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DEMO 10 SPREADING ROAD TRAFFIC

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Introduction



- Aim The Port of Rotterdam Authority, together with market parties, is investigating options to make distribution more sustainable and to improve the flow of goods through the port by road. Board computer data gives us more insight into the bottlenecks of 'off-peak distribution'.
- Value proposition 20% reduction of traffic by 2030 \bullet

KPIs

- Truck turnaround times
- Truck emissions (peak vs off-peak times)

Lessons Learned

- Decrease of waiting times at the terminal during off-peak hours - For the first time, assumptions could be

underpinned with real data/ helps companies with data based decision making - More insights into dependencies (challange (warehouse) opening hours)



Current Progress Status

1. Launch of demonstrator; 2. Elaboration of KPIs, Operation characterization and modelling, and ongoing studies; 3. Testing phase in lab and data collection; 4. simulations and testing phase in pilot area; 5. results and commercially available; 6. ready





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PORTO DE

SINES









INTERACTIVE EMISSION MAPPING TOOL

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Introduction



Aim of demo – A digital and interactive visualisation tool of carbon and pollutant emissions in port areas integrating different emission sources (i.e. road transport, ships at berth, container-handling machines within terminals)
Value proposition – The tool allows port authorities and stakeholders in the port ecosystem to assess the impact of regulatory measures on carbon and pollutant emissions in a broader context than simply the individual terminals or the port area.

KPIs Emission sources apportionment:

- CO2 emissions (kg/h or tons/year)
- NOx emissions (kg/h or tons/year)

Lessons Learned

• **Barriers** – The main barriers on the conception and development side came from the lack of available data shared by port authorities to correctly model and validate the different emission sources in the port

Road traffic performance:

- Average traffic speed (km/h)
- Traffic flow (#veh/h)

ecosystem. The value of the tool would be better perceived by port authorities only if they were willing to use it to analyze specific use-cases. IFPEN and POR used the tool to complement analysis of Demo 10.

• **Scalability** – The tool is generic and easily adaptable to any port of any size. Very few input data are necessary for application. Input data about port operations (e.g. vessels mouvements) would facilitate more comprehensive analysis of emissions in port areas.



Current Progress Status

1. Launch of demonstrator; 2. Elaboration of KPIs, Operation characterization and modelling, and ongoing studies; 3. Testing phase in lab and data collection; 4. simulations and testing phase in pilot area; 5. results and commercially available; 6. ready to scale up

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