

Digitalization and opportunities for Wallenius Wilhelmsen

Michael Hynekamp
EVP and COO WW Ocean

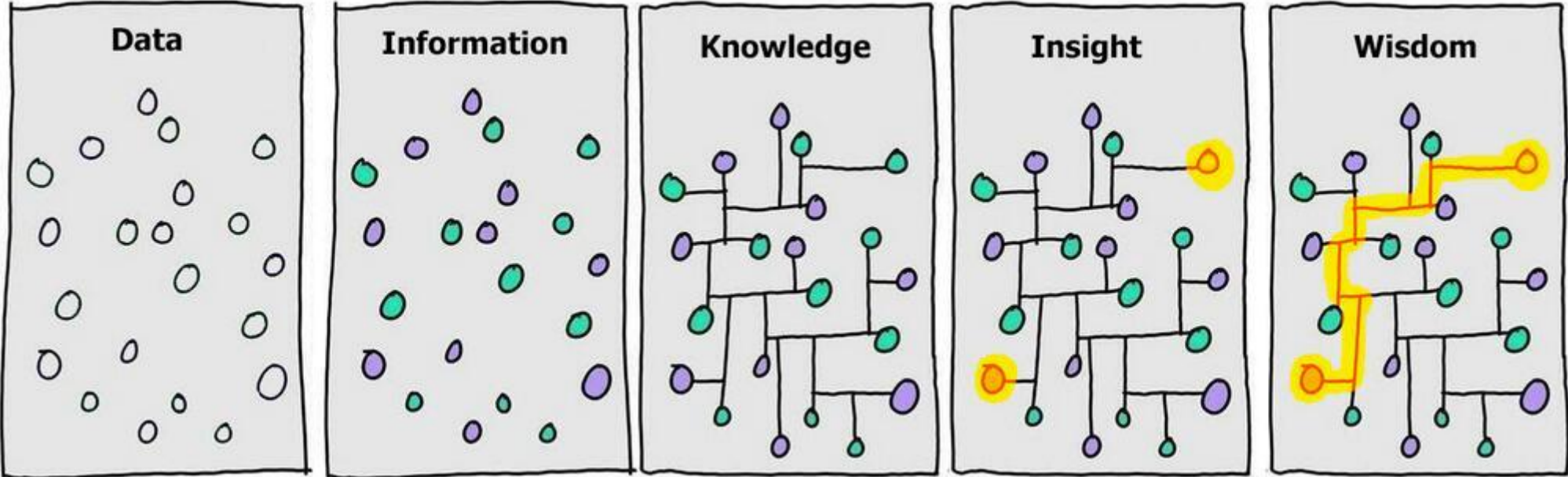
Ari Marjamaa
General Manager

Diana Bruel
CEO Syngin Technology

7 November 2018

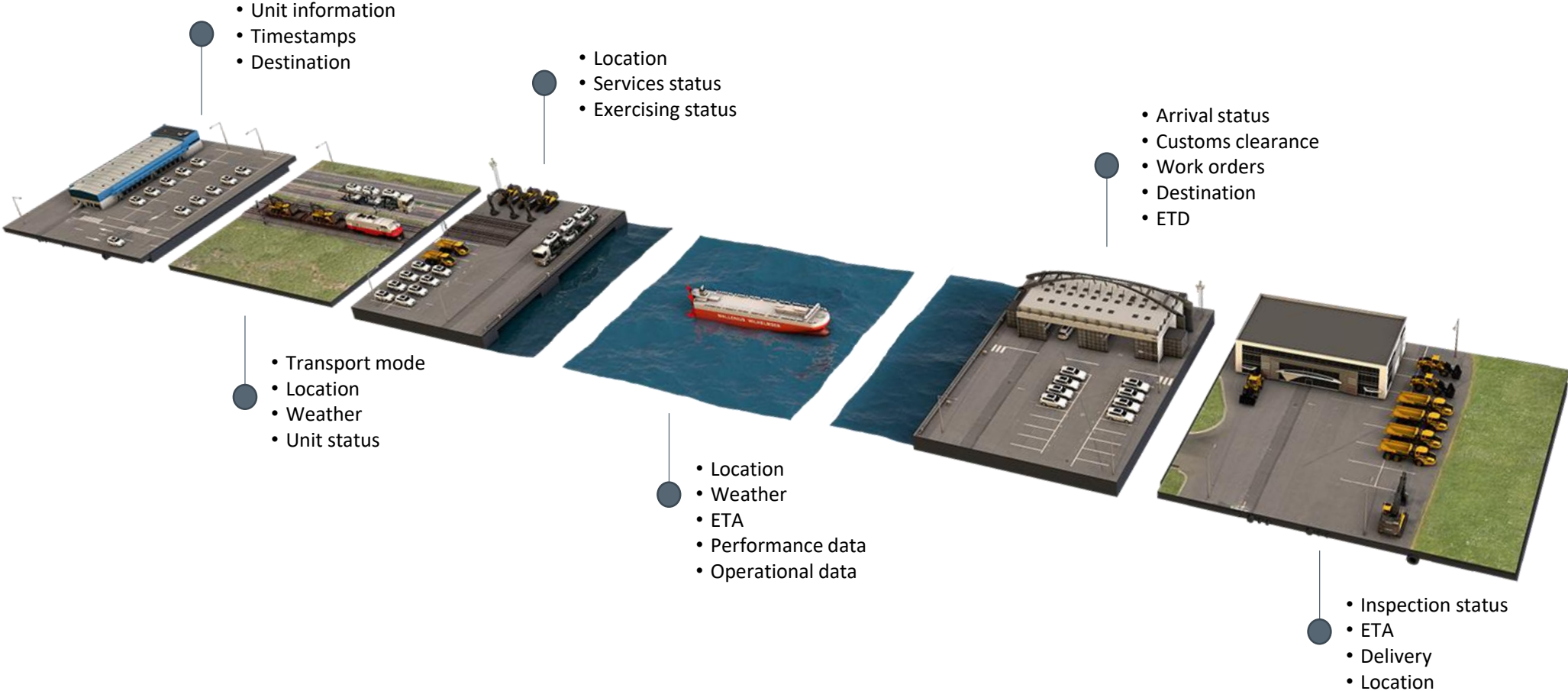


Digitalisation is about moving from data to wisdom










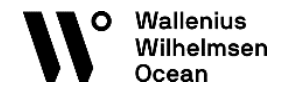
The supply chain is data rich, but still information poor, large upside potential, but depends on the digitalization of the supply chain

Large number of potential data sources throughout the supply chain, but too little of it is used today




Digitalization happens at multiple layers in the organisation

Area of impact	Generic examples of impact	Examples of current efforts	
	Digital Product / Service	<ul style="list-style-type: none"> ○ Applications, software solutions ○ Services delivered through APIs, eg weather routing ○ Services delivered, eg Uber Freight 	
	Digital Business Models	<ul style="list-style-type: none"> ○ X as a service ○ Transaction/consumption based vs fixed fee 	
	Digital Customer Relationship	<ul style="list-style-type: none"> ○ Digital distribution models, eg Amazon ○ Customer interaction portals ○ Customer analytics, eg targeted marketing 	
	Digital Processes	<ul style="list-style-type: none"> ○ Automation through systems ○ Robotics process automation ○ Additive manufacturing 	
	Data analytics	<ul style="list-style-type: none"> ○ Data insight, data driven decisions ○ Machine learning / AI 	
	Data platforms	<ul style="list-style-type: none"> ○ Cloud based storage and computation ○ Scalability 	
	Data capture & generation	<ul style="list-style-type: none"> ○ IOT & sensors ○ Communication 	



Today, the follow-up of our \$80m “factories” are limited to daily emails...

OUR FACTORIES: \$80M VESSELS WITH \$5M ANNUAL FUEL SPEND...

Vessel value	\$80m	Operating range	Global
			
Cargo value	\$300m	Fuel cost per year	\$5m

...ARE BEING FOLLOWED-UP THROUGH **DAILY EMAILS**

Sea Passage (Noon)

Email Reports ← Previous DOL

Particulars			
	New Data	Last Data	Validation Message
Vessel	Thalatta	Thalatta	
Date & Time (UTC)	2018-09-03 19:00	2018-09-02 19:00	yyyy-MM-dd HH:mm
Date & Time (LT)	2018-09-03 12:00	2018-09-02 12:00	
Charterer	WWL	WWL	
Voyage No	UD830	UD830	XXXXY or XXXYYY or X.YY
Departure Port	[USTIW] Tacoma		
Arrival Port	[JPHIC] Hitachinaka		
Name of Persons Approving Data	First Name	Last Name	
Master	Raymond	Lobo	
Chief Engineer	Porus	Variava	
Time since Last Report:	24.00	hours	
Local Time Difference	- 07.00	hours	

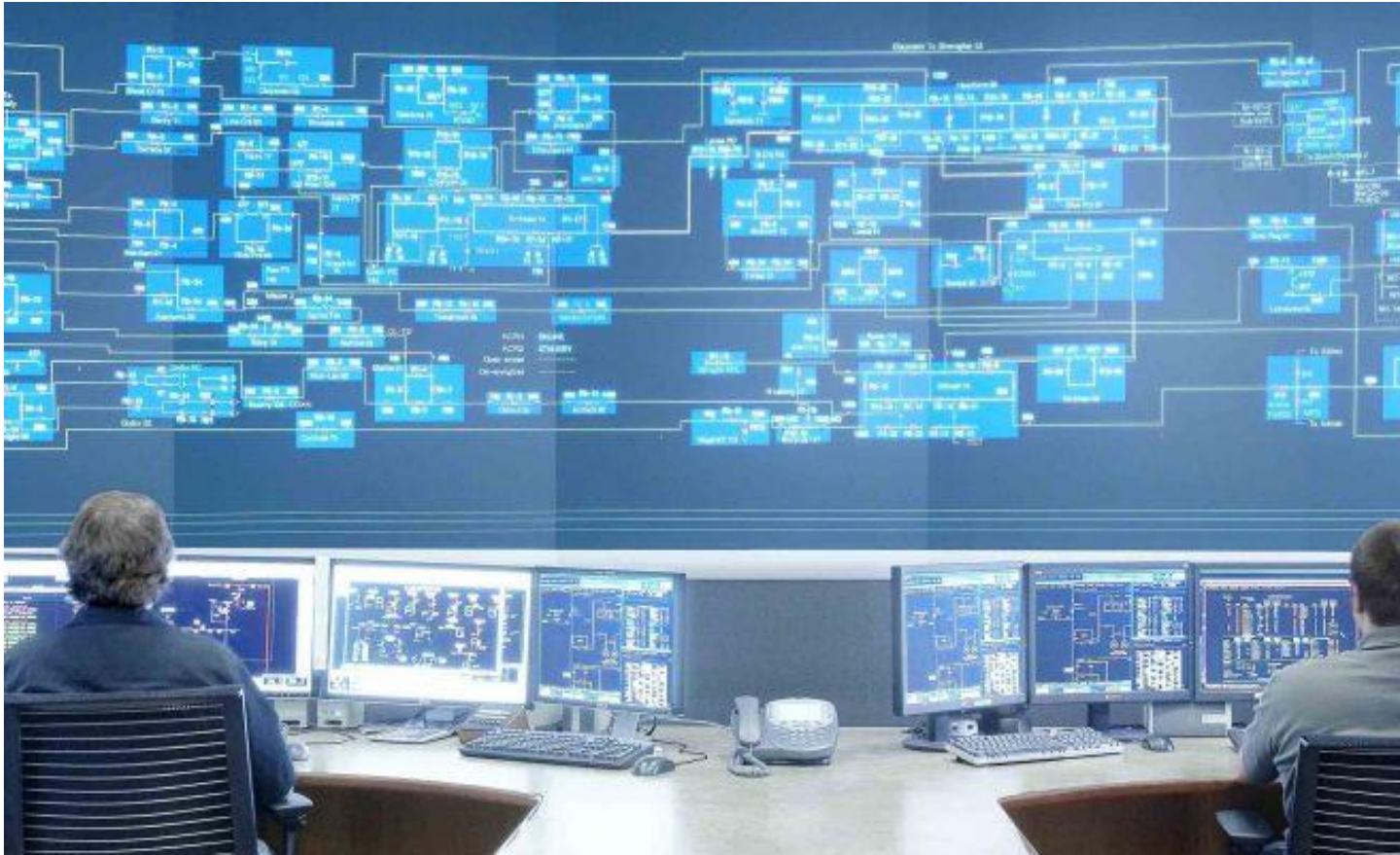
Measurement of energy efficiency and other KPIs are limited to daily emails

- Crew reading instrument values and inserting values manually

Emails are processed through various systems, making data inaccessible

- Follow-up is tedious and hard to carry out in a consistent manner

...while on land, factories are monitored through thousands of sensors made available real-time in one single place



Real-time access to thousands of sensors



Transparent information for all parties



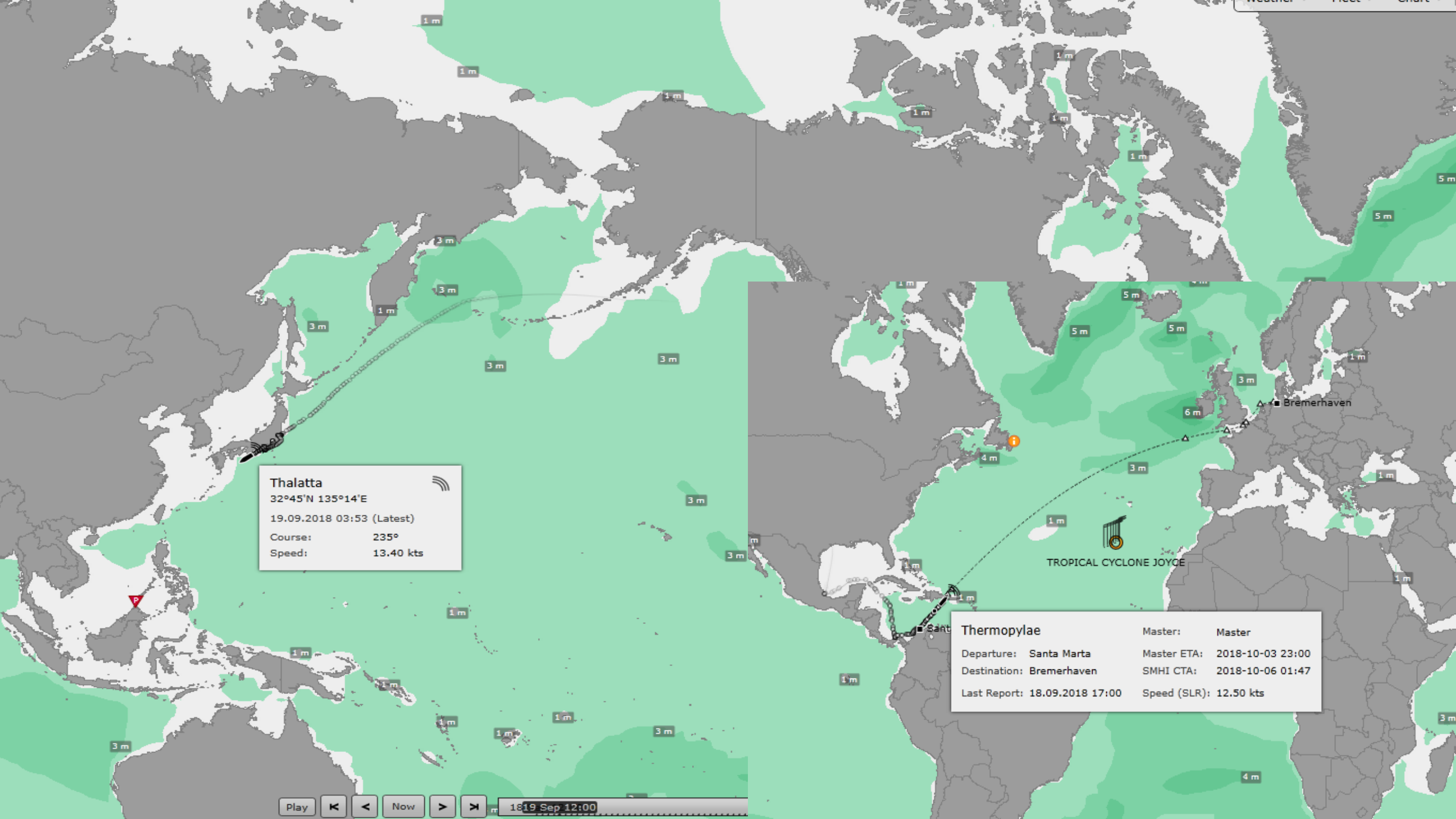
Focus on exceptions



Improved analysis and decision making

Thalatta
 32°45'N 135°14'E
 19.09.2018 03:53 (Latest)
 Course: 235°
 Speed: 13.40 kts

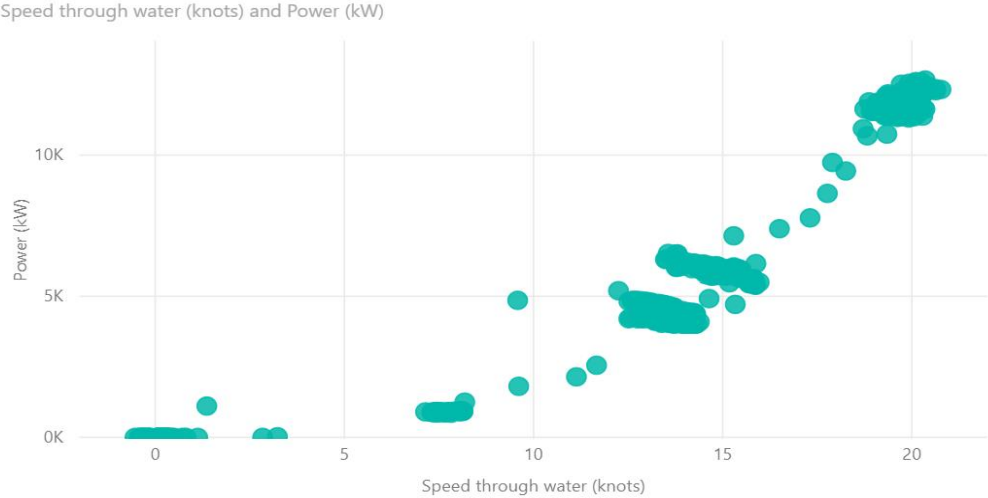
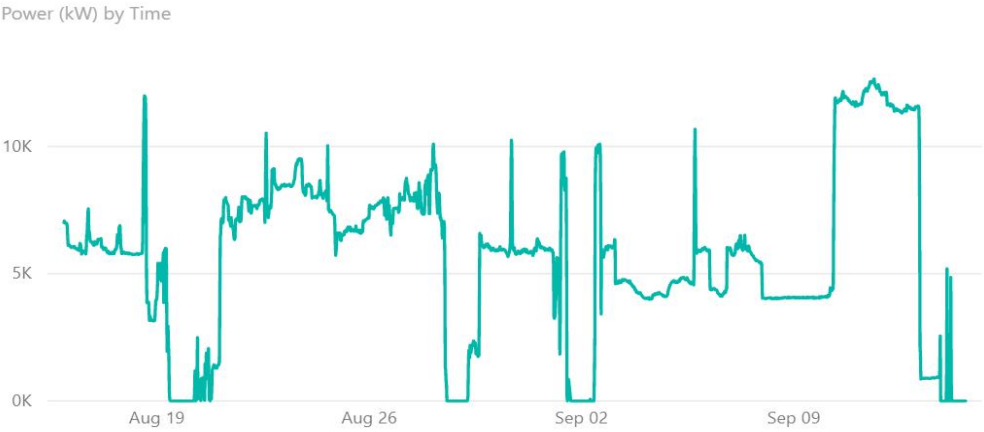
Thermopylae
 Master: Master
 Departure: Santa Marta Master ETA: 2018-10-03 23:00
 Destination: Bremerhaven SMHI CTA: 2018-10-06 01:47
 Last Report: 18.09.2018 17:00 Speed (SLR): 12.50 kts



Real time data is now streaming from the vessels, allowing for a much better understanding of actual performance



Improved data analytics allows for better optimisation of assets and operations










Digital support centre as a physical location, but also available where required

- Current data capture is first step towards realizing Digital Control Room



- The data is now live and accessible through one common data platform
- This enables us to generate analytics, to gain more insight in our operation and exploit opportunities to improve
- We will mainly focus on areas with cost saving potential, such as energy efficiency, but these are all building blocks in our desired end state – the digital control room

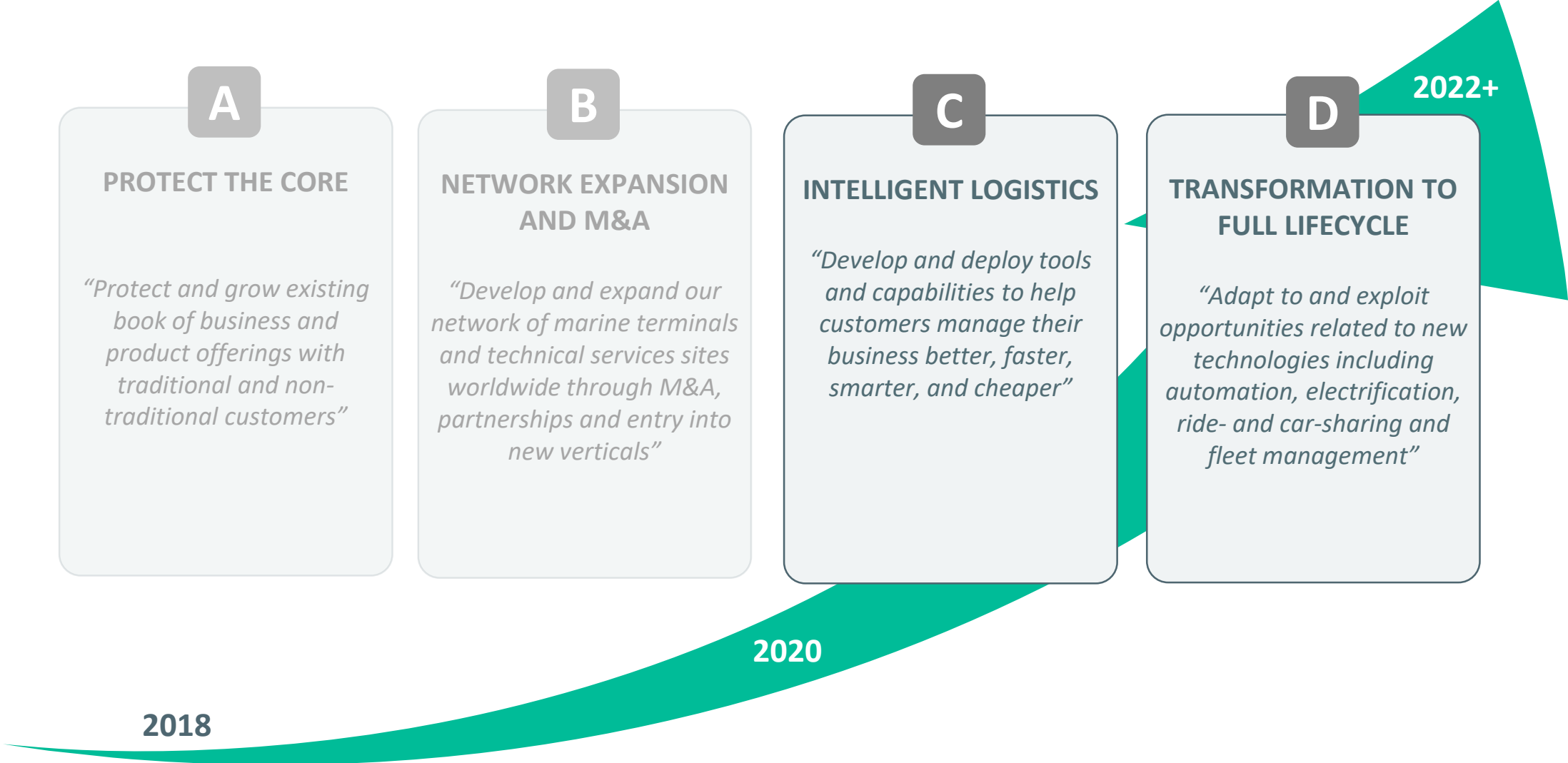
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 <div data-bbox="341 482 1110 549">Digital Business Models</div>	<ul style="list-style-type: none"> ○ X as a service ○ Transaction/consumption based vs fixed fee
 <div data-bbox="341 639 1110 692">Digital Customer Relationship</div>	<ul style="list-style-type: none"> ○ Digital distribution models, eg Amazon ○ Customer interaction portals ○ Customer analytics, eg targeted marketing
 <div data-bbox="341 782 1110 835">Digital Processes</div>	<ul style="list-style-type: none"> ○ Automation through systems ○ Robotics process automation ○ Additive manufacturing
 <div data-bbox="341 925 1110 978">Data analytics</div>	<ul style="list-style-type: none"> ○ Data insight, data driven decisions ○ Machine learning / AI
 <div data-bbox="341 1068 1110 1120">Data platforms</div>	<ul style="list-style-type: none"> ○ Cloud based storage and computation ○ Scalability
 <div data-bbox="341 1210 1110 1263">Data capture & generation</div>	<ul style="list-style-type: none"> ○ IOT & sensors ○ Communication

Examples of current efforts



WW Solutions ambition is to significantly grow earnings by transforming to full life cycle logistics, partly enabled by digitalization



Syngin Technology marks our first entry into Full Life Cycle Logistics

"The future of logistics lies in combining digital services, physical assets and a deep understanding of logistics flows. With Syngin we boost our digital capabilities, setting us up to better support the changes we see in our customers' needs for the future"

Craig Jasienski, President and CEO Wallenius Wilhelmsen group



"I am thrilled about the acquisition of Syngin. In late 2017 we announced an ambitious strategy to offer "Full Life Cycle Logistics" services and now six months in we have made our first acquisition in this space. The joint capabilities of WW Solutions and Syngin represent a unique opportunity for growth both before and after the vehicle's first point of sale"

Ray Fitzgerald, EVP and COO of Wallenius Wilhelmsen Solutions

Syngin Technology in brief

Syngin Technology is a leading provider of automated logistics solutions that leverages digital marketplaces to connect fleet owners and vehicle remarketers with transportation providers, repair centers and auction houses

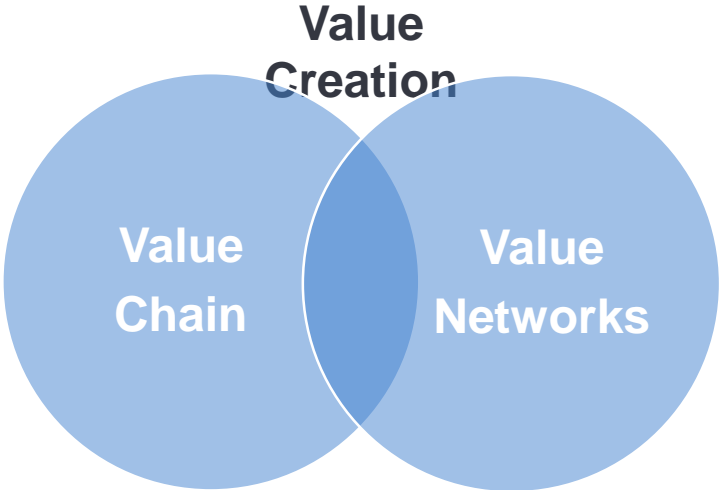
Syngin Technology provides complete inventory management, transportation, and remarketing solutions to ensure a timely and cost-effective movement from the time a vehicle is located until it's sold

What we do: Innovate by resolving Client Needs, and empowering vendor networks

	<h3>WORKFLOW SOLUTIONS</h3> <p>Digital workflow solutions that integrate supply side and demand side processes and services</p>	
<h3>BUSINESS INNOVATION</h3> <p>Empower Value Creation by connecting data, companies, solutions and ideas across multiple industry ecosystems</p>	 <p>CREATIVE SOLUTION SUCCESS STRATEGY IDEA</p>	<h3>B2B MARKETPLACE</h3> <p>Connect extended ecosystems with B2B solutions for Value Creation</p>

Syngin's Unique Selling Proposition is creating value and competitive advantage through Operator enabled Solutions

We enable operators through marketplaces, which we integrate into our clients' workflow and opens doors into the workflow of entirely new ecosystems



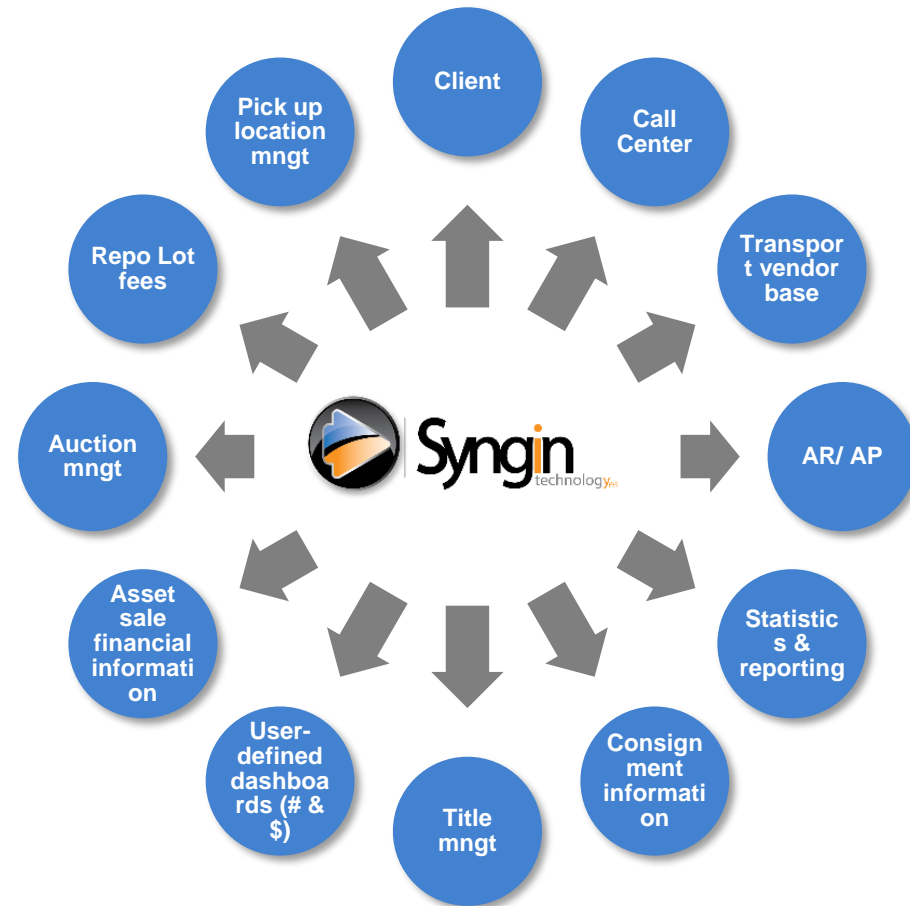
Core Business Process



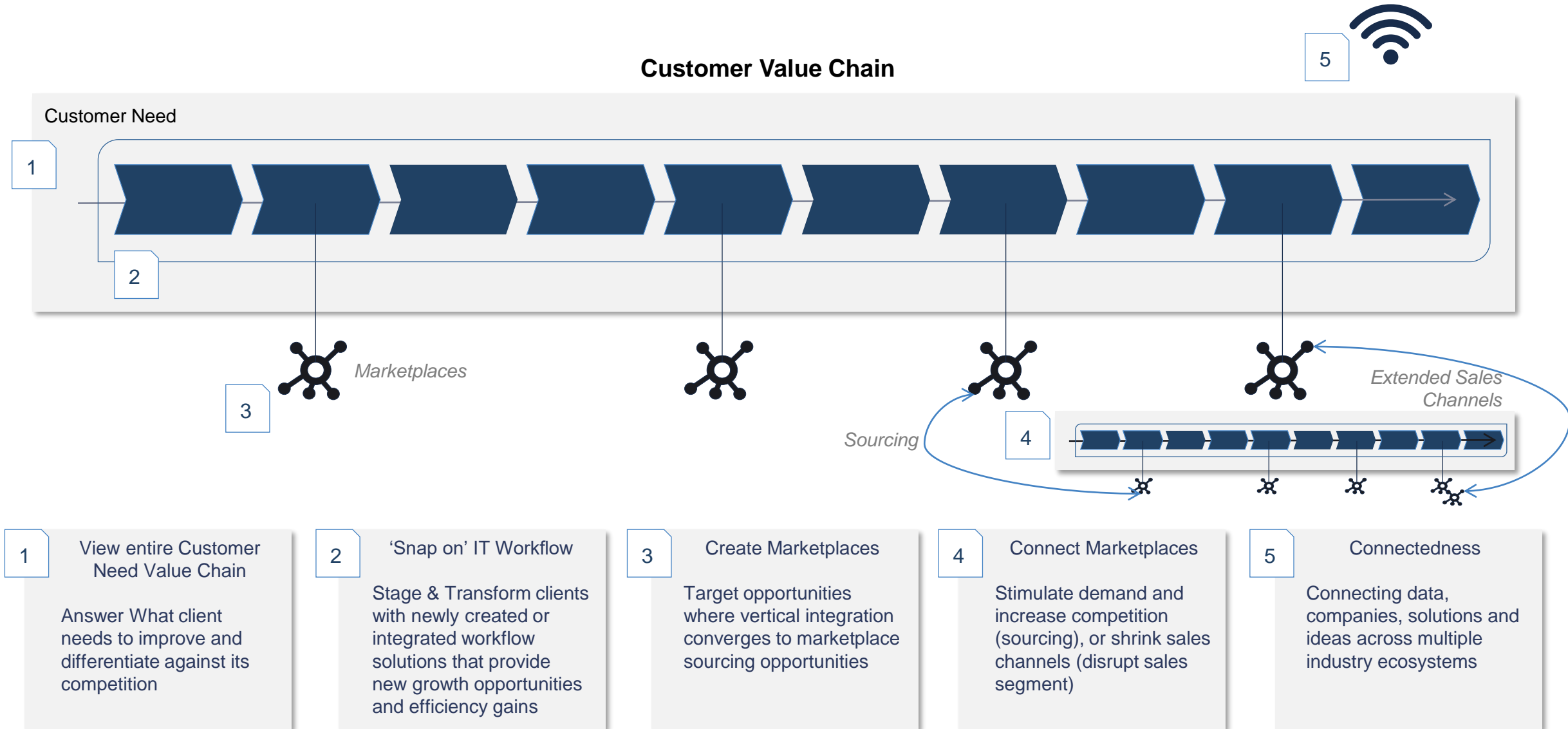
How we do it: Connectivity between data, funds, vendors, clients and their collective work processes

Syngin Technology's trademark is its Unique Workflow

- Real-time, non-linear, multidimensional integration of applications
- Clients, vendors and operational staff perspectives, roles and permissions
- Distinct workflows for assets, information, titles, and funds
- Web enabled cloud-based technology
- Unlimited scalability
- Integrates all supply chain elements and users



Syngin's opportunity and growth business model



Questions?



Regulatory changes and IMO 2020

Michael Hynekamp
EVP and COO WW Ocean

Roger Strevens
VP, Global Sustainability

7 November 2018



Lean:Green sustainability strategy

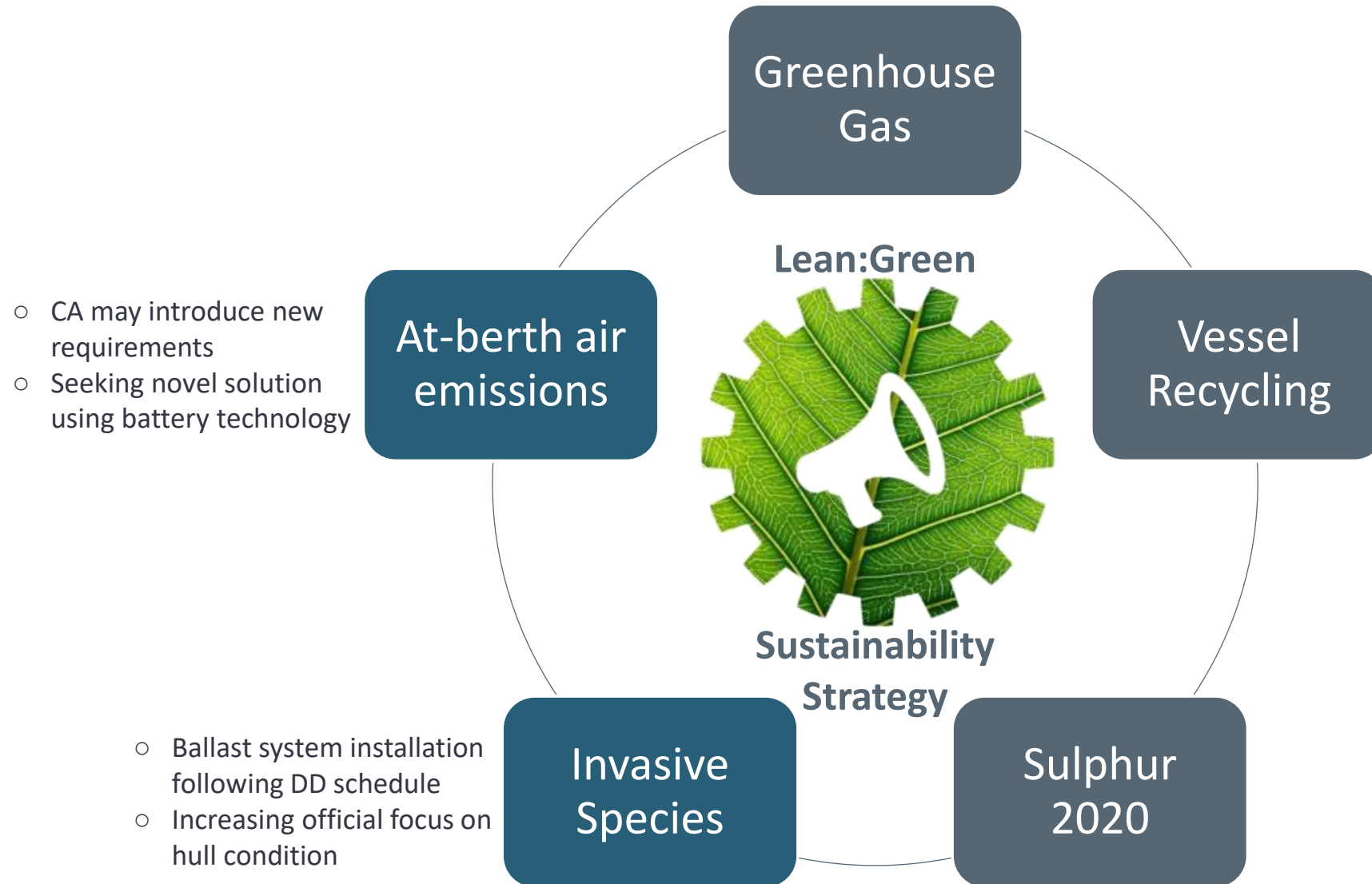
Core contention: what's sustainable and what's economic *can and must* be the same thing

To pursue Lean:Green is to be a **leader**

- **Engaging with innovators** to find new Lean:Green solutions
- **Advocacy** is vital in making sustainability the norm



The big five... of the moment



GHG regulatory developments

- At least 50% absolute reduction by 2050 vs. 2008
 - Deceptively urgent
- Focus areas for regulatory development include:
 - Port scheduling optimisation – likely first order of business
 - Vessel speed reduction – many ripple effects
- Regulatory changes not expected before 2020



Wallenius Wilhelmsen's GHG approach

Continuous

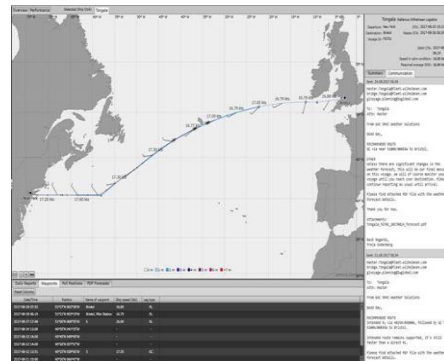
Periodic

Once-Off

Project



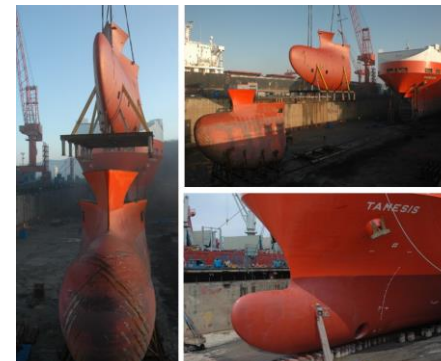
Digitalisation



Weather Routing



Bio-fouling management



Bulbous bow refit



Fleet renewal

Operational/ OPEX

Design /CAPEX

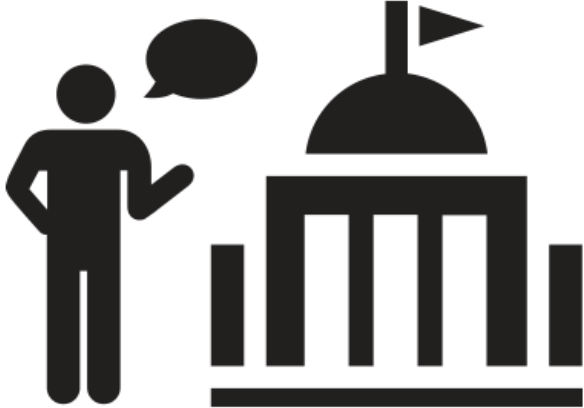
Engaging for a zero emission future



Partner to find
Lean:Green solutions



Attract innovators
to shipping



Engage in the
regulatory process



Vessel Recycling

- **Wide range in recycling performance**
 - Worst: horrific welfare and environmental consequences
 - WalWil: responsible recycling of vessels for many years
- **Transparency key to progress; enables informed decision-making**
- **Ship Recycling Transparency Initiative (SRTI) – launching end Nov.**
 - Online platform for disclosure of recycling policies & practices
 - ‘Obligation’ for investors and customers to respond



Sulphur 2020 – Recap

What | Fuel sulphur content drops to 0.5%, or equivalent. ECAs stay at 0.1%

When | January 1st 2020 – deferral not possible

Who | Applicable to all vessels, all of the time

Enforcement | ‘Carriage Ban’ adopted - signals IMO’s commitment, important tool

Wallenius Wilhelmsen has chosen a balanced approach which gives the best chance of managing risks and costs

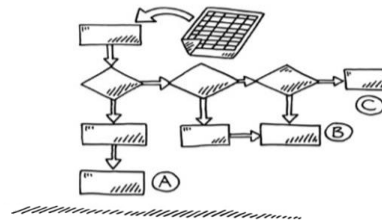
Commercial

Changes in Bunker Adjustment Factor (BAF) clauses and customer contracts



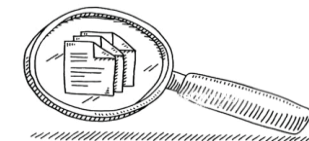
Technical

Scrubber installations to allow for use of HSFO on selected vessels



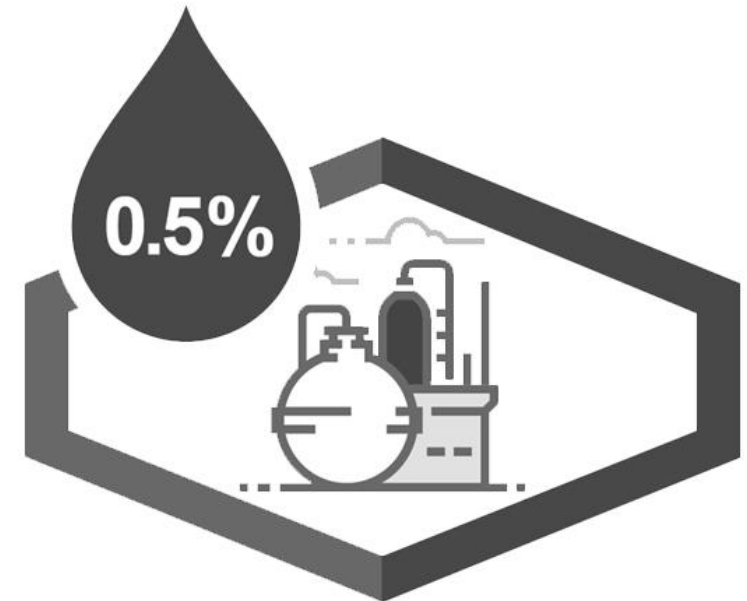
Financial

Derivative products and hedging to reduce exposure

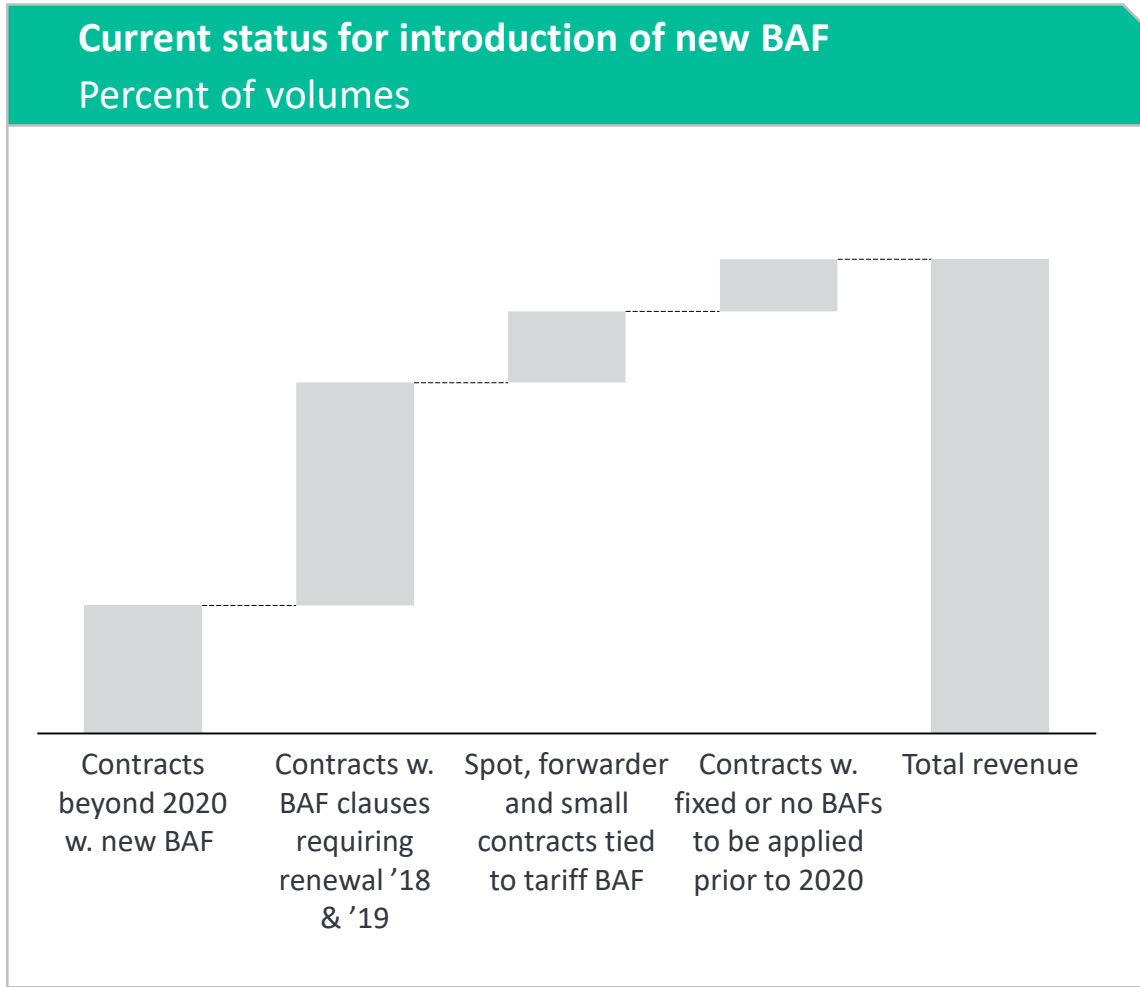


Increased bunker costs to be transferred to the customers...

- The cost of compliance with the regulation will be linked to the new fuel most vessels will switch to
- The cost will have to be passed on to the customers using the same mechanism as today's BAF clauses
- The new regulation will simply mean a different price for compliant marine fuel for most vessels
- BAF clauses will change on Jan 1 2020 and will feature a different reference fuel from that point on



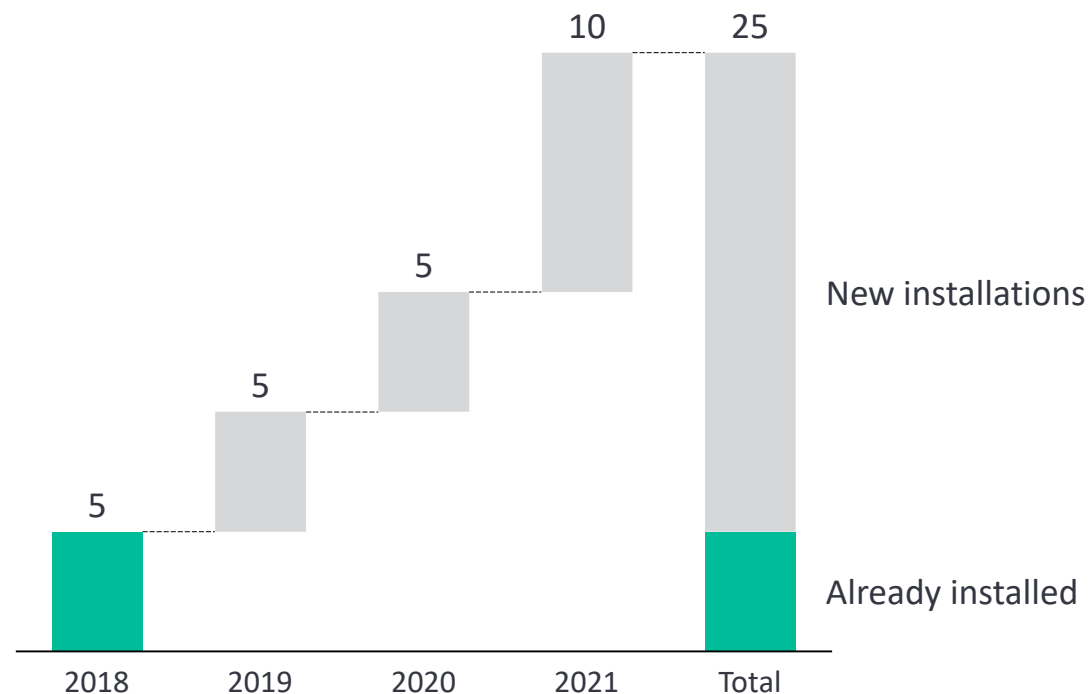
... and implementation well under way in Wallenius Wilhelmsen



- Comments**
- Since the finalisation of the regulation, the group has been direct and open in communication with our customers that:
 - This change is coming
 - We agree with and support the change
 - The increased cost must be passed on in full
 - The majority of contracts that extend into 2020 (now carry new clauses that provide a basis to adjust contracts and terms to reflect the new IMO regulation)
 - For contracts running into 2020 with any gap to provisions to adjust BAF, the group will implement emergency fuel surcharge
 - Discussions are ongoing or will run in parallel with tenders for contracts that expire before 2020 to introduce new BAF
 - Tariff BAF will also be adjusted to point to such a new public market index

Wallenius Wilhelmsen will have 25 vessels with scrubbers by end of 2021

Development in # of scrubbers in the fleet



Comments

- In June 2018, Wallenius Wilhelmsen decided to initiate a program to retrofit scrubbers on 20 vessels by the end of 2021
- In October 2018, Wallenius Wilhelmsen signed a fixed price turn-key contract with one supplier for scrubber installation covering engineering, equipment, materials and yard conversion and installation.
- Total cost for the turn-key delivery for 20 vessels (including off-hire costs) is expected to be USD 120-130 million
- Scrubber installations on our types of vessels, are typically more complex than for mainstream vessel types, e.g. tankers, bulkers and box ships
- The installation schedule with yard slots are confirmed with 5 scrubbers in 2019, 5 scrubbers in 2020 and 10 scrubbers in 2021.
- The scrubbers will be retrofitted during scheduled dry docking to minimize impact on the operations and will be financed through available cash and credit facilities.
- WW Ocean opting for a hybrid type scrubber design, which can operate in both open and closed loop modes

Conclusion

Cost is unprecedented and cannot be absorbed

The increased bunker cost will be passed on the (end-) customers through BAFs

Wallenius Wilhelmsen has and will continue to **prepare customers** for the cost increase this regulation will have on their business

A balanced approach gives the best chance of **managing risks and costs**

