



# Esgian

sustainable action starts here



Esgian is built on the fact that we make better decisions when we are informed

Data and model-driven insight and analytical tools



Collecting  
Asset Data



Modelling &  
Crunching



Presenting



# The Esgian Approach to The Green Shift

Bridging sustainability and traditional business performance indicators as it will impact a company's relative competitive strength and position

## The Challenge

- The global shipping industry emits close to 1 billion tons of CO2 per year
- Heavy regulatory pressure and consumer awareness are both pushing the sustainable agenda
- Inadequate focus on sustainability will inevitably have an adverse impact on:
  - Brand name and corporate reputation
  - OPEX/CAPEX
  - Elevated enterprise risk
- The market has grown tired of “fluffy sustainability strategies”
- Increasing demand for tangible and verifiable action that translates into measurable reductions in greenhouse gas emissions
- “The train is leaving the station” so do not get left behind...

## The Solution

- The **Esgian Shipping Suite** merges sustainability focus with innovative commercial applications
- Greenpact Ships:
  - Benchmark current and future emission performance by vessel or operator and do comparative analysis
  - Understand how regulations will impact the fleet both operationally and financially
  - Identify and compare solutions to reduce CO2 footprint
  - Analyze impact of fuel cost and carbon tax
  - Ensure performance is aligned with sustainability linked goals
- Shipping Analytics:
  - Analyze and compare operator actual service delivery across several key performance indicators such as scheduling integrity, actual transit time, consistency in service delivery, geographical coverage and relative strength

# The Green Shift for automotives – from evolution to revolution

Changing customer demand and regulatory pressure impacting business priorities and strategy for the automotive industry

- 1886 to 2000s - Internal combustion engine evolution
- 2000s to present day - emissions regulations tightening and final customers increasing awareness
- 2012 - Tesla Model S
  - Milestone on the path to electrification
  - Disrupting the industry and the competitive landscape
- New CSF:
  - Sustainability (electromobility)
  - Shared mobility services
  - Autonomous driving
  - Connectivity
- Lower barriers to entry and many innovative newcomers

- The Path to Zero - The environmental ambitions are high and so is the willingness to invest...

*“Polestar aim to manufacture a car with **zero carbon footprint** by 2030”*

*“**EUR 52 billion** to be invested in e-Mobility 2022-2026 by **The Volkswagen Group**”*

*“Tesla’s mission is to accelerate the world’s transition to **sustainable energy**”*

*“The **BMW Group** has set itself a firm and verifiable interim goal for 2030 throughout **its entire value chain to reduce CO2 emissions** from its vehicles by at least 40%”*

*“GM to increase its investment into EV and autonomous vehicles to **USD 35 billion** through 2025”*

*“Ford’s sustainability goals include becoming **carbon neutral** globally by 2050”*

*“The **Toyota** Environment Challenge 2050 aims at a long-term goal of **reducing CO2 emissions** from new vehicles during driving by 90% from the level of 2010”*

*“Hyundai is committed to **realizing emission-free mobility** as a fundamental human right. Under this vision, we pledge to become carbon neutral by 2045”*

# The Green Shift – What about the other cargo owners?

Changing customer demand and regulatory pressure impacting business priorities and strategy also for other major cargo owners looking towards PCTC as their ocean transportation of choice

- Not only automotive OEMs pushing the sustainability agenda in the PCTC sector
  - High & Heavy
  - Breakbulk
  - Freight Forwarders



- Sustainability is clearly on the agenda as these examples below illustrate, so time to “walk the talk”?

*“DB Schenker’s global climate goal is to reduce Co2 emissions by at least 50% by 2030 using 2006 as base year”*

*“By 2030, DSV has committed to reducing scope 3 emissions (primary from subcontracted freight transport) by 30% from a 2019 baseline”*

*“Kuehne+Nagel sustainability goals include achieve carbon neutrality for our suppliers’ and customers’ footprint by 2030 (Scope 3 of GHG Protocol)”*,

*“100% of Caterpillar’s new products through 2030 will be more sustainable than the previous generation through collaboration with customers, reduced waste, improved design, lower emissions or improved efficiency”*

*“General Electric is committed to being carbon neutral in its facilities and operations by 2030”*

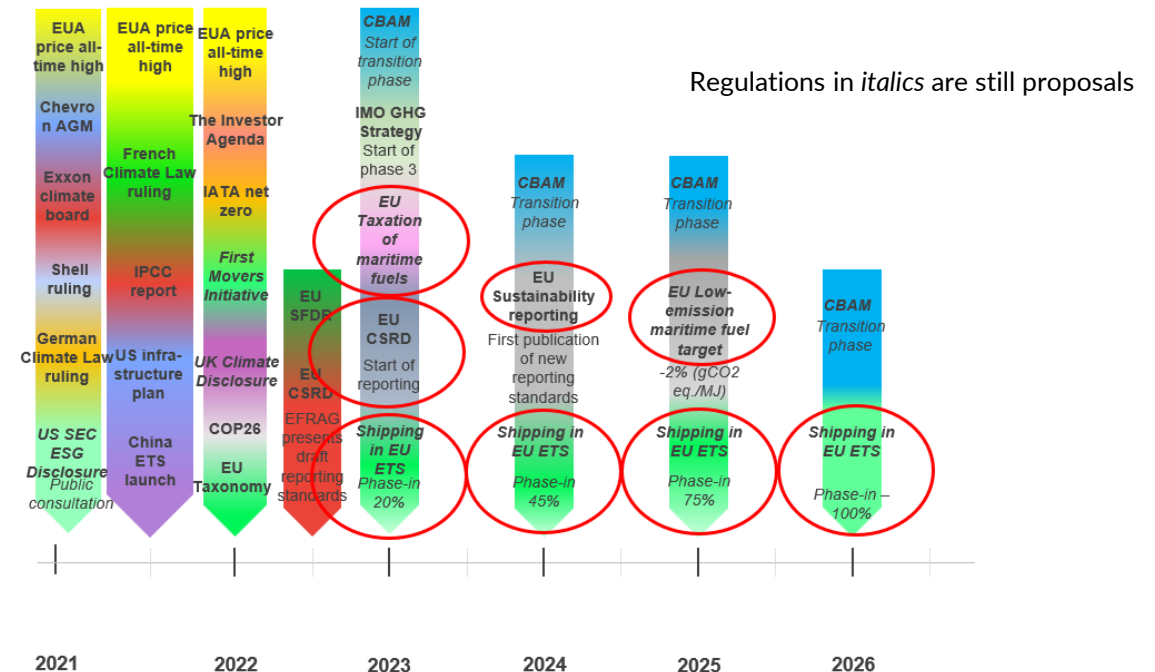
*“Volvo’s emission targets include reduce absolute emissions by 30% by 2030 for construction equipment and 40% reduction in emissions per vehicle-km for trucks and buses by 2030 ”*

# The Green Shift – Sustainable action translated into Competitive Advantage

Changing customer demand and regulatory pressure impacting business priorities and strategy for the PCTC industry

- Global automotive manufacturers are increasingly focusing on sustainability in their entire value chain
- Past: Price, frequency and transit time
- Future: Emission reduction and measurable sustainability strategy
- The requirements of tomorrow:
  - What is the company's climate target and how to you measure and get there?
  - What investments have been made in the areas of sustainable innovation?
  - Are you able to project future emissions?
  - Do you have a sustainability strategy in place? What is the focus and content of this strategy?
  - Do you have systems in place to measure effect of energy efficiency improvements?

- Spearheaded by the IMO and EU, a tsunami of regulations is coming
- Impact on both operating costs and ultimately noncompliance will revoke the “license to operate”

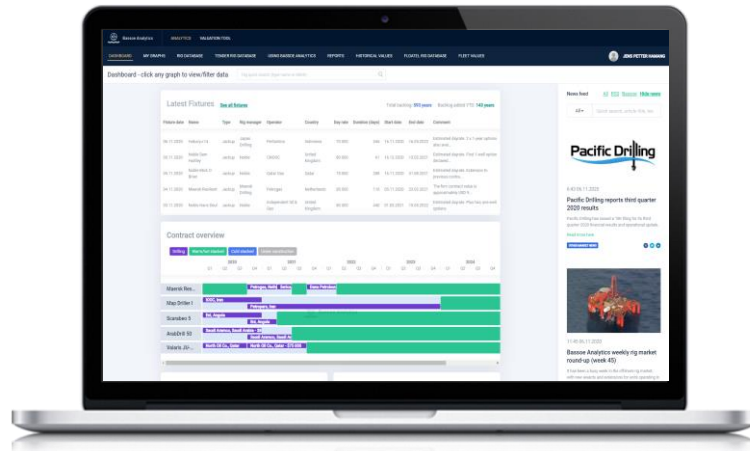


# The Esgian Greenpact Ships & Shipping Analytics Suite

A complete commercial decision-making suite covering emission benchmarking and service performance analysis

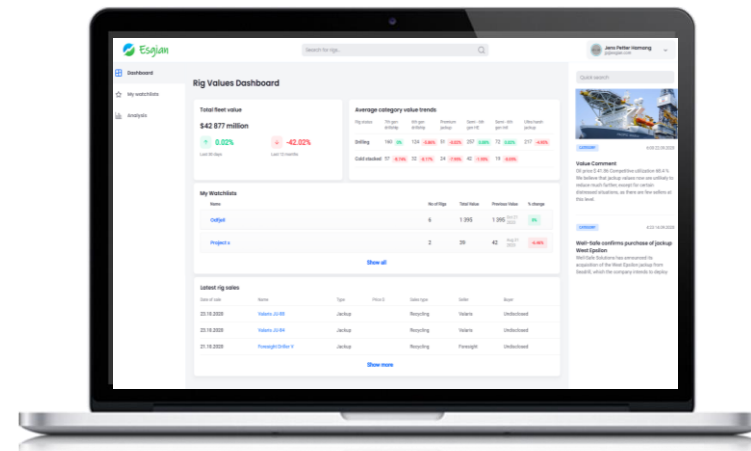
## Overview

- Emission modelled and activity tracking covering the entire Global PCTC sector
- Analytics tools designed to aid decision-making
- Subscription-based
- Updated continuously and accessible 24/7



## Tools and Features

- Custom emission and competitive position by vessel or operator/owner enabling comparative analysis
- Past, present and future trends
- News, commentary and reports
- Easy to use interfaces
- Export data/values to excel



# Greenpact Ships

Emissions benchmarking by satellite tracking and weather data application through advanced algorithms and machine learning

- Calculate Emissions
- Generate custom emission analysis and graphs
- Benchmarking & Comparative analysis
- Impact of future regulations and improvement initiatives
- Exclusive emission related news and commentary
- Transparent, easy to use interface

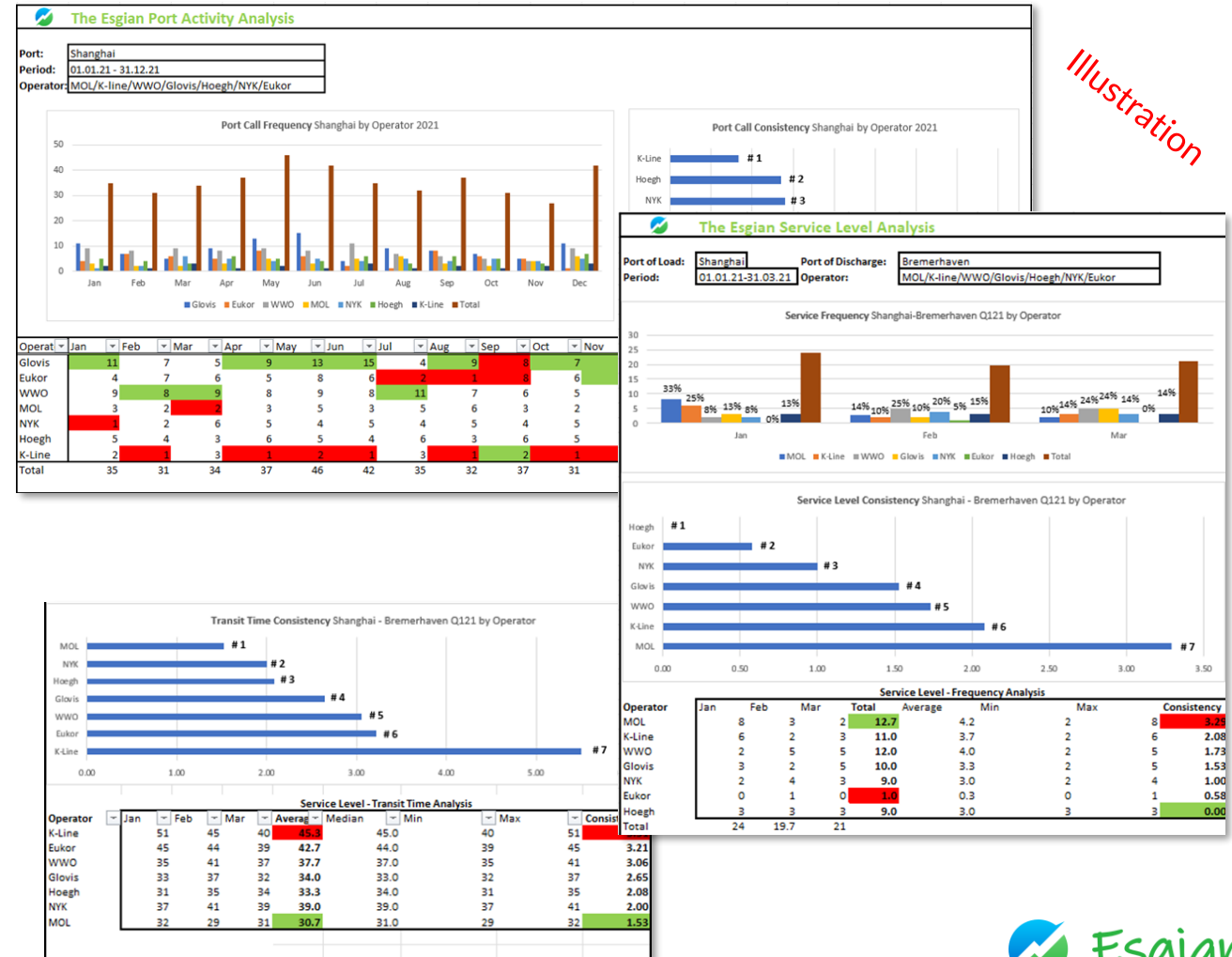
\* Screen shots from shuttle tanker suite



# Shipping Analytics

Innovative commercial tool to analyse own competitive position and relative service performance vis a vis competition

- Interactive world map
  - Understand the competitive landscape, vessel movements and market trends
- Competitive market position & port analysis
  - Assess each operators' commercial footprint and relative competitive position across the global markets
  - Analyze past and present market strength and reliability
- Scheduling and product offering analysis
  - Compare operators' service offering and consistency between loading and discharging ports
  - Actual frequency and transit time data
  - Sea/port ratio and average service speed
  - Consistency in service delivery

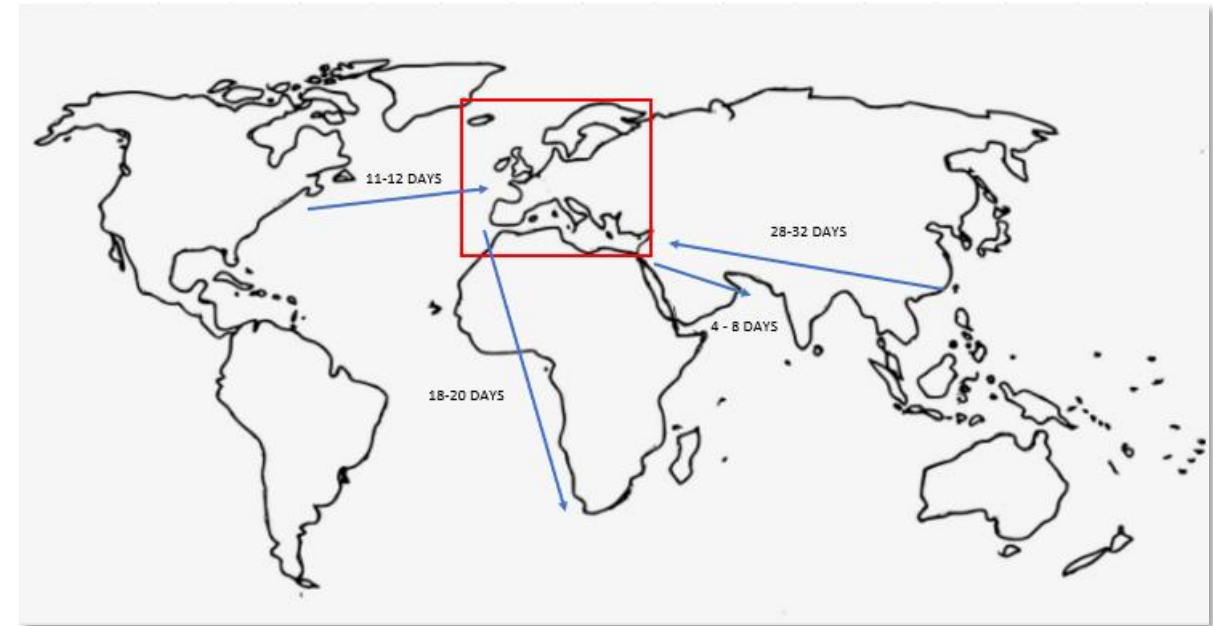


\* Screen shots to the right are draft design and dummy figures for illustrative purposes only

# Still not convinced?

## Case Study of the potential impact of the proposed European Emission Trading System (ETS) for Deepsea PCTC

- The proposed EU ETS revision will impact deepsea transportation of cars and other rolling stock as of 2023 where each operator will be subject to pay for emissions:
  - 100% exposure whilst in European waters and 50% of the voyages in/out of European waters will be subject to ETS
  - In the tabled revision, the shipping sector does not qualify for free allocations
- The current proposal on the table has an incremental scale starting with 20% of emissions subject to ETS already from 2023, growing to 45% in 2024 via 75% in 2025 to reach 100% in 2026
- Esgian has analysed the current service level\* of the seven major PCTC operators in the deepsea space and estimate that about 60 voyages enter European waters on a monthly basis, but the actual sourcing and vessel schedules vary greatly
- The map shown to the left clearly illustrate that the in/outbound schedule and its duration will impact the ETS calculation significantly, e.g., some carriers load China direct to North Continent giving a 30 day + inbound voyage subject to ETS. Conversely, a Europe to Middle East voyage will be down to as little as 4-5 days



\*Schedules and service level verified by Hesnes Shipping AS

# First you establish the baseline...

## Case Study of the potential impact of the proposed European Emission Trading System (ETS) for Deepsea PCTC

- Albeit most of the operators follow a liner service, the schedules are fluid and subject to rapid change, but broadly speaking we see the following trading pattern\*:

Trade Route / Operator	Hoegh	WWO	Eukor	NYK	MOL	K-line	Glovis
Europe to US (Atlantic RT) or Caribbean	2 per month	6 to 8 per month	N/A	N/A	2 per month	6 per month	N/A
Europe to Middle East / Far East	1 to 2 per month	N/A	6 to 8 per month	2 to 3 per month	4 to 5 per month	4 per month	7 to 8 per month
Europe to Oceania via Panama Canal	1 to 2 per month	2 to 3 per month	N/A	N/A	N/A	N/A	N/A
Europe to South Africa / Indian Ocean / Oceania	3 to 4 per month	2 to 4 per month	N/A	N/A	0 to 1 per month	N/A	1 per month
Europe to South America	N/A	1 to 2 per month	N/A	1 to 2 per month	1 per month	N/A	N/A
Europe to US WestCoast	N/A	2 per month	N/A	4 per month	N/A	N/A	2 per month
Europe Outbound	8 to 9	15 to 19	6 to 8	7 to 9	5 to 7	10	10 to 11

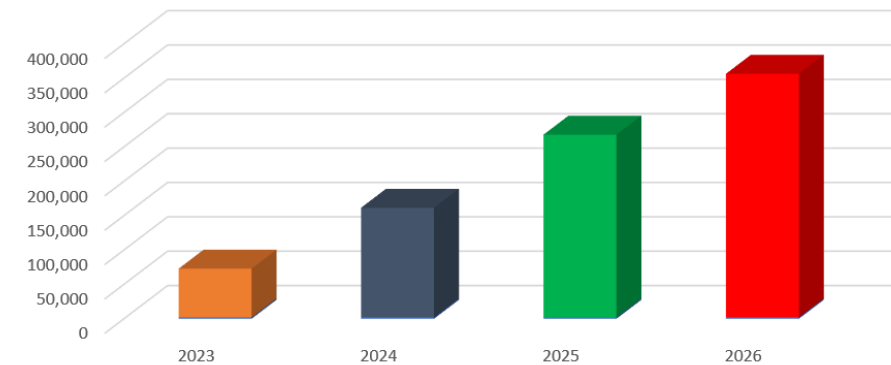
\*Schedules and service level verified by Hesnes Shipping AS

## ...then you get the result

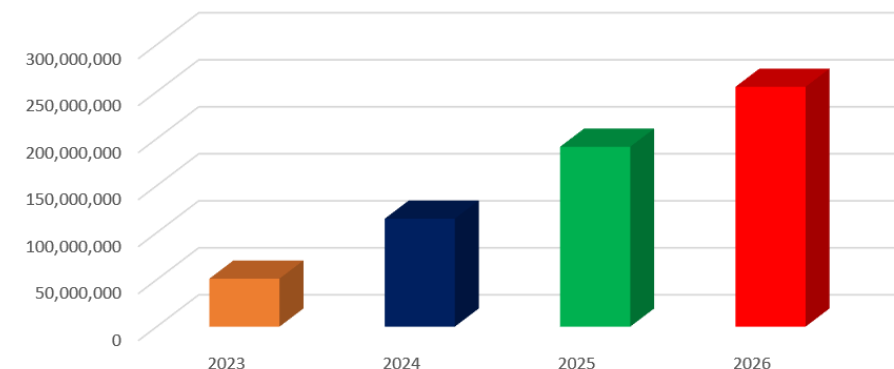
### Case Study of the potential impact of the proposed European Emission Trading System (ETS) for Deepsea PCTC

- Currently (March '22), the cost to emit 1 mt of CO2 under the ETS scheme is EUR 80 but according to analysts' consensus, it is expected to be increase to between EUR 90 and EUR 110 in the 2025-2030 period but still high uncertainty – our model assumes EUR 100/mt for illustrative purposes.
- The port range and steaming days vary greatly between each operator and individual voyages/trades, so our model takes a conservative approach with the following bunker consumption:
  - 15 days (50%) inbound from last port call outside Europe to first port call Europe
  - 10 days (100%) in European waters between port calls which also includes the Mediterranean Sea
  - 15 days (50%) outbound from last port call in Europe to first port call outside Europe
- Voyage in/out of European waters: 30 days steaming \* 45 mt IFO/day = 1.350 mt or 4.253 mt CO2 of which 50% will be subject to ETS
- Intra European waters: 10 days steaming \* 45 mt HFO/day = 450 mt or 1.418 mt CO2 which will be 100% subject to ETS
- With the incremental scale of 20% (2023), 45% (2025), 75% (2025) and 100% (2026), the cost picture for just these seven deep sea carriers is illustrated below per voyage and month meaning the bill can **surpass EUR 250 million** in 2026 on an annual basis... **Who will foot the bill?**

Estimated ETS Cost per voyage in/out of Europe (EUR)

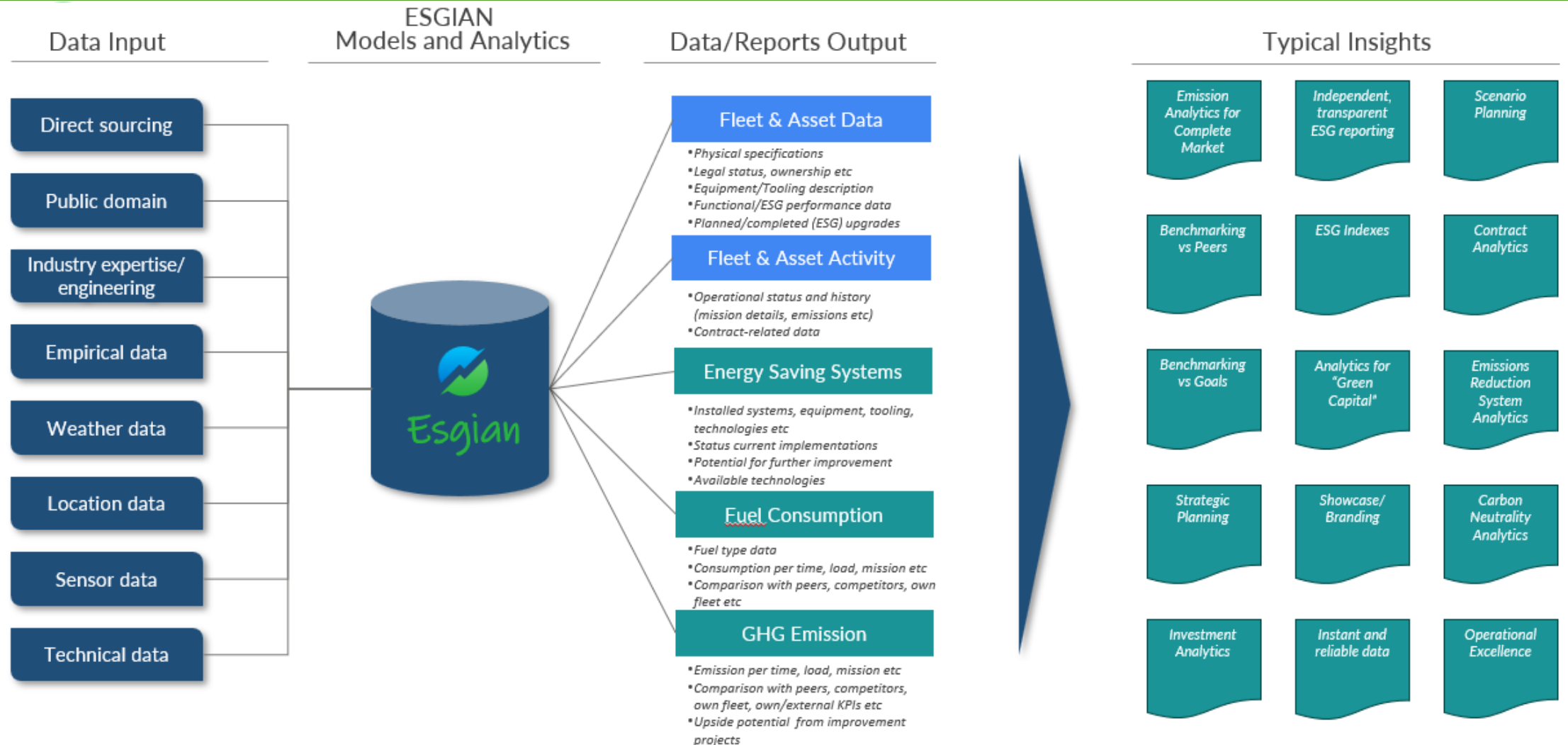


ETS Cost per Year in/out of Europe (EUR)



# The Esgian Ecosystem & Value proposition

“A look under the hood” – profound data acquisition, processing, modelling and reporting



# Forging Sustainable Strategy through Transitions

The Next Step: Looking back to see the future

- Climate change - an undeniable fact
- Regulatory pressures and customer demand increasing
- **Esgian** believe companies must look back in order to see the future as...
- **Backward facing**
  - Provides absolute figures on past events
  - Factual – numbers assumed to be known
  - The only sensible guide to past performance
  - Critical to get right
- **Forward looking**
  - Modelled accuracy
  - Enables proactive decision making
  - Provides the decision framework to reach stated goals
  - Scenario planning of different outcomes

- At **Esgian** we *look forward* with a strong historical foundation
- We invite future-oriented business leaders looking to make a difference to trust **Esgian** to deliver objective analysis and insight into future emissions and climate policy coupled with sound commercial analysis





## Contact Information:



Address:  
Soerkedalsveien 6  
0369 Oslo, Norway

Phone:  
+23 00 10 00

Email:  
[hello@esgian.com](mailto:hello@esgian.com)

Web:  
<http://www.esgian.com>

Stian Omli, Vice President Shipping  
Phone: +47 400 39 601  
Email: [stian.omli@esgian.com](mailto:stian.omli@esgian.com)

Jostein Opsahl, Product Manager Ships  
Phone: +47 908 89 373  
Email: [jostein.opsahl@esgian.com](mailto:jostein.opsahl@esgian.com)