

# DATA DRIVEN ROUTES TO ZERO EMISSIONS

A large ship, likely a supply vessel, is sailing on the ocean at sunset. The sky is filled with warm, orange and yellow hues, and the sun is low on the horizon. In the background, a wind farm with several turbines is visible against the sunset sky. The ship is in the foreground, moving towards the right.

Gareth Prowse – Head of Decarbonisation  
March 2022

**SVITZER**

# AGENDA

- INTRODUCTION
- MEASURE WHAT YOU NEED TO MANAGE
- USING DATA TO DRIVE CHANGE
- WHAT NEXT?

# SPOT THE TUG?

## THE DECARBONISATION CHALLENGE

- SVITZER operates over 400 vessels
- A fraction of the:
  - 12,000 tugs and pusher boats globally - IHS
  - or 14,641 if you use IMO (3<sup>rd</sup> GHG report 2012 value)
- Globally - 21,301,000 tonnes CO<sub>2</sub> 2012
- Policy focuses on the biggest emitters 1<sup>st</sup>
  - Greater than 5000 gross tonnes

- How does our industry face this challenge?
- How should companies approach the challenge?

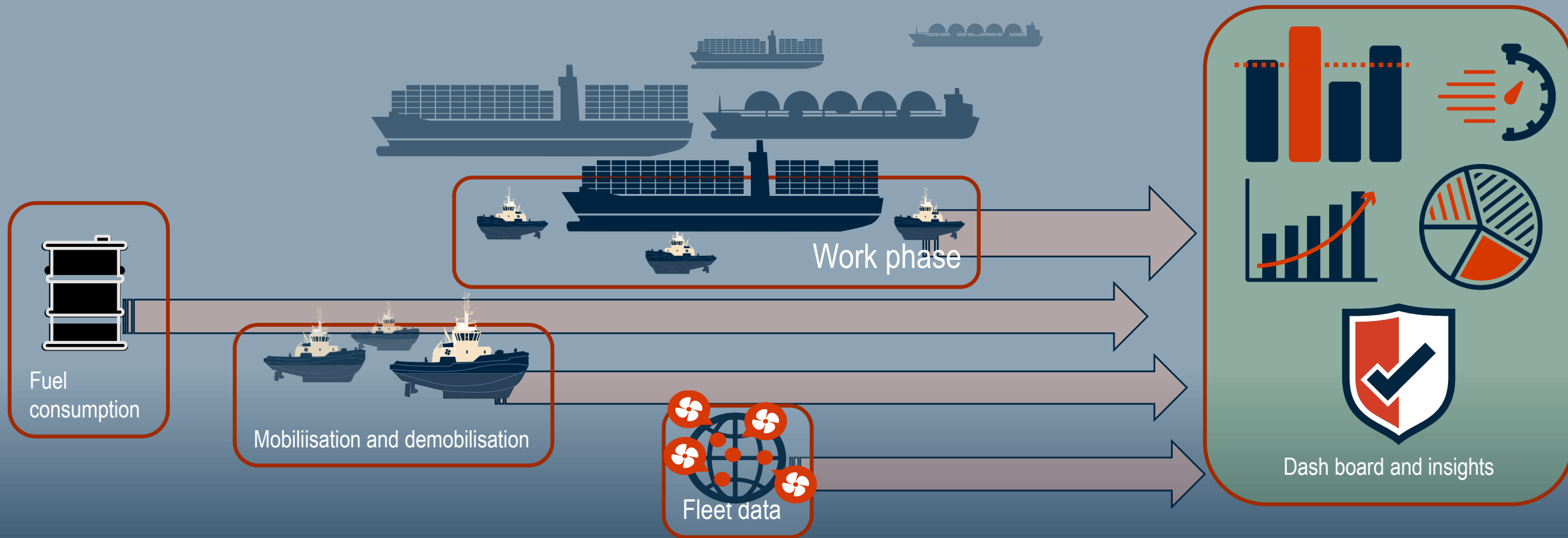


- Emissions of vessels >5000gt 'dwarf' those from their smaller counterparts

**MEASURE WHAT YOU  
NEED TO MANAGE...**

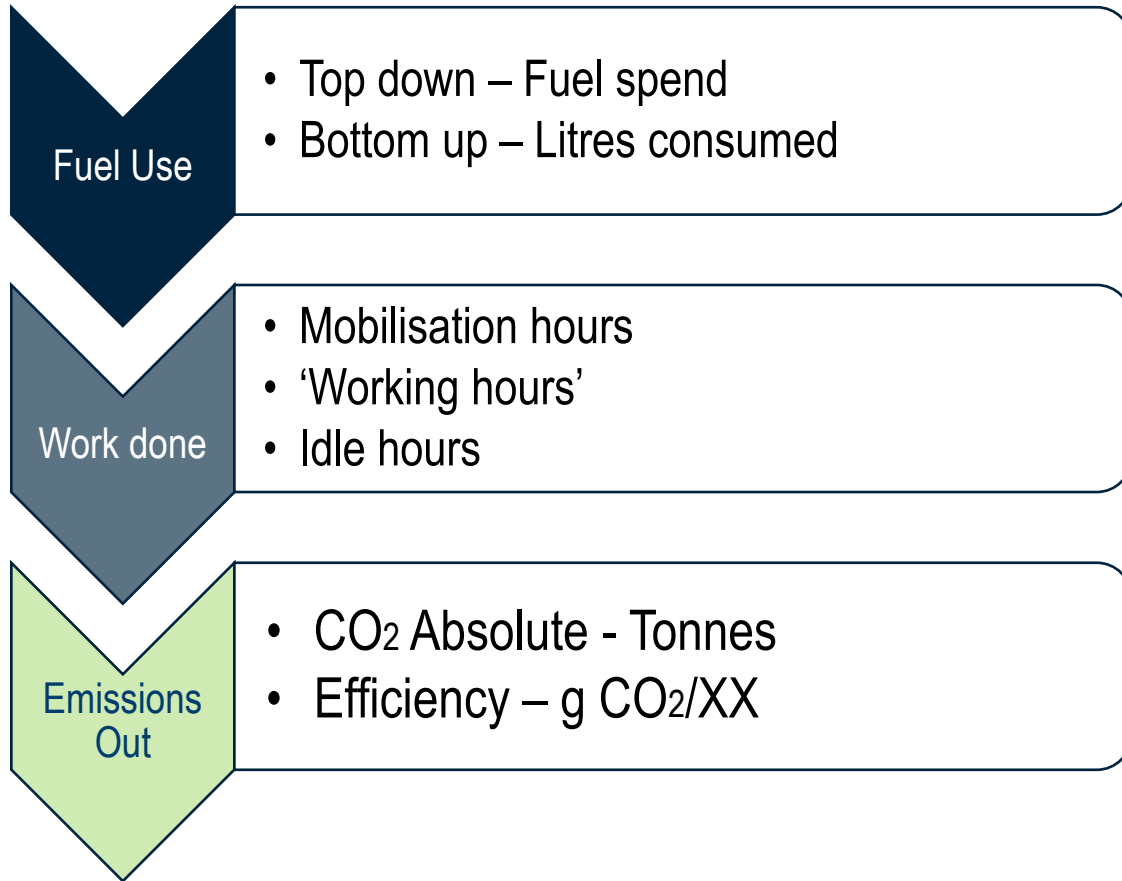
# FUNDAMENTAL DATA SETS

## MEASURE WHAT YOU NEED TO MANAGE



# FUNDAMENTAL DATA SETS

## MEASURE WHAT YOU NEED TO MANAGE...



### What Svitzer has Achieved

- Known Base line
- Measureable Targets
- Tracking for Efficiency improvement
- Targeted decision making – where to invest effort

### Key considerations

- How to measure efficiency beyond fuel consumption?
- How to manage data accuracy?
- What level can the data be applied?

# USING DATA TO DRIVE CHANGE...

# GLOBAL FLEET GLOBAL CHALLENGE

## SETTING OUR BASELINE

435

Vessels

32

countries

93

Operations

In 2020 we emitted **281,288**  
Tonnes of CO2 – 110,000 cars / yr



Or...



5 Months of  
driving...

1 tug job



226 km  
Travelled



# THE CHALLENGE AHEAD

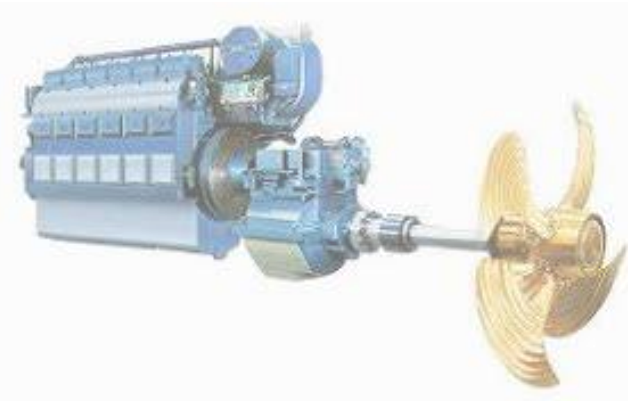
## NO SILVER BULLETS...

- Three areas to focus on
  - Reducing current fuel consumption
  - Optimising equipment for greatest efficiency
  - Changing fuel to benefit from low Carbon Alternatives

5-10%?



2-6%?



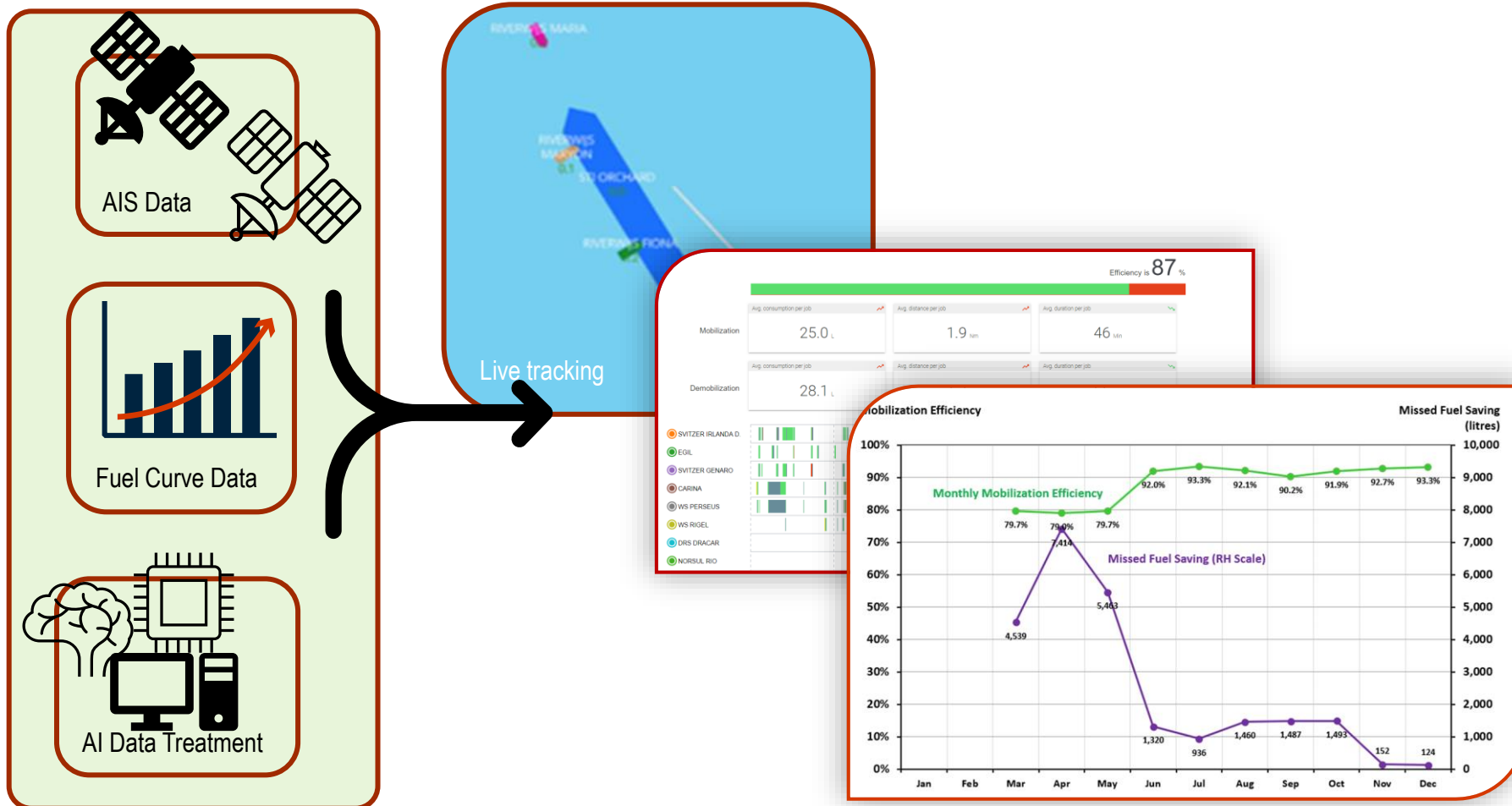
Up to 100%



# PUTTING DATA TO WORK...

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## OPTIMISING MOBILISATION AND DEMOBILISATION



- Automated system using AIS data alone
- Avoids need to install fuel consumption equipment
- Enables 'nudging' of Captain's to change behaviour
- Significantly cut fuel consumption where used

# PUTTING DATA TO WORK: ECOTOW



Sustainable biofuels

- Second-generation biofuels replace MGO



Reduced carbon footprint

- 90 percent well-to-wake CO2 reduction
- 100 percent tank-to-wake CO2 reduction



Audited Scope 3  
Emissions savings  
certificate

- CO2 savings allocated to individual customers

# PUTTING DATA TO WORK: BUILDING FOR EFFICIENCY, ENABLING FUTURE FUELS

- **SYdrive gear box**

- Single engine running both thrusters
- Optimises engine use
- Enables multiple power trains

- **TRAnverse tug**

- Maximise indirect towage effects
- Reduce fuel consumption during work phase
- Maximise efficiency

- **MeOH Fuel Cell Tug**

- Hybrid system
- MeOH fuel only with battery support



# USING DATA TO DRIVE CHANGE... WHAT NEXT?

# WHAT NEXT? DRIVING DECARBONISATION...

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- Strengthen what we already have – Ensure data quality, Simplify reporting, Targeted Analysis
- Connected vessels delivering data automatically – New build, and retrofitting
- Setting meaningful targets – Vessel efficiency data will become key in understanding how to accelerate decarbonisation
- Driving change in our fleet to drive down emissions – Data insights supporting where we invest our ‘decarbonisation money’
- Passing on the benefits – Our emissions are someone else’s ‘Scope 3’ emissions. Robust data will ensure confidence in our progress.

**THANK YOU**