Interreg

Co-funded by the European Union

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REISFER

Suomenlinna 2 emission reduction

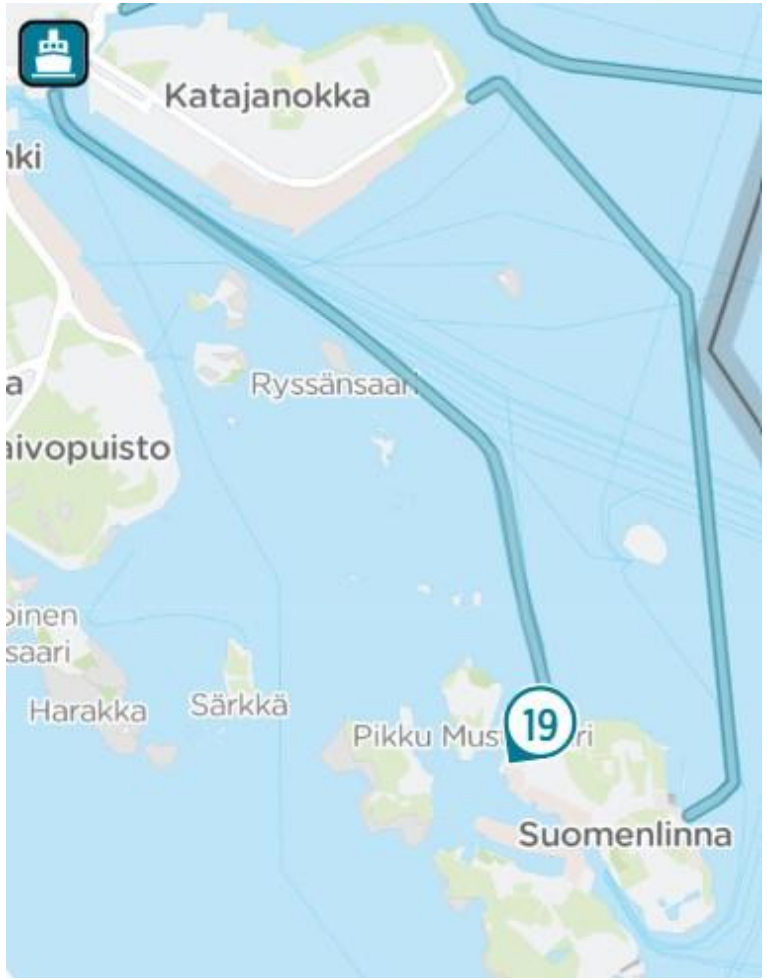
MS Suomenlinna 2

- Loa 33,8m
- Beam 8,5m
- Draught 3,2m
- 2x500kw Azipod
- 395 pax
- In operation since 2004

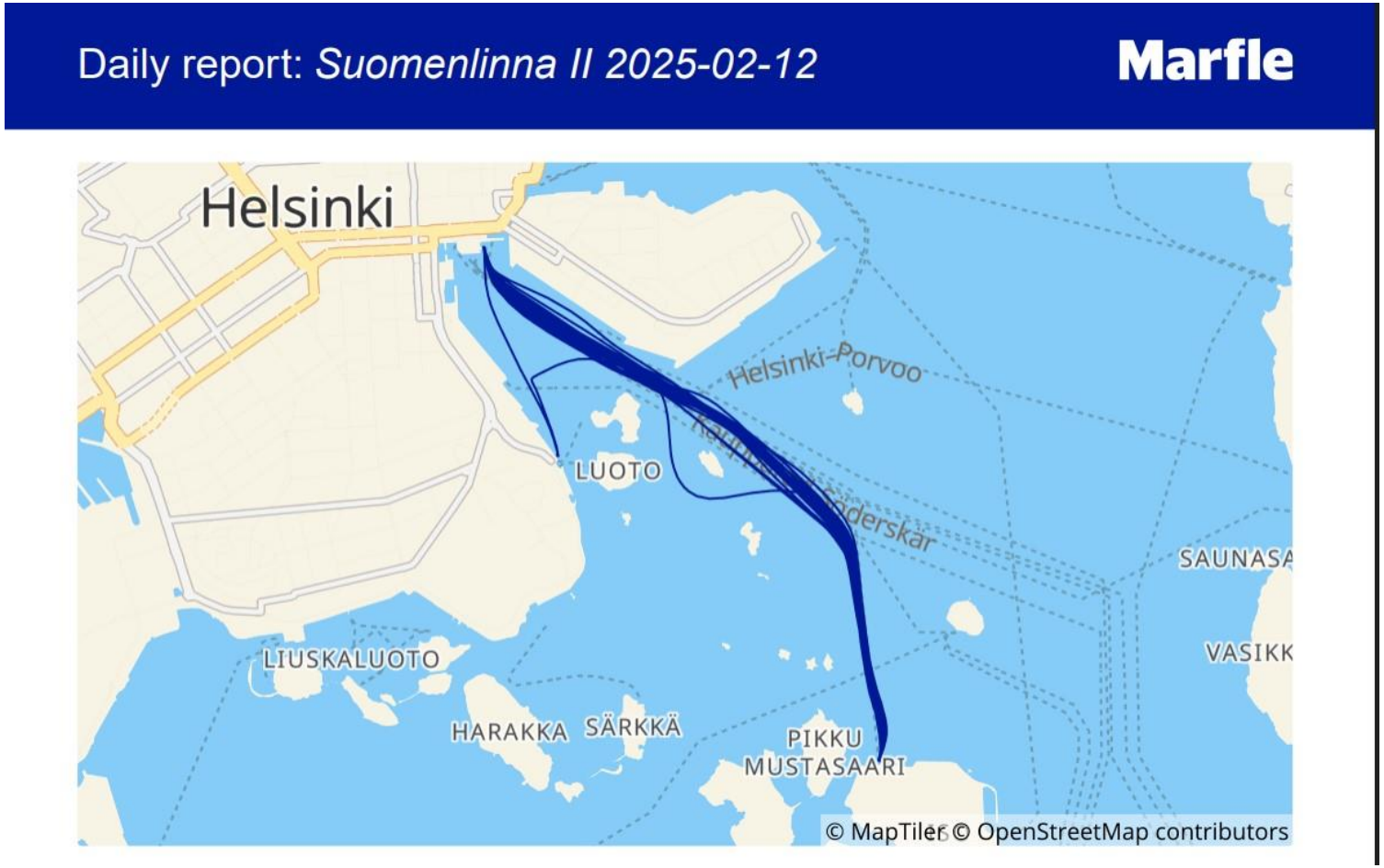
- In 2024:
  - New gensets, IMO Tier III
    -> new adblue system
  - Drives update = propulsion control renewal
  - Box cooler update
  - Data gathering capability added

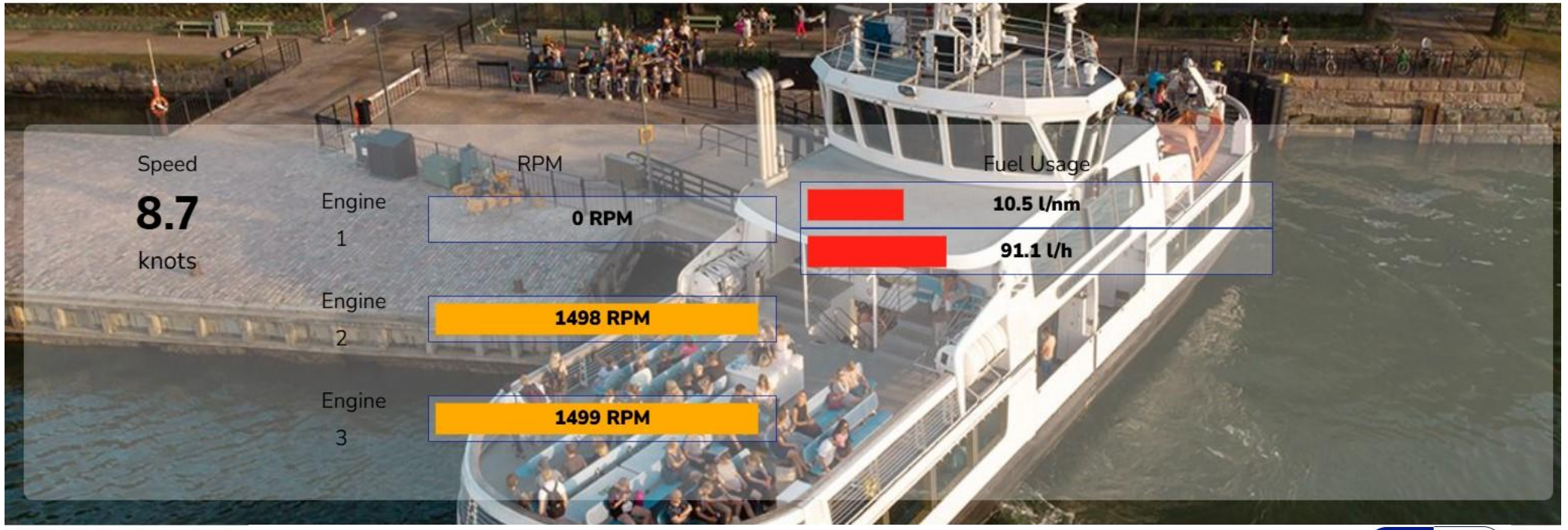
Ferry on 2,7 km route

As imagined…



As done





Latest trips

Trips Days

Suomenlinna päälaituri - Kauppatori

1 nm	3.0 knots	17.2 l/nm (25 l, 68 kg CO2)	18.03.2025 09:58 (0h 30min)

Kauppatori - Suomenlinna päälaituri

2 nm	4.5 knots	12.5 l/nm (19 l, 50 kg CO2)	18.03.2025 09:38 (0h 20min)

Suomenlinna päälaituri - Kauppatori

1 nm	4.3 knots	13.3 l/nm (20 l, 53 kg CO2)	18.03.2025 09:17 (0h 20min)

Overview

	Location	Time
Harbour Departure	Olympiaranta	03:41:28
Farm Arrival		
Farm Departure		
Harbour Arrival	Olympiaranta	17:17:50

Phases

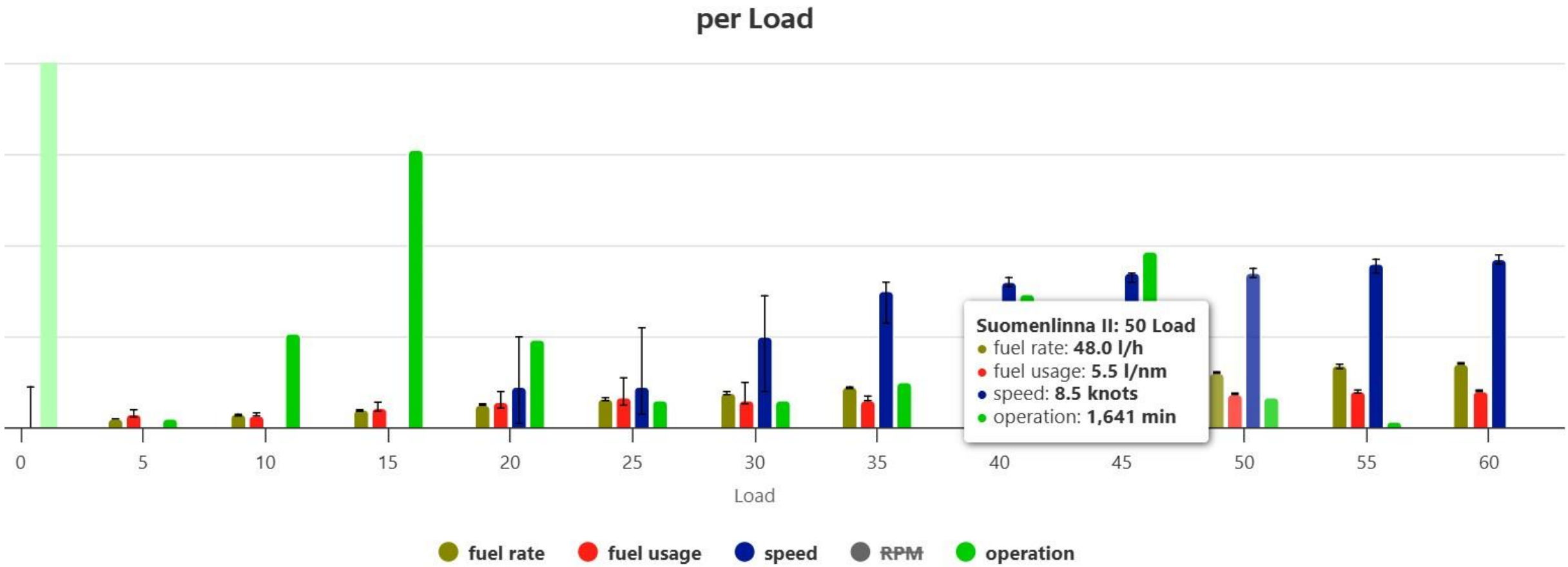
Operation phase	Distance (nm)	Time (min)	Avg. speed (knots)	Fuel used main (l)	Fuel used aux (l)	Economy (l/nm)
Harbour operations	1	390	0.1	212	-	-
Transit, other	56	446	7.6	589	-	10.5
Totals	57	836	4.1	801	-	14.1

Modes

Operation mode	Distance (nm)	Time (min)	Avg. speed (knots)	Fuel used main (l)	Fuel used aux (l)	Economy (l/nm)
Slow	3	109	1.4	78	-	30.0
Push	1	282	0.2	157	-	140.7
Transit	53	446	7.2	567	-	10.7
Totals	57	836	4.1	801	-	14.1

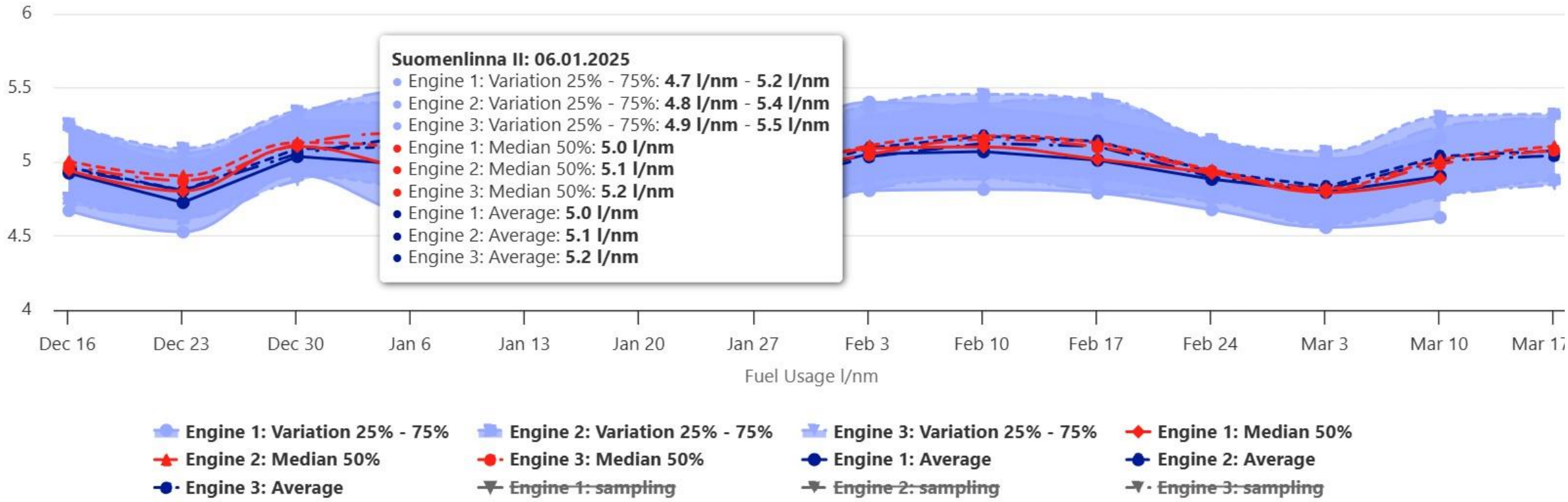
Transits

Location	Start time	Duration	Length (nm)	Fuel used main (l)	Fuel used aux (l)	Economy (l/nm)	MSI (%)	WBV (%)
Olympiaranta Suomenlinna päälaituri	03:41	12 min	1	15	-	10.1	?	?
Suomenlinna päälaituri Kauppatori	04:00	12 min	1	13	-	9.1	?	?


per Load
Suomenlinna II: 50 Load
fuel rate: 48.0 l/h
fuel usage: 5.5 l/nm
speed: 8.5 knots
operation: 1,641 min
0
5
10
15
20
25
30
35
40
45
50
55
60
Load
fuel rate
fuel usage
speed
RPM
operation

Overview Operations Report Economy Driving Style Engine Alerts **Trend Analysis** Logbook Debug

Fuel Usage l/nm (l/nm)



Preliminary findings

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- Data gathering and analysis is the only way

  to gain understanding
- New technology is better than old – fuel consumption appears to be lower by 8% – longer monitoring period is needed however
- Human touch has variance in it, but not much. No huge savings appear to be achieveable in operations – will however proceed with monitoring
- Will implement feedback system to facilitate learning and promote culture
- Predicting winter conditions and their future development has huge signifigance in fleet management in the near future