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Co-funded by the European Union

Central Baltic Programme

Sustainable Flow

Sustainable Flow Digital Tool

In support of sustainable, energy-efficient, and cost-efficient port operations

WHY?

You cannot reduce CO2 emissions if you don’t know their sources.

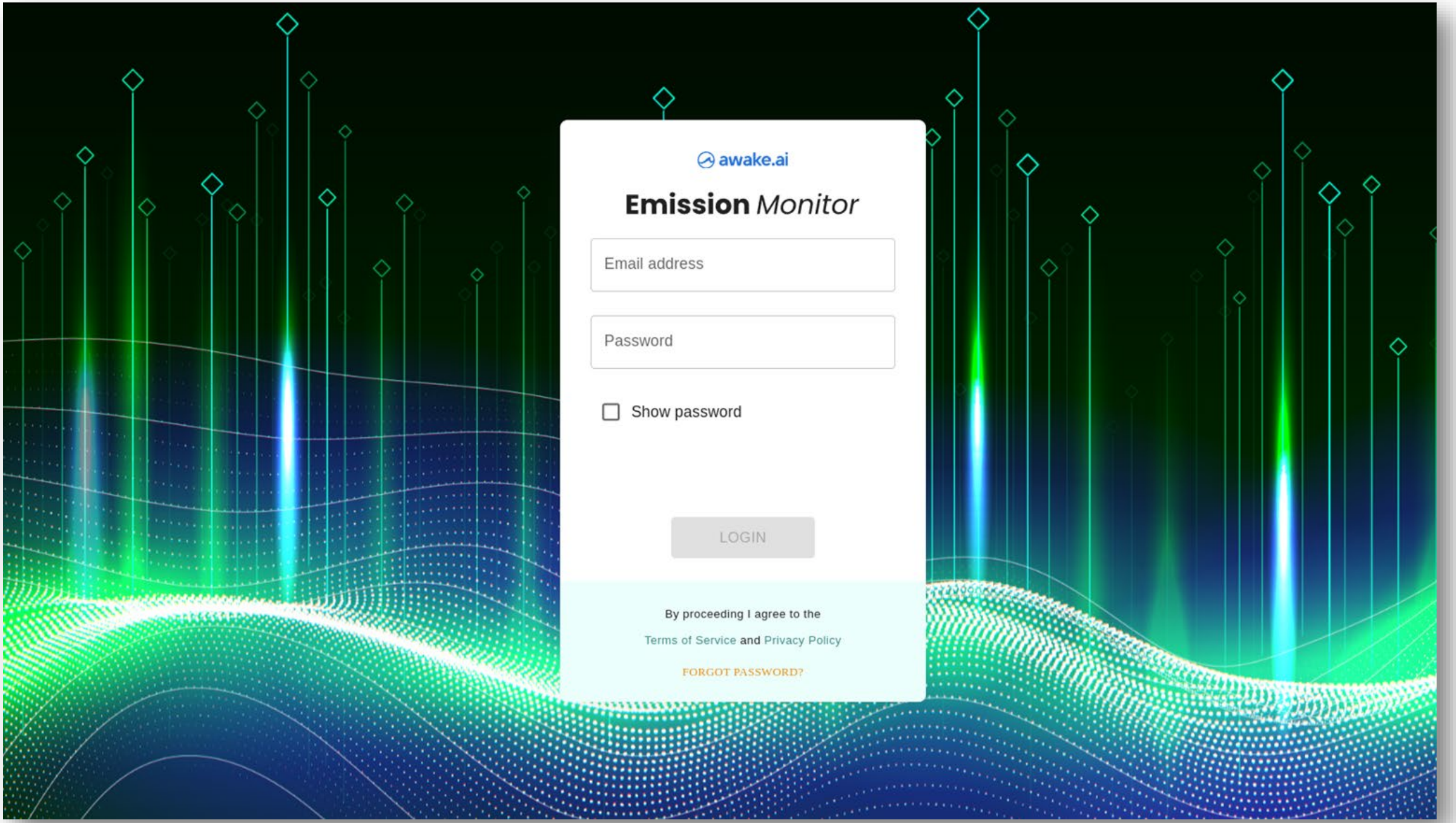
The Sustainable Digital Tool provides real-time CO2 emission data in accordance with sustainability reporting standards so that ports can have a comprehensive understanding of emission sources.

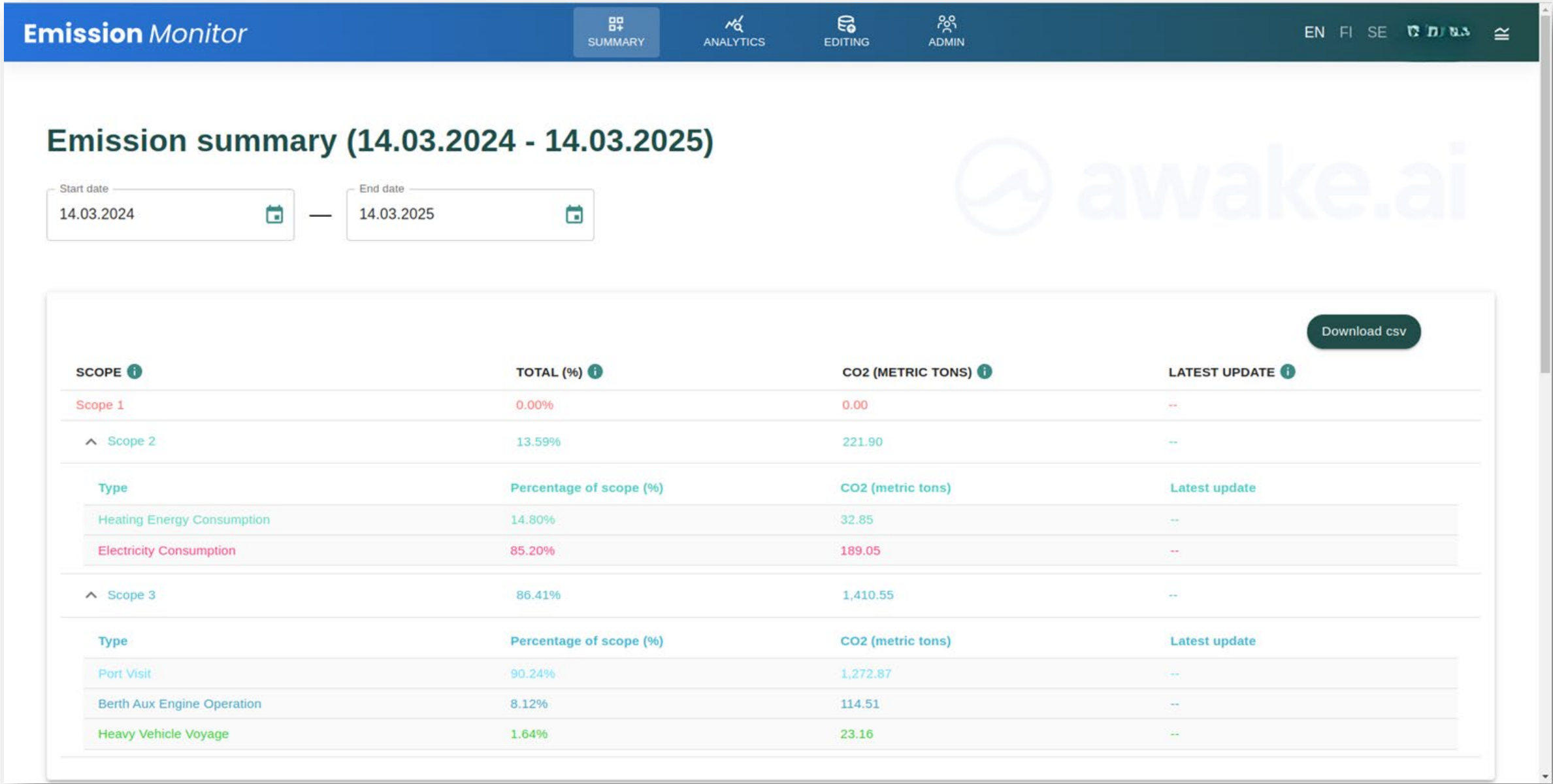
BENEFITS

It’s not only about **emission calculations** and enabling smooth sustainability reporting. With the tool you can also evaluate **what-if-scenarios** to support decision-making in your emission reduction and energy efficiency efforts.

- **Real-time CO_2 emission measurement**
- **Supports mapping and visualizing CO2 emissions**
- **High cybersecurity and data protection**
- **Developed based on port-specific needs**
- **Third parties (e.g. port operators) can report their emissions**
- **Supports reporting in accordance with the ESRS E1 in CSRD**
- **Open source**

PRELIMINARY VIEWS OF THE TOOL'S USER INTERFACE


awake.ai
Emission Monitor
Email address
Password
Show password
LOGIN
By proceeding I agree to the
Terms of Service and Privacy Policy
FORGOT PASSWORD?


Emission Monitor
SUMMARY
ANALYTICS
EDITING
ADMIN
EN FI SE
Emission summary (14.03.2024 - 14.03.2025)
Start date
14.03.2024
End date
14.03.2025
awake.ai
Download csv
SCOPE
TOTAL (%)
CO2 (METRIC TONS)
LATEST UPDATE
Scope 1 0.00% 0.00 --
Scope 2 13.59% 221.90 --
Type Percentage of scope (%) CO2 (metric tons) Latest update
Heating Energy Consumption 14.80% 32.85 --
Electricity Consumption 85.20% 189.05 --
Scope 3 86.41% 1,410.55 --
Type Percentage of scope (%) CO2 (metric tons) Latest update
Port Visit 90.24% 1,272.87 --
Berth Aux Engine Operation 8.12% 114.51 --
Heavy Vehicle Voyage 1.64% 23.16 --

Schemas

BerthVisitAux
Expand all `object`

CO2Emission
Collapse all `object`

- `emissionId*` `string` `uuid`
- `co2EmissionT*` `number`
- `scope*` Expand all `integer`
- `emissionEventDetails*` Expand all `(object | object | object | object | object | object | object | object | object | object | object | object | object | object | object | object | object | object)`

CarVoyage
Collapse all `object`

- `emissionBreakdown` Expand all `(array<object> | null)`
- `id*` `string` `uuid`
- `startTime*` `string` `date-time`
- `endTime` Expand all `(string | null)`
- `startLatitude` Expand all `(number | null)`
- `startLongitude` Expand all `(number | null)`
- `endLatitude` Expand all `(number | null)`
- `endLongitude` Expand all `(number | null)`
- `name` Expand all `(string | null)`
- `eventType` Expand all `string`
- `emissionSource` Expand all `string`
- `travelledDistanceM` Expand all `(number | null)`

CargoOperation
Collapse all `object`

- `emissionBreakdown` Expand all `(array<object> | null)`
- `id*` `string` `uuid`
- `startTime*` `string` `date-time`
- `endTime` Expand all `(string | null)`
- `startLatitude` Expand all `(number | null)`
- `startLongitude` Expand all `(number | null)`

Total Emissions

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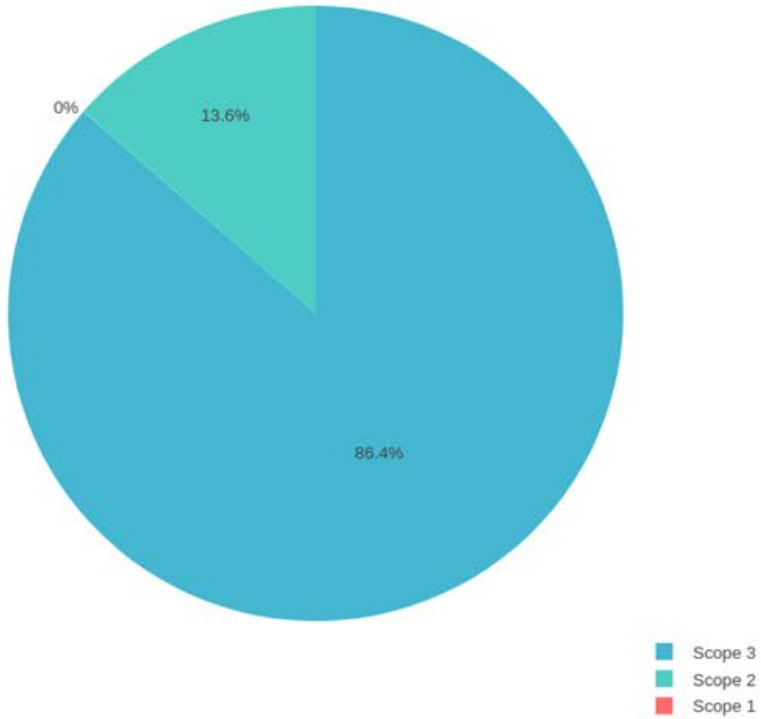
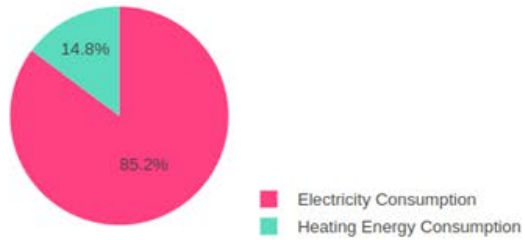
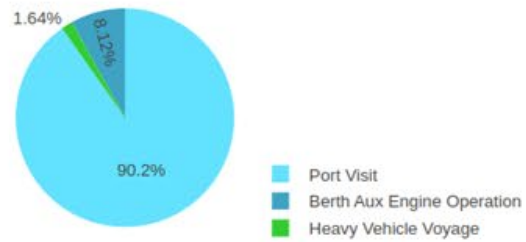


Scope 1

Scope 2



Scope 3



Emission *Monitor*

SUMMARY | ANALYTICS | EDITING | ADMIN

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EMISSION SUMMARY (14.12.2024 - 14.03.2025)

Start date 14.12.2024 — End date 14.03.2025

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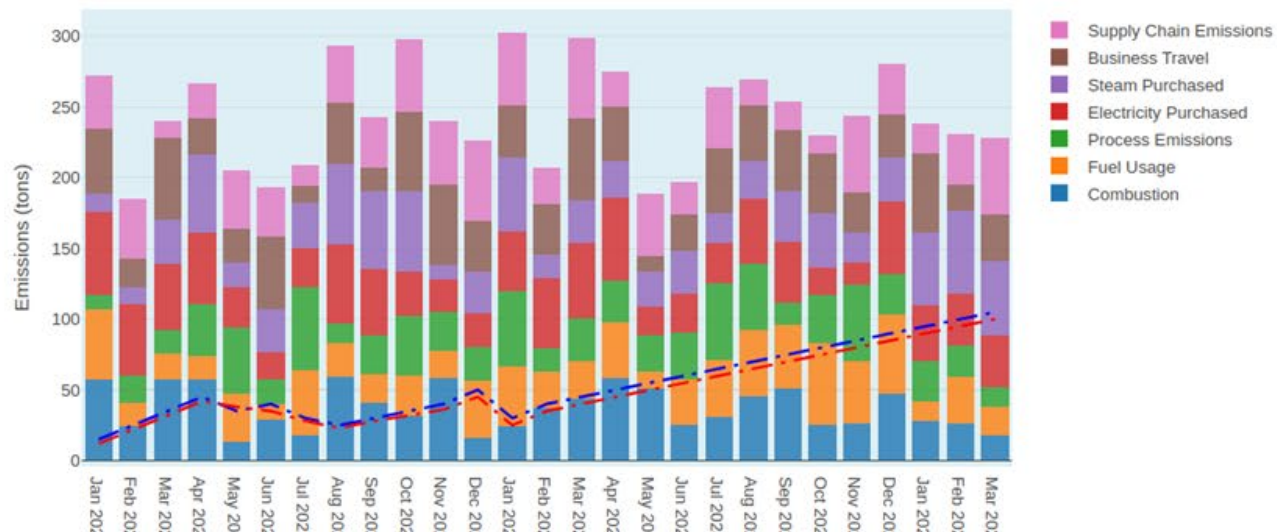
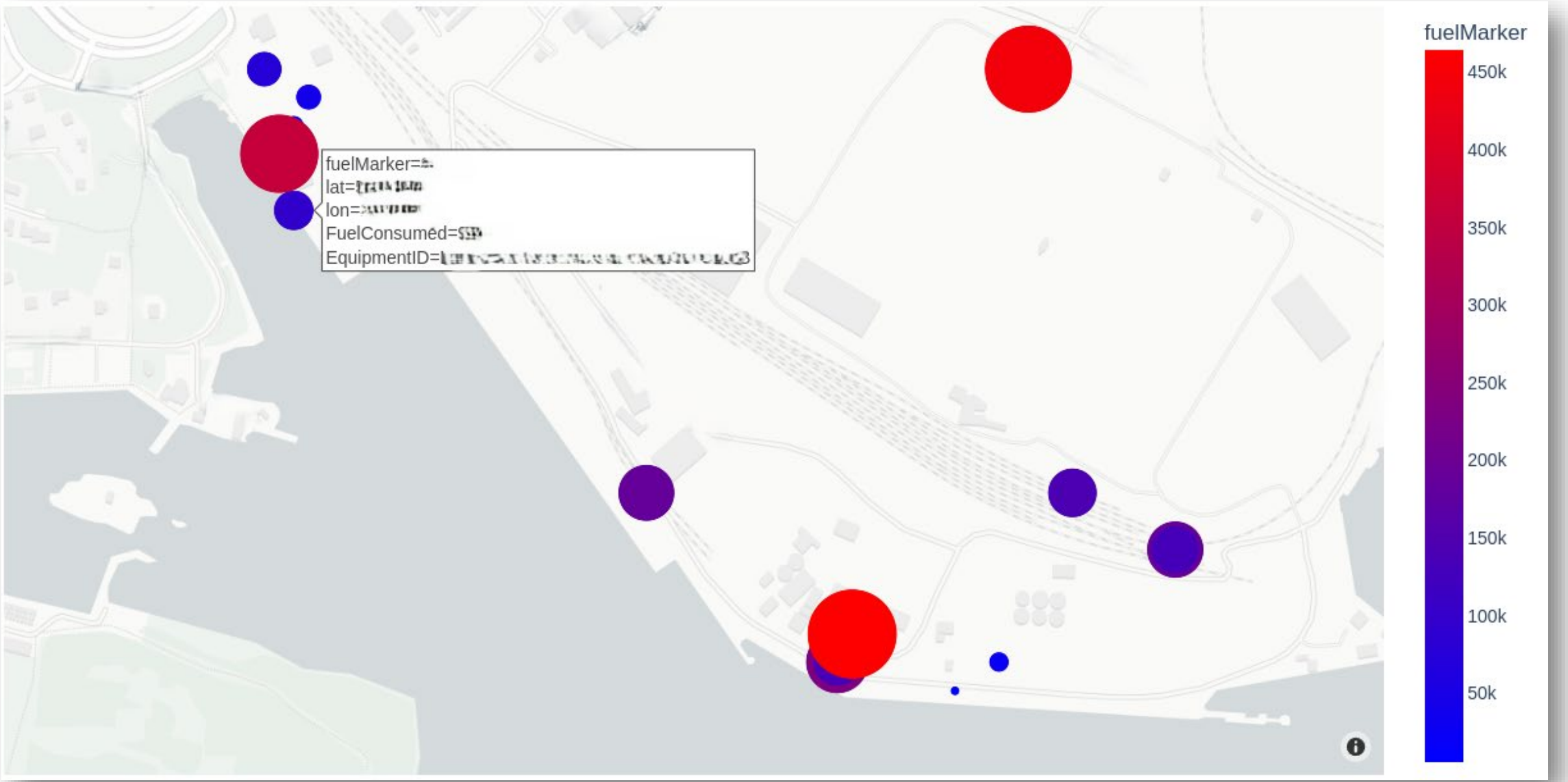
- **Scope 1 Total**
  - Combustion
  - Fuel Usage
  - Process Emissions
- **Scope 2 Total**
  - Electricity Purchased
  - Steam Purchased
- **Scope 3 Total**
  - Business Travel
  - Supply Chain Emissions

Scope 1 Total 3 Months Avg

Scope 2 Total 3 Months Avg




fuelMarker=
lat=
lon=
FuelConsumed=
EquipmentID=
fuelMarker
450k
400k
350k
300k
250k
200k
150k
100k
50k

Timetable


MILESTONE 0
Initial Project Plan and System Architecture
20.12.2024
MILESTONE 1
Final Project Plan and System Architecture
10.01.2025
MILESTONE 2
Lauch of Minimum Viable Product (MVP)
25.05.2025
MILESTONE 3
Full release of the software
25.08.2025
MILESTONE 4
Final system review and approval
25.10.2025
MILESTONE 5
Further development done
22.12.2025

Achievements by End of May 2026

Ports have reduced their CO2 emissions by at least 10 percent since the beginning of the project.

Ports have a tool that enables fact-based decision-making and smooth reporting.

Ports are greener and more sustainable, energy efficient and cost efficient.

centralbaltic.eu/project/sustainable-flow/

Emission Calculation Tool

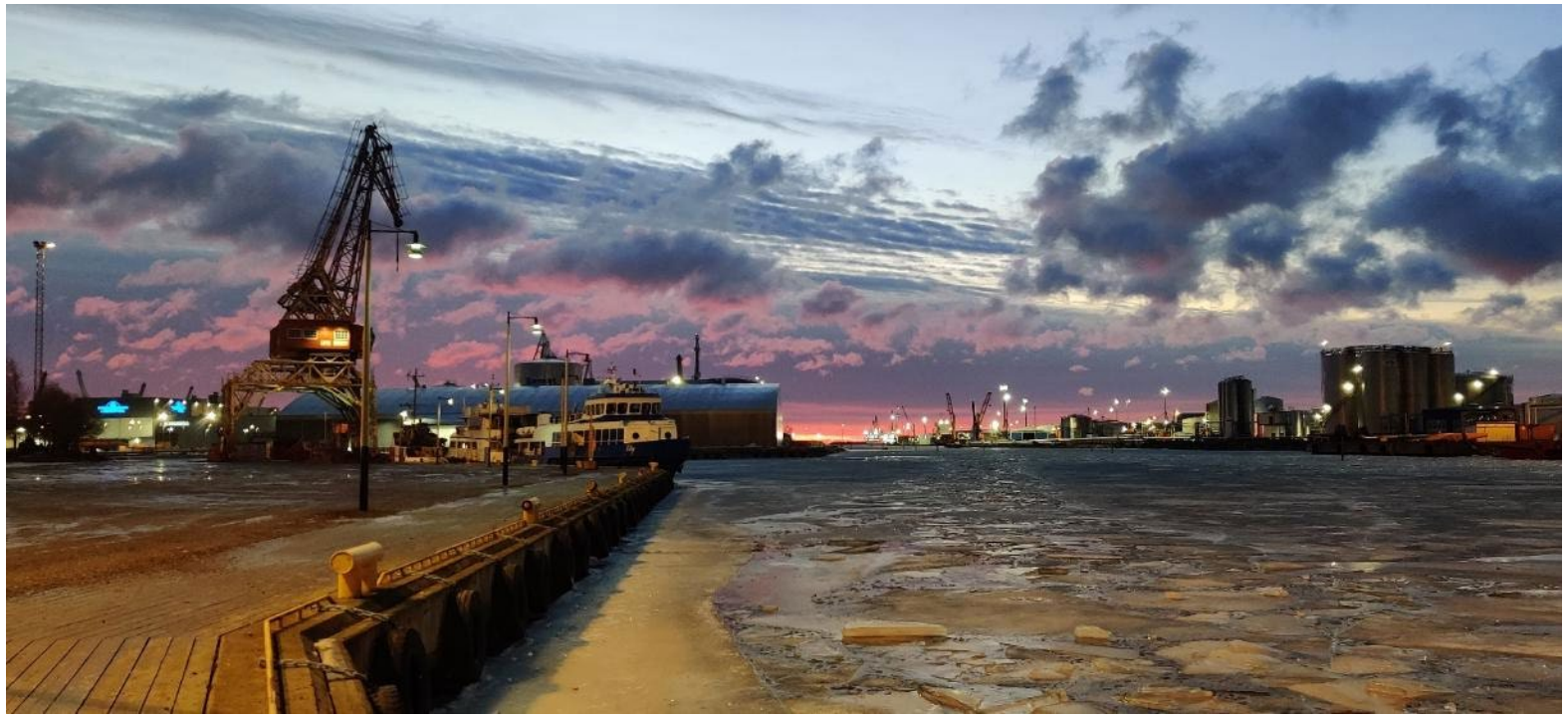
Empowers port businesses to efficiently grow and adapt to environmental challenges and green transition by offering a **secure, accurate and smooth way of working** and **operations that align with energy efficiency and saving needs**.

Decision-Making Tool

Aids ports to make well-informed decisions on sustainable investments based on scenarios analysed with the tool.

Joint Success

The Sustainable Flow partners in Finland, Sweden, Estonia and Latvia are working for you. **Ports' input is essential** to have the best possible tool for reducing CO2 emission and to have more energy-optimised operations.



THANK YOU

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Sustainable Flow

IN COOPERATION WITH

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SWEDISH MARITIME ADMINISTRATION

TRANSPORTFÖRETAGEN Ports of Sweden

ITDA

TAL TECH

Fintraffic

HÅ

https://centralbaltic.eu/project/sustainable-flow/