











TOMORROW: 2050

Alternative Futures for Logistics

PURPOSE

The purpose of this publication is to explore alternative futures for the logistics sector toward 2050, with particular emphasis on M&A potential at a global level.

Scenario planning exercises are well-known and recognised tools for gaining foresight about plausible futures and identifying key drivers for business growth and the potential influence of future events. To this end, four scenarios are presented. The development of these scenarios was based on a process that first identified the key drivers, from which pivotal uncertainties were distilled. These were then used to craft the scenarios.

Importantly, from the outset, an inclusive cocreation approach was used.

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FUTURES THINKING PRINCIPLES

THE GROUND RULES



Seek knowledge about those factors shaping the future

We do not make predictions



Craft alternative futures

Understand there is more than one possible future



Explore the issue from multiple perspectives

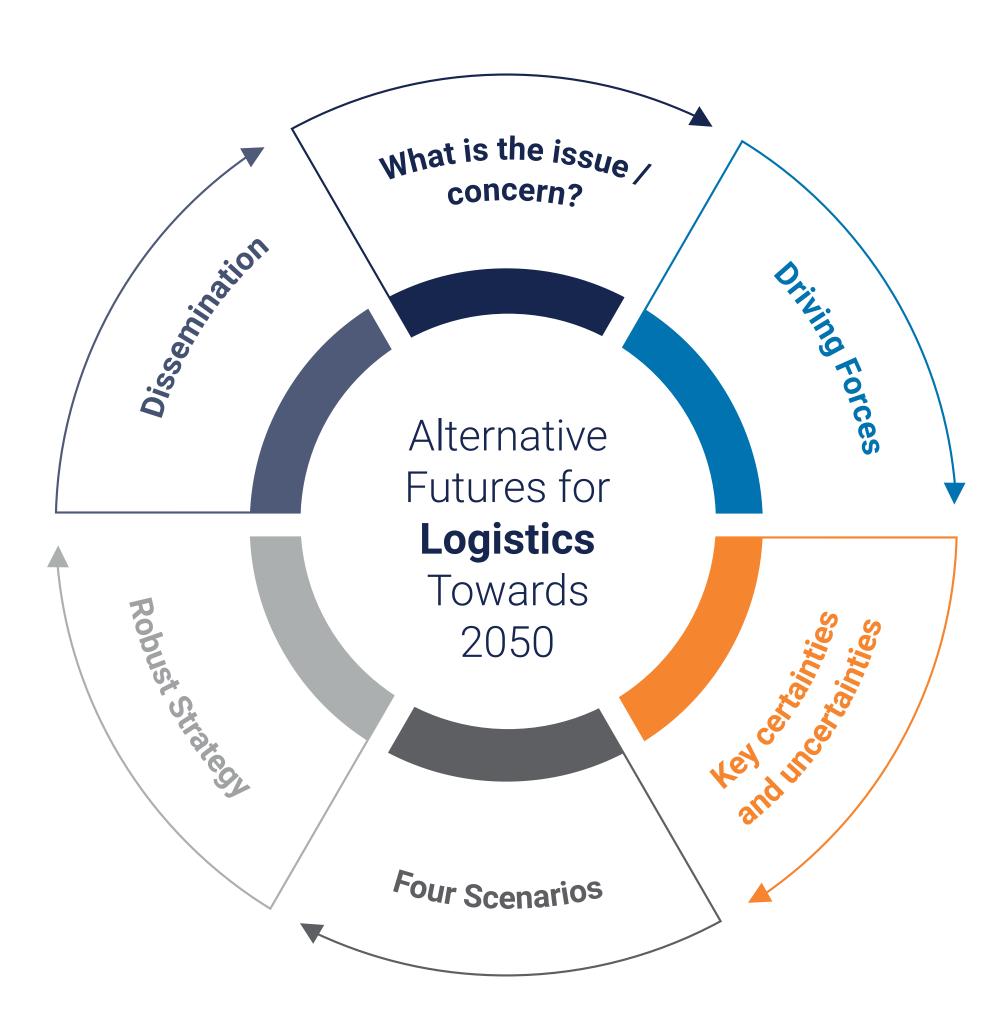
See change as holistic and systemic



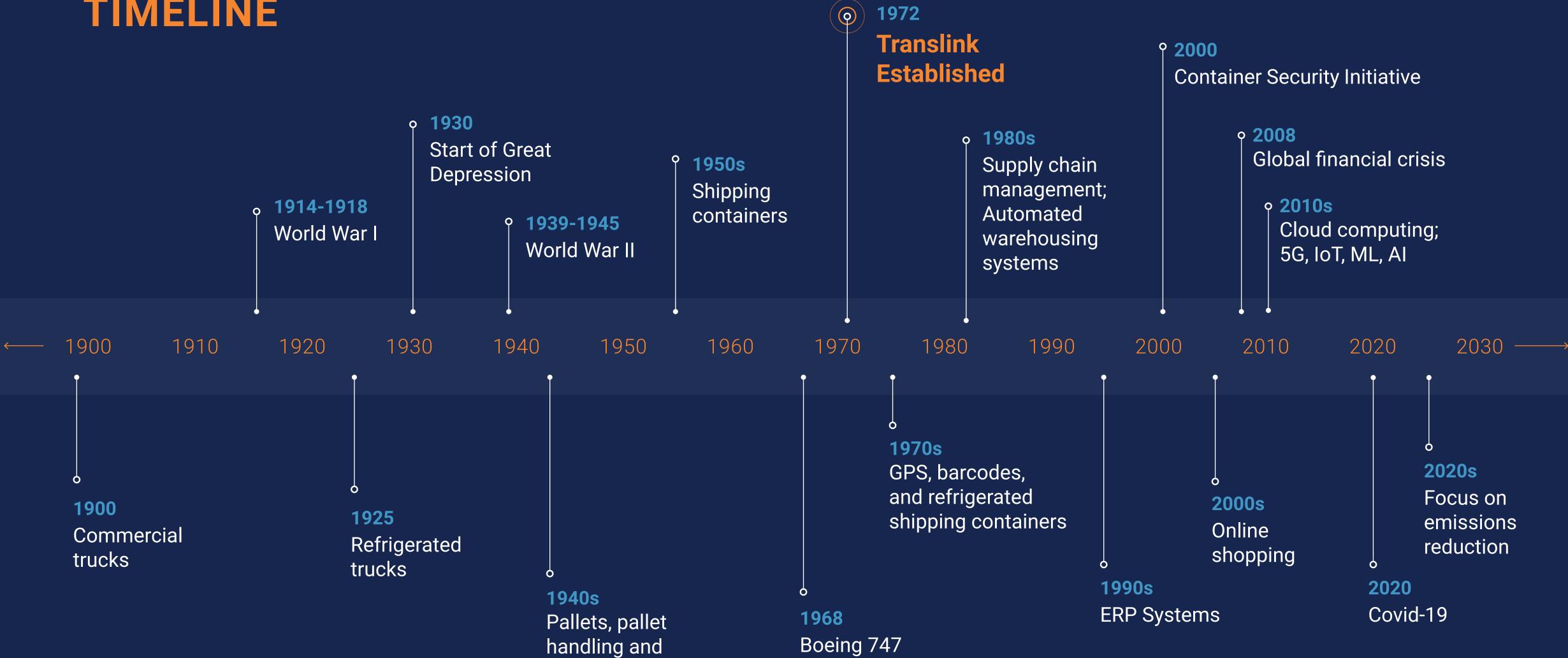
Scenarios offer learning journeys

They enable us to rehearse for the future

THE SCENARIO PROCESS



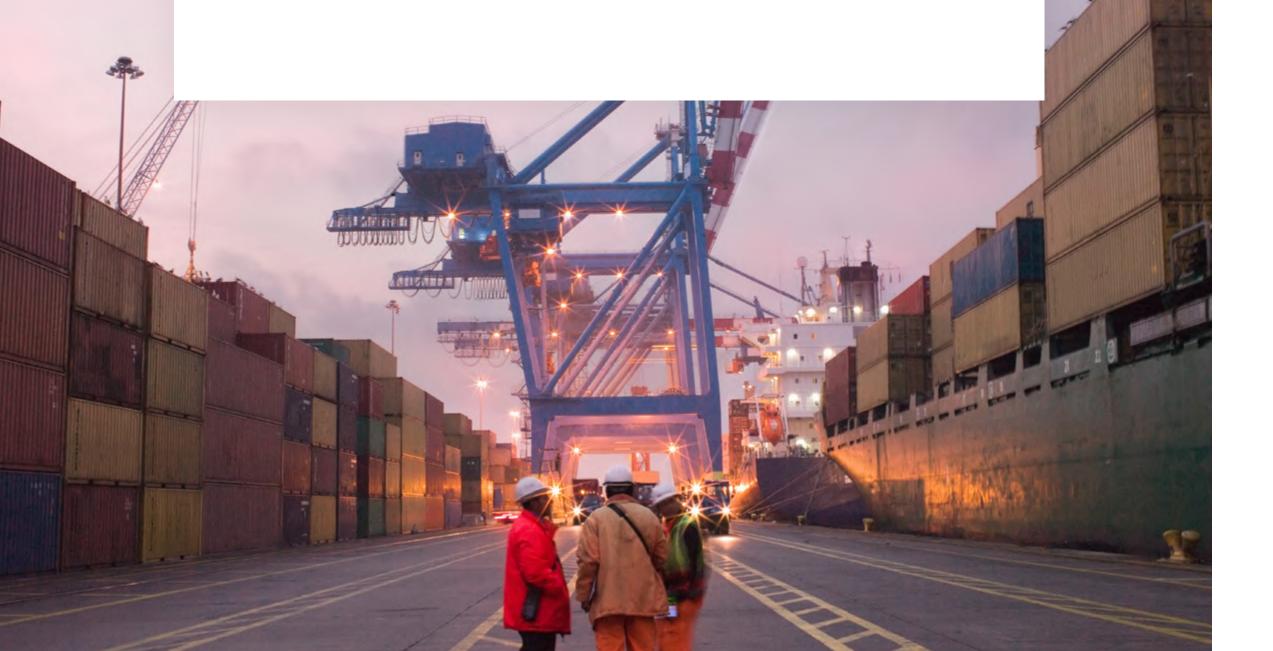




storage systems

Factors that influence the futures of the logistics sector toward 2050:

These driving forces were sourced from a comprehensive environmental scan and from think sessions held with key stakeholders. This process ensured that the driving forces identified for the industry were as comprehensive as possible.



Political Drivers

- **Conflicts** on regional and geopolitical levels, and the consequences for supply chains and the movement of goods.
- **Trade protectionism** on-shoring, friend-shoring, diversification, shorter supply chains, and other efforts to secure control over supply chains.

Economic Drivers

- Economic power distribution and trade shifts away from the G7 and towards the most significant emerging economies.
- Disruption from the **sharing economy.** Digital platforms increasingly facilitate transactions between parties, creating efficiencies and reducing the need to own particular assets.
- Shifting to servitisation models (Everything-as-a-Service).
- Labour shortages, in some areas caused by ageing workforces, and in others by inappropriately skilled people.

Social Drivers

- Urbanisation putting strain on city logistics.
- E-commerce client expectations new rules for an e-commerce era, particularly about last-mile delivery, speed, and value-add services.
- The rise of a **conscious consumer** one that takes a more proactive approach to sustainable lifestyle.

Technology Drivers

- Artificial Intelligence and advanced analytics improving efficiencies, service delivery, and decision making.
- Robotics, automation and IoT (the Internet of Things).
- Increased adoption of **blockchain**, with the benefits of increased transparency and traceability across the whole chain.
- **Digital twins,** offering a virtual duplicate of a system to explore complex relationships and test potential interventions.
- **Drones** not only for deliveries, but also for inspecting large assets and managing inventory.
- Autonomous vehicles for the movement of both large and small loads, both inside yards and in public spaces.
- 3D printing may bring production capacity closer to consumers.

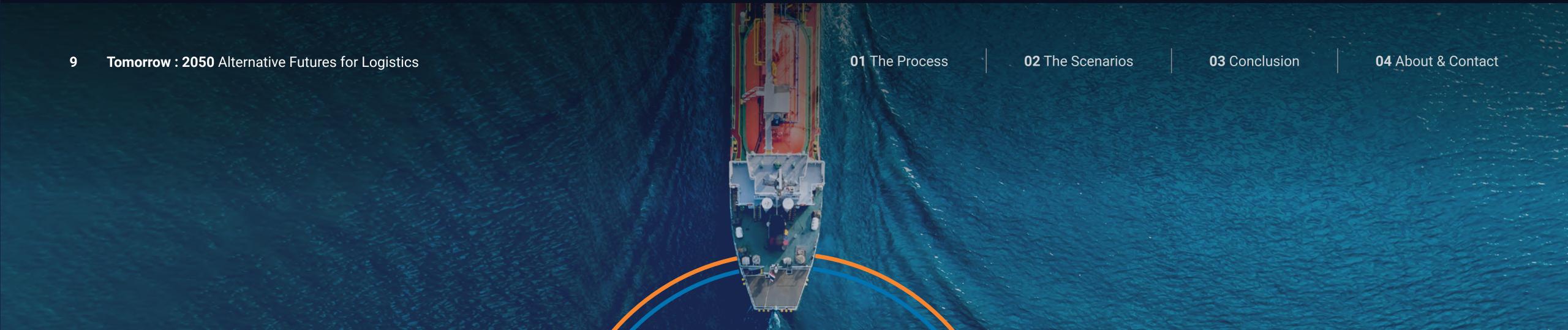
Environmental Drivers

- Climate change and mitigation measures will put increased strain on the sector, with the sector being influenced by climate change across the geographies that it serves, and by the measures taken to mitigate the impact of climate change.
- Pressure to shift toward a **circular economy**, offering both potential new business and the risk of reducing and disrupting existing business.
- **Resources** like water, food, energy, land and minerals are becoming **increasingly scarce** (while global population numbers are still increasing at a significant rate).

Regulatory Drivers

- Increasing environmental regulations may increase supply chain complexity and costs.
- **Compliance** is becoming **increasingly complex**, with participants coming from a wide range of areas with varying standards and regulatory requirements.





Development and adoption of appropriate technologies

such as artificial intelligence, advanced analytics, digital twins, blockchain, IoT, and other technologies yet to be developed. 01

Two scenario shaping factors

A thorough analysis of the driving forces produced **two factors** with the highest levels of uncertainty and the highest impact potential. These two factors will be used as axes to create four scenarios.

Climate
change mitigation,
and the influence that the

and the influence that the appropriateness and the unilateral acceptance of the mitigation measures could have on the logistics sector.

Universal agreement, Shared standards

change

itigation

THE 2050 SCENARIOS

Fragmented moves

A logistics sector operating within a world of shared goals and standards about climate change mitigation, but where technologies are developed and adopted in a fragmented and elitist manner, creating high barriers to entry.

Fragmented, Elitist

Development and adoption of appropriate technologies

Complex moves

Technologies are developed in a fragmented and elitist manner, and a lack of universal agreement on climate mitigation measures creates a complex operating environment.

Shared moves

Universally agreed climate mitigation measures and a collaborative, fully automated logistics sector, with inclusive and accessible technologies.

Agile, Ubiquitous

Smart moves

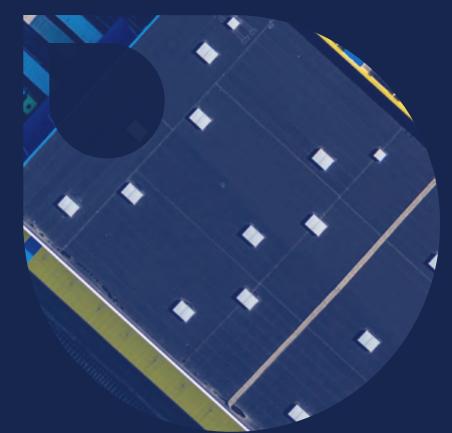
A logistics sector with ubiquitous access to agile, smart technologies, operating in an environment where different geographies have different standards and measures to mitigate climate change.

Different areas have different measures

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A DEEP DIVE into each scenario



Shared moves

Smart moves

Complex moves

Climate change migration measures

2050 is a time of shared goals, commitments and measures to mitigate climate change. It was a tough journey, but pressure from multiple sources brought global leaders together, and eventually, agreement was reached, and a global body formed to develop and apply shared standards to mitigate climate change.

Consumers across the world are using the length and climate impact of a product's supply chain, as well as its potential to be repurposed or recycled, as critical considerations in their purchasing decisions. Like regulations about nutritional value on food products, regulations stipulate how the labelling of any product should indicate its 'score' on the universally accepted climate mitigation measures.

Although there is global agreement and support for the climate mitigation measures, geopolitical tensions and conflict arise because some countries feel unfairly influenced due to differences in contextual challenges and access to technologies.

The global pressure towards a more sustainable, even restorative economy, creates opportunities for logistics companies to create new business opportunities, especially in the transport of goods and materials for repurposing and recycling.

Development and adoption of appropriate technologies

Technologies are developed and adopted by an increasingly elitist group of organisations and countries. They were the early movers and purposefully keep the barriers to entry high, and as such guard their intellectual property fiercely. It is expensive to 'buy into' these technologies. Large companies enter into agreements with each other, creating technology ecosystems and forming supply chain corridors where information and technology developments are shared amongst the participants only.

What this means for M&A

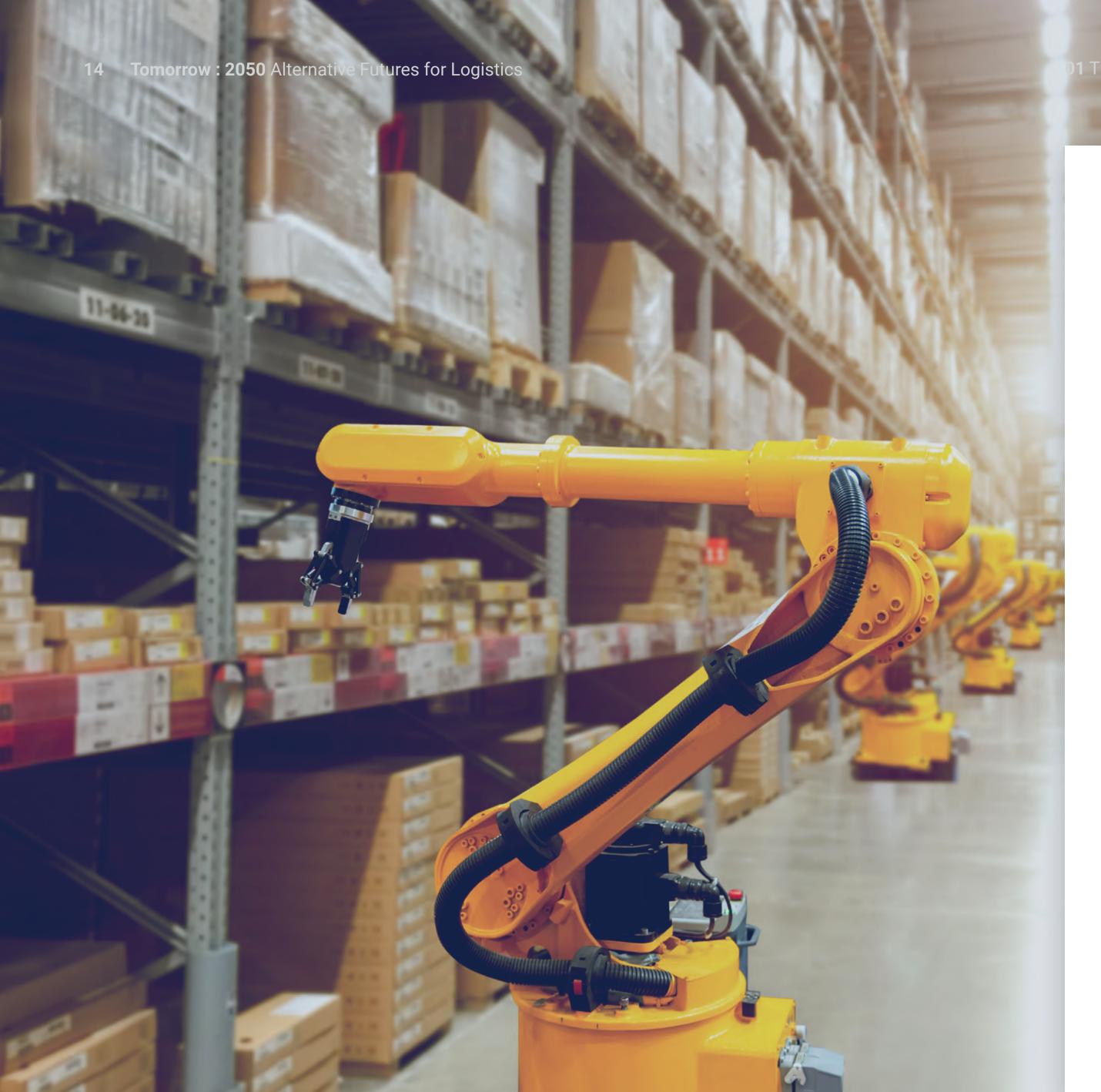
- High value M&A deals are made where an organisation wants to buy into an established supply chain corridor.
- Since different supply chain corridors may use different technology ecosystems, organisations that want to operate in multiple corridors may seek M&A deals that facilitate their own technology systems to interact with these different kinds of technology ecosystems.
- There are opportunities to participate in reverse logistics.
- Mergers serve to buy in skills not available within a particular region.



Shared Moves Scenario

In the Shared Moves scenario, the logistics sector finds itself in an environment that sees increasing awareness about the changing climate and pressure on governments to mitigate these effects. Inclusive and accessible new technology, including advances in automation and robotics, have a profound effect on improved productivity.

Exploring the critical factors catalysing this scenario \rightarrow



Fragmented moves

Shared moves

Smart moves

Complex moves

Climate change migration measures

During the late 2020s, increased awareness about the changing climate and social responsibility across societies compounded the pressure on politicians and global leaders to mitigate the effects of climate change. It was universally agreed that an international standard for reliable measurement was needed. This international standard was developed, accepted by all parties and applied across the globe. A global body was established where measures were agreed, compliance monitored, and member countries held to account.

Development and adoption of appropriate technologies

Humans and technologies evolve together - logistics are, for the most part, automated and autonomous as a result of breakthrough advances in automation, robotics, and artificial intelligence.

Humans still play an integral part in management roles due to complex logistical processes and the requirement of continuous monitoring of these processes. Logistics training has become more tech-focused to enable staff to work in the new automated work environments.

Automation, first targeted at dealing with large labour shortages, has led to increased productivity and a dramatic reduction in labour costs. Due to increasingly stringent climate regulations and international standards, there has been a shift toward leveraging technologies to achieve sustainability goals and contributing to a restorative economy.

As technologies such as blockchain, digital twins, IoT, AI & ML, advanced analytics, robotics and other emerging technologies become ubiquitous and increasingly integrated across the industry, the vast amount of data and insights are now enabling intelligent and continuously learning design.

What this means for M&A

- Increased globalisation and open borders create opportunities for more M&A deals.
- There is global pressure to create a more restorative (not only a sustainable) economy. This opens opportunities for logistics companies to enter new markets, develop new service offerings, and form new partnerships.
- Interesting opportunities exist for deals between logistics, technology and environmental companies.
- M&A deals happen to enable logistics companies to fulfill their compliance duties reporting on their adherence to the standards and measures to mitigate climate change.

Tomorrow: 2050 Alternative Futures for Logistics

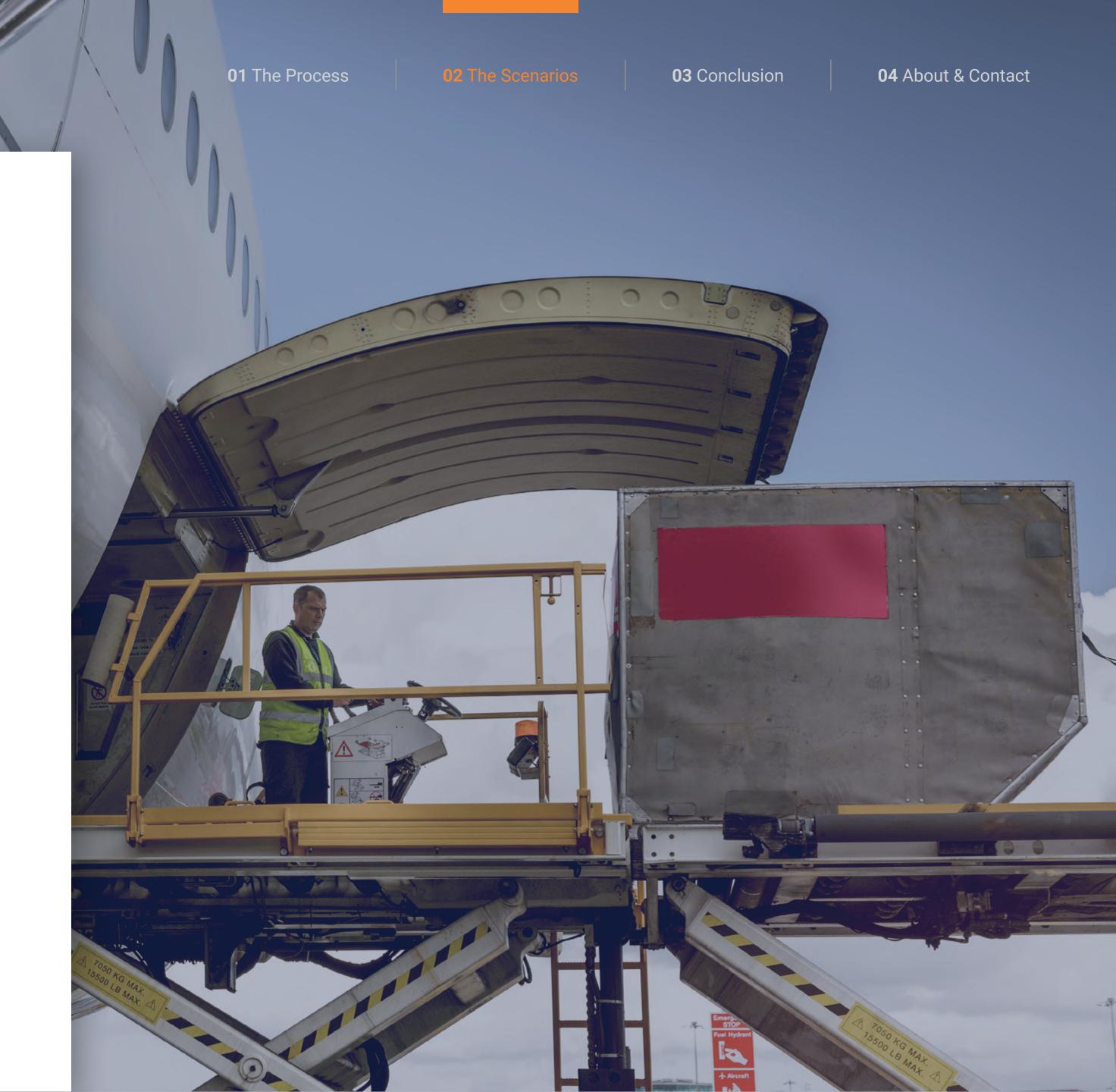


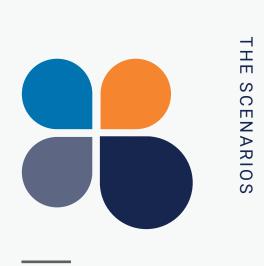


Without global agreement or an international standard for mitigating climate change, the Smart Moves scenario sees different sets of standards when it comes to production and logistics globally. While environmentally conscious consumers are able to demand and choose 'green' products, cost sensitive consumers in other parts of the world with less stringent regulations are more likely to choose products based on price.

Here an intelligent logistics sector sees agile smart technologies being accessible and playing an important role, although navigating these differing standards and climate change mitigation measures is challenging.

Exploring the critical factors catalysing this scenario \rightarrow





Fragmented moves

Shared moves

Smart moves

Complex moves

Climate change migration measures

Governments across the globe have different views about measures to mitigate climate change and are unable to agree on a set of shared initiatives and standards. Therefore, logistics companies must adhere to and report on differing sets of standards in different countries. Some countries form regional blocks with shared standards but moving products across the world is still a very complex undertaking.

Development and adoption of appropriate technologies

Technologies are developed and adopted in an inclusive manner, creating the potential for an intelligent logistics sector running on accessible and ubiquitous technologies.

Competitive advantage stems from an organisation's ability to navigate the differing standards and measures between different geographical regions in an efficient manner, rather than from having access to appropriate technologies. Furthermore, technologies assist companies to navigate through the maze of differing standards and help to match the most appropriate routes with an organisation's level of potential compliance.

Conscious consumers have a significant influence on the demand for products. A product's influence on climate change has become a critical factor for customers' choice of suppliers. In this scenario, there is varying reliability of sustainability measurements and transparency from companies, making it more difficult for customers to choose green suppliers. Tech start-ups shift their focus towards this challenge and partner with logistics companies to integrate blockchain, IoT and emerging technologies to increase product traceability and visibility of supply chains.

However, other companies operating in areas with less stringent environmental regulations use advanced technologies to drive efficiency and cost-savings rather than prioritise sustainability. This has led to a significant competitive advantage in terms of pricepoints countering pressure to be more 'green', with cost sensitive consumers in some parts of the world being less concerned with 'green procurement'.

What this means for M&A

- In this highly competitive sector, access to technologies are not hard to come by, but adhering to differing standards and climate change mitigation measures are tough. Many M&A deals happen between organisations that need assistance with adhering to and reporting on the differing standards, and organisations that supply these types of services.
- An increasing number of interesting deals happen between diverse partners (from technology, environmental and logistics sectors) in order to gain competitive advantage and to establish optimal and efficient routes between and around regions with differing standards and measures to mitigate climate change.
- Deals happen to establish and strengthen regional supply chains.

have different types and levels of climate change mitigation measures, creating a complex logistics environment, resulting in reduced globalisation.

Exploring the critical factors catalysing this scenario \rightarrow

Shared moves

Smart moves

Complex moves

Climate change migration measures

In this scenario, players in the logistics sector face a myriad of different climate change mitigation measures. Different countries and blocks of countries have different types and levels of climate change mitigation measures. Some regional blocks have very high standards and others have lower standards, creating a complex environment, especially for long supply chains.

Development and adoption of appropriate technologies

Technologies are developed and advanced, but it is not accessible to everyone. Technology is regarded as a strategic advantage and therefore tech companies and governments practice protectionism to ensure privileged access to resources and technologies. High barriers to entry are created and upheld.

These protectionist and elitist ideologies result in reduced globalisation and broad international cooperation. In some cases, regional blocks are created where similar climate change mitigation measures are upheld, and specific technology ecosystems are shared and accepted. Logistics companies operating across several of these regional blocks, may have to run multiple 'sets' of technology systems.

Logistics companies in this scenario are less agile than those in the Shared Moves and Smart Moves Scenarios. The high barriers to access to emerging technologies cause organisations to be slower in their adoption thereof, wanting to be more certain of the benefits before they invest. Conflict, both as a cause and effect of protectionist strategies, is a regular occurrence.

Competition for technological supremacy between large players (and countries), creates further technological fragmentation and causes increased complexity in international trade, transport and logistics.

What this means for M&A

- Interesting partnerships and collaborations could happen in this scenario. Opportunities exist for logistics companies to partner with organisations that help them to remain informed about and adhere to regulatory changes in different geographies – both about climate change mitigation measures and requirements regarding technology ecosystems.
- There could also be opportunities for mergers and acquisitions within regional blocks, to create logistics ecosystems unique to a particular regional block of countries.

THE 2050 SCENARIOS

What this means for M&A in summary

Fragmented moves

- Global standards in addressing climate change facilitate global deal opportunities
- Exclusive ownership of latest technology favors growth of dominant industry players
- Top 100 firms expected to perform larger deals, increasing global dominance
- Small and medium sized players will expand via smaller regional and global acquisitions
- Ultimately, further consolidation and more oligopolistic structures in this scenario
- This scenario would mostly benefit large global industry players

Fragmented, Elitist

Development and adoption of appropriate technologies

Complex moves

- Absence of global standards re: climate change mitigation creates barriers and may favor deglobalization/regionalization trends
- Requires more sophisticated approach by leading logistics firms who need to adhere to national, regional regulatory frameworks re: climate change mitigation
- May create strong regional players that are fully adapted to regional regulatory framework
- M&A transactions will still happen, but focus will shift from "global" to "regional"

Universal agreement, Shared standards

change

itigation measure

Shared moves

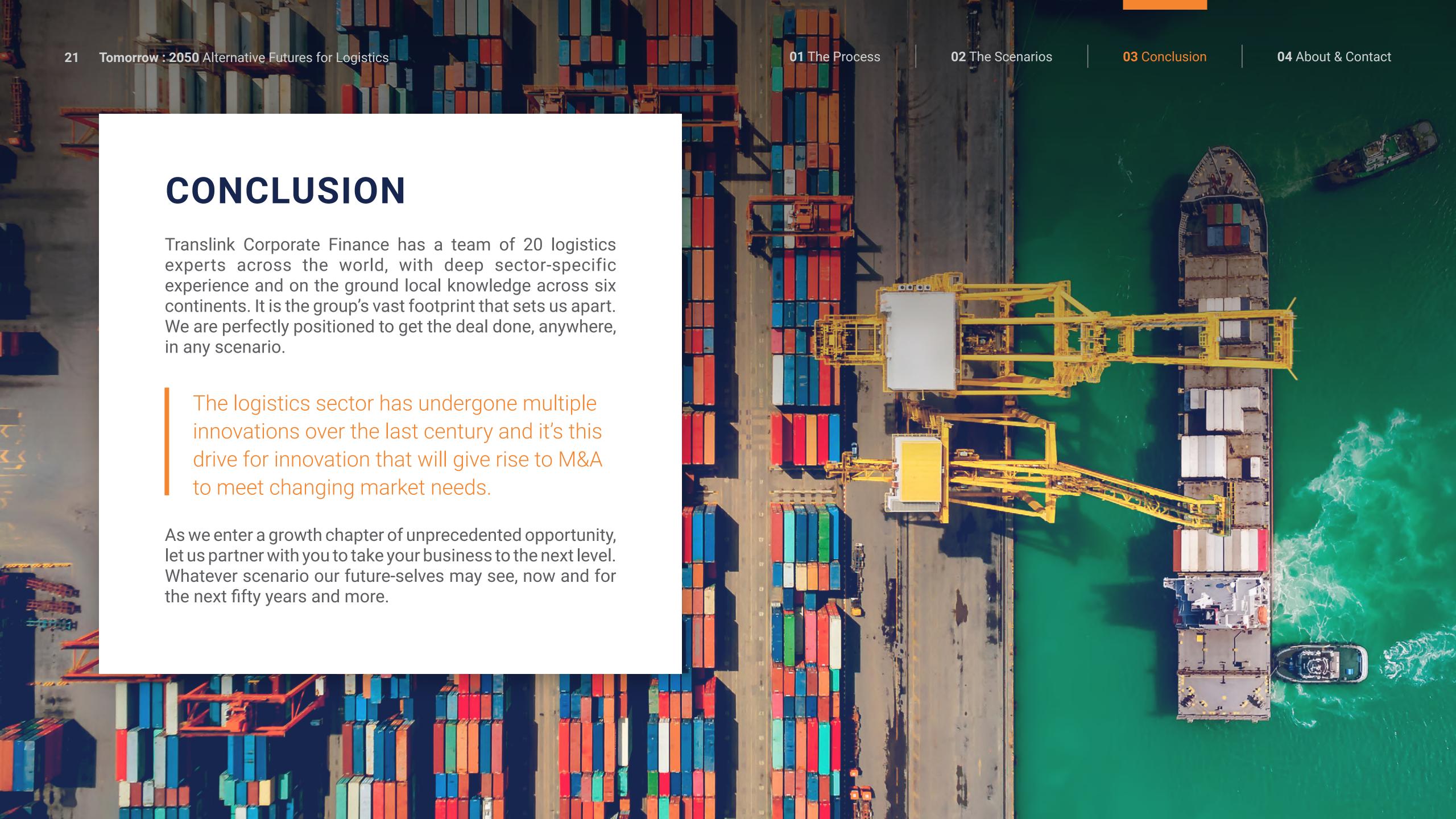
- Collaboration mindset facilitates alliances across geographies and segments
- Dominant players are constrained, leaving medium sized players more room to prosper
- Technology is no longer key differentiator; alternative factors efficiently served by and fuel M&A activity
- Speed critical to capture first-mover advantage, with innovation fuelling M&A activity

Agile, Ubiquitous

Smart moves

- Local operators, sheltered by complexity barriers, become attractive targets for cross-border deals
- ESG friendliness and compliance a key differentiator; M&A helps companies get greener
- ESG is an increasingly important criteria for completing M&A transactions
- Global pressure to create more restorative (not only a sustainable) economy fosters opportunities for logistics companies to form creative alliances with tech and environmental players

Different areas have different measures







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ABOUT

The Institute for Futures Research

The Institute for Futures Research undertakes Futures research, trains corporates and individuals in the use of futures thinking tools, and offers various publications to keep clients updated on what is waiting on the horizon. Overall, our services are aimed at helping clients to acquire strategic foresight in order to make better longrange decisions. This will enable them to sense opportunities and mitigate risks in good time.

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ABOUT

Translink Corporate Finance

Translink is a trusted global corporate finance group with deep, local, sector-specific expertise. Founded in 1972, we have +300 experts covering 35 countries on six continents. We've closed deals in almost every sector imaginable. Our powerful partnerships around the world set us apart. In some industries, we have pooled our global expertise to form Industry Groups focused on serving our clients with deeper insights into global developments and knowledge on targets and bidders in the respective markets.

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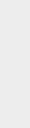
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Selected Logistics sector transactions

For more information on Translink's expertise in logistics, visit:

https://www.translinkcf.com/industrysectors/logistics/

















