National and regional approaches and needs for new risk management tools

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Fintraffic – Who are we?
Context
Problem framing
Proposed solution
Summary

Fintraffic in brief

We control traffic on land, at sea and in the air.

Intelligent traffic control services, digital services for companies and consumers and up-to-date traffic information are at the core of our work.

We help people and goods arrive safely and smoothly, while also paying attention to the environment.

We employ 1,200 professionals.

The task given to us - purpose of Fintraffic's existence

TASK MANDATED TO FINTRAFFIC BY FINLAND

The provision and development of the **traffic control and management services** required by society, commerce and the authorities

Building cooperation networks and promoting the development of **internationally competitive business ecosystems** in the transport sector

Accelerating the **development** of market-based products and **services** in the sector and the business-driven and **export-driven growth** of the sector

Creating new **platform solutions** that distribute and utilise traffic data more extensively and promoting new **data-based service business and value creation**

HOW DOES FINLAND MEASURE OUR SUCCESS?

More efficient mobility and transport, smoother traffic and improved traffic safety

Reliability and quality of the services the company provides to authorities

Promoting new business opportunities in the business sector

Development of transport in an environmentally sustainable manner

The purpose of VTS is to contribute to the safety of life at sea, improve the safety and efficiency of navigation and support the protection of the environment within a VTS area by mitigating the development of unsafe situations.
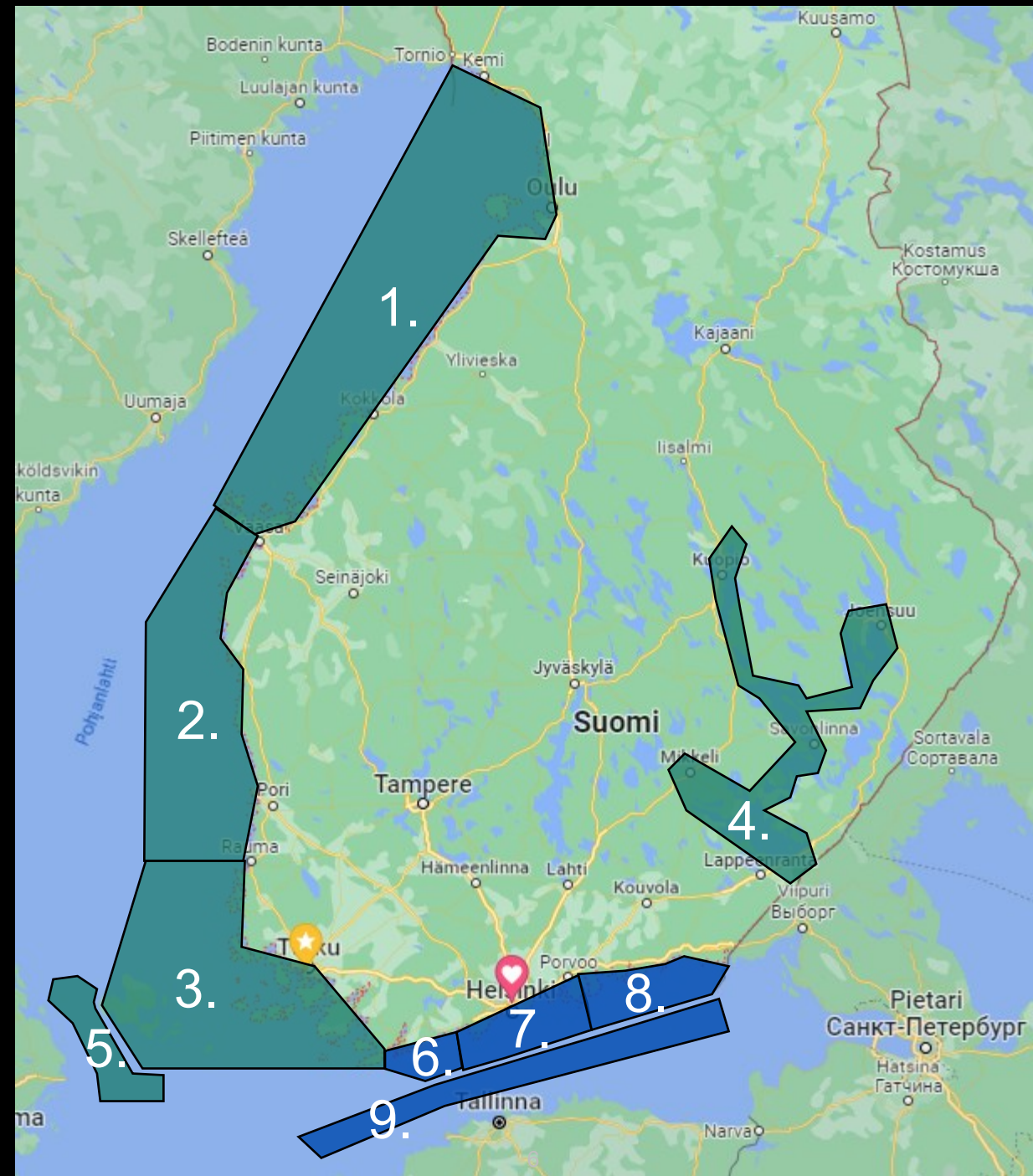
VTS areas

Western Finland VTS Centre, Turku
1. Bothnia VTS
2. West Coast VTS
3. Archipelago VTS
4. Saimaa VTS
5. Åland Sea Traffic (TSS in the Åland Sea) & Turku Radio (Safety Radio)

Gulf of Finland VTS Centre, Helsinki
6. Hanko VTS
7. Helsinki VTS Sectors 1 & 2
8. Kotka VTS
9. Helsinki Traffic (Gulf of Finland Reporting System)

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Context: VTS Risk management framework

SOLAS Chapter V Reg 12

*Contracting Governments undertake to arrange for the establishment of VTS where, in their opinion, **the volume of traffic or the degree of risk** justifies such services.*

IMO Resolution A.1158(32)

*The establishment of VTS is dependent on national law and relevant international conventions, recognizing factors such as **the volume of traffic, degree of risk, and geographical and environmental conditions**.*

*The need for VTS should be assessed and reviewed through **risk assessment**.*

IALA Standards, VTS Manual, and Guideline G1018

- *Formal Safety Assessment (FSA) recommended by the International Maritime Organization (IMO) for use by maritime authorities*
- *The broader concept of organizational risk management, within which FSA should be integrated, is described by the ISO31000 standard*
- *The tools of the IALA Risk Management Toolbox are introduced, indicating how they can support the risk management process*

Competent Authority

The competent authority for VTS should:
- ***Establish a regulatory framework** for establishing and operating VTS in accordance with relevant international conventions and IMO instruments, IALA standards and national law*
- *Authorize VTS providers to **operate VTS within a delineated VTS area***

VTS Provider

The VTS provider should:
- *set **operational objectives for VTS** that are consistent with improving the safety and efficiency of ship traffic and the protection of the environment. The objectives set **should be routinely evaluated** to demonstrate that they are being achieved*
- *ensure that VTS are **adequately staffed** and that VTS **personnel are appropriately trained and qualified***

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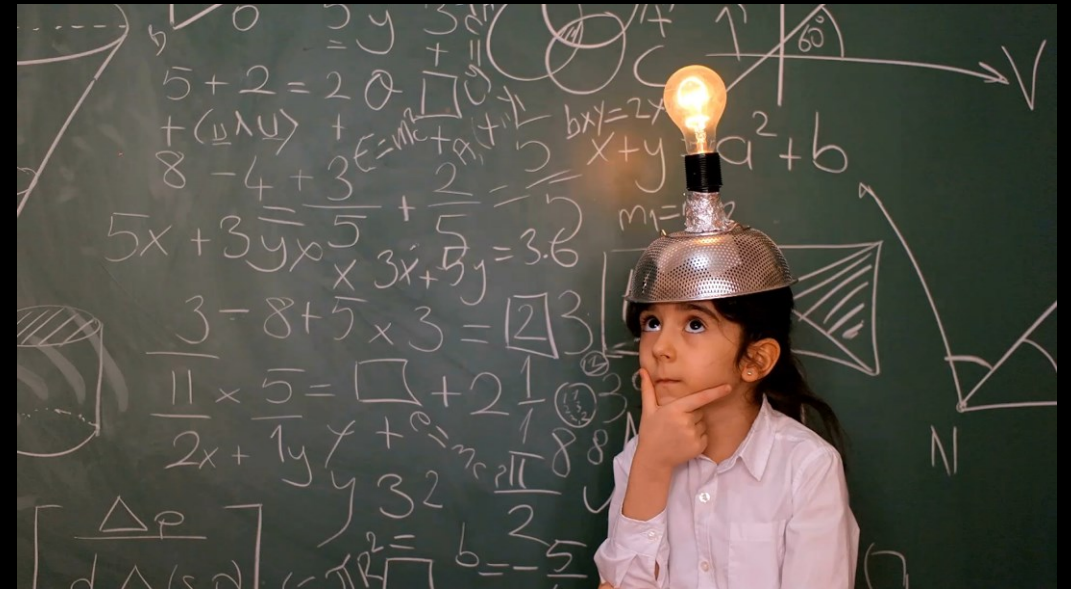**Solution and outcome**
Summary

Problem framing

Considering the degree of risk is not constant in the face of

- varying traffic volumes (and type),

- geographical conditions,

- and environmental conditions,

how can we routinely evaluate that the VTS meets its objectives?

Further, when is staffing adequate in relation to the delineated VTS area? How should it correspond to the degree of risk within that area?

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Underlying assumption: Decision-making should be data-driven and supported with realist evaluation.

Tool Development Principle: Customizability

- Consideration of various stakeholders
- Acknowledge diverse user needs
- Cater to the preferences and requirements of different users

Risk Presentation

- Enhance user experience by providing customization options to the risk model
  - Custom polygons;
  - Customizable timeframe, and;
  - Ability to filter the factors that impact the risk presentation.
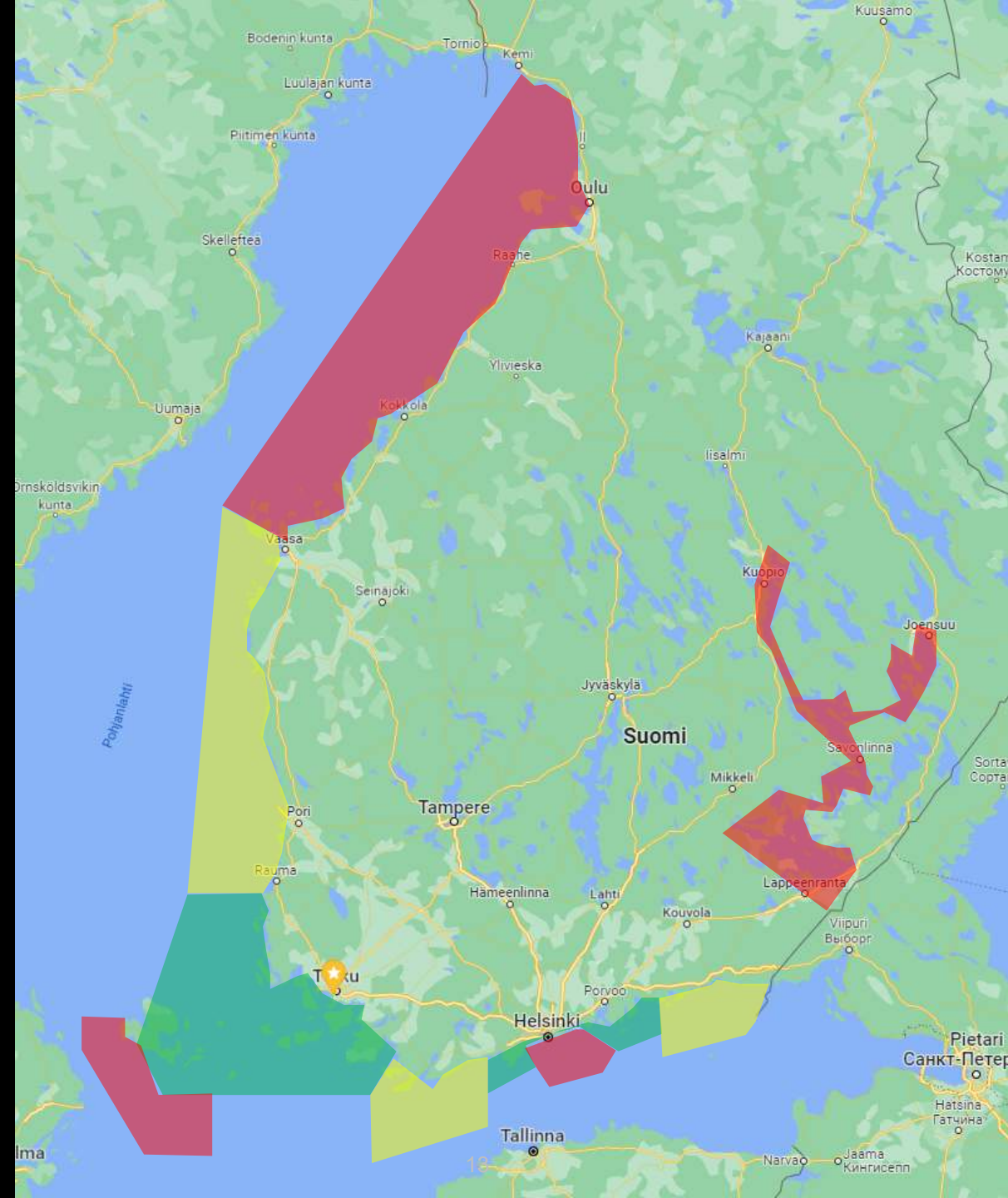
Anticipated outcome

- High customizability allows data driven insights for various stakeholders

- Supported by realist evaluation, insights provide a hybrid approach to determining risk in any geoprahical area, at any timeframe, with factors that are relevant to the user

- Geoprahical areas can be matched to the delineated VTS areas

- Finally, the risk and risk trends are considered as the basis for robust decision-making to facilitate safe and smooth traffic

- In the context of VTS, the evaluation of risk extends further to operational efficiency, taking into account factors like adequacy in staffing and training of personnel

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- New tools are crucial for continuous improvement in the context of maritime safety

- The tools should aim for maximum utility across a broad user base, fostering usability, and promoting cost-effectiveness

- Customizability is essential to cater diverse user-needs

- Wishlist of end-user features:

  - Custom polygons for geoprahical areas;

  - Customizable timeframe, and;

  - Ability to filter the factors that impact the risk presentation.

Thank you!