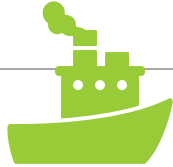2.6% of global emissions!

CAR-GO$_2$

$$E_t^{Trans} = \sum_{s \in S} \sum_{b \in B} \left(\frac{BU_{s,b,t} \cdot d_s^{OPre} \cdot fc^{truck} \cdot eff \cdot 10^3}{LHV_b^{wet} \cdot \rho_b^{wet} \cdot \omega^{truck}} \right)$$
$$+ \sum_{s \in S} \sum_{r \in R} \sum_{i \in I} \left(\frac{TI_{s,r,i,t} \cdot d_{s,r}^{SR} \cdot fc^{truck} \cdot eff \cdot 10^3}{LHV_i^{dry} \cdot \rho_b^{dry} \cdot \omega^{truck}} \right)$$
$$+ \sum_{r \in R} \sum_{f \in F} \sum_{p \in P} \left(\frac{SF_{r,p,f,t} \cdot d_{r,p}^{RP} \cdot eff^{ship}}{LHV_f^{fuel}} \right) \quad \forall t \in T$$

Less CO$_2$, more cargo

Problem – can we make cargo transport a little bit greener or has this ship sailed?

Transmetrics

Can we reduce old PSV (platform supply vessel) ships CO_2 emissions?

Answer is YES! - by optimizing logistics!
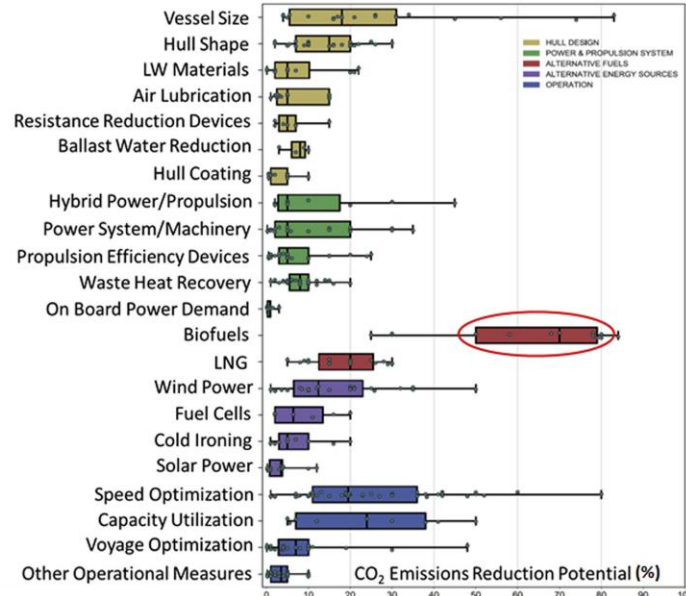
What is out there?

MarineTraffic

SEARATES by DP WORLD   FREIGHTOS

Why not use biofuels? Or why not electric ships?

	MDO	LNG	Methanol	Biofuel	Ammonia	Hydrogen	Battery
SOx, NOx, PM emissions	✗	✓	✓	✗	⚠	✓	✓
Carbon (CO_2) emissions	✗	✗	✓	✓	✓	✓	✓
Flammability	✓	✓	⚠	✓	✓	✗	-
Toxicity	✓	✓	⚠	✓	✗	✓	-
Technological maturity	✓	✓	⚠	⚠	⚠	⚠	✓
Energy cost	✓	✓	⚠	✗	✗	✗	✗
Bunkering availability	✓	⚠	✗	✗	✗	✗	⚠

Target customer and market

core29

Companies with non-electric PSVs still in use (lifespan up to 40 years)
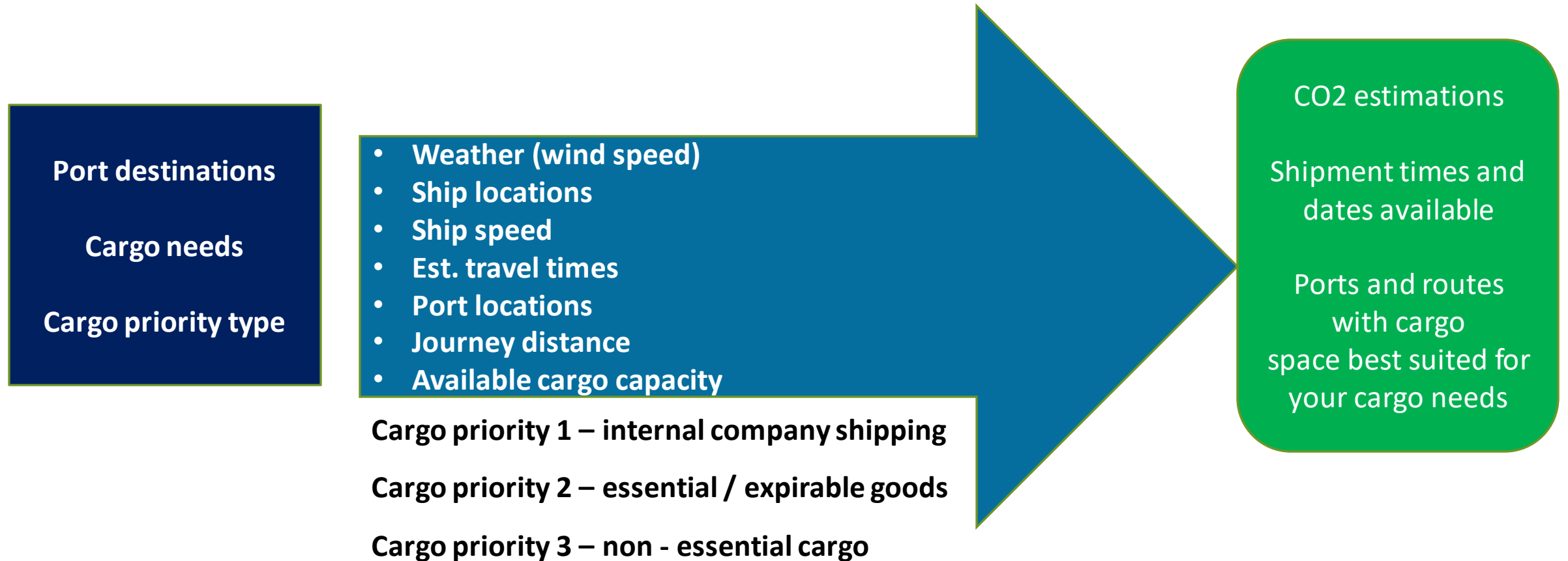
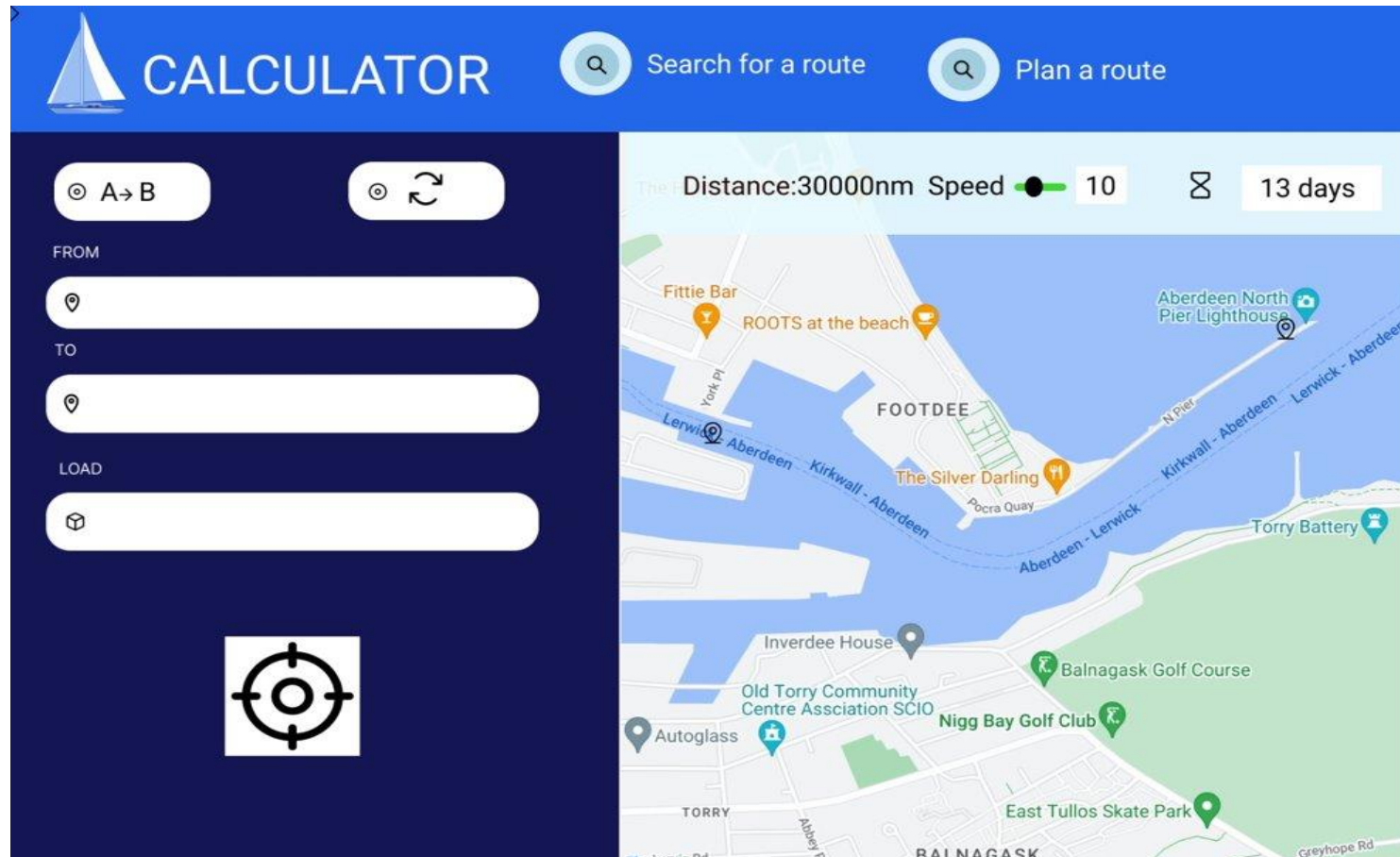Globally cost-effectively and more environmentally friendly

Clients who want to outsource shipping to other companies to avoid overload of ships and help reduce empty journeys after unloading of cargo

Product - Vessel emissions calculator

Port destinations

Cargo needs

Cargo priority type

- **Weather (wind speed)**
- **Ship locations**
- **Ship speed**
- **Est. travel times**
- **Port locations**
- **Journey distance**
- **Available cargo capacity**

Cargo priority 1 – internal company shipping

Cargo priority 2 – essential / expirable goods

Cargo priority 3 – non - essential cargo

CO2 estimations

Shipment times and dates available

Ports and routes with cargo space best suited for your cargo needs
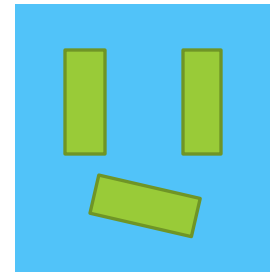
How the technology works?

Next steps

Web App

Mobile App

Automation with
machine learning

Would you like to hop on board with the crew?

Wojciech Bock · 1st
Student at Dundee and Angus College
Dundee and Angus College

Nana Yaw Ankomah · 2nd
Data Scientist || Machine Learning Engineer
Aberdeen, Scotland, United Kingdom · 240

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Universitetet i Oslo (UiO)

Thank you for your attention!