



Brave new world? The next 25 years of container transport

Oscar Egerstrom, TT Club

Matt Stone, McKinsey & Company

EUROPEAN SEA PORTS ORGANISATION 16TH ANNUAL CONFERENCE

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**McKinsey
& Company**

TT CLUB 

50 years ago ...

Pre-container general cargo

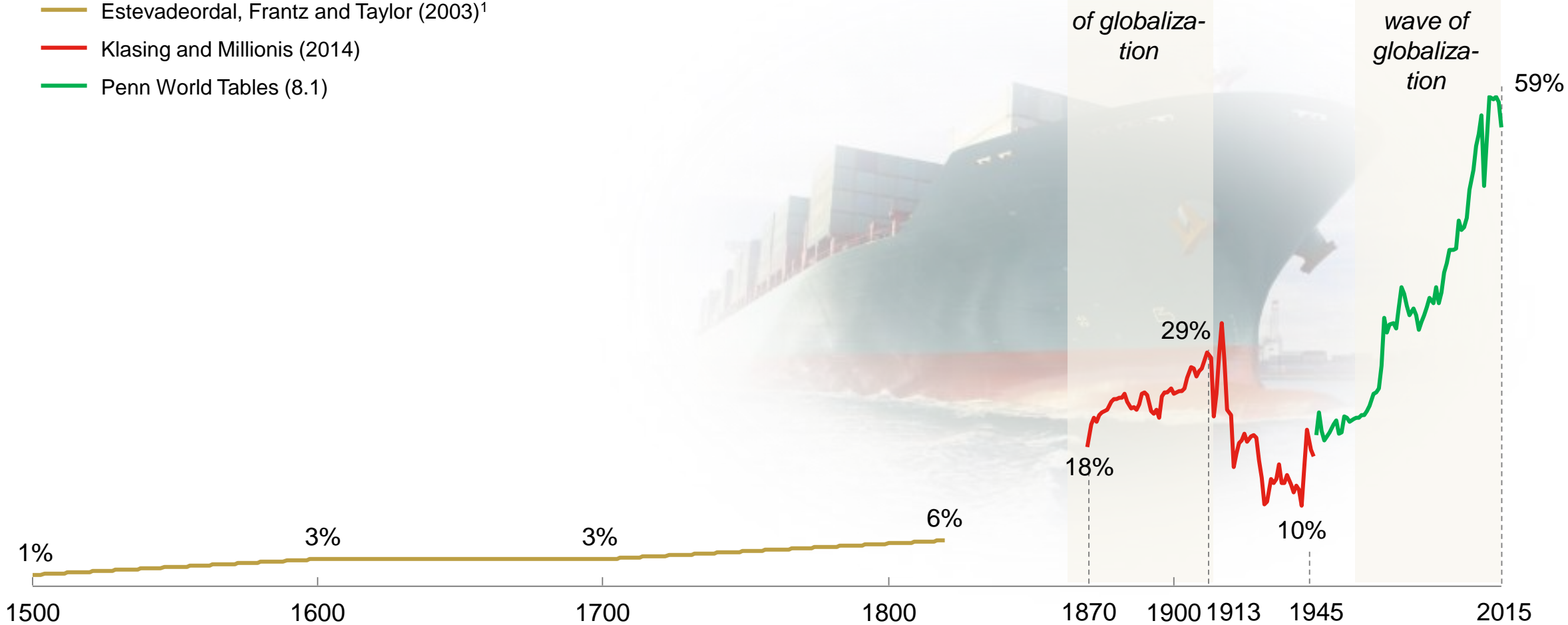


MV Fairland, Bremen, 1966

We've been living in an unprecedented era of trade growth

World exports and imports of goods and services

Share of world GDP, %



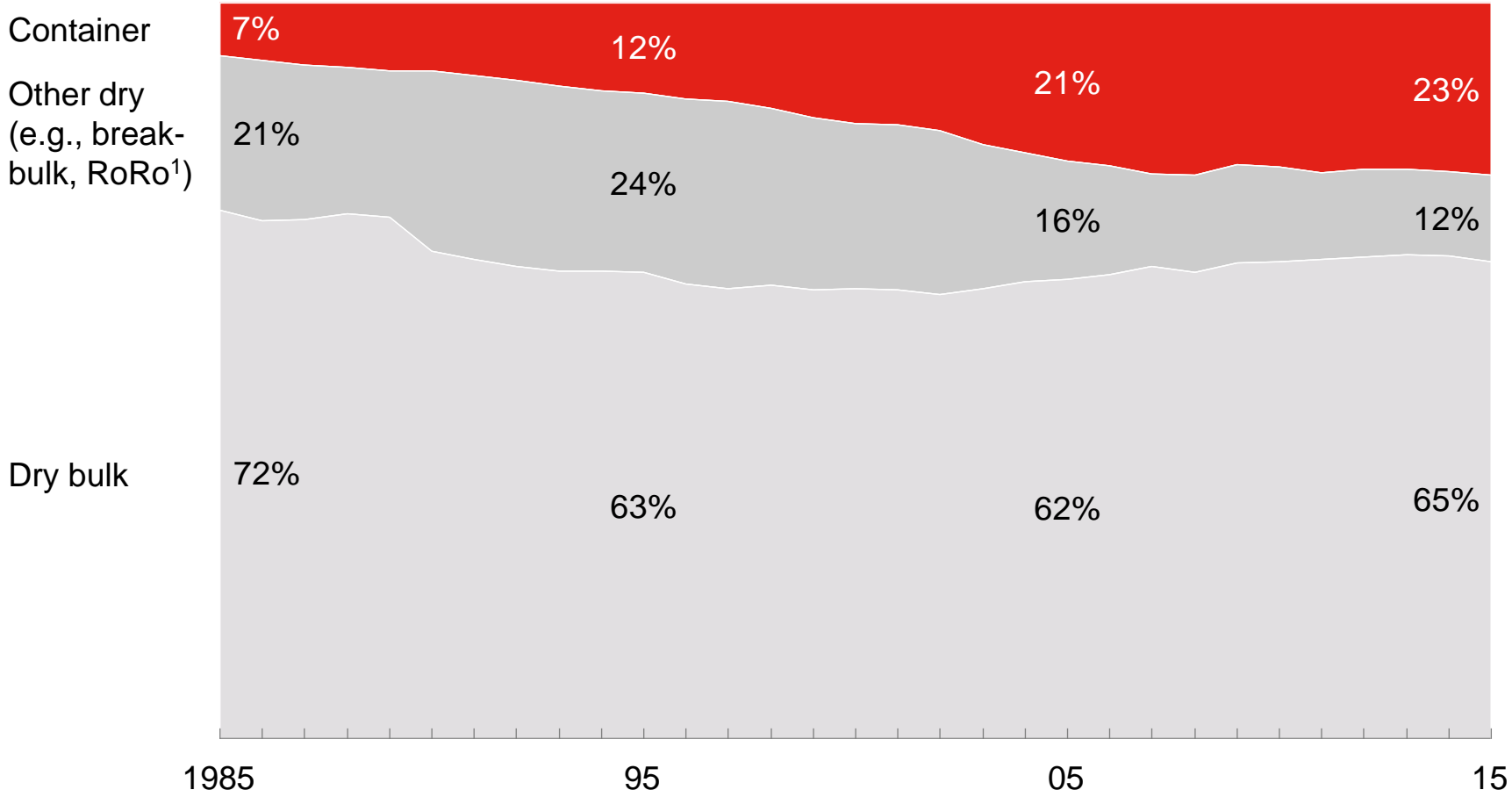
¹ Simple average of lower- and upper-bound estimates.

SOURCE: Esteban Ortiz-Ospina and Max Roser, "International trade," OurWorldInData.org; Mariko Klasing and Petros Milionis, "Quantifying the evolution of world trade, 1870–1949," *Journal of International Economics*, January 2014; Antoni Estevadeordal, Brian Frantz, and Alan Taylor, "The rise and fall of world trade, 1870–1939," *The Quarterly Journal of Economics*, May 2003; Penn World Tables Version 8.1; McKinsey analysis

Containerisation has slowed considerably since the early 2000s – but is unlikely to reverse

Container share of dry seaborne trade

% of total dry seaborne trade tons



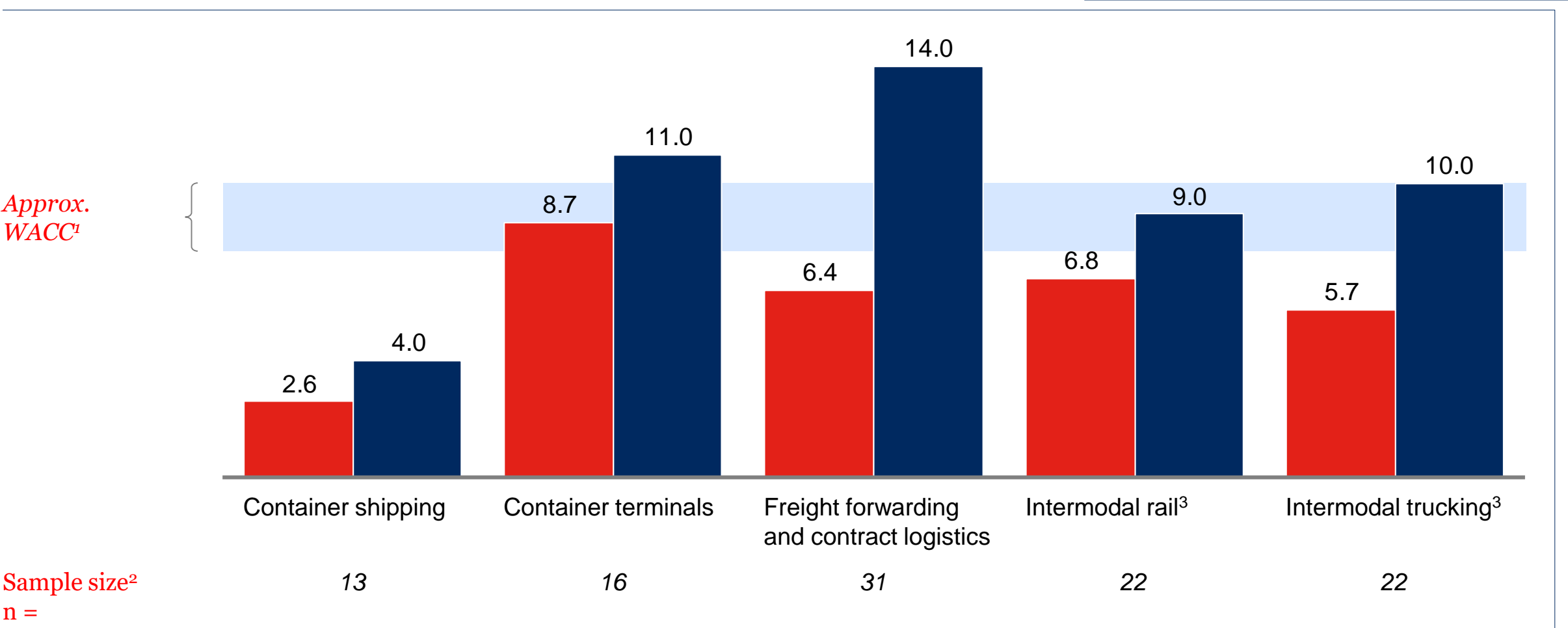
1 Roll-on, roll-off

SOURCE: IHS, McKinsey analysis

The container transport industry has struggled to return its cost of capital in the last two decades

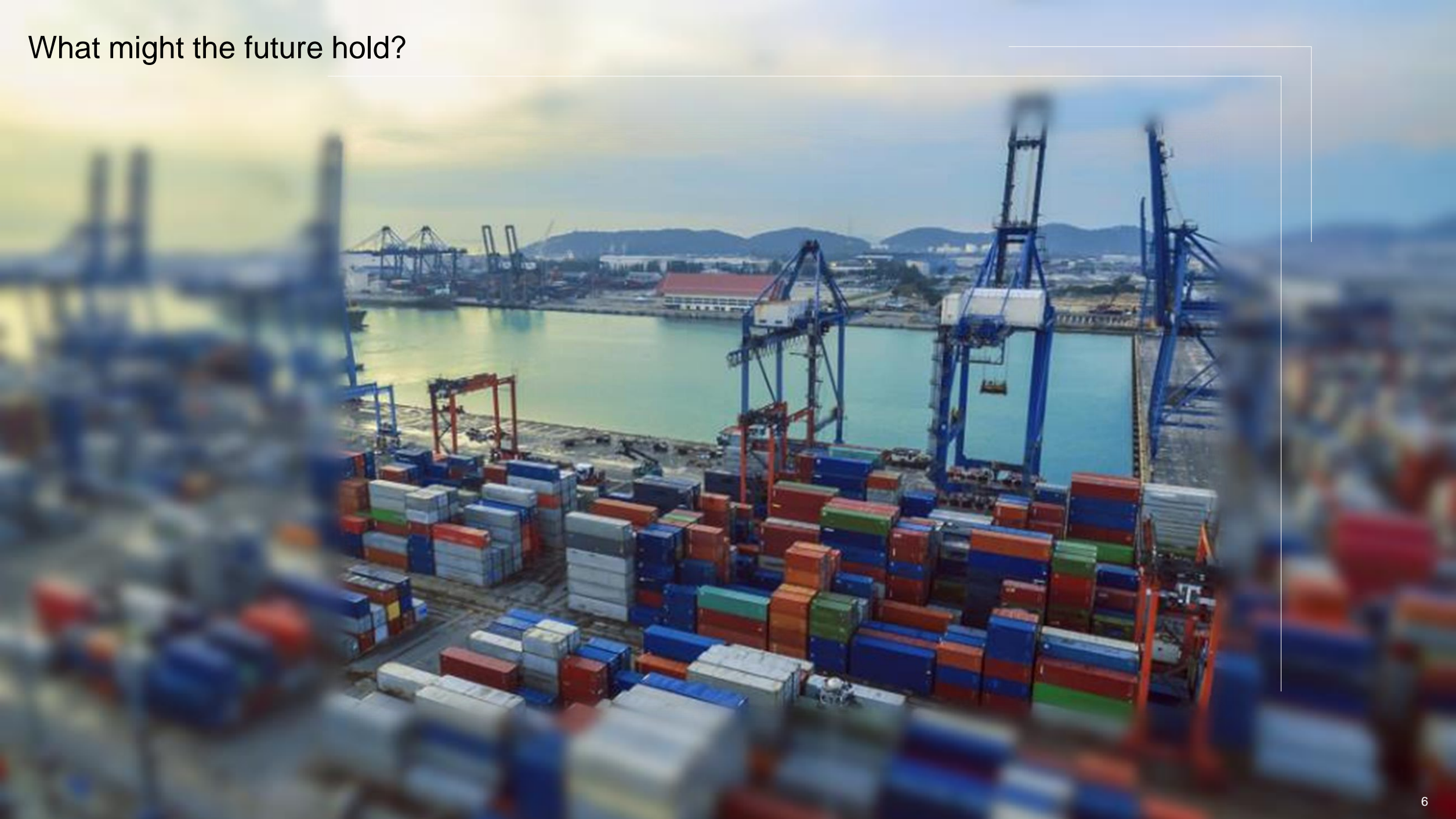
■ Average ROIC
■ Top-quartile ROIC

Average return on invested capital (ROIC), %, 1995-2016




1 Weighted average cost of capital; estimated at 8-10%
 2 Sample size varies across years due to data unavailability
 3 Includes non-containerized transport

What might the future hold?



Looking forward ...



TT CLUB
50 years of established expertise

McKinsey&Company

Brave new world?

Container transport in 2043

TT CLUB
IS MANAGED
BY **THOMAS
MILLER**

What fundamentally drives industry value-creation over the next 25 years?

- Trade growth?
- Digital, data, analytics?
- Something else?

Six (potential) sources of value creation going forward

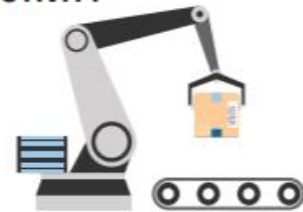
1 GREATER ECONOMIES OF SCALE



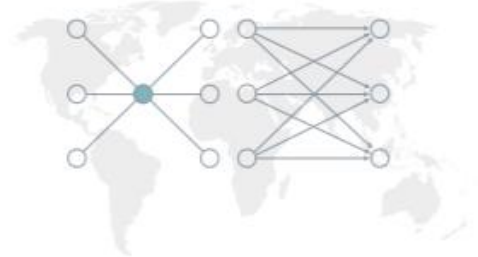
3 SUPPLY CHAIN RELIABILITY AND PREDICTABILITY



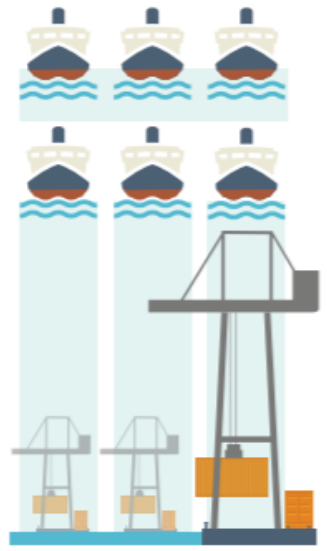
5 AUTOMATION AND PRODUCTIVITY



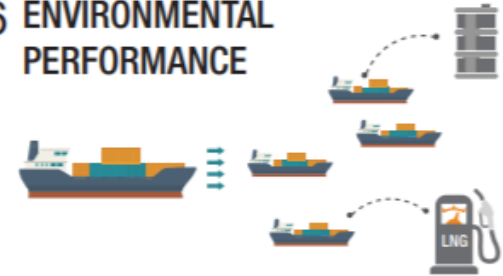
2 FLEXIBILITY



4 CONSOLIDATION AND INTEGRATION



6 ENVIRONMENTAL PERFORMANCE



Future #1: Third wave of globalisation

Trade demand



>2x
MULTIPLIER

Re-acceleration of trade growth



Container captures significant share from bulk

Specialisation results in significant supply chain fragmentation



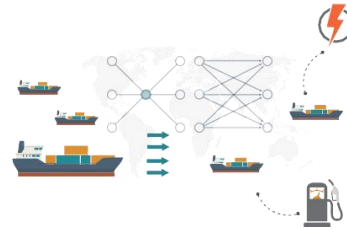
China manages slowdown while India grows >10% p.a.



Sector economics

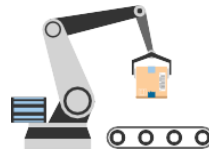


Scale economies become important again faster than expected: ~30k TEU ships within 10 years

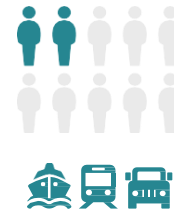


Continued prominence of hub-and-spoke networks

Digital, data, and analytics a fundamental driver of value



Considerable automation across value chain (ships, ports, rail, trucks)



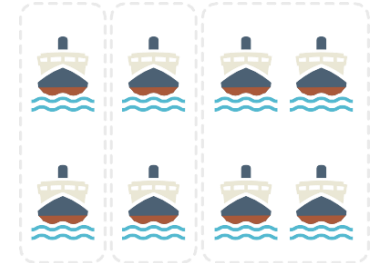
Industry structure



Room for both “digital natives” and incumbents

Freight forwarders digitise and are key nodes in ecosystem

7+ incumbents and “long tail” of point-to-point players



Alliances remain important and expand scope



Vertical integration proves to be of limited value


Future #2: "Peak container" & consolidation

Trade demand

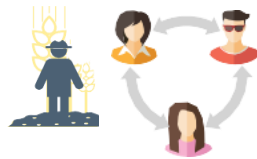


<1X
MULTIPLIER

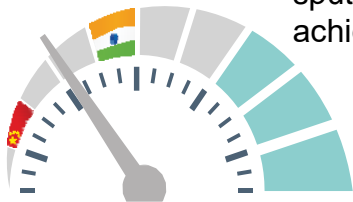
Further slowdown of trade growth

 No more containerization
Market stays flat at **23%**

Increasing share of "local for local" supply chains



China's export engine sputters and India does not achieve "breakout" growth



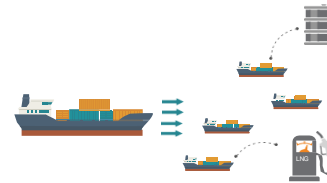
Sector economics



Scale economies lose salience because insufficient demand to fill ships



Hub-and-spoke networks; more trans-shipment



Digital, data, and analytics only an "overlay"

Gradual automation, especially landside (ports, rail, trucks)



Industry structure



Freight forwarders digitize faster than asset owners and avoid disruption

Accelerated consolidation resulting in 3-4 leading liners



Vertical integration proves to be of limited value



Alliances less valuable

"Digital natives" play in the margins; no entry by "digital giants"

Future #3: Digital reinvention

Trade demand



1-1.5x
MULTIPLIER

“Slow and steady” trade growth

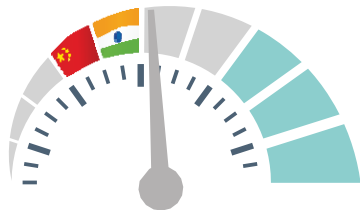


Modest additional containerization

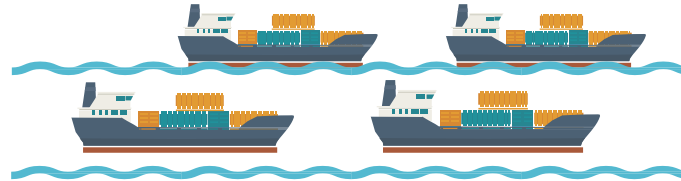
Shorter, more diverse supply chains (e.g., India to China, Africa to Europe)



China manages slowdown, India does not achieve “breakout” growth



Sector economics



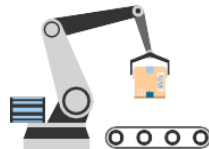
Scale economies lose salience; flexibility is valued



Smaller ships, more point-to-point, less transshipment



Digital, data, and analytics a fundamental driver of value



Considerable automation across value chain (ships, ports, rail, trucks)

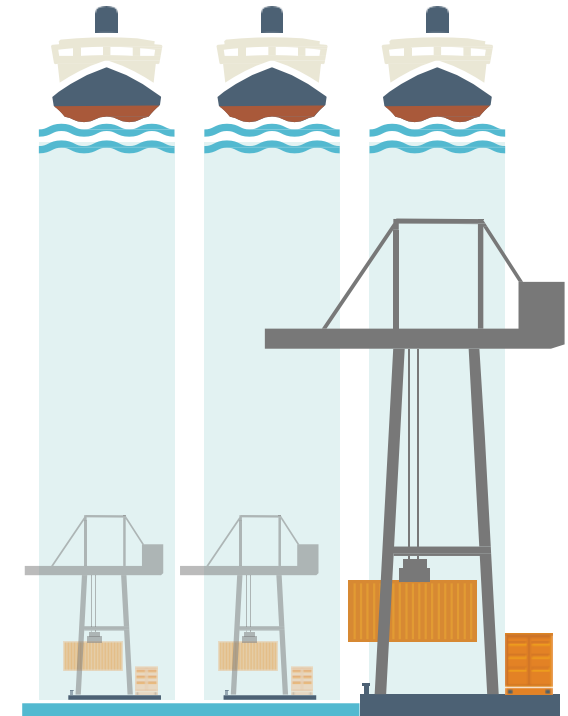


Industry structure

4-5 major incumbents and “long tail” of point-to-point players

Vertical integration enables digitisation and provision of E2E supply chain services

Freight forwarding radically shifted to a digital model



Future #4: Digital disruption

Trade demand



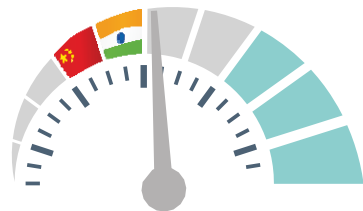
1.5-2x
MULTIPLIER

Reduced friction via digital unlocks new exporters/importers



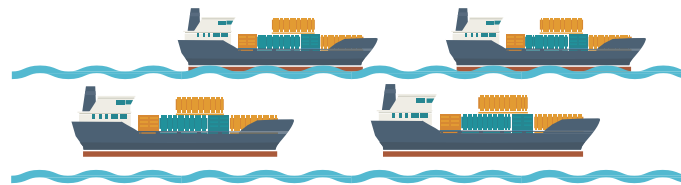
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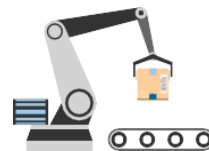
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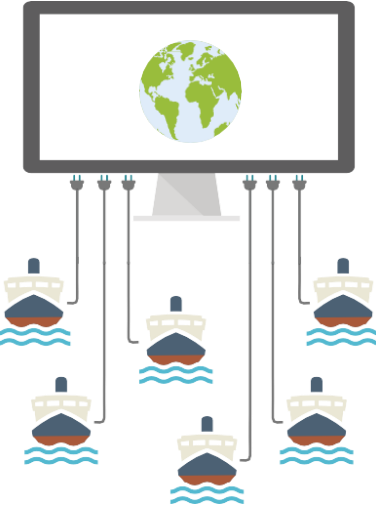


Considerable automation across value chain (ships, ports, rail, trucks)



Industry structure

Digital giants provide the platform / selectively own physical assets to optimise chains



"Uber-ization" of container transport: proliferation of carriers acting as "dumb pipes"

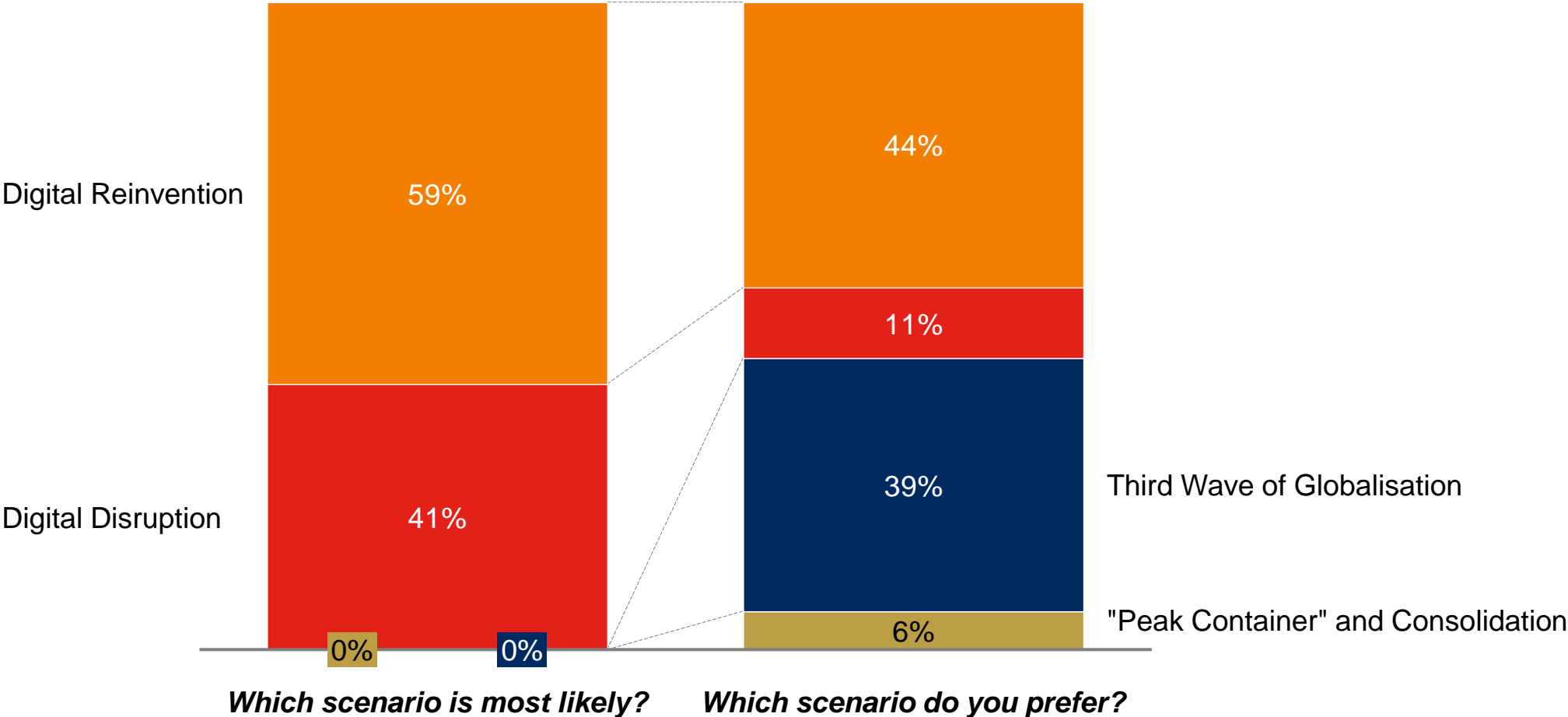


Vertical integration led by "digital giants" – enables digitization and provision of E2E supply chain services

Freight forwarding becomes totally digital

The future is digital

Responses of TT Club directors (November 2017)



Concluding thoughts

It is far too easy to be pessimistic about the future – there is **more opportunity** than we tend to think

The **future is digital** – some will win (big) while others will lose

The winners will focus on innovation to **delight the customer** and make bold moves

The **license to operate** – e.g., environmental performance, safety – will become more important





See the report:
ttclub.com/tomorrow

Thank you!

Oscar Egerstrom
oscar.egerstrom@thomasmiller.com



Matt Stone
matt_stone@mckinsey.com

McKinsey
& Company