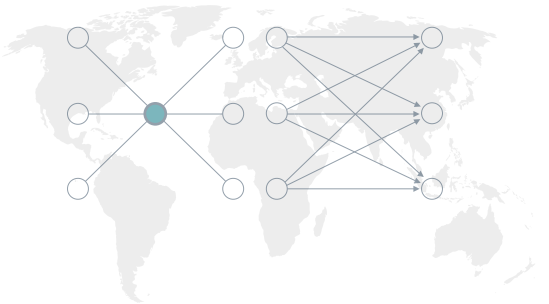


# Brave new world? Six sources of value creation

## 1 GREATER ECONOMIES OF SCALE



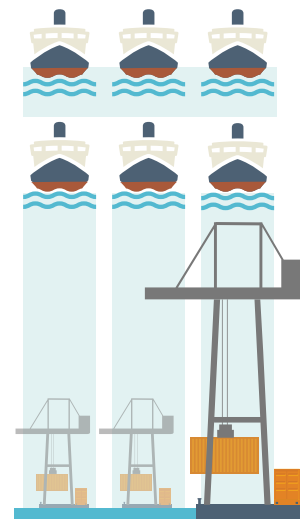
## 2 FLEXIBILITY



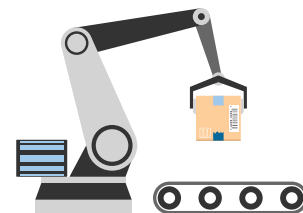
## 3 SUPPLY CHAIN RELIABILITY AND PREDICTABILITY



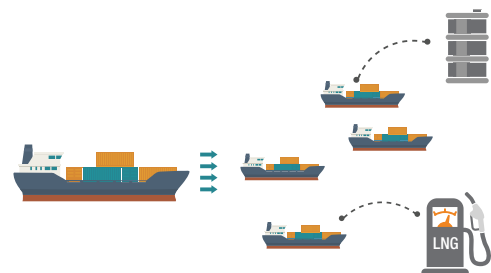
## 4 CONSOLIDATION AND INTEGRATION



## 5 AUTOMATION AND PRODUCTIVITY



## 6 ENVIRONMENTAL PERFORMANCE



## Value source 1: Greater economies of scale

How technically feasible are ever-larger ships? What's the trade-off between ship capacity and network flexibility, and the additional costs imposed on other segments of the value chain – especially ports and terminals – when introducing larger ships? If ship economies of scale only work when the ship is filled, will liners continue to look for any opportunity to book volumes, including from freight forwarders?

## Value source 2: Flexibility

How much will customers value faster, more direct services – even at a slightly higher price? Will scale be deprioritised in favour of flexibility and modularity? Could new commercial practices also be introduced to better align incentives across the value chain? Will asset-light freight forwarders show the way, swiftly reorienting services across different container transport providers to meet customer demand and preferences?

## Value source 3: Supply chain reliability and predictability

Customer needs are changing, especially as e-commerce upends consumer expectations and last-mile distribution – forcing changes further up the container value chain. What will the impact of digitised document flows, omniscient cargo tracking and predictive analytics be for beneficial cargo owners? Are smaller ships and more flexible services the future for supply chain reliability? Will freight forwarders capture value by being the digital “glue” in the supply chain?

## Value source 4: Consolidation and integration

In recent years, container liner mergers have helped mitigate market over-capacity, optimise networks and cut overheads. And while container terminals and freight forwarding have not seen as much consolidation, vertical integration such as ‘smart’ stowage could be the way forward. Optimised stowage plans would have to be shared by all players touching the cargo along the route. But is this a challenge too far?

## Value source 5: Automation and productivity

We estimate 1-2% of a container shipping line's cost base comes from on-ship labour, and many technologies exist today to automate much of what a crew does. Labour costs are more significant in other parts of the value chain, with the possibility of automating roles like crane operator, truck driver, and customs officer. Automation is likely to also happen on the landside with driverless trains, driverless trucks and a revolution across hinterland connectivity.

## Value source 6: Environmental performance

Meeting green challenges over the long term is likely to see the use of new fuels and higher conversion efficiency. Terminals have already electrified operations to reduce emissions. Their environmental impact will improve further as trucking also electrifies and becomes autonomous. For liners, liquefied natural gas (LNG) is in the spotlight, but are ships powered by nuclear, hydrogen fuel cells, or even electricity on the horizon?

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