
AUTHORITY PLANNING IN PUBLIC TRANSPORT




Bachelor's Thesis

Degree Programme in Traffic and Transport Management

Riihimäki, spring 2016

Olli-Matti Toivanen



RIIHIMÄKI

Degree Programme in Traffic and Transport Management

Traffic planning

Author

Olli-Matti Toivanen

Year 2016

Subject of Bachelor's thesis

Authority planning in public transport

ABSTRACT

The theme of this thesis was authority planning in public transport in Finland, Sweden and Denmark. The thesis was commissioned by INIT GmbH. The primary aim of this thesis was to figure out what kind of possibilities and challenges public transport authorities face in competitive tendering, contracting and cooperation with operators. An additional aim was to survey and compare authority planning in above mentioned countries, look for similarities and differences between these three countries.

The research was made by interviewing competitive authorities: six in Finland, three in Sweden and two in Denmark. The main topics during these interviews included competitive tendering, contracting and co-operation with operators. Material was also gathered by studying the legislation, the internet and literature in the field, and received from INIT GmbH.

There were significant differences between Finland, Sweden and Denmark in authority planning in public transport. In most Finnish cities and regions competitive tendering has just started or is starting. The knowledge of competitive tendering is slowly rising and an awareness of the importance of quality on the demands of the contracts is slowly increasing. Finland still has a long way to reach the level of the two other Nordic countries. Sweden and Denmark have been using competitive tendering for more than twenty years. Their knowledge is of a high level and quality is already now a very important part in public transport contracts.

Now and in the future quality may be more important in Finland as well, although economic recession may slow down this development, because of a scarce investment on public transport. However, when reporting and technological developments improve, the quality and the level of public transport in Finland shall improve. In Denmark and Sweden quality might rise to come as important as price in contracts in near future.

Keywords Authority planning, public transport, Nordic countries, co-operation, competitive tendering, quality

Pages 35 p. + appendices 3 p.

Riihimäki
Liikennealan koulutusohjelma
Liikennesuunnittelu

Tekijä Olli-Matti Toivanen **Vuosi** 2016

Työn nimi Authority planning in public transport

TIIVISTELMÄ

Tämän opinnäytetyön aiheena oli kaupunkien viranomaisten joukkoliikenteen suunnittelu Suomessa, Ruotsissa ja Tanskassa. Työn toimeksiantaja oli INIT GmbH. Työn tavoitteena oli selvittää, millaisia haasteita ja mahdollisuuksia joukkoliikenteen viranomaisilla on tarjouskilpailuissa, sopimusten tekemisessä ja sopimuskaudella operaattoreiden kanssa tehtävässä yhteistyössä tällä hetkellä. Tavoitteena oli myös kartoittaa ja vertailla suomalaisten, ruotsalaisten ja tanskalaisten kaupunkien ja alueiden viranomaissuunnittelun eroja ja yhtäläisyyksiä.

Pääasiallisena tutkimusmenetelmänä työssä käytettiin haastattelututkimusta, joka suoritettiin kaupunkien ja alueiden kilpailuttaville joukkoliikenteen viranomaisille. Haastatteluja suoritettiin kuusi Suomessa, kolme Ruotsissa ja kaksi Tanskassa. Tämän lisäksi menetelminä olivat tutustuminen edellä mainittujen maiden liikennealan lainsäädäntöön, kirjallisuuteen ja internetistä löytyvään materiaaliin sekä toimeksiantajalta saatuun materiaaliin tutustuminen.

Eroja havaittiin joukkoliikenteen viranomaissuunnittelussa Suomen, Ruotsin ja Tanskan välillä. Useimmissa Suomen kaupungeissa ja alueilla kilpailutus on vasta alkamassa. Tietämys tarjouskilpailuista ja laadun tärkeydestä joukkoliikenteen sopimuksissa lisääntyy hitaasti. Silti Suomella on pitkä matka kahden muun haastatellun Pohjoismaan tasolle. Ruotsissa ja Tanskassa on kilpailutettu joukkoliikennettä jo yli 20 vuoden ajan. Tietämys viimeksi mainituissa kahdessa maassa on korkealla ja laatu on jo nyt joukkoliikenteen sopimusten merkittävä osa.

Tulevaisuudessa Suomessa panostettaneen lisää laadun parantamiseen, vaikkakin taloudellinen tilanne hidastaa kehitystä tällä hetkellä, kun tukia karsitaan. Kun raportointi etenee ja teknologia kehittyy, laatu ja joukkoliikenne voivat nousta seuraavalle tasolle Suomessa. Lähitulevaisuudessa Tanskassa ja Ruotsissa laadun merkitys voi nousta joukkoliikenteen sopimuksissa yhtä tärkeiksi kuin hinnan merkitys.

Avainsanat Viranomaissuunnittelu, joukkoliikenne, Pohjoismaat, yhteistyö, tarjouskilpailu, laatu

Sivut 35 s. + liitteet 3 s.

CONTENTS

1	INTRODUCTION.....	1
1.1	Background	1
1.2	Commissioning company.....	2
1.2.1	Init AG.....	2
1.2.2	INIT GmbH	2
1.2.3	Initplan GmbH.....	2
1.3	Objective of the thesis	2
1.4	Limits	3
1.5	Research question.....	4
1.6	Research methods.....	4
2	EU LEGISLATION AND DEVELOPMENT OF LEGISLATION IN PUBLIC TRANSPORT IN FINLAND, SWEDEN AND DENMARK.....	5
2.1	EU	5
2.2	Finland.....	6
2.3	Sweden	7
2.4	Denmark	9
3	STATE AUTHORITIES IN PUBLIC TRANSPORT IN FINLAND, SWEDEN AND DENMARK	10
3.1	Finland.....	10
3.2	Sweden	11
3.3	Denmark.....	11
4	INTERVIEWED AUTHORITIES IN FINLAND, SWEDEN AND DENMARK	12
4.1	Finland.....	12
4.2	Sweden	14
4.3	Denmark.....	16
5	COMPETITIVE TENDERING.....	17
5.1	Finland.....	17
5.2	Sweden	18
5.3	Denmark.....	19
6	CONTRACTING	20
6.1	Negotiations after competitive tendering	20
6.1.1	Finland	20
6.1.2	Sweden	20
6.1.3	Denmark	20
6.2	Incentives and sanctions, as well as demands for extension options	21
6.2.1	Finland.....	21
6.2.2	Sweden	21
6.2.3	Denmark	22

7	CO-OPERATION OF OPERATORS AND PUBLIC TRANSPORT AUTHORITIES	
	23	
7.1.1	Finland.....	23
7.1.2	Sweden	25
7.1.3	Denmark	26
7.2	Supporting interviews	28
7.2.1	Waltti in Finland.....	28
7.2.2	TITSAM in Denmark	30
8	CONCLUSIONS	30
	SOURCES	33

Appendix

The questionnaire for interviews

GLOSSARY

Public transport	a general term in traffic engineering which refers to the carriage of persons referred to transport large number of persons, regardless whether transport is public or not. The most commonly, the public transport is based on routes and schedules by bus or rail transport.
Market-based transport	is based on free competition, where traffic operates on the basis of each operator's own design and pricing without public support. A public transport or route traffic license granted by the competent authorities is required for market-based transport operations. Traffic shall be conducted in accordance with the quality of the promise contained in the customer inputs the operating license.
Regulated competition	refers to a situation in which the services are produced rather than the free market-based competition terms and conditions, specified by the competent authority. In regulated competition, operators compete for contracts related to the traffic for the treatment of competition law or regulation under the service agreement.
Competent authority	is the authority or group of public authorities, which has power to intervene in public passenger transport in a given geographical area, in accordance with the service contract regulation. During text competent authorities and public transport authorities are the same authorities.
SGEI	means services of general economic interest, are provided for remuneration and subject to European internal market and competition rules. However, derogations to these rules may be authorised in order to ensure that the general interest is respected.
Deregulation	is the reduction of the state regulation. It increases the freedom of the market economy, by abandon price controls, removing employment barriers and abolishing subsidies.
Competitive tendering	is on order to tender a service. Competitive authorities begin by drawing up a specification, setting out the delivery targets, expected outcomes, and sanctions for failure to meet the targets. Operators, bidders, take part in tendering.
Gross cost contract	means that production risk is borne by the operator while the commercial risk is taken by the authority. The operator is remunerated by a contribution of the authority based on the

	costs. The remuneration can be modulated by a bonus/penalty scheme according to the evolution of quality, patronage etc., which enables the authority to modify the level of commercial risk.
Service concession	means both production risk and commercial risk are borne by the operator. The operator is remunerated by the revenues and a complementary compensation payment for social fares and other public service obligations as well as a contribution of the authority based on the costs. The commercial risk can be modified by adjusting the complementary payment according to the real revenues.
Management contract	means both production risk and commercial risk are borne by the authority. The contract may include incentive schemes linked to the changes in revenues or changes in costs etc.
Ely-centre	is The Centers for Economic Development, Transport and the Environment. It is responsible for the regional implementation and development duties of the central government in Finland. ELY centres have three responsibility areas: Environment and natural resources, transport and infrastructure, and business and industry, labour force, competence and cultural activities.

1 INTRODUCTION

In this chapter the author introduces the background of this thesis, the research question, the research objectives, limits and the methods of this research. In the beginning of this chapter there is also a part which presents shortly the commissioning company of the thesis.

1.1 Background

The topic of this thesis was "Authority planning in public transport". This thesis was commissioned by INIT GmbH. The supervisor was Mr. Sotavalta from HAMK. Instructional employers from INIT included Ms. Fabianski and Mr. Hardman. Ms. Fabianski nowadays works for UITP, L'Union Internationale des Transports Publiques, in Brussels.

People move from one place to another, all around the world, round the clock, due to work or leisure. Short distances are easy to reach environmentally friendly by foot or by bicycle. If we need to move further away, we might need a motorcycle or a car, or public transport. Public transport allows moving a higher volume of passengers in a compact size, at lower cost and more environmentally friendly than if each passenger drove a car. The lack of open space on roads is a complex problem in large cities all around the world. The amount of cars is increasing all the time, especially in developing countries and their urban areas. The citizens of developing countries become wealthy and they want the same kind of appliances, such as cars, as in developed countries. In developed countries the economic resources of authorities for public transport have always been tight and are decreasing in many western countries due to economic recession. On the other hand, global warming and increasing emissions influence public transport positively due to less pollution. There is a great need for investments to improve public transport and compete with other modes of transport, especially private car traffic. That is why there is a great need for intelligent traffic, which allows space, time and advantages for public transport, such as by giving traffic signal advantages and improved timetables. Smoother public transport means more passengers, more space on the roads, safer roads and less pollution. It means that we save money and breathe more fresh air. (Cities on the Move 2002, 93-107)

As mentioned earlier, the usage of intelligent traffic systems (ITSs) are at different levels between countries, even in Nordic countries, such as Finland, Sweden and Denmark. Municipalities, regions and their public transport authorities may learn from each other, and find better solutions to reach more efficient and technology-advanced public transport. This is done by listening what similar authorities in neighbouring municipalities and regions are thinking, doing and developing.

1.2 Commissioning company

1.2.1 Init AG

INIT (Innovation in traffic systems) AG is a holding company for the INIT Group, and it has been listed on the German stock exchange since 2001.

INIT headquarters are located in Karlsruhe, in southern Germany. INIT has two other offices in Germany as well. Besides Germany, INIT has subsidiaries around the world in the United States, Canada, Australia, the United Arab Emirates, the United Kingdom, France, Finland and Singapore. INIT had totally 492 employees around the world in 2014. The Chief Executive Officer of INIT AG is Dr. -Ing. Gottfried Greschner. (INIT AG 2015)

1.2.2 INIT GmbH

INIT GmbH was established on 7 March in 1983 by Dr.-Ing. Gottfried Greschner as a university spin-off. INIT GmbH develops, produces, installs and maintains hardware and software solutions for customers. The customers are operators and public transport authorities of the cities and regions in six continents; Europe, North-America, South-America, Asia, Oceania and Africa. Totally INIT has more than 400 customers worldwide. INIT is the worldwide leading supplier of intelligent transportation systems and electronic ticketing systems for public transportation. This thesis is commissioned by INIT GmbH. (INIT GmbH 2015)

1.2.3 Initplan GmbH

Initplan GmbH develops, distributes and maintains planning and scheduling software for transportation companies and authorities. The planning and scheduling software of Initplan is called MOBILE-PLAN. Initplan GmbH is a subsidiary of INIT AG. Last winter author worked for Initplan GmbH in Karlsruhe for two months. Duties were get to know MOBILE-PLAN. Other targets during the trainee period were get to know better intelligent transport systems, branch; rivals, systems, customers and development. (Initplan GmbH 2015)

1.3 Objective of the thesis

The primary objective of this thesis was to find out and learn what kind of differences and similarities there are in the authority planning in the branch of public transport in Finland, Sweden and Denmark. Finding out about the expectations and hopes for the future of public transport authori-

ties was a part of the objective; what is the role of authorities in public transport?

The commissioning company, INIT, was interested to know more about what was happening in the Nordics related to authority planning regarding their products.

Other objectives included improving further author's knowledge regarding ITS market, and to get to know where the systems of INIT might step in and what the software may cover.

Objectives were resolved by getting answers to questions such as

- What kind of developments would you like to see for the next 10 years in competitive tendering?
- What kind of developments would you like to see for the next 10 years in contracting?
- What kind of incentives or/and sanctions do you use for the operators?
- How do you think systems and technology would help you to develop relationship with the operators?
- How would you develop the relationships with operators?
- How do you transfer responsibility to someone and make sure that they take care of it in a proper way according to you?

1.4 Limits

The limits of this thesis were set up in as the follows by the commissioning company, supervisor from the university and the author. There are two main parties in competitive tendering and cooperation in public transport. Competent authorities are responsible for organizing competitive tendering for bidders, choosing the operators, and negotiating with operators before the beginning of traffic and during the process. Operators may take part in competitive tendering and drive the service, if they are chosen for this. As in this thesis the topic was "authority planning", only authority views and thoughts are examined here. There were no operators interviews, only authorities were interviewed. These limits were mainly set by INIT and initplan, because purpose was to give new information. Initplan sells products to both parties: operators and authorities, but in the Nordic countries mainly for authority part, due to their interest to take charge of planning and developing. Time and expenses provided some kind of limits; it would have taken more time and money to interview both authorities and operators during the thesis process.

A former INIT employee has started research in France with the same kind of topic, but she never finished her research project, because she changed the employer. However, she helped the author to understand the framework and branch in the beginning of this thesis, and also supported me during the writing process of the thesis.

1.5 Research question

The purpose of this thesis was to find out an answer to the following research question: How do public transport authorities organize and manage competitive tendering and co-work with operators in Nordics?

1.6 Research methods

To reach the objectives, to answer the research question and to complete the thesis, the following research methods were used: qualitative research and interviews on Skype or face to face, contact by e-mail with state authorities regarding the legislation history and development of the branch, literature from INIT GmbH and internet materials, regular contact with co-workers from the commissioning company and using the data of previous internship at INIT in Germany, which author learned and received last winter. The purpose was to achieve, understand and produce relevant practical data and sufficient theoretical background for the thesis.

Qualitative research was chosen as the primary research framework of this thesis. Qualitative interviews are themed interviews, to collect data. Qualitative research tries to answer questions such as why, how and what kind of. The purpose is to understand the target population and phenomena deeply in qualitative research projects. (Qualitative research 2015)

The initial questions were sent one week in advance, so that the interviewee would have enough time to prepare for the interview. In a week the interviews were arranged at the position where interviewee works, except for two interviews, which were conducted online.

In Finland the interviews took place in Finnish. In Sweden and Denmark the interviews took place in English. Totally twelve authorities were interviewed. A system architect from the company called TVV Lippu- ja maksujärjestelmä Oy was also interviewed. The company was formed by competent authorities of Finland. TVV Lippu- ja maksujärjestelmä Oy have developed a product called Waltti, a ticketing and payment system. The interview with TVV Lippu- ja maksujärjestelmä Oy was arranged first and the interview gave good background information related to the topic.

All the interviews were recorded. Everything the interviewees said, was listened to and compared to other interviews afterwards. The results were combined and looked for similarities mainly within the country. Then the results were ready to get compared between Finland, Sweden and Denmark.

The questionnaire consisted of 30 questions, which were divided for five themes: General questions, competitive tendering, contracting, cooperation with operators, and supporting questions. The interview lasted 30 - 45 minutes.

There were also other research methods used in this project, as mentioned earlier. The theoretical knowledge was based on materials given by the commissioning company. The commissioning company have worked a few years in all three countries, where the authorities were interviewed, so they already had some knowledge about working in the Nordic environment. Especially in Denmark INIT had a strong foothold. The author also found materials from internet sources, especially for the background data.

A regular contact to the co-workers was established by visiting Karlsruhe, and by e-mail. Co-workers sent the author information regarding the topics during the writing process.

A previous internship with the commissioning company the winter before gave the author a basic worldwide knowledge regarding the branch. With the knowledge, the author was able to write the background text for the thesis. The author also got valuable information related to competent authorities, when he and colleagues visited in Paikallisliikennepäivät in Jyväskylä for two days in the middle of September 2015. Business trips to meet and train INIT's customers during the year 2015 gave to the author a lot of new information related to the authority planning.

2 EU LEGISLATION AND DEVELOPMENT OF LEGISLATION IN PUBLIC TRANSPORT IN FINLAND, SWEDEN AND DENMARK

2.1 EU

EU has regulated public passenger transport services in year 2007. The number and the name of the regulation is 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road. The regulation repealed Council Regulations (EEC) No 1191/69 and (EEC) No 1107/70. The new regulation defines the conditions in which the competent authorities can intervene in the area of public passenger transport, rail and road transport, to guarantee the provision of services of general interest. Public service compensation may be necessary to ensure the provision of services of general economic interest, SGEI, and guarantee safe, efficient, attractive and high quality passenger transport. The Regulation applies to regular and non-discriminatory access, national and international public passenger transport services by rail and other track-based modes and by road. (EUR-Lex 2015)

The competent authorities with the power to intervene in public passenger transport within a given geographical area, known as the competent authority, is obliged to conclude a public service contract with the operator to which it grants an exclusive right and compensation in exchange for discharging public service obligations, known as PSO. Obligations which aim at establish maximum tariffs for all or certain categories of passengers may also be subject to general rules. The competent authority grants com-

pensation for the net financial impact occasioned by compliance with the contractually defined public service obligations or pricing obligations established in the general rules. If the contract is estimated under EUR 1 million or supply less than 300 000 kilometers of public passenger transport services, it is known as low level contract, competitive procedures does not apply. Rail transport, emergency measures taken or contracts are imposed in response to actual or potential service interruption, are out of the competitive procedures. (EUR-Lex 2015)

The duration of public service contracts is limited and must not exceed ten years for bus and coach services, and fifteen years for passenger transport services by rail or other track-based modes. This period may be extended by up to 50 % under certain conditions. (EUR-Lex 2015)

2.2 Finland

It has passed more than hundred years, when the motorized bus transportation began in Finland. First contract-based public transport was made between city and private operators in Helsinki in 1972. (Tinnilä & Kallio 2012a, 9-10.)

In Finland first competitive tendering was made in capital region and organization YTV in 1995. (Anttila 1996, 10.) Turku started competitive tendering also in 1995, Helsinki in 1998, Espoo in 1999, Vantaa in 2000 (Haatainen 2003, 191.) and Tampere in 2006. In other cities, municipalities and regions in Finland competitive tendered traffic began mainly as late as in July 2014. (Kataja 2015)

1980's economic growth in Finland was very fast. At that time it didn't exist Public transport act, but Road traffic act and Regulation regarding professional motor vehicle traffic. Passenger transport act became in 1991 and Public procurement act in 1994; both were important milestones in public transport in Finland. Finland became the member state of the European Economic Area (EEA) in the beginning of 1994 and in the beginning of 1995 the member of the European Union (EU). The new acts and membership of the European Union had an efficient influence on public transport throughout the country and the legislation. (Tinnilä & Kallio 2012b, 10.)

The Public transport act and the EU Regulation on public passenger transport services entered into force at the end of 2009. It is based on EU regulation on public passenger transport services. When the authorities conclude acquisition of public transport services, shall be subject to the EU regulations, Public transport act and Public procurement act. Public transport act defines the competent authorities in Finland; cities, municipalities, a regionally joint authority and ELY-centres. The purpose of the act is to develop public transport in two different kinds of area. First, the purpose is to increase the use of public transport in urban areas. Second purpose is to secure a basic level of public transport elsewhere. The Public

transport act describes also how competent authorities define service levels, nationwide service levels are defined by the Ministry of Transport and Communications. Both operators and competent authorities may plan routes and timetables, alone or in co-operation. Operators are responsible for the planning of the production of traffic. (Public Transport Act 869/2009, 1-19 §)

The Public Transport Act introduced the transitional period of ten years. During the transitional period the organization of transport is gradually adapted to the new act. The old licenses for route traffic have been changed into public service contracts during the transitional period. These licenses will gradually expire between 2014 and 2019. The extent to which public authorities may intervene in markets to guarantee the quantity and quality of public transport services is laid down in the EU Regulation on public passenger transport services. (Liikennevirasto 2015a)

Under the Public transport act, the competent authorities are responsible for organizing public transport. The competent authorities comprise 26 municipal authorities and nine Centers for Economic Development, Transport and the Environment. The most of competent authorities are responsible only for own municipality. Some, such as Tampere and Hämeenlinna, are also regional competent authorities; responsible area is greater than their own municipality area. The competent authorities define the service level of public transport in their own region and decide how the transport services should be organized. The transport services are whether market-based or put out to tender as laid down in the EU Regulation on public passenger transport services. (Liikennevirasto 2015a)

2.3 Sweden

First motorized buses began transport in Sweden in year 1899.

In 1978 a significant transformation in public transport in Sweden began by the new regulation. Each county had the responsibility to arrange the planning and the operation of public transport services in order to ensure an integrated and coordinated system. Responsibility for local and regional road passenger services in each county was placed in the hands of new county transport authorities to be set up by 01.07.1983. (Jansson & Wallin 1991, 97-102.)

The reform was motivated by a desire for integration and co-ordination. Public transport was to be integrated in the framework of community service; target was to improve local and regional public transport services throughout Sweden. It was believed that coordinating regional transport services under a single authority would encourage the more efficient use of transport resources and aim at regional season ticket systems, known as county season tickets in Sweden. Under the new act the responsibility for county transport services was to be shared by the county councils and the municipalities. Only Stockholm was an exception; county council had al-

ready taken over the responsibility for public transport. County transport authorities throughout the country were given the right to decide service range and fares, is it themselves or operator who operates, and distribute the losses. The responsibility of the transport authorities covered all public road transport and tramway and underground systems, where those were integrated with other urban transport systems. (Jansson & Wallin 1991, 97-102.)

Next step was towards the deregulation, in 1985. The act concerning the right to operate certain scheduled services. It came to force 01.07.1989; the service licences issued previously ceased and their vehicles were sold to transport authority if the owner of the ceased licence didn't wish to compete for operating rights. Once they had participated in tendering and lost, they couldn't no longer claim redemption. The new regulation gave transport authorities to operate a scheduled road passenger services without a license. Or, as another option, the new act gave enter into a contract with an independent operator holding the requisite operator's licence to operate the services. (Jansson & Wallin 1991, 97-102.)

Responsibilities were shared as follows. Public transport authorities are in charge of all planning, including network, timetables and fares, only actual operation was for tender, for operators. Already in 1990's there were some quality demands; such as the maximum age of bus, and friendliness for disabled persons. Under the new rules transport authorities were also responsible for rail services, locally and regionally. (Jansson & Wallin 1991, 97-102.)

In 1997, public transport and special needs transport were integrated.

The next, and the latest, regulation change in public transport in Sweden was enacted in 2010 and became to force in 2012. The current legislation is based on act 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road, as in Finland. The new act defines commercial companies are free to set up public transport services anywhere in the country. All types of the transport operators, including the commercial players, will have to submit information on the range of services they will offer which will then be fed into the common system for passenger information. The objectives of the latest act are conventional; improve services, increase the amount of passengers and achieve lower prices. (Transportstyrelsen 2014)

There are many changes in the new act. New regional competent authorities were formed with responsibility for developing the public transport system in each region. Strategic decisions on public transport are made by these authorities, which leads to greater insight and better co-ordination with the other forms of social planning. The competent authorities decide on regional transport provision programmes which specify the long-term goals for regional public transport. They also decide on their public service obligations, which mean the transport for which they intend to be re-

sponsible and which, as an undertaking to their citizens, they guarantee to maintain. (Swedish public transport 2012)

2.4 Denmark

The history of competitive tendering in Denmark reaches in the 1990s. However before 2007 it was very coincidental whether the bus traffic was tendered or driven by local companies owned by the municipalities in Denmark. Some of them had a local contact and this small company drove their traffic. One of the main consequences of the Reform in 2007 was that some of these local operators could no longer bid because the amount of traffic in new tender was too big for them to serve. In the greater Copenhagen area it was forced that companies had to cooperate on fares and traffic planning. However there was no great interest in cooperation between operators. Idea was to create a ticket which passenger could use in metro, bus and train. Unfortunately it is still a challenge to find cooperation between different types of transport.

The new organisation and financing of public transport, part of the Danish Municipal Reform, changed a lot in Denmark in the beginning of 2007. By this reform the number of municipalities and regions were reduced and many assignments were switched. 16 counties disappeared and became five regions, and 273 municipalities disappeared and it became 98 municipalities. Idea was to get municipalities which each has at least 20 000 citizens. Municipalities can collect taxes but regions can't; they are subsidized by the government and the municipalities.

Changes to public transport are significant. Railways are mainly a task for the state. Regions had to form the new Public Transport Authorities, PTA. They are formed between municipalities and regions. Municipalities have the majority in the board. One region may include many Public Transport Authorities.

Regions take care of regional buses and local trains; municipalities take care of local buses. Municipalities will be responsible for the incoming light rails in Copenhagen, Aarhus and Odense as well. Regions and municipalities have common responsibility for the administration. Only Sealand and Capital region, where Copenhagen locates, has different model. Since the beginning of 2007, it has been mandatory to establish traffic companies to run the buses. Private operators, as in Sweden, are responsible for long distance coaches.

The tasks of PTA are public service transport, coordination of public transport, plan timetables in cooperation with regions and municipalities, fares, level of service and tendering contracts. State takes care of common fare system in Denmark, limits to increase the fares, control of the funding in the regions and also state has larger role in planning public transport. (The organisation and financing of public transport. 2007) In year 2016 the maximum increase of ticket is 1.3 percent in Denmark.

One detailed change was it became mandatory to offer at least one ticket type passengers could use for the whole trip, i.e. making a shift from train to bus doesn't necessarily require that they should buy a new ticket. This change hasn't succeeded yet. The train company still offers some discounted tickets that can only be used on the train and therefore requires buying a new ticket if passengers want to continue by bus.

3 STATE AUTHORITIES IN PUBLIC TRANSPORT IN FINLAND, SWEDEN AND DENMARK

There are state authorities in each Nordic country. Here is a short summary what kind of authorities they are and which are their main responsibilities regarding public transport.

3.1 Finland

Liikennevirasto, the Finnish Transport Agency, enables smooth, efficient and safe travel and transport. FTA is responsible for Finland's roads, railways and waterways and the overall development of Finland's transport system. Operations are under the jurisdiction of the Ministry of Transport and Communications. (Liikennevirasto 2015a) Personnel workforce of FTA is 650 employees. The annual budget of the FTA is approximately 1.8 billion Euros. Headquarters of the Finnish Transport Agency locates in Helsinki. (Liikennevirasto 2015b)

FTA is heavily involved in the public transport in Finland. In order to enable coherently evaluate the neutrality and effectivity of public funding, the Finnish Transport Agency enables to define the level of service for public transport similarly throughout Finland. The Finnish Transport Agency coordinates the public transport operations of the ELY Centres and national development projects regarding public transport. Other tasks include improving the development of passenger transport services and the public transport information management, preparing discretionary government grants for the regional allocation, making decisions regarding large and medium-size cities about government grants, participating widely in the development of public transport in urban areas, and developing the travel chains smoother by advancing the passenger information at stations and by planning the feeder traffic together with different parties of the public transport. The Finnish Transport Agency is also a shareholder of TVV lippu- ja maksujärjestelmä Oy, which produces and develops combined ticketing and payment system Waltti. (Liikennevirasto 2015a)

Trafi, Finnish Transport Safety Agency, develops the safety of the transport system, promotes environmental friendly transport solutions and is responsible for transport system regulatory body. Trafi has 530 employees. Headquarters of Trafi locates in Helsinki. (Trafi 2015)

Trafi has some influence on public transport as well. Trafi takes care of such as driving licence by monitoring and teaching driving schools, the professional competence of professional drivers, registration plates, vehicle tax and by monitoring technical car inspection stations.

3.2 Sweden

Transportstyrelsen, The Swedish Transport Agency, was established January 1st, 2009. It is a Swedish Government agency under the Ministry of Enterprise, Energy and Communications. The agency has quite similar duties as Trafi has in Finland. The Swedish Transport Agency stipulates rules and monitors how they are followed, grants permission; such as driver's licenses and certificates, registers change of ownership, performs quality and market analysis, and manages congestion and vehicle taxation. The headquarters of Swedish Transport Agency locates in Norrköping and has 1600 employees. (Transportstyrelse 2015)

Trafikverket, The Swedish Transport Administration, is responsible for the long-term planning of the transport system for all types of traffic, as well as for building, operating and maintaining public roads and railways. The Swedish Transport Administration is also responsible for administering the theoretical and driving tests needed to receive a driving licence and an taxi driver badge, as well as the theoretical test for the professional know-how needed for a transport licence and the certificate of professional competence. There are also three other authorities in Sweden in state level; analysis, air controlling and maritime administrations. Headquarters of the Trafikverket locates in Borlänge, about 200 north-west from Stockholm, and it has 6500 employees. (Trafikverket 2015)

3.3 Denmark

Trafik- og byggestyrelsen, the Danish Transport and Construction Agency, is responsible for railway planning and co-ordinating public transport. Tasks are such as regulate fares and monitor that fares for public transport do not exceed the level defined by the fare cap, and administrate the revenue allocation between trains, busses and metro for the fare system covering the Greater Copenhagen Region. The main target is to secure that all investments secure mobility and generate the greatest possible value for society. The Danish Transport and Construction Agency gathers and publishes relevant data and statistics about public transport as well. The headquarters of DTCA locates in Copenhagen and it has approximately 300 employees. DTCA is under the Ministry of Transport and Building. (Danish Transport and Construction Agency 2015)

There is also The Danish Road Directorate in Denmark, but it has only small direct influence on public transport in Denmark, because it constructs, maintains and operates road network in Denmark. (Danish Road Directorate 2015)

4 INTERVIEWEED AUTHORITIES IN FINLAND, SWEDEN AND DENMARK

4.1 Finland

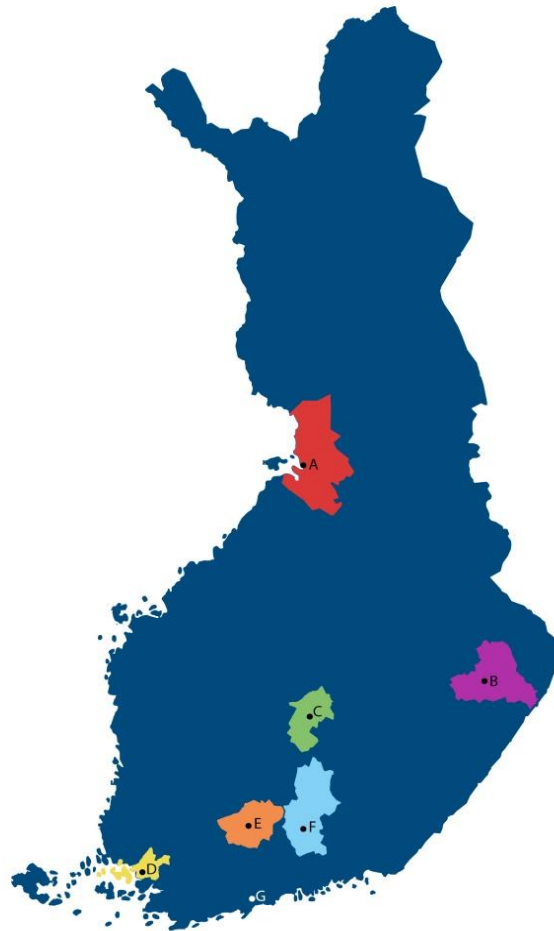


Figure 1 Locations of interviewed authorities in Finland: A. Oulu B. Joensuu C. Jyväskylä D. Turku E. Hämeenlinna F. Lahti

Competent authorities, which were interviewed in Finland as seen in Figure 1, included Oulu (A), Hämeenlinna (E), Lahti (F), Turku (D), Jyväskylä (C) and Joensuu (B). In Joensuu there were two interviewees; a public transport logistics officer, and a social and health transport manager. Oulu region consists of seven municipalities, Hämeenlinna of three, Lahti of eight, Turku of six, Jyväskylä of three and Joensuu of three municipalities as well. The author also interviewed a person from TVV Lippu ja Maksujärjestelmät Oy (G), which develops and maintains Walti, combined ticketing and payment system for competent authorities in Finland. The purpose of the interview is to support other interviews, and give basic

knowledge related to the IT solutions and the technological development in Finland.

In Finland there are typically only a few employees working for the public transport authority in cities. Some authorities have as many as five employees, but smaller towns have usually only one person; often called a public transport logistician. The public transport logistician works in cooperation with other city authorities which is usually very intensive. It is necessary especially in those cities, where there is only a one authoritative working for public transport.

The amount of the operators in interviewed competent authorities varies between one and thirteen in Finland. The amount of the contracts is between four and thirty; there is a great difference between authorities, how many operators and contracts they have. One of the interviewed authorities has only four contracts, with four operators. The amount of the contracts, and also the amount of the operators, depends on how areas and routes have been shared and tendered in the cities and regions.

There are also great differences between public transport budgets between the cities and regions. The interviewed authority which has the biggest public transport in their region has a budget of fifty million euros, and the smallest has a budget of approximately three million euros budget. The biggest and some smaller interviewed authorities as well are not just one city or municipality; they are a whole region which covers many municipalities, even many cities. None of the authorities in Finnish cities or regions make profit by ticket income, which is very common in public transport. Usually 30-40 % of the expenditure is covered by ticketing revenues in Finland.

In Finland most of the objectives for public transport have been defined the EU and in the Public Transport law, as mentioned earlier. All of the interviewees and their authorities aimed at increasing the volume of passengers in public transport. In the city centres public transport may challenge private car traffic, even in the speed of transport. On the other hand remote areas will have only limited routes, which are driven rarely. In recent decades and likely in the coming years countryside will be depopulated in Finland which means that even less public transport is needed in remote areas. Authorities would like to see public transport as an alternative way for moving in urban areas. Some interviewees mentioned, that the usage of the private car would decrease, due to improved public transport in the area. Many interviewees wanted to see light traffic, walking and biking, as an important transport mode in the future as well. Especially walking, but also biking, because both are easy to combine with public transport; interchange to public transport may be done very easily when leaving bike to “park and ride” and step on the bus, train or tram.

4.2 Sweden

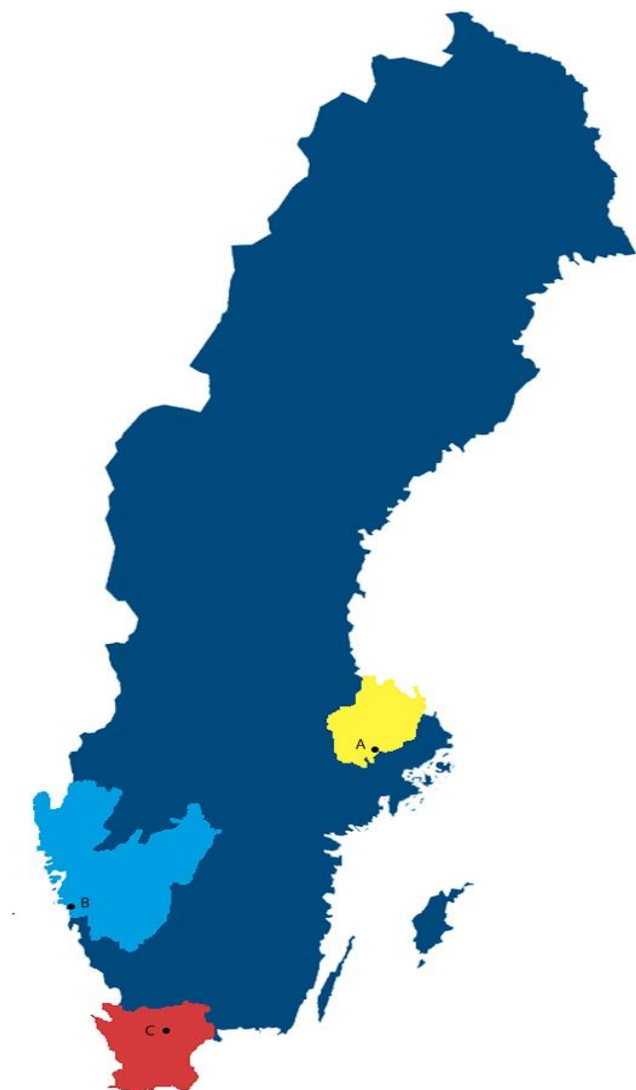


Figure 2 Locations of interviewed authorities in Sweden: A. Uppsala (Upplands Lokaltrafik), B. Göteborg (Västtrafik), C. Hässleholm (Skånetrafiken)

The competent authorities, which were interviewed in Sweden, as illustrated by Figure 2 included Upplands lokaltrafik in Uppsala (A), Skånetrafiken in Hässleholm (C), and Västtrafik in Gothenburg (B). Skånetrafiken and Västtrafik are two of three big public transport regions in Sweden, only Stockholm is bigger. Upplands Lokaltrafik is number four in Sweden regarding the size of the public transport. There are over twenty public transport authorities in Sweden. Each one of them is responsible for public transport in their county.

The big three regions; Stockholm, Skåne and Västra Götaland, dominates public transport in many aspects. These three counties represent almost 60 percent of the supply, 71 percent of passenger kilometres, and 84 percent of the total boardings by the public transport in Sweden. (Lokal och regional kollektivtrafik 2014 2015)

In Sweden competent authorities offer the different mode of the transport between the counties. The most cities and regions offer both bus and train. (Lokal and regional kollektivtrafik 2014. 2015) All three interviewed authorities have both road and track transport. Each one of them has between ten and fifteen employees in planning; it is not uncommon in Sweden, that local planning is done by operators, same as in smaller regions in Finland. Västtrafik has 30 operators, other two has approximately five operators. Västtrafik has approximately 50 contracts with operators, Skånetrafiken has approximately 25 contracts, and Upplands Lokaltrafik has five contracts with operators.

The size of the annual budgets are large, because also the regions and cities inside the regions are highly populated, which means there really is a great need for the public transport. The annual budgets of the two larger regions are more than 500 million euros a year previous year, Upplands Lokaltrafik has approximately 150 million euros a year in year 2014.

The total cost of the public transport in Sweden in 2014 was approximately EUR 4.44 billion, while revenues were EUR 2.16 billion. Revenue funding thus accounted for 48 percent of the total cost for public transport; the remaining part came from the variety of subsidies. During 2014, county funding amounted to 45 percent of the total cost of the public transport, municipal funding amounted to six percent, and one percent of the subsidies came from state funding. (Lokal and regional kollektivtrafik 2014. 2015) 1.35 billion journeys per year are made on regional and local public transport. The market share of the public transport on national level is approximately 25 per cent. More than half of the journeys are made by buses. (Swedish public transport 2012)

Public transport authorities have ambitious targets for public transport also in Sweden. They really want to increase and even double their amount of passengers during the next twenty years. Other ambitious target is 100 % renewable fuel in all busses in one interviewed region. There are also some softer targets such as taking care of the environment and nature, more reliable society and public transport is important part when trying to reach the level of good life. There are thoughts behind the amount of passengers; why there is a need for more passengers and how is it possible to reach the targets. In the interviews were also mentioned to achieve important social goals, for example the possibilities to commute to work and to places of education by good public transport.

4.3 Denmark

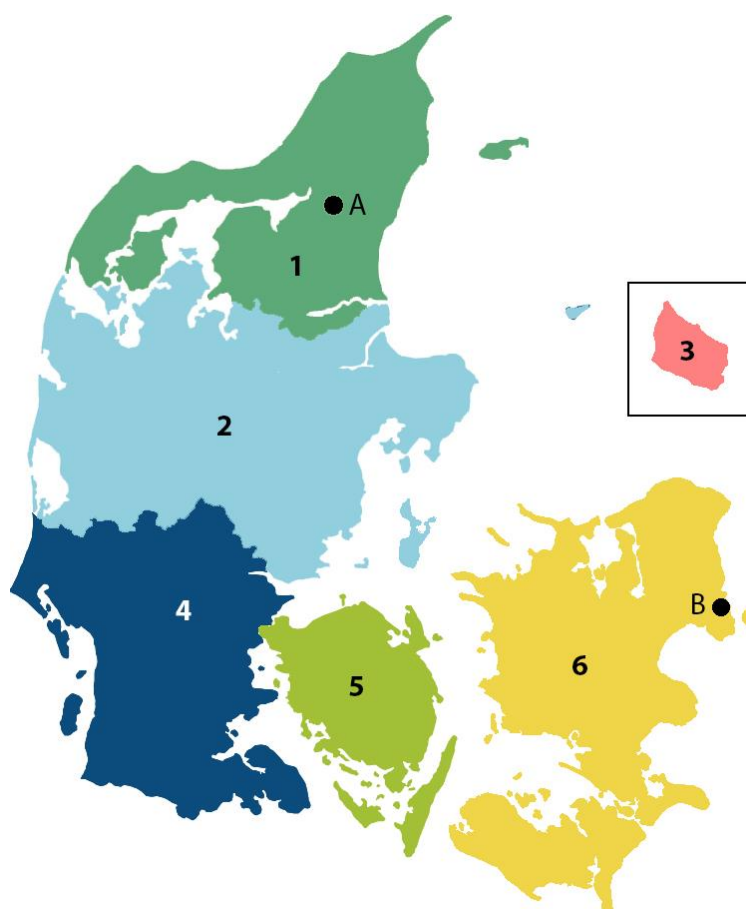


Figure 3 The locations of the interviewed authorities in Denmark: 1. Nordjyllands Trafikkselskab 2. Midtrafik 3. BAT 4. Sydtrafik 5. Fynbus 6. Movia, the interviewed authorities in Denmark: A. Aalborg (TITSAM) B. Copenhagen (Movia)

Public transport authorities, which were interviewed in Denmark as seen in Figure 3 included Movia (B), from Copenhagen, and TITSAM (A), from Aalborg. TITSAM –person works near with all other public transport authorities in Denmark, except Movia. Movia is responsible for authority planning in the islands of Zealand, Lolland, Møn and Bogø. Copenhagen, the capital of Denmark, locates in Zealand, which is the largest and the most populated island in Denmark.

As in Sweden, there are many employees working for public transport in Denmark. TITSAM covers totally five areas, as shown in figure 3 (areas 1,2,3,4 and 5). Each five areas have many employees working for public transport but less than Movia (6). As mentioned earlier, Movia is responsible for the area which covers almost 2.5 million citizens, nearly half of the whole country.

Each area in Denmark has at least a couple of operators, and multiple contracts with operators. It means that areas have been divided, which adds the amount of competitive tendering. This increases competition and improves knowledge regarding competitive tendering on both parts. Annual budgets, due to large areas, are large. The region of Movia (6) has the

largest budget. In Denmark some authorities have responsibility of public transport for both track and road.

Competitive authorities have many objectives in public transport in Denmark. All the interviewed authorities want to increase the amount of passengers, but there are also some other targets. In Denmark there is interest in more environmentally friendly vehicles, new technology innovations, and adding and combining the different modes of transport; such as car-sharing.

5 COMPETITIVE TENDERING

Competitive tendering is a globally common method finding a suitable contractor. In public transport at a local level in the Nordic countries it is a very common method for choosing the operator.

5.1 Finland

Competitive tendering aims at competition. There is a great need for more than one bidder. Many competent authorities in Finland think that it is very important that the atmosphere is as in a real competition, even if there is only one bidder.

Other important criteria for successful competitive tendering, according to the interviews in Finland, are to keep prices low, bidders have to create understandable tenders, and the risks and responsibilities have to be extremely clear on both sides of the table. Quality was mentioned in the interviews in Finland, but because there are not so many bidders, usually quality is elastic, and price is almost the only indicator, to get at least one bidder.

In many municipalities or regions in Finland there have not been many competitive tendering processes up to this point and that is why they have not so much experience related to challenges and development there. However, usually the major challenges come at the beginning, and that is why the interviewees had a possibility to name at least a few of them. First competitive tendering is usually a quite extensive process, and many authorities mentioned, that it was really hard to complete it. They did not want to tender all the routes at the same time in the future. Challenges were usually in reporting and in how to define. Because there is no output data, it is very difficult to draw comparisons to previous times and set targets. This creates problems to traffic planning, because nobody knows, how many passengers there are on a route, and how many buses are needed to transport them. Some authorities thought that they needed more experience; after the first competitive tendering process they felt they were still beginners.

Naturally development focuses on challenges. Having enough bidders, clear tendering contracts, more inexpensive technical innovations, different sizes of contracts are just a few of the challenges, which the interviewees named. Low-cost technical innovations were hoped for, because those would be needed for routes that do not have a lot of passengers on board and ticketing revenues are at a low level, to cover the expenses. In many remote regions it is hard to get as many as two bidders, and that makes competition really difficult.

In Finland all the interviewees mentioned, that there are minimal quality requirements, but that the price determines the outcome. Reporting and passenger counting have not started in many cities in Finland, and this means that it is difficult to measure quality. Some cities conduct passenger surveys once or twice a year and they have an ability to pay bonuses according to the number of passengers. Operators, who take part in competitive tendering, do not have new busses or a great deal of money, so they cannot offer good quality, at least at the beginning. Since authorities want to improve quality but still keep tendering at a low-cost; it is very hard to find a good solution. If quality demands are too high and strained, operators do not dare to bid. And if the price is low, it is not possible to acquire new buses and invest into development.

5.2 Sweden

The three interviewed competitive authorities thought that it was easy to get bidders. If there were some difficulties, timing would help; you should not tender at the same time as your neighbour region is tendering. This is especially important for smaller regions, which are located next to bigger regions who offer bigger contracts.

It was more common to talk about partnership than co-operation in Sweden. It is always a little difficult to create a partnership because the primary target of the operator is to make business anyway.

Because quality was almost as important as price in Sweden, the major difficulties related to competitive tendering were born, when a bid was too low. When aiming at a 10-year contract, there is no reason to choose an operator, which does not earn enough. An operator, which offers less money to win the contract, will not be willing to improve and develop partnership and traffic all the time, and this will bring difficulties during the contract period as well. Some bidders aimed only at getting the contract, and did not think the consequences. Operator has to get enough income, so that it could live, improve and develop. In long-term thinking, the lowest price is not always the best option. Competitive authorities would like to see that operators really want to serve, earn and succeed; to bring in results. You cannot do this without a sufficient income.

Theoretically there is a free market in Sweden; anybody can start a public transport. In practise the situation is different. With long distance buses

there is a free market in Sweden. However, in public transport in cities and regions there is no free market. Regional public transport aims at getting as much passengers as possible. Free market is impossible because operators would drive only the most popular routes, precisely what has happened in long-distance transport. Companies will not serve all the customers or larger areas, which however are in the interests of the public transport authorities.

Today, depending on the region of public transport is paid by taxes btw. 50 and 60 % in Sweden. A free market would be only possible to organize without public funding, but because public transport has to be comprehensive, the only option is to support public transport through public funding.

Quality determines about 30 percent in competitive tendering in Sweden, the rest of it, 70 percent, is accounted for by price. Usually with the lowest price wins. However it has happened, that the second or third lowest wins, if the quality is much higher than with the lowest price.

5.3 Denmark

The main criteria for successful competitive tendering in Denmark are having enough bidders and clear contracts. Hopes for the future are that demands are not only technical but also functional. It is easy to focus only on technical demands, because it is easier to talk about this but then many other important aspects are forgotten.

Price and quality are quite at the same level in Denmark as in Sweden; price accounts for about 70 percent and quality about 30 percent in contracts. In Denmark also authorities talk about and aim at partnerships with operators.

Interviewed competent authorities felt that it was quite easy to get bidders for competitive tendering. In larger contracts it is quite common to get as many as five or six bidders, smaller contracts the typical number of bidders is between two and three. However, in Europe there are major players and small local players, and both types of operators are needed. Large operators take care of major contracts, but are not usually interested in playing with minor contracts which are better for local smaller operators. You have to sell service well and to aim at developing the operator business as well. A weak or uninterested operator is not a good solution; not for the operator nor for the public transport authorities.

At the interviews in Denmark it was mentioned that it is very important for the operators to tender every year to earn the knowledge of the authorities and also to give enough possibilities for both major and local operators to get contracts. Without knowledge and a high enough number of bidders, there is no competition, improved quality or competitive prices.

6 CONTRACTING

6.1 Negotiations after competitive tendering

6.1.1 Finland

After a competitive tendering process when suitable operators for traffic have been chosen, there are not so many negotiations between the authorities and the operators. The procurement Act restricts negotiations after the maiden contract in Finland. Only minor issues can be adjusted and negotiated; such as more buses may be needed or minor changes made on timetables. Most of the competitive authorities think there are no problems during the time period after tendering and before the traffic starts. Usually the cooperation is already at a good level before the traffic starts: it is easy to talk with operators. Authorities think contracting is an ongoing process; negotiations are mostly held before the operator is chosen, but the developing process is continuous. Contacts to operators have to be close enough during the whole period of pre-contracting, and of course during the future contracting period.

6.1.2 Sweden

Sweden does not differ from Finland regarding contracting. In Sweden there are some minor issues, which may be changed after the competitive tendering process with operators. In Sweden the procurement Act restricts negotiations after tendering. Swedish competitive authorities want the contract to be almost completed upon tendering but some possibilities for changes should be available. These possibilities are similar to those in Finland.

6.1.3 Denmark

Denmark does not differ much from Finland and Sweden either regarding contracting, due to a quite similar procurement act. In Denmark only minor changes are acceptable and in use.

In the interviews in Denmark it was mentioned that it is extremely important to give enough time to operators after competitive tendering for preparing the incoming traffic and service. Usually from eight to ten months is a long enough time for operators. Operators may need to order new buses and train new drivers. In recent years there have been problems with intelligent traffic systems such as ticketing systems and real time information. Everything has to work since the first day of operation. You need enough time to install and test the hardware and software. Technical difficulties may rise to a very big role at the beginning of the service, if all the problems have not been solved. All the problems, which are not solved, reflect to service and passenger satisfaction surveys.

6.2 Incentives and sanctions, as well as demands for extension options

6.2.1 Finland

There are no incentives in use in all the regions in Finland. A few cities have bonuses related to the number of passengers. A few interviewed authorities think it is difficult to show whether the bonuses are earned due to a better performance by the operator. For example if new apartments have been built and new citizens move in, no more passengers will come because of a better performance of the operator, but because of more citizens live in the region. Of course it is possible to advertise and affect new citizens positively; it might be a merit for the operator. Some cities in Finland conduct customer satisfaction surveys, and more and more are starting these surveys. When sufficient information is collected, it is easier to set targets and share bonuses. With most of the public transport authorities everything concerns incentives and bonuses at the beginning; only sanctions are in use. The most important sanctions are non-driven lines, delayed lines and equipment demands. In some cities, where bonuses are in use in Finland, sanctions accumulate bonuses. An interviewed authority, which is starting customer satisfaction surveys, says a whole year is needed before it is possible to start paying bonuses; enough information is needed for accounting passengers and reporting.

The usual length of a contract period is between four and seven years in Finland. If traffic and co-operation work well, there is no need to deny any extension options. Because efficiency and price are always thought about, before an extension option is signed, that is a good time to talk about efficiency. Usually extension options are from one to three years in Finland. The procurement act defines the length of the contracts and extension periods.

6.2.2 Sweden

In Sweden the interviewed authorities use incentives, bonuses and sanctions. From 20 to 30 percent of the contract value is paid by incentives. This means that if operators want to succeed, they need to earn incentives. A typical incentive, is the number of passengers. For example operators earn X amount of crowns per each passenger. Of their own each interviewed competitive authority has also some incentives, such as sales incentives; where operators need to sell tickets to all customers. In Sweden, as mentioned earlier, there are three major public transport authorities, one medium-sized, and the rest much smaller. That is why, especially the three biggest, but also Uppsala Lokaltrafik, are more developed than the others, and also they are using more incentives and bonuses than the others. An incentive means positive things both for authorities and operators; public transport will get more passengers and operators will earn more money through it. However, sanctions are negative for operators; they have to pay sanctions. But sanctions are also negative for authorities. If operators have

low customer satisfaction, passengers might not want to use public transport as much and authorities suffer due to lower income. Although authorities earn money by giving sanctions to operators, it is always more negative than positive also for authorities.

Sanctions are also the part of the contract. Sanctions are consequences from mistakes and poor customer service. Sanctions are very important especially in the end of the contract, when the operator is not that interested to develop towards and already aims at new competitive tendering and future developments. Typical categories of sanctions in Sweden include: reporting, non-driven lines and the functionality of the ticketing devices. Many of the sanctions are opposite to incentives; do something well and you will earn incentives, do it poorly and you will get sanctions. Most of the public transport authorities have never ended a contract before the end of the contract period. This does not mean that it is impossible, they just have not needed, or dared it, yet. If the competitive authority ends the contract earlier, when necessary, it is not only a negative aspect. This would signal to incoming contracts and operators that it is also possible to end the contract early.

In Sweden contract periods are usually eight years, with two years of extension. Nowadays there are also contracts which last ten years and where there are no extensions in the contract.

6.2.3 Denmark

In Denmark there are long traditions with customer satisfaction surveys, which make bonuses and sanctions more easily shared. For example the operator may set their target grade as to the survey before the start of the service. After this authorities and operators accept the terms. Then year goes by and it is the time for a customer satisfaction survey. If the grade is better than the target, the operator will get bonuses. If the grade is worse than the target was, the operator will get sanctions. This approach is very fair. It is quite important to know how surveys are made and also former survey grades regarding performed traffic and service should be known.

Sanction types are quite similar to those in Sweden and Finland. As mentioned earlier, quality is at the same level in Danish and Swedish contracts.

The duration of a contract in public transport in Denmark is typically six years. Extension options are typically two years, and the contract can be renewed as many as three times before new competitive tendering has to be set up. The total length of a contract may be as long as 12 years.

7 CO-OPERATION OF OPERATORS AND PUBLIC TRANSPORT AUTHORITIES

7.1.1 Finland

In Finland local public authorities meet operators, if not monthly, at least four times a year during operator meetings. Because of technological development, it is very easy to reach operators and also other authorities online. At times when there are lots of new investments or technology coming to the region, authorities meet operators more often. Some interviewed authorities felt, that it is hard to meet often enough, because the workforce is quite low, and workload heavy, on the authority part. Authorities hoped that meetings regarding the development of cooperation could be arranged more often. There, together with operators, authorities could think and draw new ideas for the future.

Because of the limited workforce in some public transport organizations, all authorities do not have a person in charge for each operator. Usually knowledge areas have been divided, and each authority has its own knowledge area. Some public transport authorities have divided person in charge by routes.

Technology has become more and more important in public transport in recent years. There are many wishes and hopes for the development of technology. The main issue is how to collect, combine, report and understand data. There is a great need for real-time tracking, data collection and reporting in Finland. Information is needed immediately. Then it is easy to react fast and fix the problems fast as well. Other wishes were to find low-cost fare collection devices for remote routes, where there are not so many passengers. Usually one fare collection device costs a lot. Hopes to develop better ticket and payment systems were mentioned as well.

Risks are in a significant role in public transport in Finland. How to divide risks, who takes care of what, and does the risk taker have an ability to influence the risk? In Finland many regions are using gross-cost contracts, one region had service concession. Only one region has both service concession and gross-cost contracts, but also market-based contract. Some authority which has gross-cost contract in use they think it is not good to mix it with market-based contract, otherwise entirety suffers. It is not fair for gross-cost contract operator that part of incomes goes to market-based contract operator although public transport authorities have the ticket revenue risk. Bonuses and incentives may be lost in the future due to unfair market situation.

As mentioned earlier, the sharing of risks is a major issue in Finland. Regions and cities have different contract models and they follow each other in how things are going in each competent area; whether they should also change to a better contract type. The interviewed authorities mentioned

that it was important to know which risks had been given to the operator side, but it is also very important to recognize one's own risks. The opposite party should take care of risks which are not one's own, because problems on the opposite side will have influence on one's own part, sooner or later. If the ticketing revenue risk is on the operator's part and public transport authorities want to change the ticket types, there will be a problem which needs cooperation and negotiations. Authorities want to take incentives, bonuses and sanctions to in better use, but first they need reporting; what is happening on the field and how much. Then there are incentives, bonuses and sanctions; and this will in turn improve the service and risks are easier in sight, both for authorities and operators.

In many regions in Finland operators take part in planning the routes. At least authorities ask for advice when something has to be changed in their routes. Usually operators want to give advice on initiatives as well. That is how they will also better know what is happening and what is changing, and may influence the decisions more efficiently.

Cooperation between public transport authorities is increasing in Finland. One reason is Walthi, the common ticketing and payment system in most of the larger cities and regions in Finland, excluding the capital region, in the near future. Authorities have also close contacts with each other; they have a common e-mail community, where they can ask and share problematic questions and topics. If someone has a problem, some other city or region might have solved the problem, and they can help solve the problem with experience. Different competent authorities do not compete directly with each other, but they want to improve cooperation which would help both. There are also a larger meeting in Helsinki a few times a year, where all the public transport authorities gather and share their opinions and thoughts. Paikallisliikenneliitto, which represents competent authorities, is an important part of cooperation. Their main tasks include influencing on government and local authorities regarding public transport issues and deepening the skills and the public transport knowledge. They also organize training sessions for competent authorities and release planning guidelines and publications. (Paikallisliikenneliitto 2015)

The interviewed public transport authorities were mainly satisfied with the co-operation with local politicians. Sometimes it is hard for politicians to understand, that it is not acceptable to set new discount groups, such as students and the elderly. This brings more passengers to public transport, but ticketing incomes decrease and it is necessary to reduce the traffic or raise the prices of the tickets again. Another challenge is that there are not many authorities in public transport and the workload gets heavier. This means some minor issues are not possible to be handled, or even worse if there is no time for major issues. If politicians do not see the reality, it is hard to understand it either. Sometimes politicians plan and decide on new topics behind closed doors, and then suddenly just announce the decision. It is difficult to change this or to have an influence on a decision, after it has been done, even if the public transport authorities should take better

account of it. However, in general local policy-making listens to advices the public transport authorities before they make decision on matters that influence public transport.

Close co-operation between operators is quite rare in Finland. When new applications and developments exist, they try to solve the problems together. However, it is important to remember, that they are competitors who do not want to help each other too much.

Co-operation in city planning, such as the planning of new residential areas, is generally very close. Some cities do not even plan incoming populated areas, where public transport cannot work effectively. Other authorities, such as traffic engineers who control the zoning, need to have a basic knowledge related to public transport.

Feedback from services organized by cities and regions, such as health and social services, would be greatly appreciated. For example hospitals and medical centres need public transport, both for their customers and employees. Employees start work every day and night at almost the same time, but customers come and go. Timetables have to offer routes both for visitors, patients and employees. Different customer types, such as the elderly and children, have to be taken into consideration.

Also schools give feedback regarding timetables and vehicle types. School days in all schools finish at almost the same time and big buses cannot be in front of every school at the same time; mutual flexibility is needed, and schools also have accepted it, by changing the starting and ending times of classes.

7.1.2 Sweden

In Sweden co-operation between authorities and operators is rather called partnership than just cooperation. Authorities meet, send e-mails and talk with operators very often. It may be a management meeting, or a specified meeting such as business planning, marketing or development of traffic. Some authorities have included the number of meetings in contracts; how many times a year at least they need to meet with operators.

Cooperation, or partnership, in Sweden is at such a good level that authorities do not see that there would be any major development needs concerning meetings.

In Sweden there are wishes for better reporting and monitoring systems; some authorities are using many different systems at the same time. Some kind of a combined system would be better. Regarding monitoring, tickets sales on mobile phones are in a greater role in the future. Following passenger behaviour; where they step in, how long they stay on the buses, where they step out, will be easier when the technology is enough developed. It is expensive to get the results of monitoring, but the results are al-

so quite valuable and important; that way it is easy to improve the service and get more passengers and faster routes.

Risks play a major role also in Sweden. There are fears that the allocation of risk does not correspond with the allocation of responsibility. Inversely, the party which controls the risk has to get the responsibility as well.

In Sweden there are all kinds of contracts in use: service concession, gross-cost and market-based contract. However usually there is only one contract type per authority. Usually operators take part in the planning of routes, authorities however make the decisions.

There is a lot of cooperation between the three biggest authorities in Sweden, but also smaller regional public transport authorities take part in this. Regular larger meetings between public transport authorities are arranged few a times a year. Authorities, together with operators, try to develop and use the kind of contract types and forms. It will help both parties of the contract to understand and develop negotiating. Operators also have some nationwide cooperation, but just as in Finland, they are rivals and do not want to help each other too much.

Local politicians make wider guideline decisions regarding public transport in regions in Sweden. Cooperation with politicians works well according the interviewees.

In Sweden regions have many objectives such as sustainable development, and public transport is usually associated closely with this. However, there are differences between regions on how public transport has been taken into account. In some regions it is not possible to build new residential areas without taking into consideration public transport and the access of it into the area. It is easier to plan public transport together with the planning of new area than to do it afterwards.

7.1.3 Denmark

As in Finland and Sweden, also in Denmark there is quite a dense meeting interval. There are general meetings, but also specified meetings at different levels, such as developmental, operational and technological meetings. As in Sweden, also in Denmark there is a great interest in partnership-thinking; operators and authorities understand, aim and want to improve both operators' and authorities' interests. Always behind the partnership there is money, and it bothers the partnership more or less. Operators want to make money and do business and that should be combined with partnership thinking; this is not easy.

The latest technologies are already in use in Denmark. In the future there is interest in getting more information, both on the use of technologies, but also on future technologies. It would be very important that new technolo-

gies would give benefits to all the three parties; authorities, operators but especially passengers.

Risk thinking is very similar to that in Sweden and Finland. The party which can better influence risk has to take the responsibility.

Authorities are usually responsible for planning the routes in Denmark. It is wise to ask information regarding time scheduling on routes from the operators and to get also for other hints and wishes to improve the routes and quality. In some regions authorities set the volume of buses and routes; operators make the schedules and routes.

Knowledge sharing is very important with other authorities from other regions. Going together to the same direction is easier. Close cooperation between authorities will help everybody, both authorities and operators.

Politicians make decisions on a large scale in Denmark. Traditionally cooperation has been very close and efficient. Elections during years have not changed thoughts and wishes too much and the same targets have remained for many years, which will help planning today and in the future.

There are thoughts that public transport should be combined better with city planning, new residential areas should be taken into account better with public transport already at the construction stage. As already mentioned earlier, afterwards it is more expensive and difficult to organize public transport to a new residential area. Denmark is worldwide known for cycling; this accounts for 24 percent of all commuter trips. (Cycling embassy of Denmark. 2015) The Danish have shown their skills and intents in light traffic, so it has to be possible in public transport as well.

7.2 Supporting interviews

7.2.1 Waltti in Finland

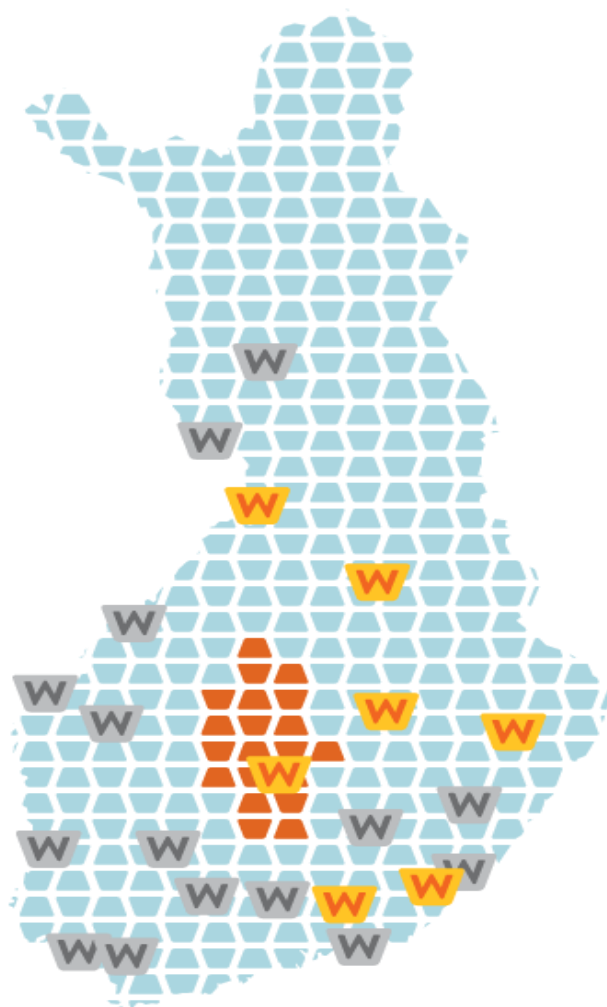


Figure 4 The distribution of Waltti; yellow areas and cities are using Waltti, greys are the becoming users of Waltti in years 2016-2018.

Waltti is a ticket- and payment system. For passengers Waltti is known as a zone-based travel card, created by Tieto. TVV Lippu- ja maksujärjestelmä Oy, which develops and maintains Waltti, is the IT-service and procurement company of competent authorities and the state. The activities of Waltti cover more than 20 main urban areas and 9 ELY centers in future. Between year 2016 and 2018 are coming multiple new cities and ELY centers. Market based operators in long distance traffic might be possible to take part in later in the future. The company's objective is to maintain and develop the common ticketing and payment system in cooperation with system suppliers and the users of the system by the competent authorities. Competitive authorities don't need to tender ticket- and payment system, they can choose Waltti. TVV Lippu- ja maksujärjestelmä Oy offers the system part of the ticketing and payment system, operators or competitive authorities own the ticket- and payment devices. (TVV Lippu- ja maksujärjestelmä Oy 2015a)

The tasks of TVV Lippu- ja maksujärjestelmä Oy are; the administration and the development of the ticketing and payment system, the management of the ticket and discount register, the organisation of the centralised technical support to local customer services, the nationwide organisation and the coordination of the sales point network, the submission of the clearing invoices to authorities and clearing supervision, the distribution of the travel cards to competent authorities, and the joint procurement of the systems and equipment for the customer service and sales point network. (TVV Lippu- ja maksujärjestelmä Oy, 2015a)

Public transport competent authorities tasks are in Waltti co-operation: The competitive tendering and the monitoring of the traffic, the traffic planning and the determination of the zone boundaries, the determination of the product assortment within the scope of the alternatives in the ticket register, the determination of the travel fares, the public transport customer services and the distribution of the travel cards to end users, the organisation of the possible additional sales points, the regular payment of the clearing net-posted invoices, and the sharing of the timetable information. (TVV Lippu- ja maksujärjestelmä Oy 2015a)

The purpose of Waltti is to offer only one zone-based travel card, which covers almost whole country. The biggest and the most important excluding area is the capital region of Finland. Now Waltti is in use in six different cities; Joensuu, Jyväskylä, Kajaani, Kouvola, Kuopio and Oulu, and in one ELY center; Keski-Suomi. Smaller area in the beginning helps to improve the system and find teething troubles before the next group of the participants take part in. (TVV Lippu- ja maksujärjestelmä Oy 2015a) Objective is also to increase the annual public transport trips to 200 million by the year 2022 and to provide in the area of cities and ELY – centers to about 4 million customers a unified service package. (TVV Lippu- ja maksujärjestelmä Oy 2015b)

There are still many challenges related to Waltti. Each competitive authority has different cultural ways to work; how to combine different products and thoughts to a same way to work. It is also difficult to combine cities and ELY areas; how to share ticket incomes and share use, when traveling from ELY area to city area and back. This is why it has been very important that both Jyväskylä and Keski-Suomi, Jyväskylä locates inside Keski-Suomi, have been involved since the beginning. As mentioned earlier, it is easier to solve teething troubles in two areas than in all areas at the same time. Different reporting needs is a challenge; now there are almost as many reporting systems as there are cities and ELY areas. Interfaces have to work between systems. Greater marketing is needed in future; Waltti is not known too well yet. Of course next two years will help marketing when new cities and ELY centers are taking part, and more citizens will own the Waltti-card as well. Now there is about half a million Waltti-card users in Finland.

7.2.2 TITSAM in Denmark

TITSAM is an IT association for the Public Transport Authorities. The name comes from Company's Danish name Trafikselskabernes IT samarbejde. TITSAM is a co-operation of Nordjyllands Trafikselskab, Midtrafik, Sydtrafik, Fynbus and BAD – bus på Bornholm – authorities. Headquarters locates in Aalborg. TITSAM is responsible for development and maintenance of existing IT-systems. Inside TITSAM area lives approximately three million Danish citizens.

Traditionally the transport authorities in Denmark have been working together on developing common solutions and sharing experiences. Not only concerning IT but also general issues, e.g. standard contracts with the operators. TITSAM is also a reason of improving the cooperation.

8 CONCLUSIONS

Many Finnish cities and regions are at the beginning in greater development of public transport and the introduction of ITS. In most regions in Finland competitive tendering started just a year ago. Quality is not in a major role yet. In fact in many Finnish cities and regions there are no high quality demands. If there is no quality, there are not as many passengers. If there are no passengers, there are no ticketing revenues. Without ticketing revenues, you cannot develop quality and traffic.

Sweden is a developed country regarding ITS in public transport. Quality is almost as important as price in competitive tendering, authorities want to get new buses and equipment into traffic and the economy of Sweden is in a better condition than Finland. This does not mean that the Swedish authorities should stop the development.

Denmark is the smallest country, where interviews were arranged. 5,6 million citizens live in a small area, bridges combine the islands to the mainland. The usage of cars in Finland and Sweden is almost 85 percent of the passenger transport, in Denmark approximately 80 percent. This means that public transport is in greater use in Denmark than in the other two interviewed countries. Buses are in the same level of use as in Finland, about 10 percent, and trains are at same level of use as in Sweden, about 10 percent. (European Environment Agency, 2015) As mentioned, Denmark is a smaller country regarding the size, about ten percent of Sweden is and about thirteen percent of Finland's land area; it is easier to arrange public transport when there are not so many remote areas in the country. Denmark is also a very flat country, this also helps to build new tracks and roads. Denmark and Sweden are more near to Central Europe than Finland. For bigger operators, it is easier to come to Sweden, because it has larger cities and more citizens than Finland. Denmark is more attractive due to being a more densely populated country. For example in 2011 there was only one major in the public transport operator market in Finland, but two in Denmark and three in Sweden. (ITS in public transport 2011, 19.)

Denmark has made a major Reform in 2007 and is going more or less at the same level as Sweden in public transport.

It is also good to remember that there are also differences inside each country. Cities and municipalities are of different sizes, they have different contracts, and different ways of working and future thoughts, as it is possible to understand from the results. Sometimes there are more similarities between two cities in different countries than two cities in the same country. But the ITS branch does not care about borders, the same as the EU. In the future there might be some border crossing co-operations, or partnerships, or a Europe-wide ticket system, such as Interrail on tracks nowadays.

Competitive tendering has started in the most cities and regions in Finland generally in the 2010s, but in the most regions of Sweden and Denmark already in the 1990s. Twenty years of experience has to show, and it does.

Regarding contracting issues in the three countries, there are no major differences. It seems that the Nordic countries are on the same line, maybe in a different position. The Swedish and Danish regions are a bit ahead, the Finnish regions behind. Because they follow each other, they know what is happening in public transport in the Nordic countries.

There are differences between Finland, Sweden and Denmark regarding co-operation with operators. In Sweden and Denmark there is a greater interest in partnership than in Finland but also Finnish authorities are known to be conscious regarding partnership advantages and drawbacks; they follow closely what is going on in Sweden and Denmark. It feels like there are more meetings in Sweden and Denmark; although it is easier to arrange and take part in more meetings if there are more employees in the public transport authorities. Otherwise the objectives are pretty much same and risks are known in all three countries, only timing is different. Mobile phones and devices may play a big role in public transport in the future; if each passenger uses mobile tickets, it might be possible to see, by the location of their mobile devices, where they step in and out. Of course authorities would need a permit from passengers to use that kind of technology.

The author has made a scale of own from one to six: The author would say that Finland is at level two; quality demands have come to mind but no special development has taken place, yet. At least level 1 has been reached in Finland; competitive tendering is in use. At level three quality is really increasing. Sweden and Denmark are at level four: quality is in use, quality demands accounts for 30 percent in contracts, and thoughts of increasing exist. Level five would be quality accounting for 50 percent and price for 50 percent. At level five, operators really need to focus on how traffic is settled and realise that car traffic has to be challenged in urban areas. At level five a smooth and cooperative partnership is a valuable and important feature. Level six is in the future, but what will it be like? Quality

cannot be 100 percent in contracts, “straight” money is always important in contracts.

Authorities in Finland need new technological developments, especially for passenger accounting, monitoring and reporting, so that it is possible to share incentives, bonuses and sanctions, also by customer satisfaction surveys. If this is done well and together with the operators, cooperation will improve and perhaps there will be an interest in entering a partnership level, and deeper cooperation. Authorities are professionals, but they need help at the beginning regarding ITS; from each other and from the private sector.

The economic situation in a country is also important. It might have been easier to have improved public transport in Finland in the 2000s, due to the economic situation; unemployment was not so bad and the state had also money to invest in municipalities. However, during economic downturn, citizens want to save money and public transport offers a more inexpensive way to transport people from one place to another than cars, especially in bigger cities. This means that there is no time for taking things calmly.

Perhaps in the near future thinking of private cars and public transport is changing. Private cars pollute more than public transport. Quality might not ever reach the level of private cars for each passenger, but the cost will be lower now and in the future. Reaching from point to point will take more time by bus than by car in the future, unless public transport will not get more advantages. In fact, same kind of “fight”, quality vs. price is also on the passengers minds just like in competitive tendering. If the quality is poor, there is no interest in public transport, although the price will be lower than car expenses. Authorities need to find some kind of balance for passengers between price and quality. Marketing has to be important in the future; without knowledge concerning improved public transport there is no interest to change from private car traffic to public transport.

Methods are quite similar both in Finland and in Sweden and Denmark. If, and when, the economic downturn is defeated, Finland may well follow the ways of Sweden and Denmark regarding the development of public transport. It is very important that there is a development during economic downturn and recession, there is no reason to prolong important decisions, because they prolongation will only harm the development.

SOURCES

Anttila, T. 1996. Paikallisliikenteen sääntelyn purkaminen ja kilpailuttaminen. Helsinki: Suomen Paikallisliikenneliitto ry.

Cities on the move, urban transport strategy review. 2002. Report by World bank. Washington

Cycling Embassy of Finland. 2015. Accessed 30.12.2015
<http://www.cycling-embassy.dk/facts-about-cycling-in-denmark/statistics/>

Danish Road Directorate. 2015. Accessed 1.12.2015
<http://www.vejdirektoratet.dk/EN/Pages/default.aspx>

Danish Transport and Construction Agency. 2015. Accessed 30.11.2015
<http://www.trafikstyrelsen.dk/EN/Public-procurement.aspx>

EUR-Lex. 2015. Accessed 07.11.2015
<http://eur-lex.europa.eu/legal-content/FI/TXT/?uri=URISERV:124488>

European Environment Agency. 2015. Accessed 30.12.2015
<http://www.eea.europa.eu/soer-2015/countries-comparison/transport#tab-based-on-indicators>

Haatainen, J. 2003. Bussiliikenteen kilpailuttamisen henkilöstövaikutukset. Tampere: Tampereen Yliopistopaino

INIT AG. 2015. Accessed 05.11.2015
<http://www.initag.de/en/company/company.php?thisID=319>

INIT GmbH. 2015. Accessed 05.11.2015
<http://www.initag.de/en/company/initgmbh.php?thisID=322>

Initplan GmbH 2015. Accessed 05.11.2015
<http://www.initag.de/en/company/initplan.php?thisID=384>

ITS in Public Transport. 2011. Report by Berg's Insight. Gothenburg

Kataja, A. 2015. Competitive tenderings in public transport during years 2013–2014. HAMK University of Applied Sciences. Traffic and Transport Management Programme. Bachelor's thesis.

K. Jansson and B. Wallin 1991. Deregulation of Public Transport in Sweden. 97-102.

Liikennevirasto. 2015a Accessed 30.11.2015
http://www.liikennevirasto.fi/web/en/transport-system/public-transport#.VlyA_zZdHoo

Liikennevirasto. 2015b. Accessed 23.11.2015

<http://www.liikennevirasto.fi/web/en/operating-philosophy#.VIW4fDZdFTy>

Lokal och regional kollektivtrafik 2014. 2015. Accessed 10.12.2015

<http://trafa.se/globalassets/statistik/kollektivtrafik/lokal-och-regional-kollektivtrafik-2014.pdf>

Paikallisliikenneliitto. 2015. Accessed 16.2.2016

<http://www.paikallisliikenneliitto.fi/index.php?area=1&id=40>

Public Transport Act. 869/2009. 13.11.2009

Ringsholt Jensen L. 2016. Special consultant. Danish Transport and Construction Agency. By e-mail

Qualitative research. 2015. Accessed 25.10.2015

https://en.wikipedia.org/wiki/Qualitative_research

Swedish public transport 2015. Accessed 30.11.2015

<http://www.samtrafiken.se/wp-content/uploads/2012/10/its6.pdf>

The organisation and financing of public transport. 2007. Accessed 29.12.2015

http://www.ccre.org/docs/transportseminar_denmark.PPT

Tinnilä, M. & Kallio, J. 2012a. Pääkaupunkiseudun bussimarkkinoiden toimivuus. Helsinki: Liikennevirasto

Tinnilä, M. & Kallio, J. 2012b. Pääkaupunkiseudun bussimarkkinoiden toimivuus. Helsinki: Liikennevirasto

Trafi. 2015. Accessed 25.11.2015

http://www.trafi.fi/en/about_trafi

Trafikverket. 2015. Accessed 28.11.2015

<http://www.trafikverket.se/en/startpage/about-us/Trafikverket/>

Transportstyrelsen. 2014. Accessed 12.12.2015

<https://www.transportstyrelsen.se/sv/vagtrafik/Yrkestrafik/Kollektivtrafik/>

Transportstyrelsen. 2015. Accessed 27.11.2015

<http://transportstyrelsen.se/en/About-us/>

/

TVV Lippu- ja maksujärjestelmä Oy. 2015a. Accessed 27.11.2015.

<http://www.lmj.fi/>

TVV Lippu- ja maksujärjestelmät Oy. 2015b. Accessed 1.12.2015

<http://www.lmj.fi/toiminta/>.

Figure 1-3. Olli-Matti Toivanen

Figure 4. The distribution of Waltti.
www.waltti.fi

INTERVIEWS

Adolfsson S. 2015. Transit manager. Upplands Lokaltrafik, Uppsala. Interview. 17.11.2015

Alanen J-M. 2015. Logistics manager. City of Joensuu. Interview. 02.11.2015

Dahllöf J. 2015. Procurement specialist. Skånetrafiken, Hässleholm. Interview. 19.11.2015

Englund S. 2015. Deputy director of Operations, Operators and Customers. MOVIA, Copenhagen. Interview. 21.12.2015

Inkinen-Remes M-L. 2015. Public transport logistics officer. City of Joensuu. Interview 02.11.2015

Jorasmaa L. 2015. Public transport manager. City of Turku. Interview 30.10.2015

Kaartokallio M. 2015. Public transport coordinator. City of Hämeenlinna. Interview 29.10.2015

Ranta J. 2015. System architect. TVV Lippu- ja maksujärjestelmä Oy. Interview 27.10.2015

Soininen M. 2015. Public transport manager. City of Oulu. Interview 28.10.2015

Thomsen L. 2015. Project Leader. TITSAM, Aalborg. Interview. 23.11.2015

Tuovinen A. 2015. Public transport engineer. City of Jyväskylä. Interview 30.10.2015

Vahnberg R. 2015. Vice president. Västtrafik, Göteborg. Interview. 18.11.2015

Venesjärvi K. 2015. Public transport logistician. City of Lahti. Interview 29.10.2015

GENERAL QUESTIONS

- 01) How many employees work for your public transport organization?
- 02) How many operators do you have at the moment in your public transport?
- 03) How many agreements do you have with operators?
- 04) What is the size of your annual budget in public transport?
- 05) What are your aims in public transport?

COMPETITIVE TENDERING

- 06) What are the criteria for successful competitive tendering?
- 07) What kind of developments would you like to see for the next 10 years in competitive tendering?
- 08) What kind of challenges have you had in competitive tendering?
- 09) Do you attract enough bidders for competitive tendering?
- 10) What do you think about less regulation and less public funding?
- 11) Price vs. quality, which one determines?

CONTRACTING

- 12) How would successful tendering affect contracting?
- 13) What kind of developments would you like to see for the next 10 years in contracting?
- 14) What kind of difficulties have you had in previous negotiations with operators?
- 15) What kind of incentives and sanctions do you use for the operators?
- 16) Do you have, and what kind of, demands for extension options?

CO-OPERATION WITH OPERATORS

- 17) How often do you meet and talk with operators?
- 18) How would you develop the relationships with operators?
- 19) Do you have responsible person for each operator?
- 20) How do you think systems and technology would help you to develop relationship with the operators?
- 21) Have you worked during the time before competitive tendering?
 - a. How has process developed?
 - b. What was better during the time before competitive tendering?
 - c. How was the deregulation implemented?

22) Do you feel that the risks are shared equally?

- a. What are the risks of sharing risks?
- b. How do you transfer responsibility to someone and make sure that they take care of it in a proper way according to you?
- c. How are the commercial and the productive risks divided between you and the operators?

23) Do operators take part in planning the routes?

24) How does your co-operation with other cities and regions look like now and in the future?

25) How do the goals from politicians affect your work?

26) Does your operators have co-operation?

27) How public transport has combined with city planning/zoning?

OTHER QUESTIONS

28) What kind of quality you have at your area? Your demands vs. passenger satisfaction vs. reality?

29) How do you take care of punctuality?

30) How do you estimate the cost at the trip level?