

Aker Arctic
The Ice Technology Partner

20 YEARS OF ARCTIC PASSION

Arctic Passion Seminar 2025
6 March 2025

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CEO



Agenda

Aker Arctic's story

- History
- Development
- Future view

World's icebreaking vessel fleet development

Major achievements



Why Finland is the icebreaking superpower?

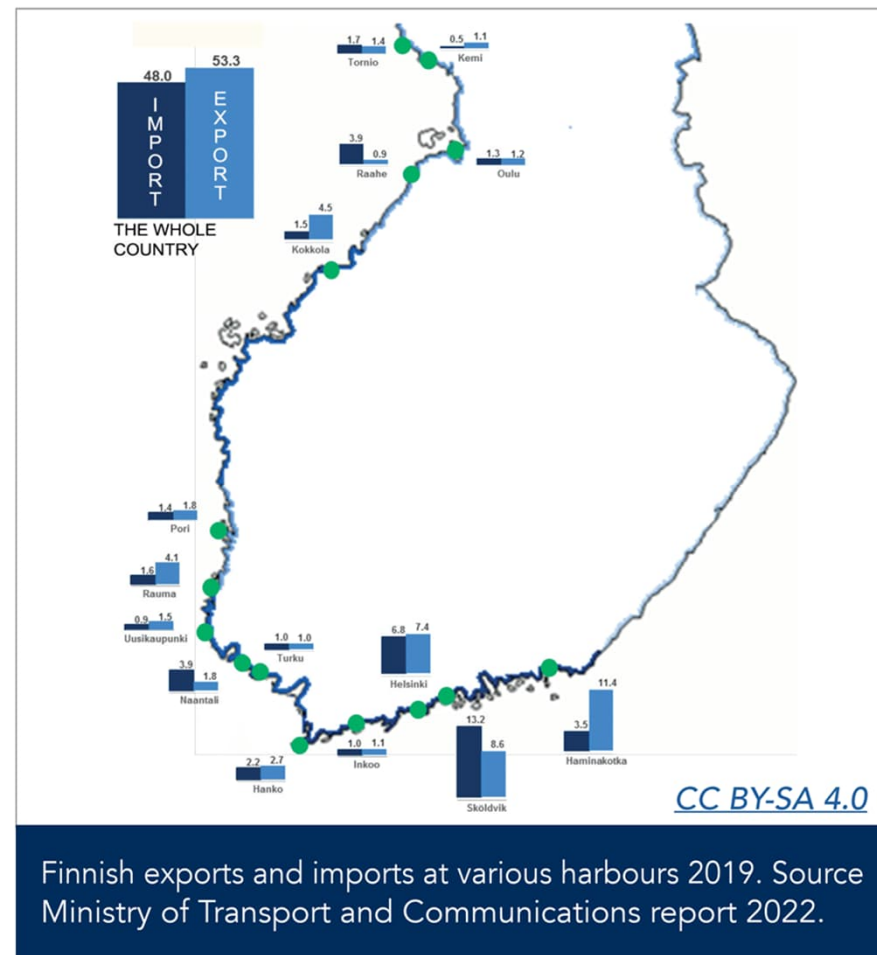
Finnish economy is depending on functional marine logistics

- About 96% of Finnish foreign trade is conducted via maritime transport
- Most of Finnish ports freeze every year — all during normal winter
- Winter navigation depends on icebreaker assistance — functional system is essential
- Government–industry co-operation has enabled development of new and innovative solutions
- “Own backyard” has offered excellent test field for new solutions

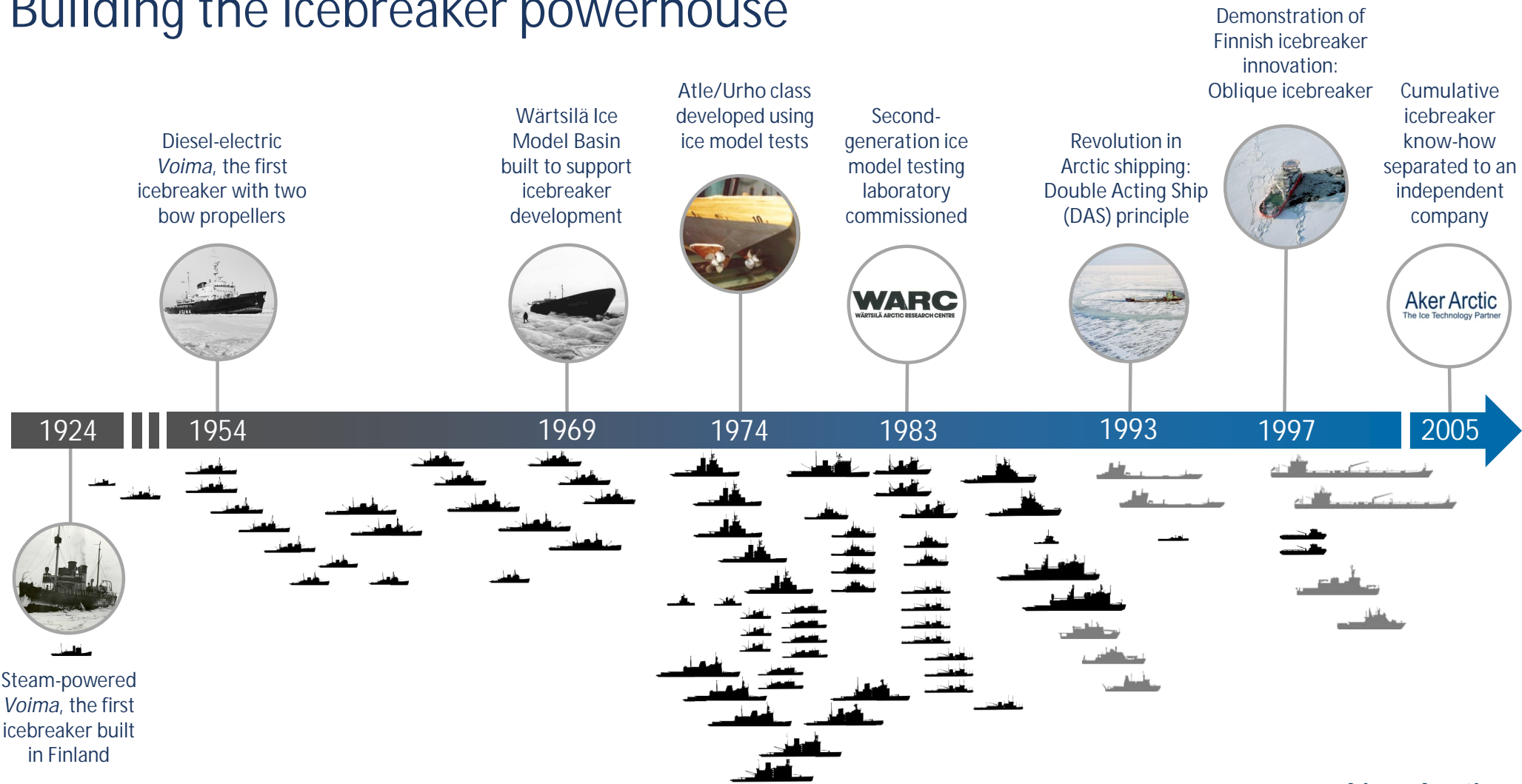
Trade with the Soviet Union

- Significant number of icebreakers built for the Soviet Union secured constant technology development
- New operational and technical challenges to solve:
 - Icebreaking in polar waters and multi-year ice
 - Shallow and ultra shallow draft icebreakers
 - Nuclear-powered icebreakers

Know-how can be developed and maintained only though continuous involvement in icebreaker design

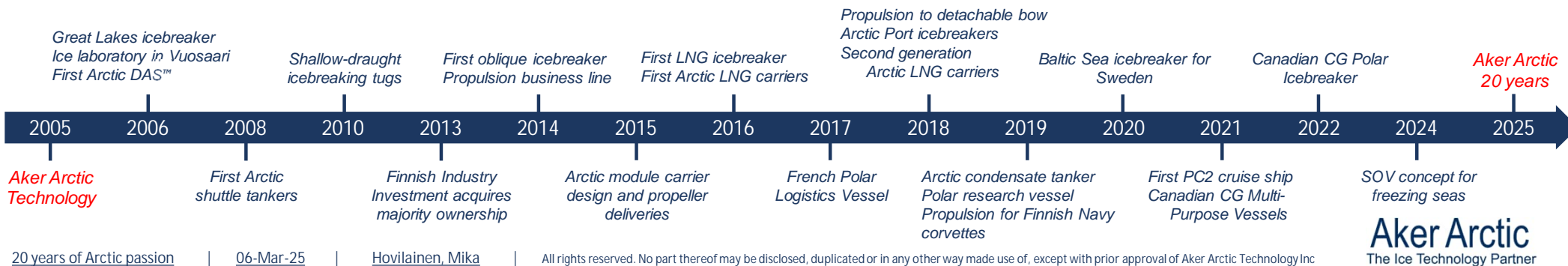


Building the icebreaker powerhouse



From a Finnish expert into the global ice technology partner

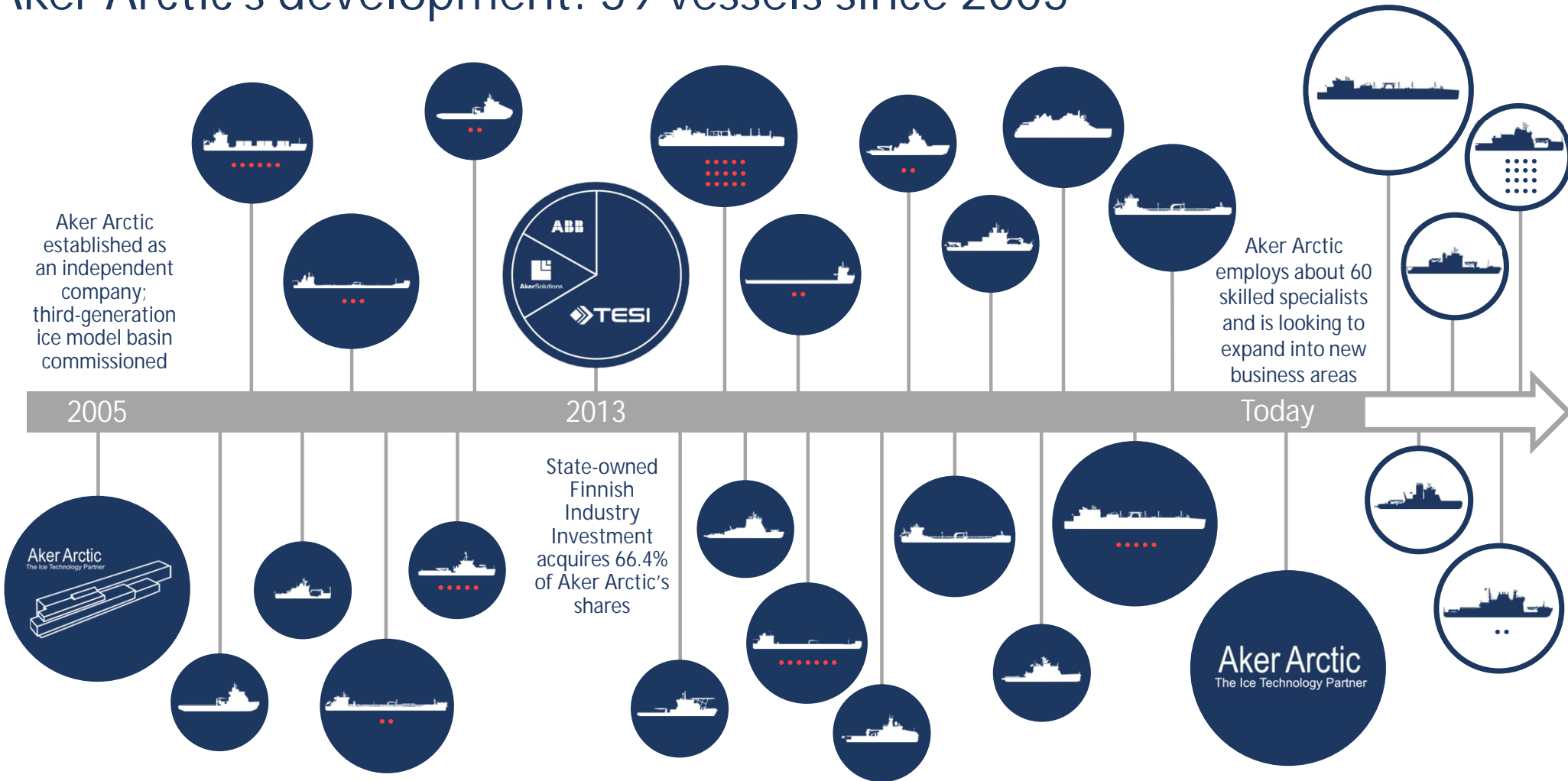
- Ice model basin → Arctic research center → Independent design and engineering company
- Industry leadership through decades of cumulative icebreaking expertise, continuous technology development, and commitment to design the best icebreakers in the world
- 20 years as an independent company — from 12 to 60 experts under visionary leadership
- Today Aker Arctic's expertise can be found in most icebreaker vessels built worldwide



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Aker Arctic's development: 59 vessels since 2005



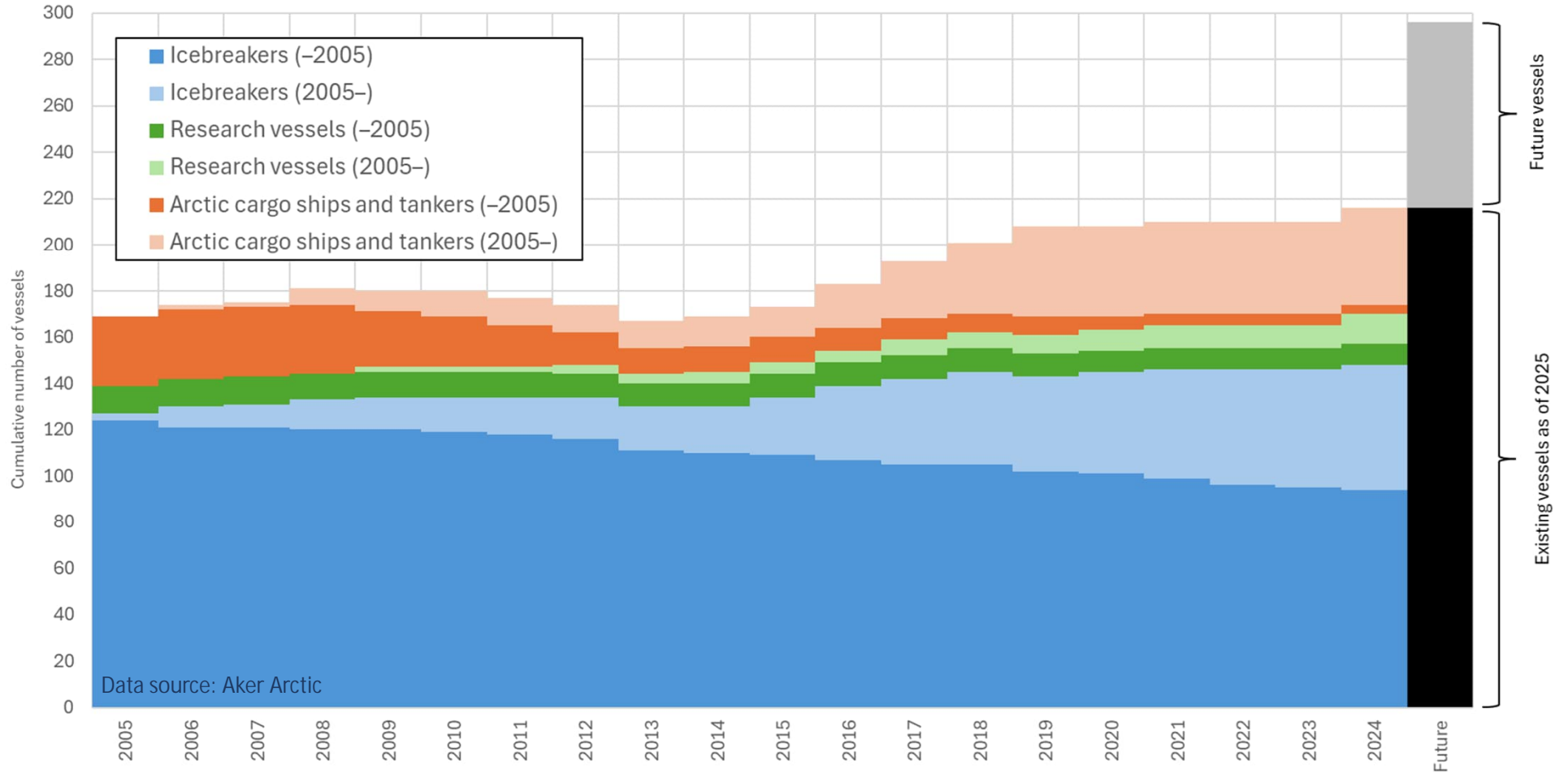
Aker Arctic established as an independent company; third-generation ice model basin commissioned



Aker Arctic employs about 60 skilled specialists and is looking to expand into new business areas



World's icebreaking vessel fleet, the last 20 years



Strategic Focus

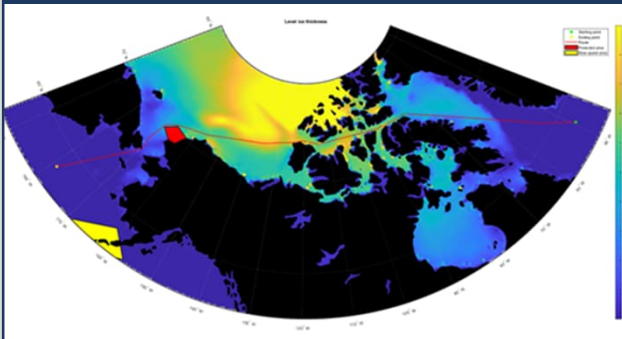
Aker Arctic specializes in development, design, engineering, consulting and testing services for ice-going vessels, icebreakers, offshore marine structures and marine transport solutions



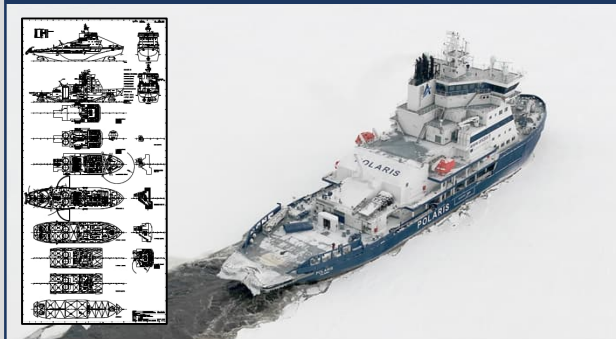
Aker Arctic's services and products



Consultancy & Technology Development



Ship Design & Engineering



Offshore Wind



Ice Model Tests



Full Scale Tests

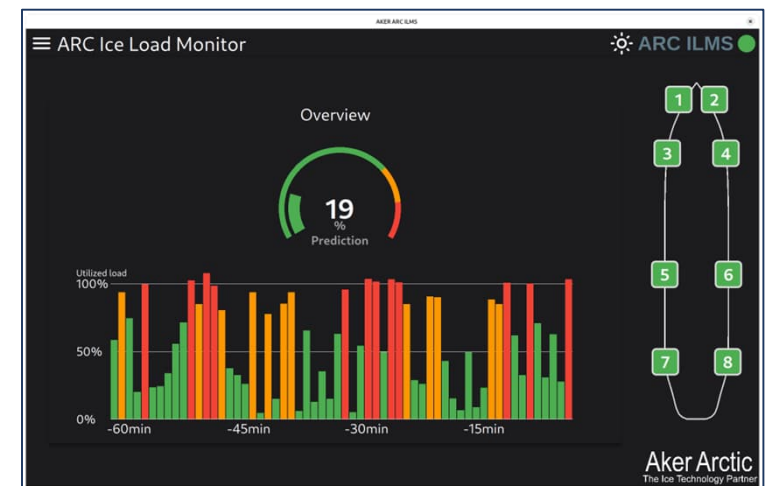
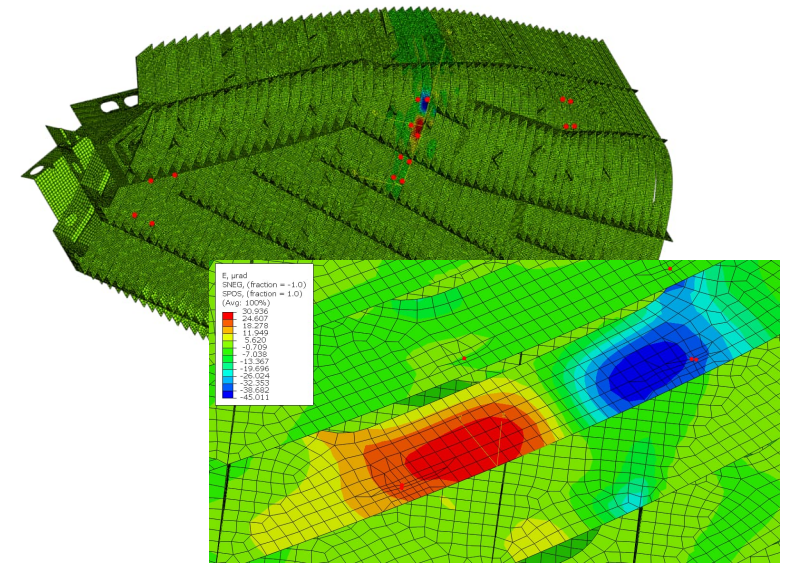


Equipment and products



Ice Load Monitoring Systems

- An understanding of the ice load on the ship's structure is essential for safe navigation
- For decades Aker Arctic has been involved in measuring these loads through R&D and dedicated measurement campaigns
- We have developed the ARC ILMS, an ice load monitoring product that draws on Aker Arctic's knowledge of ice loads and ship structural response to deliver an advanced real-time monitoring system. Our core knowledge and used to:
 - Position strain gauges on the structure to ensure loads are measured effectively
 - Evaluate the capacity of the structure, to set correct alarm levels
 - Assess the measured raw load data and make it make sense!
- Our ARC ILMS recently reached the North Pole, measuring loads on Ponant's Le Commandant Charcot
- Aker Arctic will supply our ARC ILMS for the Canadian Coast Guard Multi Purpose Vessels being built in Seaspan
- Aker Arctic will supply our ARC ILMS for the series of four *Pohjanmaa-class* multi-role corvettes currently under construction at Rauma Marine Constructions for the Finnish Navy



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THANK YOU!

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