

CAPITAL MARKETS DAY 2019



Wallenius Wilhelmsen ASA – Capital markets day 2019 program

Market outlook

Michael Hynekamp

EVP and Chief Operating Officer WW Ocean and WW Solutions

Decarbonisation

Roger Strevens

VP Head of Global Sustainability

Digitalisation

Simon White

EVP and Chief Digital Officer

Mats Amland

VP Head of Transformation Office

Market Outlook

Mike Hynekamp
EVP and COO WW Ocean & WW Solutions



There is no doubt that the industry around us is changing...

Electrification



Mobility models



Autonomy



Flexible manufacturing

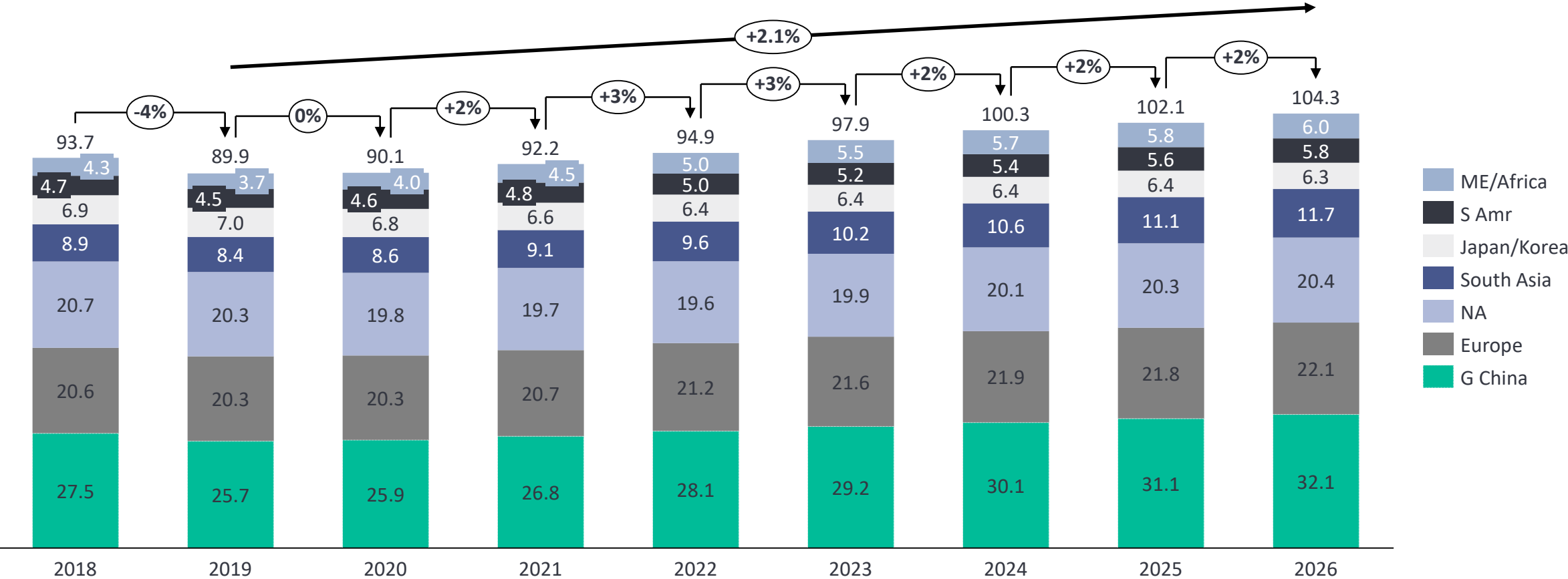


New entrants

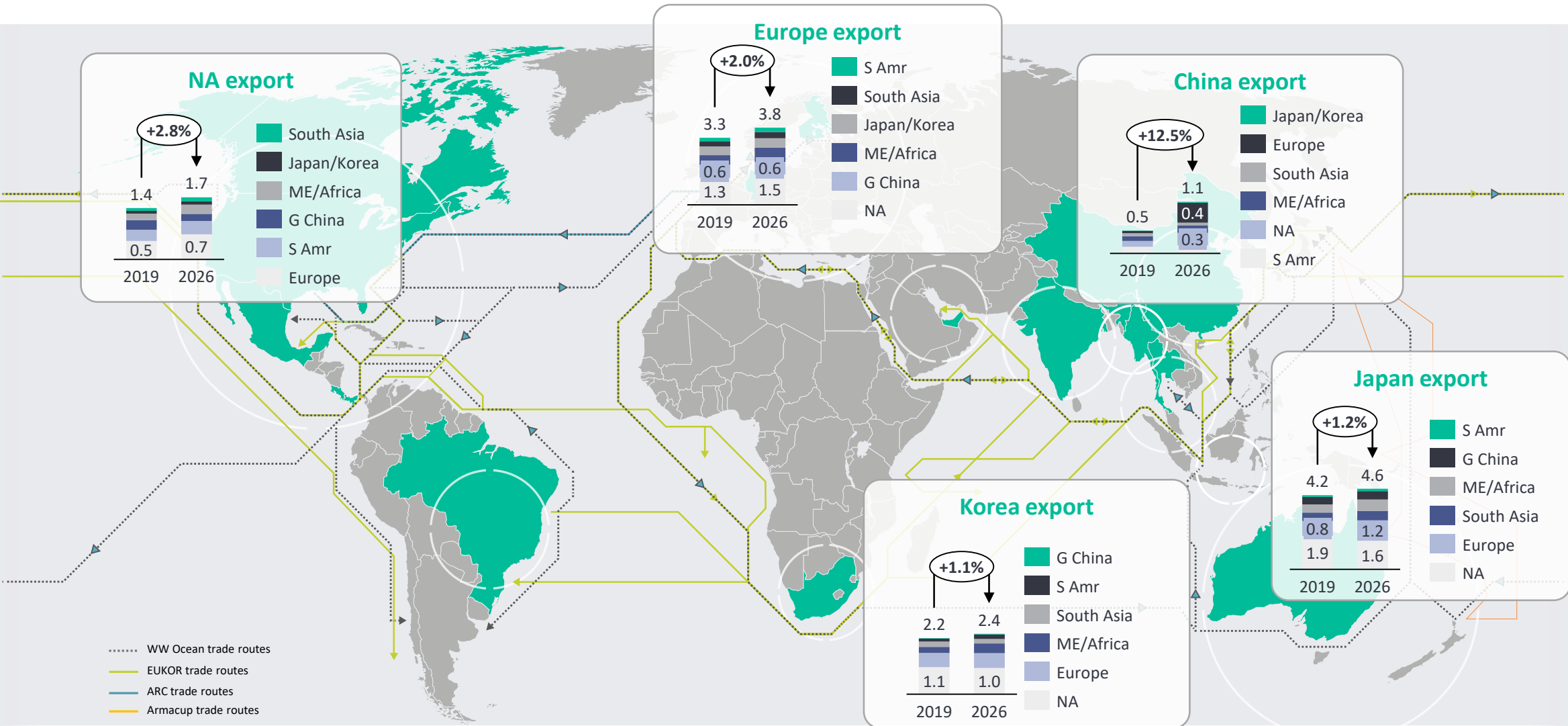


Light vehicle sales growth expected to see a CAGR of ~2.1% going forward

LV global sales, sales region, million units, 2018-26

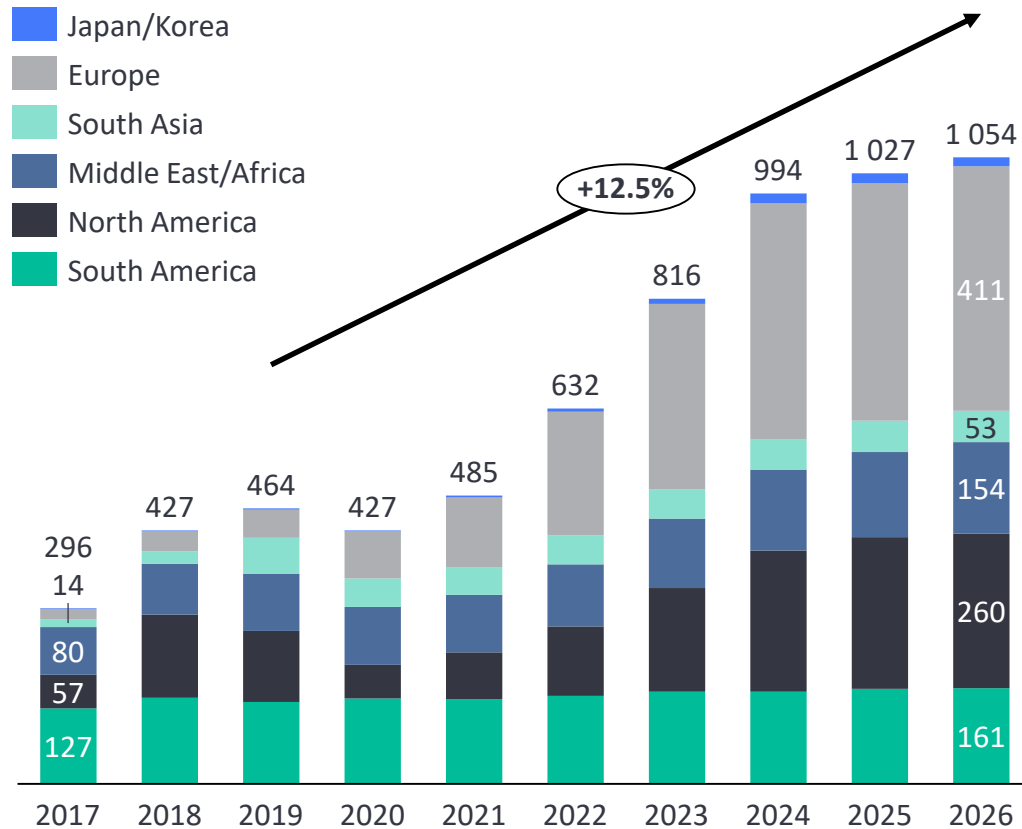


Forecasted growth in deepsea volumes in all key markets



Chinese light vehicle export set to be ramped up to >1 million units / year

Chinese LV export per consumption region 1000 units, 2017-26FC



Comments on Chinese LV export

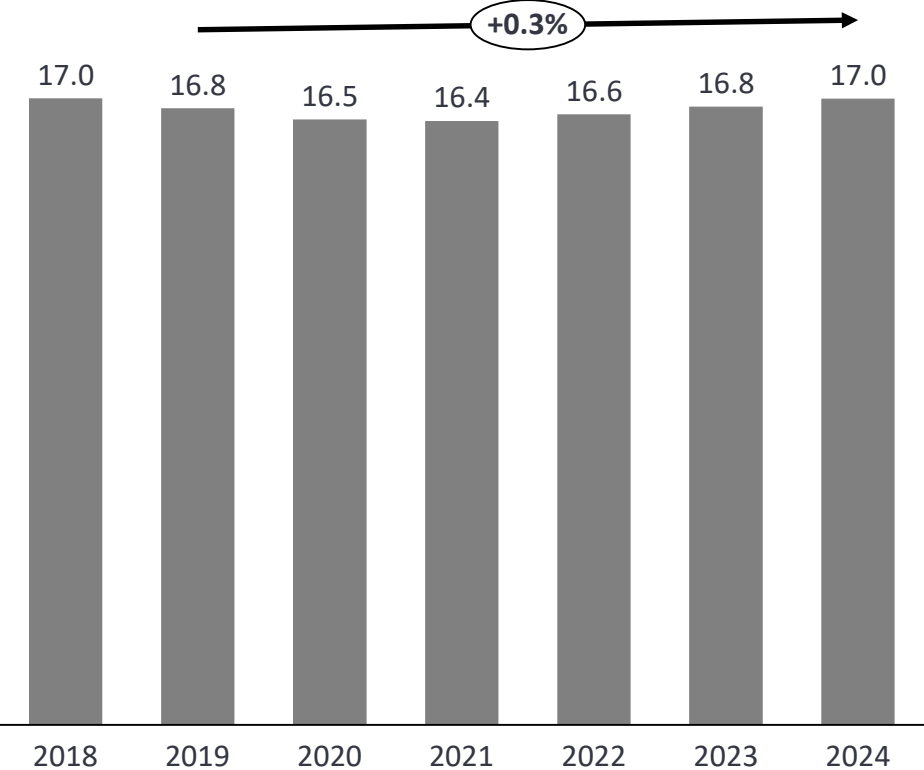
- **China** largest production region globally, expected to increase from 26m in 2018 to 32m in 2026
- **Open capacity** at Chinese plants
- Chinese **export of LVs** to increase from 296k in 2017 to 1054k in 2026
- **Battery electric vehicles (BEVs)** expected to contribute to most of export growth
- Regional emission regulation to influence consumption of BEVs, where **Europe** is expected to be a large consumer of these vehicles

North American light vehicle production and H&H sales show stable outlook

Vehicle processing

LV production NA

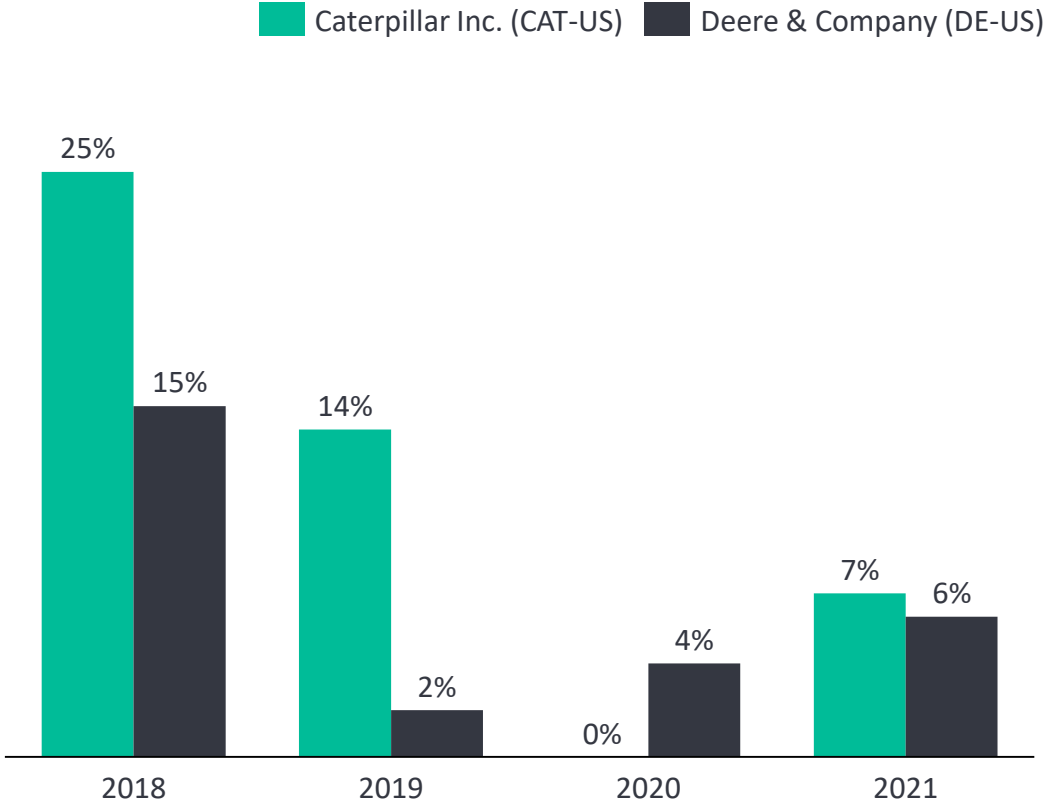
Mill units, 2018-24FC



Equipment processing

H&H Equipment OEM sales growth

Analyst consensus est, 2019-21FC



Source: IHS Markit / Market Insight WW, Factset data and Analytics (14.10.19) | Analyst consensus sales growth – Fiscal years (Caterpillar – North American sales of construction and mining equipment divisions only | Deere – Global sales of Agriculture & Turf division only) (USD, y-o-y %)

Outlook for marine terminals is solid

Terminals

LV export and import NA

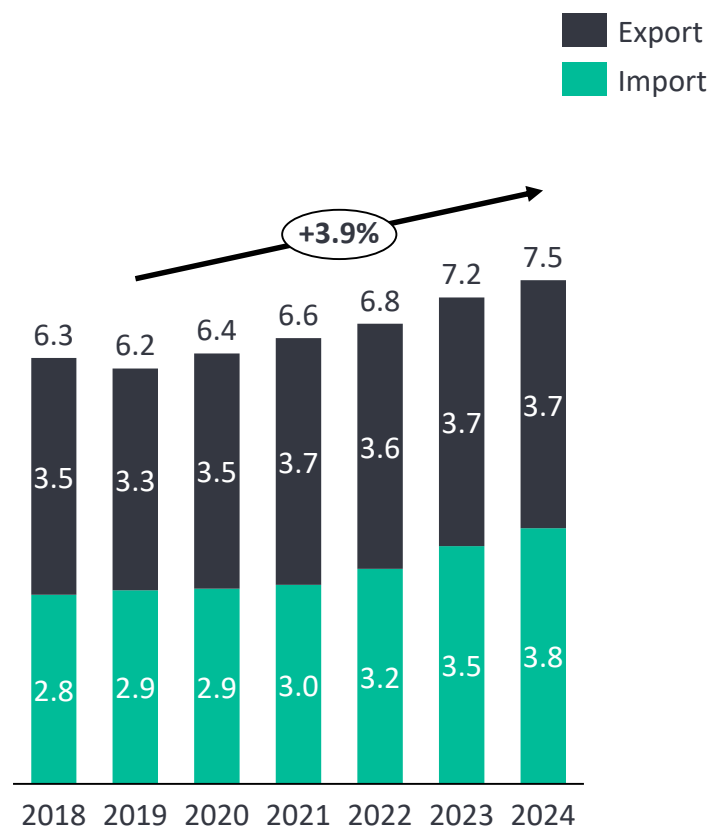
Mill units, 2018-24FC



Terminals

LV export and import Europe

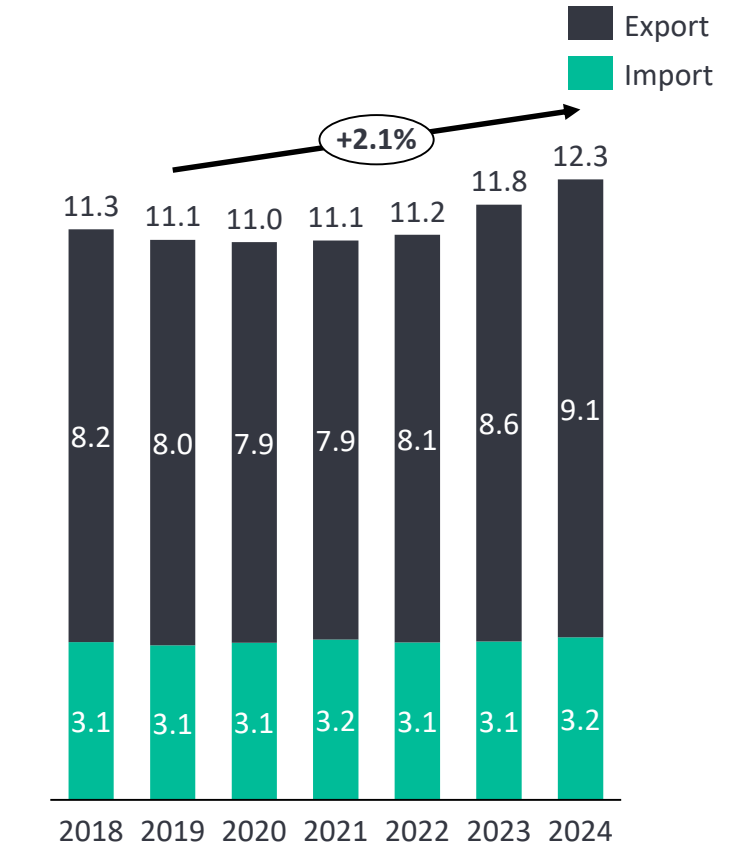
Mill units, 2018-24FC



Terminals

LV export and import APAC

Mill units, 2018-24FC

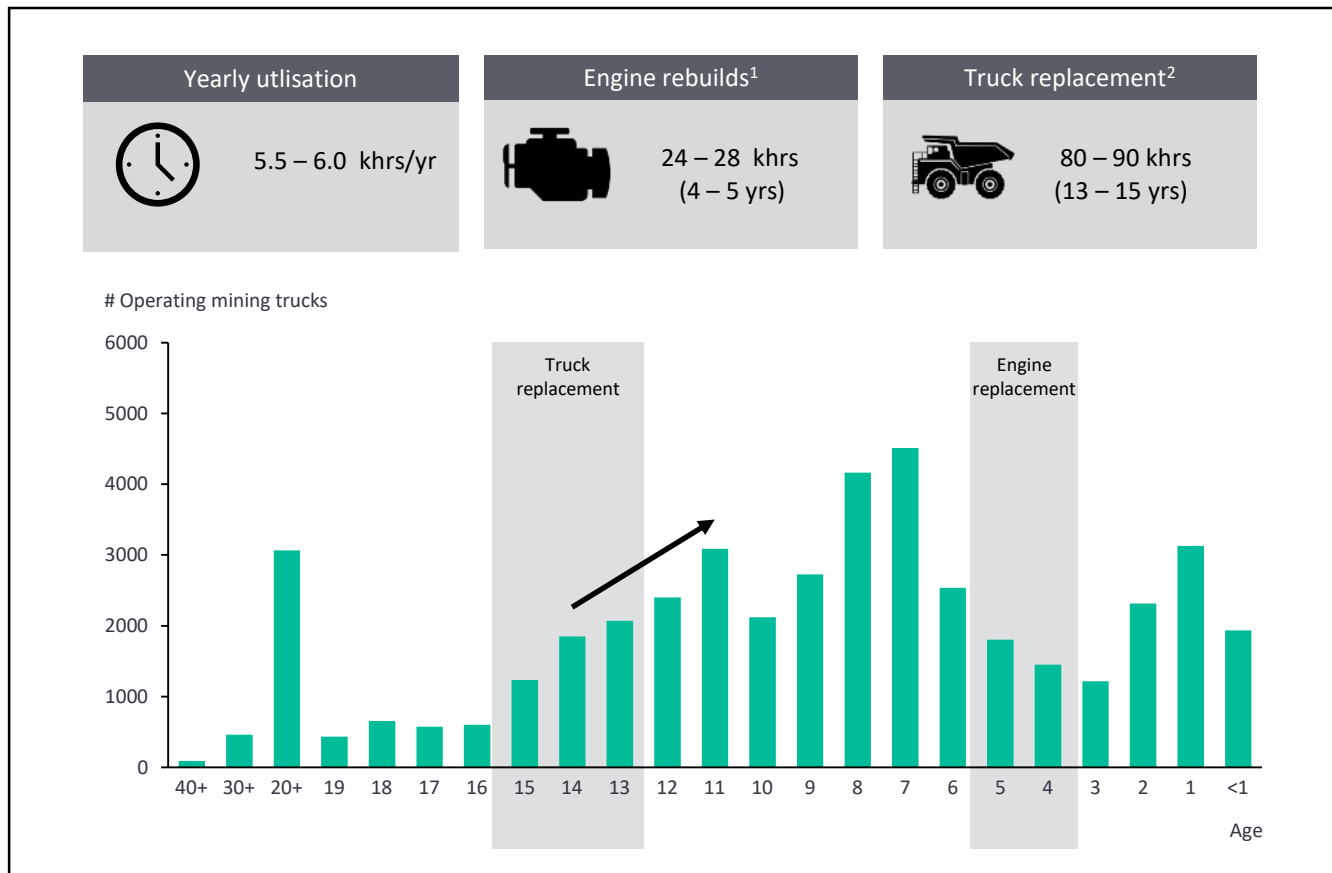


We appear to be in the start of a Mining truck replacement cycle

- Trucks commissioned during 2007/2008 are approaching theoretical replacement age

The number of trucks that are approaching the end of their chassis life is steadily growing over the next years

Large mining truck fleet characteristics



OEM quotes on Mining equipment replacement demand

CATERPILLAR

"(...) most commodity prices remain at investable levels (...) the end-user demand for mining equipment remains positive. And large mining trucks have further room for growth. We continue to believe we are in the early stages of a multiyear recovery in mining. However, miners are cautious due to economic uncertainty."

- D. James Umpleby III, Chairman & CEO Caterpillar

Q3 19 Earnings Call

HITACHI

"(...) the sentiment for ultra-large hydraulic excavators (over 300t) and dump trucks (payload over 150t) for major mining companies is bullish."

Q2 FY2019 presentation (Period: Jul.- Sep.19)



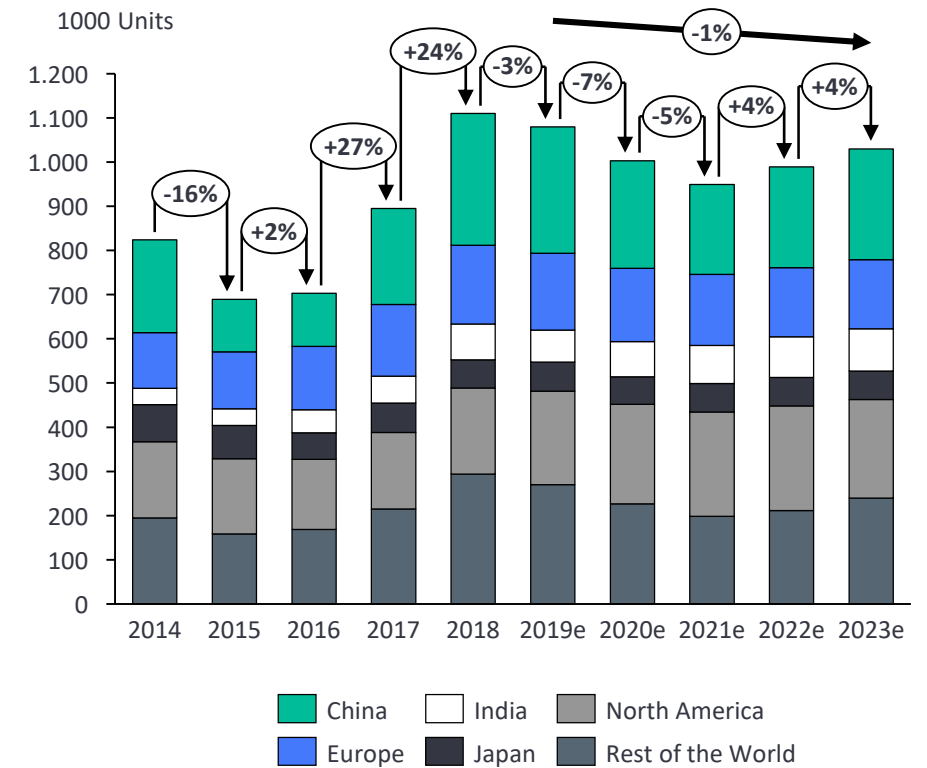
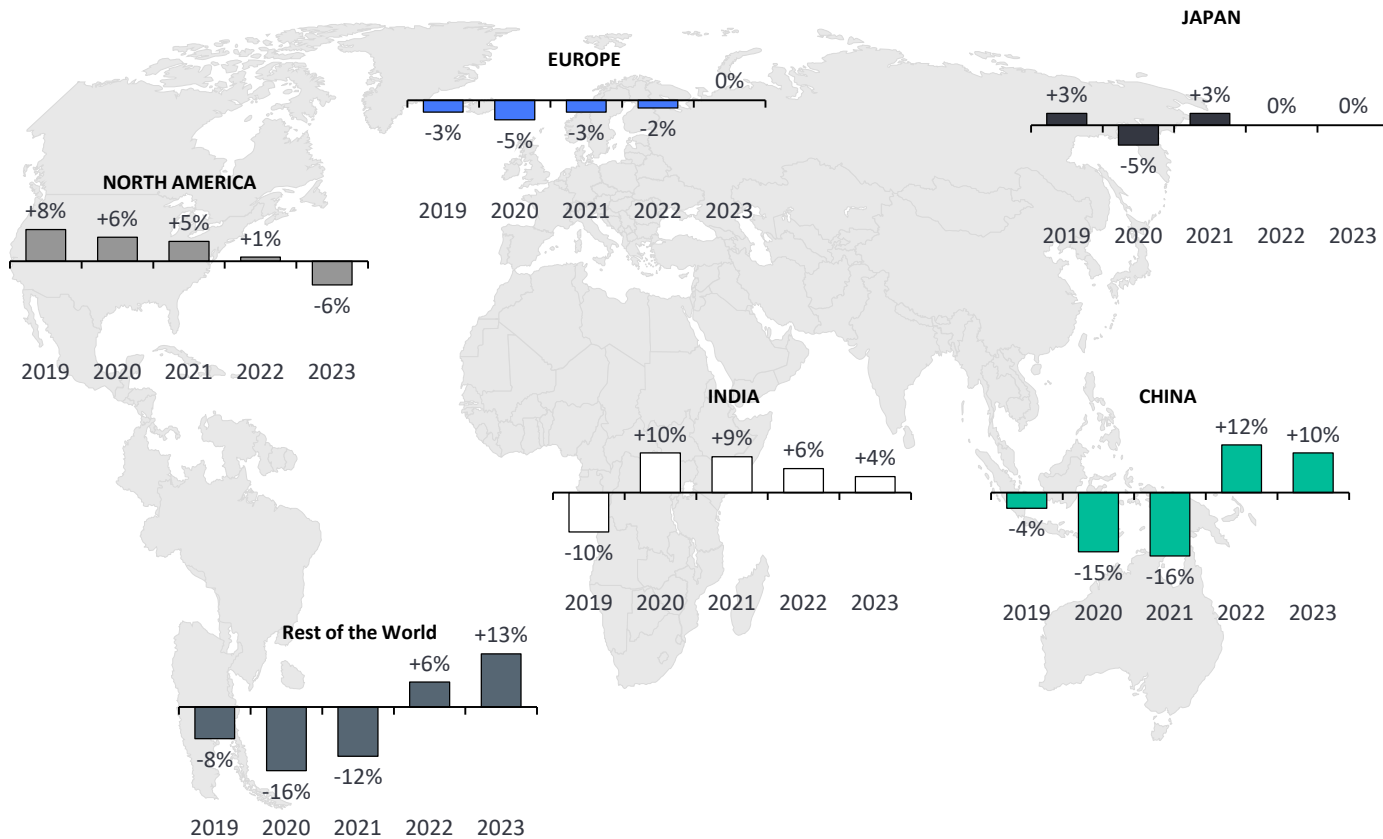
Source : The Parker Bay Company (Q3 2019) | Large mining truck (+91mt payload) fleet characteristics (Age distribution (years) and maintenance/replacement needs) (Not considering parked/idled machinery)

¹The industry is currently changing truck engines at between 24 000 and 28 000 hours (every 4 to 5 years)

²Life of a truck is a minimum of 80 000 hours, but the industry is aiming to extend that to well over 100 000 hours, as improved engine technology (live digital monitoring, oil sampling, RPM limiting) and preventative maintenance is leading to extended life

Global construction machinery demand is expected to weaken through 2021 before growing again in 2022

North American sales are believed to grow through 2022, European demand edging down, while the Chinese market is expected to once again decline strongly before improving in 2022
 Global Sales of Construction Equipment by Region (Units)

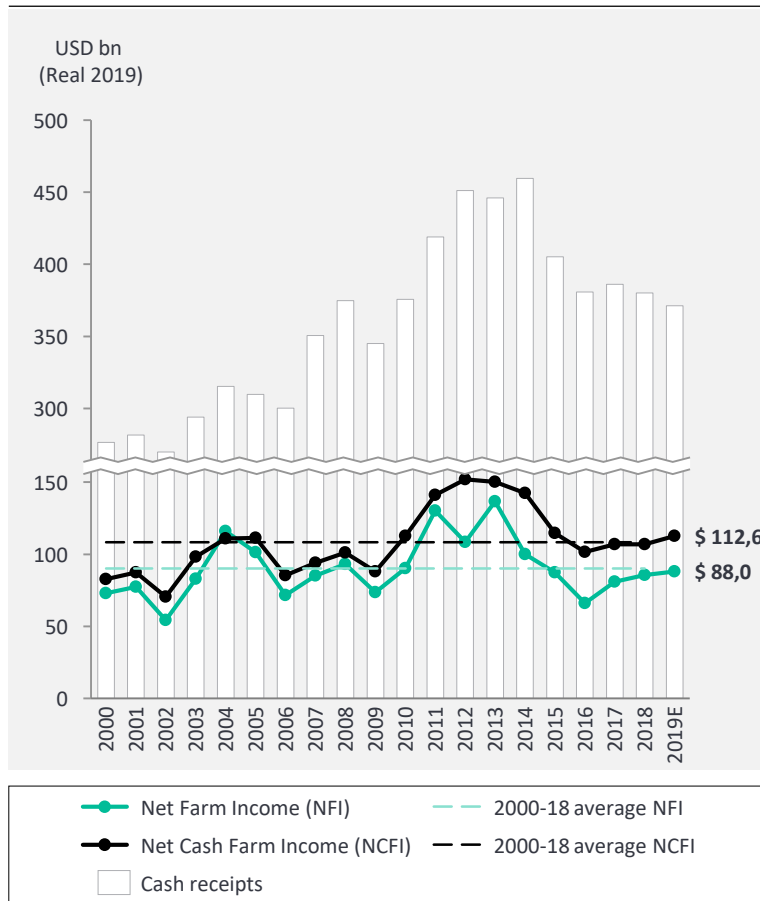


The economic outlook for farmers is expected to be mixed across key markets

- In the US, direct government payments to affected farmers aim to soften the short-term blow of the ongoing trade war

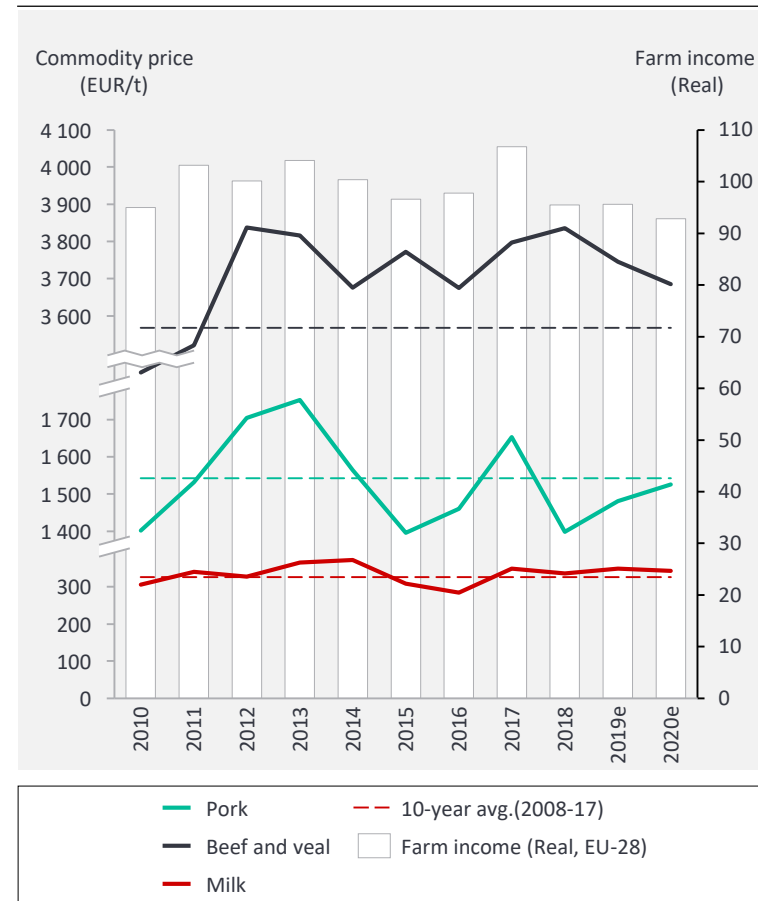
US farm profits expected to increase slightly in 2019

US Farm Income Forecast¹



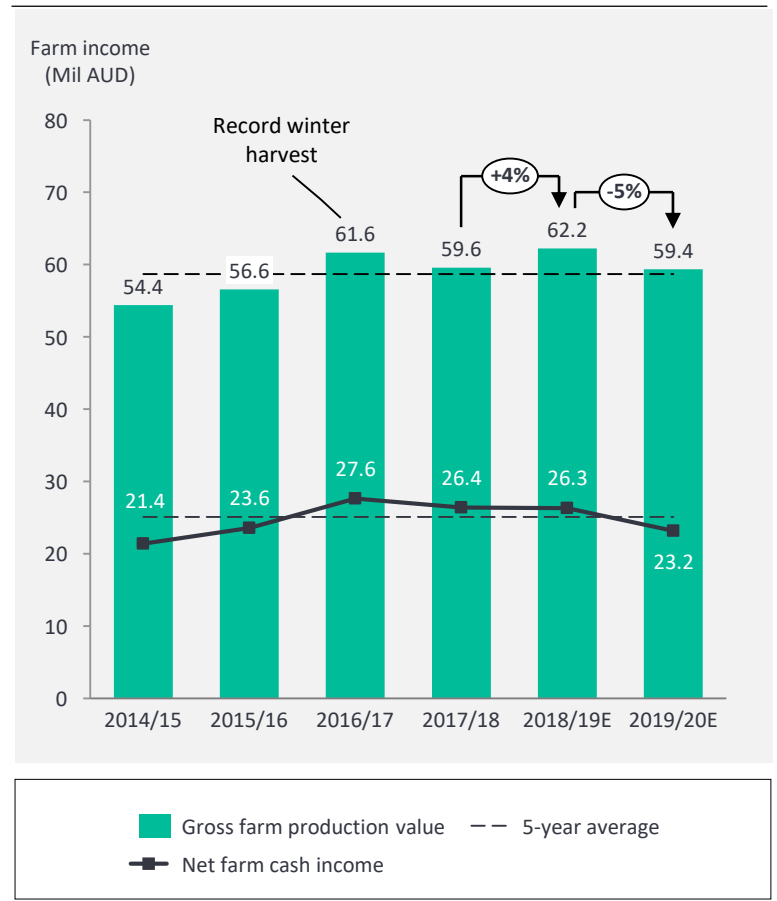
EU farmer income is expected to decline slightly over the next 18m

EU Farm income and commodities forecast²



Australian farm income is expected to drop below 5-year avg.

Australian Farm income³



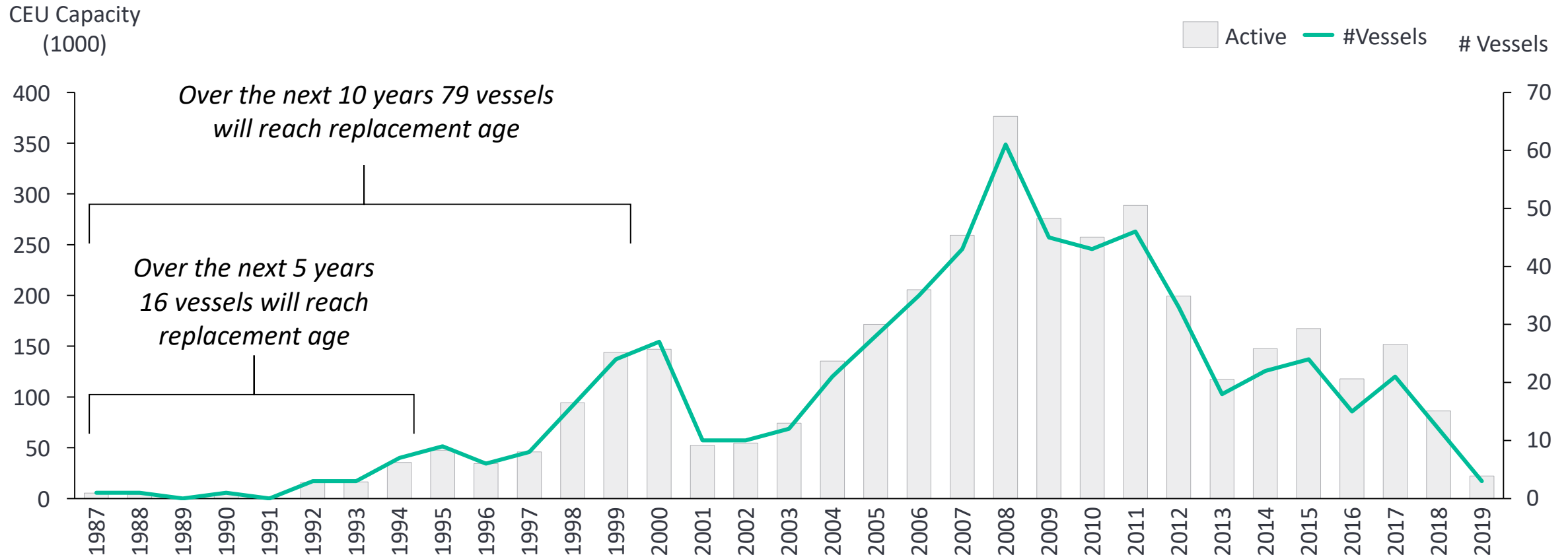
Source: ¹USDA | August 2019 US Farm Income Forecast (Real 2019 USD) vs Cash receipts ²EU Commission - Agriculture and Rural development | Forecasted EU Farm entrepreneurial income (EU-28 Factor income in real terms) and commodity prices (Pork/Beef/Milk) (EUR/t) ³ABARES (September 2019 Agricultural Commodities Report) | Australian farm income (Gross, Net cash) (Mil AUD)

Recycling might pick up over the next 5 years

- Potential for upward pressure on rates

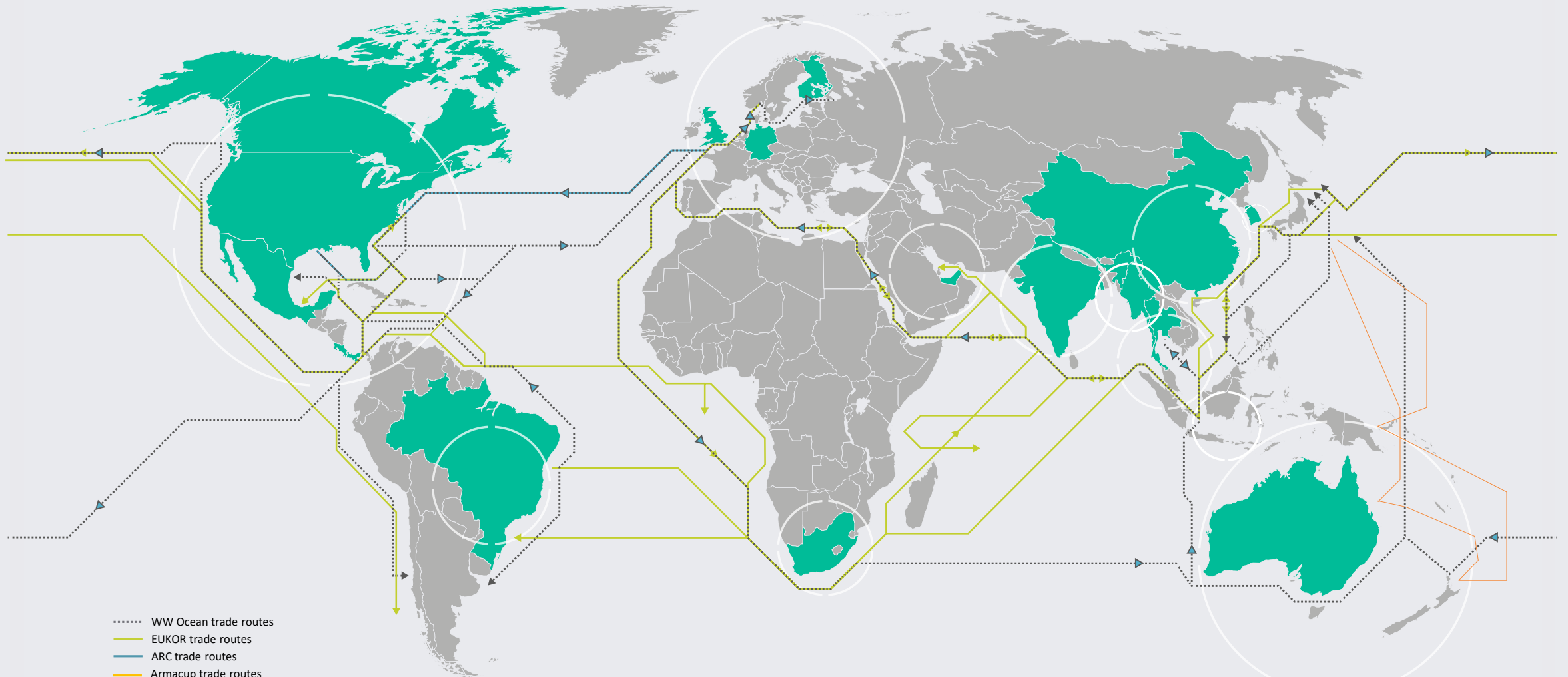
Fleet composition by year of build

CEU capacity (>4000), Active by September 2019¹

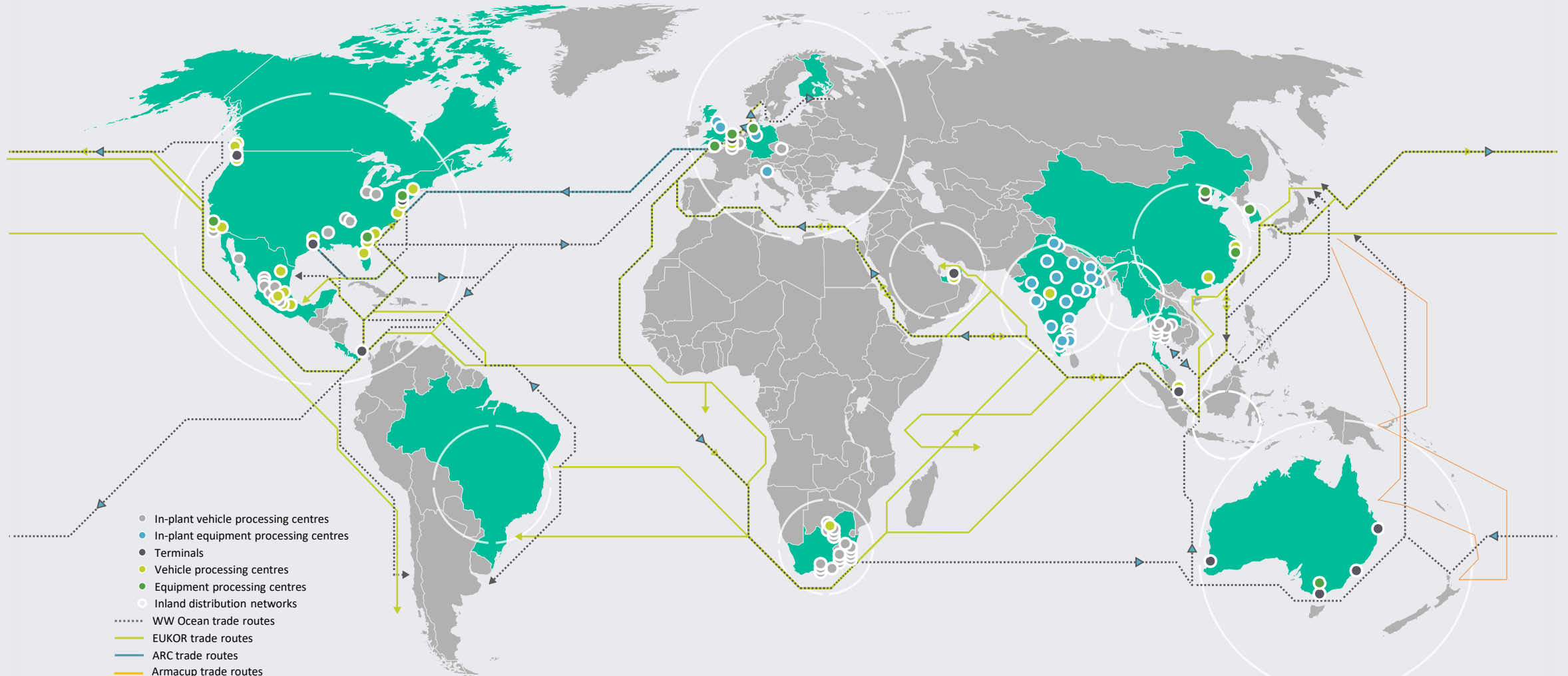


Source: Seaweb.com ¹capacity includes only Active vessels.

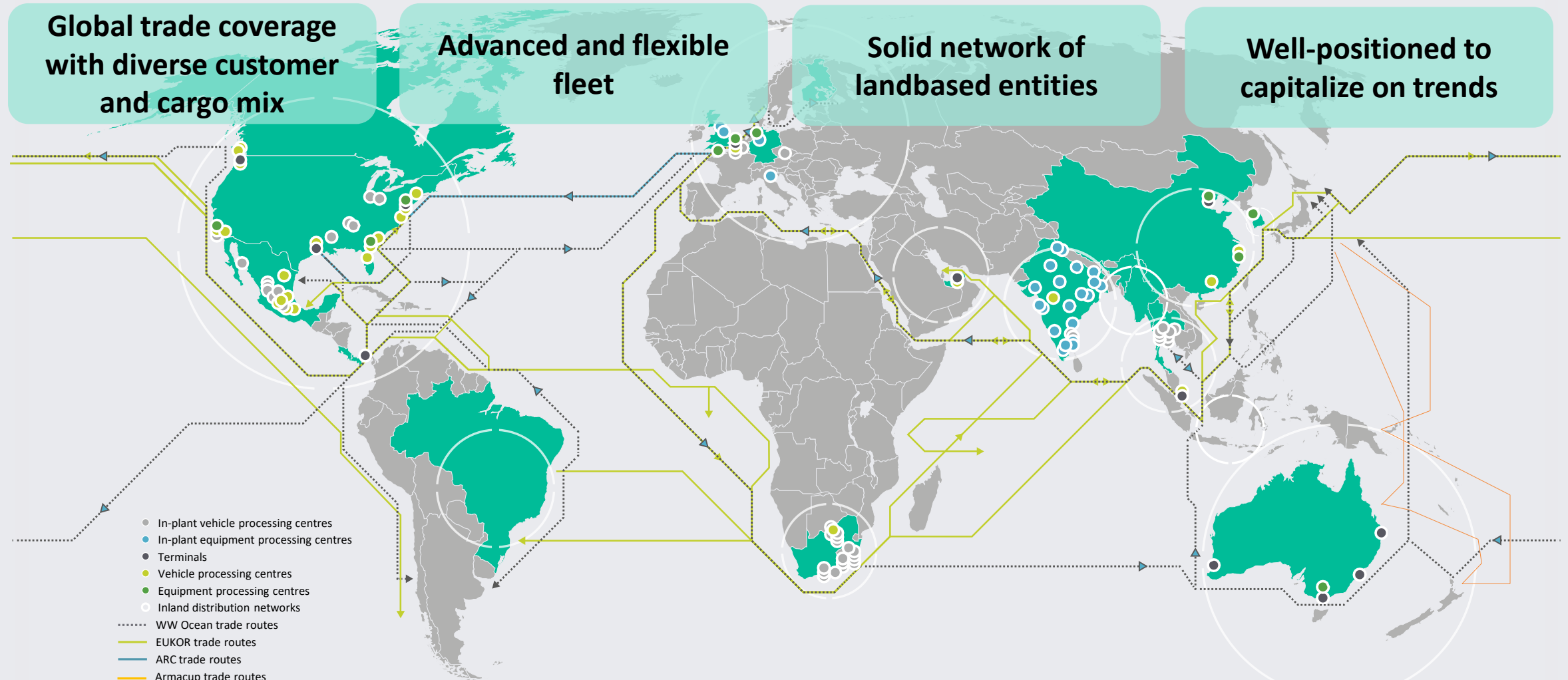
An unrivalled and agile global RoRo network to meet changing demand...



... and a global network of Landbased entities well positioned for future growth



Despite uncertainty in the short term we see solid development expected for the next 5-7 years and remain optimistic for horizon beyond



Decarbonisation in shipping

Indispensable industry,
unprecedented challenge

Roger Strevens
VP Head of Sustainability





IMO regulatory targets



- Relative CO2 reduction of at least 40% by 2030 compared to 2008
 - WW CO2 intensity 2008:2018 **-32%**
- Absolute reduction in total GHG of at least 50% by 2050 compared to 2008
 - Will require **zero emission vessels**

Wider meaning...

- CAPEX and or OPEX?
- Changes to service?
- Competitive landscape?

- All of the above

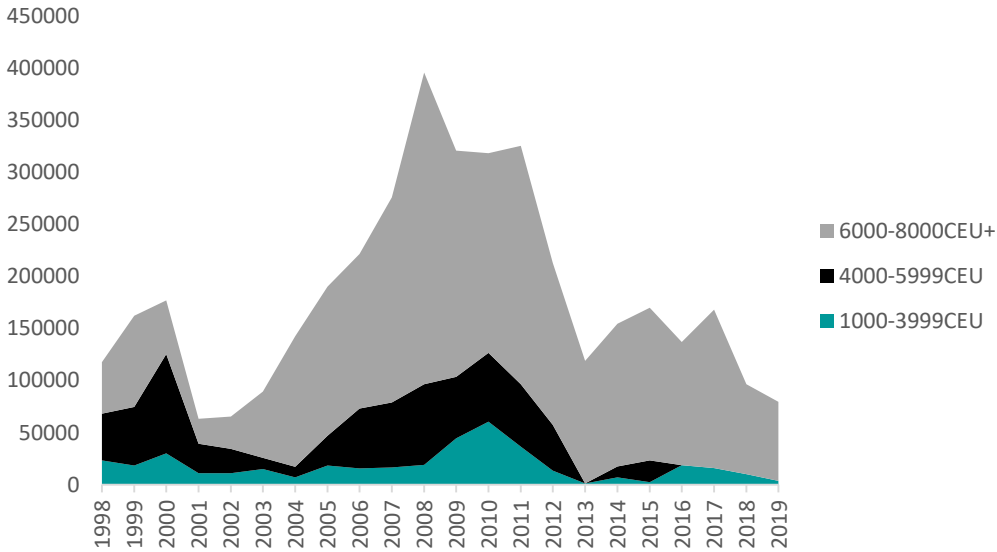
- Engagement advisable

Past to present

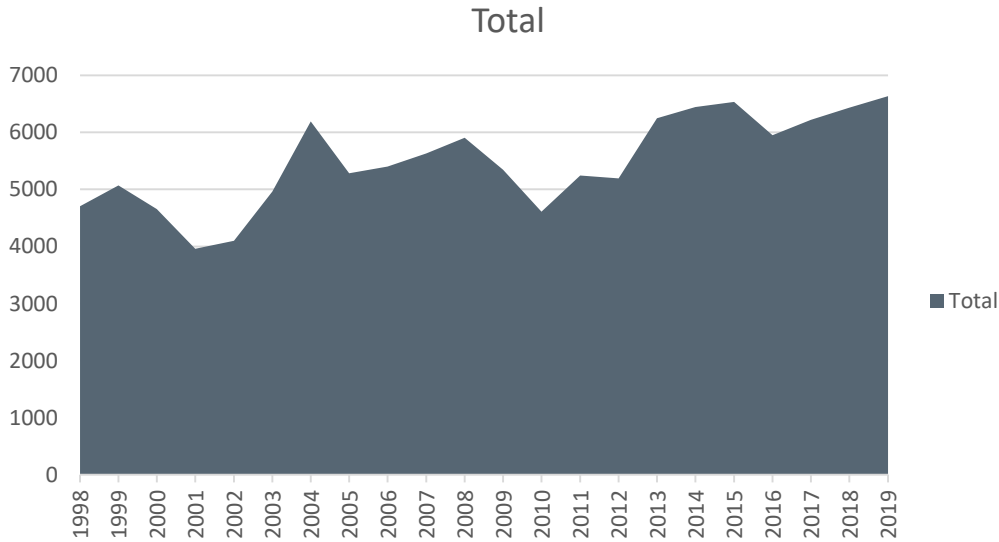


Increase in economy of scale

New vessels have been getting bigger...



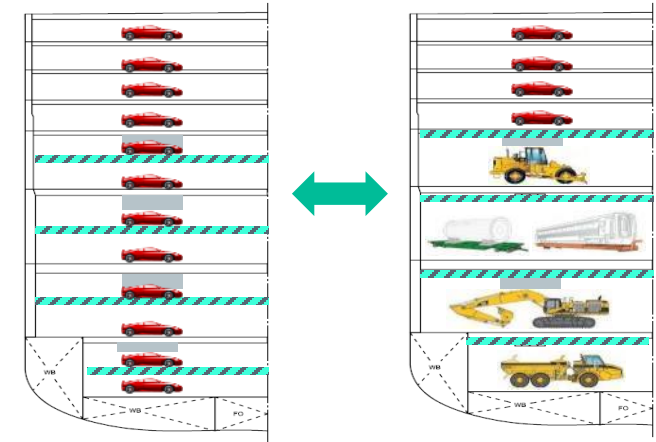
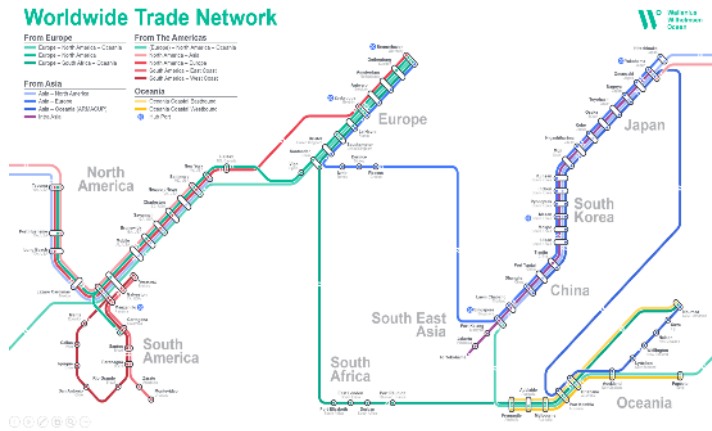
...so the fleet average has been increasing



Panama canal expansion



Other contributing factors



Toward 2030...



Digitalisation to extract efficiencies



Hull fouling management to reduce inefficiencies



No comment... for competitive reasons

Pushing progress



Our approach to achieving progress



Take the initiative to position for the future



Partner to find Lean:Green solutions



Engage in the regulatory process



Attract innovators to our industry

Progress imperatives: 3 perspectives



Incremental reduction
Business as usual

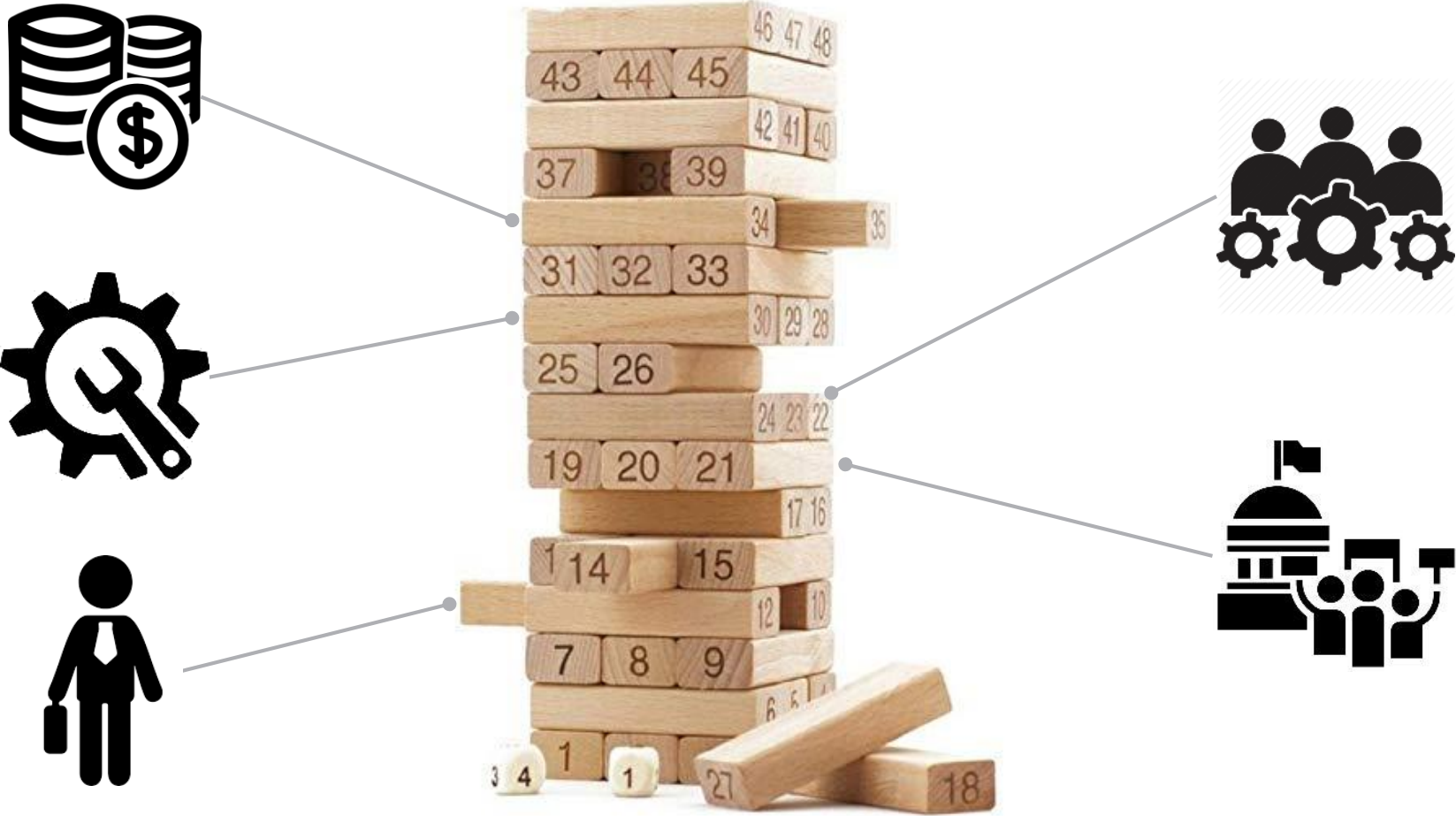


Step improvement
Carbon neutral

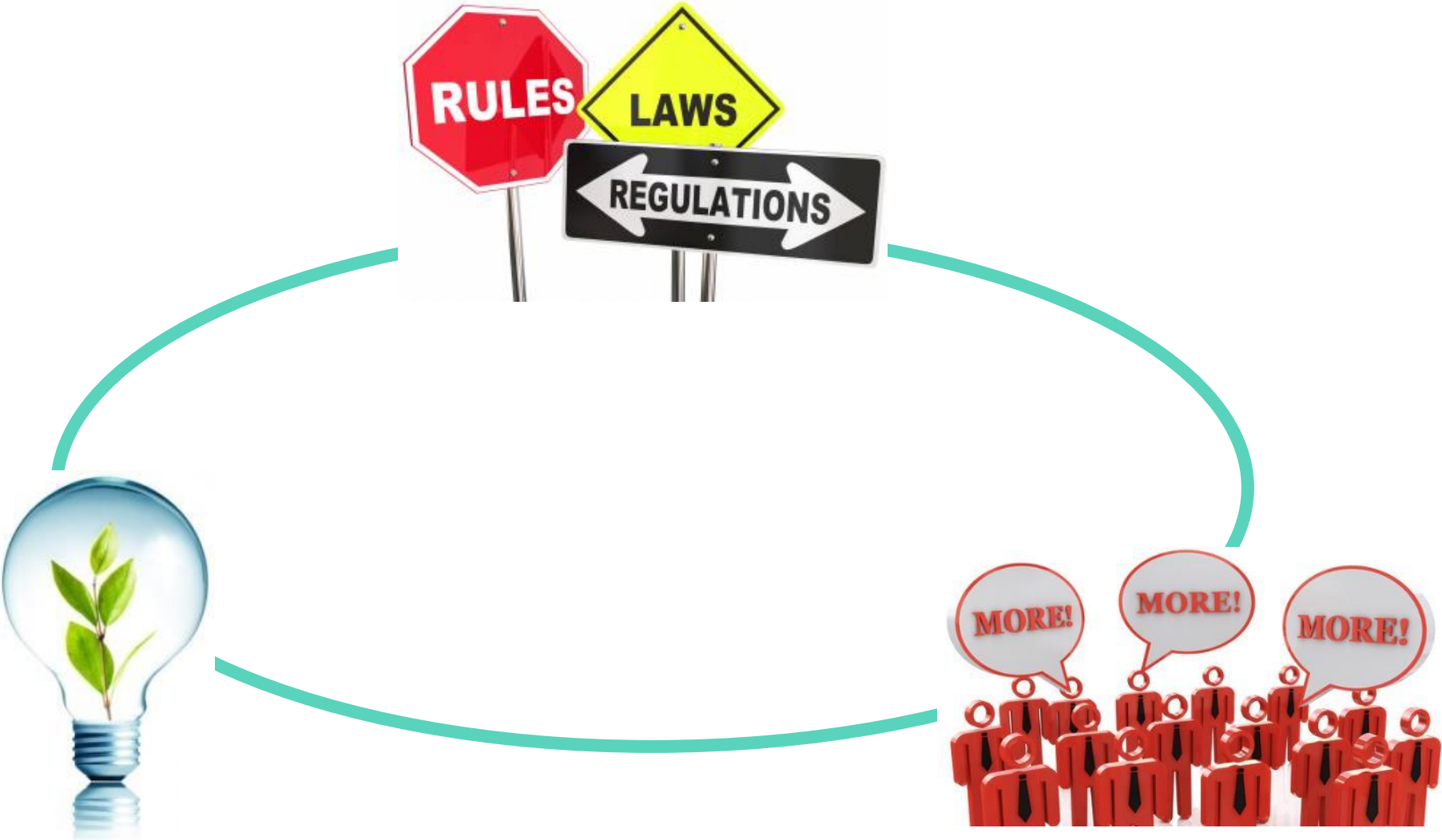


Final destination
Zero emissions

What makes an innovation stack up?



NB: Shifting frame of reference



W° 2020: Next-level transparency

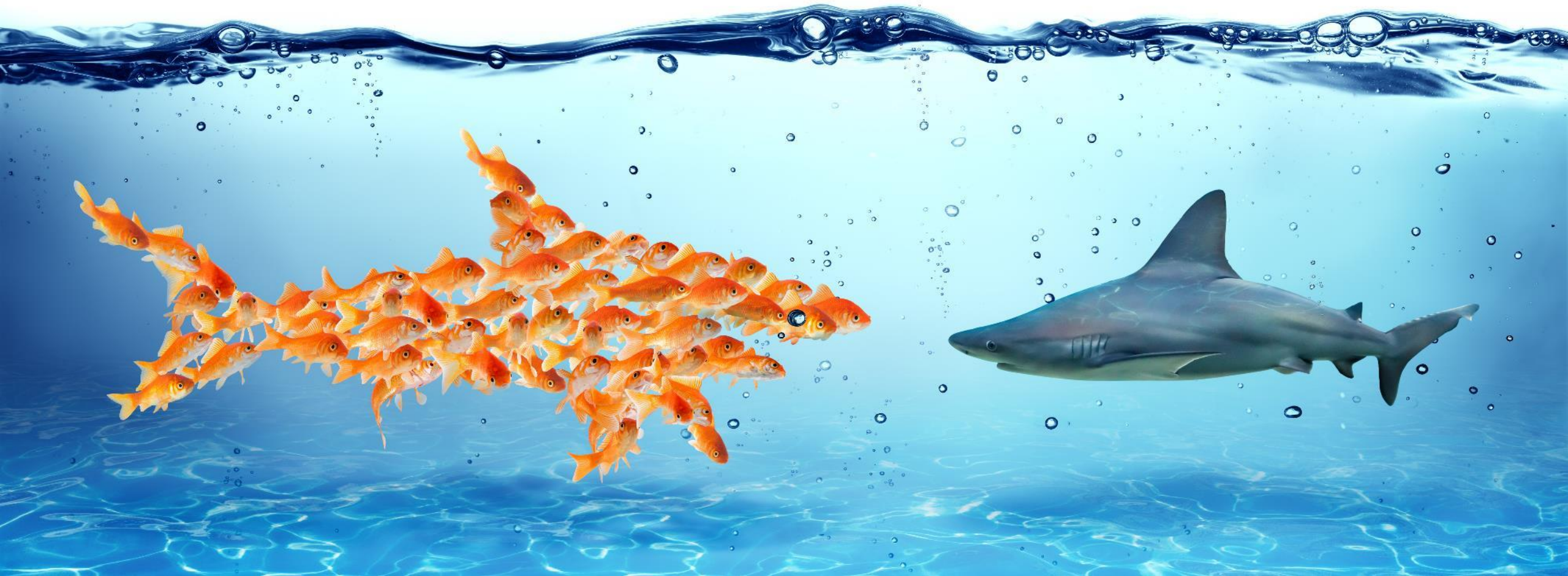
- Addressing climate risk - TCFD based on SASB
 - Physical and transition risks
 - TCFD: the 'what', SASB: the 'how'
- CDP: most widely used carbon reporting framework
- SBT: top-down target setting approach
 - Will inform new GHG target setting



Into the future



Partnership: when the total is greater than the sum of the parts



Wind assisted propulsion



- WPC: Wind Assisted Car Carrier
- Design development by Wallenius Marine
- Concept feasibility assessment underway
- Conclusions expected H1 2020



Introducing LEO: *Lignin Ethanol Oil*

- Natural polymer, byproduct of paper production
- LEO: potential 2nd generation biofuel
 - Near carbon neutral, no sulphur
 - Heavy 'drop-in' fuel for existing fleet
- Bench-top now, test engine ca. Q4 2020



Getting to zero 2030 – we're onboard



'Accelerating maritime shipping's decarbonisation with the development and deployment of commercially viable deep sea zero emission vessels by 2030'

Orcelle Award hosted by the Ocean Exchange



- Forum for accelerating sustainable innovation
- Wallenius Wilhelmsen proudly sponsor
- Helping close gap to zero emissions



- In-water hull cleaning with capture
- Significant operational savings



- Flow battery technology
- Potential 'at-berth' solution



- 2019 Orcelle Winner
- Carbon-oxide battery

Lean:Green #Leadership

Thank you for your attention



Digitalisation

Simon White
EVP and Chief Digital Officer

Mats Amland
VP Head of Transformation Office





Building the Foundation



**Re-imagining the supply chain
together with our customers**

**Current Digital Focus
Areas**

Digital Acceleration & pilots

**Digitalising Operations
Energy efficiency &
Sustainability**



Digital pilots



Current activities – Digital Pilots

- Corporate Partnership

PLUGANDPLAY

- Digitisation of cargo survey
- Digital Pilots initiated in the areas of
 - Cargo Risk and Biosecurity
 - Mixed reality training
 - Video AI – Safety and efficiency
 - Worker safety technology
 - Cargo measurement and yard management

- Partnerships

Ogilvy

NEWLAB

RAALABS



Re-imagining the supply chain together with our customers

- Immediate opportunity to reduce emissions and lower costs by *removing waste* in the supply chain
- From *track and trace* to the *intelligent supply chain*
- Potential for the *connected vehicle* in the supply chain
- Digitalised solutions supporting *fleet and mobility* models


Digitalising Operations Energy efficiency & Sustainability








Data connectivity and data platform will form the basis for the digital transformation



 **Application development
AI/ML**

 **Data analysis / science**

 **Data platform**

 **Data connectivity**



Digitalisation

The process of considering how best to apply digitised information to simplify specific operations.



Digitisation

The process of making information available and accessible in a digital format.



Digital Transformation

The process of devising new business models that integrate all the digitised data and digitalised applications.



Vessel digitalisation has great potential to improve efficiency across vessel, voyage and cargo



Vessel



Energy efficiency and bunker optimisation:

- Energy Management
- Fuel consumption monitoring
- Weather monitoring and routing
- Speed management
- Trim & ballast
- Hull & propeller performance
- Main engine performance
- Aux engine performance



Voyage



Voyage follow up and optimisation:

- Tonnage planning
- Bunker management
- Voyage management (Trade)
- Predictive maintenance
- Maintenance management
- Performance management



Cargo



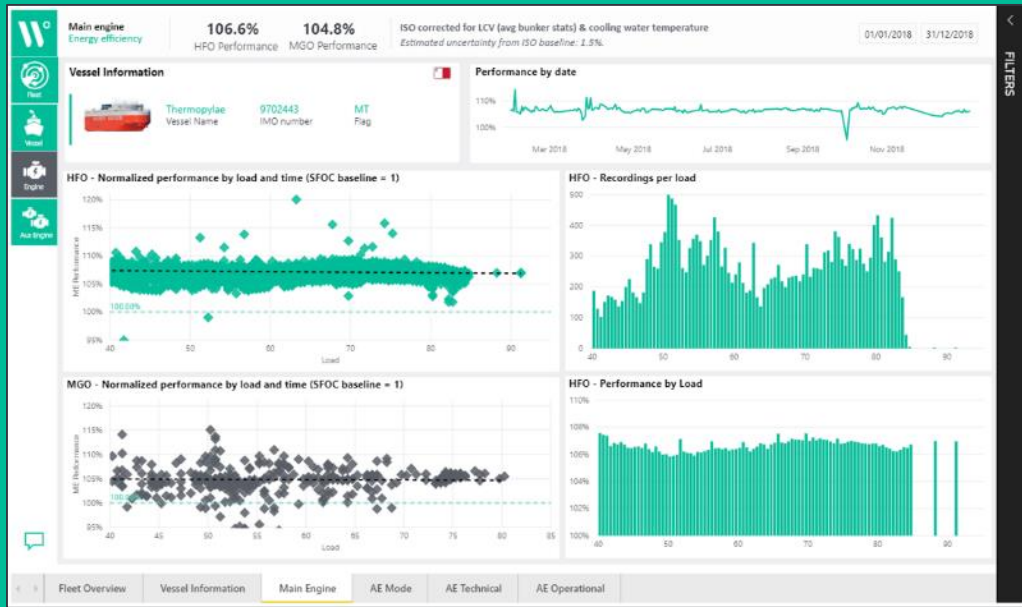
- Stowage and cargo optimisation
- EDI, Customs++
- Customer data support



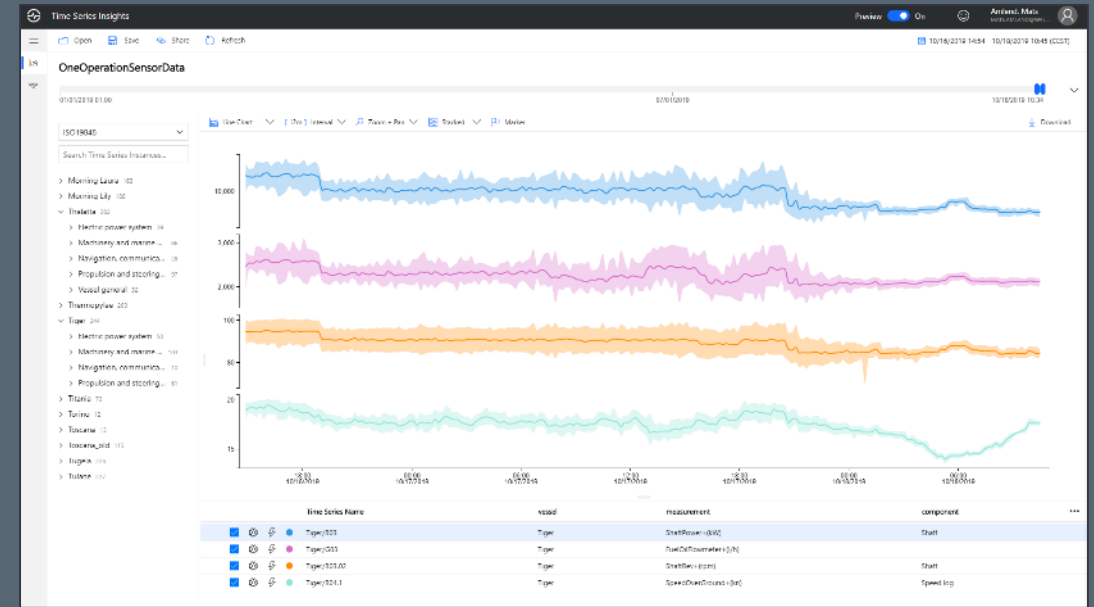
High frequency data opens up opportunities through analysis and real time monitoring



Energy efficiency



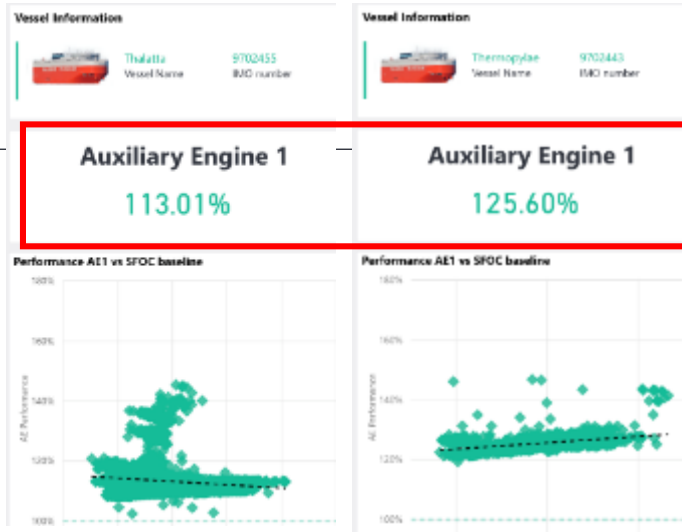
Time series data



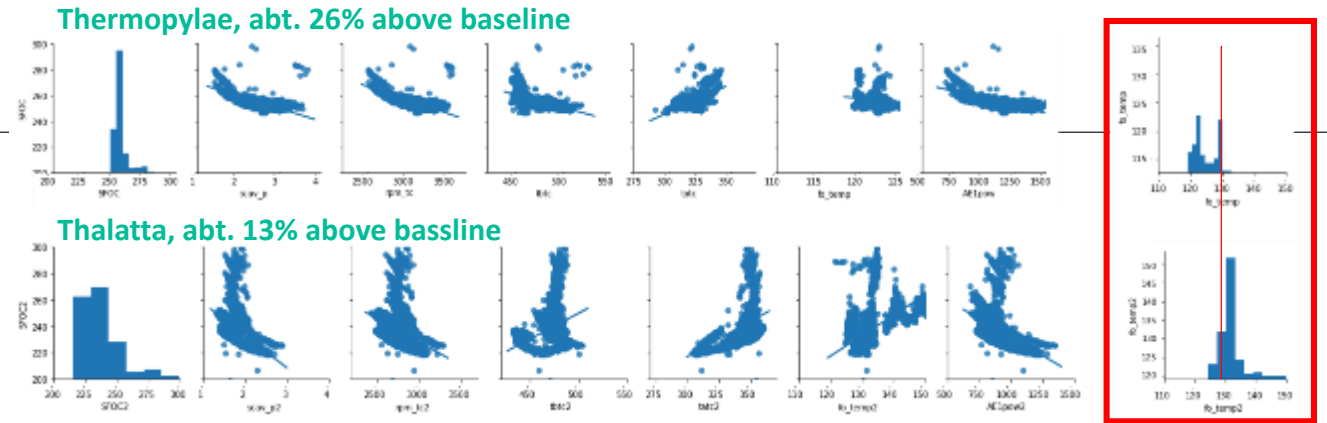


A real-world example: finding inefficiencies based on granular data - and taking corrective action

1



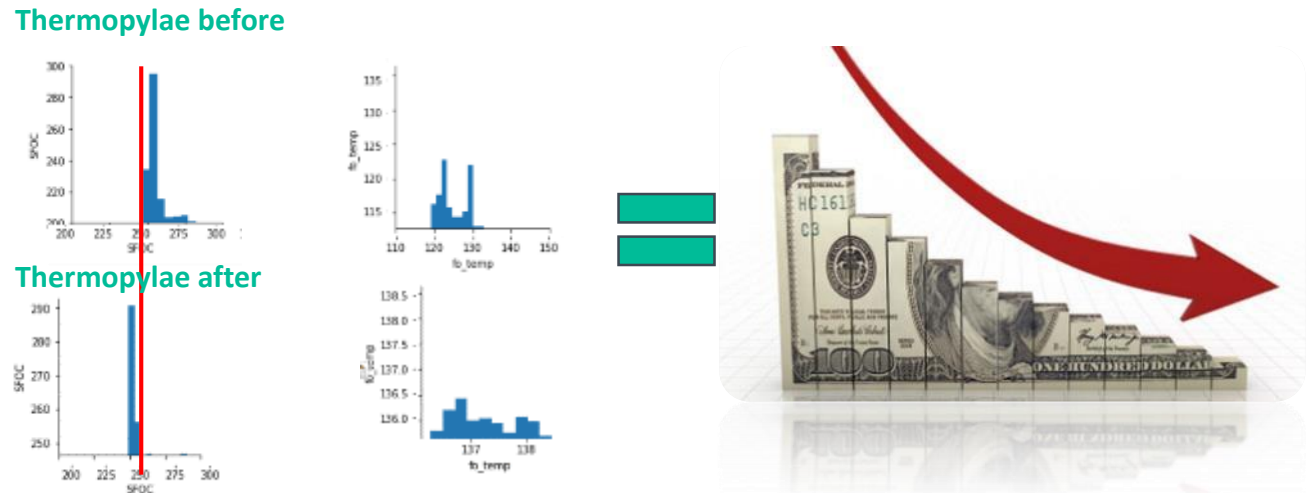
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3

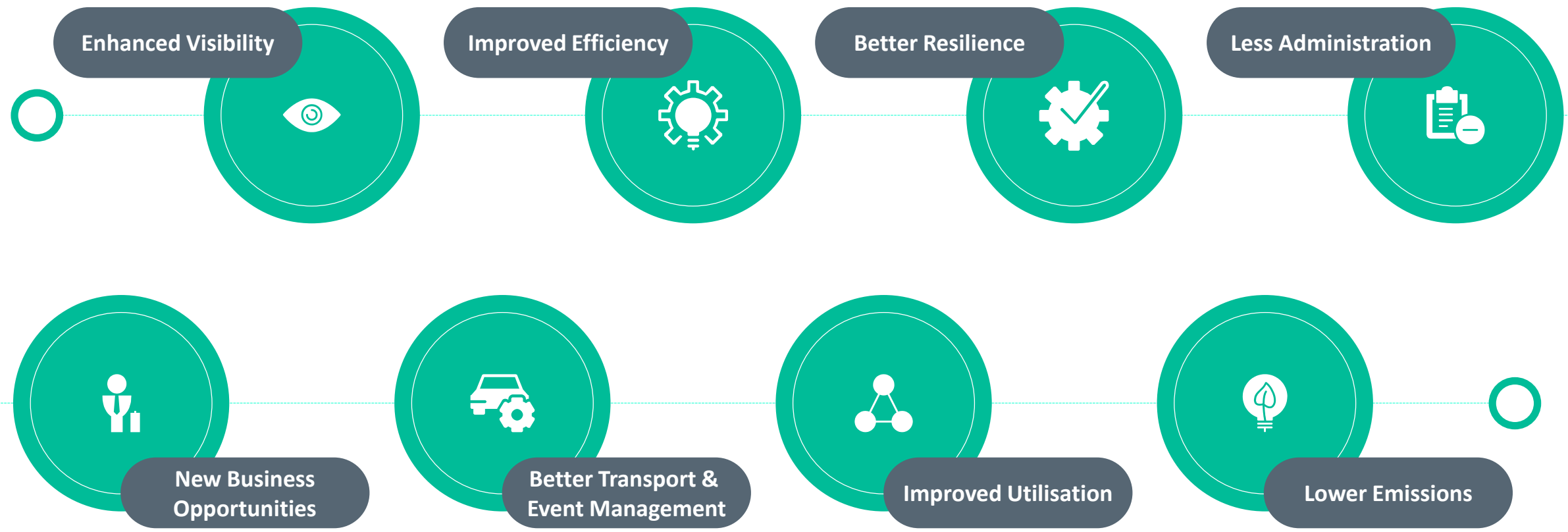


4





Digitalisation benefits across the supply chain



Q&A

Sustainable logistics for a world in motion

