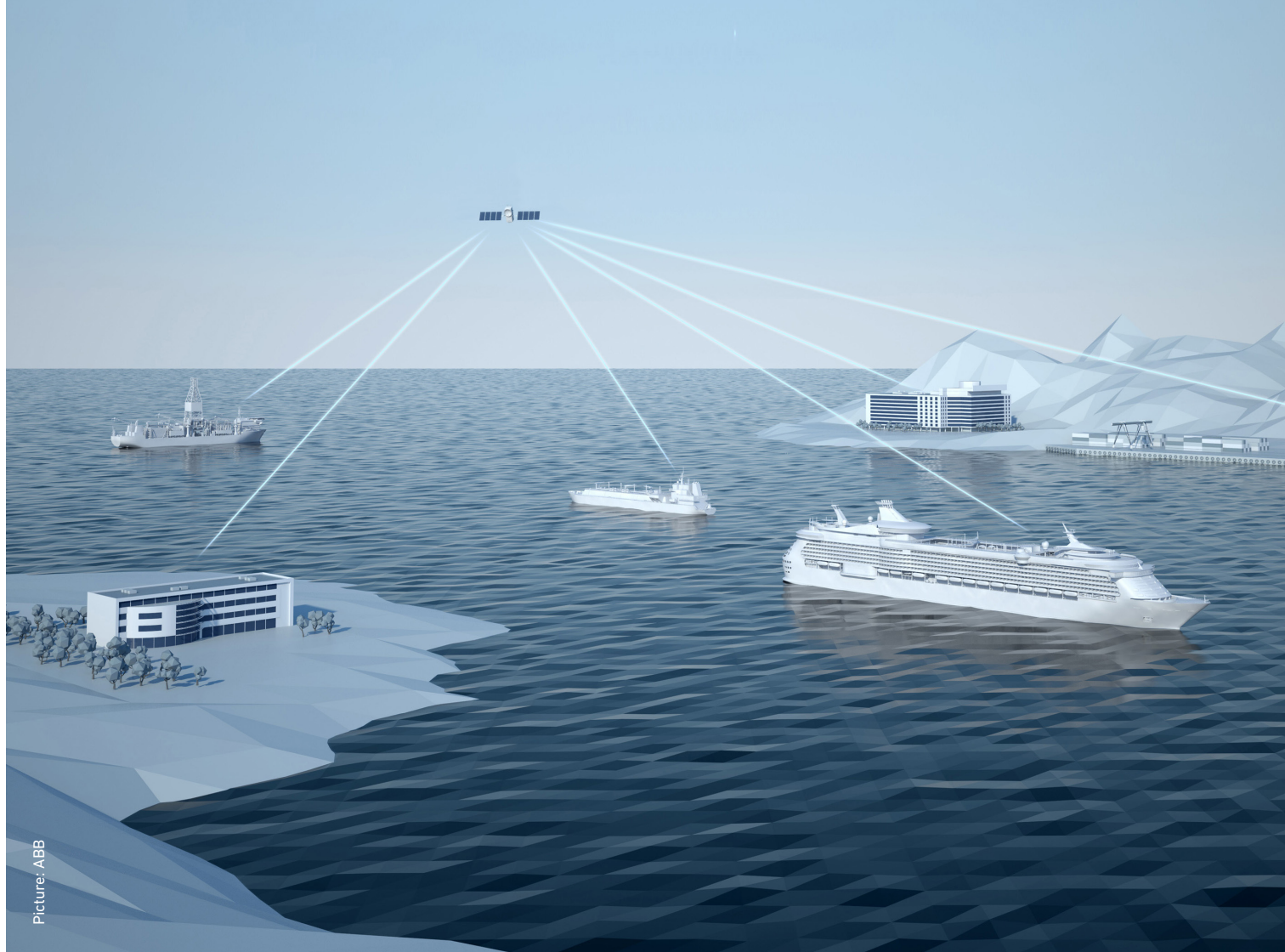


SMART MARITIME TECHNOLOGY SOLUTIONS

AN UPDATE: A STRATEGIC RESEARCH AGENDA FOR
THE FINNISH MARITIME CLUSTER 2017–2025



Picture: ABB



Meriteollisuus
Finnish Marine Industries



Ministry of Economic Affairs
and Employment of Finland

THE VISION

By 2025 Finland will have the most creative, agile and adaptive maritime network known from innovation of customised solutions, services and forms of operation delivered in flexible schedule and with competitive price.

Finnish Maritime Cluster; the most creative, agile and adaptive maritime network 2025

The aim of the Strategic Research Agenda (SRA) is to create a common vision. Previous SRA was released 2014. The updated agenda focuses on the time period from 2017 to 2025, and highlights the themes that are seen vital today for the success of the maritime cluster.

The strength of the Finnish Maritime Cluster is versatile markets in which the different sectors balance each other

Global megatrends have a crucial influence on marine businesses. The operational environment is changing in accelerating pace as information is distributed faster and the efficiency of all processes is required to be higher. Social responsibility and awareness of sustainability have increased as a customer value.

Finland has the world leading position as smart, sustainable and high-tech marine solutions provider

One of the main tasks for the industry in the following years is making a controlled introduction of new generation of experts to the branch, and sharing the tacit knowledge from experienced professionals.

The visions and the main development directions:

> Competitiveness and Competence Development:

- **Vision:** By 2025 Finland has to the most competent, adaptive, agile and co-operative network of highly skilled people globally. It is a frontrunner at the current and emerging marine technology markets.
- **Keywords:** Research; Education; Infrastructure; Multi-disciplinary problems; Building Process; Service Business; International Operations; Value Network; Project-based Business; Blue growth; Foresight

> Energy, Environment and Sustainability:

- **Vision:** The objective is to produce the cleanest energy solutions for ships and to minimise the environmental impact of shipping globally.
- **Keywords:** Zero-emission; Self-sufficient; Sustainability; Renewable energy production; Environmental protection; Circular Economy; Energy Storage

> Intelligent Ship, Systems and Solutions:

- **Vision:** The objective is to reach technical, operational and legal readiness to introduce unmanned shipping in Finland – as the first country in the world.
- **Keywords:** Digitalisation as an enabler; Open data platform; Digital services; Remotely operated vessels; Autonomous vessels; Legislation

> Cruise and Ferry:

- **Vision:** The Finnish marine industry cluster dominates by its customised, entertaining, efficiently and sustainably produced, green cruise ships and ferries.
- **Keywords:** Production development; Green Vessel; Sustainability; Energy efficiency; Safety and comfort; Intelligent ship; Education

> Arctic Technology:

- **Vision:** The Finnish Marine Industries enable sustainable, safe and efficient operations in the remote and sensitive Arctic and Antarctic areas
- **Keywords:** Harsh Conditions; Environmentally friendly; Safety and Security; Ice Management; De-icing

> Offshore:

- **Vision:** The Finnish industry delivers value-adding, sustainable technology to extreme offshore conditions utilising global supply chain networks.
- **Keywords:** HSE; Quality; Weight-efficient; Recycling; Production technology; Energy efficiency; Maintenance logistics; Oil and gas production; Offshore wind farms

As of 2014, the turnover of the Finnish Marine Industry amounted to around €8 billion and 30,000 people were employed. Finnish Maritime Cluster turnover amounted to around €13 billion, and nearly 50,000 people were employed in maritime cluster operations. Competitive marine industry creates significant amount of exports and majority of Finnish trade is transported by sea.

Rolls Royce Marine



Elomatic



Statoil



Merima



Courtesy of Wärtsilä

