ALTERNATIVE FUTURE SCENARIOS FOR BLUE ECONOMIES 2/4

MARITIME CLUSTER

Estonian and Finnish economies rely heavily on export and import of goods via seas. Helsinki was the busiest passenger port in Europe, and possibly the entire world with 12.08 million passengers in 2018.

Shipbuilding industry has grown rapidly in Finland in recent years. Expert expect strong growth is expected for maritime the maritime sector, in particular for maritime transport and cleantech.

SUSTAINABILITY ABOVE ALL

Zero emission policies - low emission renewables used in shipping. Strong environmental leadership. Modern ship-building and innovations: the environmental impact of ships is designed to be as small as possible. Ports and ships reuse their waste at the maximum level. Advanced intelligent maritime systems used, autonomous vessels operate in the Baltic Sea.

Policy towards sustainability will lead to global climate agreement, and strong legislation proposing zero emissions will be introduced. Strong environmental leadership. Environmental thinking will be strengthened in maritime education: it will create more favorable attitudes among the people in the industry. Technological solutions, ICT and digitalisation will support sustainability. Most vessels are autonomous and cargo handling will be automatized to optimize cargo transport, and to minimize the environmental impact of shipping.

UNLIMITED GROWTH

Increasing global consumption and heavy maritime traffic. Minimum environmental requirements are fulfilled in shipping. Current technologies used in the maritime cluster. Mainly fossil fuels and other unsustainable fuels used in shipping.

Today's support and fiscal policy will continue, with small reforms on taxation, EU-support and local political systems. Low awareness of environmental problems, more consumption and production, bigger vessels, people buy more. Fossil fuel from Arctic: oil and liquefied natural gas (LNG). Multifunctional ships will carry new cargo types, such as waste. There will be more offshore services, port congestion and new waiting areas.

SUSTAINABILITY DILEMMA

Mix of renewable and fossil fuels used. Attitudes impact on choices: some shipping companies use renewables, others use traditional fossil fuels. Economic profits are considered more important than sustainable values.

Lack of regulation, or no common regulation. Inconsistency in energy, environmental policies and legislation. No strategy with a vision of sustainable economy in the long-term. Political systems and businesses are too closely interlinked. Profit drives business, both politicians and businesses are beneficiaries of the current system and there is no motivation to change the system. No price on carbon in climate policy.

VIRTUAL REALITY

Extensive digitalisation, local production such as 3D printing, and optimization of logistics have drastically reduced the need for maritime transport, except raw materials. Unmanned vessels operate on the Gulf of Finland and Archipelago Sea. Internet of Things in cargo handling.

Autonomous maritime transport will be enabled by regulations, and by providing the best conditions for testing and trial runs of new technologies and solutions. Development and innovations at universities in close cooperation with the industry. A greater need for new technology creates the conditions for new companies to develop and create the required equipment. 3D printing develops with an unexpected pace and with no problems. Renewal of business models.

TOP DRIVERS FOR MARITIME CLUSTER

- Conditions and trends of global economy, globalization
- Environmental regulations and legal practices
- Fuels used in shipping (environmental policy)
- Cleantech / emissions from maritime cluster (energy efficiency)
- ICT, digitalisation

BLACK SWANS

= Sudden developments, which may change the future development into a different direction.

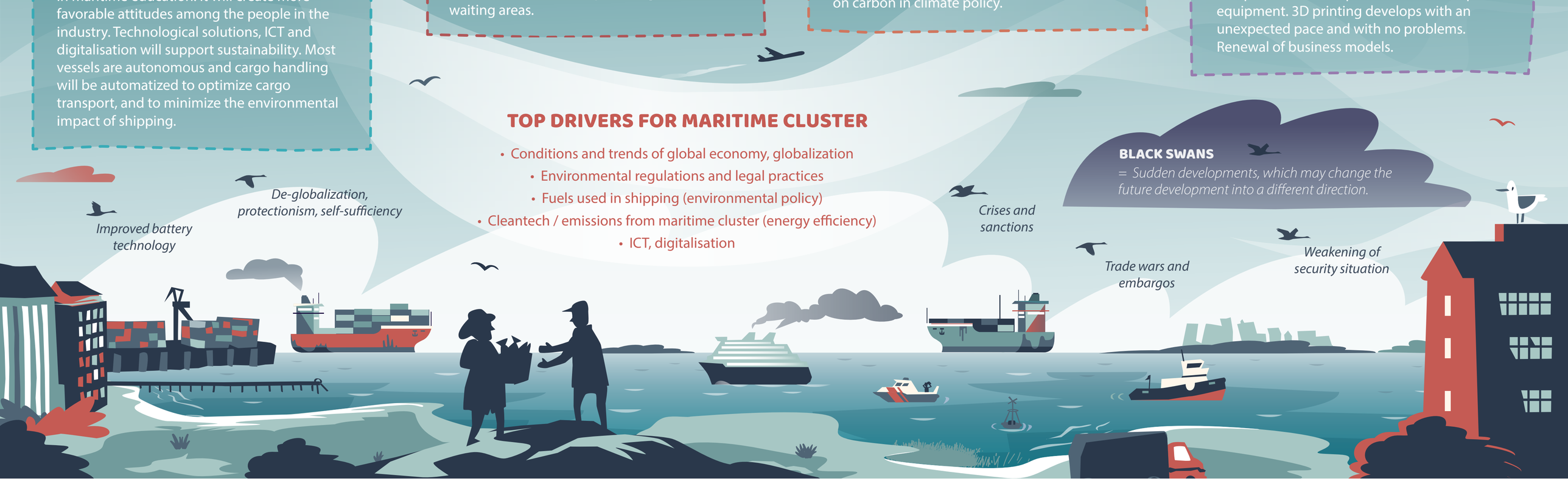
Improved battery technology

De-globalization, protectionism, self-sufficiency

Crises and sanctions

Trade wars and embargos

Weakening of security situation



Read more about the scenarios for energy, maritime tourism, maritime cluster, blue bioeconomy & subsea resources in the Gulf of Finland and Archipelago Sea: **www.syke.fi/projects/Plan4Blue/scenarios**

PLAN4BLUE

Interreg Central Baltic

EUROPEAN UNION European Regional Development Fund

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