



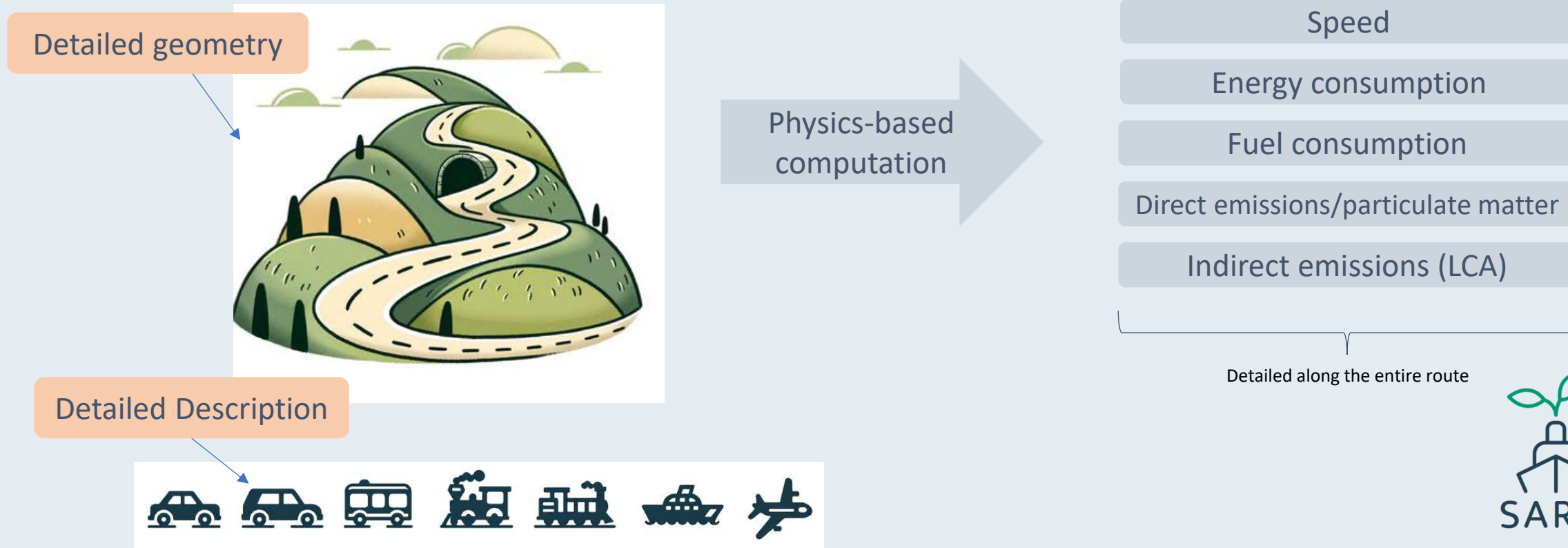
SINTEF

ENERGY MODULE TOOL



Energy Module Tool

For calculating speed, energy usage and emissions for a given vehicle driving a given route



Configuration

Interactive

Vehicle

Average diesel private vehicle

Route

Waypoints

European Road Network

1

-8.559140484705495

42.87469255164095

2

-8.64328237367647

42.46910983949863

Reverse

Driver

Economic

Normal

Aggressive

- Input O/D pair and tool determines routing
- OR -
- Input own routing path



- Select default vehicle
- OR -
- Customize vehicle *

Energy module

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Log out

Main

Overview

Method

Emission factors

Publications

Web calculator

Usage

Calculate

Vehicles

Vehicle fleets

REST API

Usage

Swagger

Admin

Usage statistics

Error messages

User management

energimodul@sintef.no

S. P. Andersens veg 3

Configuration

Interactive

Vehicle picker

Pick one of the already existing vehicles, or go to the [Vehicle editor](#) to create a new one.

Vehicle type:

Fuel type:

Public:

Definition types:

Search:

LargeGoodsVehicle

All

All

All

Name, description, id ...

My organization's vehicles

Energy module default vehicles

Other public vehicles

My organization's vehicles

Vehicles shown here are those people in your organization have created in the [Vehicle editor](#).

Volvo FH Euro 6, 6x2

Volvo FH Electric, 6x2

Heavy distribution, closed unit (electrical)

Heavy distribution, closed unit (hydrogen)

Heavy distribution, closed unit (diesel)

Average electrical goods vehicle

Average diesel goods vehicle

Heavy distribution, container (electrical)

Heavy distribution, container (hydrogen)

Heavy distribution, container (diesel)

Articulated semi, closed (electrical)

Articulated semi, container (electrical)

Dry bulk truck (electrical)

Modulvogntog (electrical)

Tank truck, distance (electrical)

Thermo truck (electrical)

Timber truck with hanger (electrical)

Articulated semi, closed (hydrogen)

Articulated semi, container (hydrogen)

Dry bulk truck (hydrogen)

Modulvogntog (hydrogen)

Tank truck, distance (hydrogen)

Thermo truck (hydrogen)

Timber truck with hanger (hydrogen)

Articulated semi, closed (diesel)

Articulated semi, container (diesel)

Dry bulk truck (diesel)

Modulvogntog (diesel)

Tank truck, distance (diesel)

Thermo truck (diesel)

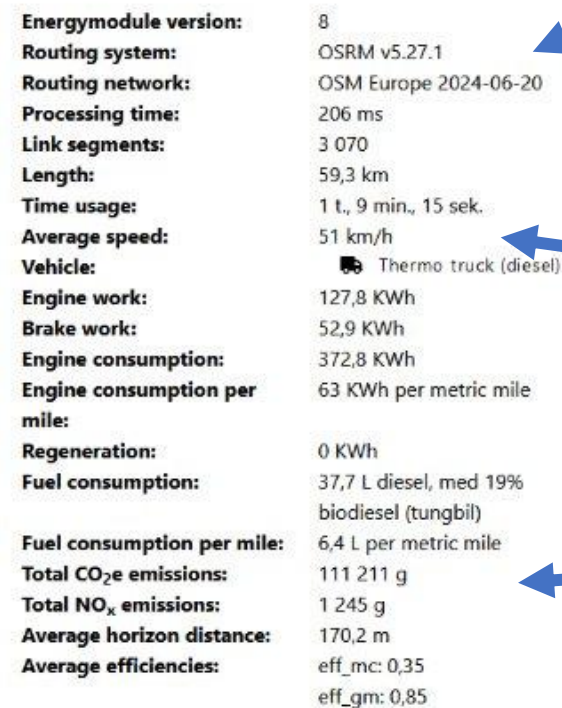
Timber truck with hanger (diesel)

Average hydrogen goods vehicle

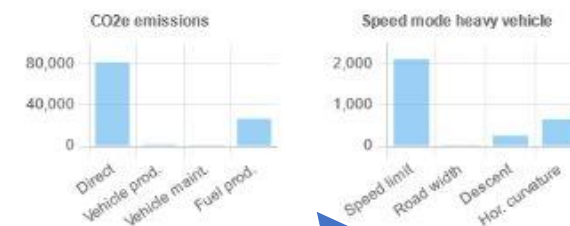
Cancel

Run calculation

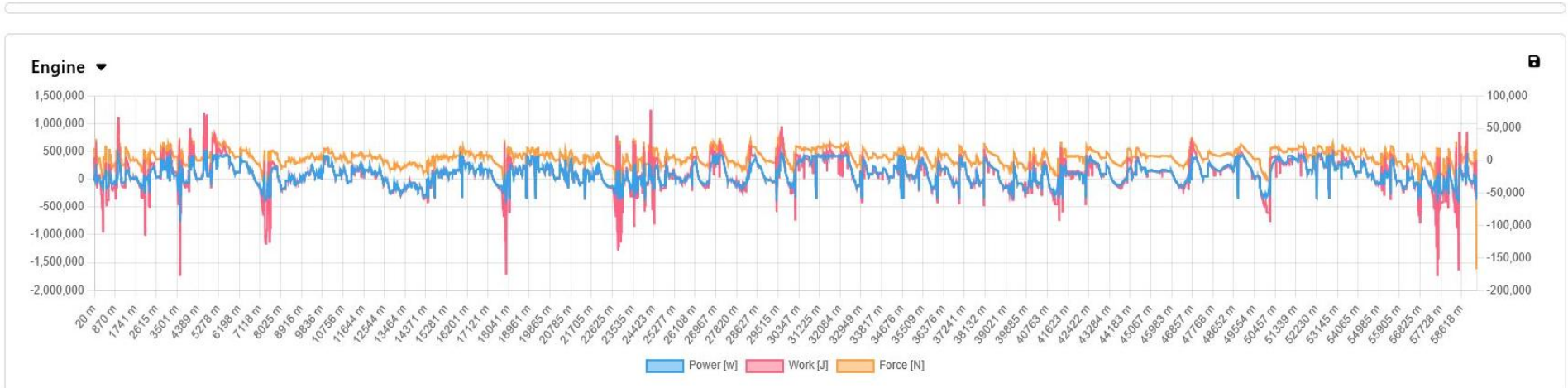
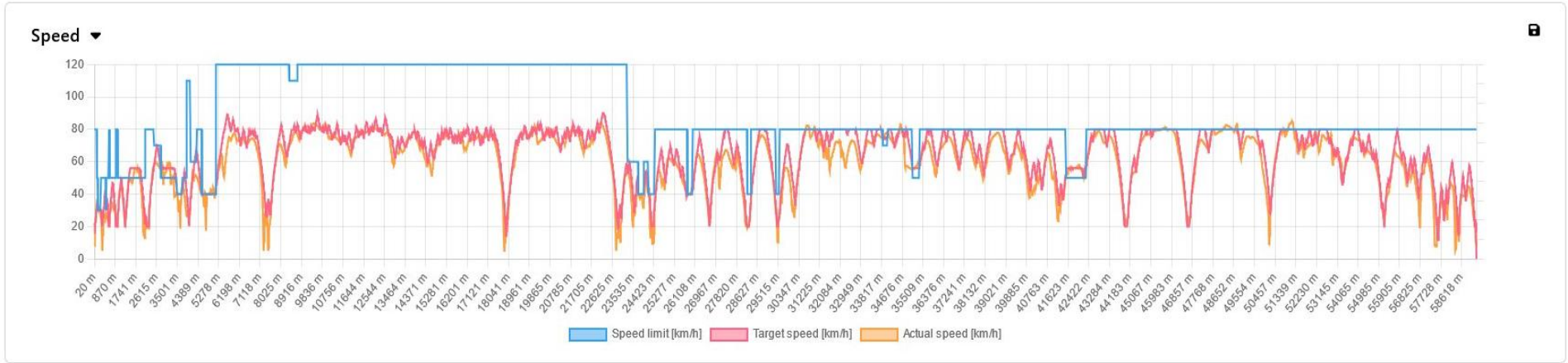
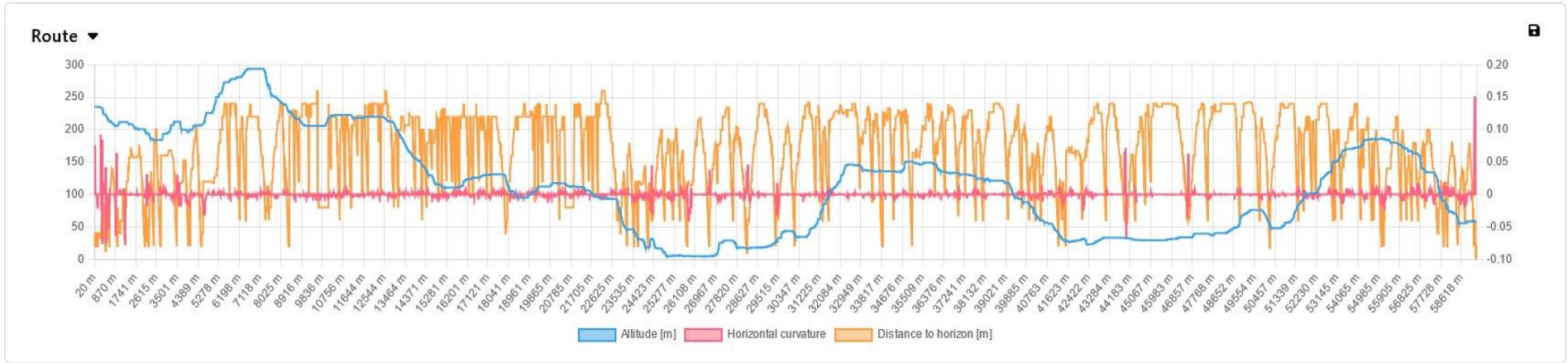


 Export

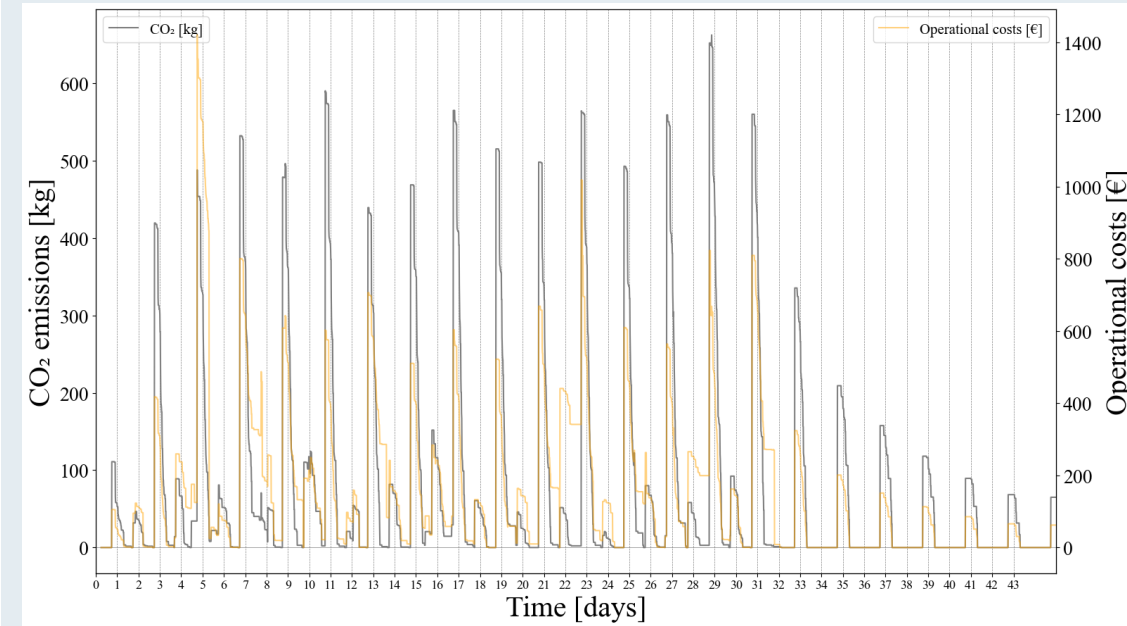
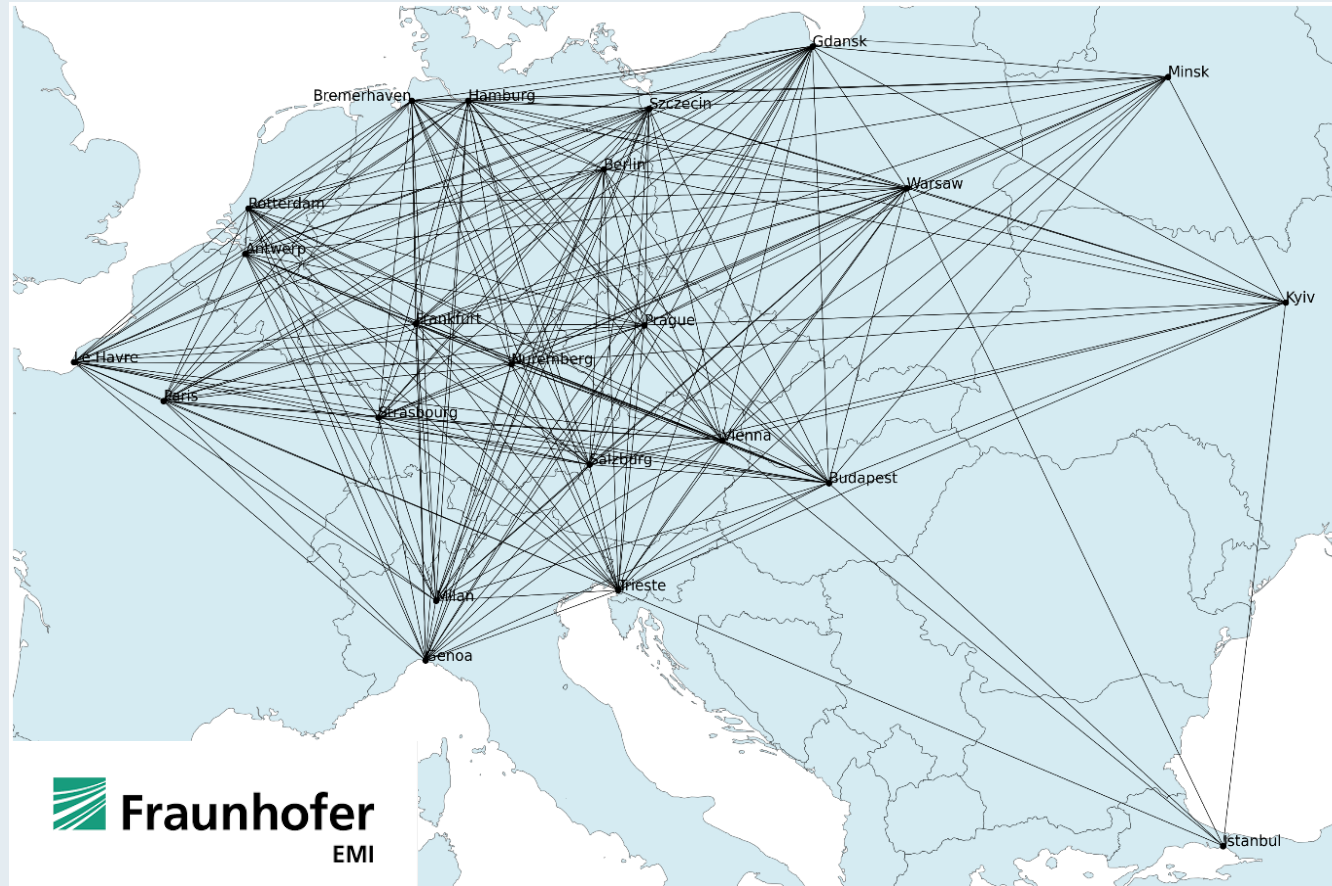
Emissions



Emission details



Energy Module integrated with ASTROIT

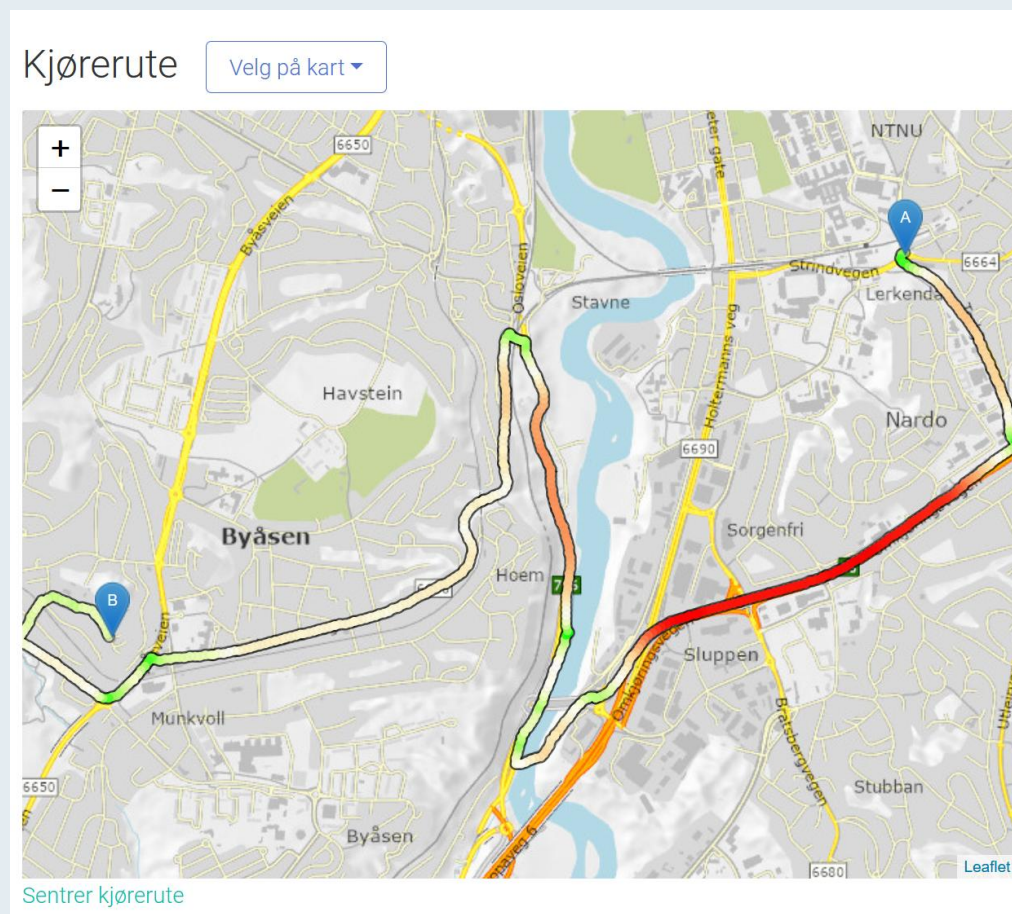


Unique selling points of the Energy Module

- All modes are included - multimodality can be handled in one tool.
- Considers topography and geometry of the road
- More transparent (know which assumptions are made)
- More user friendly (less factors to select because model is “physics-based”)
- Helps to better integrate the emission calculation with the traffic simulation (transport/traffic models), as it can calculate the emission on a route-level

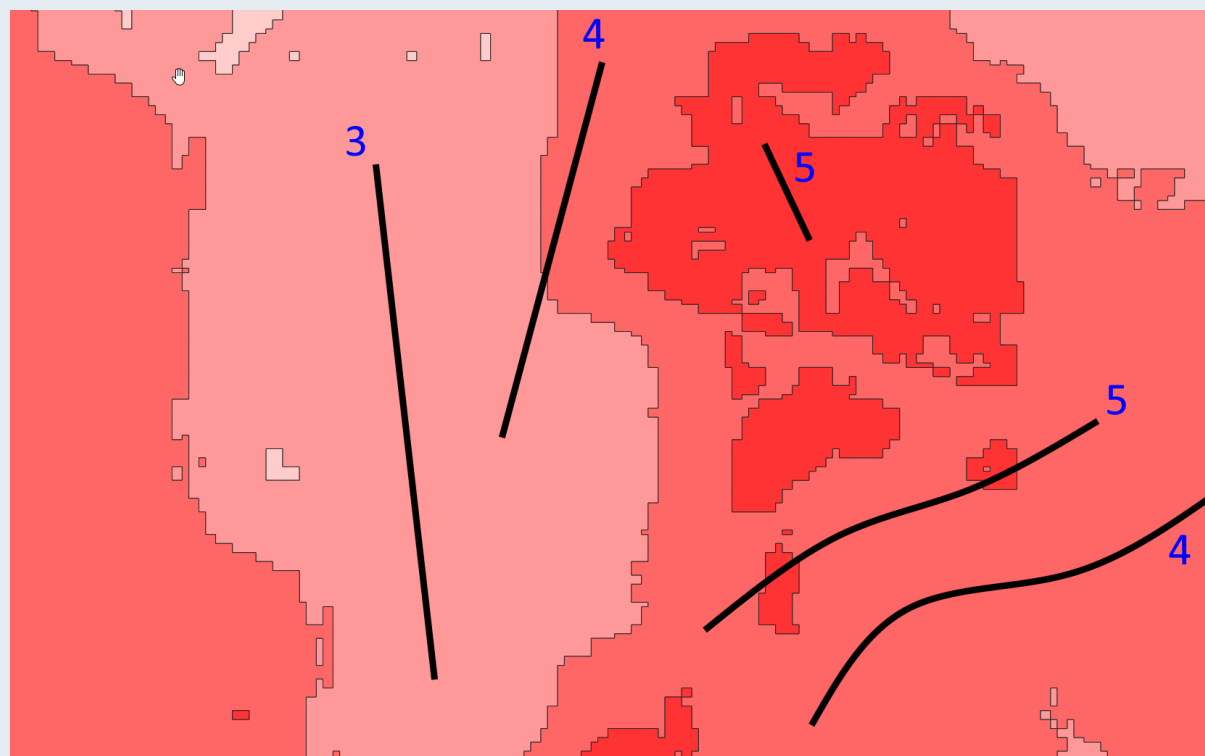
Energy Mapping (*beyond SARIL's European Scenario*)

- Energy mapping (visualization)



Resilience-based routing (*beyond SARIL's European Scenario*)

- Hazard levels assigned to road links – route based on least likely disruptive route (or a combination with reduced costs and reduced emissions)

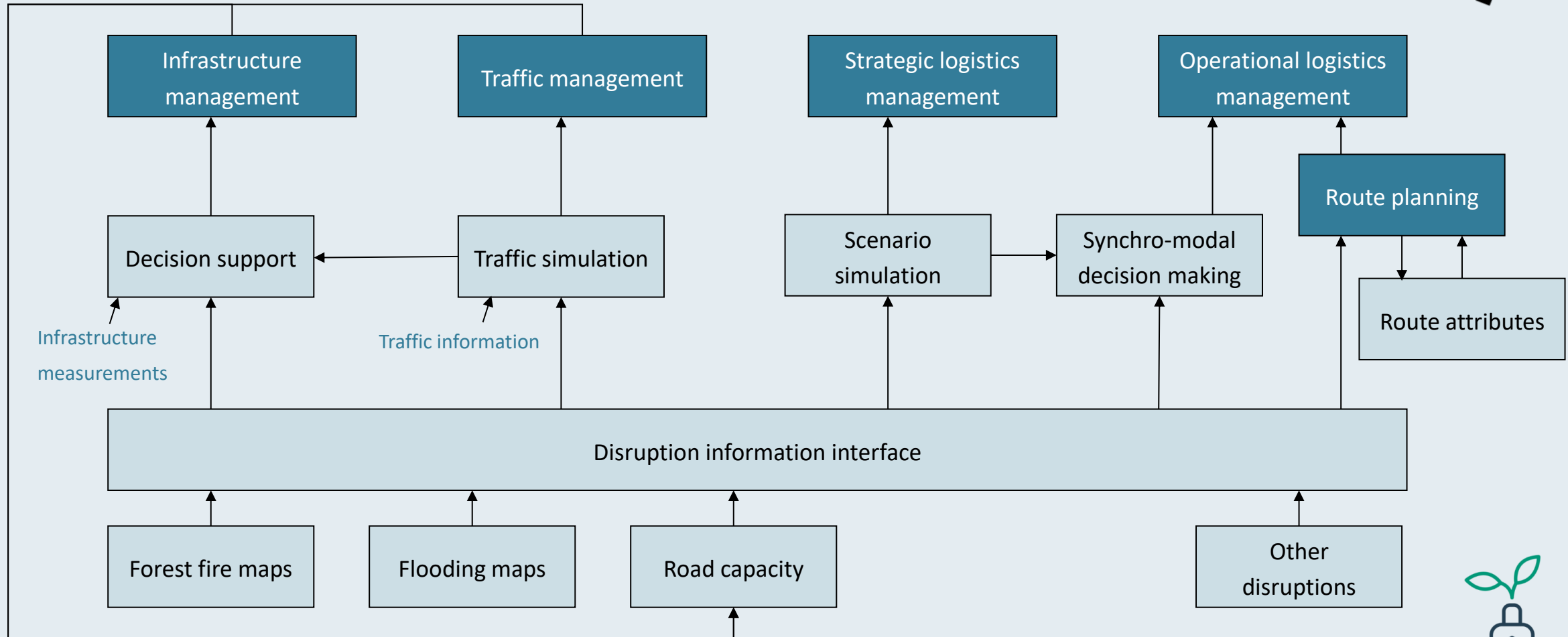


Customizable Fleets *(beyond SARIL's European Scenario)*

- Logistics providers can customize fleets
- More user friendly to define fleet and routes



SARIL toolkit for sustainability & resilience for infrastructure and logistics networks



Thanks for your attention

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Universidade de Vigo



alice | Alliance for Logistics Innovation through Collaboration in Europe



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