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Governance of publicly procured island ferry traffic services in the Central Baltic Region

Operations & Supply Chain Management

Master's thesis

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This thesis focuses on the markets, governance models, and public procurement of island ferry services in the Central Baltic Sea Region. Island ferry traffic, referring to publicly provided, procured, or subsidised ferry services in archipelagos and coastal areas, is a highly specific industry in the transport sector. Tourism-based ferry services, road ferries, and large-scale ferry services (as in ferries carrying thousands of passengers per vessel) are excluded from this thesis. Island ferry traffic is a small-scale industry and often creates a difficult business environment, yet it provides a vital service to its end-users. Inhabitants of small islands in the Central Baltic Sea Region are often highly dependent on ferry connections to the mainland and other islands. In the four selected regions of this thesis—Estonia, mainland Finland, Stockholm County in Sweden, and the Åland Islands—these ferry services are publicly procured and governed by various public sector entities.

For this thesis, academic literature on market economy, market governance, sustainability in governance, public-private partnerships, and public procurement was studied to form a theoretical foundation. The literature was used to create a spectrum of public-private partnerships, which was used to categorise these partnerships in the island ferry traffic industry. A framework for "good practice and avoidable mistakes" regarding public procurement was also established and used to analyse research results.

Data was collected on how the markets function and how authorities approach the governance and public procurement of island ferry services in each of the four regions. The data was collected by interviewing selected experts representing both authorities and service providers. The interview materials were then analysed, and together with secondary sources such as annual reports and relevant online articles, similarities, differences, and defining features of the markets, governance models, and public procurement approaches of island ferry services in the four selected regions were identified. Finally, the research results were evaluated based on key findings from academic literature.

The output of this research is a first-of-its-kind study providing insight into the markets, governance models, and public procurement in the highly specific industry of island ferry services in the Central Baltic Region. The research showed that across all four regions public procurement of island ferry services is shifting from a traditional price-focused approach towards emphasising quality and low emissions. It was also found that especially in mainland Finland and the Åland Islands business environments are difficult, while Stockholm County has a relatively stable and competitive market in the island ferry sector. Overall, the island ferry traffic industry is undergoing major changes in the 2020s due to political pressure to achieve emission reductions, new approaches to governance and public procurement, and the increasing need to update vessel technology.

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ABBREVATIONS AND TERMS

AB, Ab	Aktiebolag, limited liability company in Swedish (AB in Sweden, Ab in Finland)
AX	Åland Islands
BBAB	Blidösundsbolaget AB, a Swedish ferry service provider in the Stockholm County
CB	Central Baltic
CO_2	Carbon dioxide
ELY (Centre)	Finnish regional authority representing the national government in matters regarding Economic Development, Transport and the Environment (Elinkeino-, liikenne- ja ympäristökeskus in Finnish)
ESG	Environmental, Social, and Governance
ESF	Estonian State Fleet
EST	Estonia
EU	European Union
EUR	Euro (currency)
FIN	Finland
GoA	Government of Åland
GPP	Green Public Procurement
HSL	Helsingin seudun liikenne, a joint municipal authority organising and procuring public transport in the Helsinki metropolitan area
IGPP	Innovative Green Public Procurement
Island ferry	Ferries connecting islands to the mainland with varying route lengths, designed either for both passengers and vehicles or for passengers only
KLOY	A company operating and developing public transport in the Helsinki metropolitan area. The full name in Finnish is Pääkaupunkiseudun Kaupunkiliikenne Oy, which translates to Metropolitan Area Transport Ltd. in English, but the company is also known as just Kaupunkiliikenne Oy
MEUR	Million euros (currency)
OÜ	Osaühing, limited liability company in Estonian
Oy	Osakeyhtiö, limited liability company in Finnish
PPP	Public-private partnership
Road ferry	Ferries that are a part of the road network, typically designed to carry mainly vehicles over short sea or lake voyages
SEK	Swedish Krona, currency of Sweden
SL	Stockholms Lokaltrafik, organiser of public transport services in the greater Stockholm area

SLL	Suomenlinnan Liikenne Ltd, ferry company operating ferry services mainly for the Suomenlinna fortress island in Helsinki
SWE	Sweden
WÅAB	Waxholms Ångfartygs AB, a ship owner company of Region Stockholm

1 Introduction

1.1 Introduction

This thesis is written as an assignment aiming to provide a comparative report focusing on the market structures, governance models and public procurement practices of the island ferry traffic sector in four selected regions in the Baltic Sea: Estonia, Finland, Sweden, and the Åland Islands. The Baltic Sea has a significant number of islands, which are often small and uninhabited, but some are home to permanent inhabitants. Even though the island populations tend to be small, people living on the islands have a right to transportation services. For example, in Finland the right to transport services for islanders is a part of Finnish national legislation through the Act on developing archipelago areas (Finlex, 26.6.1981/494).

From a transport perspective, islands can be connected to mainland areas via bridges, tunnels, or airports, but as building this sort of infrastructure is expensive, ferry traffic often serves as the only connection islands have to the mainland in the Central Baltic Region. Island ferry services are consequently vital for the island communities and coastal regions, both for the people living there and for any the mainlanders who wish to visit or do business with the islands. From a business perspective, providing island ferry services might not be profitable as such, which is why companies operating the ferry traffic in the Central Baltic Sea Region are typically either owned, subsidised or contracted by the state (Ojala, 2023). In other words, island ferry traffic in most cases can be categorised as public transport.

The empirical research of this thesis is geographically limited to four regions within the Central Baltic Region: Estonia, Mainland Finland, Stockholm County in Sweden, and the Åland Islands (Figure 2). Latvia is a part of the Central Baltic Region but as the country's coastline has no islands and consequently no market for island ferry services, Latvia as a region is excluded from this thesis. The four selected regions all have plenty of inhabited islands and distinct island ferry traffic markets. The Åland Islands (a Finnish region) are treated as a separate region from mainland Finland in this thesis due to having an autonomous position and an independent governance structure in the island ferry service sector.

Ferries are waterway transport vessels with a wide range of scale, capacity, and purpose. A ferry can be used to cross a river with a handful of cars onboard or to transport thousands of passengers and hundreds of vehicles across open sea. Defining what is island ferry traffic is an essential starting point

for this study. The definition of island ferry traffic varies by region, but regarding this thesis a categorisation model for ferry services by Professor Ojala (2025) will be applied. The model is demonstrated in Figure 1 below.

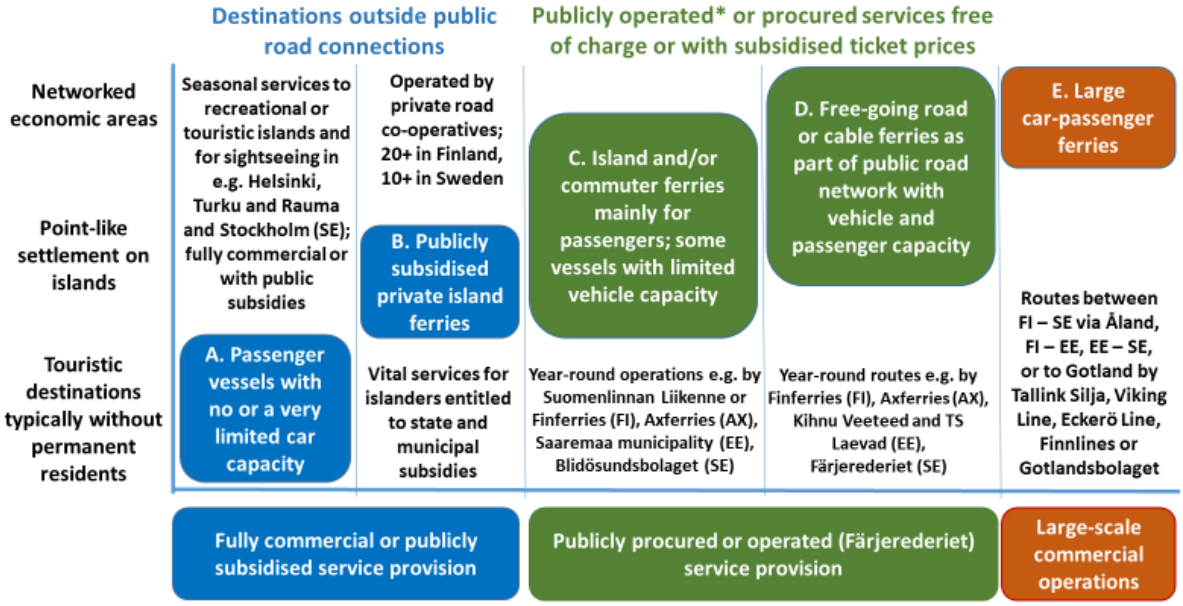

Figure 1: Categorisation of various types of ferry transport sub-markets in the Central Baltic Region, out of which Category C is the focus of this thesis

Ojala categorises the Central Baltic ferry service market into five sub-markets based on scale and capacity of transport, purpose of transport, seasonality, and whether it is public or commercial transport. The categorisation is largely applicable also elsewhere, apart from type B, which is uniquely found in mainland Finland and Sweden in the Central Baltic Region.

A. Subsidised or fully commercial often tourism-based and seasonal passenger transport
B. Subsidised private road ferries (an unusual arrangement found in Finland and Sweden)
C. Publicly funded, scheduled, and year-round[1] transport to islands with permanent inhabitants, which can be operated by state-owned companies or private companies
D. Road ferries, which are a part of the road network connecting roads over a body of water
E. Commercial ferry transport in a significantly larger scale with vessel capacities of hundreds or thousands of passengers.

Category C out of the five presented categories provides a fitting classification of what is defined as island ferry traffic in this thesis. Some cases from the other ferry traffic categories will also be

[1] A vast majority of type C ferry routes are year-round, but some are seasonal such as the archipelago trails in Southwest Finland (Yhteysalus.fi, retrieved 20.1.2025)

considered as examples of how the governance structure of ferry transport may be configured. However, type C ferry services will remain as the main focus of this thesis.

The objective of this thesis is to provide an overall picture of the market in selected regions, and to analyse and compare the existing governance models and public procurement practices. A sustainability aspect, mainly environmental, is also included into this thesis, but sustainability is not a core theme of this study. Ideally the research results may provide some insight on how well do these governance models enable sustainable development in the ferry traffic industry. The focus will be on governance factors such as governance structure, public funding, public contracts and procurement criteria. Governance is a broad subject, which is further explained in Chapter 2, but the list below provides examples of what type of factors constitute a governance model regarding island ferry services.

- Governance structure
    - Is the governance of the island ferry sector a responsibility of a national, regional, or municipal government?
    - What public entity is procuring ferry services? Which ministry or agency within a government for example?
- Public funding
    - The island ferry traffic operators in all four regions are receiving public funding, but there are differences in for example where the funding is coming from or what is the funding mechanism like
- Contracts between authorities and service providers, which include details such as:
    - Service level (in this context may include)
        - Schedule details, frequency of trips
        - Capacity of vessels
        - Number of ferry crew members employed by the operator
    - Ownership of vessels
    - Number of vessels and existing back-up vessels required
    - Sustainability metrics such as emissions targets
    - Fixed or flexible schedule
- The procurement criteria of decision-making organisations managing the tendering process
    - Technical specifications for vessels
    - Emission levels
    - Staff competency
    - Financial state of the company

Chapter 1.2. presents the REISFER project and D.1.2.1. assignment (deliverable 1.2.1., see Chapter 1.2), which form the foundation of this thesis. Chapter 2 forms the theory section of this thesis using

academic literature and other sources to explain key concepts regarding this thesis and establishing a conceptual framework for the empirical sections. Chapter 3 explains the methodology of the thesis and Chapters 4-7 present the results of the research through four Chapters for each four regions respectively. Summary of results and conclusions are be provided by Chapter 8.

1.2 The REISFER project and the D.1.2.1. assignment

This thesis is based on an assignment from Turku School of Economics, which is a partner of the REISFER project. The REISFER project is aiming to significantly lower the carbon footprint of island ferry traffic in the Central Baltic Sea Region with a goal of reducing CO_2 emissions by 10-20%. REISFER is one of several projects under the EU part-funded Central Baltic Interreg Programme. The project has identified several ways of tackling the issue and one of the most important aspects is ship technology. Either by bringing in new vessels or retrofitting older ones with low-emission technology, such as electrified propulsion, emissions of ferry traffic can be lowered significantly. There are also other tools for lowering emissions of maritime transportation such as energy systems, alternate routing, and eco-driving.

Due to its exceptionally low salinity and relative isolation from the Atlantic Ocean, the Baltic Sea is a unique but also very sensitive ecosystem. The Baltic Sea has also become increasingly polluted, which has not gone unnoticed by surrounding countries and the EU. A strategy regarding the Baltic Sea was published by EU in 2018, which focusses on three points:

1. Saving the sea
2. Connecting the region
3. Increasing prosperity in the Baltic Sea region.

Island ferry traffic is an essential, if small scale, component of this strategy considering it can impact all three points. (European Commission, 2018, Dobrzycka-Krahel & Bogalecka, 2022)

REISFER project officially began in April 2024 and is due to last 36 months until March 2027. The project is divided into six periods, each lasting 6 months. Figure 2 shows the Central Baltic Interreg Programme project area, which also includes Latvia, but as the country has no islands, neither on coast or on inland lakes, it is excluded from the island ferry traffic oriented focused REISFER project. Estonia, Finland, Sweden and the Åland Islands form the four regions of the REISFER project and there are 9 partners from these regions working towards a common goal with Tallinn University of Technology (TalTech) being the lead partner of the project. The project partners listed in Table 1 are a

combination of universities, research institutes, authorities and private companies operating in the island ferry traffic sector.

Table 1: REISFER project partners (Central Baltic Programme, retrieved 18.6.2025)

Partner	Abbreviation	Country	Organisation type
Tallinn University of Technology	TalTech	Estonia	University
University of Turku	UTU	Finland	University
Blidösundsbolaget AB	BBAB	Sweden	Ferry operator
AS Kihnu Veeteed	KVT	Estonia	Ferry operator
Finland Archipelago Shipping Ltd	Finferries	Finland	Ferry operator
Estonian State Fleet	ESF	Estonia	Public sector organisation
Government of Åland	GoA	Åland	Public sector organisation
The Swedish National Road and Transport Research Institute	VTI	Sweden	Public sector organisation
Suomenlinnan Liikenne Oy	SLL	Finland	Ferry operator

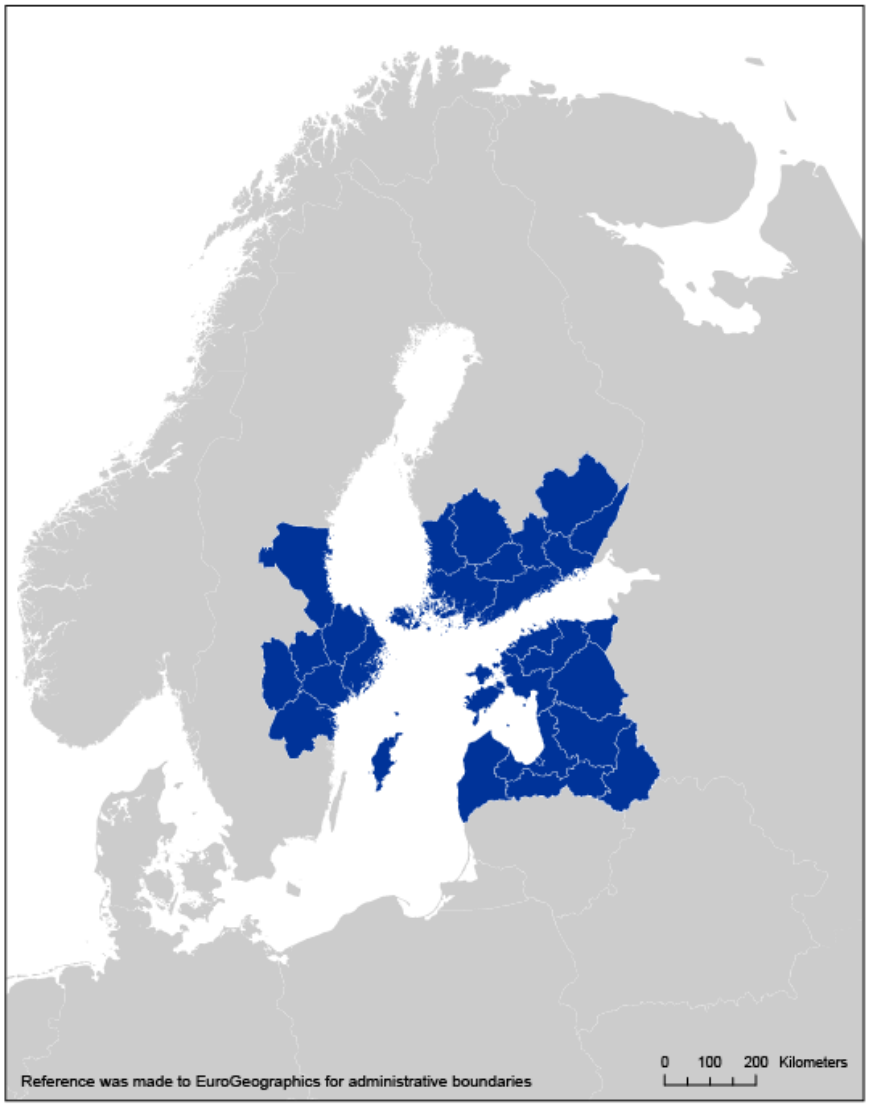

Figure 2: Central Baltic Programme area map (Central Baltic Programme 2021-2027 cooperation area, retrieved 2.6.2025)

Research done for the REISFER project culminates in deliverables, which are a set of various type of outputs or reports written by project partners in collaboration with other stakeholders familiar with the highly specific industry of island ferry traffic in the Baltic Sea. This thesis is based on the D.1.2.1. deliverable from the REISFER project, which has already been released as publicly accessible report in March 2025. This thesis is its own paper, but with a mostly shared empirical section with the D.1.2.1. report. The report was co-written by B.Sc. Elias Joki-Korpela (Author) and Professor Lauri Ojala. Below a direct quote from REISFER project materials describing what the D.1.2.1. report should focus on.

> "Report on the results of stakeholder meetings and interviews with public procurement tenderers and their policy-making background organisations forming a unique comparative overview of the governance structures of this specific line of operations in EE, FI, AX and SE."

2 Theoretical background and key concepts

2.1 Defining a market

This thesis includes analysis on the highly specific market of island ferry traffic, which is why a good starting point is to define what is a market. A market is a key element in economics as it provides a framework for trade. Traditionally a market was a physical venue or gathering, such as farmers markets for example, where buyers and sellers meet and trade but in the modern world markets are much more complex and often facilitated in digital form.

Rosenbaum (2000) writes about what defines a market and breaks down the concept. At its core a market is based on exchange. But any exchange of commodities or services is not necessarily a market in an economic sense, as there are other important criteria for markets. The exchange must be voluntary and specified to a certain product or service. The exchange also must take place regularly as in a single transaction does not create a market but perhaps most importantly, a market includes competition between sellers, buyers, or both. Without competition, the exchange setting becomes a monopoly or monopsony (more about monopolies in Chapter 2.2). (Rosenbaum, 2000)

A market is not only defined by companies already in the market, but also the prospect of entry and exit. Some markets are easy to enter whereas others require complex facilities, capital investment, highly trained workforce and official permits to even begin production. The concept of difficulty to enter a market in economics is known as barriers of entry. High entry barriers give well established companies security and protection as the threat of a new competitor entering the market is low in contrast to a market with low entry barriers, where companies must continuously work towards increasing or maintaining their market share. For example, entry barriers to the oil and gas industry are high, while entry barriers for starting an e-commerce business are very low.

The national economies of most countries are based on the ideas of market economy and free trade, which date back to the classic school of economics prevalent during the 18th and 19th centuries. A free market is one not controlled or restrained by central planning but guided by free will of consumers and the law of supply and demand. The free-market theory states that a pure market economy uses resources and labour most efficiently. (Investopedia, 2024)

An ideal form of a market, according to classical economics, is the free market where multiple sellers compete against each other while the buyers choose freely which products or services to buy. In an

ideal market all consumers have perfect information on available products and services to make informed decisions. This leads to a situation where, the sellers must be innovative and cost efficient to improve their products or lower prices to beat the competition. In a fully free market, there are no regulations or taxes limiting free trade and entry barriers for the market are low, meaning anyone can start a business and start selling products or services. Theoretically, a free market would benefit consumers above all as they would get products with increasing quality while prices remain moderate. (Tamplin, 2023)

However, the free market is more of a theoretical construction than a practically good solution. The *laissez-faire* (French for let it be) approach of classical economics relies on the invisible hand theory by the famous 18th century economist Adam Smith, where individuals and economic agents seeking their self-interest in a free market could create a self-governing economic system. But this theory has its flaws, which are recognised by other schools of economics as well as Adam Smith himself. Even Smith knew that some level or government interference is needed for creating a level economic playing field with fair competition (Mittermaier, 2020)

Without market regulation, a pharmacy, for example, could be founded by a person without any medical expertise while the products sold in the pharmacy would not be require going through any official testing and licensing procedures. An uncontrolled free market can also easily become skewed and enable unwanted economical phenomena, such as monopolies, cartels, and high income inequality. This is why a fully free market from classical economics is more of a theoretical ideal than the best option for a society. Markets in modern economies have become more complex and they usually include some level of involvement from the public sector, which is why most national economies today are mixed economies (meaning they are a mixture of free market principals and government interference). (Office of Fair Trading, 2009)

A foundation for the following subchapters has been established by defining that functioning modern markets are based on voluntary and regular exchange of commodities including competition and some level of government interference, such as regulation or taxation. Especially subchapters 2.2, 2.3, and 2.4 focus on market phenomena and market governance.

2.2 Natural monopolies and critical industries

A competitive market has several sellers of the same product or service but if there is only one seller, the market has become a monopoly. Markets where one company has a dominant position and a market share of over 70% can also be viewed as monopolies. A private company may achieve a monopoly position in a market through the economies of scale and buying or pricing out competition for example. However, economists typically view private monopolies as undesirable outcomes for a free market as the lack of competition tends to have negative impacts such as inefficient management and production, lack of innovation and investment, and high consumer prices. Once a monopoly position is established, consumers have no choice but to buy from the monopolists if they need the product or service in question. This results in a situation where the monopolists reap unnaturally high profits while consumers are faced with poorer quality, a lack of options, and higher prices compared to a competitive market. (Rosenbaum, 2000, Office of Fair Trading, 2009)

Governments usually try to prevent private monopolies from emerging, but the public sector has incentive to create their own monopolies for certain markets. Creating a public monopoly for some markets may be viewed as a matter of national interest. For example, several Nordic Countries (FIN, SWE, NOR, ISL) have their own version of an alcohol monopoly. These countries have a state-owned company, which has a monopoly regarding selling medium and strong alcoholic beverages. This type of monopoly is created through a political decision and an alcohol monopoly doesn't exist in most countries, meaning it is a not a natural monopoly. For example, Estonia has a free market-based open retail system regarding alcohol sales instead of a monopoly. (Alko, 2021)

A private monopoly emerges when a company controls the entire market, while a public monopoly is created through a political decision by giving a state-owned company or entity a monopoly position in a particular market. A natural monopoly, on the other hand, could be described as a situation where the most efficient number of companies providing a product or service is one. Megginson & Mueller (2022) present five characteristics, which are necessary for the existence of a natural monopoly. Of these characteristics the first one is that "the industry must supply an essential product or service", while the other four revolve around how the industry is reliant on infrastructure, unstorability of its products or production, and uninterrupted demand.

Good examples of a natural monopoly are the water supply network and an electric grid, where the massive infrastructure required for operating in the industry creates very high entry barriers to the market, where the output is an essential service or product. (Megginson & Mueller, 2022) Table 2 below summarises the definitions, key features, and examples of different types of monopolies.

Table 2: Definition, key features, and examples of private, public, and natural monopolies

	Private monopoly	**Public monopoly**	**Natural monopoly**
Definition	A private company has reached a dominant market position, which gives the company control over the market with little competition	A state-owned or controlled enterprise is given a legal monopoly position over a certain market	An industry where the most efficient number of providers (of a product or service) is one
Key features	Typically viewed as an unwanted outcome due to the lack of competition and other downsides of monopolies	Public monopolies are typically created in industries that are deemed important for national interest	Often emerges in critical industries with high capital costs and need for infrastructure providing an essential service or product
Examples	Google could be considered a private monopoly in the search engine market due to 79.1% market share. (Statista, 2025)	Alcohol monopolies in Nordic countries like Alko (FIN) and Systembolaget (SWE).	Water supply, railways, electric grid.

Providing an essential service or product is characteristic for a natural monopoly, and they often form around critical functions of society. According to the EU's CER directive (EUR-Lex, 2022/2557), a critical entity is a public or private entity typically providing some essential service or services. The EU defines 10 critical sectors (or entities) of society in the CER Directive of 2022 and among the critical sectors are energy, transport, drinking water, and digital infrastructure, which are exactly the type of industries where natural monopolies may emerge. The EU defines an essential service as:

> "'essential service' means a service which is crucial for the maintenance of vital societal functions, economic activities, public health and safety, or the environment;" (EUR-Lex, 2022/2557)

2.3 Market governance

The word" governance" is extremely broad and difficult to define, but nevertheless, a key concept regarding this thesis. To narrow down what sort of governance is relevant for this thesis, this subchapter will briefly describe and explain what market governance is.

As the fully free market is a theoretical ideal rather than a practical solution, markets today are governed by national, regional, and municipal governments through various means and mechanisms. Market governance could be described as the process of governments setting rules, laws, and regulations for how business is conducted within a certain market while various public sector institutions oversee that these rules are being followed. Market governance aims to create a business environment based on legality, transparency, accountability, and fair competition.

Antitrust laws, i.e. laws and regulations that are meant to maintain fair competition and prevent private monopolies, are a good example of market governance. As governments have recognised private monopolies as harmful and competitive markets as beneficial for the consumers, laws and regulations have been set to maintain the preferred state of competition in various markets. Through these types of regulations governments impact markets. According to Vogel (2023) market governance is never fully neutral, it always benefits certain stakeholders. For example, market governance can be either designed to benefit incumbents (meaning companies already in the market) or it can benefit challengers. In this example market governance has great impact towards how difficult it is a for a new player to enter the market. (Vogel, 2023)

If a market consists of private companies competing against each other, the government has a passive role with indirect control through market governance. However, the public sector may have more direct control over a market through building and owning key infrastructure, having a state-owned company in the market, or by essentially creating the market by procuring products or services from private companies for example. Especially the public procurement-based market, which broadens the scope and increases importance of market governance, is relevant for this thesis. More about public procurement in Chapter 2.5.

2.4 Sustainability in governance

Traditionally the purpose of a company is to make profit and maximise shareholder value, which is also what corporate governance was originally meant to support: to manage a large and complex organisation as effectively as possible while maintaining accountability, transparency, fairness and responsibility. Over the past decades corporate governance has been gradually absorbing a new element: social and environmental sustainability. While economic sustainability and legality remain among the core aspects of corporate governance, companies today must be increasingly focused on environmental and social sustainability as well. Raking in as much revenue as possible is no longer considered the sole purpose of a company, social responsibility and sustainability are also expected from modern companies, especially from large well-known corporations. (Camara & Morais, 2022, Pollman, 2022)

The trend of increasing emphasis for sustainability issues in business has given birth to the concept of ESG, which stands for Environmental, Social, and Governance. ESG is not clearly defined but a broad umbrella term consisting of three pillars listed below. According to Camara & Morais (2022) the purpose of ESG is understanding the different aspects of sustainability and being able to evaluate how sustainable and responsible a business is, typically from an investor's perspective. Ideally, adopting ESG-oriented thinking will result in more investments flowing towards the responsible and sustainable organisations.

- Environmental factors:
    - reducing emissions
    - transitioning to circular economy
    - sustainable use of water
    - protecting biodiversity and ecosystems
- Social factors:
    - Human rights, e.g. not tolerating slave or child labour anywhere in the supply chain
    - Paying fair wages
    - Workplace health and safety
    - Relations with local communities
- Governance factors
    - Business ethics, e.g. not tolerating bribery or corruption
    - Disclosure of information
    - Shareholder rights
    - Risk management

ESG culminates what is generally considered as good governance and has become an often used corporate buzzword despite having no clear agreed upon definition. ESG is not a solution to

governance related issues, but it provides guidelines of what aspects corporate governance perhaps should include today. ESG is typically embodied by various corporate governance measures such as social responsibility and sustainability-oriented strategies, improved risk management, strengthening cybersecurity, committing to emission reductions, and supplier management. Implementation of ESG measures is often approached using the "cascading effect", which refers to a top to bottom type governance where for example the buyer of a product or service demands certain standards from the tier 1 supplier, who in turn demands the same standards from the tier 2 supplier and so on. (Camara & Morais, 2022)

Adopting sustainability aspects into business does not only regard private companies and corporations, it also concerns the public sector and state-owned companies. Politicians create pressure for the public sector to reduce emissions and invest in sustainability through ambitious emission reduction goals such as the Paris agreement or Finland's goal of becoming carbon neutral by 2035 (Ministry of Economic Affairs and Employment of Finland, 2022). A book edited by Phillippe Hamman (2019) focuses on Sustainability Governance and Hierarchy in Public-private partnerships. The transformation of our society as a whole from the current state of to an environmentally sustainable version is a notable change, which requires decision makers transforming to a sustainability-focused approach on governance.

Administrative entities can enable change in their respective industries by setting policy, providing resources and expertise, and tracking policy implementation. While EU countries often declare emission reduction goals, existing arrangements of governance typically are not formed in optimal manner regarding sustainability. Bornemann & Christen (2019) argue that to transition from traditional governance to sustainable governance the public sector should adopt a combination of imaginative and reformist attitudes towards governance. The authors use a metaphor of having a machine. Instead of repairing or oiling the machine, decision makers should rebuild the machine or even "throw sand into the machinery." The metaphor translates into making fundamental and disruptive changes instead of continuing with existing governance models and practices while making small tweaks and gradual updates. (Bornemann & Christen 2019)

2.5 Levels of public sector involvement within a market

When the public sector is procuring goods, services, or works from the private sector a public-private partnership (PPP) is formed. A typical setting is that the public sector owns infrastructure or facilities but procures service or labour from the private sector. Construction projects where these facilities or infrastructure are built, are another typical setting for PPP. Dewulf, Blanken, and Bult-Spiering (2011) write about strategic issues in PPPs and in their book the authors break down the different types and levels of PPPs. The spectrum is adapted from the work of Dewulf et al. (2011) and will be used here to create a simple classification for PPPs presented in Figure 3 below.

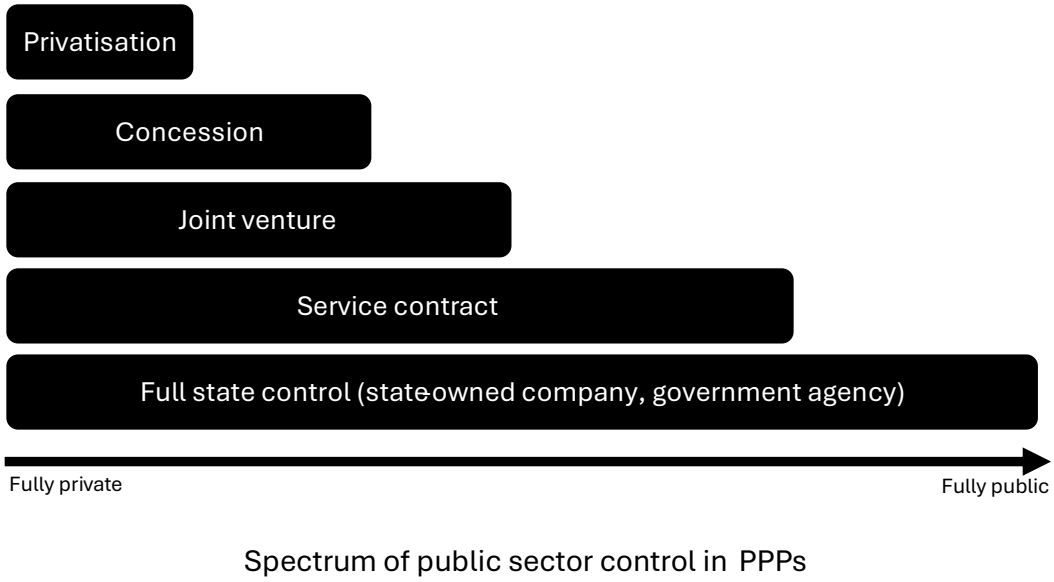

Figure 3: Spectrum of public-private partnerships (Adapted from Dewulf et al., 2011)

On the "private" end of the spectrum of PPPs is privatisation i.e. selling state-owned assets such as infrastructure, production facilities, or entire enterprises to the private sector. Privatisation means complete transfer of equity without time limitations leading to the public sector losing all direct control over what was privatised. This approach is not really a partnership, but a full transfer of ownership, which is why it as a rather radical and rarely used option for a government, especially regarding critical industries.

On the "public" end of the spectrum there is full state control in the form of a government agency or state-owned company. An important detail regarding a government agency, or another entity, is that it's not a company and therefore not bound by trade law to seek profits or revenue. A state-owned company, however, typically comes with a more commercial mindset and often has a dual role of both serving public interest and seeking profit and being economically sustainable as a business. The privatisation and full state control represent opposite approaches to PPPs and create boundaries for the

private-public spectrum. In a way, the true forms of public-private partnerships can be found in between these two extremes. (Dewulf et al., 2011)

A service contract is an often-used version of a PPP, which retains operative control and public assets mostly in the hands of the state. Service contracts are used to essentially hire a private company to provide services on the behalf of the state. With a service contract the buyer, a public sector organisation in PPP context, oversees and tracks service delivery having firm control but also must carry the business risk. There are service contracts, which include lease agreements of public assets, but usually the private company does not use public assets with service contracts. This results in an PPP arrangement, where private sector control is low. (Dewulf et al., 2011)

The service contract is a standard approach especially in the transport sector and local public transport networks are often based on a set of service contracts. Typical example of a service contract could be a bus company hired by the local municipality to provide bus services based on a public contract with very little freedom to affect service level factors such as schedules or vehicle capacity. With a service contract in the transport sector the service provider is paid by the public procurer, not by the customers. In public transport the service provider usually uses their own vehicles, which are not public assets. There are also lease agreements arrangements in the transport sector, where the service provider is hired to operate state-owned vehicles, vessels, or rolling stock. (Dewulf et al., 2011)

A joint venture, as the name suggests, is essentially a halfway solution between public and private control. Joint venture means having or establishing a public-private company, which is owned jointly by private and public shareholders. A joint venture is based on extensive co-operation where ownership, service delivery and business risk are all shared between the private and public partners. Out of the varying forms of PPPs, a joint venture is perhaps closest to a true “partnership”. Examples of joint ventures can be found in urban development among other fields. (Dewulf et al., 2011)

A concession on the other hand is a solution where the national, regional or local government gives a private company the sole right to either take possession of or first build and then own a piece of infrastructure or a certain route for a specified period of time. Concession is a slightly ambiguous concept that does not have a clear singular definition, but key features of a concession are usage and ownership of public assets and funding of service delivery. Compared to service contracts, concessions are typically longer PPPs in duration and include the private company carrying both business risk and responsibility over service delivery.

In the infrastructure context a concession could be a private company constructing a highway and then collecting toll said highway for a certain time period to cover costs incurred by construction of the

road. After the agreed time period is over, ownership and tolling rights of the road are transferred to the state. There are several alternative arrangements, what a concession covers and how the transfer of ownership of assets can take place after the concessions period is over such as:

- BOT = Build-Own-Transfer
- BOOT = Build-Own-Operate-Transfer
- BLT = Build-Lease-Transfer

In the transport sector concessions are found for example railway transport, where the infrastructure plays a key role. In a public transport concession, a key detail is commercial risk coming from ticket revenue. With a service contract ticket revenue goes to the public procurer but in a concession the private company collects the ticket sale revenue directly from customers. BOT or BOOT type of concessions are, however, rare in the context of island ferry traffic, because the contractual periods are relatively short, such as 5-15 years or so. (Dewulf et al., 2011)

2.6 Elements and methods of a public procurement

The public sector, which consists of the national, regional, and local governments and representatives of these government including authorities, agencies, and other public organisations, is typically tasked with providing vital services for its citizens ranging from education, healthcare, and transport to waste management and national security. However, the public sector does not produce all required services itself. Authorities often acquire services, supplies, and labour from the private sector, i.e. practice public procurement, which makes the public sector a major purchaser of goods and services in certain industries.

When the public sector procures goods or services form the private sector, the private company receives and signs a public contract. Especially regarding services, these contracts are instrumental in defining aspects such service level, volume, quality, and emission restrictions. In the transport sector for example, the contract defines how often a route must be served, what the capacity of a single vehicle needs to be, and how much a ticket costs. Public transport is often based on these public contracts between local authorities and service providers (companies) and that both parties honour the contract diligently.

The process of public procurement must be fair and transparent by EU law as a tempting environment for corruption is created, if authorities were free to award lucrative public contracts to whoever they choose “behind closed doors.” When the public sector decides to procure goods or services from the private sector, the setting is often based on competitive bidding. The buyer, a public sector

organisation, provides a set of criteria to be fulfilled for an eligible bid and then sellers, private companies, start making offers. This procedure in public procurement is known as tendering or a tender, which is competitive and public, meaning anyone can take part and the best offer based on given criteria is awarded with a public contract. (Public tendering rules (of the EU), retrieved 5.5.2025)

Table 3: Relevant current national and EU thresholds for public procurement in Estonia, Finland, Sweden, and the Åland Islands (Public tendering rules (of the EU), EU and national thresholds, Ministry of Finance (of Estonia), Baker McKenzie, retrieved 5.5.2025)

	National threshold	Central government authority (EU threshold)	Other authority (EU threshold)	Utilities (EU threshold)
Estonia, Finland, and Åland	60,000 EUR	143,000 EUR	221,000 EUR	443,000 EUR
Sweden	~143,000 EUR			

The higher the value of a public contract is, the higher is the incentive for the authorities to create a tender. EU has set thresholds for how valuable public contracts must be tendered meaning valuable public contracts in EU countries must be tendered while low value public contacts may not need to, depending on national legislation. The general threshold for supply and service contracts in the EU is 143,000 EUR for a central government authority and 221,000 EUR for other authorities, such as local authorities. In addition to these thresholds, both Finland and Estonia have national threshold of 60,000 EUR. Island ferry traffic is included in the supply and service contracts category (143,000 EUR threshold) while railway and bus traffic are included in the utilities sectors with a higher threshold of 443,000 EUR. Public procurement thresholds of Estonia, Finland, and Sweden[2] from relevant industries regarding this thesis are summarised in Table 3 below. (Public tendering rules (of the EU), retrieved 5.5.2025)

A very typical issue regarding public procurement is the quality versus price trade-off. “Quality” in public procurement can refer to various details such as industry specific service level factors, newer and more advanced technology, or improved sustainability. The buyer would prefer as high quality as possible when procuring goods, service, and works, but higher quality comes with higher price and public sector entities usually operate with tight budget constraints. This is why a traditional approach towards public procurement is to exclude incompetent applicants and then choose the offer with the lowest price.

[2] In the context of public procurement thresholds, the same policies apply to Åland as to Mainland Finland.

Technology is often present in public procurement in one form or another. For example, in the transport sector age of vehicles or vessels, which determines how advanced technology they possess, is a key feature. Procuring older technology is an effective avenue to save costs for authorities, but if increasing the quality or environmental sustainability of procured services is required, newer technology is often needed. The choice between using old but cheap vehicles, vessels, or rolling stock versus new technologically advanced ones with increased costs is a typical practical example of the quality versus price trade-off in the transport sector. In a case study on bus services tendering in Germany, it was found that simply introducing competitive bidding to the procurement process was able to bring down the average age of a bus fleet from 7.8 years to 4.8 years. (Beck, 2011) This study highlights that successful tendering can help to tackle this problem.

Estache & Iimi (2011) study the quality versus price question in the context of public infrastructure projects in developing countries and recognise, that while quality should not be compromised, high quality standards for the tender could narrow the number of eligible bidders and decrease competition. According to a study on the tendering process for services in Czechia, each additional tenderer lowers the price of the contract by 3.05% (Stehlík, 2018) amplifying the incentive for authorities to facilitate competition. However, too low-quality criteria, while creating competition, could lead to hiring incompetent and faithless contractors, which will create further costs and quality issues. Estache & Iimi (2011) also argue that a major benefit of moderate quality criteria is that it enables local smaller businesses to enter the competition and boost local economy. (Estache & Iimi, 2011, Stehlik, 2018)

Regarding technologically advanced public procurement, the length and requirements of the tendering process may become a problem. If the tendering process takes for example three years, a typical duration in Nordic countries, technological advancement can pass the bidders' original offers within the three-year period ultimately giving the contractor slightly outdated technology to begin with (Nordic Council of Ministers, 2010). Another time-related factor is the length of public contracts provided. Ojala (2023) concluded that providing longer public contracts in the ferry traffic in Finland would benefit both the authorities and the service providers. The public procurers would save time and effort by organising fewer tenders while the service providers can be more focused on making long term investments and less focused on constantly preparing for the next tender. (Nordic Council of Ministers, 2010, Ojala, 2023)

When the public procurers are focusing on environmental factors, the process may be referred to as Green Public Procurement, (GPP). The main issue with GPP is, once again, the price. Sustainable solutions are typically technologically advanced and consequently cost more than less environmental options. A study on GPP of freight services in Norway shows that while authorities are already

emphasising sustainability in tendering, there are barriers, especially financial ones, to overcome. Low emission transport services require infrastructure investment, which makes it difficult for both smaller buyers and sellers. Smaller municipalities, for example, struggle to afford the high-cost infrastructure while small local businesses are easily trumped by big corporations in the competitive bidding phase. The public sector needs to adapt its approach to create a sustainable and level playing field for future procurements. (Karlsson et al., 2022) Table 4 below summarises the key points of this subchapter resulting in a "good practice versus avoidable mistakes" framework.

Table 4: Good practice and avoidable mistakes of public procurement (Nordic Council of Ministers, 2010, Beck, 2011, Estache & Iimi, 2011, Stehlik, 2018, Karlsson et al., 2022, Ojala, 2023)

Good Practice	Avoidable mistakes
Rewarding innovativeness and environmental sustainability	Having **a price over quality mentality**, only chasing cost savings can lead to hiring incompetent and faithless contractors or procuring outdated technology
Attracting several bidders, also local ones, creating competition, lowering prices, and potentially **boosting local economy**	Offering **too short contracts**, disincentivises sustainable development
Expecting **new vessels and vehicles** form bidders (in the transport sector)	Creating a **complicated and overly long tendering** process
Finding a **"sweet spot" regarding the quality versus price** trade-off	**Setting the bar too high regarding quality** standards resulting in local smaller businesses dropping out of the race

Finally, there is an approach to public procurement labelled IGPP (Innovative Green Public Procurement), which is a way to emphasise innovation and sustainability with tendering in contrast to a more traditional mindset. Instead of setting high technological standards and thresholds, the IGPP approach is based on rewarding innovativeness and lower environmental impact. The cases used for the research left out technical standards and replaced them with criteria concerning environmental performance. As a practical tool it can be useful for the buyer to create rewards instead of requirements as in "provide the lowest amount CO_2 emissions per km." (Nordic Council of Ministers, 2010)

2.7 Conceptual framework

The subchapters 2.1 – 2.6 have presented and explained key features and concepts regarding this thesis based on mainly academic sources. As this thesis is focused on the island ferry traffic industry,

subchapters 2.5 and 2.6 are more focused on the transport sector to provide an accurate and relevant theoretical background for the subject. Overall, the of Chapter 2 is to lay a theoretical foundation for the empirical section of this thesis and enable forming a conceptual framework.

Two such conceptual frameworks have been established and will be used to analyse the results of this study. The first one is the spectrum of PPPs presented in subchapter 2.5, adapted from Dewulf et al., (2011). This framework (see Figure 3) will be utilised in analysis of how the authorities procuring island ferry services approach the public-private partnership in different regions included in the thesis.

The second framework is the good practice versus avoidable mistakes of public procurement table (see Table 4). Despite the suggestive name of the framework, this table will simply be used to recognise what are the areas, where public procurers of Estonia, Finland, Sweden, and Åland have been successful and where room for improvement remains based on the elements derived from academic literature. It is highly important to state that this thesis will not be ranking, which region is the best or worst at public procurement of island ferry services nor will this thesis set out to give instructions or recommendations on how respective authorities should act in the future. The aim is to describe and compare current governance models and to use the “good practice versus avoidable mistakes” framework for detecting some of the strengths and weaknesses of existing procurement approaches.

3 Research methodology and interviews

3.1 Methodology

3.1.1 Research design

The objective of this thesis is to describe, explain, and compare existing markets and governance models of Estonia, Finland, Stockholm County in Sweden, and the Åland Islands in the island ferry traffic industry. A qualitative approach has been selected for this research as the aim is to understand organisational dynamics, decision making processes, and stakeholder perspectives in a highly specific operating environment instead of numerical analysis or making generalisations, which would suit a quantitative approach. More specifically, the thesis could be categorised as descriptive research as the aim is to gather descriptive information of a particular subject using interviews and other sources and to lay a foundation for possible more sophisticated future research. (Krishnaswamy & Satyaprasad, 2010)

The method for data collection in this thesis is interviewing experts working or involved in the field of island ferry traffic. This thesis has a practical approach and in addition to interviews conducted, secondary sources such as corporate annual reports, news articles, and website articles provide valuable background information for this study. Particularly regarding the “Operating environment” and “Operators and main ferry routes” subchapters secondary sources are vital and often sufficient in understanding key features of each island ferry service market.

The primary sources, meaning interview materials, will be utilised mostly for understanding details and nuances in the governance structures and public procurement processes of selected regions. The “Public procurement of island ferry services” subchapters require information, which is typically either difficult to find or not freely accessible for the public. The interviews provide key information and insights in the governance and public procurement areas. Artificial intelligence, namely Chat GPT, is utilised in this thesis for finding sources and translating text, not for generating text for the thesis itself.

3.1.2 Research question

The island ferry traffic market, governance model, and approach to public procurement of island ferry services in Estonia, Finland, Stockholm County in Sweden, and the Åland Islands form the scope of

this thesis. As a comparative study, an understanding of these themes in each four regions must be established before findings and results can be compared and conclusions made. This is why the research questions of this thesis could be formed as:

1. What are the key features, differences, and similarities of island ferry traffic markets, governance models, and public procurement approaches of Estonia, Finland, Stockholm County in Sweden, and the Åland Islands?

3.1.3 Sampling strategy: selecting interviewees

Regarding the process of selecting interviewees for the research, on the contrary to random sampling, this research uses purposive sampling of experts. Precision and accuracy were the main objectives for sampling in this thesis as the interviewees were required to have insider level knowledge on the highly specific industry of island ferry traffic. The interviews were a key part of the D.1.2.1 REISFER report, which is why Professor Ojala played a key role in both planning and executing the interviews. Nine (9) interviews were conducted, and all four regions (EST, FIN, SWE, and AX) are represented among the interviewees. Interviewees were selected, mainly by Professor Ojala, based on the need for specific information. Regional quotas, such as two interviews per region, were not used resulting in an uneven number of interviews among the four regions. B.Sc. Joki-Korpela (Author) was present in all but one interview and was mainly focused on additional questions and taking notes.

Table 5: Interviewees, their organisation, country, and role

Interview number	Organisation of interviewee	Region	Role
1	Transport Administration	Estonia	Public procurer
2	Ministry of Regional Affairs and Agriculture	Estonia	Public procurer
3	Estonian State Fleet	Estonia	Public procurer
4	ELY Centre of Southwest Finland	Finland	Public procurer
5	Finferries corporation	Finland	Service provider
6	Suomenlinnan Liikenne Ltd	Finland	Service provider
7	The Prime Minister's Office	Finland	Ownership steering
8	Blidösundsbolaget AB	Sweden	Service provider
9	Government of Åland	Åland	Public procurer

The interviewees were also selected to represent essentially two different sides with different perspectives on the issues: the public procurer's side and the service provider's side. With the design of the research being descriptive and the main focus on the governance and public procurement, the public procurer's side was emphasised in sampling. Five out of the nine interviewees were representatives of the public procurers, and one represented the ownership steering unit of the Finnish

government. A somewhat minimal saturation point of data was reached with nine interviews even though only one interviewee represented both Sweden and Åland respectively, which consequently affects the trustworthiness of the research. This saturation point was reached by concluding enough data for the research was accumulated through the nine interviews. Table 5 summarises the sampling of interviewees for this thesis.

3.1.4 Data collection and analysis

The interviews were conducted as semi-structured conversations, where the interviewees were asked to explain and describe the local governance model and provide details on the public procurement of island ferry services. Each interviewee is an expert in their own particular field and role and answered given questions based on their personal experience and insight. The interviews focused on a few key themes such as the relationship between service providers and contracting authorities, funding of island ferry services, service level factors, and procurement criteria. Similar questions were asked from all interviewees with slight variation and the interviewees were able to answer the questions freely and bring up various perspectives and insights. The interview questions used in interview 3 listed below exemplify the type and scope of questions used.

1. **The relationship between service providers and contracting authorities** – How are decisions regarding traffic made by the contracting/financing entities? E.g. the roles of Ministries and central government in view of national and EU-level regulation. What is the ownership or corporate structure of service providers?

2. **How is the service funded, and how is public funding allocated?**

3**. How are service levels and integration with other public transport defined?** – Aspects such as schedules, routes, capacities, operating hours or seasons, workforce size and their qualifications. Additionally, how are these elements monitored and reported to the contracting authority (e.g. weekly, monthly, or annually, and at what level of detail)?

4**. Procurement Processes and Regulatory Mechanisms** – Is service provision guided by a competitive tendering process or other regulatory mechanisms? Do these apply to individual routes or broader traffic regions? What types of financial and/or environmental incentives are in place for operators and their management, such as performance indicators (KPIs) tied to service levels?

5. Key advantages and challenges of the existing governance structure when planning for the future, particularly in terms of enhancing safety and environmental sustainability toward 2040–2050?

The interviews were recorded, and transcripts were created using AI available on Microsoft Teams. The material was then analysed by listening and reading what was discussed and writing down key points into summary documents, which in turn serve as source material for both this thesis and the D.1.2.1. report of the REISFER project.

3.1.5 Limitations and trustworthiness

This thesis is limited by two main limitations:

1. Geographical limitation: The empirical section of this research focuses exclusively on the four selected regions (Estonia, mainland Finland, Stockholm County in Sweden and the Åland Islands. Countries across the world have varying versions of ferry traffic industries, but the data collection and, consequently, research results of this thesis are strictly limited to the Central Baltic Sea Region.

2. Industry specific limitations: Ferry traffic is a broad transport mode, but this thesis is aimed at island ferry traffic, a very specific form of ferry traffic. For the definition of island ferry traffic used in this thesis, see Chapter 1.1 and Figure 1.

The geographical limitation is rather straightforward, but the industry specific limitation is more nuanced. Regarding an individual ferry route, it might be very difficult, if possible at all, to define whether the route belongs to the category C presented in Figure 1. Arguably the most important limitation is the exclusion of road and cable ferries from this thesis. However, the categorisation in Figure 1 is a generalisation, not a waterproof system for classifying each and every ferry route in the Baltic Sea, which is why ferry routes closer to some of the other categories may be included in this thesis.

A sustainability aspect is included in this thesis as well, but more as a side feature rather than a focal point. This also provides an avenue for further research as emphasising sustainability is an increasing trend in transport sector regulation and governance.

The trustworthiness of this thesis is somewhere between high and moderate. Trustworthiness is increased by accuracy and topicality of acquired information and also by the simplicity and practicality of research methodology. The conceptual frameworks derived from academic literature are clear, easily understandable, and credible leaving little room for error in application. However, trustworthiness of the thesis is negatively affected by the lack of breadth in data collection. For example, only one expert was interviewed form both Sweden and the Åland Islands. These interviews provided plenty of useful data, but also create the risk of these experts' personal opinions and

viewpoints having a disproportionate effect on research results. However, separating facts and stakeholder perspectives from personal opinions is a typical challenge of qualitative research and was considered during the data analysis phase of the study.

4 Estonia

4.1 Operating environment

The demand for island ferry transportation in Estonia is created by the inhabited archipelago on the northern and western coasts in addition to one inland route on lake Peipus bordering Russia (Figure 4). Two Estonian islands stand out due to their size, Saaremaa and Hiiumaa, and consequently these islands are often referred to as the large islands (of Estonia). Saaremaa is home to 30,304 people and Hiiumaa to 8,418 meaning roughly 3% of the Estonian population live on these two islands (Statistics Estonia, retrieved 9.9.2024). The populations of the smaller islands are significantly smaller as reportedly 1,874 people lived permanently on the small islands of Estonia in January 2022 (Hunt et al., 2024).

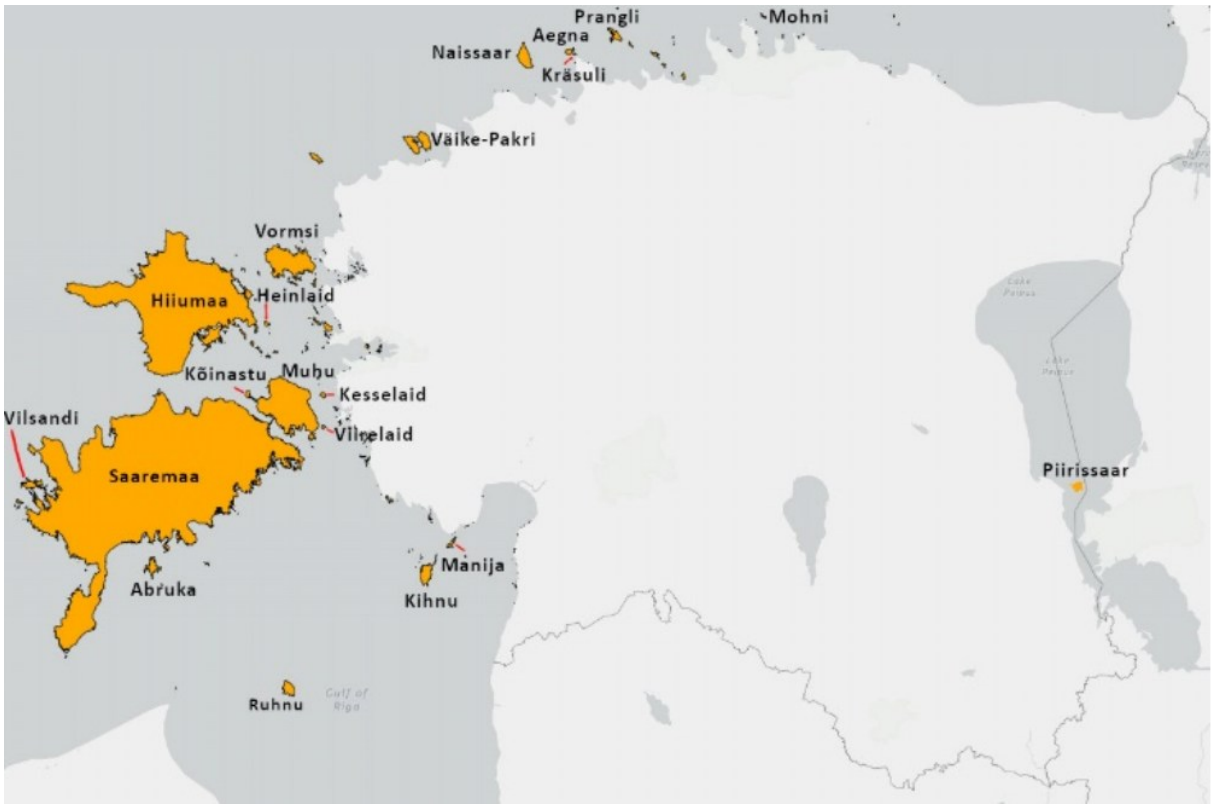

Figure 4: Map of Estonia with Estonian islands highlighted (Hunt et al. 2024)

In addition to the permanent population, the Estonian islands are popular tourist attractions, and the large islands received a record number of travellers in the summer of 2023 (The Baltic Times, 15.9.2023). Tourism on the islands is heavily seasonal, meaning the islands are most visited during summertime, which results in the number of inhabitants on small islands decreasing during the winter.

Due to the major economic impact and seasonal nature of tourism, the demand for island ferry services in Estonia is also very seasonal, especially on the smaller islands.

As a result of the geography and demographics of Estonia, two categories emerge within the Estonian island ferry traffic market.

1. Ferry traffic connecting the two large Estonian islands, Saaremaa and Hiiumaa, to the mainland. Operated by state-owned company TS Laevad OÜ.

2. Ferry routes serving the smaller islands and traffic between the large islands. Operated by various service providers.

The Estonian ferry connections used to be governed by regional authorities, but this changed in 2017 due to a reform of regional governance. Estonia has a national government, and 79 self-governed municipalities authorised to make decisions over local matters. Estonia is divided into 15 counties, but as a result of the 2017 reform, these counties have no regional governments anymore. As the regional level of government has been abolished in Estonia, the governance of island ferry traffic services has become a task of the national government and, in some cases, local municipalities. (European Committee of Regions, retrieved 28.2.2025)

4.2 Operators and main ferry routes

4.2.1 Main island ferry routes

Unlike in other regions, the Estonian ferry routes cannot be divided into road ferry routes and island ferry routes. The country has different sorts of ferry routes with varied route lengths, vessel capacities and trip frequencies. Estonian routes are mostly designed to simply connect an inhabited island to a mainland port. As an exception there is the Munalaid - Roomassaare - Pärnu – Ruhnu route, which has several stops and the longest travelling distance of Estonian ferry routes. 11 selected Estonian ferry routes are listed in Table 6 below and shown on a map in Figure 5 below. These routes were selected based on an article on Estonian ferry traffic by Hunt et al. (2024) and the interview conducted with the Estonian Transport Administration. Figure 5 and Table 6 do not include certain seasonal ferry routes. (Interview 1)

Table 6: List of Estonian ferry routes (Hunt et al., 2024, Interview 1)

	Estonian ferry routes
1	Virtsu - Kuivastu
2	Rohuküla - Heltermaa
3	Rohuküla - Sviby
4	Munalaid - Kihnu
5	Sõru - Triigi
6	Munalaid - Manilaja
7	Munalaid - Roomassaare - Pärnu - Ruhnu
8	Roomassaare - Abruka
9	Papissaare - Vikati
10	Laaksaare - Piirissaare
11	Leppneeme - Kelnase

Figure 5: Map of Estonia with Estonian ferry routes (Adapted from Hunt et al., 2024)

4.2.2 Operators

Currently there are several companies operating in the ferry traffic sector in Estonia, but some are so small in scale that they will not be considered in this thesis.[3] The largest company operating domestic ferry transport in Estonia is the state-owned TS Laevad OÜ. The company is a subsidiary of AS Tallinna Sadam (Port of Tallinn in English), which is listed in the Tallinn Stock Exchange and 67% of the company's stocks are owned by the Estonian state. TS Laevad OÜ is tasked with the routes connecting the large islands (Saaremaa, Hiiumaa) to the mainland. These two routes (1 and 2 in Table 6) are the busiest ferry routes in Estonia and provided transport for 2.4 million passengers and 1.1 million vehicles in 2023. Due to the high volume and frequency on these two routes, two vessels are required per route in addition to a spare vessel for a backup and increasing demand in the summer season. (Port of Tallinn: Annual Report 2023)

In addition to the large island routes, several service providers are currently operating on the small island ferry routes along the Estonian coastline. Largest of these is Kihnu Veeteed, a private company operating mostly state-owned vessels in addition to two spare vessels owned by the company. Kihnu Veeteed operates five routes in total and three of Kihnu's vessels are sister vessels with each having a passenger capacity of 200 and vehicle capacity of 30. Kihnu Veeteed's ferries carried 218,790 passengers in total in 2023. (Kihnu Veeteed.com, retrieved 7.1.2025, Interview 1)

Table 7: Service providers of Estonian island ferry traffic, their turnover and number of staff and vessels in 2023 (Inforegister.ee, retrieved 28.2.2025)

Service provider	Turnover 2023 in million EUR	Personnel	Vessels
TS Laevad OÜ	36.7	140	5
Kihnu Veeteed AS	6.6	49	7
Tuule Liinid OÜ	1.7	20	4
Spinnaker OÜ	0.6	4	4
Saarema Vald*	-	-	2

* Saaremaa Vald is a rural municipality and consequently does not publish KPI's like annual revenue or personnel

[3] The Estonian ferry companies excluded from this thesis are companies with an annual revenue below 200 000 EUR

Other Estonian service providers include companies Tuule Liinid and Spinnaker OÜ (also known as Sunlines) as well as the municipality of Saaremaa. Tuule Liinid currently operates the longest ferry route in Estonia, route 7 in Table 6. Spinnaker OÜ operates four routes along the northern coast of Estonia. These include two routes in Tallinn, the route in Viimsi (route 11 in Table 6) serving the island of Prangli and a river ferry route connecting Narva and Narva Jõesuu. Most routes of Spinnaker OÜ are seasonal summer routes. (Sunlines.ee, retrieved 6.3.2025, Interview 2)

In addition to these companies, the municipality of Saaremaa (Saaremaa vald) operates two routes within its territory with state-owned vessels. These routes connect the small islands of Vilsandi and Abruka to the large island of Saaremaa (Figure 5) Table 7 summarises the key figures of the Estonian service providers. (Saaremaa Vald, retrieved 28.2.2025).

4.3 Public procurement of island ferry services

4.3.1 Authorities

The governance structure regarding Estonian island ferry services has been going through several changes during past years. Estonian ferry and bus connections used to be governed by regional authorities, which were abolished in the 2017 reform. Now the governance is managed mainly by the national government through its ministries but also locally by self-governed municipalities and regional public transport centres as remainders of the regional governance era. In any case, the public procurer contracts a service provider through a tendering process for each route separately. The Saaremaa municipality is an exception as the ferry service is provided directly by the municipality meaning there is no public procurement of ferry services for their routes.

The Estonian Ministry of Finance creates the budget, which forms an economic framework for public procurement of vessels and ferry services. The public procurement of island ferry services on the national level is conducted by the Ministry of Regional Affairs and Agriculture (Regionaal- ja Põllumajandusministeerium in Estonian). On a local level the procurement is conducted by local municipalities, such as Viimsi municipality, which procures ferry services from Spinnaker OÜ for the route 11 (Table 6). Pärnumaa ÜTK and Tartumaa ÜTK are the regional public transport centres still procuring ferry services for a few routes. (Interview 2)

A unique factor regarding Estonian authorities is the Estonian State Fleet (ESF, Riigilaevastik in Estonian). It is a government agency, which serves the purpose of a ship owner entity. The predecessor of ESF was the Estonian Maritime Administration, which was merged with the Estonian Transport Administration in 2021. In 2023 ESF was founded, and the agency began acquiring

maritime vessels of all kinds under its ownership. Currently the State Fleet owns around 300 boats and vessels of various sizes and purposes including even row boats. (Ojala, 2023, Riigilaevastik.ee, retrieved 4.3.2025)

ESF is governed by the Estonian Ministry of Climate. The tasks of ESF include owning and systematically inspecting owned vessels, acquiring existing vessels and procuring new vessels in cooperation with the Ministry of Climate. The procurement of new vessels by ESF and Ministry of Climate is focused on bringing new more environmentally friendly ferries to the Estonian waters. The aim of the national government is to acquire Estonian vessels under a centralised public sector ship owner, ESF, resulting in a situation where private companies are hired to operate state-owned vessels on a bareboat chartering basis. (Riigilaevastik.ee, retrieved 4.3.2025, Interview 2)

4.3.2 Public funding

The Estonian state budget of 2025 allocated 30 million EUR for island ferry services, of which 22 million EUR were granted for the ferry services provided by TS Laevad OÜ connecting the large island of Estonia with the mainland. The remaining 8 million EUR are used for funding small island ferry services. The municipalities procuring island ferry services receive a once-a-year lump sum subsidy payment from the national government for funding ferry services. These payments are included in the 8 million EUR national funding, but the municipalities also use their own funds and ticket sale revenue to cover the costs of ferry services (Interview 2)

Estonian island ferry routes are not cost free for passengers and ticket sale revenue is part of the funding of island ferry services. The service provider sells tickets, but the ticket sale revenue goes to the state. There are also several ticket brokers selling tickets for Estonian ferries, which means that there is no centralised ticket sales system. TS Laevad OÜ is bound by contract to have a maximum of 8% of its annual revenue come from ticket sales.

4.3.3 Procurement criteria

Due to the effect of having a state fleet (Riigilaevastik), there are essentially two types of public procurement of island ferry services in Estonia:

1. Bareboat chartering: When a route has a designated vessel owned by the Estonian state through ESF and a service provider is hired to operate the vessel in addition to other related tasks such as

maintenance and acquiring insurance. In the Estonian model the service provider does not pay rent for the vessel.

2. Full-service contract: When a route does not have a designated state-owned vessel the service provider must both provide a vessel and to operate it.

With type 1 the tendering process is very straightforward as the potential operator only needs to provide a qualified crew and take over management of the vessel. On type 2 the tendering process is more comprehensive as the potential operator needs to provide a suitable vessel as well. There are minimum requirements for what a suitable vessel is for type 2 tendering, for example, minimum passenger/vehicle capacity or ice class. For both types of procurement, however, the public procurement of Estonian island ferry services is highly price-focused with quality or environmental criteria having little impact. Choosing an operator after tendering in Estonia is simple: the company offering the lowest price while fulfilling minimum requirements will win the contract. (Interview 2)

4.3.4 Contracts between operators and authorities

The contract between the service provider and the procuring authority in Estonia is drafted for each route separately and depends on whether the route has a designated state-owned vessel or not. The authorities decide the volume of service, for example by demanding a certain number of annual trips per route. The schedules, however, are created by the service provider in cooperation with local authorities and inhabitants. Currently the public contracts in Estonia are 5 years for small island routes and 7 years for the large island routes with the exception of route 10 (Table 6) having a 10-year contract. (Interview 2)

The Estonian state has a system where the state-owned ferries are typically fixed for a certain route. In this case the public contract is based on the bareboat chartering principle. The vessels are given for the service provider free of charge (not to own, to operate) but the service provider is then responsible for service delivery and managing the vessels. This includes operating the routes but also acquiring and paying for insurance for the vessel, maintenance of the vessel, and informing passengers of any changes to schedules. Once a state-owned ferry is handed over to the service provider, ESF will inspect the vessels twice a year to make sure the ferries are properly maintained. (Interview 3)

On the routes, which do not have a designated state-owned vessel, the contract is a full-service contract. This means the service provider is required to own or acquire a suitable vessel for the route and to operate the vessel according to the route specific contract. A full-service contract might also include requirements for a backup vessel to ensure service continuity would one vessel be temporarily

out of order. Need for a backup vessel may also rise when the demand for ferry services increases during the summer season and the contracting authority decides to increase service level. For example, TS Laevad OÜ has two vessels for each of its two large island routes in addition to one backup vessel, Regula. (TS Laevad OÜ, retrieved 6.3.2025)

4.4 Governance and public procurement in Estonia

Estonian island ferry services serve dozens of islands along the country's coastline in addition to the inland route on lake Peipus. Estonian routes can be divided into the large and small island routes with the large island routes connecting Saaremaa and Hiiumaa to the mainland and the rest of the routes being small island routes. The large island routes, operated by TS Laevad OÜ, are also significantly larger in scale measured in annual passengers and vehicles transported. In contrast: some of the small island ferries have no vehicle capacity and serve passenger traffic only.

While TS Laevad OÜ operates all traffic on the large island routes, the small island routes have several service providers with Kihnu Veeteed having the most market share. Spinnaker OÜ, Tuule Liinid and Saaremaa municipality are also operating small island ferries but competition in the industry is low according to Estonian interviewees.

Key factors regarding Estonian public procurement of island ferry traffic services include price-focused procurement, the unique effect of having a state fleet, small number of service providers, short contracts, and constant change regarding contracting authorities. Estonian service providers of island ferry traffic are private companies contracted by the national government through the Ministry of Regional Affairs and Agriculture, a regional public transport centre, or the local municipality. In any case, the service is funded by the public sector and ticket sale revenue goes to authorities, not to the service provider.

Estonian public procurement has a pragmatic approach, where the contract is given to whoever can offer the lowest price while fulfilling minimum quality criteria. While this approach is cost-effective, environmental and other quality criteria easily become secondary. As Estonia does not have many private companies operating in the island ferry traffic sector, a competitive tender may only receive one or two offers. Even with competition being low and the procurement criteria focusing mainly on lowest price offered, the quality aspect of island ferry services in Estonia can be improved through the state fleet.

The Estonian State Fleet has the government backing it regarding procurement of new vessels, which naturally provides significantly more resources compared to small and medium sized private companies acquiring new vessels. The State Fleet is already procuring new vessels with increasing emphasis on environmental sustainability. Having the state doing the heavy lifting regarding procuring new technologically advanced vessels, is the unique Estonian way of improving environmental sustainability in the island ferry service sector.

Several Estonian interviewees raised the issue of communication. The Estonian governance structure regarding island ferry services has been under constant changes during the last 10 years and the service providers are experiencing uncertainty as a result. Typically having 5-year contracts with uncertainty about the future and communication issues creates a challenging operating environment for Estonian island ferry service providers. One of the Estonian interviewees quite fittingly summarised the current situation as being somewhat messy, but with things moving in the direction.

5 Mainland Finland

5.1 Operating environment

In mainland Finland there are essentially two separate markets for island ferry traffic services: One for the island ferry services along the southern coast of Finland and a separate market for ferry services in the capital city, Helsinki. A vital difference between these two markets of Finnish island ferry traffic is that they have entirely separate governance structures. The longer archipelago routes across southern Finland are governed nationally whereas the ferry routes of Helsinki are an internal matter of the city and governed mainly by the City of Helsinki. For clarity, the Helsinki island ferry traffic market and governance structures will be covered in designated subchapters 5.2.3 and 5.3.5, while the rest of Chapter 5 focuses on the Finnish island ferry traffic outside of Helsinki.

Figure 6: Regional map of Finland with Southwest Finland, Uusimaa and Kymenlaakso regions highlighted from left to right

The Finnish coastline is surrounded by archipelago, but only three regions in southern Finland have island ferry traffic routes (Figure 6). Most Finnish island ferry routes are located in the region of Southwest Finland (Varsinais-Suomi in Finnish) in addition to a few other routes found in the regions of Uusimaa and Kymenlaakso. Many Finnish islands do not have a large population, if any, but the

government is determined and bound by Finnish law to provide public transport services for its citizens in the archipelagos. (Finlex, 26.6.1981/494)

5.2 Main ferry routes and operators

5.2.1 Finnish island ferry routes

Finnish island ferry routes can be divided into two categories: full-service contract routes and subsidised routes. Full-service contract routes are costless public transport focused on passenger transport. The subsidised routes are a more commercial form of ferry traffic and free only to inhabitants of the local islands. Services provided by the subsidised routes vary from passenger transport to freight transport and from seasonal to year-round.

Figure 7: Island ferry routes of Southwest Finland (Yhteysalus.fi, retrieved 20.1.2025)

Most of the full-service contract routes are located in the region of Southwest Finland. The region has up to 13 island ferry routes due to the dense the archipelago located between the region and the Åland Islands. The island ferry routes of Southwest Finland are shown in Figure 7 below. In addition to the routes in Southwest Finland, three full-service contract routes are located in the eastern part of the southern coast of Finland. The Sipoo and Porvoo routes (Figure 8) are found in the region of Uusimaa and the Kotka-Pyhtää route in Kymenlaakso (Figure 9).

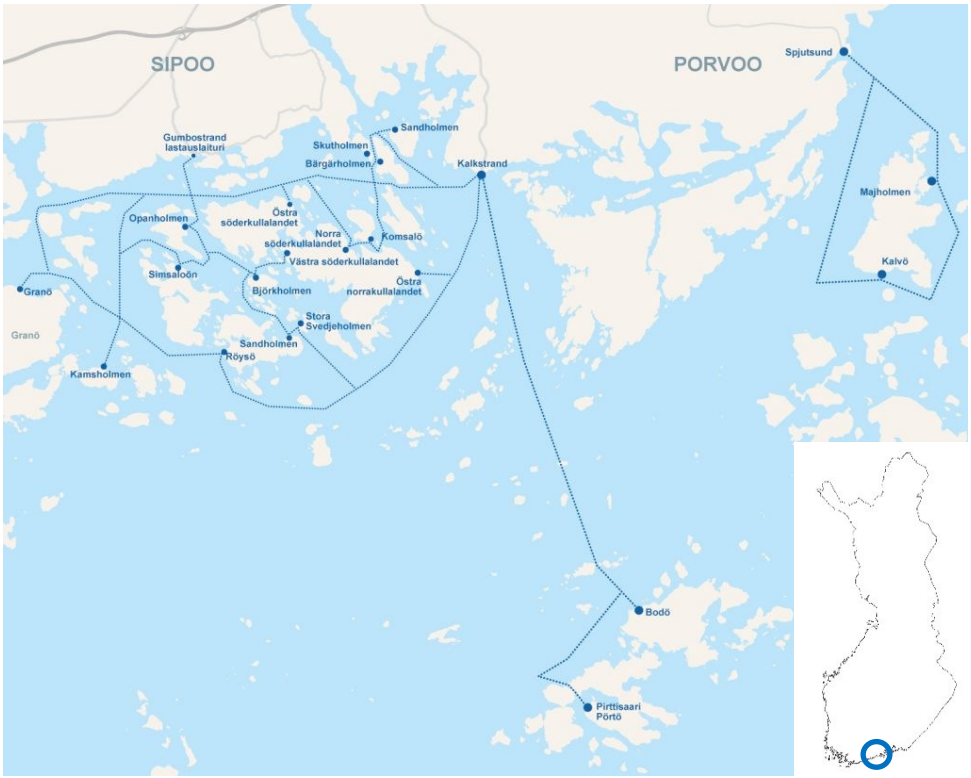

Figure 8: Sipoo and Porvoo routes (Yhteysalus.fi, retrieved 20.1.2025)

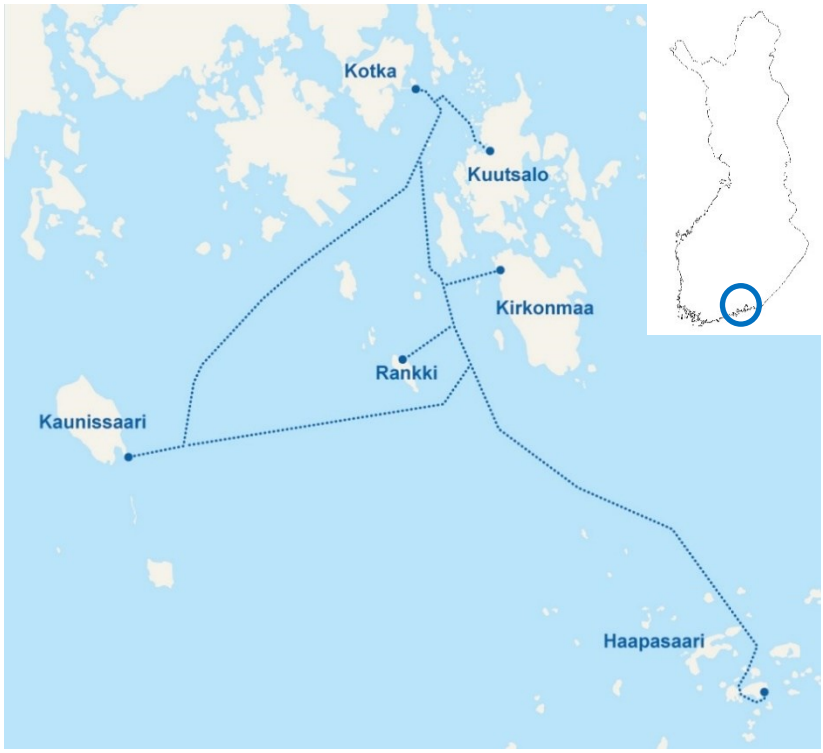

Figure 9: Kotka-Pyhtää route (Yhteysalus.fi, retrieved 20.1.2025)

Figure 10: Map of subsidised Finnish island ferry routes (ELY Centre, retrieved 30.1.2025)

In addition to the full-service contract routes, there are six subsidised routes in Finland. They are found in Loviisa, Inkoo, Raasepori, Sipoo and Southwest Finland. The ones in Southwest Finland are known as archipelago trails, (archipelago trail and small archipelago trail). The subsidised routes are demonstrated in Figure 10.

5.2.2 Operators

There have been several changes regarding the service providers of public island ferry routes in Finland during recent years. A company named Saariston Meritie Oy, subsidiary of Kuljetus Savolainen Oy, was the operator on three routes in the beginning of 2023 but has since sold its ferries and route operation rights to Finferries. Pörtö Line, subcontractor for EW Finland, was the operator on the Porvoo and Sipoo routes until June 2024, when their public contract was terminated by the ELY Centre as Pörtö Line was reportedly unable to fulfil the duties dictated by the contract. The Porvoo route has since been given to Kymen Saaristoliikenenne Oy and the Sipoo route to Sibbo Skärgårdstrafik Ab. (Ojala, 2023, Yle.fi 11.7.2024, ELY Centre, retrieved 30.1.2025)

Suomen Lauttaliikenne Oy is a state-owned Finnish ferry company, which uses the marketing name "Finferries". Predecessors of the company have a long history, but Finferries was founded in 2010 to continue ferry operations of a state-owned enterprise Destia. In 2012 Finferries bought the entire stock of another ferry company named Arctia Archipelago Shipping, which became a subsidiary of Suomen Lauttaliikenne Oy and was renamed to Finland Archipelago Shipping Ltd. (Suomen Saaristovarustamo Oy in Finnish). Finferries corporation operates both road ferries and island ferries in Finland. It is the subsidiary of Finferries corporation, Finland Archipelago Shipping, which provides island ferry services in Finland. (Finferries: Historia, retrieved 22.10.2024)

The Finferries corporation owns and operates 91 vessels in total with personnel of 399 people (Finferries: Annual Report and Corporate Responsibility Report 2023). In January 2021 Finferries had a market share of only 25% (Ojala, 2023) but at the time of writing the state-owned company together with it its partners operate 14 out of the 16 full-service contract island ferry routes in mainland Finland (ELY Centre, retrieved 30.1.2025). While most of the island ferry routes are located in the region of Southwest Finland, Finferries corporation operates road and island ferries across Finland. With an annual revenue of 51.6 million EUR Finferries is the largest ferry company and a market leader in island ferry services in Finland (Finferries: Annual Report and Corporate Responsibility Report 2023). Service providers of mainland Finland are listed in Table 8 below.

Table 8: Finnish island ferry traffic operators (Asiakastieto.fi, retrieved 20.1.2025)

Company	Turnover 2023 (Million EUR)	Personnel	Vessels
Finferries corporation	51.7	280	91
Suomen Saaristovarustamo Oy (Finferries)	13.3	49	15
Kuljetus Savolainen Oy	7.1	30	10
Suomenlinnan Liikenne Oy	5.6	21	3
Kymen Saaristoliikenne Oy	2.7	3	2
Archipelago Lines Oy	2.4	13	1
Sundqvist Investments Oy Ab / Östern	1.3	7	1
Sibbo Skärgårdstrafik Ab*	n.a.	n.a.	n.a.

*Despite being one of the ferry operators in contract with the ELY centre, there are no key figures available online of Sibbo Skärgårdstrafik Ab

Kymen Saaristoliikenne Oy operates the Porvoo route and the Kotka-Pyhtää route together with Finferries, although Finferries carries out most of the traffic there. Archipelago lines Oy is a small company with only one (ferry type) vessel, and they operate the Korppoo route in cooperation with Finferries. Sjövagen Oy operates the Nauvon poikittainen route as a contractor for Finferries. On 10 Finnish routes Finferries is the sole operator. The full-service contract routes and their operators are listed in Table 9.

Table 9: Finnish full-service contract routes (ELY Centre, retrieved 30.1.2025)

Full-service contract routes	
Route	**Operator**
Korppoo route	Archipelago lines (partner of Finferries)
Hiittinen route	Finferries
Houtskari route	Finferries
Iniö route	Finferries
Nauvo southern route	Finferries
Nauvo northern route	Finferries
Nauvo middle route	Finferries
Parainen route	Finferries
Rymättylä route	Finferries
Utö route	Finferries
Velkua route	Finferries
Kotka-Pyhtää route	Finferries and Kymen Saaristoliikenne Oy
Porvoo route	Kymen Saaristoliikenne Oy
Sipoo archipelago	Sibbo Skärgårdstrafik Ab

Table 9: Finnish subsidised routes (ELY Centre, retrieved 30.1.2025)

Subsidised routes		
Route	**Sector**	**Operator**
Archipelago trail	Passenger	Finferries
Small Archipelago trail	Passenger	Sundqvist Investments Oy Ab
Raasepori	Passenger	Sommaröstrand Kb
Raasepori	Freight	Ekenäs Trans-service Ab
Inkoo	Passenger	Mikael Rehnberg
Inkoo	Freight	Ekenäs Trans-service Ab
Loviisa	Freight	Henrik Lindgren
Sipoo	Freight	Frank Jonasson

The subsidised routes in Raasepori, Loviisa, Inkoo, and Sipoo, typically have local and small-scale operators. The operators on these routes may be as small as a single person operating a vessel they own. Subsidised routes and their operators are listed in Table 10. (ELY Centre, retrieved 30.1.2025)

5.2.3 Helsinki island ferry services

There are around 300 small islands scattered in the archipelago surrounding Helsinki. These islands are typically very small, uninhabited, and often restricted for military use (Stadissa.fi, retrieved 6.2.2025). However, around 20 of these islands are in public use and have boat or ferry connections with the mainland. (Interview 6) These connections are most often seasonal and tourism-based and thus do not fall under the classification of island ferry traffic used in this thesis.

However, a form of publicly procured year-round island ferry traffic can be found in Helsinki as well. The historical fortress island of Suomenlinna, a UNESCO world heritage site, creates demand for a regular public ferry connection. Suomenlinna is a popular tourist attraction with up to a million visits annually but also home to roughly 800 permanent inhabitants. This is why Suomenlinna cannot rely only on tourism-based commercial ferry services, as transport is also needed in the winter when tourism is off-season. The company operating this route is named accordingly Suomenlinnan Liikenne Oy, SLL for short. (Suomenlinna.fi, retrieved 6.2.2025, Interview 6)

Built in the 1700’s, Suomenlinna was a restricted area due to its original use as a military base for most of its history. The fortress island has had civilian inhabitants throughout its history, but tourists were not allowed until development and opening the island for visitors started in the 1950’s. SLL was founded in 1950, and the company began operating public passenger transport from Helsinki city centre to Suomenlinna in 1952. (Suomenlinna.fi, retrieved 6.2.2025)

Originally SLL was owned jointly by the City of Helsinki and the Finnish state but several changes in its ownership have since taken place. Now SLL is a subsidiary of KLOY (Pääkaupunkiseudun Kaupunkiliikenne Oy in Finnish, Metropolitan area Transport Ltd. in English), which is a major company in the transport sector with an annual revenue of 215 million EUR in 2023. KLOY is owned and, consequently, under direct governance of the City of Helsinki[4]. (Kaupunkiliikenne Oy: Annual report 2023, Interview 6)

KLOY was founded in 2022 when HKL, former traffic department of Helsinki, was turned into a corporation. In addition to Suomenlinna ferry services, KLOY is tasked with building infrastructure, operating the underground and tram networks of Helsinki and related maintenance tasks. The primary task of KLOY is to provide transport services in Helsinki but the corporation also has a strong will, and political pressure from the City of Helsinki, to improve sustainability in the transport sector. (Kaupunkiliikenne Oy: Annual report 2023)

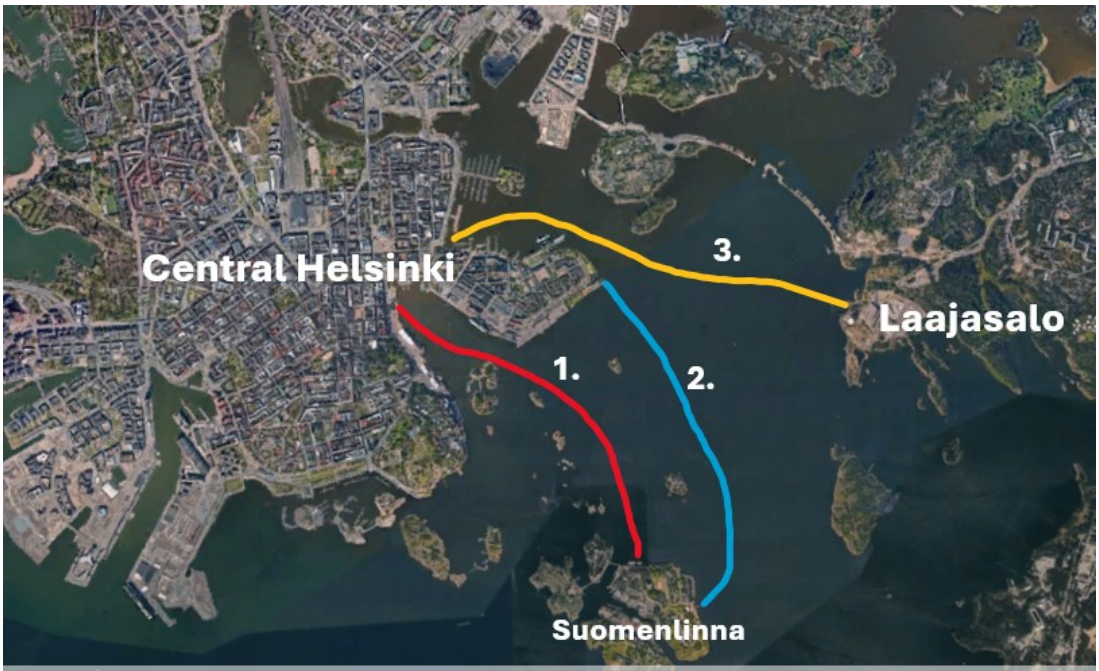

Figure 11: SLL routes in Helsinki (Interview 6)

[4] City of Helsinki owns 99% of Kaupunkiliikenne Oy. The city of Vantaa has a 1% ownership due to an upcoming tram line project in Vantaa. (Kaupunkiliikenne Oy: Strategia 2023-2026, visio ja arvot, retrieved 6.2.2025)

Helsinki is an expanding city and Laajasalo is one its districts that are quickly gaining population. Laajasalo is an island located roughly three kilometres east form Helsinki city centre. A major infrastructure project was started in Helsinki to connect Laajasalo to central Helsinki with a bridge. The city wanted to have an operational connection from Laajasalo while the bridge is under construction, which is why a temporary ferry route was created. This ferry route was granted to SLL, who in turn are procuring the ferry service from companies JT Line and Sun Ferry. (Interview 6)

In addition to the Laajasalo connection, SLL also operates a maintenance ferry service to Suomenlinna. The passenger ferry is not suited for vehicles or heavier shipments (the ferry has room for one or two vehicles), which is why a second ferry connection to Suomenlinna is needed. The maintenance ferry, M/S Ehrensvärd, is a repurposed road ferry used for shipping food, mail, and construction materials for example, making it a crucial lifeline for Suomenlinna's inhabitants. All three SLL routes are shown in Figure 11. (Interview 6)

5.3 Public procurement of island ferry services

5.3.1 Authorities

Several ministries and authorities are involved in the procurement, governance and funding of Finnish island ferry services. The public funding of island ferry services comes from the Ministry of Finance (valtiovarainministeriö in Finnish), while the governance and procurement of island ferry services fall in the sector of the Ministry of Transport and Communications (liikenne ja viestintäministeriö in Finnish). The Ministry has delegated the governance of island ferry services to one of its bureaus, Traficom, which further delegates the responsibility to the ELY Centre of Southwest Finland. (Ojala, 2023)

ELY Centre is short for "Elinkeino-, Liikenne- ja Ympäristökeskus", which translates to Centre for Economic Development, Transport and the Environment. The Finnish ELY Centres are regional public sector entities representing the national government regarding various matters of regional development and the environment. There are 15 ELY Centres in Finland in total of which the ELY Centre of Southwest Finland has been given authority to procure and govern island ferry services nationwide. This is mainly because a majority of Finnish island ferry routes are located in the Southwest and having one centralised governing body for such a specific industry is an effective approach. Figure 12 below illustrates how the governance, funding, and politics regarding island ferry traffic are distributed among Finnish ministries. (Interview 4)

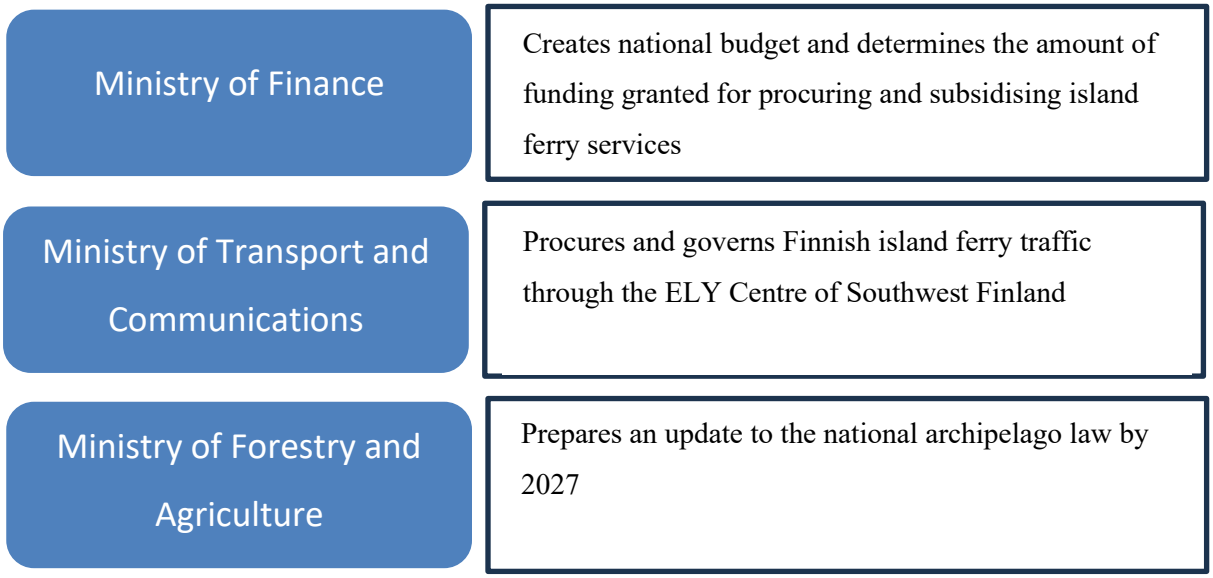

Figure 12: Responsibilities of Finnish ministries regrading island ferry traffic (Modified from Ojala, 2023, Talousarvioesitys 2025, Saaristolain uudistaminen, retrieved 7.2.2025)

The Ministry of Transport and Communications, however, is not tasked with archipelago related legislature. The Archipelago Act (*saaristolaki in Finnish)* provides an institutional foundation for island ferry traffic services. The Act on developing archipelago areas, originally from 1981, grants a special status for the Finnish archipelago and a right to free public transport services for permanent inhabitants of islands. (Finlex, 26.6.1981/494) The incumbent Finnish government has announced to update the archipelago law. Updating the Archipelago Act by 2027 is a task for the Ministry of Forestry and Agriculture. (Saaristolain uudistaminen, retrieved 7.2.2025)

5.3.2 Public funding

Publicly procured service providers of Finnish island ferry traffic receive funding from the national government. The funding is paid to an operator as a compensation for provided transport services typically as a monthly payment. The amount and other details regarding the funding received by the operator are specified in the contract made for each route between the ELY Centre and the operator. (Interview 4)

The amount of funding allocated for island ferry services in the annual budget of the Finnish government is proposed by the Ministry of Finance and accepted by the Finnish Parliament. In the latest proposal for the budget of 2025 the amount of public funding allocated for the development and procurement of island ferry transport was 19.9 million EUR. This budget indicates a slight decrease in the funding of island ferry traffic in Finland as the amount of funding was 20.2 million EUR in 2024. (Talousarvioesitys 2025)

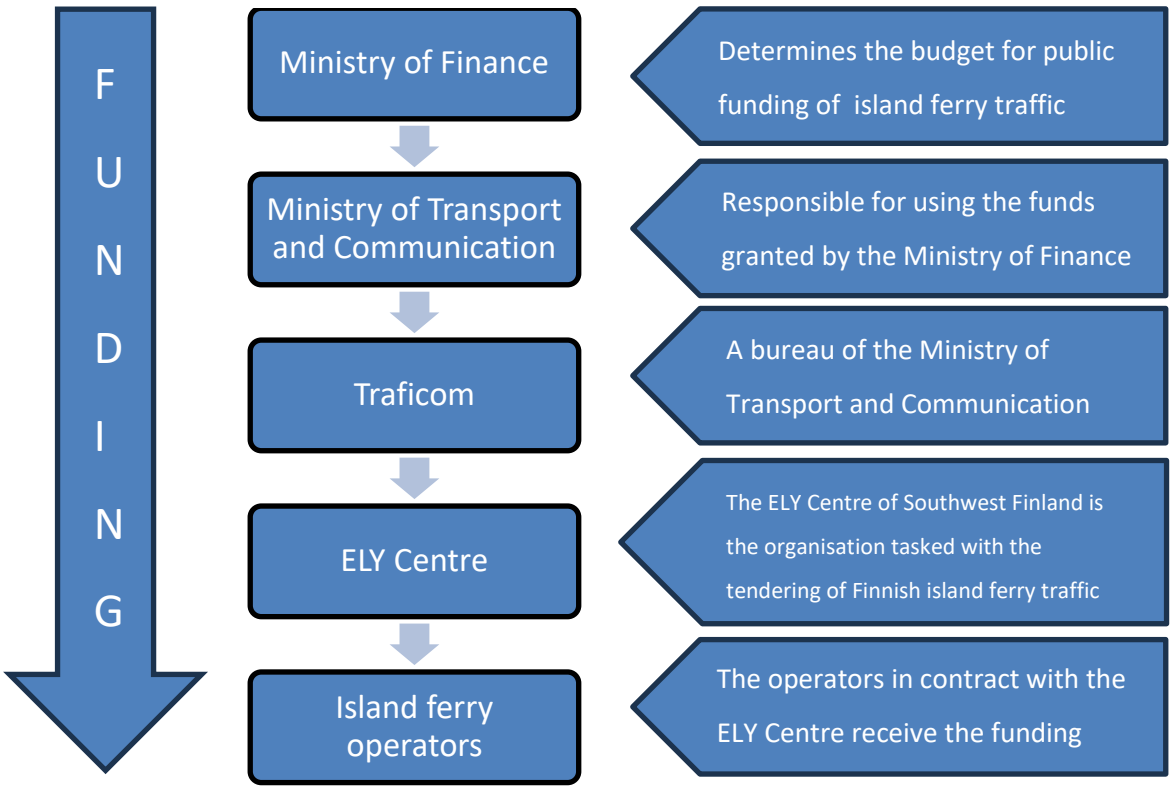

Figure 13: Public funding of island ferry traffic in Finland (Adapted from Ojala, 2023)

To summarise, the public funding of Finnish island ferry services is channelled from the Ministry of Finance to the ELY Centre through several public sector entities. Figure 13 visualises the flow of public funding in Finland in a pipeline structure.

5.3.3 Procurement criteria

Until recently, the public procurement of island ferry services has been heavily focused on cost efficiency meaning that essentially the offer meeting minimum requirements with lowest price was going to win the contract. Changes to this approach are being made and the procurement criteria are shifting towards 30% quality and 70% price in the future (Interview 4). Price will still be the deciding factor, but quality will have increased weight in the process. ELY Centre is trying to find procurement criteria that would keep prices reasonable, uphold quality, but still enable competition and help to receive plenty of offers. In other words, ELY Centre is trying to find a “sweet spot” regarding the quality versus price dilemma of public procurement. (Interview 4)

Quality in the Finnish context can mean for example technically advanced vessels, knowledge of local archipelago, and especially low emission levels and other environmental factors. These are quality

factors that a potential service provider may offer, but there are also minimum requirements that must be met for an offer to be viable. The minimum requirements include: (Interview 4)

- A threshold value for annual revenue
- Threshold value for emission levels
- Accessibility of vessels (the archipelagos have plenty of elderly inhabitants)
- Technical specifications for vessels
- Certain certificates for vessels

5.3.4 Contracts between operators and authorities

The public contracts in Finnish island ferry traffic are made between the selected operator and the ELY Centre of Southwest Finland and for each route specifically. Most existing contracts are for a 5-year period, but the ELY Centre has recently been granted permission to make longer 15-year contracts. The terms of the contract are mainly based on two documents. The first one is a legal framework called the general contract terms of archipelago transport 2022. Some examples and key points of what the general contract terms entail are listed below. (Saaristoliikenteen yleiset sopimusehdot, 2022)

- The operator is bound by a “performance duty”, which includes e.g.:
  - Acquiring needed vessels
  - Operating the route
  - Acquiring needed permits and licenses
  - Maintenance of docks
  - Ensuring the safety and continuity of transport in special conditions (when the sea starts freeze in the winter, for example)
- The operator is responsible for upholding route specific service level
- The staff must be qualified and experienced in seafaring
- The operator must be careful not to allow harmful substances (oil, solvent, fuel etc.) polluting the environment
- The operator must report on incidents and details regarding the route specific service level daily
- The buyer has a right to audit and test the truthfulness of given reports
- The buyer has a right, under further specified conditions, to terminate the contract

The second document is a route specific description of service level. This document is vital for the agreement between the ELY Centre and the selected operator, as it provides instructions and details for what is expected from the operator on this particular route. The general terms form a basis for the

contract, but route specific service level description is what the operator must adhere to. Examples and key points to what the route specific service level demands include on the Velkua route. (Interview 4)

- Transport will be started according to a schedule provided by ELY Centre, but the frequency of trips must match the demand for ferry services
- The operator must have a back-up vessel at ready to ensure ferry service if the main vessel is temporarily out of order
- The operator must be customer service-oriented and inform passengers of any possible changes to the schedule or route
- The operator must report on the number of passengers, customer feedback, and other incidents daily
- The vessels must always be sufficiently staffed with qualified personnel who are able to communicate in both Finnish and Swedish

5.3.5 Governance of island ferry services in Helsinki

The island ferry services in Helsinki are governed on a municipal level. The governing bodies making political decisions are mainly the City of Helsinki, but also other cities and municipalities. A relevant authority in in the governance structure is HSL (Helsingin Seudun Liikenne), which is a joint municipal authority of Helsinki, Espoo, Vantaa and a handful of other neighbouring smaller municipalities[5]. HSL is the procurer of public island ferry services in Helsinki and KLOY, through its subsidiary SLL, is the service provider. (Interview 6)

The responsibilities of HSL are listed as (HSL Helsinki Region Transport, retrieved 6.2.2025):

- Planning and scheduling of public transport in the Helsinki metropolitan area
- Procuring bus, tram, underground, ferry, and commuter train services
- Determining ticket prices and organising ticket sales
- Marketing and communications related to HSL public transport services

HSL determines schedules and service level for SLL's routes, and the company provides transport services as requested. As ticket sales for SLL's ferry routes are organised and collected by HSL, SLL does not receive any ticket sales directly. A HSL ticket is valid for all modes of public transport within the HSL area and thus all ticket sales are first pooled and then distributed among the procured

[5] Helsinki, Espoo, Vantaa, Kauniainen, Kerava, Sipoo, Tuusula, Kirkkonummi, and Siuntio are the cities and municipalities, which form HSL. (HSL Helsinki Region Transport, retrieved 6.2.2025

operators. Compensation for providing public ferry services in Helsinki is paid to SLL as a monthly lump sum by HSL. (Interview 6)

5.4 Governance and public procurement in mainland Finland

The island ferry market of mainland Finland can be divided into the nationally governed ferry routes and municipally governed ferry routes of Helsinki. On the national level the public procurer of ferry services is the ELY Centre of Southwest Finland and in Helsinki it is HSL, a joint municipal authority providing public transport for the greater Helsinki area. Public ferry services in mainland Finland are mostly free to use with some exceptions. There are also publicly subsidised ferry services in Finland, which are free only for local inhabitants and the ferry routes in Helsinki are a part of the HSL transport network requiring the same tickets one would need for a bus or tram ride in Helsinki.

A particular issue in mainland Finland is that the competitiveness is so low the market is seemingly sliding towards a public monopoly. In the ferry traffic sector, Finferries corporation is a huge state-owned player compared to small and medium sized local private companies. While smaller ferry operators struggle to stay in business in Finland, Finferries is benefitting from the economies of scale and gaining market share. The interviewees from Finland rejected the idea of the Finnish island ferry market becoming a monopoly, but the rapidly growing market share of one dominant state-owned company is an undeniable current trend in mainland Finland. However, as the authorities are not interested in turning the market into a public monopoly, facilitating competition is a pressing matter for the public procurers.

The public procurement of Finnish island ferry services is defined by a complicated governance model, a shift from short contract periods to long ones (from 5 to 15 years), and low competitiveness. However, the industry in the 2020's is also defined by constant change and development. A price-focused procurement approach is giving way to more versatile and quality-based procurement criteria with low emission levels of vessels becoming increasingly important. Finland has some of the most ambitious emission reduction goals in the EU, which is why Finnish authorities and companies in the logistics sector are under constant political pressure to lower emissions amidst increasing environmental regulation.

The longer 15-year contract periods aim to enable service providers to make more investments for lowering emissions instead of constantly preparing for the next tender. The downside of the longer contract period is that it will likely make it more difficult for other companies to enter the market and decreases competition in an industry, which requires specialised vessels and staff for a company to

operate. The main challenge of public procurers in mainland Finland, is how to manage a tendering process in a way that attracts several bidders and requires high quality while keeping prices moderate. The Finnish government slightly decreased funding for island ferry services for this year meaning tight budget constraints are not helping the ELY Centre in this matter.

The situation in Helsinki is very different as the Suomenlinna ferry routes are operated by a company owned by the city. Public procurement for the routes operated by Suomenlinnan Liikenne Ltd. does not exist but on the seasonal tourism-based routes the city is arranging tenders. The City of Helsinki is facing similar challenges as the ELY Centre as seeking improved quality and lower emissions combined with low prices is difficult.

6 Stockholm County in Sweden

6.1 Operating environment

Sweden has three levels of government: national, regional and municipal. The country is divided into 21 counties (Län in Swedish), which form a regional level of government through their regional councils, also known as “Regions”. Responsibilities of the Swedish Regions include healthcare and public transport, among others. On the municipal level there are 290 municipalities in Sweden deciding over local matters. Sweden is the largest of the four regions included in this thesis and Sweden consequently has the broadest ferry shipping industry of the four regions. (Statistics Sweden, retrieved 31.8.2024) As a rough categorisation, the Swedish island ferry traffic industry can be divided into three main geographical focal points:

1. Ferry transport in greater Stockholm area and surrounding archipelago.
    - The Stockholm County is home to 2,454,821 people (~23% of the Swedish population) in addition to both the city and surrounding archipelago being popular tourist attractions. (Statistics Sweden, retrieved 31.8.2024)

2. The ferry connection between the island of Gotland and the mainland.
    - The Island of Gotland, also a Swedish county, is home to 61,029 people making it the most populated island in the Baltic Sea. Unlike Öland, the second largest Swedish island, Gotland is not connected to the mainland with a bridge. In addition to a single airport in Visby, ferry traffic is the only connection Gotland has to mainland Sweden. (Statistics Sweden, retrieved 31.8.2024)

3. Ferry transport in the archipelago on the south-western coast of Sweden.
    - The cities of Malmö, Helsingborg and Göteborg together with other municipalities form a densely populated south-western coastline with plenty of islands and archipelago. The region also has ferry routes to Denmark.

Out of these three categories of Swedish ferry traffic, this thesis is focusing on category 1 and the Stockholm County. The scale of ferry traffic between Gotland and mainland Sweden is closer to international ferry routes such as Helsinki – Tallinn, which is why the Gotland routes exceed the scale of island ferry traffic used in this thesis. The south-western coast of Sweden on the other hand is not geographically included to the Central Baltic Region and therefore excluded from the REISFER project area.

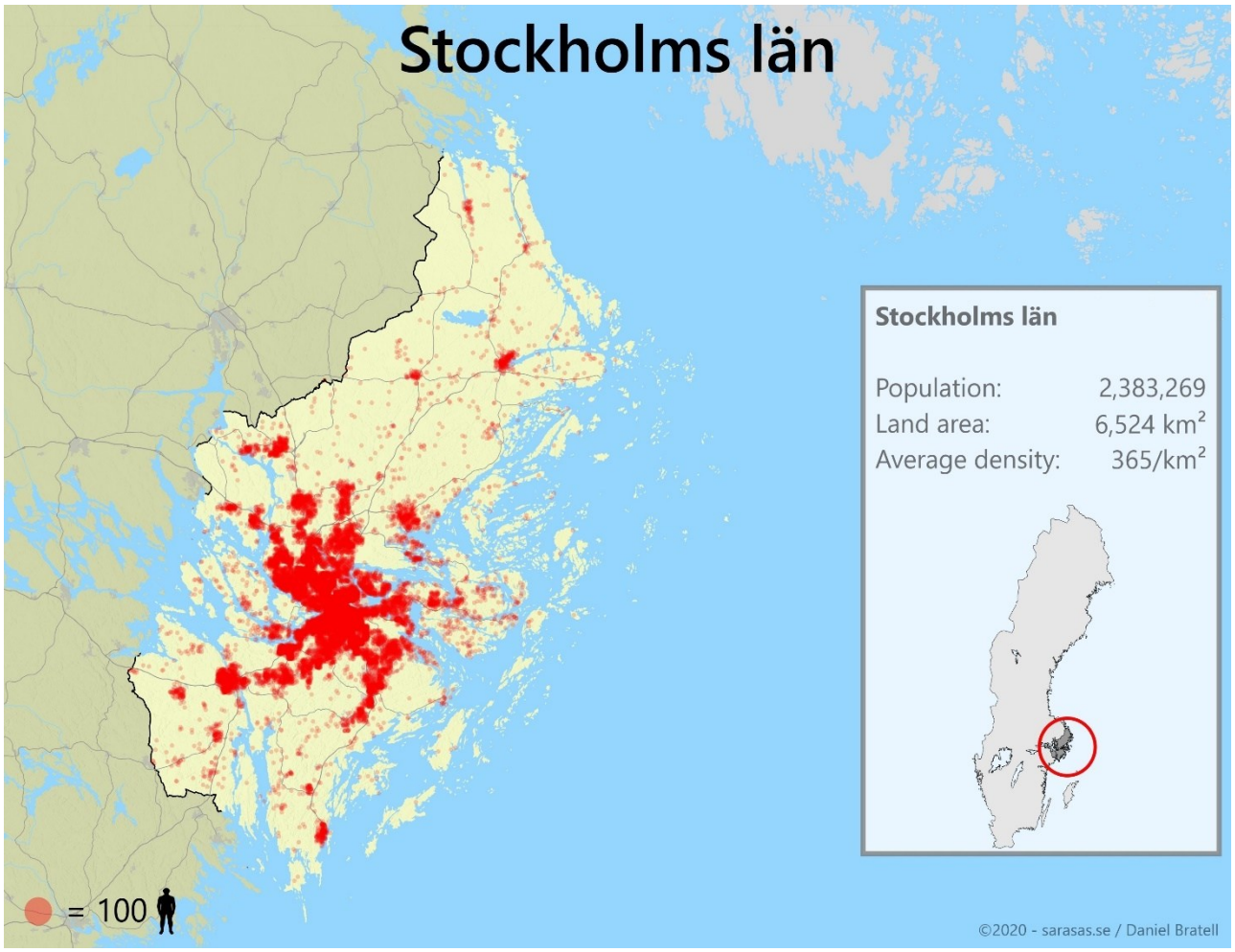

Figure 14: Map of Stockholm County population density (Population density in Stockholms län, retrieved 3.12.2024)

This leaves us with the Stockholm County in which the greater Stockholm area is the most highly populated area in Sweden. Figure 14 shows how the population is clustered around the city of Stockholm, but also how inhabitants are dispersed along the coastline and the archipelago. This creates a need for a more comprehensive waterway transportation system instead of a set of individual routes from the mainland to nearby islands.

6.2 Main ferry routes and operators

6.2.1 Swedish island ferry routes

Stockholm County has essentially two types of island ferry routes: commuter ferries for the greater Stockholm (city) area and archipelago ferries for longer routes headed outside the city of Stockholm. The commuter ferries are oriented for the people working and living in Stockholm (city) while the archipelago ferries cover the broader and more sparsely populated archipelago of the Stockholm County. The archipelago routes are longer than the commuter ferry routes and with a more seasonal

demand as the archipelago is a popular tourist destination during the summer. Most of the ferry routes in Stockholm County are for the archipelago ferries and five routes are included to the greater Stockholm public transport network, i.e. commuter ferries. (Interview 8)

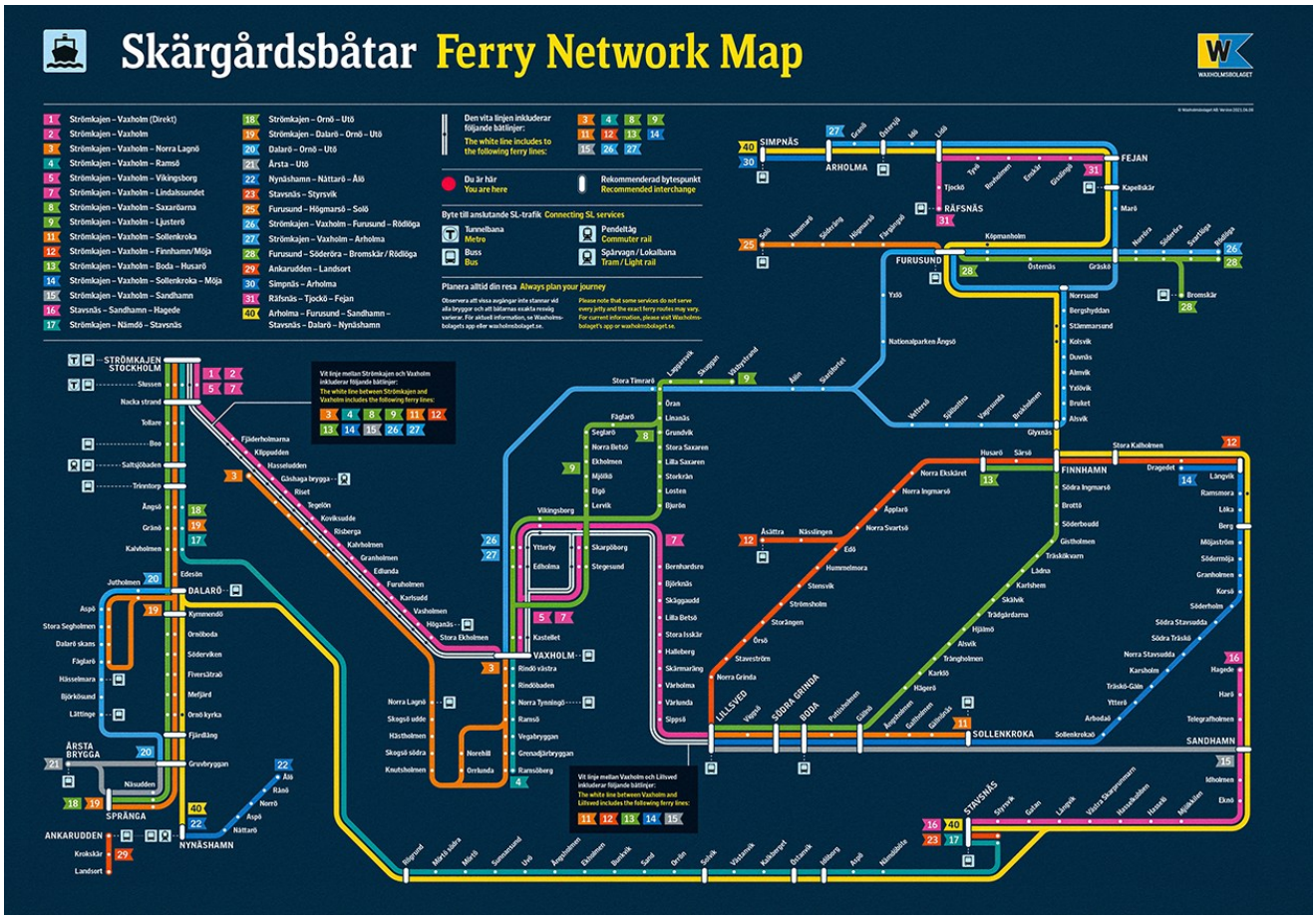

Figure 15:Stockholm County ferry network map (Stockholm Archipelago Ferry Network Diagram, retrieved 4.9.2024)

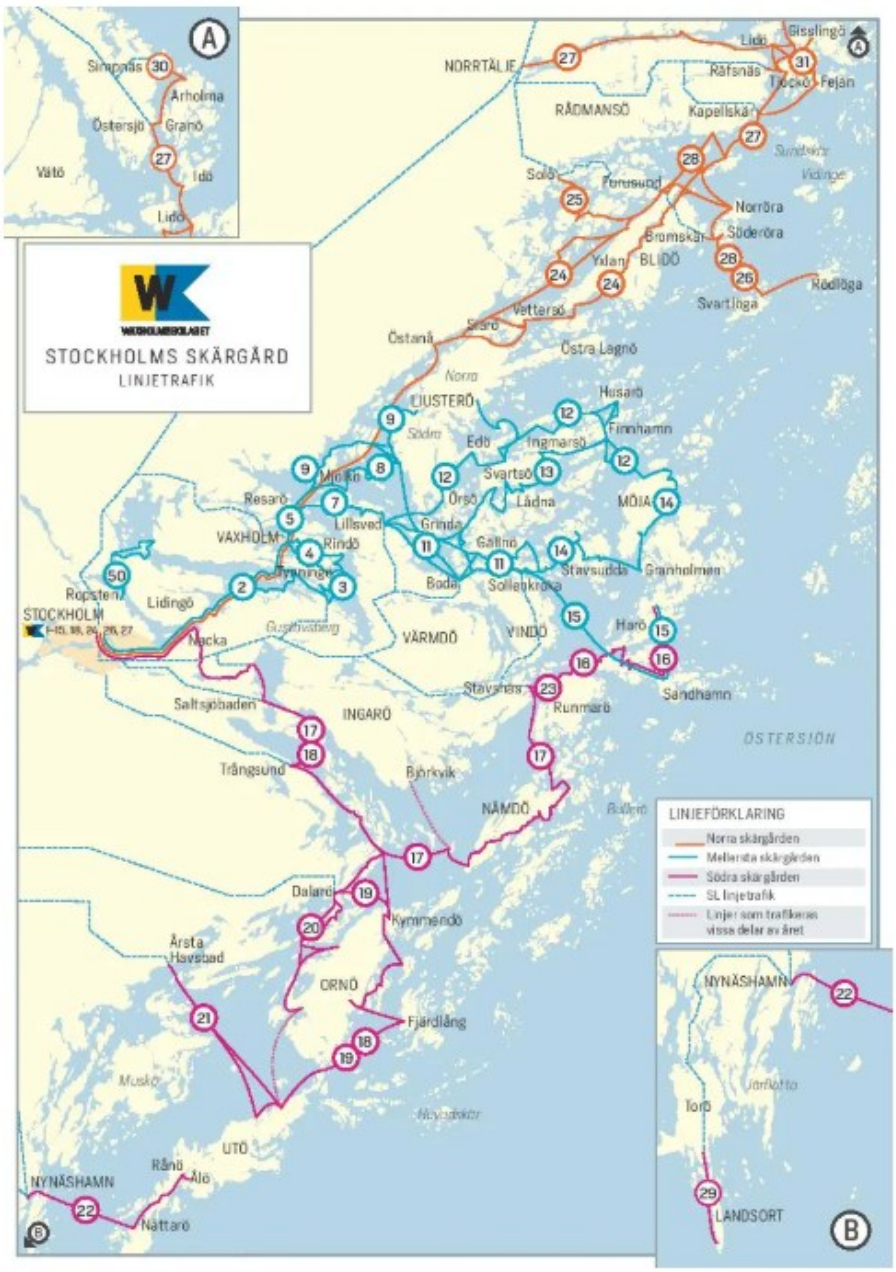

Figure 16: Map of Stockholm County's archipelago and ferry routes in autumn 2020 (Waxholmsbolagets Höstturlista 2020, retrieved 3.12.2024)

As the Swedish ferry routes in the Stockholm County are required to provide transportation services to a substantial population, they are not organised as individual ferry routes, but a part of a larger public transport network integrated with land-based modes of transportation. Figure 15 shows how ferry routes are connected to road and railway transportation in various modes highlighting the intermodal nature of the Stockholm County public transportation. The Stockholm County ferry network encompasses around 30 ferry routes mostly starting from central Stockholm and spreading out to destinations all around the County (Figure 16).

6.2.2 Operators

The Swedish island ferry traffic operators are private companies contracted by Region Stockholm. The main service provider on the archipelago ferry routes is Blidösundsbolaget AB (abbreviation: BBAB). The Stockholm-based company operates a fleet of 38 vessels in total, of which 21 are owned by the Region Stockholm's ship owner brand, Waxholms Ångfartygs AB (WÅAB). Rederi AB Ballerina is the second largest service provider with around 17 vessels in operation and BBAB recently lost one of its public contracts to Ballerina. (Sjömannen 25.11.2024)

Table 10: Swedish island ferry operators, their turnover, number. of staff, and vessels in 2023 (Bolagsfakta.se, retrieved 20.1.2025)

Company	Turnover 2023 in SEK Million	Turnover 2023 in EUR Million (1 SEK = 0.087 EUR)	Personnel	Vessels
Blidösundsbolaget AB	483.7	42.1	227	38
Rederi AB Ballerina	169.2	14.8	94	17
Madam Rederi AB	39.2	3.4	18	5
Djurgårdens Färjetrafik AB	31.4	2.7	22	6
Ingmarsö Sjötjänst AB	24.3	2.3	4	2

*Calculated according to the SEK to EUR exchange rate on 20.1.2025 (1 SEK = 0.087 EUR)

Smaller service providers of ferry traffic in the Stockholm County include Djurgårdens Färjetrafik AB, Madam Rederi AB and Ingmarsö Sjötjänst AB. Djurgårdens Färjetrafik AB is a private company operating two ferry routes within the SL area in greater Stockholm with four vessels owned by WÅAB and two of their own. Madam Rederi AB and Ingmarsö Sjötjänst AB operate both publicly procured routes and commercial traffic in the archipelago. The five routes within the SL area are operated by BBAB, Rederi AB Ballerina, and Djurgårdens Färjetrafik AB. Service providers contracted by Region Stockholm are presented in Table 11.

6.3 Public procurement of island ferry services

6.3.1 Authorities

Region Stockholm is a regional governing body in the Stockholm County, which is responsible for healthcare, public transport, culture and regional development within the county. Island ferry traffic is a part of the county's public transport network, which is one of Region Stockholm's main

responsibilities. On the municipal level in the greater Stockholm area, SL (Stockholms Lokaltrafik) is the provider of public transport. Much like HSL in Helsinki, SL is tasked with planning and scheduling public transport and with organising ticket sales. However, the procuring party of ferry services regarding both commuter ferries and archipelago ferries is Region Stockholm, not SL.

The shipowner company WÅAB is owned by Region Stockholm and the role of WÅAB is to simply own vessels, not to operate the vessels. WÅAB has a fleet of 25 vessels, which are not enough for the demand of island ferry services in the Stockholm County. Thus, Region Stockholm is also procuring ferry services from companies operating their own vessels.

6.3.2 Public funding

The ferry services procured by Region Stockholm rely mostly, but not necessarily fully, on public funding. Regarding both SL's ferries and the archipelago ferries, ticket sale revenue goes to the contracting authority, not the operator. The operators can receive revenue through other means. For example, Blidösundsbolaget AB has food and beverage service on board generating revenue in addition to a historical vessel operating commercially. The company gets around 90% of its revenue from public funding and the remaining 10% from other sales. Some operators are known to provide commercial ferry services in addition to the public contracts awarded by Region Stockholm. (Interview 8)

SL is the provider of public transport tickets for the greater Stockholm are and SL's tickets are valid in all of its public transport services in the city. However, the SL area does not cover the whole county. Unlike SL's year-round commuter ferries (pendelbåtslinjer) the so-called archipelago ferries are not included in the SL ticket system. (Interview 8)

The public funding of ferry services in Stockholm County is not coming from the national government, the operations are funded regionally. Around 50% of Region Stockholm's funding of public transport comes from income tax paid by inhabitants, while the rest comes from ticket sales, selling advertising space and the rental of premises connected to public transport. Tickets are required for the archipelago ferries as well, but local inhabitants are entitled to subsidised yearly tickets. (Interview 8)

6.3.3 Procurement criteria

The procurement criteria for Region Stockholm's ferry providers are price-focused but moving towards a more environmentally oriented direction. The contracting decision is made mainly based on lowest price offered, but extra points are given for quality. Quality criteria include comfort criteria such as cafeteria service, accessibility and toilet facilities as well as environmental criteria i.e. low emission levels. (Interview 8)

Minimum requirements of an offer in the tendering process include vessel capacity and the number of hours of service provided by the potential operator. As the service providers in the archipelago traffic can create their own revenue stream via cafeteria and restaurants, these additional services can affect the procurement decision. A service provider with strong revenue streams from other sources can offer a lower price for the contract. (Interview 8)

Another factor with significant value in the Region Stockholm tendering for ferry services is electrification. Environmental criteria are important quality factors and electrification is specifically mentioned as a sought-out solution. If a service provider would be able to offer a fully electric ferry on a certain route, they would be in a strong position to win the contract. However, the service provider needs to arrange the charging infrastructure, which requires significant additional investment and planning. (Interview 8)

6.3.4 Contracts between operators and authorities

The public contracts provided by Region Stockholm are service contracts. The contracts of the archipelago traffic in the Stockholm County are for so called route packages, not for individual routes. Over 30 routes are bundled into six contract packages, which are tendered by Region Stockholm mainly for 10 years. In the future, 15-year contracts are considered to better enable investment in new vessels and/or more environmentally friendly propulsion technologies. (Interview 8)

In archipelago ferry traffic, operators are compensated on hours of service provided. Region Stockholm's public contracts require extensive reporting from the service providers to track fuel consumption, service level, and other metrics. (Interview 8)

6.4 Governance and public procurement in Stockholm County

Stockholm County in Sweden has a significantly larger island ferry service market compared to Estonia, mainland Finland, and Åland Islands. The island ferry traffic industry in Stockholm County can be divided into commuter ferry routes and archipelago ferry routes. The commuter ferry routes are a part SL's network, which is the provider of public transport in the greater Stockholm area. The archipelago ferry routes are longer ferry routes, which serve the archipelago areas further from the city of Stockholm.

The public procurement of ferry services in the Stockholm County is carried out by the regional authority, Region Stockholm. Public contracts in Sweden include both bareboat chartering contracts and full-service contracts. The bareboat chartering contracts are a result of private companies being hired to operate vessels of WÅAB, which is a ship owner company of Region Stockholm. Multiple companies are currently providing ferry services in Stockholm County with Blidösundsbolaget AB being the main service provider in the archipelago.

Much like the ELY Centre in mainland Finland, Region Stockholm is shifting from traditional price-based procurement criteria towards emphasising quality criteria and particularly environmental criteria. Region Stockholm, as the contracting authority, is keen on electrifying routes where feasible in the future.

Unlike most other interviewees of this study, the Swedish interviewee did not raise the issue of low competitiveness in their region, nor has there been a problem with service providers going bankrupt during a public contract period in the Stockholm County. This indicates that Stockholm County has a relatively stable island ferry traffic market, which can support multiple service providers and maintain healthy competition.

Another factor why Stockholm County is a rather fruitful operating environment for island ferry service providers from a business perspective, is that the Swedish operators are not entirely dependent on public funding. In addition to ferry services, operators offer onboard cafeteria and restaurant services, along with other commercial activities, creating an independent revenue stream. This extra income can help service providers offer lower prices when competing from public contracts.

7 Åland Islands

7.1 Operating environment

The Åland Islands are not an independent nation, but a region of Finland located in the Baltic Sea between mainland Finland and Sweden. However, Åland is an exceptional Finnish region in several ways, but most importantly, Åland has autonomy. The Åland Islands have their own regional government (Government of Åland, GoA) meaning the citizens of Åland can make various political decisions locally, which is a mandate no other Finnish region has. This autonomous approach to governance also includes the industry of island ferry traffic in Åland, which is why the Åland Islands are considered as a separate region from mainland Finland in this thesis. Åland is small in population but has nevertheless a noteworthy island ferry service industry.

Åland is the smallest Finnish region in both area and population as well as the only Finnish region separated from the mainland by sea. Åland has a population of 30,541 people of which 85.4% are Swedish speakers (Statistics Finland, retrieved 25.2.2025). Finland has two official languages, Finnish and Swedish, but in Åland Swedish is the sole official language. This widespread use of Swedish and small number of Finnish speakers is one of the many differences between Åland and mainland Finland. (The special status of the Åland Islands, retrieved 25.2.2025)

Figure 17: Map of the Åland Islands (Visit Åland, retrieved 25.2.2025)

Åland is not just a single island, but a region consisting of one main island and an archipelago of smaller ones (Figure 17). The main island, Fasta Åland, is home to 93% of the population of the region and includes the capital city of Mariehamn (population of Mariehamn is 11,757). The region of Åland includes thousands of islands, the exact number depending on what is classified an island, of which around 60 are permanently inhabited. Having a dispersed population and a strong archipelago-based tourism industry are factors explaining why demand for island ferry services is high. Despite being the smallest of Finnish regions in population, the Åland Islands have an island ferry traffic market of virtually the same size a mainland Finland when measured in annual revenue. This highlights the massive importance ferry services have to the people and economy of the Åland Islands. (Ålands statistik- och utredningsbyrå, 2023)

7.2 Main ferry routes and operators

7.2.1 Island ferry routes of Åland

Figure 18: Åland Islands ferry routes: Red = Northern Line, Yellow = Transverse Line, Green = Southern Line, Blue = Föglö Line (Saaristolautat.fi, retrieved 24.1.2025)

There are four main ferry routes connecting the Åland Islands. The Northern Line, red line in Figure 18 below, starts from Hummelvik and travels to Torsholma. The Transverse Line, yellow line in Figure 18, connects Långnäs to Snäckö. The Southern Line, green line in Figure 18, travels from Långnäs all the way to Galtby. The fourth route is the Föglö Line, blue line in Figure 18, connecting Svinö to Degerby on the island of Föglö. The Northern Line consists of five separate shorter routes and takes off from the island of Vårdö. The other three main routes, on the contrary, are singular ferry routes starting from Fasta Åland heading towards various destinations in the archipelago. (Saaristolautat.fi, retrieved 24.1.2025)

7.2.2 Operators

Åland used to have a model where private companies operated vessels owned by the Government of Åland, but this changed in 2024, when a key service provider suddenly went bankrupt. A joint venture, AxFerries, was founded quickly and took over the routes of the bankrupt operator. AxFerries is a joint venture between GoA and the Finnish state-owned ferry corporation Finferries. This means that there

is no private company involved in the joint venture that is AxFerries. Currently AxFerries operates seven free-moving ferries (meaning not cable ferries) on the Northern Line, Southern Line and Föglö Line. This means that AxFerries is operating on three of the four main ferry routes in Åland.

Kuljetus Savolainen Oy operates the Transverse line with two ferries. Saariston Meritie Oy is a former subsidiary of Kuljetus Savolainen Oy, which used to operate in Åland, but Saariston Meritie Oy has recently been merged with Kuljetus Savolainen Oy, meaning the company does not exist anymore. Kymen Saaristoliikenne Oy operates one vessel on the Torsholma-Lappo-Asterholma-Kumlinge route, which is a part of the Northern Line. Similarly, Alandia Tug Ab operates the Åva – Jurmo route as part of the Northern Line. Sundqvist Investments operated the Enklinge Line with one vessel up until May 2025, but Kuljetus Savolainen Oy took over this route starting 1.6.2025. (Interview 9)

7.3 Public procurement of island ferry services

7.3.1 Authorities

As the Åland Islands have autonomy and a regional government, it is the Government of Åland that procures and governs island ferry services in the region. The regional government owns most of the vessels used for public ferry services in Åland, but they are also procuring ferry services from companies operating with their own vessels.

However, the governance structure is changing in the Åland Islands as the new operator, AxFerries, has entered the market. AxFerries being a 50/50 joint venture of Finferries and GoA means that the regional government is now procuring a significant portion of its ferry services from its own company. In early 2025, free-moving island ferries used by AxFerries and owned by the Government of Åland have so far been bareboat chartered. The plan for the near future is that AxFerries will fully take over these vessels into its balance sheet, whereby the Government of Åland would no longer own any island ferries. This will also result in GoA changing their procurement approach from lease agreements of state-owned vessels to full-service contracts. (Interview 9)

7.3.2 Public funding

Ferry services in the Åland Islands are mainly publicly funded. The total costs of public procurement of ferry services in the Åland Islands are 18-20 million EUR per year. Ticket sale revenue amounts to around 1.4-1.6 million EUR, which covers 7-8% of annual costs. The rest is public funding paid by the Government of Åland to the service providers. The annual budget of the Government of Åland is

around 400 million EUR. This means that the approximately 20 million EUR used for ferry services represents a significant portion of regional fiscal policy. (Interview 9)

Passengers without vehicles can use Åland's island ferries free of charge but tickets are required for bringing vehicles on the ferries. Tickets are priced low for the citizens of the Åland Islands, but are more expensive for visitors. A citizen of Åland is entitled to a yearly ticket at a price of 190 EUR, which is roughly the price of four to five single tickets, to incentivise locals to buy the yearly ticket instead of single passage fares. (Interview 9)

7.3.3 Procurement criteria

Public procurement of ferry services in Åland has so far been very price-focused. Minimum standards for the technical aspects of vessels, annual revenue, and other factors have been set, and the procurement decision has then been made based on the lowest price offered while fulfilling the standards. This approach has been highly price-focused and economically unsustainable, which resulted in price competition and eventually in bankruptcies of service providers. The fact that a too price-focused public procurement mentality caused these issues, is something the interviewee from Åland quite directly admitted. (Interview 9)

As a response to this issue, the Government of Åland is aiming to move away from the price-focused approach to a more quality-focused approach with an increasing emphasis on lowering emissions. This is why the public procurement of island ferry services in Åland is currently defined by a major ongoing change. (Interview 9)

7.3.4 Contracts between operators and authorities

The Government of Åland previously operated under a governance model in which it owned most of the island ferry vessels, while private sector operators were procured through competitive tendering. This approach resulted in bareboat charter-based public contracts, where the vessels remained state-owned, and operators were responsible only for personnel costs and daily maintenance.

However, as Åland's governance model has been shifting toward private vessel ownership, new contracts are increasingly structured as full-service agreements. Traditionally, these contracts lasted 10 to 15 years, but recently the regional government issued a shorter 2+1-year contract as the public procurement system is undergoing a transition. (Interview 9)

The regional government defines the service level for ferry routes through scheduling, leaving service providers with little or no flexibility to adjust schedules or other operational factors. Since ferry services are a key aspect of local politics, service levels can change based on political decisions following elections.

7.4 Governance and public procurement in the Åland Islands

Despite being a small region, both in size and in population, the Åland Islands have significant demand for island ferry services. This is because the region has a strong archipelago-based tourism industry and having roughly 7% of the region's population scattered across 60 smaller inhabited islands. Island ferry traffic is an essential service not only to the inhabitants of the smaller islands, but to the region as a whole. Despite the vital nature of the services, the industry in Åland is not highly competitive and service providers have had problems with staying in business.

The governance model regarding island ferry services in Åland is simple as the regional government carries out public procurement and governance of the services itself. It is the transport bureau within the department of infrastructure, which is tasked with tendering and governance. The services are funded through mostly public funding, but also partially by ticket sale revenue.

The public procurers of ferry services in the Åland Islands have admittedly been too price-focused in the past, which was economically unsustainable and lead to bankruptcies of service providers. This is why procurement criteria are being reassessed and shifting towards giving quality and environmental criteria more weight. The procurement approach in Åland regarding island ferry services is under ongoing transition, rather than in any clear mode or mindset at the moment.

Another major change in Åland is the impact of AxFerries entering the market. The company is a newly established operator jointly owned by Finferries, the largest island ferry company in mainland Finland, and the Government of Åland. AxFerries is a major player in the region and is expected to play a dominant role in future public procurements. While the regional government is optimistic that Finferries' expertise will contribute to reducing emissions in Åland's ferry sector, there are concerns that AxFerries' presence could further weaken the already limited competition among ferry service providers in the region.

8 Comparison of results and conclusions

8.1 Operating environment and market

The markets, governance models, and public procurement approaches of Estonia, mainland Finland, Stockholm County (Sweden), and the Åland Islands regarding island ferry traffic have similarities, but also definitive differences. A major trend that was found in each four regions was change. This means that in none of the regions was the island ferry traffic industry in a state of preserving a well-functioning status quo. The steady increase of environmental regulations and expectations for companies and public sector organisations in the transport sector is a major driver of change, but so are several governance and procurement related factors.

When analysing the markets of island ferry services of the selected four regions, it can be stated that the Stockholm County in Sweden has the strongest and most stable market. The market making 65 million EUR in annual revenue and carrying 16 million passengers is significantly larger in scale compared to the markets of Estonia, Finland, and the Åland Islands. The results of this research indicate that having low competition and few potential service providers is characteristic for Åland and especially for mainland Finland and Estonia. In Stockholm County, on the contrary, the market has healthy competition.

It is, nevertheless, worth stating that the island ferry service market of the Åland Islands is exceptionally big considering how small the region is in population. The Government of Åland uses around 5% of their annual budget on island ferry services while Estonia, mainland Finland, and Stockholm County do not even reach a 1% public spending threshold regarding island ferry traffic. While these services all always important to the locals who use them the most, in Åland island ferry services are vital for the whole region.

The operating environment in Stockholm County is fruitful for island ferry service providers as demand is high and the operators are typically not fully dependent on public funding. The Swedish operators often have some other commercial activities producing revenue resulting in more economically sustainable businesses. In the other regions service providers tend to be small to medium sized companies with little to none other revenue streams. This means that losing a tender may result in significant losses or even going out of business for the company.

The operating environments in mainland Finland and Åland are particularly difficult for smaller local companies as these types of operators have struggled to stay in business while the publicly owned big players, Finferries corporation and AxFerries in Åland, are quickly gaining market share and dominating the industry. However, the public procurers of Finland and Åland are not aiming for a state monopoly, which emphasises the issue of facilitating competition in the industry.

8.2 Governance structure and public-private partnerships

While there are similarities, each four regions have their own unique governance models and structures. In Estonia, the Ministry of Agriculture and Regional Affairs is responsible for public procurement of island ferry services on the national level, and local municipalities and two regional public transport centres on the local level. In mainland Finland, the public procurement and governance is delegated and centralised to the ELY Centre of Southwest Finland, while in Helsinki HSL, a joint municipal authority, procures island ferry services from SLL, which is a company owned by the City of Helsinki.

In Stockholm County in Sweden, Region Stockholm is a regional authority tasked with procuring and governing island ferry services. In the Åland Islands it is also a regional authority, the regional Government of Åland, which procures services and governs the local island ferry sector. Mainland Finland and Stockholm County focus more on quality and environmental criteria than Estonia and Åland, and this mentality in Finland and Sweden is likely to strengthen in the future. The governance model and procurement approach in the Åland Islands is under transformation at the moment, while Estonia has a price-focused procurement mentality with the Estonian State Fleet focusing on procuring more environmentally friendly vessels.

The public contracts provided in all four regions are service contracts, there are no concessions offered by the authorities in the Central Baltic island ferry sector. However, the arrangement in Helsinki could be closer to a concession if the company, Suomenlinnan Liikenne Ltd., was a private company. SLL is a subsidiary of KLOY, which in turn is owned by the City of Helsinki. As a publicly owned company is delivering the service with a permanent grant, there is no tendering for the Suomenlinna – Helsinki city centre routes. There is one joint venture approach in the island ferry industry of the Central Baltic Sea Region, AxFerries in the Åland Islands. However, as AxFerries is owned jointly by GoA and the Finferries corporation, there is no private company involved in the joint venture meaning the vessels are and will remain under public ownership.

The main difference in the public-private partnerships comes from the aspect of vessel ownership. Some PPPs in the island ferry sector are based on full-service contracts, where the private companies own the vessels used for service delivery, while some are based on lease agreements meaning the private company will operate publicly owned vessels for service delivery. Full-service contracts are provided by the ELY Centre in mainland Finland and GoA in Åland in future procurements, whereas lease agreements of publicly owned vessels are typically, but not always, the case in Estonia. There are also cases where both approaches coexist resulting in a mixture of privately and publicly owned vessels operated by a single service provider. This mixed approach means that a service provider is operating both publicly owned and privately owned vessels, which is typical in Stockholm County.

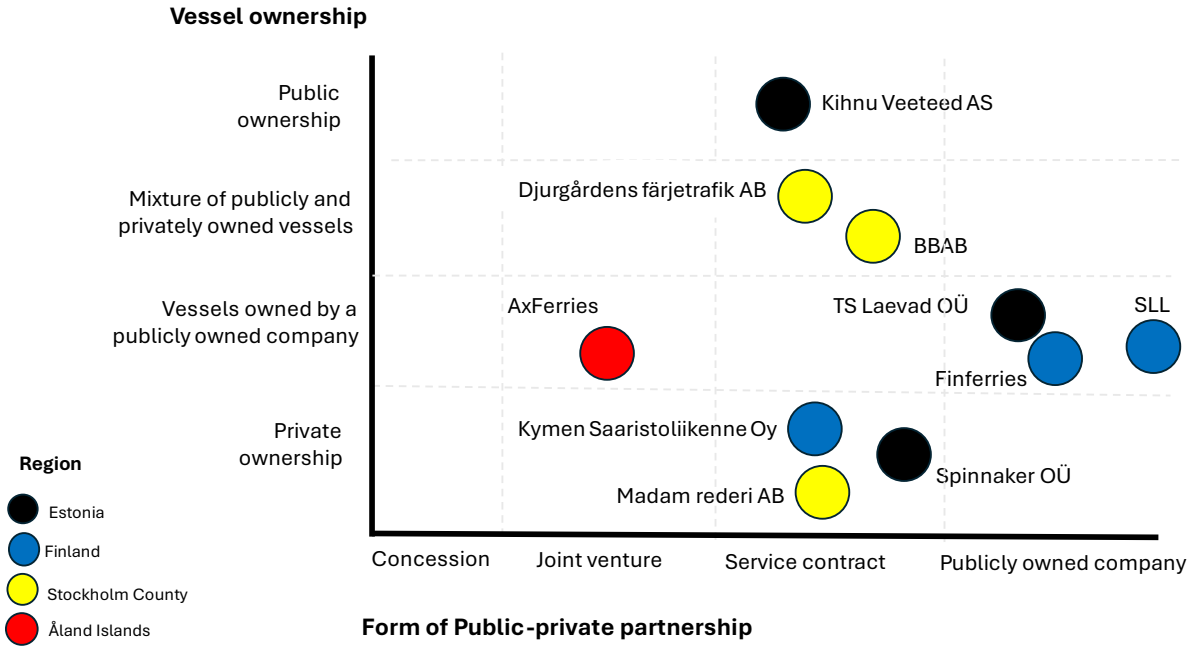

Figure 19: Public-private partnerships of island ferry service providers in the Central Baltic Sea Region, Spring 2025

There is a state agency providing ferry services in the Central Baltic Region, Färjerederiet in Sweden, but Färjerederiet operates road ferries (see Figure 1, Category D) instead of island ferries as classified for this thesis (see Figure 1, Category C). However, there are several publicly owned companies such as TS Laevad OÜ in Estonia, Finferries corporation in mainland Finland, and SLL in Helsinki providing island ferry services. The publicly owned companies are characteristically major players with significant resources compared to rival private companies. TS Laevad OÜ has a strong position in the provision of ferry service to the large islands of Estonia, while Finferries has a market share nearing a monopoly in mainland Finland. In Helsinki, SLL currently has no competition as there is no tendering for their routes.

Figure 19 demonstrates where different service providers of this thesis are located on an industry specific spectrum of public-private partnerships and vessels ownership. When state-owned companies own vessels, the vessels are owned by a company, not by the procuring authority. However, as the company itself is owned by the state, vessel ownership in that case cannot be classified as fully private.

8.3 Public procurement approaches

The public procurement approaches of authorities regarding island ferry services in each four regions will be evaluated and compared using the "good practice versus avoidable mistakes" presented in Table 4. Several features from the framework, both good practice and avoidable mistakes, appeared in the results of this research. The framework's key points are listed below:

Good practice

- Rewarding innovativeness and environmental sustainability
- Attracting several bidders, also local ones, creating competition, lowering prices, and potentially boosting local economy
- Expecting new vessels and vehicles form bidders (in the transport sector)
- Finding a "sweet spot" regarding the quality versus price trade-off

Avoidable mistakes

- Having a price over quality mentality; only chasing cost savings can lead to hiring incompetent and faithless contractors or procuring outdated technology
- Offering too short contracts, disincentivises sustainable development
- Creating a complicated and overly long tendering process
- Setting the bar too high regarding quality standards resulting in local smaller businesses dropping out of the race

The "Rewarding innovativeness and environmental sustainability" is a good practice measure found in most regions, not perhaps at the moment, but as a direction where the public procurement approach is heading. In mainland Finland, Stockholm County, and the Åland Islands public procurers are well aware of the increasing emphasis and political pressure for more environmentally friendly ferry services. This why the importance of environmental factors is shifting from a secondary procurement criterion to new standard requirement.

"Expecting new vessels from bidders" is a measure intertwined with improving environmental factors in the public procurement of ferry services, as the most effective way to lower emission levels

typically is acquiring a new vessel or retrofitting an older one with new technology. It is likely that public procurers in all regions will be expecting or favouring bids providing new or retrofitted vessels in the future.

The Estonians have taken a different approach to the issue of sustainable public procurement. The Estonian State Fleet is acquiring Estonian ferries and procuring new vessels for the national island ferry industry in a centralised manner. The Estonian State Fleet has significantly better resources for purchasing new environmentally friendly vessels compared to small and medium sized private companies. This is why Estonian public procurers are less focused on demanding environmental requirements from service providers, that aspect is considered more of a responsibility of the state in Estonia. “Expecting new vessels from bidders” is a good practice measure, on which the Estonians are focusing on with their own unique approach.

The” Attracting several bidders” and “Finding a "sweet spot" regarding the quality versus price trade-off” are more difficult good practice measures to execute in the island ferry traffic industry, at least in the Central Baltic Region. The island ferry service sector is often defined by a limited amount of potential service providers resulting in tenders receiving few bids. The “sweet spot” regarding quality and price is, on the other hand, one of the main challenges of public procurement in general. The Stockholm County is slightly ahead of the other regions in this regard, as the other three regions have struggled with low competition and too price-focused procurement.

Regarding the avoidable mistakes, “having a price over quality mentality” has been the most typical one in the island ferry sector in the Central Baltic Sea Region. Especially in the Åland Islands this has been the procurement mentality, which resulted in issues currently being untangled by the authorities. In Estonia there have been issues with an operator struggling to maintain service levels on certain routes. These are exactly the sort of consequences a public procurer can face after too price-focused procurement decisions, and the authorities in Åland and Estonia know this and are already changing their approach to island ferry service procurement.

The “offering too short contracts” is an issue, which has specifically impacted mainland Finland. The ELY Centre of Southwest Finland wants their operators to invest in more environmentally friendly technology, but the 5-year contract system was giving little incentive for these investments. This is why the ELY Centre has very recently shifted to providing 15-year public contracts.

“Creating a complicated and overly long tendering process” is an avoidable mistake, which has successfully been avoided by public procurers in the island ferry service industry. The results of this research do not indicate that the length or complexity of tendering processes is a problem in any of the

four regions. “Setting the bar too high regarding quality standards resulting in local smaller businesses dropping out of the race” is also a mistake well avoided in the selected region. However, in mainland Finland small local businesses have been struggling to stay in business during recent years while Finferries is gaining market share, but there are several factors contributing to this trend with public tendering not necessarily being the main reason.

Table 11: Summary of key features of the island ferry traffic markets and governance models of Estonia, mainland Finland, Helsinki, Stockholm County, and the Åland Islands

	Estonia	**Mainland Finland**	**Helsinki**	**Stockholm County**	**Åland Islands**
Public procurer	Ministry of Agriculture and Regional Affairs, local municipalities, and public transport centres	ELY Centre of Southwest Finland	HSL	Region Stockholm	Government of Åland
Governance level	National, regional, and municipal	National	Municipal	Regional	Regional
Main service provider(s)	TS Laevad OÜ, Kihnu Veeteed	Finferries	SLL	BBAB	AxFerries
Contract length	5-10 years	Previously 5, 15 years in future tenders	No tendering	10-15 years	10-15 years
Procurement criteria	Price-focused	Price-focused with quality points	No tendering	Price-focused with quality points	Price-focused
Market size	28 million EUR, 2.6 million Pax	20 million EUR, 0.3 million Pax	6 million EUR, 2 million Pax	65 million EUR, 16 million Pax	20 million EUR, 1 million Pax

Table 12 summarises some of the key findings of this thesis. Knowing which authority is charged with public procurement of island ferry services and it whether the decision making is on a national, regional, or municipal level, forms the foundation of each regions’ governance model. Market size, the number of passengers per year, and main service providers are key information regarding the operating environment whereas contract length and procurement criteria are main features of local approach to public procurement of ferry services.

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