Prioritized Measures and Financial Toolbox for Development of the East West Transport Corridor

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Annex 1
1. **Summary**

This report illustrates a number of different aspects on the cross-border cooperation that has developed over time in relation to the East West Transport Corridor (EWTC). The report also reflects on the future development of the East West Transport Corridor Association (EWTCA).

The analysis is based on an institutional theoretical view and reflects the results of a survey on the future development of the EWTCA, carried out by Region Blekinge and Netport during 2013, where the organizational and financial aspects of cooperation in the six areas given the highest scores by the respondents have been focused.

It is crucial to bear in mind that the EWTC is both a physical transport infrastructure asset, and a basis for carrying out transport services, meeting demand from customers in different markets serviced through the corridor. The main markets are the Nordic-Baltic market, the Black Sea market and the Asian market.

In relation to transport infrastructure development in the corridor it is foreseeable that the EWTCA can have and develop roles primarily as a facilitator of planning processes, supporting national and regional authorities with information and by bringing different parties in touch with each other during the planning process. The Association also might play a role in connecting with EU and supranational organizations like the UNECE and its transport and trade facilitating activities. Governments on different levels are though, also according to the survey, expected to be mainly responsible for financing and ownership of the transport infrastructure systems.

When it comes to the development of ICT-systems, trade facilitation measures, the development of Key Performance Indicators (KPIs) and the further development of business cases, like the Viking train shuttles, the EWTCA can also have important roles.

Trade facilitation is an area where efficient routines and measures clearly can contribute to the smooth function of the transport services in the corridor and the growth of these services.

It is important to keep in line with already developed guidelines and structures for data transfer and dissemination. At the same time warnings are given for focusing too much on Single Window Solutions. These have often proved to be difficult to implement and are dependent on long-term national government support and political backing.

The existence of different institutional barriers between the countries engaged in the EWTC connects to the institutional theory basis of this report. Besides experiencing cultural and language related aspects that might hamper the development of cross border cooperation, the institutional setting as reflected
in legislation and administrative structures in different countries, might be difficult to align.

At the same time a number of possible projects related to concrete situations where cost reductions or revenue enhancements is at hand should be given increased focus. “Small and simple” is often a good principle to follow as a way forward, while too complex projects might lead to time consuming and less favorable results.

Public and private sector cooperation is a recommended measure and practice in the further development of the corridor. Private sector actors are often experienced in focusing on results, while public sector actors might provide long-term perspectives and access to political support and necessary momentum for institutional reform and adjustment.

In a separate section the development of the SouthEast-link in Sweden, county of Blekinge, has been discussed. Here the conclusion is that organizational models where the region and local actors take on more active roles for the realization of the project, including possible EU-funding and with possible “project bond” financing, might be a fruitful, but financially and organizationally challenging, way forward. This clearly resembles a multi-level-governance structure where actors on the local and regional level, that were instrumental in constructing the railroad in the late 19th century, regain some of these traditional roles from the government.

In order to raise the potential for future government financing in relation to the SouthEast-link it would be favorable to have it included as a branch of the Southern main trunk railroad line in Sweden. This would make the SouthEast-link to a section of the TEN-T core network and more easily eligible for EU-financing.

A possible joint project between the regional and local governments, and with the support of the local business interests, might be fruitful to investigate further in order to present a concrete offer to the government for the construction of the link.

The EWTC and the Association are two good examples of the ongoing change of traditional roles for actors on all levels in relation to transport infrastructure and transport flow-development. Regions and local actors become more involved over time and nations have to face demands both from the regional/local arena and from the supranational level. Multi-level-governance as a reality seems to be here to stay.

The report is the result of an assignment to the KTH Royal Institute of Technology from Region Blekinge and has been carried out from November 2013 to May 2014.
2. Introduction and theoretical background

Region Blekinge is an active partner in the development of improved transport links and trading flows in an East West direction, with the port in Karlshamn as an important node for the further transport flows in the Baltic Sea Region and, in relation to the current project, with Klaipeda as the primary corresponding node. Region Blekinge is participating in the development of the East West Transport Corridor (EWTC) wherein the different activities in relation to the development project are organized. Since 2010 these activities are channelled through the East West Transport Corridor Association (EWTCA), an organization that has attracted the participation from nearly 40 different organizations from a wide range of countries, including China, Russia and Sweden, with an East West transport perspective.

Other Swedish members in EWTCA are Netport Science Park, the Port of Karlshamn and the Municipality of Karlshamn.

Region Blekinge, other public sector members and private sector corporations in the county of Blekinge have also been active in planning for and furthering the restoration and development of the present (and former) railroad connecting the “coast-line” in Blekinge with the national trunk line from Älmhult through Olofström to the coast-line west from Karlshamn. This project is named “Sydostlänken” (the “SouthEast Link”).

The development and investigations in relation to these activities have been carried out through the EU-financed project BSR TransGovernance, which is part of the Baltic Sea Region Programme 2007-2013. Questions related to the facilitation of cross-border transport infrastructure structures and the improved transport flows in the Baltic Sea Region are among the core aspects in the project. The organization and financing of cross-border management and construction of transport infrastructure and transport flows are at the core of the TransGovernance activities.

Region Blekinge is interested in analysing further the appropriateness of different management forms as well as organizational and financial aspects on the EWTC-structure. This includes both the development of the links in Sweden, with primary focus on the SouthEast-link, as well as the development of the cooperation in the EWTC and EWTCA. A further interest is the analysis of possible measures in order to facilitate cross-border trade and trading flows, related to the reduction of administrative hindrances, such as customs regulations.

Region Blekinge has assigned KTH Royal Institute of Technology in Stockholm, the School of Architecture and the Built Environment, to carry out this analysis. The project has been carried out from November 2013 to May 2014. Dr. Björn Hasselgren, Research Fellow in the Department of Urban Planning and
Environment, and specialized in Transport Infrastructure Organization and Financing, has been project manager. Johan Pontén, BSc, has been assigned the specific task of analysing the cross-border trade facilitation aspects, based on a broad and deep knowledge in the area, e.g. based on extensive UN/CEFACT trade-facilitation experience.

The report includes two more elaborated sections on financing-models for transport infrastructure projects and trade-facilitation aspects, both in a cross border perspective. Previous reports from the EWTC-project have been studied and a natural starting point for the investigations and analyses presented in the report. The analysis regarding the trade facilitation aspects has been reported in a separate (annexed) report by Johan Pontén “Facilitation of Border Crossings – Tools Available for the East West Transport Corridor Association (EWTCA)”.

When analysing the EWTC and the Association it is crucial to bear in mind that there are three rather separated and distinct markets that are served through the corridor. The Nordic countries are primarily affected by the markets in the Baltic Sea Region, with its connections to the East and to the West. Another important market is centred round the Black Sea and the different connections in Ukraine, Russia and other border states in the region. Finally, the ultimate outreach of the project is to connect these two markets to the markets in Asia including China. For the EWTC/A the political and practical situation in the different markets varies. In this report the primary focus is the larger Baltic Sea Region.

The analysis has been carried out based on an institutional theoretical perspective and based on experiences from other recent research reports covering cross-border cooperation in the Baltic Sea Region and Öresund. KTH has recently carried out other research projects covering the cooperation in the Öresund region (Cars, Hasselgren et al, 2014) e.g. covering transport infrastructure.

The above mentioned KTH reports have as their starting point an institutional theoretical perspective as reflected e.g. by Williamson (2000), North (2005) and Ostrom (2009). An example of a analytical framework describing the different layers of institutional aspects “framing” processes like cross-border cooperation in the Öresund region is presented below in Figure 1.
Institutions, according to Williamson, range from slowly changing informal structures as culture and language to short-term marginal condition based decisions concerning e.g. resource allocation. The connections between the different “layers” of institutions are what define the “rules of the game” of e.g. cross-border cooperation.

In recent research on decision making and cooperation a stakeholder perspective has come to play an important role. The networked society of today is characterized by a variety of value preferences, unclear rules of the game and great challenges in shaping society. Dryzek (2000) points out five challenges for policymaking in the network society; the new spaces of policymaking, the conditions of radical uncertainty, diversity, interdependence and the dynamics of trust and identity. Dryzek also calls for activism in order to shape and reshape the institutional settings where action takes place.

“If the traditional forms of government are unable to deliver – either because of a lack of legitimacy or simply because there is a mismatch between the scope of the problem and the existing territorial jurisdictions – then networks of actors must create the capacity to interact and communicate.” (Dryzek, p. 11)

Whereas representative democracy or bargaining democracy based upon aggregated interests, usually result in majority/ minority situation or a winner/ loser situation, a deliberative approach valuing pluralism and non-coercive-
ness, might give end results based on interaction, relationship building, shared meanings and shared learning. This latter form resembles important features of markets, where decentralized learning and spontaneity are central signs.

“Politics and policymaking thus is not simply about finding solutions for pressing problems, it is as much about finding formats that generate trust among mutually interdependent actors.” (Dryzek, p. 12)

The roles held and taken by actors on different spatial levels in society are often discussed in relation to the “multi-level-governance-concept” (See e.g. Peters & Pierre, 2004). In this literature, which has also been highlighted in the BSR Trans Governance project, the changing division of responsibility between actors on different levels is further discussed. There are similarities to the institutional perspective in this report where different layers or levels of societal processes are considered.

The time perspective was highlighted in the KTH report of 2014 as one of the main explanatory factors and perhaps the most paradoxical factor. Although the differences in language, culture and traditions are often highlighted as obstacles towards developing cooperation and being aware that these are institutions change only very slowly over time, these very same differences are nevertheless often seen as restricting the possibilities for cooperation across the national border. At the same time more short-sighted cooperation focusing on cost reduction or economizing in the present are often more fruitful, but at the same time less politically favored or sought for. Visions for the long run are often surprisingly disconnected from progress in the short run. This is something that might be true also in the EWTC-cooperation.
3. The governance of border-crossing transport corridors

Physical transport infrastructure assets such as roads and railroads are generally governed on a national, regional or local level in every country. A division of responsibility has been developed over time in most countries where the government takes on the most central assets, and also such border-crossing assets, while regional and local actors take the responsibility for assets on lower spatial levels. This system has been appropriate for a long time when national markets have been dominating and cross-border trade flows have been modest.

In the current situation we experience both a tendency for change in the division of responsibilities between actors on different spatial levels and growing cross-border trade as an effect e.g. of the EU internal market. Therefore we will see a future situation where changes in the division of responsibility between different spatial levels will become necessary.

We can therefore expect, and have to a large extent seen, a shift in the responsibility for transport infrastructure from the national to the supranational-EU-level. A corresponding shift in responsibility seems also to take place where national responsibility is shifted to regions and local governments/municipalities, as illustrated in Figure 2.

EU has had more elaborate policies for Trans-European Networks (TEN) since the 1990s and has developed a stronger policy in the field ever since. With
the advent of the new Connection Europe Facility (CEF) the EU has focused on fewer more strategic multimodal transport corridors. Coordinating powers are intended to strengthen through both coordinators, which have been elected and coordination fora that will be set up. These include both public sector authorities and private sector actors. The combined resources now being available for these project on the EU-level and the establishment of a new coordinating EU-agency for this area also echoes a stronger focus and commitment to the cross-border aspects of EU-policy in transportation.

On the regional and local level a corresponding strengthening of the activities both as regards transport related projects in general and cross-border projects in specific is obvious. Regional and local actors in the public sector have to a large extent become the most active when it comes to cross-border projects. More so than national governments, who often tend to focus on the national planning processes and to handle cross-border issues in transportation with greater caution than the regional actors do. This is the background to the large interest and many initiatives in relation to cross-border transport infrastructure taken on the regional and local level, where the EWTC is one prominent example.

The EWTC is also an example of another aspect of, at least the Scandinavian countries’, transport infrastructure policy, which often has a focus on North-South oriented relations, whereas East-West oriented links have less interest on the national arenas. The main interest in the national planning systems generally follows the main trade and passenger flows. The relative lack of initiatives when it comes to East-West projects on the national level and the stronger interest on the regional and local level is obvious, and has also led to the somewhat surprising result that regional and local actors are often more involved in cross-border projects in transport infrastructure than the national levels.

In a context of EWTC this observation might be something that makes the cooperation more complicated than it otherwise could have been. Except for the countries involved being both EU and non-EU members, which in itself might be hampering the smooth operation of a cooperative structure like EWTC, the differences between the countries when it comes to the representation from each country poses additional challenges. Both national and regional/local actors have to cooperate in the same project and overcome both long-term cultural and other informal institutional hindrances, according to Williamson operating on the “highest” level in Figure 1, and often apparent in cross-border cooperation, e.g. in the Öresund region, as studied by KTH in other projects.

There are different ways of organizing in order to overcome the obstacles described above. One is to lean towards the European processes and try to be included in the corridor setting of TEN-T/CEF. This might be possible for EWTC when it comes to the EU-related sections of the corridor and also for specific projects aiming for the strengthening of rail-transport, maritime infrastruc-
ture or transportation in general. The interest in EWTC to combine EU and non-EU transport flows and infrastructure though speaks in favour of a looser coordination when it comes to planning, where EWTC indeed can have a role, combined with more concrete projects for areas where there are clear business-cases or cost-reduction possibilities at hand. Once again the Öresund cooperation experiences, with the formation of the joint corporation for the seaports in Malmö and Copenhagen, might be a good example. Cost reduction and price-related issues, according to Williamson, might be seen as examples of faster changing institutional settings on the lower levels on the institutional scene and easier to influence for the different actors.

Before entering the task of analysing and discussing the results of the survey on the future development of the EWTC that has been carried out during 2013 it is important to take into consideration that the EWTC is dominated by actors in the private sector with only few public sector actors actually responsible for transport infrastructure assets. Transportation market related issues might therefore be closer to the primary agenda of many of the association’s members than actual infrastructure management. Perhaps the members in Sweden, with Region Blekinge and Municipalities in Blekinge are exceptions to the rule, with more of an interest and responsibility also for infrastructure on the regional and local arena than many other members.
4. The development of EWTC/A – prioritized measures

As part of the on-going development of the EWTC and the Association a survey was carried out by Region Blekinge and Netport during 2013. The survey focused on what different areas should be developed in the coming efforts carried out in relation to the EWTC and who should be responsible for the different measures that were proposed for further action. Another aspect covered in the survey was vies on who should be responsible for the financing of the different measures prosed in the study. The result of the survey is commented on in this chapter.

4.1 Questionnaire on greening measures in the EWTC

The aim of the survey was to receive expert opinions on which are the most important measures in the EWTC when it comes to efficiency and environmental sustainability. The respondents were also asked to give their opinion on which levels of society should be directly involved in implementing and financing the measures focusing on the division of responsibilities between private and public sector actors on different levels. A list of 11 measures was identified and approved by members of the EWTC Association at a meeting in Odessa on May 27, 2013.

The following measures were included in the survey:

1. Use of Long and Heavy Vehicles (LHV) for High Capacity Transport (HCT) in long haulage cross border traffic.

2. Development and deployment of a common ICT platform form information exchange and data sharing between all actors throughout the corridor.


4. Development of container train shuttles along the corridor using the One-Stop-Shop rail freight administrative services.

5. Introducing an interoperable system for Road User Charging to distribute external costs for emissions, wear and tear of infrastructure and noise in a fair manner.
6. Establish joint trans-national cross border planning of infrastructure for better alignment and coordination with common prioritization of investments.

7. Constructing a robust and supportive infrastructure by eliminating bottlenecks, missing links and barriers in the system.

8. Use of technology options to reduce energy consumption and GHG emissions in hub operations using fossil-free fuels, electrified handling equipment, cold ironing, automated guided vehicles (AGV) and new transhipment technologies.

9. Facilitate the establishment of a biogas corridor with infrastructure for the provision of liquefied biogas for vehicles.

10. Introducing a certification programme for the transport corridor taking into consideration criteria for quality, environment, safety and security.

11. Use of Key Performance Indicators (KPI) to assess and monitor corridor development in terms of sustainability.

The survey was carried out during August and September 2013. The questionnaire was sent to the members of the Association and relevant administrations and authorities. Answers were received from 20 organizations in eight countries of which 13 organizations were representing the EWTC Association. In the first question each respondent was asked to distribute a total of 100 points to measures according to their opinion of the importance of each measure for enhancement the sustainable efficiency in the corridor, choosing freely how many measures they liked to prioritize. In the second and third question the respondents were asked to choose which types of organizations should be directly involved (responsible or directly taking part) in the implementation and financing of each measure. It was possible to choose one or a combination of organizations for the measures prioritized by the respondent.

The result of the survey indicated six measures as being the most important, namely those with a ratio above 0.4 below in Figure 3. These are: Cross border planning of infrastructure; Establishment and financing of cross border infrastructure; Facilitation of border crossings; Railway shuttle development; ICT platform development and Use of KPIs to monitor corridor development. In Figure 3 the measures have been rescaled by dividing the score of each measure with the score of the highest ranked measure.
In the next section of the questionnaire the respondents were asked to indicate in priority-order which organization that should be responsible for the different tasks and how financing of the activities should preferably be arranged.

4.1.1 Cross-border planning of infrastructure

Planning of transport infrastructure generally is an area where public sector authorities have had a strong role, both on the national and regional level. There is an expectation in the survey that this general pattern for the division of responsibilities should be at hand also when it comes to the future EWTC-setting.
Actors in the public sector both on supranational, national and regional levels are given the highest scores by the respondents, with some additional role to play for the port authorities, often also part of the public sector. The anticipated roles both for the national and the regional levels are obvious in this case with coordinating roles in relation to planning in both a national and a cross-border perspective, as well as for EU to have a stake in the planning also with a role to align national planning with the core transport network corridors. Transport authorities are generally more engaged when it comes to detailed planning, while private sector actors have their focus more to the transport flows and operations than to the planning of transport infrastructure as such.

If EWTCA is seen as a body where these organizations can meet and might cooperate this is of course a possible future role for the EWTCA.

### 4.1.2 Establishment and financing of cross border infrastructure

Transport infrastructure can be organized in a number of different ways, also on a national level. Through history there has been a shift between periods when private sector and local initiatives have been dominating for providing and financing infrastructure and other periods when public sector and national initiatives have been the stronger of the two. In the following section a number
of different models for the provision of transport infrastructure, primarily on a national level, are discussed, which might also be applicable in an EWTC-setting in relation to the questionnaire.

### 4.1.2.1 Introduction and background

There is an interest from several parties to explore ways to bring about an expansion of the capacity of transport infrastructure network throughout Scandinavia, the Baltic Sea Region and in most parts of EU. In Sweden the major routes between cities Stockholm-Gothenburg/Oslo-Malmö/Copenhagen have been in focus of the discussion relating to railroads. In these areas the majority of the population lives, and a large part of the Swedish business community is also situated in these corridors. By connecting more closely the region’s three major metropolitan areas a population of approximately 12 million can be reached. Through further links in Europe, Scandinavia is linked to the European rail network, both for passengers and for freight. There is also an interest in improving transport links in several other relationships, and often in an East-West perspective. This section reflects on projects carried out in Sweden. At the same time most of the reflections are valid also in a broader perspective such as in the EWTC-environment.

The current transport network has been developed largely around the national main lines for railroads and roads, through the latest 150 years. Through successive upgrades of the technology, these networks have been able to adapt to increased demands for speed and capacity. Increased traffic by rail in the last 10-15 years, and increased regional passenger rail in particular, have, however, led to the situation where capacity ceilings now begin to be reached, in some sections, and at certain times. The same holds for the road network in general. However, there is still in general plenty of capacity on the current network, since capacity utilization is concentrated to fairly short time periods.

A perceived need to upgrade both the traditional routes going primarily in a North-South direction and routes in complementary East-West relations makes the future financing and organization of these extensions crucial to analyze. There are a number of main models for this to discuss that has different advantages and disadvantages. Some of them are discussed below.

Here the focus is on infrastructure financing and organization, seen as separate from the organization of transport operations. Railroads are more in focus than other modes of transport.
4.1.2.2 Different financing models

Government financing

The model most frequently used in Sweden and in most other countries since the nationalization of the railways and roads during the 1930-1940s, has been government financing and ownership of the infrastructure. The infrastructure assets have been managed either in the former State Railways Agency (“SJ”), acting like a public utility, or in the form of government agencies (the Road Administration, the Rail Administration).

Investments have been financed with yearly appropriations or for some projects through borrowing with government guarantees or alternatively through the National Debt Office.

During the time SJ operated (from the 1940s until the end of the 1980s) the users (passengers and freight) of the railway system paid most of the costs of the rail network through the prices charged for the transport services. Through various forms of government intervention the costs that the users had to finance were reduced. It was done by extra depreciation of the governmental capital that SJ had in its balance sheet for the rail network and/or by the Government giving grants to SJ in order to cover the deficit in the operations.

From the end of the 1980s, operators on the rail network have instead paid fees related to their capacity usage, which has to some extent matched the variable costs that the traffic induces. These fees represent about 10 percent of maintenance and reinvestment costs.

This financing model, in combination with the Swedish State Budget Act, leads to a situation where investments are paid for by yearly appropriation. Of course, it is theoretically possible to make use of government borrowing to meet the expenditure in individual years in the government’s budget. This has though largely been avoided by the Government in later years. The track charges that the operators have to pay have to comply with the EU-regulation in this field. The flexibility is though rather wide meaning that there is room to keep the track charges relatively low within the regulations or to let operators pay a higher proportion of the costs.

In the Swedish Transport Administration’s balance sheet roads and railroads are recorded to their net value after depreciation. The counterpart in the balance sheet is an item called “state capital” that is notionally defined.

Government financing, corporate structure

Within the framework of a public financing model a possibility is to transfer responsibility for the design, planning and implementation of transport infrastructure projects to a government owned limited liability company. Whether
This in reality would be any different from a government agency model. The corporate form would though allow for a more separate and autonomous management of an infrastructure asset and might also open for more effective ways for carrying out construction. Perhaps one of the most important differences from a governance point of view is the more narrow management that this organizational form gives room for.

Since it can be expected that the implementation of the construction phase of the project will take place mainly through contracts of various types also in the government agency model above, the two models might be rather similar also in this respect. Also when it comes to funding and future charges and fees that the corporation would have to charge these would essentially be determined by the influence and regulation the government likes to direct to the corporation. The balance sheet of the company can be given the structure the governments sees as appropriate and the fees necessary to meet its financial burden can thus be adjusted accordingly.

Similar organizational models exist for a number of transport infrastructure projects that the government has initiated and operates, for example the Öresund Bridge and “Arlandabanan” the rail line connecting the Stockholm city center with the major airport Arlanda.

A corporate structure can, of course, offer flexible forms of co-financing from municipalities and regions, which may also occur in the government agency model above, but perhaps within more narrow limits. It is easier to see the government as owner or partner operating through a corporation than in the government agency model. Various types of project related cooperative structures could easily be formed as part of different projects, perhaps around station development projects compared to a government agency model.

At the end of the period the project lasts, for example 30-40 years, the balance sheet of the company set up for this specific purpose, should in principle consist of an asset recorded to current value and equity on the liabilities side. With the government as the only owner of the company, or with other parties such as municipalities, as shareholders, it is an issue for these parties how the company will be managed in the following time period.

**PPPs – a mixed model**

In cases where there is an interest in going further towards cooperation between the public and private sectors in transport infrastructure projects public-private partnerships (PPPs) can be an alternative. PPPs can, in turn, consist of a variety of organizational and financial models.
The basic idea is that it is the government or any other public sector actor that is the ultimate contracting partner and final owner of the transport infrastructure asset. This is the very essence of the “public” aspect in the PPP-model. The government or other public sector actors generally initiate planning and construction of a transport infrastructure link (or reinvestments in present links) but chooses to contract the implementation of the project to a party that is separated from the government’s balance sheet.

In general PPPs are organized in a special purpose vehicle, usually called SPV, specifically set up for this purpose to be responsible for the implementation of the project. The realization of the project may in turn be carried out differently from a purely technical implementation/construction phase of a project earlier planned in detail by, for example the Transport Administration, to a project setting where the SPV is responsible for all stages of project implementation. This latter form would encompass all stages from planning and financing to implementation and the operation phase. In general, these projects tend to include both financial and implementation/operational responsibilities, but it is not in itself an absolute prerequisite that both these phases are included.

A commonly used contract period is 30-40 years. After this period the road or railroad is generally given back to the contracting partner in the public sector. The conditions to be fulfilled at the handover are generally regulated in the agreement. It is important for the public sector to safeguard that the asset meets the stipulated technical criteria in order for it to be easily re-incorporated into public sector ownership and management. Alternatively the asset might be handed over to a new contractor, following a public procurement procedure.

The loans and other financing instruments used to finance the construction of the plant related to a PPP-construction are normally paid off during the duration of the project. This should also apply to the asset side of the SPV-company, which by contract deadline schematically can be expected to consist of an assets reduced by depreciation during the term, which may amount to 40-50 percent of the original investment value. On the liabilities side at the same time only equity remaining after repayments of loans and dividends to owners of the SPV-company should be recorded. The exact composition of the balance sheet at the end of the contract is also something that can be the subject of an agreement between the parties when the PPP-contract is originally negotiated.

The cash flow of the SPV-company is normally based either on fees from users paid to the SPV-company or on a compensation paid to the SPV-company by the public sector party.

With regard to rail infrastructure, the EU regulatory framework might demand that the railroad itself is seen and treated as part of the overall railway network to which access has to be offered on equal terms to all who wish to apply for capacity. It might also be the case that EU regulation has the effect that track fees on the railway have to be regulated in ways that meets with the
EU requirements. In practical terms, it is not unlikely that track charges also for PPPs will be seen as a part of the Transport Administration’s track fee system to be collected by the Transport Administration, or possibly by other infrastructure managers. Similar rules apply to road infrastructure for which fees charged on the roads also have to comply with EU regulation.

It cannot be excluded that a SPV-company could come to be seen as a formal infrastructure manager, which would mean that the SPVs would have to fulfill a role similar to the Transport Administration when it comes to capacity allocation etc. This may be seen as similar to the role that the Swedish/Finnish telecom operator TeliaSonera has with the conditions of general access for competitors to the copper network for telecommunication. An infrastructure asset formally owned by a separate company might thus have to be opened for competition.

**Private sector model**

There is nothing in principle to prevent private sector actors from planning, building and operating purely private parts of the transport infrastructure network. Historically, this was the predominant organizational model when the rail network was built in Sweden (Hasselgren, 2013) and in many other countries. The Swedish government, during the second half of the 19th century when the major parts of the rail network was originally built, gave concessions to a large number of such local and regional railway companies. In total 336 such concessions were given. Approximately 70 per cent of the rail network was built in this way and were financed by local (e.g. municipalities) and private actors. A crucial part of the concessions was usually the exclusive right for the individual company to operate railway services on that route. Also for roads a strong local responsibility prevailed up until the nationalization of rural roads in the 1940s.

Most directly corresponding private railway organizations are today those that operate various forms of tracks linked to industrial plants and ports. The underground-system in Stockholm and tramway systems in Norrköping and Gothenburg can also in principle be likened to these industrial tracks. They are separately operated from the overall rail-network and exclusively used by the owners of the system. Should this type of rail system be connected to the public rail network managed by the Transport Administration a connection agreement is set up. This regulates various issues on security, traffic management, capacity allocation, etc.

One reason why privately held transport infrastructure systems often have a limited scope is of course the major investment costs associated with these. In addition, anyway in those cases where the infrastructure asset is to be constructed outside the land held by the investor, it is a very time-consuming and complicated procedure to organize the planning and permit process specified in the legislation for the construction of the railway or road.
When the infrastructure with its supporting facilities such as terminals, traffic management and control, stations etc. are constructed, it is likely that anyway larger structures such as new main railroad lines or motorways would be seen as part of the overall infrastructure network, or at least as an asset to be managed under the same rules, that is, requiring a fair allocation of capacity for the different operators. The only cases where this could reasonably be avoided would be those where new infrastructure assets are completely separated from the public infrastructure network and if these are operated separately where only “internal” traffic was allowed.

Since a separation of infrastructure and traffic-operations is a basic requirement in EU-regulation, it is nevertheless difficult to see how such purely private railway and road companies could come to be seen as something other than “quasi-public” assets with comprehensive restrictions on the freedom of the owner to control its asset. Supervision by the Transport Agency in Sweden and the requirements of coordination with the Transport Administration would likely be an integral part of the regulation that would enclose the business (which is similar to conditions in the electricity market and telecommunications markets).

The ongoing financing of the operations would have to be arranged either through fees from “external” railway operators that utilize the railroads or by the company’s customers would the railway company be organized as a single entity. The latter appears to be less likely due to legal constraints in the EU regulations. Similar regulation and rules would apply to roads that would be financed by the users through different forms of fees or tolls.

The project must, as in the case of PPPs be financed through loans and equity. Because there is no party to hand over the project to by the end of some contract period it would be seen as a “going concern”. The company would therefore need from time to time to have an appropriate composition of capital corresponding to the risk in the company’s operations. This would probably induce such companies to hold higher proportions of own capital than PPPs or public sector owners.

Historically, it has from time to time been possible to obtain funding for this type of business on the open bond and stock markets, generally supported by some sort of government backing or guarantee. If this could be possible also today seems to be an open question. An interesting possibility would be for these companies to attract capital investors searching for investment opportunities with a long time horizon and (low but) stable dividends, such as pension funds.
Cross-border co-operation in transport infrastructure projects

The basic models described above take national projects as their starting point. However, many of the experiences can be and have been transferred to infrastructure projects that are constructed and used for infrastructure that connects different countries or regions in different countries.

Both roads and railroads have thus been constructed in such an environment. In Scandinavia, two main examples are the Öresund connection and the Svinesund connection. In the first case, a joint corporation has been formed owned by the Swedish and the Danish governments. In the case of the Svinesund connection, the construction cost was split between the two Road Administrations in Sweden and Norway and kept within their balance sheets. The fees are today administered by the Norwegian Road Administration.

Another important cross-border project in Northern Europe is of course the new tunnel connecting the South of Denmark with Germany, through Fehmarn Bælt. This is an example similar to the Svinesund Bridge, as this is being organized by the Danish government, but in close coordination with the German partners.

The construction of the Channel Tunnel (Eurotunnel) connecting Britain's railway network to France's is another well-known cross-border project. Here, a combination of governmental agreements and concessions to private sector actors has been used to organize the project and the operations. Following the liberalization of the EU railway markets and the financial crises that affected the Eurotunnel's operations, the cooperation between the governments and the private actors have been transformed on some occasions. The general situation that the project is based on a public-private cooperation model has though stayed intact.

In the current EU Transport Policy, the further development of cross-border managed transport infrastructure assets is a crucial part. The development and organization of transport corridors in the EU is foreseen to be fostered by the closer voluntary (or in the case of railways partly regulated) cooperation between the national infrastructure managers. There is also a possibility to establish cooperative structures for these kinds of cross-border structures in the form of the legal structures provided in EU legislation EEIG and EGTC, where a looser or more formalized cooperative structure is offered in the EU-legislation.

There are thus a number of possible cooperative structures at hand when it comes to cross-border cooperation in transport infrastructure. So far, the more formalized national structures seem to be the preferred alternative in Scandinavia, where the national interest is safeguarded through direct ownership.
4.1.2.3 Advantages and disadvantages of different models

The overall impression of the different possible ways to organize, operate and finance new major (national and cross-border) sections of the transport infrastructure system outlined above is that it seems most likely that these could be achieved either through public sector responsibility or through some kind of mix between public and private commitment and ownership. The overall framework for how transport infrastructure systems are generally organized in combination with the very significant scale that major transport infrastructure projects take, makes it unlikely that private operators would be willing to take on more than parts of the very substantial risks that such an undertaking would bring.

At the same time it seems rather unlikely that these very large investments should be handled only by the government and other public sector actors in the future. The actual construction phase can be expected to be carried out through the use of private construction companies. It is also possible to set up agreements where a relatively far-reaching transfer of risk to the private sector through contracts covering the operation of roads or railroads is achieved. In general it seems easier to set up structures with far reaching involvement of private sector actors in the road sector than in the railroad sector. This is largely explained by the high degree of interconnectedness between different sections of the rail network, while roads are still less interconnected.

To exploit opportunities to take advantage of the stronger incentives for efficiency and a life-cycle perspective PPP-structures at the same time seem important to develop further. It is, however, likely that the more wide-spread use of PPPs, and also for cross border structures, would require a more generally accepted legal and contractual framework for PPPs was designed. This should reasonably provide a regulatory framework which has some standard features, a public sector counseling function and some kind of oversight or supervision of PPP structures with demands for openness and transparency. Procurement stages would also need to be organized in a way which ensures that competition becomes effective.

When it comes to financing, it should be an open question how this is organized. In those cases where it is possible to arrange the borrowing on the market in a way that, overall, when the implementation and operation of the asset is added, leads to cost savings compared to a hypothetical public organization, this should be considered. It is also, of course, important that the technical standard of the assets is carefully regulated in the contracts.

For all of the three alternatives with non-government funding in the project phase the issuance of specific “project bonds” could be an opportunity to explore. A government owned corporation, such as the Öresund Bridge cor-
poration, an SPV in a PPP-structure as well as a private sector organization responsible for transport infrastructure could all issue such bonds.

Bonds connected to transport infrastructure projects normally offer a long term investment horizon with an expected yield somewhere in between of government bonds and corporate sector bonds or shares. Project bonds connected to infrastructure projects are also one of the new measures in the EU TENT-T/CEF-policies (Regulation 670/2012). A number of initiatives based on this regulation have been launched lately, where EU and EIB supports the issuance of such bonds.

A summary of the most essential aspects of the different models for organizing and funding above is given below.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Government agency</th>
<th>Government company</th>
<th>PPP projects</th>
<th>Private projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>Agency</td>
<td>Joint stock company</td>
<td>Joint stock company</td>
<td>Joint stock company</td>
</tr>
<tr>
<td>Financing</td>
<td>Grants/loans</td>
<td>Government ownership/capital and borrowing</td>
<td>Private ownership/capital and borrowing</td>
<td>Private ownership/capital and borrowing</td>
</tr>
<tr>
<td>Incentives for efficiency</td>
<td>Low</td>
<td>Medium</td>
<td>Medium/High</td>
<td>Medium/High</td>
</tr>
<tr>
<td>Contract complexity</td>
<td>Low</td>
<td>Low</td>
<td>Medium/High</td>
<td>Low/Medium</td>
</tr>
<tr>
<td>Transparency for citizens</td>
<td>Good</td>
<td>Good</td>
<td>Needs to be regulated</td>
<td>Can be regulated</td>
</tr>
<tr>
<td>Political acceptance</td>
<td>Good</td>
<td>Good</td>
<td>Pending positive</td>
<td>Unclear</td>
</tr>
<tr>
<td>Risk of the public sector party</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium/High</td>
<td>Medium</td>
</tr>
<tr>
<td>Legal conformity</td>
<td>Good</td>
<td>Good</td>
<td>Demands analysis</td>
<td>Unclear</td>
</tr>
<tr>
<td>Transparency for co-financing from other partners</td>
<td>Some opportunity</td>
<td>Possible</td>
<td>Possible</td>
<td>Possible</td>
</tr>
</tbody>
</table>

Figure 5
Different forms for organization and financing of transport infrastructure

Having considered a number of different possible organizational structures for transport infrastructure it is now time to return to the questionnaire. In terms of the survey for the development of the EWTCA the focus in this specific area has been both on construction and financing of the infrastructure system with a “bottleneck”-orientation as presented in Figure 6.
Here we can see, as in the more general text above in this section, that there is a more obvious disparity in the view on the different actors and their expected roles. Thus, the government is expected to be the core actor both being responsible for the organization and financing of these activities, primarily through its agency or authority. Primarily this is through activities on the national arena but sometimes also with a cross-border perspective. At the same time regional public sector actors as well as private corporations and PPP-structures are seen as possible and important other actors.

Regional public sector actors might of course have an important role in some countries depending on the division of responsibility in the specific country. Private sector actors might serve as partners to public sector actors, either as contractors delivering specified services in relation to construction of new infrastructure or as partners in PPP-structures.

Besides giving support to the general view that many different models might be possible to use in the future, this might also open for organizations like EWTC/A to be active in the fostering of cooperation between the public and the private sector. The organization might serve as an information broker between the different sectors and also between actors on different spatial levels. The organizational models outlined above might give inspiration to future discussions on organizational design.
4.1.3 Facilitation of border crossings

Border crossings and the facilitation of these have been among the most prioritized in the discussion on the future functioning of the EWTC. Without effective routines and procedures in this area the transport flows and their future increase will be less efficient. A special study has been carried out in this area and is reported here in some length in order to spell out some of the specific difficulties and problems, with an eye on the cross-country specificities of the EWTC/A. The full report is annexed to this report.

4.1.3.1 Weighing compliance against efficiency – what is the right balance?

Making sure that goods are compliant and can pass national borders can be cumbersome to importers, exporters and freight forwarders alike. The number of days spent at border crossings is higher than most people’s spontaneous guess and when including preparations and all documentary obligations it can be very time consuming. The costs are also very high. A commonly cited statistic (OECD, 2003) says that border crossings cost between 1 and 15 per cent of the value of the goods. The wide variation is of due to the differences in value of the goods and the differences in processes at the borders. Another international study made by the OECD shows that every extra day needed to ready goods for export and import reduces trade by around 4 per cent. Also the impact of an extra day that goods spend at the border has a greater negative impact on trade flows than an extra day spent at sea delivering a container of goods (OECD, 2011). The latter has to do with predictability. You can foresee a delay at sea but a variation in time for border crossing has a negative impact on supply chains for just-in-time and demands higher (and more costly) storage.

Studies also show that the number of signatures and documents needed for a trade transaction correlates with the number of days spent at the border (OECD). In the World Bank Doing Business Index 2013 the countries are ranked for their ability to trade across borders. Lithuania, for example is ranked 24th of the 185 countries studied. The number of days for export is 8 and the documents required are 6. For import the days spent are 9 and the documents required 5. For the Russian Federation the ease of trading cross-border rank is 162. The number of days for an import is 36 and the number of documents required 11. For export the days required are 21 and the number of documents are 8.

These numbers should be considered with a bit of reserve. The ranking is done based on the perception of traders. The number of days and documents are averages. For an individual sending the number of documents required can be substantially higher but also lower. However, the method is consistent and has been developed over a number of years. The index helps us to see the gap between leading nations like Singapore (1st in rank) and the economies that are
still working on improvements for their systems. This is a first snapshot of the situation for border crossing.

From the above it should be clear that there are economic gains to be had from improving the conditions at border crossings and that this is an on-going theme for trade policy, researchers and practitioners. But are there then not just causes to have controls at the borders? The answer to that question must be both yes and no.

Yes, all nations protect their borders and at the border there is a good possibility to have control over fluxes of goods and to collect revenue. Also there are a number of true threats that can be fought off at the borders. Diseases in foodstuff or animals, illegal immigration, substandard drugs, illegal weapons and substances, smuggled or counterfeit goods, possibly even terrorism are real threats to our societies that can be monitored and stopped at the borders. There is real need to have trade statistics and standards for goods. So yes, there is just cause to have controls at the borders.

But no, not all controls have to happen at the borders and not all goods need to be controlled. Innovative thinking around risk based controls, trusted trader schemes and customs warehouses and electronic declarations open up new possibilities to coordinate and focus controls on a smaller amount of goods with better results. This is not to say that there should be no controls. An efficient revenue collection system, with a national debt office that effectively collects debts incurred by companies, will permit controls to move from the borders into the premises of companies. Electronic declarations permit the collection of statistics. Intelligence and mobile customs controls can bring higher yields and better crime-fighting.

The list above will give an idea of what authorities are present at the border. Sweden is an extreme in this aspect since all border crossing issues are managed by Swedish Customs. It is frequent that at least 6-8 authorities share the tasks at the border. Besides customs services statistics, immigration police, agricultural and phyto-sanitarian authorities, tax authorities (if separate from customs), drugs administrations and standards authorities are authorities commonly operating at the border. To that list a large number of authorities like aviation, road safety control and many others can be added in some countries.

**Conclusions on the balance between compliance and efficiency**

The balance between compliance and efficiency at the border crossings can be made in a way that permits both goals to be accomplished. Modern methods and simplifications will achieve results that are interesting for all parties. Trade is not a zero-sum game and with smoother border controls come gains in trade and a more predictable environment for traders and their investments. New methods and risk managements should also bring higher yields. Modern meth-
ods that can be explored by the EWTC/A will be further described below. In developing an ICT infrastructure for the transport corridor the needs of authorities involved in controls at border crossings will be a constraint.

4.1.3.2 Purposeful documentation and streamlined documents. To work with authorities cross-border

The legitimate purpose of documentation asked for by authorities has already been roughly introduced. However, there are a number of issues with international trade documents beyond the actual number of documents and there have been a number of tools produced to help alleviate these issues. Different countries have different requirements and even in the European Union this is still a problem. The legislation for Summary Export and Import Declarations gives minimum rules and some countries have chosen to ask for additional information. In this context this is an example of where national requirements make standardisation and automation less easy to accomplish.

Different authorities in the same country can have different practices and legislative demands which translate into large differences in vocabulary for the same thing. For instance a border crossing might have a number of different names in different authorities; control post, border post, customs office and so on. Also there are a number of instances where names and abbreviations commonly used risk to be confounded. Paris, France seems unproblematic but a sending with the address Paris might end up in seven different locations of which Paris, Texas, is but just one example.

To help reduce the documentary burden of traders and avoid confusion authorities need to work together with standardisation and simplification. Legislation can often be directive and there will be need for parliament decisions in order to harmonise some terms. To make sure that all information collected serves a specific purpose and actually is part of the compliance needs is a first priority. Much information is asked for by tradition and for the sake of form. To perform facilitation there needs to be a mind-set where officials are prepared to question what the information asked for achieves and to seek compromise with colleagues in other authorities and across border.

The UN and its Centre for Trade Facilitation and Electronic Business, UN/CEFACT, has developed a number of tools that will help countries simplify document procedures and perform document alignment. Document alignment can be aiming at standardising paper size and form and more importantly how to organise the information on a document. The UN/Layout Key gives a standardised form for trade documents that can be used for many purposes, also at least partly in electronic form (UN Recommendation no 1 and UNECE recommendation no 6). In deciding format and the place for information on a paper based document large simplification is accomplished and even if a large part of
documentation today is given in electronic format the thinking behind is still present. There have been attempts at adapting the Layout Key to an electronic format but eventually there is much to suggest that different forms of data models will perform that sort of simplification in a more precise way.

An efficient way of accomplishing simplification is that authorities can recognise documents from neighbouring states and other authorities. This mutual recognition of documents can be extra useful in the field of rules of origin or for veterinary or phyto-sanitary documents, but can be used in a number of fields where the authorities feel that their compliance needs are met with the provided information and that they can trust the issuing authority in another country.

Another possible line of facilitation is to limit the collection of supporting documents. For instance customs authorities usually collect invoices as supporting documents to customs declarations. If there is legislation in place that mandates that companies need to keep their book-keeping and supporting documents in original, and that is enforced through tax authorities and a national debt office, there is a possibility to collect only the invoices that will be inspected at the moment. Other invoices can be inspected in post-clearance procedures or audits at a later date. This would reduce the number of invoices collected substantially and this has been introduced by Swedish Customs. The example should be possible to copy in other authorities and countries.

Conclusions on documents

Document alignments, international code lists and simplifications through for instance mutual recognition of documents are important steps towards smoother border crossings. The EWTCA should make sure that current documentation is in line with international standards and work with authorities involved in border crossings to find ways of simplifying documentary procedures. The development of a common ICT-platform for information exchange and sharing of data will be dependent on what structures and functions are needed in the agencies involved in controls at the border crossings, and on how well they can collaborate in document simplification and data harmonisation.

4.1.3.3 Simplification measures – “Toolboxes”

In the separate report on trade facilitation mentioned above four sections called “toolboxes” a number of tools and simplification measures are described and explained. Many tools could be of immediate use to the EWTCA and those are explained in some detail. Here some of the main observations and conclusions are reported.

Business Process Analysis (BPA), or Modelling, is a method to understand how a business or process is organised and run. It describes the actors and
stakeholders involved, the processes in detail, the information that is exchanged and the documents that are produced and what they are used for. This can be a very powerful methodology to describe and understand an as-is situation for a process. By mapping this in so called Enterprise Architecture specific diagrams can help give understanding of, for instance, what ways information travel.

However, it is not totally necessary to start with software and a full understanding of the tool. To do a first mapping of information flows and steps in a process and describe them rigorously will yield good results allowing a first understanding of where problems lie even for those who are not trained modellers. A deeper mapping, for instance for the purpose of simplification of processes prior to the organisation of a Single Window, would benefit from staff that are professionally trained in this methodology and this is often a tool used by consultancy firms to describe processes and look for simplifications.

There are a large number of concrete measures that can be taken to increase the pace of border crossings. UN/CEFACT Recommendation 18 is the first basis for trade facilitation. It enumerates a large number of measures divided into the thematic groups of commercial measures, international payments measures, measures related to official controls and transport related measures. This is a broad portfolio of facilitation measures covering for instance the use of cost benefit analysis when introducing new requirements, the single submission of data, advanced lodgement, deferred payments, and audit based controls. Even though many measures can already be in place it is well worth to make this long enumeration of measures a checklist for assessing if the border crossing meets with international requirements and best practice.

To organise joint border crossings demand a substantial amount of confidence and mutual trust. An extreme example of this is the joint Swedish-Norwegian border crossings where the officers from the two customs services can perform the duties of each service. This is done in separate data systems that are operated on a joint computer and the customs officer can change systems between Swedish and Norwegian customs data programmes by operating a lever.

The Single Window concept is designed to allow traders to file customs declarations and all border-crossing related documentation simultaneously, for the use of all involved authorities, and get a single joint answer. There are large advantages for all parties in installing Single Windows, both for trade and for Government agencies, but it is also a very complex project where political support at the highest possible level is required and national bodies will have to be owners and drivers of large parts of the project.

Single Windows have mostly been taken up in developing economies where the word has worked as a buzzword to attract aid money. Large old incumbent systems seem to hamper the installation of Single Window in developed economies. Even though Single Window solutions should also be a good way of han-
dling compliance demands between administrations in a regional setting, there are to date no real regional single windows operational, even though this is attempted both in Asia-Pacific and in South America.

The Single Window is a product for the volume market. There need to be a certain amount of declarations or supporting document for this to be a worthwhile investment for the authorities involved. Trade might have a different rationale for asking for a Single Window, mostly based in simplification and coordination between authorities, but these coordination needs can perhaps be reached with other measures.

Some Single Window solutions have grown organically, by letting logical solutions be added on as automation has grown. Statistics Sweden was linked to Swedish Customs as the export declarations first became electronic in the 1990s and later other modules were attached. Other countries have gone for a “big bang” where all processes involved have been mapped, aligned and stream-lined and turned electronic in a single step leading to a Single Window solution. Today a considerable amount of companies and countries are offering Single Window software packages, including also UNCTAD, which in its latest versions of free Customs System Software ASYCUDA have included a Single Window module.

In the UN/CEFACT Recommendation no 33 on Single Window three different models of a Single Window Set up are presented. Single Authority, Single Automated System and Automated Information Transaction System, representing various degrees of automation and different set-ups for governance. Also UN/CEFACT Recommendation no 34 Data Simplification and Standardization for International Trade and Recommendation 35 Establishing a legal framework for international trade Single Window are aimed at guiding countries towards the organisation of a Single Window.

Conclusions on the toolboxes

There are a number of tools and checklists that could be used by the EWTC/A to achieve its goals. However, many larger initiatives will have to be taken at a national governmental level and will need substantial political support. To start with low-hanging fruit and to base the work on international standards or recommendations should make it possible to work for political support at the same time as simplifications can be achieved on the ground. Business Process Analysis will allow for a deep understanding of what the situation is today and where possible bottlenecks are. It is a method that can be very useful in describing the current situation and help mobilise political support. The groundwork for a Single Window is document alignment, data harmonisation and process simplification.

Also a legal environment permitting for electronic documentation and communication needs to be in place. All these components in themselves will yield
benefits and are necessary stepping-stones towards a common ICT platform. It should be noted that governmental agencies are the key actors for all the above-mentioned measures. To do a Single Window for a transport corridor could be a first step towards a larger national or regional single window, but the difficulties and resources involved would be substantial and perhaps make the return on investment hard to calculate and achieve. In a regional context this has yet to be achieved. The EWTC/A should assess where its resources are best used working for smoother border crossings.

4.1.3.4 Integrity issues

There is one issue that can hamper the speed of border-crossings more than others and that is the integrity or corruption issue. The more authorities that are active at a border and can stop goods from clearing the more acute this issue is likely to be. There are large values concentrated to one spot when goods cross borders and that increases the attraction. It should however, be made clear that this is not an economic issue but a cultural and life-style issue and that there is no clear link between a country being poor and having large corruption problems.

There are methods to track and calculate corruption. This will not give a full account of that but typically at a border crossing the officer that has the longest or the shortest dwell times should be monitored. Special corruption-fighting forces are seldom efficient, but threaten to become just another hand in the pocket. It would make more sense to look at the companies that are paying if authorities are determined to root out corruption.

Reducing waiting times at border crossings and installing automated solutions will reduce the incentive to companies to pay bribes or otherwise “incentivise” officials at the border, but there is no real guarantee of integrity issue being tackled through automation. There will always be contact between officials and trade and there will always be ways of inventing a problem. The heart of the matter is in life-style choices.

4.1.3.5 The survey results

The EWTC/A survey results more or less support the recommendations in the previous section. The public sector actors are given a strong role as responsible both for the organization and financing of border-crossing simplifying activities by the respondents. Here the EU-institutions can have important roles in relation to the enactment of EU-legislation supporting simplification of customs processes and by financing different measures. Governments and their respective authorities are perceived as the most important actors in setting the legal framework in each specific country but also as responsible for the mapping, e.g. through BPA-measures. Activities and systems in order to simplify the proce-
dures, such as Single Window-solutions, is also an activity where Government authorities are expected to be responsible. Regional and local public sector actors can be instrumental in supporting the processes carried out by the national agencies, but are in general not responsible for the financing and operation of these activities.

Some additional roles are suggested to be taken by private sector actors, but these have been indicated by fewer respondents. This is also echoing the insights from the sections above. The private sector actors primarily have important roles when it comes to IT-related solutions for monitoring of trade flows. These activities are in general connected to the business-cases in focus of each actor on the transport market. Organizations as EWTCA can play an important part in fostering better procedures, e.g. through business process mapping and systems, but should probably not take on too active roles in this field.

4.1.4 Railway shuttle development in the corridor

The Viking train shuttle-system, operating from Klaipeda to Odessa, is an example of a successful border-crossing transportation system in the EWTC, where the Association also has been operative. The project and current operations were originally initiated in the early 2000s and the project has been con-
firmed by an agreement between Lithuania, Belarus and Ukraine. Transported volumes fairly quickly reached 40000 TEU/year from 2003-2007, but since then seem to have remained on that same level. The project has experienced a number of challenges connected to technology (cars and IT-systems etc.) and a number of border crossing related obstacles. Legal differences as well as economic and policy-related differences are also reported as obstacles that have been tackled. It is interesting to see that most of the institutional aspects reflected in the model in Figure 1 thus are influencing the development of practical services like these.

This is clearly an area where the private sector could be expected to take the lead in cooperation with public sector actors. This is also the result of the survey. The development of the services should primarily be driven by the business cases and the market. The private sector could be expected to be the drives for developing intermodal solutions, operate transport flows as well as terminals and providing rolling stock.

At the same time there is an experience from many countries that the responsible agencies should also be active in fostering good prerequisites for railway shuttles to be developed. On the national level legislation might have to be put in place in order to facilitate intermodal and border crossing systems. In cases where the railroad operations are in the hand of the government there would of

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**Figure 8**

*Development of container train shuttles along the entire transport corridor using One-Stop-Shop rail freight administrative services*
course also be an important role for the government to take on responsibility for some part of the operations. The assignment of capacity in the railroad system for systems like the Viking shuttle is also an important role where government authorities are generally important.

Public sector authorities on the regional and local level as well as port authorities could be instrumental in providing support for terminals and ports to be constructed and operated in accordance with procedures that leaves them open to all parties in a non-discriminatory ways.

The current EU project Shift2Rail is an example of a major project with a transport corridor perspective where business, public sector authorities and research institutions are working together with the aim of strengthening the railway sector in general. Here the role of EU is exemplified. But EU also has a role in supporting financially the development of intermodal transport systems, e.g. through the Marco Polo-programme.

Organization like EWTC/A can generally, as in the case of the Viking-project, be expected to participate in these kinds of activities offering information and resources to help coordinate different actors, much in line with the role traditional Chambers of Commerce often take on.

4.1.5 ICT-platform development

This is an additional area where cooperation between the private and the public sector should be expected and might lead to positive results. The public sector might bring stability and structure into common platforms, while the private sector should generally be expected to provide the data and influence the platforms and the data in order to achieve an efficient supporting environment for business to be carried out.
Here, as well as in other areas of cooperation over borders and between sectors, it is crucial to take the institutional environment into consideration. Different views on the roles and the regulatory environment, e.g. when it comes to integrity might be crucial aspects in order to achieve success. EU, ministries and government authorities have important roles in developing and implementing legal frameworks where necessary. Sometimes these actors also can take on more active roles as financing partners, and as operators of parts of the ICT-systems. Transport authorities and ports are natural actors in this respect.

EWTCA might have an important role in this respect overcoming differences and supporting the development of ICT systems and platforms, but probably not as an active actor in the provision of systems etc.
4.1.6 The implementation of Key Performance Indicators

Key Performance Indicators (KPI) is a tool for monitoring of the development and performance of e.g. transport flows or infrastructure in a transport corridor like the EWTC. KPIs can be developed for measuring services from a wide range of different angles. Five different such angles are discussed in a 2010 report developed within the EU-funded Super Green project (Super Green, 2010). These are KPIs directed at measuring:

- Efficiency
- Service quality
- Environmental sustainability
- Infrastructural sufficiency and
- Social issues

All these measures can be further specified and have to be operationalized as regards definition, measurability, data gathering and designation of reporting and monitoring responsibilities. One of the major difficulties in setting up KPI systems is to organize both the collection of data, data analysis and dissemination with the actual monitoring and follow up with appropriate measures, whenever target levels are not met.
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- Social issues

All these measures can be further specified and have to be operationalized as regards definition, measurability, data gathering and designation of reporting and monitoring responsibilities. One of the major difficulties in setting up KPI systems is to organize both the collection of data, data analysis and dissemination with the actual monitoring and follow up with appropriate measures, whenever target levels are not met.

In the survey this has been identified as an area where, once again, a good public private cooperation is crucial. Public sector agencies on different levels can often provide a sound basis for such systems to be set up and to be operated over time. Transport authorities often have a good access to relevant data concerning the infrastructure as well as the transportation flows. Therefore these actors have an important role to play.

It is though crucial that the private sector actor, which is generally the user of the systems are involved in the development of the systems and the reporting from them. This in order to safe-guard that the data provided through the systems comes to reasonable use and can influence the future development. Business-case adaptation is thus crucial also in this respect.

The common development of KPI-systems between the public and the private sector as regards setting target levels and goals and procedures for monitoring and evaluation is crucial for success.

Once again it seems reasonable that the EWTC has a role to play in the development of these systems, but reasonably not in the further operation of them.

**Figure 10**
Use of Key Performance Indicators to assess and monitor the status and development of the separate processes within the transport corridor in terms of sustainability, i.e. economic, environmental and social efficiency
4.2 Additional rail-road capacity in Sweden, the ”SouthEast-Link”

The realization of effective railroad transport that connects the port in Karlshamn, County of Blekinge, with the main national railroad-lines and important freight customers, such as IKEA and Volvo, is one of the most prioritized infrastructure projects in Blekinge. The railroad between Älmhult (where IKEA has major parts of its Swedish operations) and the Blekinge coast-line was constructed in the late 19th century but was interrupted by the late 1980s when the southern section of the railroad was taken out of operation and later torn up. Today the railroad-section between Älmhult and Olofström is operated but the “missing” link south of Olofström means that train transport has to take the longer route passing Kristianstad to reach the port in Karlshamn.

A thorough investigation on a new-construction of the missing link and a re-investment in the remaining railroad-line has been carried out by the Swedish Transport Administration, partly financed by Region Blekinge, private corporations and the local governments in the area (Transport Administration, 2011). The reports show that the realization of the project is practically viable. There are some different alternatives for the physical location of the new-construction of the missing link which has to be further discussed. The final solution also has to take into account whether the focus should be freight transport and/or passenger transport. A combination of both these transport flows is though probably a requisite for the financing of the project.

The total investment costs of the project are estimated to 2.5 billion SEK. Financing could be sought from national government transportation appropriations. This would probably not be an enough encompassing financing solution, which makes contributions from Region Blekinge and the local governments necessary. A calculation carried out by a special investigation commissioned by Region Blekinge and presented in 2014 indicates that financing from the EU could also be expected to cover some 30 per cent of the costs. Still there exists considerable uncertainty whether the project would be viably in terms of the general financing and planning system in Sweden. Even if the project is mentioned in the new Transport Plan for Sweden, established in 2014, there is no indication of when such an investment could be realized.

This is therefore a good example of an investment in the transport system which has a given logic as part of a regional and local transport market, but also is crucial for the development of the EWTC and the possibly major transport flows this corridor could attract. The national planning system thus lacks processes and methods to include these aspects.

A number of different organizational and financial solutions could be discussed that could come to use in the further planning of the SouthEast-link.
Some of them will be discussed here, with the different models discussed in section 4.1.2.2 above as a background.

There are two crucial dividing points that have already been mentioned above when an alternative model, compared to the traditional government own-finance-build-manage model. The first is whether the new construction of the SouthEast-link should be organized as part of the Transport Administration’s operations or as a separate entity either as part of the regional or local actors’ organization or as a separate corporation.

The second question is whether a realization of the project should be sought within the general financing mechanism for these projects, with primarily government appropriation based financing, or whether also additional and alternative financing measures should be sought for. This gives four basic alternatives around which a discussion on the realization of the SouthEast-link could be centred.

![Figure 11](image-url)

**Figure 11**

**Alternatives for construction of the SouthEast-link**

The basic model in consistence with the present organizational and financing model would be to expect the Transport Administration to include the upgrading and new-construction of the project in its long-term plan, perhaps supported by regional financing available for Region Blekinge. This has, more or less, been the working assumption in the present work at Region Blekinge in relation to the SouthEast-link. So far a comprehensive pre-study for the relevant measures to be taken has been produced and presented. The possibility to prioritize this project as part of the National Transport Plan is though very limited. The newly released plan for the coming 12 years (2014-2025) does not include the SouthEast-link as an active project but as a project to further inves-
tigate. Possibly this means that the project will not be furthered in these years, following the traditional model.

Some kind of alternative, either with sustained government ownership but with alternative financing, or a regional/local alternative could be seen as possible ways forward. It is difficult to see that the construction costs of the project, even with a substantial financing from EU, perhaps in the range of 20-30 per cent would be financially viable as business operation. An alternative where either higher track fees are introduced, as part of the Transport Administration’s operations or in a separate organization, seems therefore to be dependent on support by grants from the different public sector stake-holders.

Taking into account the major difficulties other projects with similar prospects have or have had in Sweden, and specifically seen as part of the Transport Administration’s operations, perhaps it is time to consider a separate organization in order for this project to be realized in a reasonable time perspective. Therefore the prospects for forming a regional transportation corporation with the municipalities, Region Blekinge and stake-holders in the private sector could be investigated as a next step. This would be a practical use of the multi-level-governance concept applied to this specific project. Here we can see that new actors might take on roles that, since the 1940s and the nationalization of the railroad system in Sweden, have been given to the government (Hasselgren, 2013). The possible legal, financial and practical aspects on the SouthEast-link should be detailed in this analysis, with a focus on solving issues more than describing the obstacles, which are indeed numerous.

The possible financing of such a corporation should be clarified, with government grants, regional and local grants, EU-grants and private sector support. Whether bonds issued by the Region or the municipalities could be an alternative to use for the funding of the construction phase should also be included in a further analysis. EU Projects Bonds as a financing instrument should be further analysed in relation to this.

The possibility of connecting the new railroad to development of new commercial activity and enlargement of already existing operations (Volvo, IKEA and others) should also be part of the investigation. Here the wider benefits to the transportation system at large should also be taken into account. Perhaps a regional organization could sell capacity to the Transport Administration and also connect with the major transport flows on the main lines in Sweden and with the seaport in Gothenburg?

It is difficult to see how this project could be directly linked to the EWTC/A, but of course the support of the Association and the perspectives offered by the Corridor are important aspects on the further development of a project like this. All these possible connections should of course be studied in the coming investigation and analysis.
5. Conclusions and recommendations

This report has illustrated a number of different aspects on the cross-border cooperation that has developed over time in relation to the EWTC, both when it comes to the development of the cooperation that takes place cross-border and in relation to the EWTC. The possible future development of the cooperation and the EWTC’s role has been reflected on based on the survey carried out during 2013, where the organizational and financial aspects of cooperation in the six areas given the highest scores by the respondents have been focused.

Among these areas the different financial and organizational models that can be used for the development of transport infrastructure assets and questions in relation to trade facilitation measures have been given more thorough consideration.

Another area of interest has been the SouthEast-link in Blekinge and how such a project can be furthered in the most efficient way in the national transport planning in Sweden as well as in an EWTC-perspective.

The analysis is carried out with an institutional theoretical view in mind and with the multi-level-governance concept and theories connected to the growing strength of network-like structures in cooperation like this.

To start with it is important to compare the EWTC with other actors from a multi-level-governance perspective. Such a comparison is presented in Figure 12.

Here, in general terms, it becomes obvious that an organization like the EWTC has as its strengths to be active with activities like planning, coordination internally and towards external actors. Roles in financing, ownership and management when it comes to facilities in operation are generally more difficult to see as activities suited for the EWTC. The EWTC has to coordinate with the other actors with roles in the EWTC. This is also clear based on the comparison in Figure 12. Comments on the more specific areas that have been dealt with in this report are given below.
Discussing the further development of the EWTC it is crucial to bear in mind that the corridor is both a physical transport infrastructure asset, generally in the hands of the countries, regions and corporations (such as seaports and terminals) in the different countries, and a basis for carrying out transport meeting demand from customers in different markets. The survey has shown that public sector actors like the EU, ministries and agencies both on a national and on a regional level are expected to be responsible for the transport infrastructure related issues. And this includes generally both roles as owners/managers of these assets and the role as financer of the operations. Often transport infrastructure assets are financed through appropriations, but some parts of the system are financed via fees to a higher extent. This holds for some parts of the railway system as well as for seaports and terminals.

In relation to transport infrastructure it is foreseeable that the EWTCA can have and develop roles primarily as a facilitator of planning processes, supporting national and regional authorities with information and by bringing different parties in touch with each other during the planning process. An important aspect of planning is of course to present and keep updated a strategy and vision for the future development of the corridor. Here the Association can have an important role.

The Association also might play a role in connecting with EU and supranational organizations like the UNECE and its transport and trade facilitating ac-
It seems more unlikely that the EWTCA should take on more active roles in the ownership, financing and management of transport infrastructure sections in the corridor.

When it comes to the development of ICT-systems, trade facilitation measures, the development of KPIs and the further development of business cases like the train shuttles the EWTCA can also, as in the past, have an important role. Even if many of these issues also are part of public sector and private sector actors’ natural areas of responsibility there are obvious possibilities for the Association to contribute to the development.

Trade facilitation is an area where efficient routines and measures clearly can contribute to the smooth function of the transport services and the growth of these services. Here we have concluded that it is important to keep in line with already developed guidelines and structures for data transfer and dissemination as well as for safeguarding that simplification activities are carried out in line with such international standards. A powerful tool for the furthering of trade flows is generally a thorough mapping of administrative routines etc. Such a Business Process Analysis might be an activity that is well suited for the EWTCA to be responsible for.

In order to develop solutions like Single Windows for trade related administrative routines it is crucial that such a mapping of the present routines is carried out. But it is also pointed to the situation that the legal framework supporting a Single Window solution is a necessary prerequisite. This is something that generally is handled on the national level and needs a clear political backing, since the numerous agencies and authorities often part of the trade related administration often makes reform difficult and time-consuming. A too strong focus on the development of a Single Window solution should perhaps be avoided in order to experience a less successful effort for the EWTCA.

The existence of different institutional barriers between the countries engaged in the EWTC and the (at least) three rather separate markets that the Corridor serves connects to the institutional theory basis of this report. Besides experiencing cultural and language related aspects that might hamper the development of cross border cooperation, the institutional setting as reflected in legislation and administrative structures in different countries, both inside and outside the EU, might be difficult to overcome. The involvement of the governments is therefore often necessary to get ahead with many of these issues.

From experience in other similar cross-border cooperation-projects there is at the same time often a number of possible projects related to concrete situations where cost reductions or revenue enhancements might be at hand, given increased cooperation that should be in focus. In cooperation of this kind “small and simple” is often a good principle to follow as a way forward while too complex projects might lead to time consuming and less favorable results. The cooperation of the public and private sector actors in many of the activities is
also a recommended practice. Private sector actors are often experienced in focusing on results, while public sector actors might provide long-term perspectives and access to political support and necessary momentum for institutional reform and adjustment.

Finally, the development of the SouthEast-link in Sweden, county of Blekinge, has been discussed. Here the conclusion is that organizational models where the region and local actors take on more active roles for the realization of the project might be a fruitful, but financially and organizationally challenging, way forward. It seems highly unlikely that the Transport Administration will prioritize this project in the foreseeable future, e.g. in consideration of the low priority given to the project in the recently established national transportation plan. A measure that could be discussed in order to raise the potential for future government financing in relation to the SouthEast-link would be to have it included as a branch of the Southern main trunk railroad line (“Södra Stambanan”), in parallel to other similar branches connecting the national railroads. This would make the SouthEast-link to a section of the TEN-T network and more easily eligible for EU-financing.

A possible joint project between the regional and local governments and with the support of the local business interests might be fruitful to investigate further in order to present a concrete offer to the government and for possible EU-funding. This clearly resembles a multi-level-governance structure where actors on the local and regional level, that were instrumental in constructing the railroad in the late 19th century regain some of these traditional roles from the government. It is often interesting to study the history in relation to railroad construction. During the time of heavy new-construction of railroads in Sweden the initiative lay often on the regional and local level, in cooperation with private sector actors, but with different kinds of support from the government, such as guarantees and concessions. This might be a model also for the future. The connection of the project to the EWTC is of course something that should be emphasized in relation to the further development of the project.

The EWTC and the Association are two good examples of the on-going change of traditional roles for actors on all levels in relation to transport infrastructure and transport flow-related development. Regions and local actors become more involved over time and nations have to face demands both from the regional/local arena and from the supranational level. Multi-level-governance as a reality seems to be here to stay.

When understanding and analyzing the possibilities and obstacles in relation to the development of cross-border cooperation the institutional perspective presented in this report is helpful. It facilities a structuring of different aspects and arguments according to a coherent structure where slower changing aspects related to culture and legislative frameworks are important on an overarching level. In the shorter term governance structures, organizations and
cost efficiency in the given structure is perhaps more important. There are good prospects for further efforts in order to foster and facilitate further cross-border cooperation when a focus on short-term solutions are sought for. This report has exemplified a number of these possibilities. It is recommended that the EWCTA should primarily focus on such practical, short-term issues.
Literature


SuperGreen (2010), Supporting EU’s Freight Transport Logistics Action.


Annex 1