



SEAROUTES.COM

**OCEAN ROUTING, NOT BY THE BOOK.
RISK & VOYAGE PLANNING AT SEA
WITH MACHINE LEARNING**

Mr. Akio Hansen, Chief Meteorologist

Blue Invest 2019



THE PROBLEM



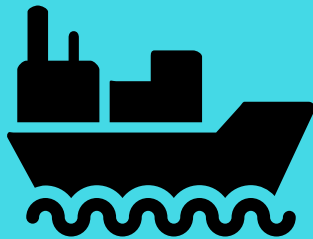
WEATHER
INDUCED DELAYS
ON SUPPLY CHAIN



WEATHER, WAVES,
CURRENTS AFFECT FUEL
CONSUMPTION BY 15 %



HUMAN ERRORS
CAUSE 80 % OF NAVI-
GATIONAL ACCIDENTS



BUNKER CONSUMPTION:

-> \$ 2 M / YEAR

-> EMISSIONS LIKE 50 MILLION CARS!

10 % REDUCTION BY WEATHER ROUTING:

-> \$ 204.000 / YEAR / SHIP

-> CO2/NOX REDUCTION

EXTENSIVE MEETINGS:

- . CAPTAINS
- . METEOROLOGISTS
- . FLEET MANAGERS
- . LOGISTIC ANALYSTS



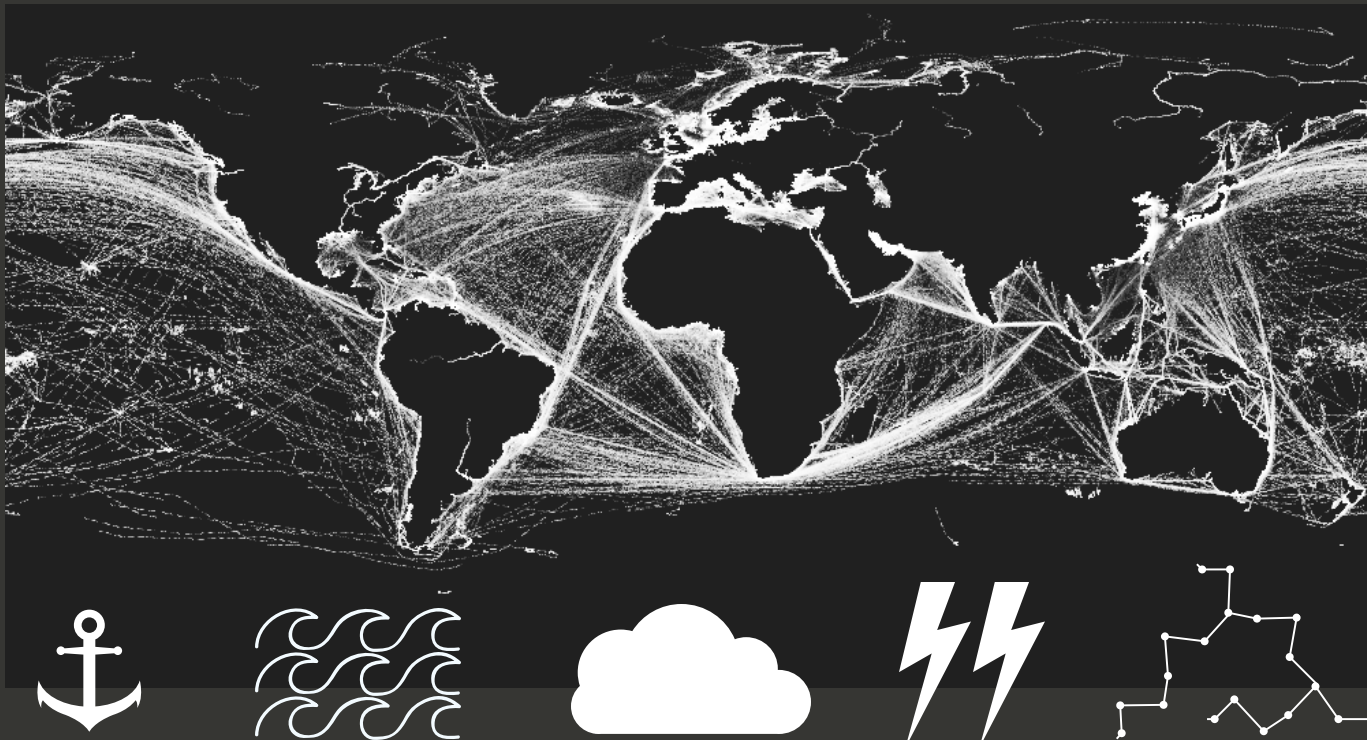
WEATHER ROUTING
IS **MANUAL, EXPENSIVE &**
NOT ACCESSIBLE.



THE SOLUTION

A **WEATHER ROUTE PLANNING** TOOL/API TO FIND
THE MOST EFFICIENT ROUTE AND SPEED.

AI + Machine Learning + Graph Theory



THE MARKET OF SEA ROUTING

50K GLOBAL MERCHANT FLEET (ICS, 2018)
18% IDLE (BLOOMBERG, 2017)
25 VOYAGES / VESSEL / YR (TRUSTEDDOCKS.COM)
~1M VOYAGES / YR

X



LOGISTICS

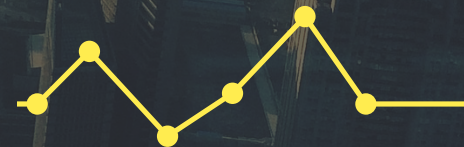
TRANSPARENCY

OPTIMIZE FOR \$\$ AND CO2



MARINERS

BUNKER \$\$ INCREASE



2020 IMO NOX & CO2 CAP



COMPETITION

WEATHER
ROUTING

StormGeo



ROUTE
PLANNING

NETPAS



ONSHORE / ONBOARD

ONLINE / SAAS



WHY IS SEAROUTES.COM SPECIAL?

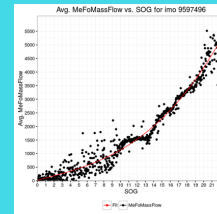
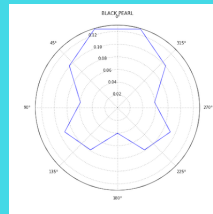
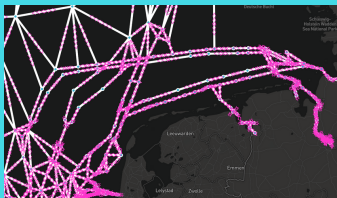
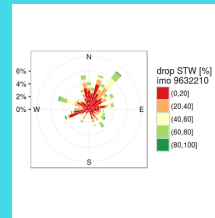
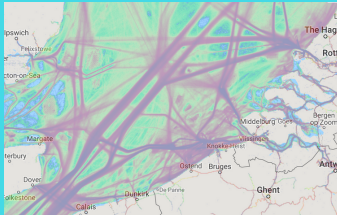
1. CUTTING EDGE TECH STACK FOR ONLINE + OFFLINE (CLOUD, SCALEABLE)

2. ML FIRST APPROACH

A. PASSAGES

B. VESSEL HYDRODYNAMICS

C. PIRACY, VESSEL TYPES



3. SOLID CLIENT LIST! - AVG. REVENUE \$3,500 (2018)



+ AAA TEAM!



THE TEAM



CEO CARSTEN BULLEMER



CTO PIERRE GARREAU, PH.D.



CMO AKIO HANSEN

EDUCATION

UNIVERSITY DUSSELDORF

ECOLE CENTRALE LYON
CORNELL UNIVERSITY
UC LOS ANGELES

UNIVERSITY HAMBURG

CAREER

GENSCAPE
VESSELTRACKER

DEUTSCHE BANK
CITIGROUP

UNIVERSITY HAMBURG
MARITIME DATA SYSTEMS

WIND, BOAT

25 KTS, WINDSURF

18 KTS, HOBBY CAT

12 KTS, 36 FOOTER

FOUNDEREXP

1 EXIT, 3 YEARS OF JOINT WORK



Our vision is to be the global no.1 weather routing and risk analysis solution.

Our goal is to help cut fuel consumption and CO2 in shipping by 15%.



Talk to us, start routing!

hansen@maritimedatasystems.com



MARITIME TREND

SHIPPING CRISIS

CO2 EMISSION
REGULATION

2020 IMO GLOBAL
SULPHUR LIMIT

INCREASE OF
BUNKERING COSTS

PORT CONGESTION
DUE TO CLIMATE
EVENTS

TRANSPARENCY &
TRACKING DEMAND

TECHNOLOGY TREND

GLOBAL INTERNET
COVERAGE

IOT GROWTH IN THE
LOGISTICS

BIRTH OF THE B2D
ECONOMY

ML ALGORITHMS

BETTER DATA SETS



REVENUE MODEL

premium online  api pool

Add-ons -- Onboard + Onshore

License -- Third party applications.

Recurrent users:

- Save routes
- Monitor fleet on routes
- Weather forecasts
- Third party Apps

B2D conversion:

- Easy Dev onboarding
- API Marketplaces



ROADMAP

FOUNDATION
16Q4



SEED ROUND
17Q4



NOW

18Q4



SERIES A
19Q2 estimated



21Q2 estimated



X 4

X 2

X 2

FUNDING

MARINERS

LOGISTICS & FINANCIALS

SELF FUNDED

ROUTE PLANNING

DISTANCE + ETA

SELF FUNDED

VESSEL TYPE

SEA + ROAD

€ .

WEATHER + RISK

SEA + ROAD

€ .

WEATHER + RISK + LOGISTICS

SEA + ROAD + RAIL

BUNKERING SAVED

(€ 83 176 M MARKET, 2016)

€ 0 K

€ 83 M (0.1 %)

€ 416 M (0.5 %)

€ 832 M (1 %)

RECURRING REVENUE

€ 10 K

€ 80 K

€ 300 K

€ 3 M

ACTIVE USERS

2,000

15,000

20,000 + 1,000 PREMIUM

45,000 + 5,000 PREMIUM

ROUTES PLANNED

5 K

200 K

500 K

3 M

CLIENTS

5

20

40

200

AVG. REVENUE PER CLIENT

€ 2,000

€ 3,500

€ 6,000

€ 12,000

TEAM

3 (2 FOUNDERS, 1 ENGINEER)

5 (2 FOUNDERS, 2
ENGINEERS, 1 SALES)

7 (2 FOUNDERS, 3
ENGINEERS, 2 SALES)

10 (2 FOUNDERS, 5
ENGINEERS, 2 SALES, 1
MARKETING)

SEAROUTES.COM



THE PROBLEM



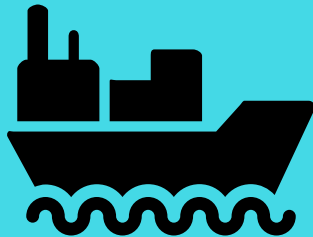
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HUMAN ERRORS
CAUSE 80 % OF NAVI-
GATIONAL ACCIDENTS



CONSUMPTION: 30 T / DAY
BUNKER PRICE: \$ 400 / T

-> \$ 12,000 / DAY * 170 DAYS = **\$ 2.040 M / YEAR**

-> EMISSIONS LIKE 50 MILLION CARS!

10 % REDUCTION BY WEATHER ROUTING:
= **\$ 204.000 / YEAR / SHIP**
= **CO2/NOX REDUCTION**

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- + TRAFFIC SEPARATION SCHEMES
- + PIRACY
- + VESSEL TYPES



- + SEASONALITY
- + OCEAN CURRENTS
- + WEATHER FORECASTS
- + WATER DEPTH



- + HISTORY OF VESSEL TRACKS
- + LIVE VESSEL POSITIONS
- + VESSEL HYDRODYNAMICS FOOTPRINT



**WE SAVE FUEL & REDUCE
GLOBAL EMISSIONS FOR CARGO
TRAVELING THE ENTIRE SUPPLY
CHAIN**

