Tracking and Tackling Emissions in Ports

In partnership with:

Thetius

ERICSSON

Thetius

Powering Ports to Net Zero: a framework for port decarbonisation

Thetius

If you have seen one port... you have seen one port.

Thetius

A FRAMEWORK FOR PORT DECARBONISATION

DETECT

Detect the source(s) of emissions. This is required to obtain a clear and quantifiable view of how to move forward with your emissions reduction strategy.

DECIDE

Decide which technologies or strategies to deploy to target port emissions.

DEPLOY

Deploy these technologies or strategies, either one by one or in conjunction with one another.

- **Ship to shore cranes,** eg. gantry cranes.
- **Cargo handling equipment,** e.g. cranes, forklifts, conveyors.
- **Vehicles operating within the port** e.g. trucks and tractors.
- **Port facilities,** e.g. warehouses, offices, businesses within the port, and other infrastructure.
- **Visiting vessels,** e.g. ships idling in port, alongside a berth or at anchor.
- **Port workboats,** e.g. tug boats, pilot boats, dredgers, surveyors operating in and around the port.
- **Hinterland connections,** e.g. trucks or trains that enter the port.

Thetius

A FRAMEWORK FOR PORT DECARBONISATION

DETECT

Detect the source(s) of emissions. This is required to obtain a clear and quantifiable view of how to move forward with your emissions reduction strategy.

DECIDE

Decide which technologies or strategies to deploy to target port emissions.

DEPLOY

Deploy these technologies or strategies, either one by one or in conjunction with one another.

Thetius

Smart Technologies

$11.5 BILLION

The market for smart technologies today is substantial. Thetius IQ values the port technology market at $4.1 billion in 2022 and predicts it will reach $11.5 billion by 2029.

Thetius

Electrification

Real-Time Data Processing is vital for smart grids within ports to instantaneously balance energy loads, detect faults, and respond to changing operational needs.

Thetius

A FRAMEWORK FOR PORT DECARBONISATION

DETECT

Detect the source(s) of emissions. This is required to obtain a clear and quantifiable view of how to move forward with your emissions reduction strategy.

DECIDE

Decide which technologies or strategies to deploy to target port emissions.

DEPLOY

Deploy these technologies or strategies, either one by one or in conjunction with one another.

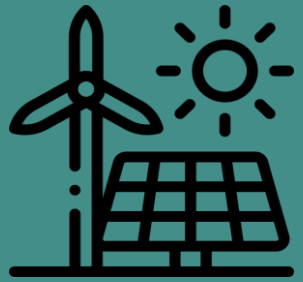
Thetius

Deploy

- Assess current and future infrastructure needs
- Build an investment case
- Verify technology claims
- Phase implementation
- Engage all stakeholders
- Measure success

The first step is deciding what technologies to implement. Then identify the best way to do it. This includes determining if the current infrastructure is sufficient or whether it needs to be upgraded.

Thetius



Renewable Energy

Portsmouth International Port in the UK switched to solar power in 2023, installing 2,660 roof-mounted solar panels across its buildings. This provides 35% of the site's electricity.

Thetius

Recommendations to Industry

Thetius

Recommendations to Industry

1. Start with the lowest hanging fruit

Renewable energy will generate the most substantial emissions reductions but will also require significant investment.

Thetius

Recommendations to Industry

2. Form innovation partnerships

Ultimately, it's important to find a partner with a good track record and tangible results.

Thetius

Recommendations to Industry

3. Don’t run before you can walk (and don’t forget the basics)

It’s also important to start slowly and build up gradually. Implement and future proof the network required as a foundation, deploy the technologies, and start decarbonising.