corridors, supporting their effectiveness.

Their role will usually take place in a maritime or energy focused government agency and will require collaboration across government departments.

C40 and Arup convened national and local governments at COP28 to discuss the role of public agencies in GSC Partnerships. Participants discussed the following opportunities:

- **Setting up and incubating Green Shipping Corridor partnerships:** This could be through development of incentives to the supply chain, importing fuels and setting up technology accelerators and pilot projects.
- **Participating in Green Shipping Corridor partnerships as a member or a stakeholder:** Participation opportunities range in form and level of engagement. Examples include supporting commitments from city and state level governments and supporting knowledge exchange regionally and globally, developing policy incentives for the supply chain, or funding green infrastructure projects.
- **Providing guidance and support around Green Shipping Corridor governance:** Actions may include ensuring accountability and transparency, supporting data sharing, and advocating for community interests.

Role of a neutral convener

Green Shipping Corridor partnerships can benefit from the facilitation of a neutral convening body to provide impartial guidance on the corridor's activities, organisational and administrative support, staffing resources, and funding. A neutral party may provide advice and recommendations without the risk of commercial conflict of interest. This party can also propose and implement strong and unbiased governance protocol, for example a decision making process. Non-government organisations such as C40 Cities, Global Maritime Forum, and the Maersk McKinney Moller Center for Zero Carbon Shipping currently hold convening roles on several existing Green Shipping Corridors.

- **Aligning on a clear strategy:** A neutral convener can propose an overall strategy or vision for the corridor, independent of commercial benefits that corridor activities may bring to the industry partners.
- **Tailoring governance approaches:** A neutral convener can propose governance protocols based on research and experience convening other partnerships, using templates and best practices rather than building a structure from scratch.
- **Programme Management:** A facilitating organisation may provide additional resources to assist with the day-to-day management of the partnership. A neutral convener can also set agendas, chair meetings, host workshops and steer discussions with an impartial voice, instead of a commercially invested partner organisation. This impartiality is also valuable for other day to day management tasks such as recording meeting minutes, co-ordinating working groups, engaging with external stakeholders and issuing communications.
- **Data and confidentiality:** A neutral convener may control the sharing and distribution of information, and anonymise data shared within the partnership, to protect the confidentiality of the disclosing parties.

Role of community

The activities of ports and Green Shipping Corridors can have direct impacts on adjacent local communities who are most heavily burdened by the impacts of the shipping industry, including exposure to reduced air quality, increased noise and truck traffic, and changes to employment and other economic opportunities. Green Shipping Corridors have the opportunity to incorporate feedback from local communities, environmental justice and other frontline groups to increase the social equity of their programmes and activities. This can be achieved by:



Giving everybody an equal voice is not equitable. More weight should be given to those who are most impacted, considering people's unique factors and circumstances.



- Aligning the corridor's guiding principles and vision with the values of the community from the beginning of the programme to build trust, transparency and a feeling of representation within the community.
- Engaging with community members from the beginning of corridor activities.
- Providing community members with direct, face-to-face access to local corridor partners to ask questions regarding their specific activities. Community outreach could be facilitated in a variety of ways, including town halls, open houses, and focus groups. Outreach should be held regularly to show progress and to follow up on issues raised.
- Allowing a community-selected representative to participate in corridor meetings and discussions to create a two-way dialogue. This may be a rotating community seat to ensure inputs are representative of the various groups within the community. It is important that community representatives are relevant decision makers with a broad representation.
- Educating communities via a third-party liaison organisation, or a technical community representative. Messaging from a third party can provide objectivity and increase trust. It can also improve the community's understanding and comprehension of corridor activities by communicating in non-technical language.
- Accounting for the social benefits of climate action that are difficult to quantify monetarily, such as public health benefits, in addition to financial return on investment.
- Leveraging local public agencies who represent the needs of their local constituents.
- Implementing a Community Benefits Agreement to commit to delivering benefits to the local community within a larger infrastructure or other development project. These are strategic vehicles for community improvement, such as providing jobs and training, economic contributions, or new public facilities, while also benefiting the private sector and state and local governments by obtaining community support for the project.



C40's Green Ports Forum workshop in Singapore, September 2023



Green Shipping Community Workshop in Carson, CA, November 2023 © 4th Street Productions



C40's Green Ports Forum workshop in Singapore, September 2023

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5. Methodology: How this report was shaped

Introduction

Governance insights for Green Shipping Corridors captured in this report are based on Arup and C40's direct experience in these partnerships, but also from collective research into lessons from other sectors and stakeholder engagement.

Challenges often stem from the complexity of coordinating actions among multiple industry stakeholders, including governments, businesses, and industry practitioners. This chapter outlines selected methods of engagement with maritime stakeholders and key lessons learned from related industry representatives.

Engaging with Green Shipping Corridor practitioners

To capture the nuances of Green Shipping Corridor governance, the study engaged with practitioners through one-on-one interviews and group workshops, yielding key findings on the ingredients for effective governance.

One-on-one interviews were conducted with industry leading individuals with experience facilitating or participating in Green Shipping Corridors or similar partnerships. These interviews allowed for in-depth discussion and analysis of the unique contexts and challenges faced by these partnerships, and possible solutions that could be applied in other similar initiatives.

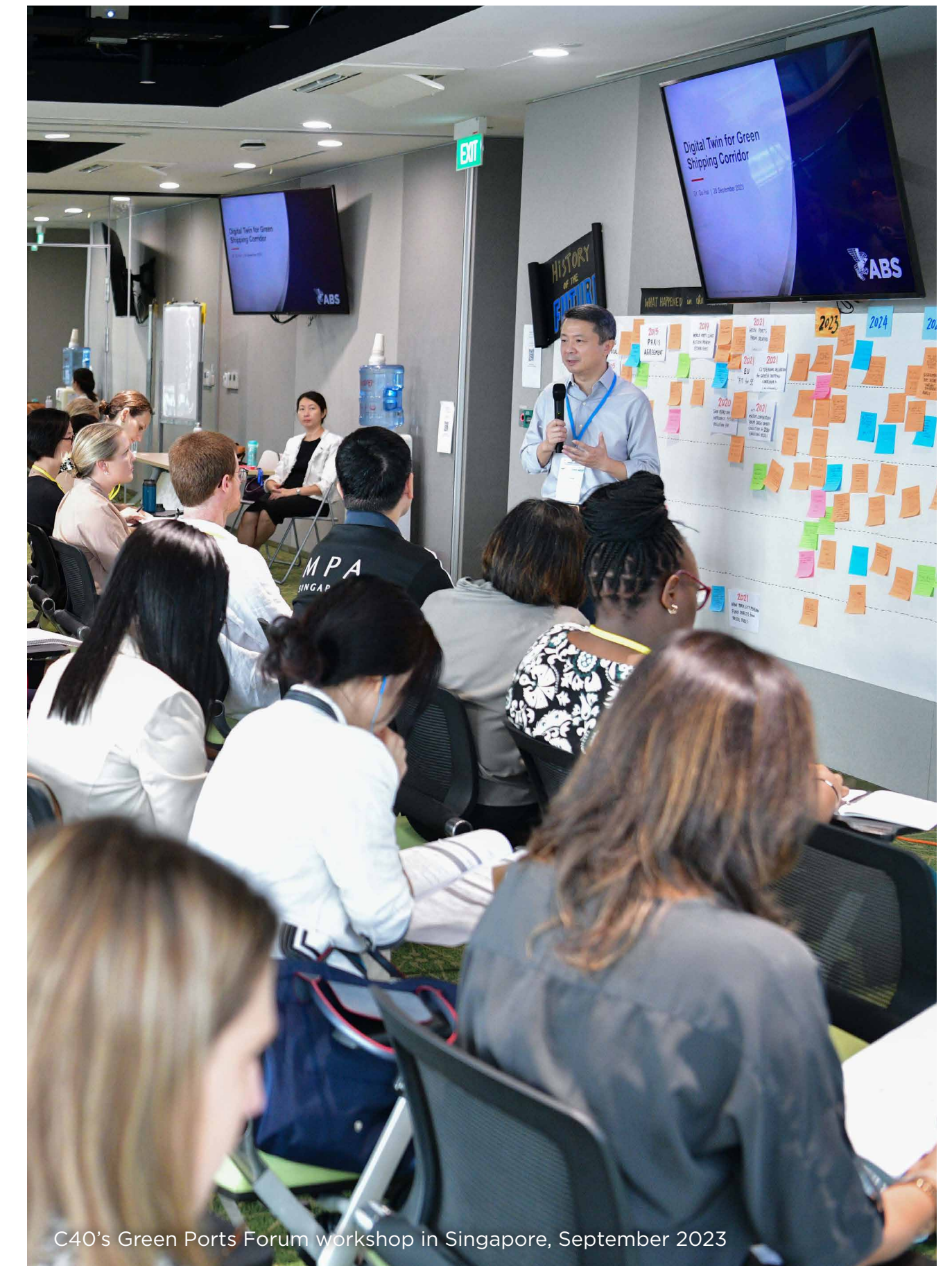
To understand the 'big picture' needs of Green Shipping Corridor practitioners, Arup also facilitated a group workshop for corridor leaders on Green Shipping Corridor governance at C40's Green Shipping Corridor Leaders' Summit in Singapore in September 2023. This workshop brought together experience from ports, cities and non-governmental organisations who are involved in Green Shipping Corridors and partnerships to discuss the goals for good governance, ways of formalising governance, and actionable steps to achieve this.

Lessons from Green Shipping Corridor Leaders

During the GSC Leaders Summit, co-hosted by C40 and MPA, participants shared the following ingredients for good governance:

- **Collectively set vision and goals to ensure all are aligned**
- **Establish rules of engagement**
 - o All partners should sign up to the same set of rules
 - o Align expectations from day one
 - o Follow set out rules for engagement
 - o Such rules should not be restrictive to participation
 - o Include rules in partnership onboarding
- **Consider a formal commitment mechanism**
 - o Voluntary partnership requires committed funding and investment
 - o Roles and responsibilities must be centred on accountability
- **Change management process**
 - o Checkpoints for review and monitoring
 - o Touchpoints with stakeholders
 - o Corridor needs to be able to evolve with the changing environment
 - o Create check points for exit strategy as needed
- **Safe data sharing environment**
 - o Allow commercially sensitive partners to feel free to collaborate

Findings from this event provided guidance on the priority topics for research in this report.



C40's Green Ports Forum workshop in Singapore, September 2023

Lessons from other sectors

A literature review was conducted to identify governance related lessons and insights from other sectors that could be catered to green shipping corridor partnerships.

Lessons Learned: Governance in response to the COVID-19 Pandemic

The pharmaceutical industry's response to the COVID-19 pandemic provides a compelling example of the power of collaboration. The industry's response centred on innovation and collaboration, creating new partnerships to manufacture on an unprecedented scale and working with governments and international organisations to find pragmatic solutions at pace. Research found that effective governance occurred when political, administrative, and clinical actors worked collaboratively in relationships characterised by:

- Trust
- Transparency
- Altruism
- Evidence
- Fully integrated with technical, policy and planning components in the health system

These collaborative efforts in the pharmaceutical industry during the COVID-19 pandemic underscore the potential of partnerships in overcoming governance challenges and turning ambition into action. They serve as a testament to what can be achieved through unified collaboration and focused effort.

Lesson Learned: Governance from the Wind Sector

The offshore wind sector is another excellent example of innovative thinking and collaborative governance from multiple sectors. Collaboration was necessary to allow the development of infrastructure on land and offshore. Another relevant realisation from this industry is that there seems to be an apparent role for public agencies to help initiate partnerships. In the offshore wind sector, this was key to supporting the industry's rapid growth. This level of will and action from the governments has been necessary to the wind sector, and could be tailored to green corridors to mature, scale, and create system-wide changes across the shipping industry.



Photo Courtesy of the Port of Los Angeles

Lessons Learned: Governance in response to the Paris Agreement

Research points to innovative governance approaches as the driving force behind aligning business, investor, city, and civil society efforts with the Paris Agreement. A challenging landscape includes legally binding targets (Kyoto Protocol), decentralised policy architecture that incentivises voluntary action (Paris Agreement), and many practical mechanisms and techniques devised to catalyse non-state climate action. To address these challenges, strategies include leveraging the 4P model (public-private-philanthropic partnerships) and establishing bilateral collaborations, like green alliances. These governance strategies foster dialogue and cooperation on climate action. Their emergence highlights the importance of robust governance systems in helping countries achieve their climate goals.

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6. Conclusions and next steps

Green Shipping Corridors can achieve their partnership ambitions by enhancing their governance practices.

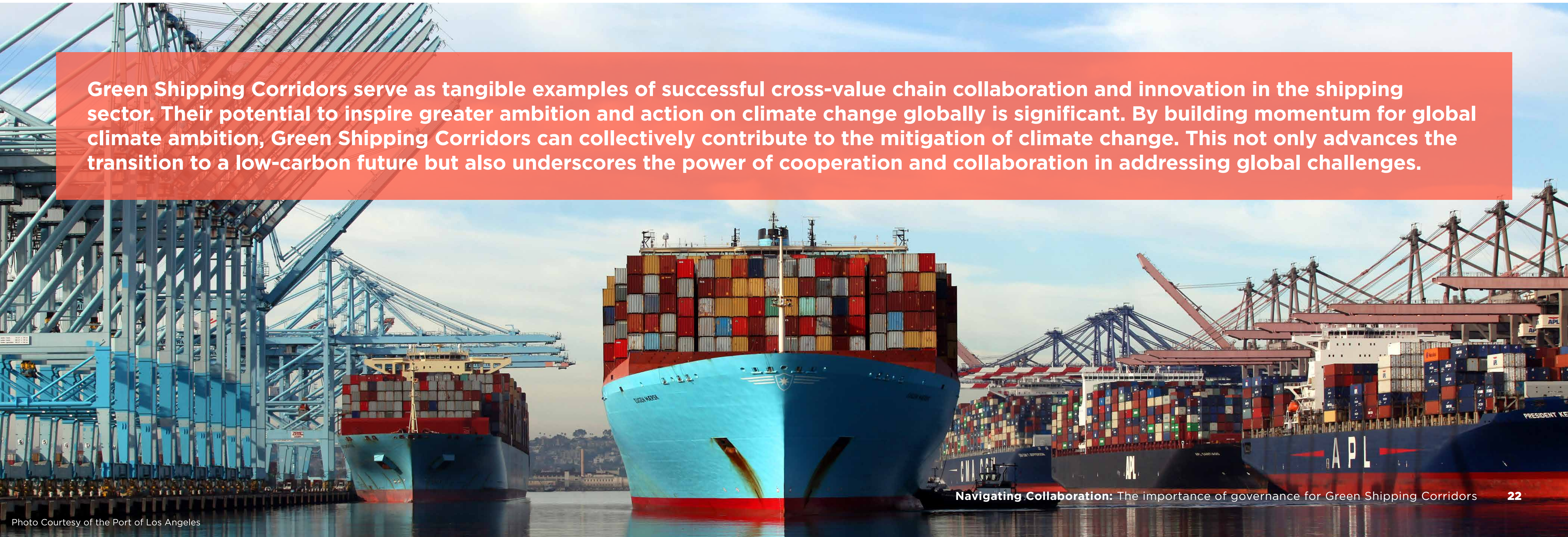
When leveraged appropriately, key considerations and strategies can help establish and strengthen governance frameworks for existing and new Green Shipping Corridors alike. These best practices

help effectively navigate risk and reward profiles, decision making structures, and responsibilities, while also providing enhanced adaptability in the face of uncertainty.

The insights gleaned from experts across the industry highlight that these strategies should be considered in tandem, not as one-off

approaches. They are interconnected facets that lay the foundation of a more holistic approach to governance in Green Shipping Corridors. By incorporating governance best practices into operations, Green Shipping Corridors can cultivate a culture of collaboration and continuous learning.

Green Shipping Corridors serve as tangible examples of successful cross-value chain collaboration and innovation in the shipping sector. Their potential to inspire greater ambition and action on climate change globally is significant. By building momentum for global climate ambition, Green Shipping Corridors can collectively contribute to the mitigation of climate change. This not only advances the transition to a low-carbon future but also underscores the power of cooperation and collaboration in addressing global challenges.





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