First period

REISFER Island Ferry Summit

2025-03-20

Interreg

Co-funded by the European Union

Central Baltic Programme

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blidösundsbolaget

En del av Transdev

AGENDA

Agenda

1. About Blidösundsbolaget
2. Our activities
3. Result
   - Study of energy consumption
   - Electrification

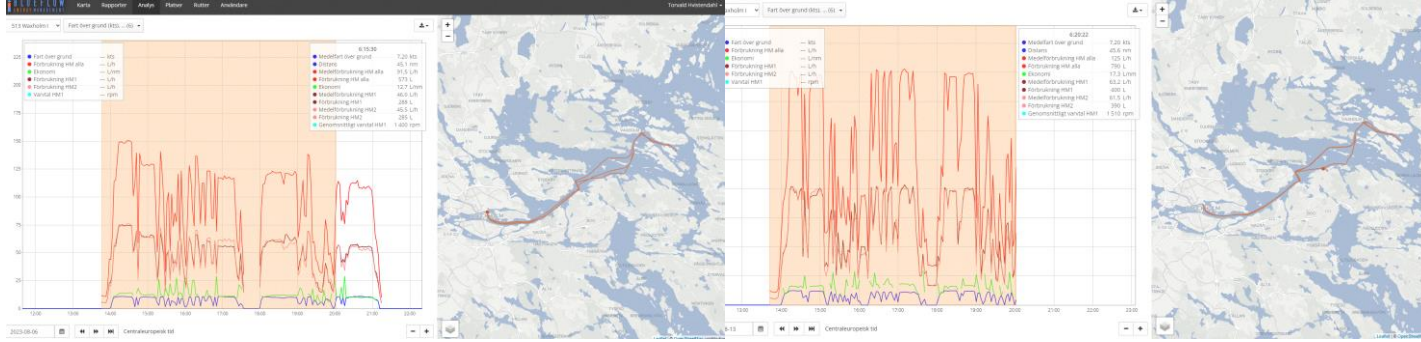
blidösundsbolaget
en del av Transdev

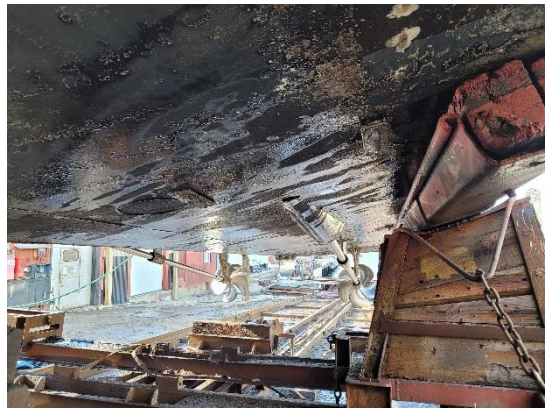
- Est. 1911
- 100% owned by Transdev Sweden AB
- Revenue MSEK 483 (2023)
- Pax >1.7 million
- Staff ~480 (May – Sep), ~260 (Sep – Apr)
- 6 Traffic Contracts with PTA
- Office in Old Town and Service station at ”Djurgården”
- 17 own vessels
- 22 vessels charter, Waxholmsbolaget (PTA) & Candela
- Seasonal variations

https://www.linkedin.com/company/blid-sundsbolaget/

Activities

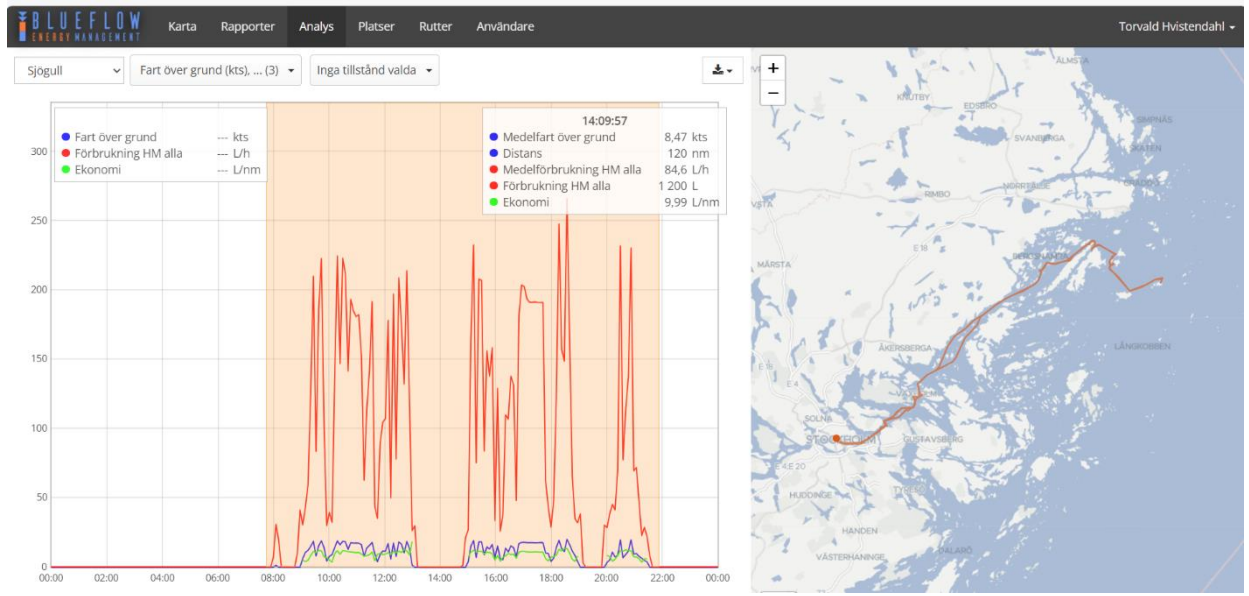
- Energy mapping and analysis through Blueflow and Cetasol historical data
- Improve heating and cooling of vessels
- Blasting, Painting and new anode concept
- Electrification of Vessel
  - Change from Diesel engines to electric engines and batteries
  - Opt. Digital semafor and real time route guidance
  - Opt. Floating flexible chargestation
- Budget abt 4,5 MSEK





Energy mapping, Blue Flow

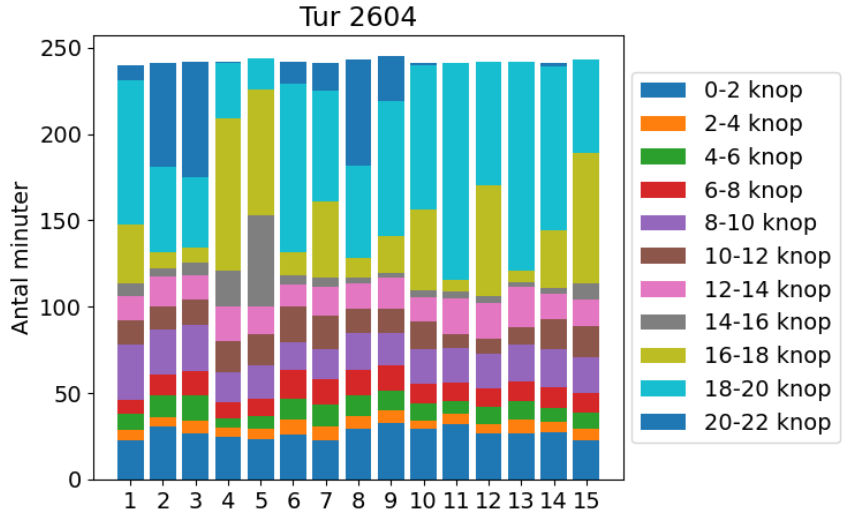
- Blue flow data from 2020
- 34 vessels online
- API – VTI software
- Model
- Leads to study:
  - Speed relation
  - Captains
  - Weather & Wind
  - Load
  - Etc.

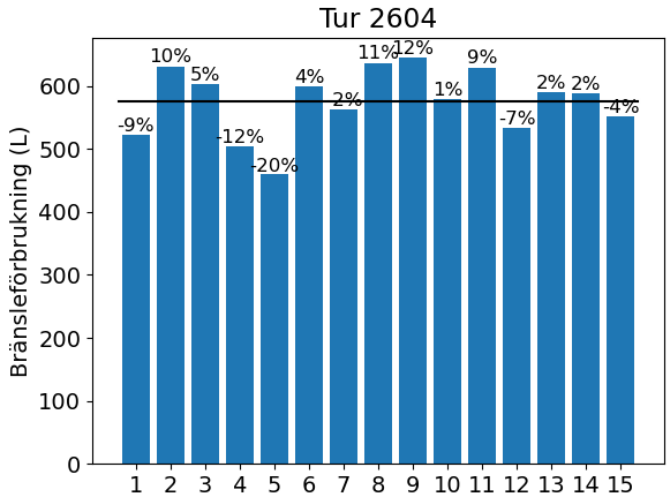


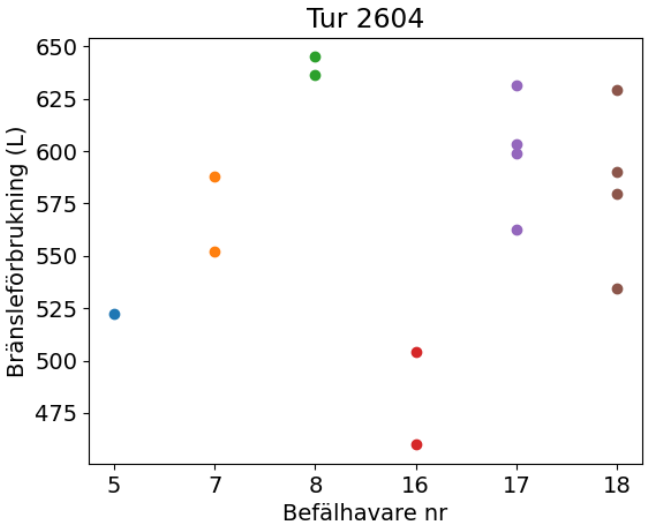
The need for speed?

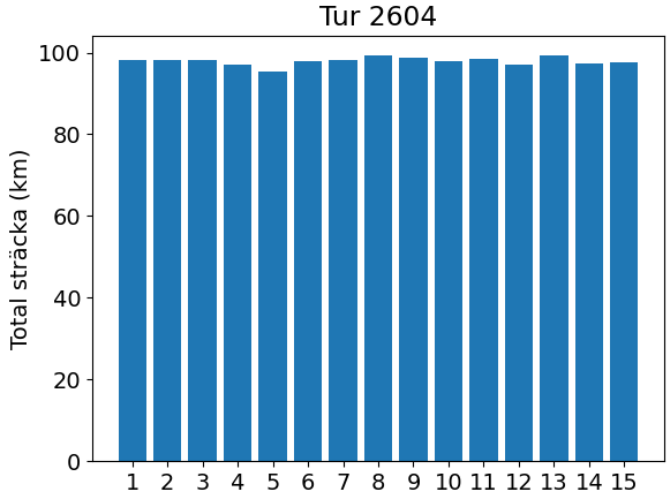
Sjögull 2023	Real		Meaning of reduce topp speed							
Topp speed	21	kn	19	kn	18	kn	17	kn	16	kn
average	13,8	kn	-0,1	kn	-0,3	kn	-0,6	kn	-0,9	kn
Running hours	1 510	h	12	h	32	h	65	h	111	h
Fuel	201 551	l	-3 566	l	-10 947	l	-21 935	l	-33 787	l
Topp speed			-9,52%		-14,29%		-21,05%		-27,78%	
average			-0,72%		-2,17%		-4,35%		-6,52%	
Running hours			0,79%		2,12%		4,30%		7,35%	
Fuel			-1,77%		-5,43%		-10,88%		-16,76%	

Driving style









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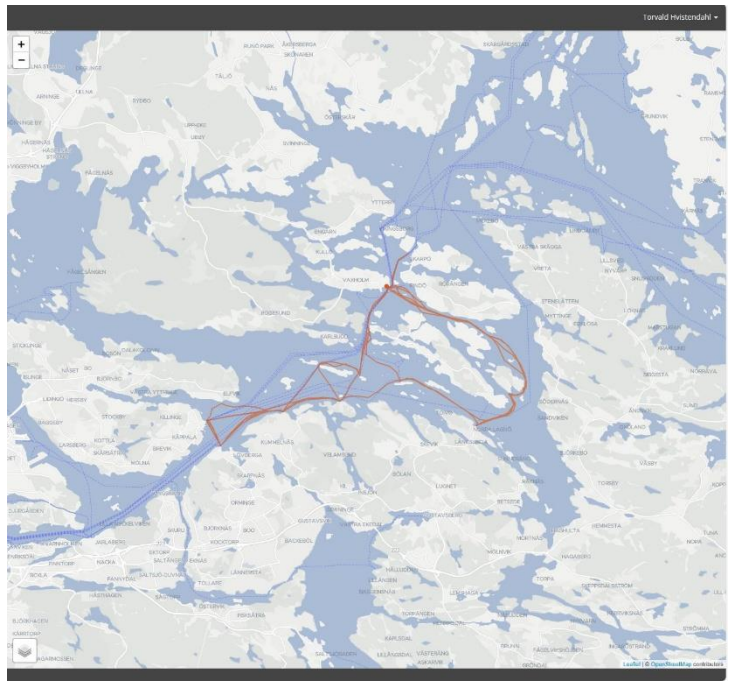
Electrification of M/S Silverö

- Local boat around Waxholm
- Today 2x DI13 092M IMO Tier III 350hp. Topp speed abt. 18 kn. 152 Pax.
- Low weight, efficient hull, arrangements well prepared
- A well suited route for electrification
- To be removed:
  - Funnels & Silencers
  - Gears
  - Tanks (Fuel & AdBlue)
  - Diesel engines & SCR
  - Dieselsystems such as pipes, filters, cooling e.tc.



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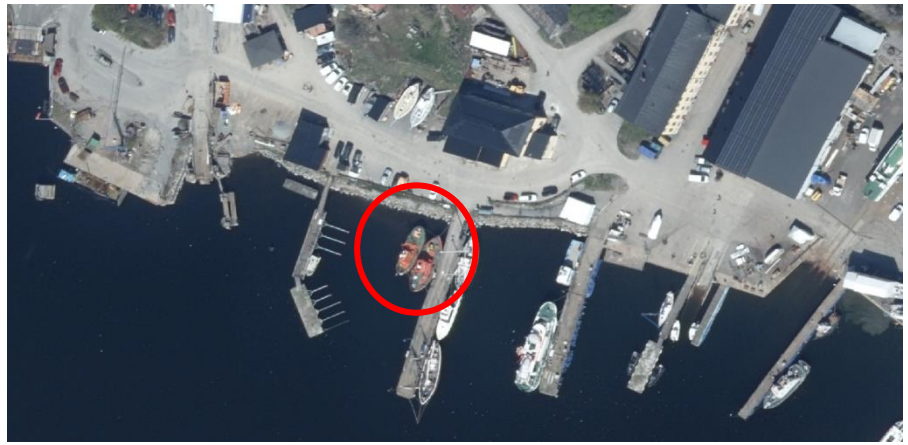
Technical solution, fully electric

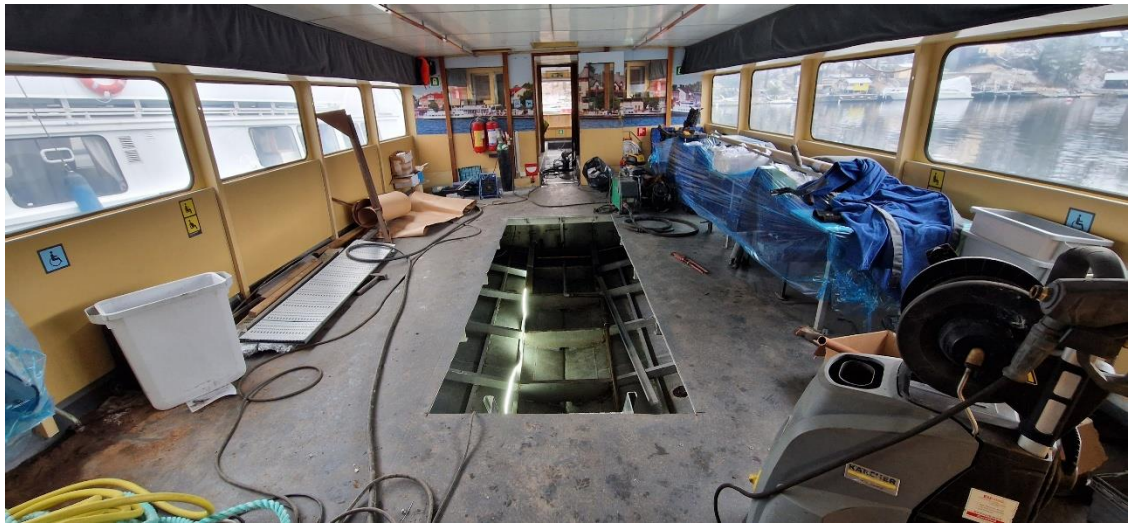
- To be installed:
  - E-engines (2x Scania CCD)
  - Cables
  - Cooling system
  - Inverters
  - Pumps
  - Batteries (2 x 390 kWh)
  - Fire insulated battery boxes
  - HVO heater
- General improvements:
  - Liferaft, gangway, hydraulic to electric
  - Interior
  - Working setting (noise, vibrations, exhaust gases e.tc.)
- Performance
  - Top speed 18 kn, 151 pax
  - Range @ average speed abt. 10 knots -> abt. 4,5h

Charging

- Laddning
  - 250A + 125 A @local Shipyard ”Rindö”
  - CCS 2 standard
  - 2 stations each with 2 sockets
- Optional Energy storage
  - 125 A
  - Abt. 575 kWh batteriers (scalable)
  - Charging CCS2 up to abt. 2x240 kW
  - Yields abt. 3:1 driving:charging
    vs abt. 4:3
  - Eg 3 h driving is recharged in 1 h or 20 min
    charging gives 1 h driving
  - To be placed on a barge or at dock side
- Discussing to extend with our hybrid vessel Rex and Candela electric hydrofoil vessel ”Nova”



Week 11



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Thanks for your attention

Sjögull i full fart fint fångad av Måns Norling, matros på bland annat Yxlan.

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