



Opening passenger rail traffic to competition in Finland – discussion regarding a draft proposal prepared by the Ministry of Transport and Communications of the Republic of Finland

Passenger rail – concession model vs. open access

Overall principle

With the public sector having to assume a high degree of responsibility for rail services, the key question is whether the state (or regions, as applicable) gets the most out of the money spent to purchase train traffic or not. The likelihood that the best way to secure that would be a direct award to a monopolist is arguably zero – the empirical evidence of such conclusion is so overwhelming that further discussion on this particular point of departure would be superfluous. This is the main theme of the draft proposal, and it is definitely the right way forward for any force in the society wishing to have an efficient rail sector for the benefit of both passengers and rail cargo customers.

Open access or public service contracts?

The open access model could in theory be argued to be the best model in terms of providing competition, since competition takes place on a daily basis between operators being active in the market, and where such operators can utilize a wide range of competitive factors, including but not limited to prices, timetable, design of rolling stock, on board amenities, punctuality record and numerous other quality parameters. The possibilities to accomplish such situations are however extremely limited, as evidenced by experiences from several countries. Two relevant examples are that the market share of DB in Germany for long distance passenger rail services is an overwhelming >99% in 2014 (Source: *Wettbewerber-Report Eisenbahn 2015/16; Netzwerk Europäischer Eisenbahnen e.V.*), and that the sole serious contender (i.e. excluding certain small niche products) in Sweden is MTR Express, who opened up an open access service between Stockholm and Göteborg on a commercial basis in 2015. There are indeed other examples, such as in the Czech Republic (LEO Express, RegioJet and Arriva) and Italy (NTV), but there are certainly not many successful examples.

This is not dissimilar from the old vertically integrated railroad, where the same company or state authority had the exclusive right to use its own infrastructure.

Basically all examples from open access passenger rail are based on a situation where the new market entrant uses its own dedicated rolling stock. The design of the rolling stock is thus used as a means of competition. Two examples of similar sized contenders would be MTR Express in Sweden and LEO Express in the Czech Republic (extending into Slovakia), both of which use new Stadler FLIRT EMUs, and both of which use this as an important part of their market offering. The same goes for NTV, with their EMUs class ETR 575 and ETR 675 (on order).

Competition in passenger rail thus has picked up speed in Europe based on public service contracts (“PSC”), most of which are for local or regional commuter train systems, in addition to certain interregional traffic systems, such as night trains between Stockholm and the far north of Sweden.

It should be noted that such public service contracts are not necessarily tied to a specific part of the rail infrastructure. The same part of the network can be used for several different train products



with different characteristics and different organizational and financing characteristics. As an example, on the rail line between Stockholm and Göteborg, you will find both local commuter trains in the Stockholm and Göteborg area, regional PSC services, long distance night train services on a PSC basis and open access traffic from several operators. It could certainly be argued that the traffic product rather than the piece of the rail network is the relevant point of departure.

A further consideration which is of paramount importance when the model for market access is decided is the fact that Finland is an island in terms of infrastructure, having the 1,524 mm gauge. Although a conversion to 1,520 mm gauge would appear to be achievable, the lack of a possible secondary market for rolling stock in the standard gauge (1,435 mm) area of Europe increases the residual value risk of rolling stock to a level completely different from the standard gauge area.

The scope for new market entrants for passenger traffic based on open access is therefore smaller in Finland than in standard gauge Europe, everything else equal. In terms of passenger volume, there are traffic relations which are big enough to potentially support competition on an open access basis, notably so the O/D pair Helsinki-Tampere (187 km), having about 4 million passengers annually. As a comparison, the number of train passengers annually between Stockholm and Göteborg is only slightly less than 2 million.

Open access for Helsinki – Turku?

The sole traffic where an open access basis is considered in the draft proposal is the regional service Helsinki – Turku (194 km). The question thus arises whether this is likely to be a successful move. There are several arguments why this is unlikely to be the case:

- Traffic volumes between Helsinki and Turku (194 km) are surprisingly poor – only about 1.15 million per annum, or about 30% of the volume between Helsinki and Tampere, an O/D pair of about the same length. Infrastructure quality may be one explanatory factor; the travel time between Helsinki and Turku is about 2 hours, while it is between 1h30 and 1h45 between Helsinki and Tampere.
- The current train supply is an hourly service in both directions. Assuming a 1 hour layover at the destination, such traffic can be produced by 6 trains (excluding any need for reserve capacity).
- It appears unlikely that there would be any material operational synergies between this traffic and traffic on other lines. However, there may of course be synergies regarding sales, general and administrative costs.
- If a challenger would succeed in getting a 50% market share (which would probably be highly aspirational; no such number has been achieved in other examples), the necessary fleet size (in the form of EMUs) would be three. It can be argued that no challenger would be willing to bet on such formidable success, which would reduce the initial number of EMUs on such service to no more than 2. This would definitely be sub-scale in any event, any adding the need for reserve capacity, it would be very hard to develop a business case. The high residual value risk comes on top of this consideration. As a comparison, MTR has 6 FLIRT EMUs in service, is also active in PSC contracts in the Stockholm area, and is according to recent statements in the press evaluating more O/D pairs. LEO express has 5 FLIRT EMUs, has about 2 million passengers, and is also evaluating new services.



- It is thus likely that a new market entrant would have to rely upon the same rolling stock as currently used by VR, albeit rented from the planned new state owned rolling stock company ("Rosco"). This would eliminate one of the main tools of competition for such challenger, and is likely to deter interest.

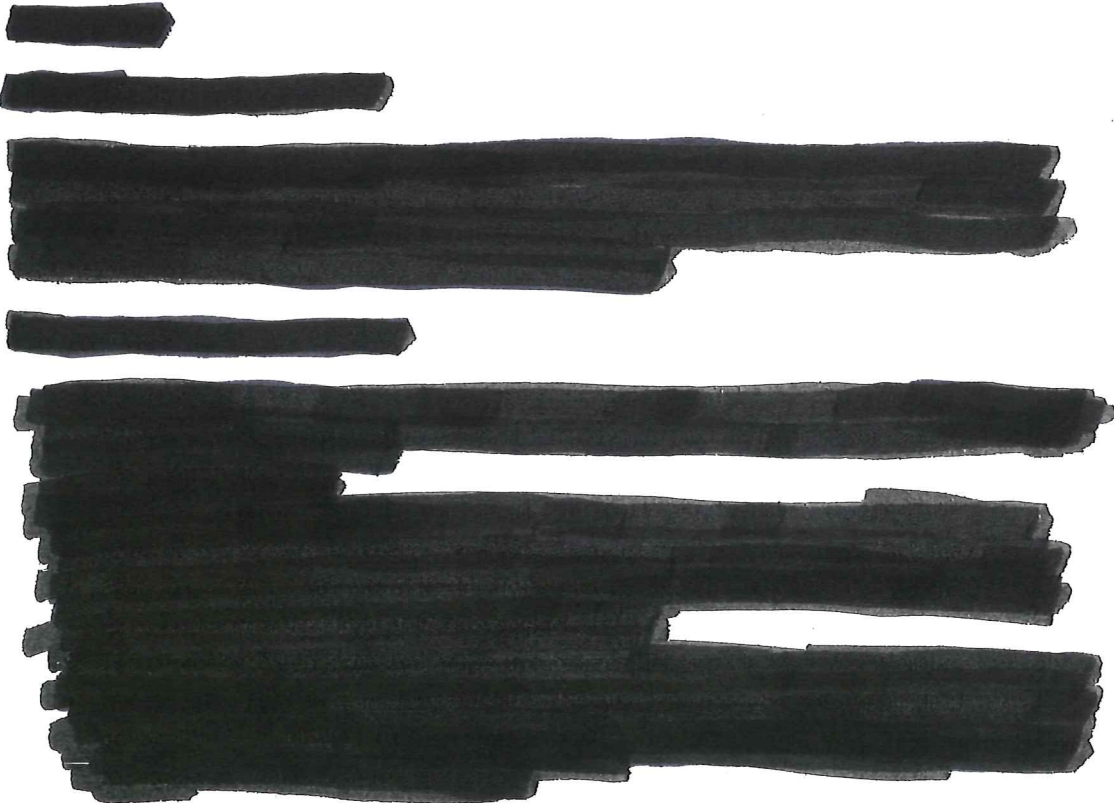
There is thus a considerable risk that no new market entrant would attempt an establishment based on open access for the traffic between Helsinki and Turku, which in turn would pose a substantial political risk for the whole restructuring project. If this line is the sole candidate for open access, it is **highly recommended that also this traffic be organized on a PSC basis.** This would also have the side effect that the Karjaa-Hanko branch line can be integrated into this contract.

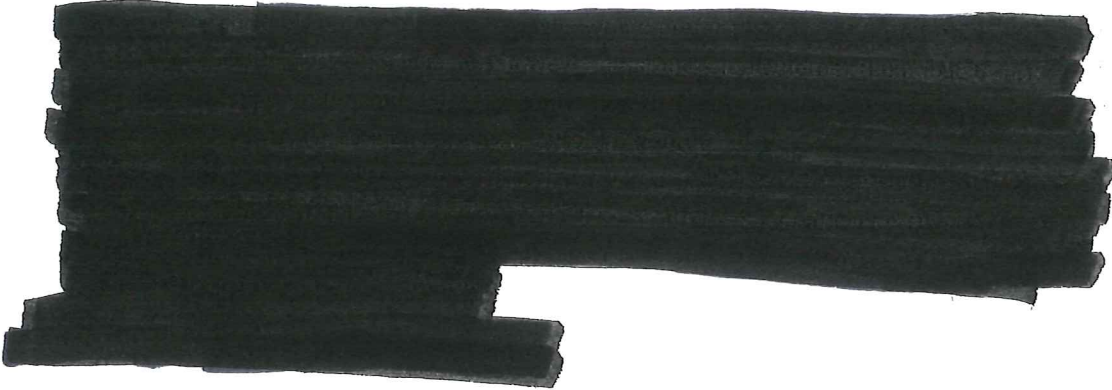
Any other open access candidates?

The only other O/D pair which potentially could be a candidate for open access would be Helsinki – Tampere. The reason for this would be the substantial volume of traffic, which in principle would be attractive for open access operations. However, several factors work in the opposite direction:

- Most of the current services are trains that continue to/from destinations/origins further north; the services ending/beginning the trip in Tampere are relatively few (8 daily train pairs Mo-Fr). This indicates that it might be difficult for a new market entrant to gain a meaningful business volume on this traffic alone.
- There is thus a risk that an open access based presence on this route alone would be sub-scale, leading to the same overall conclusion as for Helsinki-Turku.

Overall conclusion – highly recommended to go for a PSC structure only.








Type and structure of PSCs

The concession agreement approach in the draft proposal is for all practical purposes equivalent to any public service contract, comparable to the public service contracts for regional train traffic systems such as e.g. Tåg i Bergslagen in Sweden, albeit with a higher content of longer distance services.

Just like in any PSC, the award should be based on a number of obligations in terms of timetable, ticket pricing and quality performance indicators. The obvious reason is the underlying principle that the traffic authority paying the contract holder must be in control over the minimum traffic volume actually purchased. In addition to financial and quality considerations for the actual traffic in a given PSC, it is important for the traffic authority to secure cooperation in terms of timetables, so that train changes at junctions such as Seinäjoki, Pieksämäki and Tampere can be made without undue waiting times.

The choice of areas to be covered by the PSCs should be a result of finding an appropriate balance between several considerations:

- The number of contracts should be big enough in terms of traffic volume to justify the efforts of potential bidders to prepare bids. Such efforts are quite time consuming,  since any errors or failures to fully analyze and comprehend the complexities of the traffic over a long period may have anywhere from serious to fatal consequences. Several examples in Sweden illustrate this point.
- If the characteristics of the traffic in one contract differ substantially between different traffic products, it may be similar to actually bidding on several traffic products in one contract, thereby adding unnecessary complexity. Such differences may be manifested by a situation where totally separate types of rolling stock are employed.
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- In order to accomplish the overall intention to bring about a modal shift in favor of rail, and to use competition for the market as a main tool to reach such target, it would be highly desirable to stage the award of PSCs so that not all contracts are awarded at the same time and expire at the same time. 

[REDACTED]

[REDACTED]

There is no discussion in the draft proposal about the intentions of the Allegro train between Helsinki and St Petersburg. Being a joint venture between VR and РЖД (RZD), there are probably limitations in the joint venture agreement which may limit options.

[REDACTED]

Potential bidders tend to prefer relatively long contracts, with the main argument being that it would facilitate product development, production efficiency and similar considerations. Contract terms in the range 8 to 10 years (potentially plus 2 optional years) would be in line with expectations from potential bidders. Examples from Sweden include Västtrafik (9+3 years), Greater Stockholm (10+4 years) and Tåg i Bergslagen (10 years).

By employing minor variations in start and termination dates, it should be possible to avoid the situation of several large tendering processes entirely in parallel.

[REDACTED]



It should also be kept in mind that tendering processes tend to be lengthy for several reasons:

- Potential bidders need to spend the appropriate time to prepare the bid to a level of detail and comfort that would satisfy a board of directors with high demands, especially so with net contracts;
- It is necessary to allow a preparation time for the operator after award of the contract to start of operations in order to get all operational matters in place.

Furthermore, in this case, it will be unusually challenging for any new market entrant:

- VR possesses all market data for all services throughout the network, and consequently is better positioned to assess market risks;
- VR possesses all data for all rolling stock in the country, in terms of technical status, maintenance status, operating records, electricity and fuel consumption of locomotives, EMUs and DMUs, and consequently is better positioned to assess technical risks;
- VR possesses all data for all human resources in the current operations, which is relevant since numerous staff will have to be transferred to a new employer; VR is thus better positioned to assess human resources risks.

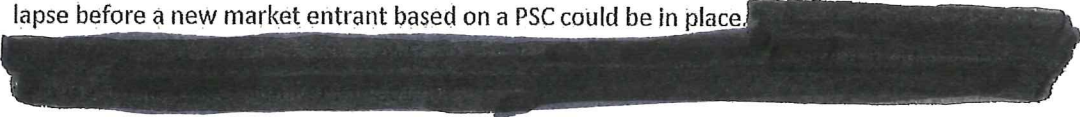
It is thus vital for the traffic authority to acquire the necessary human resources to collect and structure a comprehensive data base in the above regards, for the benefit of the potential new market entrants and the new planned state owned Rosco. Such data should be available for all bidders for a PSC on a non-discriminatory basis. It would also come as a matter of course that a comprehensive rolling stock data base should be managed by a party being neutral versus train operators. This was an important theme in the reorganization of the Swedish rail sector after the incorporation process in the early 2000's.



An example of a timeline in a recent tendering process in Sweden (Tåg i Bergslagen, about 5.7 million train kilometers), was as follows:

- Bid deadline: February 2, 2015
- Award date: November 19, 2015
- Transfer of operator; traffic start: December 11, 2016.

On the other hand, it does not appear to be necessary to wait for the entire transition period to lapse before a new market entrant based on a PSC could be in place.





Selection criteria for PSC

A good selection of evaluation criteria regarding bids for PSC starts with the definition of the service to be provided. This would include i.a. (not exhaustive):

- General contract terms
- The timetable for the services
- Description of any services in addition to the traffic to be included in the contract
- Requirements regarding rolling stock (e.g. compulsory leasing of rolling stock from the new state owned Rosco), or if not, performance and quality criteria as regards travel speed, acceleration and retardation capacity, seating capacity, on board amenities and more
- Requirements regarding maintenance of rolling stock – light maintenance, heavy maintenance, refurbishment of rolling stock, accident repair, graffiti removal etc
- Pricing regime regarding track access, electricity and diesel fuel (if applicable)
- Definitions of service provided by the traffic authority (potentially access to station infrastructure, maintenance and operations of station superstructures, joint ticketing systems etc)
- Any commitments from the relevant state bodies regarding rail infrastructure maintenance service levels
- Any requirements concerning bonus and penalty system as regards quality indicators
- Any indication of quality measurement systems that will be employed

It would be desirable to exclude business risks for bidders that are totally controllable for the state, including in particular track access charges and tax *rate* changes on electricity and diesel fuel. Such exclusions should not include electricity and diesel fuel costs as a whole, since it is desirable to maintain incentives for energy efficient driving.

Selection criteria would include:

- Price for providing the services (in principle, such price may be a negative number). Such price may vary over the life of the contract, indicating that the evaluation should be based on a present value of the total payments;
- Rolling stock requirements;
- Any proposals concerning the employment of new rolling stock rather than rolling stock to be provided by the Rosco;



- Proposals regarding the traffic structure in order to enhance overall efficiency;
- Business development initiatives intended to grow passenger ridership and rolling stock capacity utilization;
- Commitments (in terms of bonuses and penalties) regarding the results of customer satisfaction surveys;
- Commitments (in terms of bonuses and penalties) regarding the punctuality record;
- Commitments (in terms of bonuses and penalties) regarding cleanliness of the vehicles;
- Commitments regarding maintenance of rolling stock (to the extent included in the contract terms);
- Commitment as regards cooperation with other operators in order to minimize delays at transfer points, and in order to minimize adverse effects of traffic disruptions;
- Commitments regards the full participation in joint ticket systems
- Levels of passenger service in the trains
- Systems for passenger services regarding i.a. passenger information systems, assistance services to passengers with reduced mobility etc;
- Compliance with all relevant safety regulations.

Given the multitude of selection criteria, it will be difficult to work out any form of exact mathematically unchallengeable algorithm that would produce a completely quantified overall assessment. However, the traffic authority should obviously attempt to work out quantitative assessments to the largest extent possible, building on the wealth of experiences from similar processes in other countries such as Sweden, Germany and more.

The proposed measures – balanced for the intended purposes?

The full list of proposed measures is discussed from the perspective of securing equal access to the rail passenger market, so that there will be a diversity of service providers in the rail sectors, thereby securing a structure with competition in a marketplace.

The proposed list of restructuring measures is actually extremely similar to the restructuring that has taken place in Sweden over the last >15 years:

Finland	Corresponding entity in Sweden
Rolling stock company	Transitio AB for EMUs to be used in local and regional services, and rolling stock provided by Trafikverket for certain long distance PSC services
Rolling stock maintenance company to be created, with alternatives regarding light and heavy maintenance/refurbishment sites	Initially, the light (or depot) maintenance was organized in one company (TrainMaint AB), and heavy maintenance/refurbishment in a separate corporation (TGOJ AB; equivalent to the Hyvinkää and Pieksämäki workshops). The spare parts logistics business was conducted in a separate company (RPL, Rail Part Logistics AB). These three entities were subsequently combined to form EuroMaint AB, which later was privatized. Workshops intended for freight

	cars only was privatized in a separate company, SweMaint AB
Real estate company	Jernhusen AB (still state owned) is the exact equivalent in Sweden
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

Overall structure

The reorganization that has taken place in Sweden, changing the structure from an extensive conglomerate to a series of unrelated focused companies had two main drivers:

- First, a desire from the company itself to focus on the core rail operations, and thus divest support activities being less close to the core rail operations, such as freight forwarding, ferries, buses, train catering, IT services and hotels;



- Secondly, a desire from the ownership level to create a basis for competition and deregulation, and thus divest rolling stock consultancy, rolling stock maintenance, freight car leasing and train depot services (such as cleaning and shunting).

The reorganization in Sweden has indeed brought about a substantial diversity among players in most of the relevant niches, which indicates that it should be possible to accomplish the same in Finland using the overall approach contained in the draft proposal.

Creation of a "Rosco"

It is no understatement that access to rolling stock suitable for Finland is the absolutely most relevant measure to be taken. One main reason for this is that Finland's gauge is unique, 1,524 mm, which would make the residual value risk way too high for any operator on a market based on PSC to acquire. The natural thing would then be that the party or parties controlling the amount of traffic would be the owner of the rolling stock, since only such parties can exercise control of the residual value risk. This was actually the main reason for creating Transitio AB in Sweden.

If there will be any open access rail passenger operations going forward, this issue becomes much more difficult. Such new operators (like MTR Express in Sweden and LEO Express in the Czech Republic) typically want to use the rolling stock as an important competitive tool, but that will be difficult given the higher residual value risk. And – if a new market entrant would be forced to use the same rolling stock as VR – the appetite for market entrance is highly likely to be severely reduced.

If however, basically all traffic would be under PSC, the Rosco would definitely fill the desired role, and facilitate market entrance, just as has been the case for local and regional traffic in Sweden under PSC.

There are however issues that need to be observed. In Sweden, local and regional traffic EMUs are so far basically carried out by two types of rolling stock, either Bombardier's Regina or Alstom's Coradia. The rolling stock used in long distance PSC trains, such as the night trains to northern Sweden, is basically inherited from the 1980's. For the Rosco contemplated for Finland, the picture is likely to be different, including that there will be a need for the Rosco to have the appropriate skill set to order the right types of rolling stock when needed, and to make sure that such view coincides with the preferences of the existing and potential operators at the time.

Just as stated in the draft proposal, it is vital that the new Rosco is completely independent from all rail operators, including VR.



- It is not necessary from an operational standpoint to have the rolling stock for long distance services and the EMUs for local services in the greater Helsinki area in the same Rosco – the latter EMUs are simply not suitable for long distance services.
- It is true that the corresponding process in the reorganization of British Rail led to three Roscos, but the size of Finland's market is simply too small for having more than one company for long distance services. The objective regarding the Rosco should be to create

the necessary preconditions for efficient competition among operators, so that the state should save money or get more traffic out of the same financial commitment in such later part of the value chain. As a comparison, there is no competition among Roscos in Sweden, which has a bigger rail market than Finland.

[REDACTED]

[REDACTED]


[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



Maintenance companies

It is a fully justified proposal that the rolling stock maintenance resources be demerged from VR. The main justification, as made very clear in the draft proposal, is that it would be unreasonable for competitors of VR to be forced to utilize the maintenance resources of the main competitor.

It is however important to make it clear that the creation of such maintenance company should not be seen as a desire to have a monopolist service provider. It should rather be the other way around, so that the state would be supportive of new rolling stock maintenance players entering the market, for instance by entering into rental agreements with new service providers where the state owned real estate company would act as a landlord. An example would be that given the stated shortage of maintenance capacity in the Helsinki area, it would be a highly desirable task for the proposed real estate company to be instrumental in creating more capacity for rental to a competitor to the current VR units.

As noted in the report, EuroMaint in Sweden is the obvious peer. EuroMaint's business comprised both depots for light maintenance and workshops for all kinds of heavy maintenance, although several other structures were tested before arriving at the eventual structure. In addition, it should be kept in mind that a sister company focusing on freight cars only also was created and subsequently privatized.

Subsequently, a lot of diversity has emerged in the sector, giving operators much more choices of service provider. This is a desirable development for the operators, but maybe less so for EuroMaint.

There are several relevant experiences to be drawn from the EuroMaint case:



- A final observation would be that likelihood for severe soil contamination issues is high in rail workshops areas. It will be necessary that the state, in its capacity of owner and operator of such facilities, will assume the full responsibility for any such contamination issues relating to the time before the contemplated demerger. Since such undertaking potentially

may require a parliamentary decision, it is important to make this issue part of the original proposal.

[REDACTED]

[REDACTED]

Some further observations regarding EuroMaint have implications on the structure of the new maintenance companies

- EuroMaint expanded into industrial maintenance,
- EuroMaint expanded into (primarily) freight car maintenance in continental Europe (mainly Germany),

[REDACTED]

Real estate company

The proposed real estate company is a complete parallel to Jernhusen in Sweden. The proposal and the justification for such proposal make perfect sense, given that the objective is to secure a full non-discriminatory access for all side infrastructure necessary for operations. The observation to be made here is that such access should cover all types of side infrastructure, such as platforms, waiting areas in stations, access tracks to workshops etc. This means that all types of side infrastructure should be provided under the same legal framework.

[REDACTED]

[REDACTED]

[REDACTED]

Summary observations

Most of the measures put forward in the draft proposal are to the point in terms of supporting the overall objective of opening the passenger rail sector for competition and to support the development of competition in the rail freight sector. The main areas where modifications to the draft proposal would be recommended are the following:

- Open access with several market participants on the Helsinki – Turku route only is an unlikely development, especially taking the proposed timetable into account. It is therefore recommended that also this traffic be made part of the overall PSC structure;

- [REDACTED]
- [REDACTED]
- [REDACTED]

In addition, there are additional tasks that require attention:

- Secure that the same legal framework be used for all side infrastructure;
- Develop commercial contracts between the maintenance company or companies and operators that are on real arm's length basis, and where tasks to be performed are defined in detail. This turned out to be a difficult and time consuming task when EuroMaint was created;

- [REDACTED]

- Commence the process to develop the overall principles for selection criteria in PSCs to detailed specifications

[REDACTED]

[REDACTED]

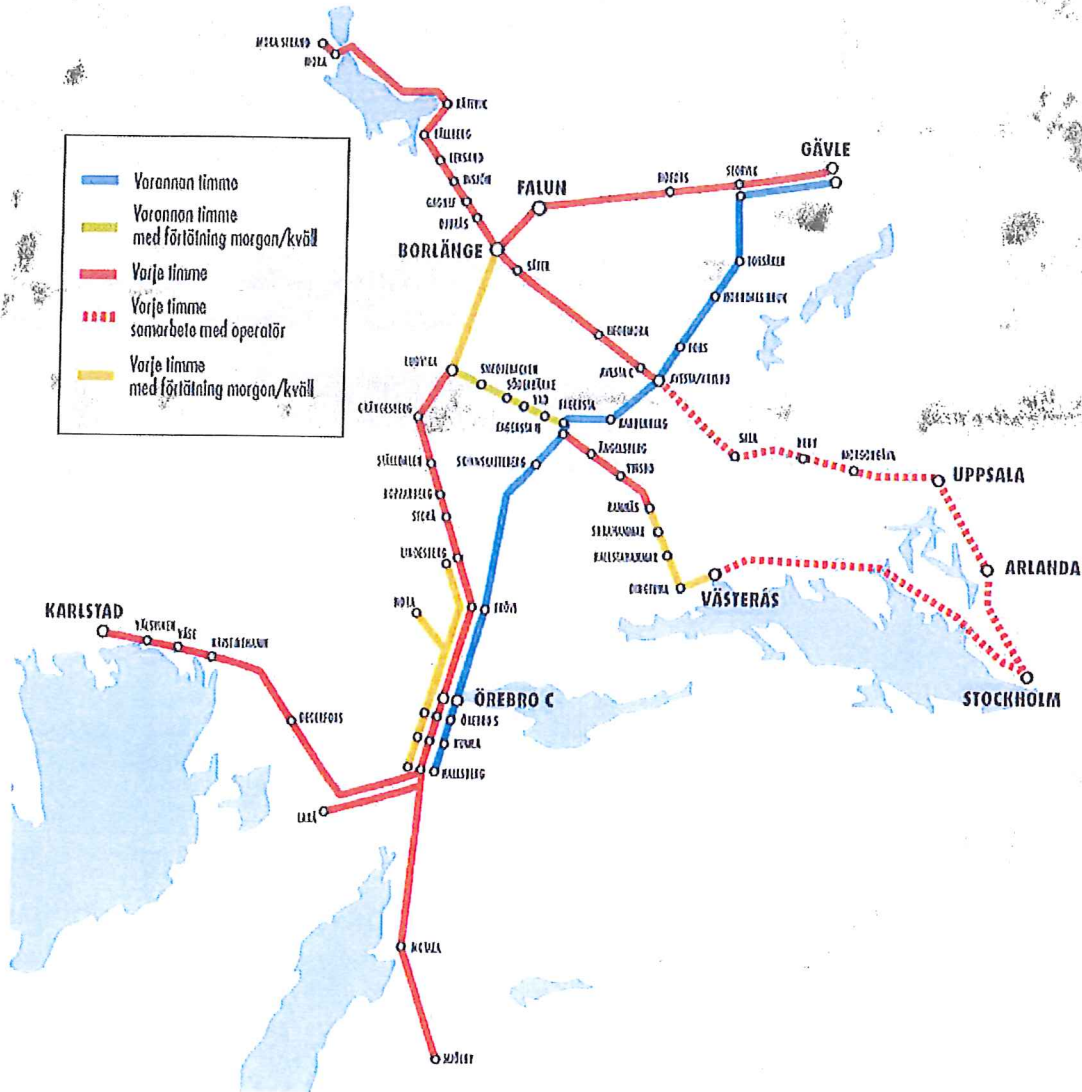
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[REDACTED]

As a final observation, it is argued that not even the best investment opportunity sells itself, and that the state for such reason should make an effort to market the investment opportunities related to the reorganization discussed in the draft proposal. Although an invitation to an information event is a good element in such effort, it is argued that it would be mutually beneficial if a discussion with the most relevant parties on a "one-one" basis could be done, thereby stimulating a discussion which would be highly likely to provide important input to the Finnish state regarding the future PSCs to come. Such discussions might take place in a "road show". It is also argued that it would be wise to use an outside advisor to assist in such process, so that the state more easily can avoid making statements that could be interpreted as commitments or position statements that would be premature at this time.

Appendix – Tåg i Bergslagen

In this report, reference is made in several instances to the Tåg i Bergslagen PSC in Sweden. Such contract covers regional traffic as shown in the map below:



This illustrates the concept that many lines can be used by traffic under different contracts, such as:

- Avesta/Krylbo – Borlänge (to some extent also to Mora) – also part of SJ's own traffic
- Hallsberg – Karlstad – also part of SJ's own traffic
- Mjölby – Motala – also part of a local traffic PSC in the area
- Hallsberg – Örebro - also part of SJ's own traffic

In addition, this PSC illustrates the point that it is possible to have a fairly complicated structure, and yet succeed in running a tendering process in full competition between several parties.