

Estonian State Fleet Ice-Breaking Management

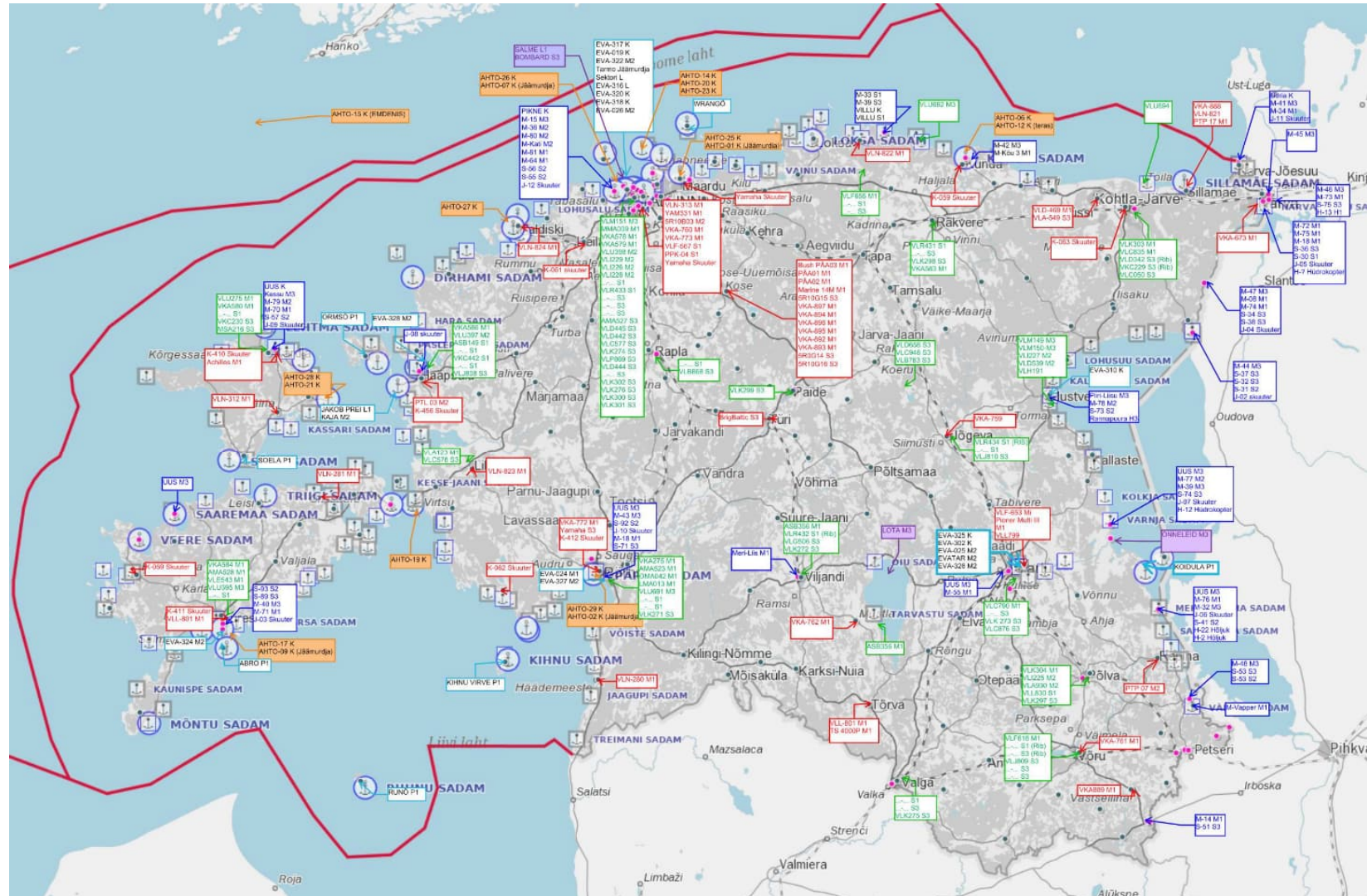
Andres Laasma
06.03.2025

State Floating Equipment



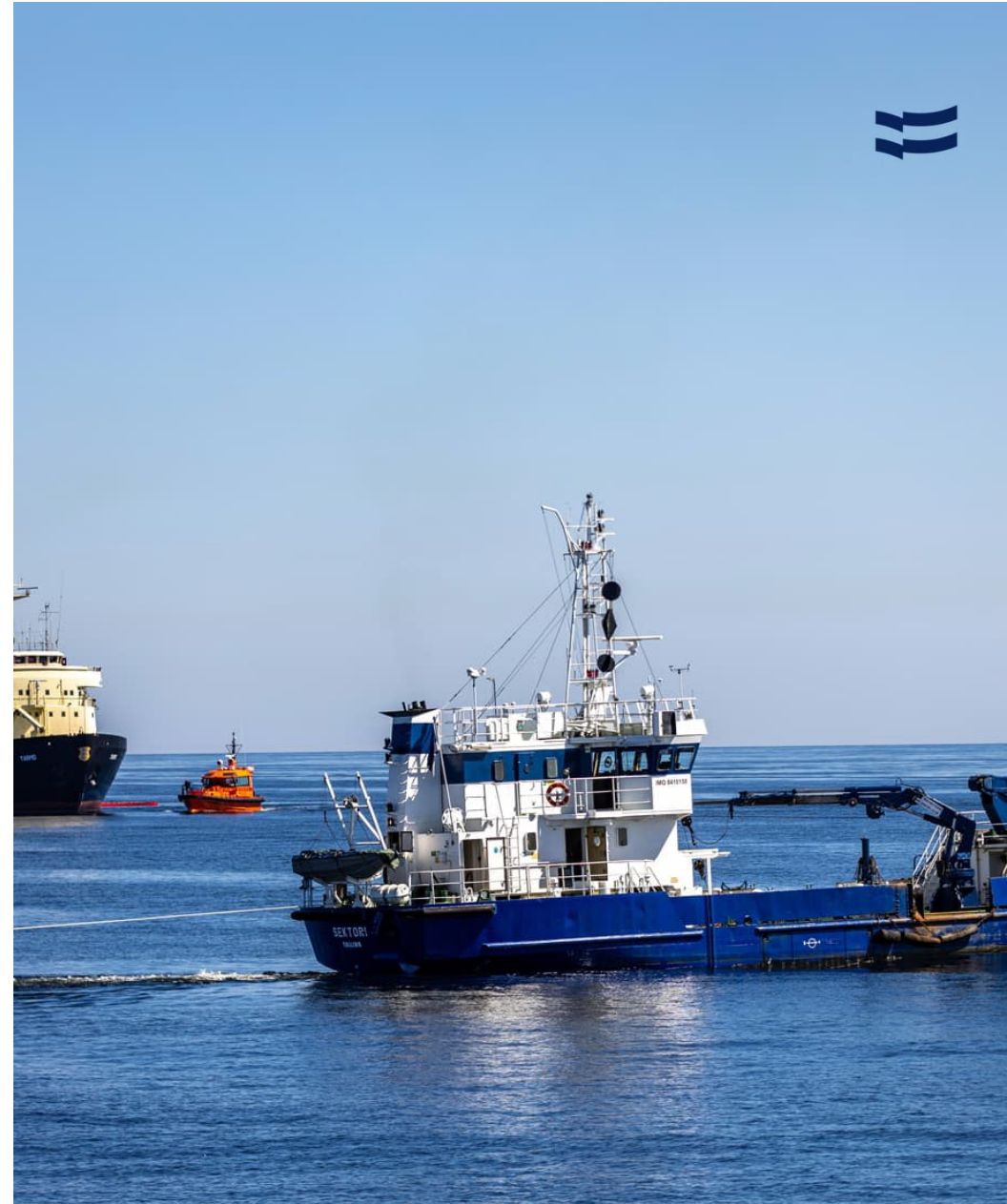
3 fleets:

- Operational
- Spare
- „Spare for spare“

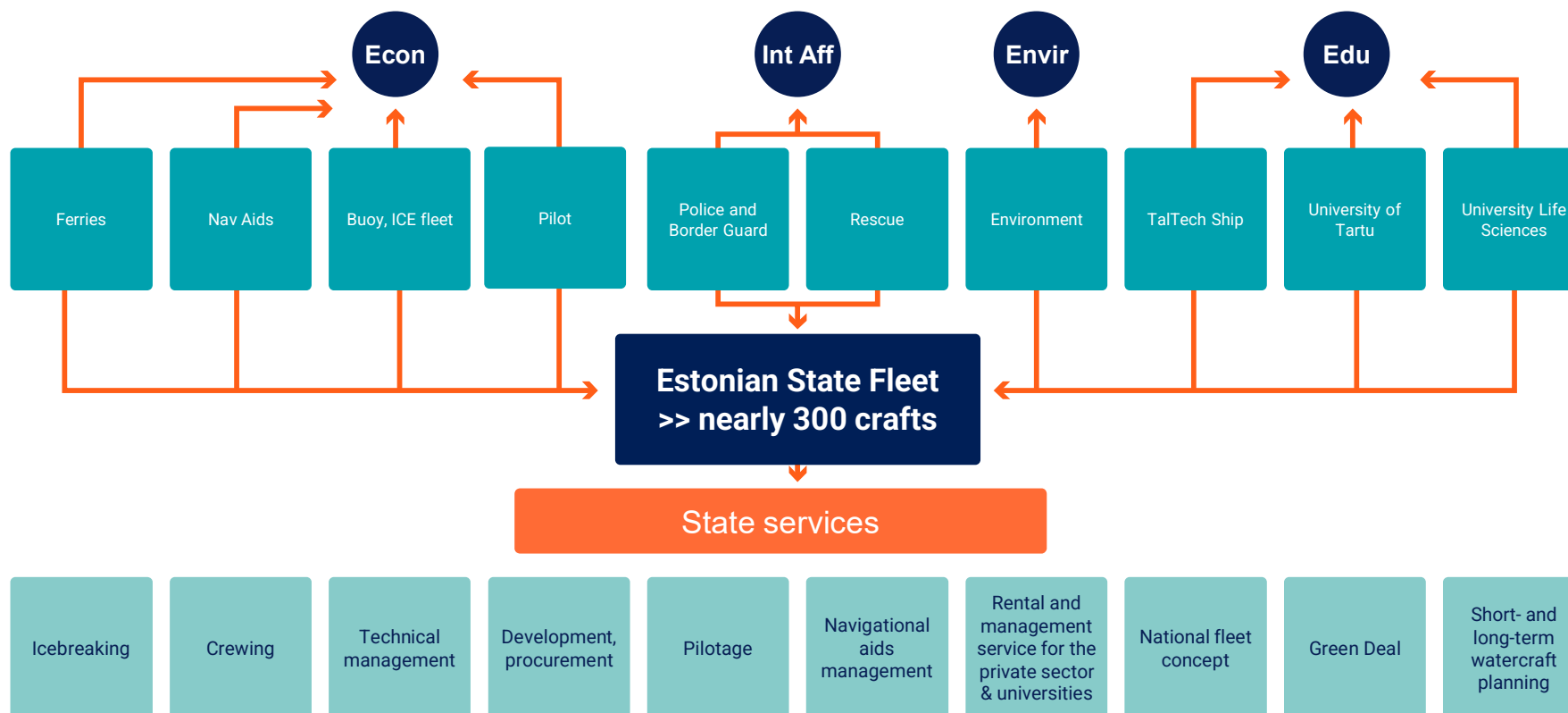


Use Efficiency – percentage of use in one year (before State Fleet)

- Average use of pilot boats - **3,6 %**
- Average use of Police and Bodres Guard vessels up to 24m - **2,8 %**
- Average usage of Administration of Transportation majors - **14,5 %**
- On average, **0,2%** of the whole year, a situation may arise where, for example, a case of SAR is underway in a pilotage area.



Fleets of Various State Agencies under UNIFIED MANAGEMENT



Estonian State Fleet tasks



Fleet Management



Pilotage Service



Navigational Aids

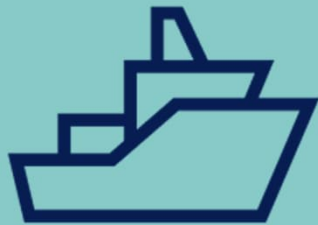


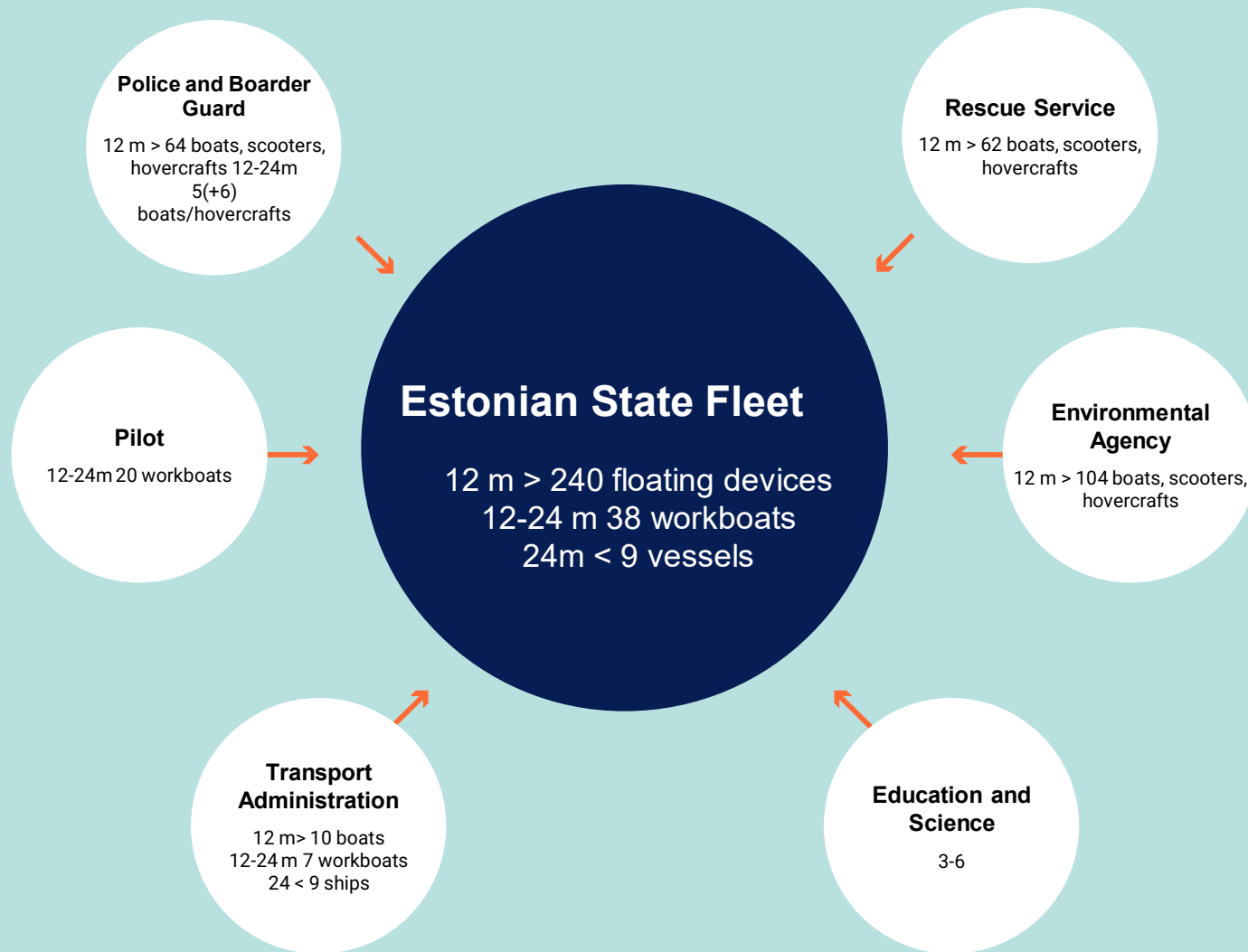
New Developments



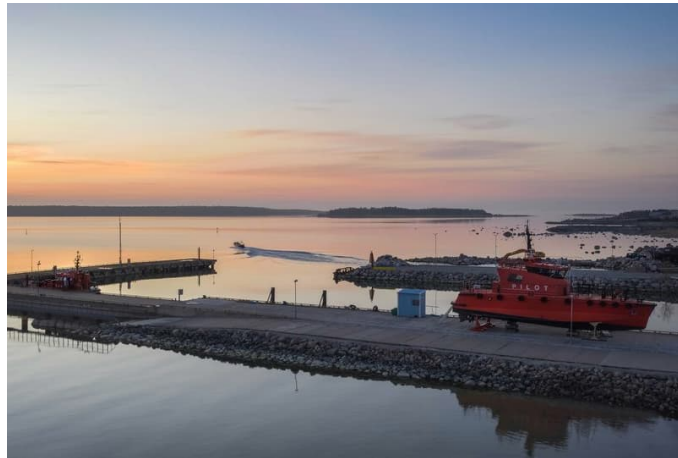
Ice Breaking

Fleet Management





Land Bases



HQ
Port of Hundipea

Regional Bases

- Tartu
- Rohuküla
- Pärnu

Pilotage
7 regional bases

DGNSS stations

- Narva Jõesuu
- Ristna

Goals and Results

- **Maximize the number of multi-purpose vessels**

- >> Functional versatility

- >> Increase of cross-utilization between partners

- >> Unified appearance

- **Transition to a cross-deployed crew system**

- >> e.g., use of IB crew in buoy placement operations

- **Fleet decarbonization by 2050**

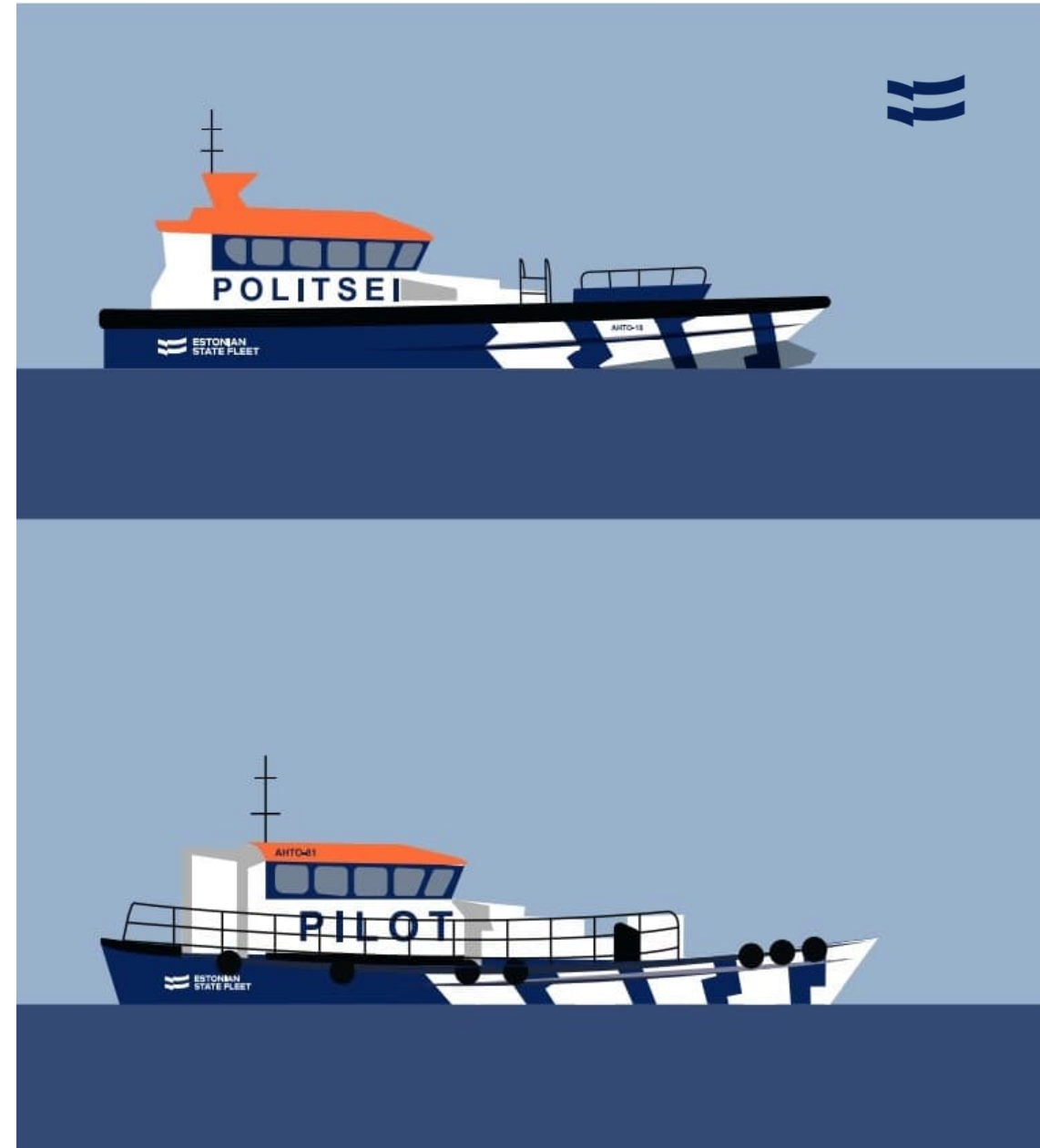
2030 = 2022

2035 -29%

2040 -57%

- **New technologies**

- >> Academic Collaboration



Navigational Aids



Estonian Navigational Aids

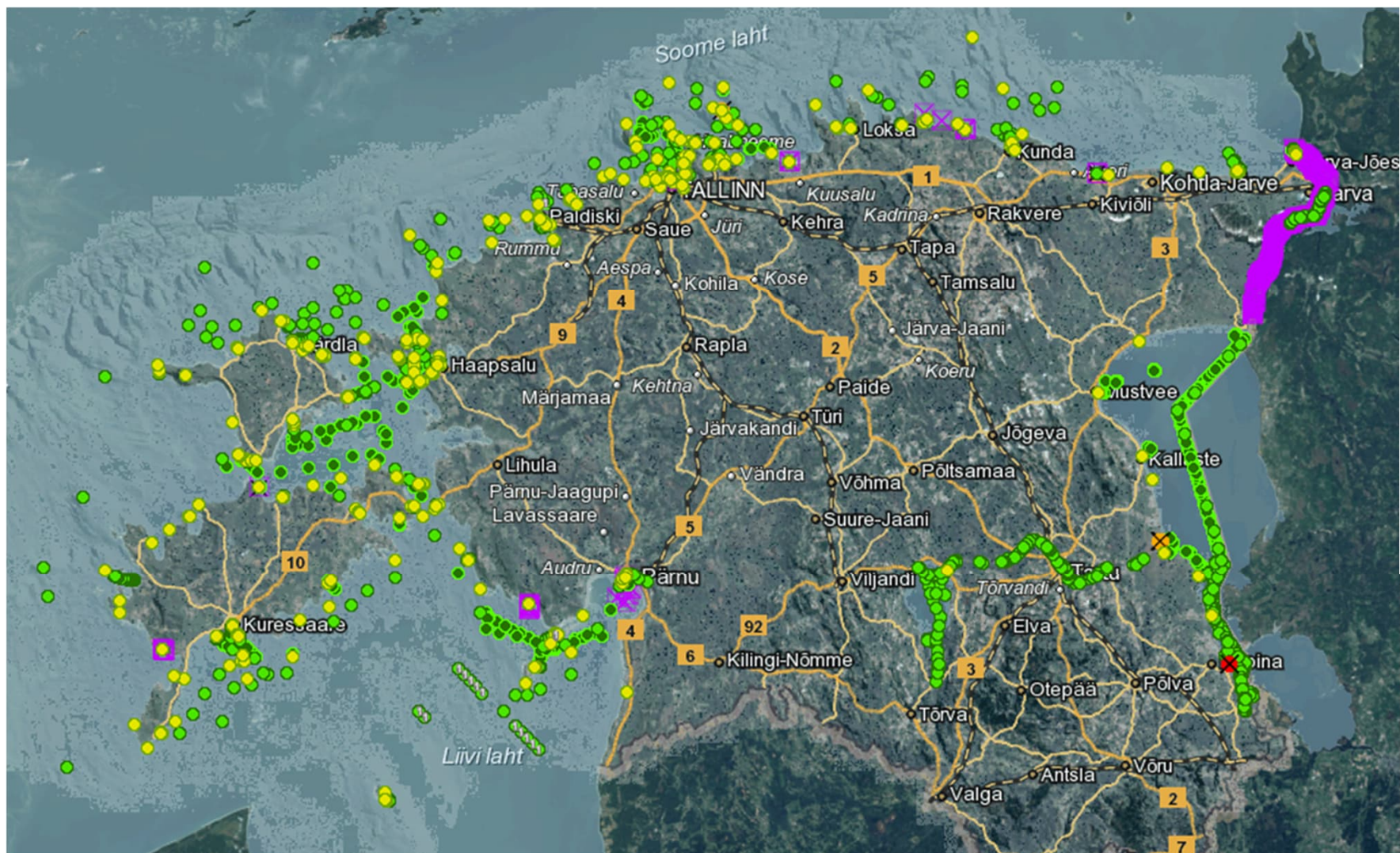
There are nearly 2000 regulated navigation signs in Estonia, of which:

- **323 are permanent aids**, including all 55 working lighthouses in Estonia
- **1600+ are floating aids**, of which 2/3 are in quantity at sea and 1/3 in inland waters.
- **250-300 floating border signs** (eastern border)

*Comparison: There are **34 000** navigation aids in Finland (also the country with the largest number of nav aids in the world), 300 in Latvia and 100 in Lithuania.*



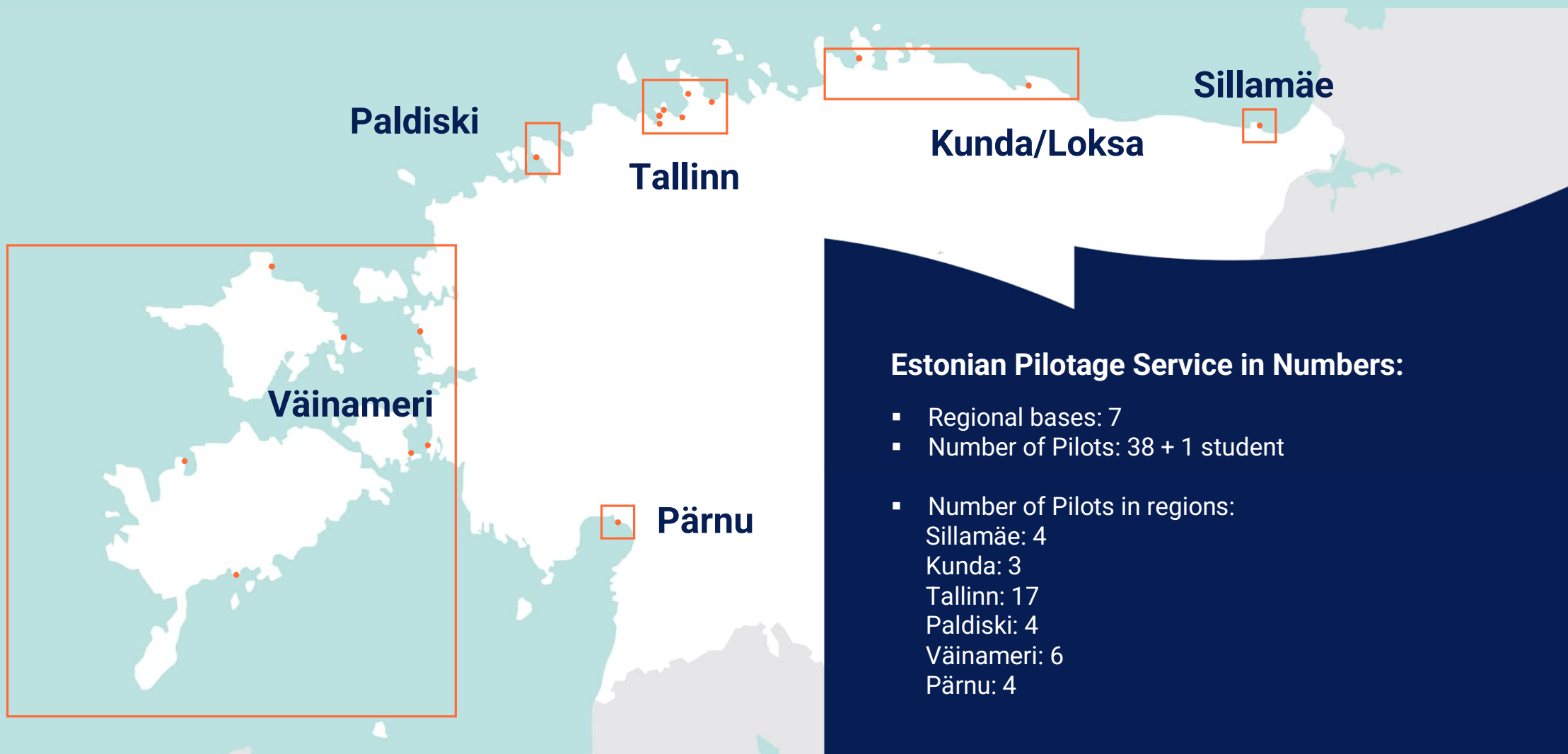
AtoN-s in Estonia



Pilotage



Estonian Pilotage Service



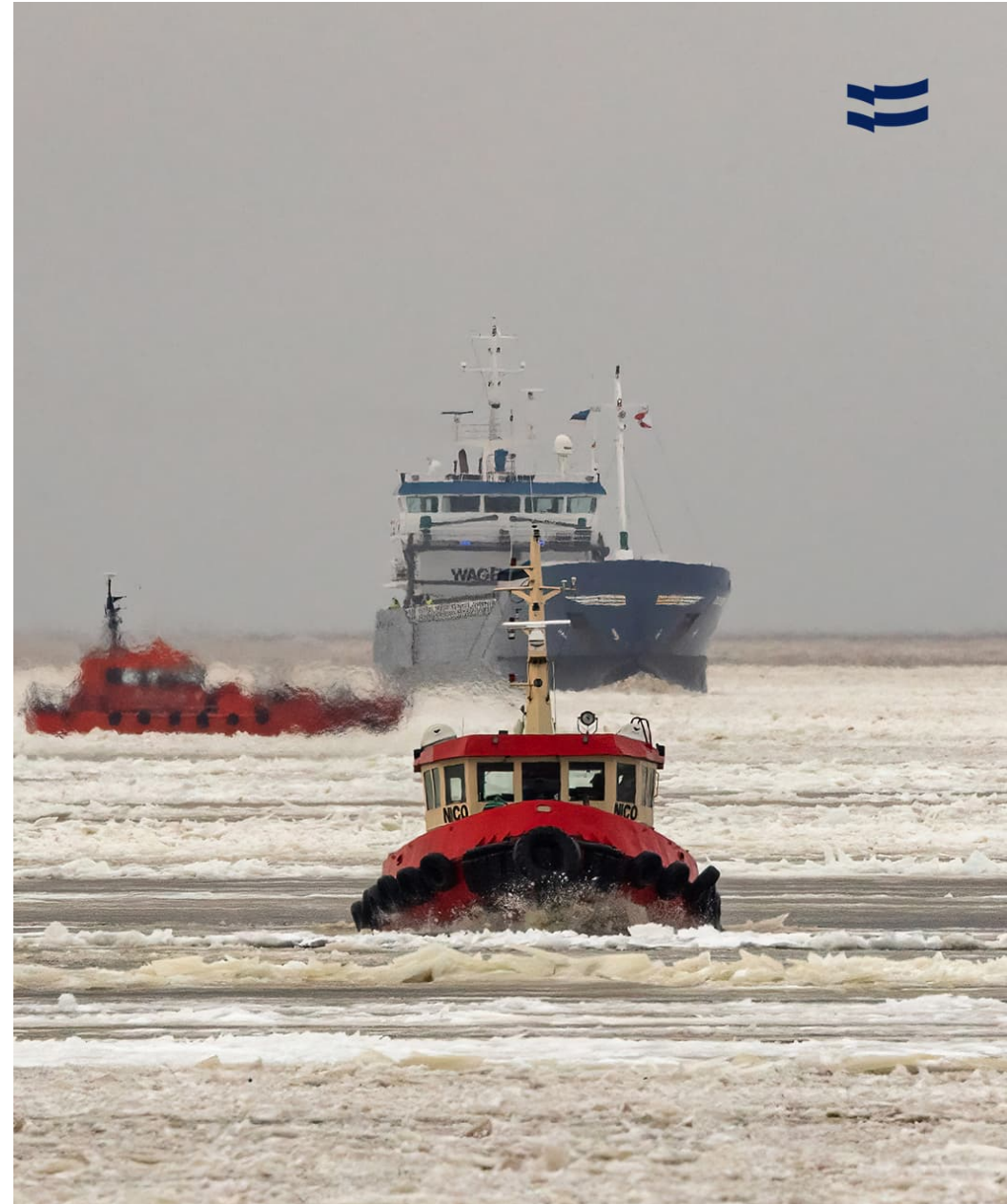
Estonian Pilotage Service in Numbers:

- Regional bases: 7
- Number of Pilots: 38 + 1 student
- Number of Pilots in regions:
 - Sillamäe: 4
 - Kunda: 3
 - Tallinn: 17
 - Paldiski: 4
 - Väinameri: 6
 - Pärnu: 4

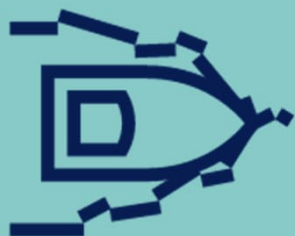
Pilotage Service

There are ~7000 pilotage operations conducted in Estonia per year.

- Estonian State Fleet took over the pilotage service in **July 1, 2023**.
- Goal: Expansion of competencies to work outside home region
- Goal: Development of multi-purpose workboats
- Goal: Development of remote pilotage system



Ice Breaking



Ice-Breaking Management



Estonian Transport Administration

- Coordination and legislative responsibilities

Long-term goal: Ice breaking Coordinator >>> VTS

Ship owners and Agents

Estonian State Fleet

- Ice-breaking activities

>> State owned IB Tarmo
>> Multi-purpose vessel EVA-316
>> Chartered Botnica for 90 days per year (Dec – April)



Estonian Icebreaking Management



Pärnu



Gulf of Finland

- Botnica (chartered)
- IB Tarmo (state owned) - will be replaced 2029

Gulf of Pärnu

- EVA-316

Väinameri

- No icebreaking service
- Traffic only in light ice conditions



Estonian Ice Breaking Fleet

- The ports served by the state with icebreakers are Muuga harbour, the ports of Tallinn and Kopli Bay, Paldiski North harbour, Paldiski South harbour, Kunda harbour and Sillamäe harbour, which are served up to the aquatorium.
- Pärnu harbour is served from the open sea up to the point defined by the coordinates.
- Icebreaking is carried out by the vessels Tarmo, EVA-316 and Botnica (chartered).
- Long-term goal >> shift to MPV fleet in icebreaking activities





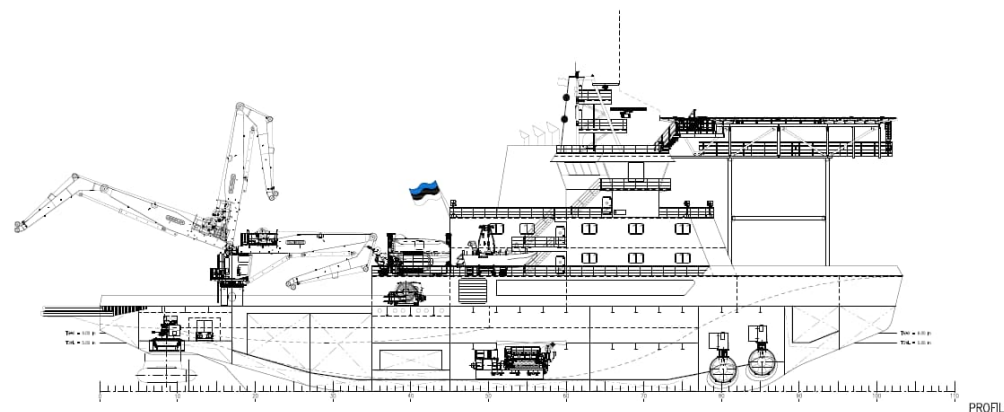
Estonian Ice Breaking Fleet

	Tarmo	EVA-316	Botnica
Year of Built	1963	1980	1998
GT	3916	907	6370
Deadweight	1585 dwt	266 dwt	2890 dwt
Length	84,5 m	57,9 m	96,7 m
Beam	21,2 m	12,2 m	24,0 m
Draft	7,4 m	3,8 m	7,8 m
Main Engine	10 120 kW	3x 1 717 kW	12x 1 258 kW
Speed	15,5 knots	12 knots*	16,5 knots /8 knots (ice)
Crew	33	13	19...23

New multifunctional icebreaker 2029



- New multifunctional icebreaker to replace IB Tarmo
- **Climate neutral:** fuelled by bio-diesel and methanol which is combined with a battery pack
- **Ice class: PC6 Icebreaker+**
- Main dimensions:
 - Length = 80 – 95 m
 - Breadth = 20 m
 - Draught = 5.0 – 6.0 m
- **Main functionalities:**
 - Escort ice-breaking in Estonian coastal waters including Bay of Pärnu
 - Oil pollution recovery capability
 - SAR capability and helideck
 - Coastal patrol capability (navigation and surveillance system, launchable patrol boat)
 - At least DP2 capability
 - Fire fighting capability
 - Fairway maintenance and scientific research conduction capability
 - Potential underwater cable repair capability + at least 150 ton crane





Smart Solutions for Estonian Waters.

www.riigilaevastik.ee

<https://linkedin.com/company/riigilaevastik>