Interreg

Co-funded by the European Union

Central Baltic Programme

Sustainable Flow

Sustainable Flow: Collaboration with Our Pilot Ports

Introducing our work within the Sustainable Flow project. We are collaborating with the Port of Oxelösund and the Port of Norrköping. These ports are crucial for sustainable logistics.

Port of Norrköping

Location & Function

- Located on the Baltic Sea, ~130 km south of Stockholm
- Full-service port with intermodal logistics capabilities
- Key terminals: Öhman, Pampus, Energy Harbour, Heavy Crane Area

Cargo Handled

- Forestry, steel, grain, energy & petroleum products, containers, project cargo
- ~500 trucks & 3–5 trains/day
- Industrial terminals for Holmen, Lantmännen, Yara, Cementa, Wibax

sustainability & Energy

- Total energy use (2021): 12,468 MWh
  - Transport (HVO100): 7,900 MWh
  - Operations: 3,127 MWh
  - Buildings: 940 MWh
- 9/10 cranes & all forklifts electrified
- Transition from diesel to HVO100 completed
- LED lighting in place; solar panel plans underway

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Environmental Impact (2022)

- Total CO_2e: ~18,825 tons
  - Scope 1: 898 tons (own equipment)
  - Scope 2: minimal (green electricity)
  - Scope 3: majority (ships, road freight)

Ongoing Development

- Shore power & solar energy under investigation
- Port-wide shift toward zero-emission operations
- Digitalisation through PortIT and Sustainable Flow

Port of Oxelösund

LoLocation & Capacity

- Ice-free, 16.5 m deep port on Sweden’s east coast
- Direct road & rail links, short approach for efficient access
- Handles ~4.7 million tons (2022), expandable to 10.5 million tons/year

Core Operations

- Bulk cargo, liquid bulk, containers, RoRo, general cargo
- Key client: SSAB (steel), plus oil, cement & dry bulk flows
- "All-inclusive port" handling entire transport chains

Green Performance

- 83% of fuel use is HVO100 (2022)
- Electric cranes and energy-saving upgrades since 2017
- Energy use down to 10.9 MWh electricity, 2 MWh district heating (2022)

Climate Action

- ~851 tons CO_2 from machines (2022), reduced despite higher volumes
- "Virtual Arrival" cuts 20.3 tons CO_2 per vessel trip (ESL project)
- Solar panels & ship sludge solutions under development

Investments & Future Focus

- New permit allows long-term expansion
- New finance & master data system in 2024
- Shore power in RoRo terminal under planning
- Exploring digitalization (Power BI, Port Activity App)

Climate and Energy Actions in Norrköping & Oxelösund Ports

Port of Norrköping

- Shift to electricity and HVO100: 9 out of 10 cranes and all forklifts converted
- Energy efficiency: LED lighting, reduced power subscriptions, energy audit
- Planned: solar panels, shore power, and reactive energy storage
- Truck engine settings adjusted from max to medium for reduced fuel consumption

Port of Oxelösund

- 83% of machinery runs on HVO100; main cranes are electric
- 8% energy reduction via insulation, ventilation upgrades, LED
- “Virtual Arrival” project cuts 20 tons CO_2 per vessel trip
- Planning solar panels and shore power for new RoRo quay

Building Strong Foundations

Coordination

Weekly coordination meetings ensure alignment.

Communication

Ongoing contact via email, Teams, and phone maintains open lines.

Collaboration

Structured and agile collaboration drives progress.

On-Site Engagement and Co-Creation

1 **Site Visits**

Site visits and workshops provide insights.

2 **Challenge Identification**

Identifying challenges and needs is key.

3 **Shared Vision**

Creating a shared vision for emission reduction is essential.

Integration and Testing

API Identification

Ports identify necessary APIs.

Data Delivery

Real data is delivered to Awake.ai.

Tool Development

Practical tool development is in progress.

First Test Pilots

Oxelösund & Norrköping

Testing the MVP.

Mariehamn

Testing the MVP

Early Feedback

Shapes ongoing development.

Looking Ahead

High-Level Cooperation

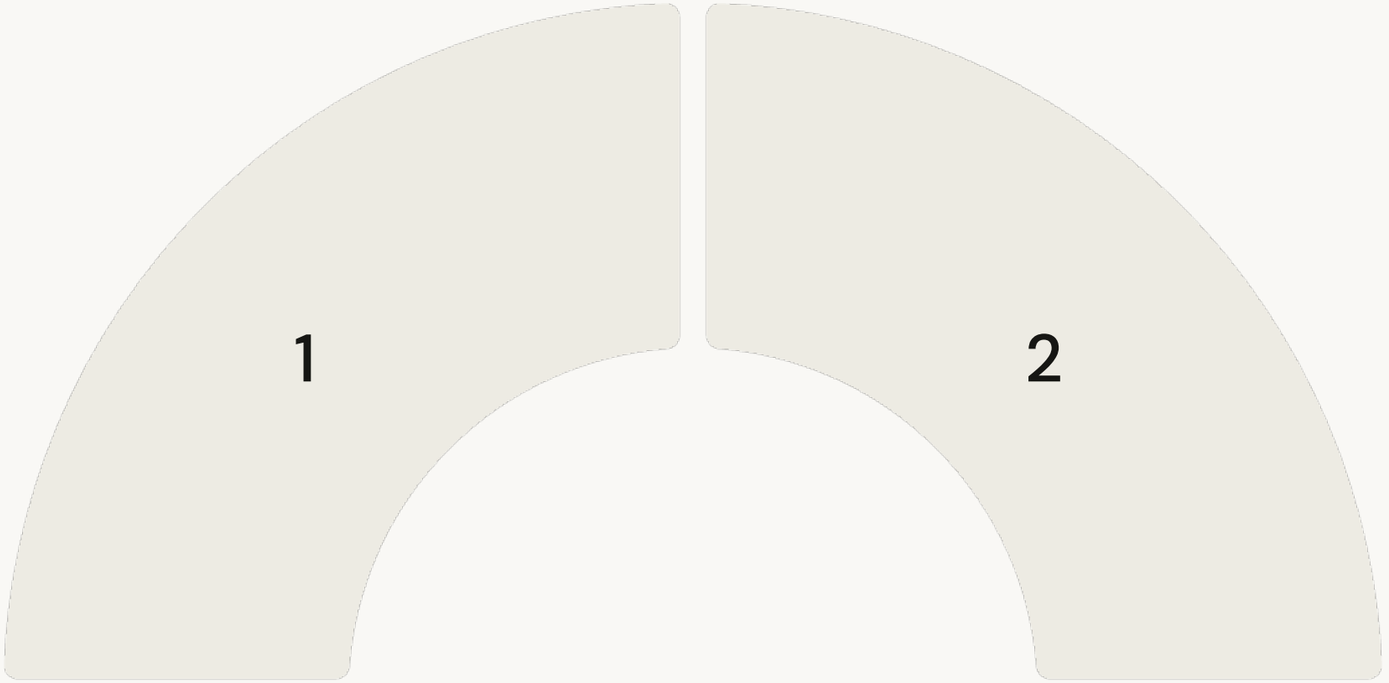
Continued

cooperation is vital.

Real Results

Helping the ports become more

sustainable



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Thank You!

Questions?