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Smart Data for Maritime shipping

Container Context & emission reporting

Q3 2022

HUGE GROWING MARKET

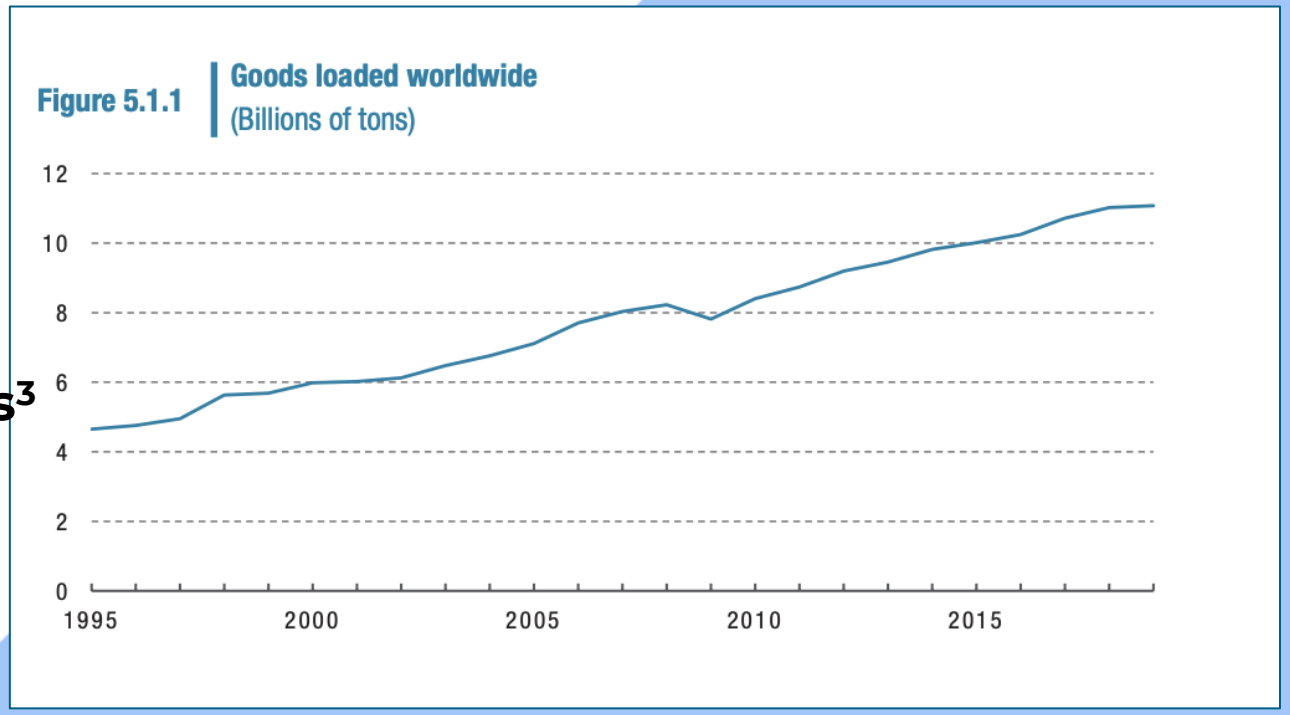
Smart Data for Maritime Shipping

Intermodal[1] Maritime shipping market:

- **10,000** container ships; **+22M** containers , inc. **2M** reefers (refrigerated container)
- x10 more efficient than truck / x100 than air travel (energy/ton/km)
- 25% of dry and 100% of reefers **connected by 2026[2]**

Major challenges:

- Late on digitization
- Needs for cost optimization
- Carbon taxed in **2023 (EU ETS)**
- **350 million tons CO_2e** emission / year
  inc. **est. 60 million tons CO_2 from reefers[3]**



Note 1: container-based shipments
Note 2: Drewry 2022
Note 3: prop and use energy

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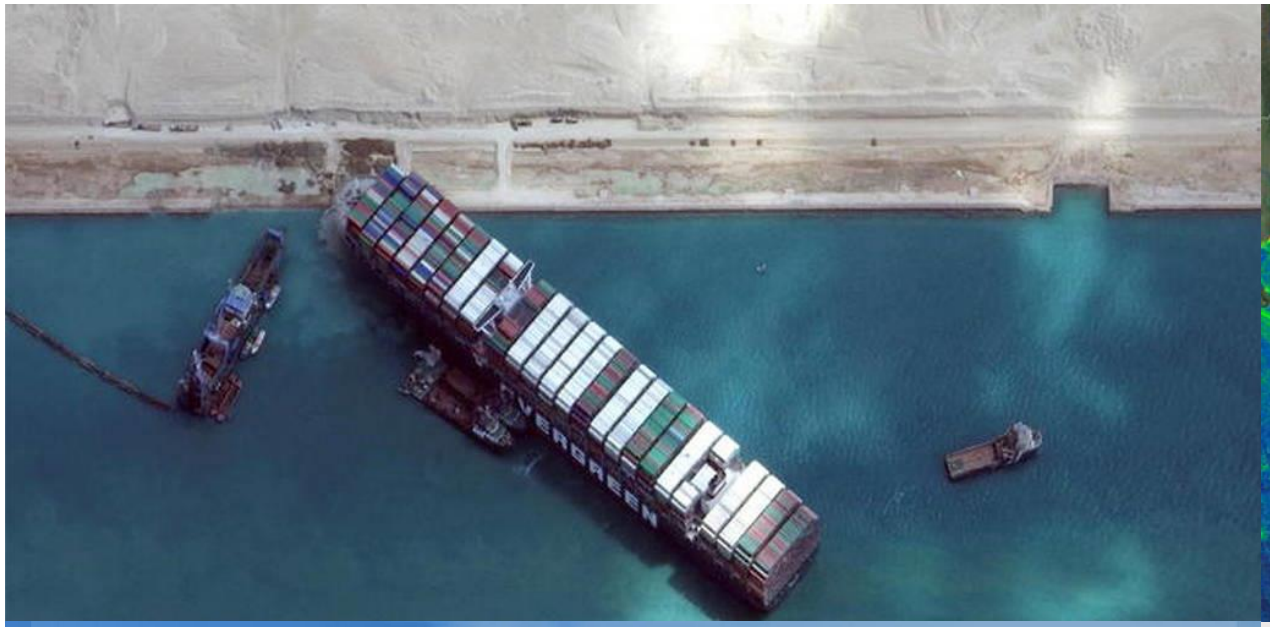

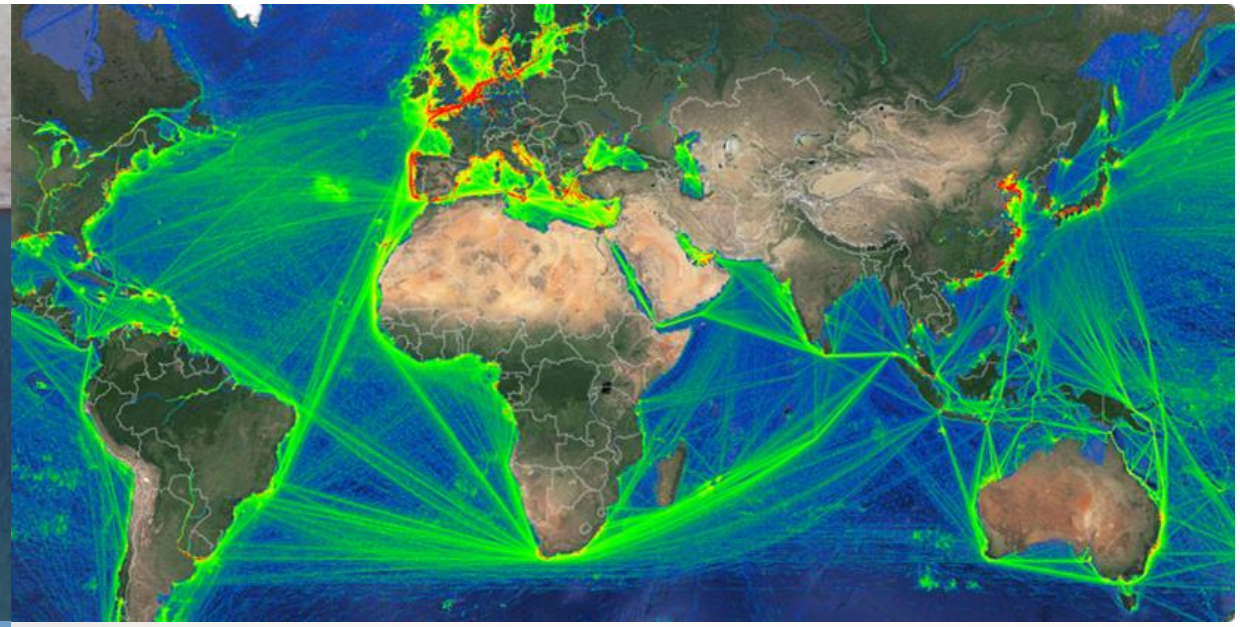

100 tons CO_2e / day from reefers
- on this picture

BluePulse is

- ✓ A data-driven company **specializing in AI**
- ✓ Focusing on **container IoT data**
- ✓ **Hardware agnostic** (any hardware, any sensor)
- ✓ Operating a SaaS platform **for time series**
- ✓ Building **patented technologies** (patents filed)

We transform **data** into **information & insights**

IMPLEMENTATION & FEATURES

Smart Data for Maritime Shipping

Available on a **SaaS** & **KPI reports** implementation :

Existing features :

- **Sea/Rail/Road/Port** tracking for dry & reefers
- **Scope 1 GHG emissions** for dry & reefers
- **Energy tracking** & **prediction** for reefers
- **Scope 2 GHG emissions** reporting
- **Event detections** for reefers
- **Efficiency index** for reefers

Upcoming features:

- **Temp breach** predictions
- **In Port zone** tracking (3 labels - CY, CFS, Quay)

GLEC GLOBAL LOGISTICS EMISSIONS COUNCIL

framework compliant

spire

Weather data

esa European Space Agency

Satellite images

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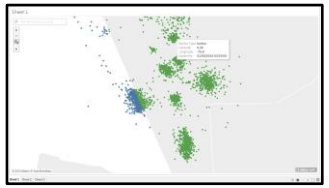
CONTAINER CONTEXT - BLUELOGISTICS

Smart Data for Maritime Shipping

Context enrichment for any container

IoT data
GPS



Sea/Harbor/ Road/Rail

Port geo fencing + GPS accuracy increase

Context:
On truck, on train, on barge, on vessel, on land
In port : on storage, on quay, on CFS

Carbon Accounting:
CO_2 tracking
CO_2 accounting [1]
Scope 1 & 2 GHG reporting

Note 1: Comply with EN16258 standards & GLEC framework

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CONTEXT ENRICHMENT : World polygon database

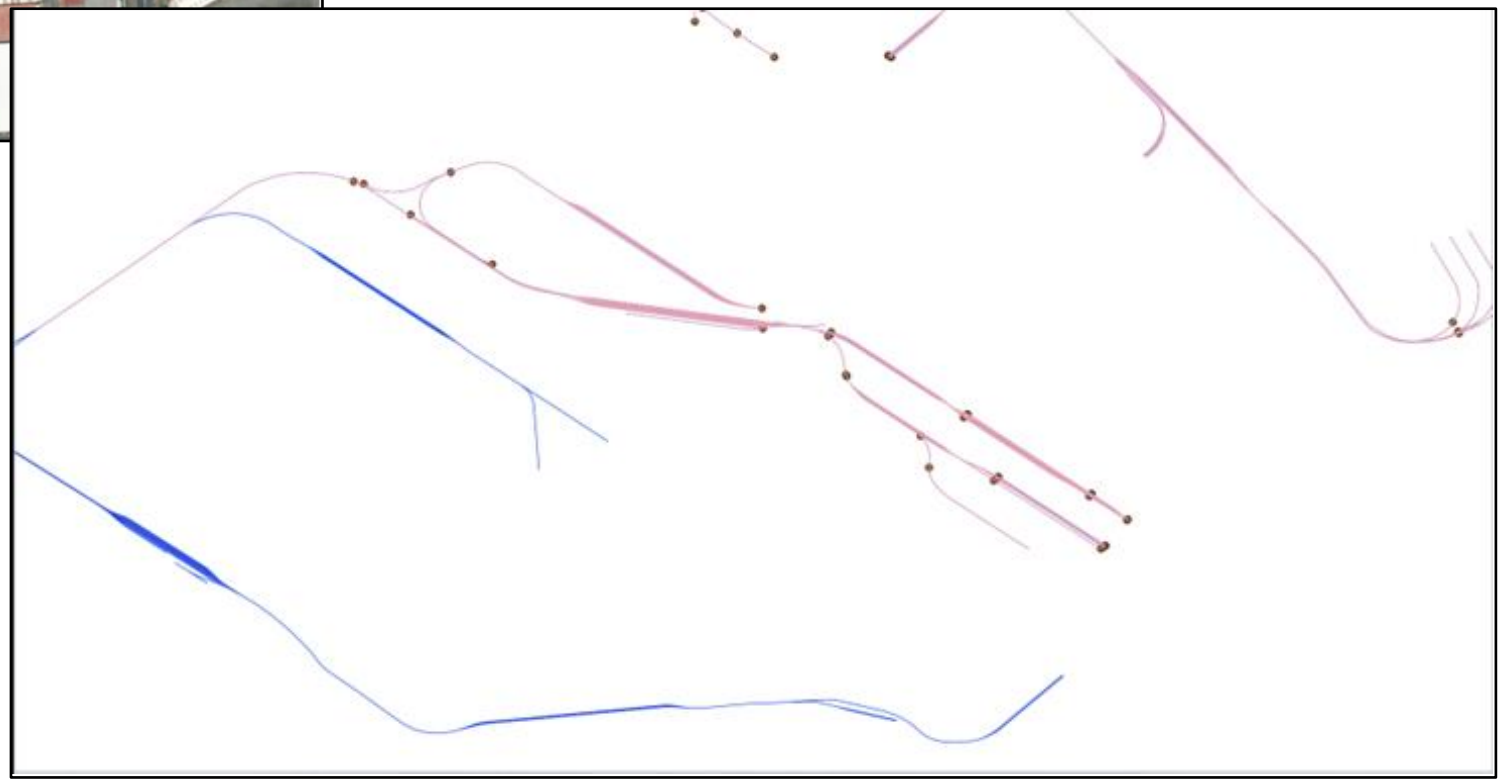
Sea / Inland tracking

Current polygons:

- **Sea**
- **Waterways** (canals, rivers, lakes)
- **Railways**
- **Highways and roads**
- **Land**

Upcoming "**in port**" zones

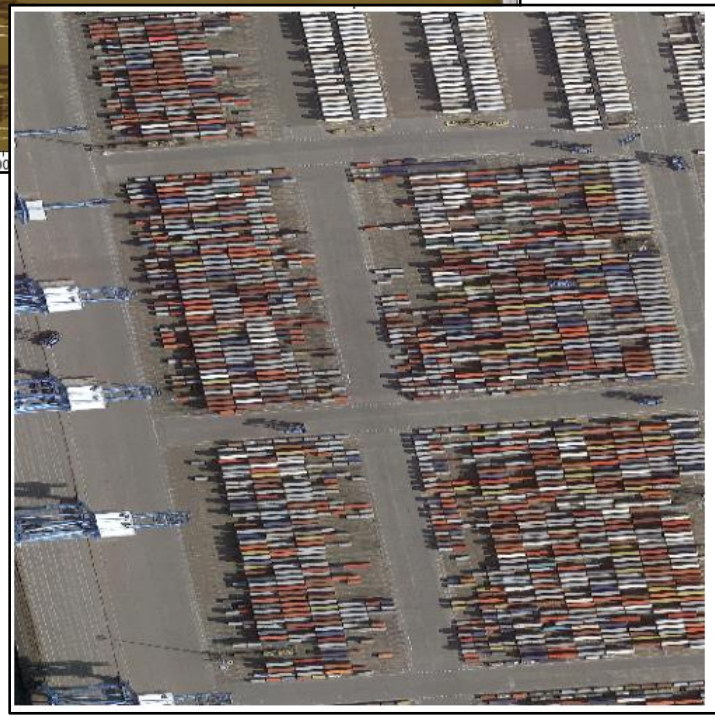
Example: Railways for Fos sur Mer Container port (Red lines)

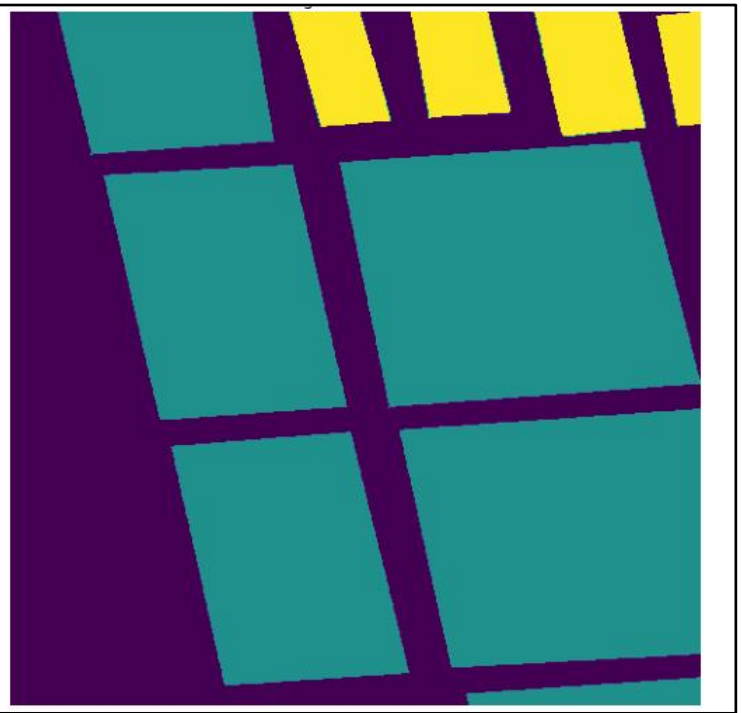


IN PORT GEO LOCATION : Storage, Quay, CFS

1) Image Classification :
automatic container **zone detection**

2) Image label: automatic **zone description**
Storage (green) & Reefer (Yellow)





SOLUTIONS BENEFITS

Smart Data for Maritime Shipping

- Identify reefer **best fit** for each routes – *10/15% savings*
- Report of reefers **losing efficiency** – *PTI optimization*
- GHG & CO_2 **accounting** & **reports** – *Carbon credits*
- Trip **context** & **qualification** – *geo fencing and alerts*
- Energy & CO_2 **prediction** – *energy optimization*

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MERCI

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