







# Governance Structure for Transport Corridors

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# MULTI-OPTIONAL GOVERNANCE STRUCTURE FOR MAJOR TRANSPORT CORRIDORS

## Abstract

Transport plays essential roles in almost all economic activities and our daily lives. Transport flows are often agglomerated in so-called transport corridors linking urban and/or commercially important areas. Clearly, it is desirable for transport to be efficient and sustainable, thus there are several on-going initiatives to develop major, often transnational, transport corridors. Diverse stakeholders are affected by and/or involved in the development of these corridors, including travellers, transport buyers, transport service providers and transport authorities (local, regional, national and transnational). Governance of the corridors can be regarded as the interactive involvement of these stakeholders in their development and subsequent management.

This is a licentiate by publications based on a covering essay that summarises and synthesises four articles. The topic focuses on the development of a framework for designing governance structures for major transport corridors, by examining the variables that should be considered, the structural and procedural organisational possibilities, and both stakeholders' participation and interactions. A qualitative research approach has been applied, as deeper understanding of the underlying issues is needed. Several studies have been performed, in conjunction with the Bothnian green logistic corridor project, to illustrate key concerns. These studies have included literature reviews, studies of documents describing governance of major European transport initiatives, and interviews with key individuals involved in the development of European transport corridors. An international study has been established and supervised to gather experiences from other research projects, including an open workshop for discussion between representatives of various stakeholder groups. In addition, a case study of the Bothnian corridor has been performed, including focus group discussions with principal stakeholders.

Main findings from the literature studies concern both the design of governance structures and their socio-political integration. The findings show that there is no universal solution for governance structures as they have to be adapted to the social, economic and political context, and should have a sufficient flexibility to meet changing requirements. They also show that collaboration between public, private and other stakeholders to address issues earlier handled by a single authority is becoming increasingly common, also within the field of transport, particularly when public investment budgets are restricted. Another main finding is that broad stakeholder inclusion is advantageous and engaged leadership crucial for a successful outcome. Both structural and procedural aspects of a governance structure influence the outcome and need to be considered when designing one. The international study and the workshop confirmed most of these literature findings and additionally highlighted the need for clear goals, objectives and rules for collaboration. Stakeholders' diverse needs of connecting to a governance structure were discussed in the workshop. The document studies and the interviews enhanced knowledge of European transport corridor establishment and management practices.

Based on the analysis of the results from the above studies a *multi-optional governance structure* has been developed aiming to involve multiple stakeholders without retarding progress. In this governance structure stakeholders can participate in different ways, with varying degrees of commitment. Core stakeholders, the most strongly committed, are drivers for the collaboration. Others may participate in thematic work or simply join a network to acquire or provide information. Collaborative groups within the structure may be organised in partnerships, alliances, networks, European Economic Interest Groups (EEIGs) or other clusters. On-going initiatives may also be linked to the structure. There are likely to be formal agreements codifying the relationships among the stakeholders, to varying degrees.

Nevertheless, the *multi-optional governance structure* is general and needs to be adapted to the context of a particular corridor to be useful in practice. The Bothnian corridor case study, including focus group discussions, was used in the process of identifying customising variables for the governance structure, which include existing management structures, links to on-going initiatives and stakeholders' intentions. While the first two variables can be relatively easily captured, stakeholders' intentions are multifaceted, and thus more difficult to characterise. Consensus regarding main objectives and core stakeholders is desirable, but challenging to reach.

The *multi-optional governance structure* is yet not empirically tested. There is a need for implementation in practice of the developed framework structure, with appropriate adaption and adjustments, possibly in gradual stages.

Keywords: transport, governance, management structure, governance structure, transport corridor, multi-modal transport, green corridor, green transport corridor

## Sammanfattning

Transporter är en viktig del av samhället och vårt dagliga liv. Transportflöden sammanstrålar ofta i så kallade transportkorridorer som binder samman städer och/eller kommersiellt viktiga områden. Det är önskvärt med effektiva och hållbara transporter, och det finns flera pågående initiativ för att utveckla stora, ofta transnationella, transportkorridorer. Olika aktörer påverkas av och/eller deltar i utvecklingen av dessa korridorer, däribland resenärer, transportköpare, transportörer och transportmyndigheter på lokal, regional, nationell och transnationell nivå. Hur olika aktörer kan och bör medverka i denna utveckling kan betecknas som governance av transportkorridoren.

I den här licentiatuppsatsen fokuserar jag på att utveckla ett ramverk för design av governancestrukturer i storskaliga transportkorridorer, genom att undersöka vilka variabler som måste beaktas när en sådan struktur utformas, vilka organisatoriska möjligheter som finns, vilka aktörer som bör delta, samt på vilket sätt samverkan bör genomföras. En kvalitativ metodik har tillämpats, för att få en djupare förståelse av ämnesområdet. Flera studier har genomförts integrerat med det EU-finansierade transportprojektet Bothnian green logistic corridor. Dessa studier omfattade litteraturstudier, dokumentstudier av governance i andra europeiska transportinitiativ, samt en internationell studie som initierades för att samla erfarenheter från andra forskningsprojekt inklusive en workshop för diskussion mellan representanter från olika delar av samhället. Även en fallstudie av den Botniska korridoren utfördes, inklusive fokusgruppsdiskussioner, samt intervjuer av nyckelpersoner involverade i governance i existerande europeiska transportkorridorer. Resultaten från de genomförda studierna analyseras, kombineras och diskuteras i licentiatuppsatsen med bifogade artiklar.

De viktigaste resultaten från litteraturstudierna rör både utformning av governancestrukturer och deras socio-politiska integration. Resultaten visar att det inte finns någon universallösning för governancestrukturer utan de måste anpassas till det sociala, ekonomiska och politiska sammanhanget, och bör också ha en tillräcklig flexibilitet för att möta förändrade krav. De visar också att samarbete mellan offentliga, privata och andra intressenter i frågor som tidigare hanterats av en enda myndighet blir allt vanligare, även inom transportområdet. Intresse för denna samverkan accentueras av begränsade offentliga medel för investering. Ett annat viktigt resultat är att en bred inkludering av olika slags aktörer är fördelaktigt, liksom att ett engagerat ledarskap är avgörande för ett framgångsrikt resultat. Både strukturella och processuella aspekter är viktiga att beakta när en governancestruktur utformas. Den internationella studien och workshopen bekräftade de flesta av litteraturstudiernas resultat. Därutöver betonades behovet av tydlighet i mål, samt regler för samarbete. Aktörernas olika intresse för, och behov av, att ansluta till en governancestruktur diskuterades på workshopen. Dokumentstudierna och intervjuerna har bidragit med en djupare kunskap om hur governance utförs i praktiken i befintliga europeiska transportkorridorer.

Baserat på en analys av resultaten från ovanstående studier har en *multi-optional governance structure* utvecklats som syftar till att involvera många olika aktörer utan att hämma arbetets fortskridande. I den här governancestrukturen kan aktörerna delta på olika sätt, med olika grad av engagemang. Aktörer med ett mycket starkt engagemang är drivande för samarbetet, så kallade kärnaktörer. Andra kan delta i ett tematiskt arbete rörande ett specifikt område, eller bara delta i ett mer lösligt nätverk för att ge och få

information. Samarbetsgrupper inom strukturen kan organiseras i partnerskap, allianser, nätverk, Europeiska Ekonomiska Interesse Grupperingar (EEIG) eller liknande. Redan pågående initiativ kan också kopplas till strukturen. Formaliserade avtal förväntas till stor del reglera samarbetet.

Den framtagna *multi-optional governance structure* är generell och för att den ska vara användbar i praktiken måste den anpassas till en specifik korridor. Fallstudien av Botniska korridoren, inklusive fokusgruppsdiskussioner, användes särskilt i arbetet med att identifiera variabler för denna anpassning. Identifierade variabler är befintliga governancestrukturer, relation till pågående initiativ och aktörernas intentioner. Medan de första två variablerna är relativt lätta att beskriva är aktörernas intentioner mer mångfacetterade, ofta oklara och därmed svårare att karaktärisera. Att enas om en gemensam syn på huvudmålen och kärnaktörer är önskvärt, men utgör också en utmaning.

Hittills är *multi-optional governance structure* inte prövad i praktiken. Genom en praktisk implementering skulle strukturen kunna utvärderas, och ytterligare anpassas och justeras. En successiv implementering ses som ett möjligt alternativ.

Nyckelord: transport, styrning, ledning, governance, governancestruktur, ledningsstruktur, styrningsstruktur, transportkorridor, multimodala transporter, grön korridor, grön transportkorridor



## Contents

1	INTRODUCTION .....	1
1.1	Governance in recent EU and interregional transport corridor initiatives across national borders .....	1
1.2	The Bothnian Corridor .....	2
1.3	Research questions .....	3
1.4	Role of the researcher .....	3
1.5	Thesis structure .....	4
2	THEORETICAL FRAMEWORK.....	4
2.1	Action design research approach .....	4
2.2	Transdisciplinary research .....	5
2.3	Governance theory .....	6
2.4	Definitions of terms.....	7
3	METHODOLOGY AND IMPLEMENTATION .....	8
3.1	Qualitative methods.....	8
3.1.1	Literature reviews.....	9
3.1.2	Studies of European transport initiative documents .....	10
3.1.3	The international study and workshop .....	11
3.1.4	The Bothnian corridor case study.....	12
3.1.5	Focus group discussions .....	13
3.1.6	Interviews with key European transport corridor personnel.....	14
4	RESULTS .....	15
4.1	Summaries of Papers I-IV .....	15
4.2	Design of a transport governance structure .....	19

5	DISCUSSION .....	23
6	CONCLUSIONS .....	25
	REFERENCES .....	27

## PAPERS

Results of the studies have been reported in the following papers, which are referred to in the text by the corresponding Roman numerals.

### Paper I:

Öberg, M. (2013). How to create a transport corridor management – a literature review. In Blomqvist, G. (Ed.), *VTI-Transportforum 2013- Granskade artiklar*. Conference proceedings from Transportforum 9-10 January 2013 in Linköping, Sweden. Linköping: VTI, pp.108-121.

### Paper II:

Öberg, M. & Nilsson, K.L. (2013). How to create a transnational transport corridor management – structural and procedural public and private cooperation. Presented at the international conference Global challenges in PPP : cross-sectoral and cross-disciplinary solutions, Antwerp, Belgium, 6-7 November 2013.

### Paper III:

Öberg, M., Nilsson, K.L. & Johansson, C. (2013) How to create a management structure for transport corridors. Presented at Transport Research Arena 2014, Paris, France, 14-17 April 2014. Available at: <http://tra2014.sciencesconf.org/17867/document>

### Paper IV:

Öberg, M., Nilsson, K.L. & Johansson, C. M. (2014) Governance structure for transport corridors. Manuscript submitted for publication in Transport Policy.

## APPENDICES

Appendix 1: Interview guide

Appendix 2: Workshop invitation

Appendix 3: Focus group discussion guide

# 1 INTRODUCTION

Almost every activity in our daily lives, including going to work, meeting friends and family, participating in cultural events and recreation involves travel. In addition, many products we use require freight transport, since raw materials are frequently extracted in one location, processed in another location, assembled in a third location, used in a home or business, and eventually disposed of or recycled at one or more other sites. Transport also enhances possibilities to develop specialised knowledge in different locations and trade both resources and skills, thereby increasing overall productivity (Stopford, 2009). Thus, transport of passengers and freight plays key socio-economic roles. Transport streams are often concentrated in so-called transport (or transportation) corridors linking urban and/or commercially important areas. There are several initiatives to develop major transport corridors, and the process often requires various contributions from diverse stakeholders. This thesis addresses the design and development of governance structures for major transport corridors in order to facilitate, and optimise, their contributions.

## ***1.1 Governance in recent EU and interregional transport corridor initiatives across national borders***

Trans-European Network for Transport (TEN-T) is an important initiative intended to enhance the efficiency of transport in the EU. A recent policy review of TEN-T has resulted in the adoption of EU Regulation No 1315/2013 for further development. The regulation describes a two-layer multimodal (rail, road, air, sea and inland water) transport network, including comprehensive and core elements, the core network being presented as a layer of major transport corridors across Europe (Regulation (EU) No 1315/2013). The most strategically important parts of the major transport corridors are the so-called core network corridors. As stated in the regulation, focus for the development of the core network corridors is to integrate different modes of transport, harmonise rules and technical systems, and infrastructure development.

To develop the core network corridors the European Commission appoints a coordinator and corridor forums will be organised for each corridor together with concerned states (Regulation (EU) No 1315/2013). According to the regulation the complete core network will be implemented through the development of the core network corridors. The coordinator and concerned states can arrange working groups for specific topics or ask others for advice. Other stakeholders interested in developing TEN-T can apply for funding from various EU-funds or participate in regular planning procedures on a national level (Regulation (EU) No 1315/2013). The TEN-T provides a governance structure for the core network corridors, but it is unclear precisely how the entire core network will be governed, and consequently how the development of the entire core network will be achieved. Further, the development of multi-modal (rail, road, air, sea and inland water) transport corridors for both freight and passenger traffic will inevitably involve and affect numerous stakeholders. The coordinators and concerned states may consult specific stakeholders, but the regulation does not provide a structure codifying the connections and interactions of engaged and interested stakeholders with the presumed governance. In addition to

initiatives from the European Union, there are also initiatives strengthening transport corridors originating from a regional level.

An example of an inter-regional transport project is the East west transport corridor project (EWTC), covering east-west transport in the south Baltic region with connections to Russia and China. Only some relatively small parts of the geographical stretch of the corridor are part of the TEN-T core network. In terms of governance, the initiative is currently being managed via an association, in which diverse stakeholders from both European and non-European countries can participate (East West Transport Corridor Project, 2012). However, Källström (2012) investigated various governance possibilities in an attempt to identify a suitable governance structure for the corridor, and raised concerns regarding difficulties for an association to accommodate the diverse stakeholder interests, due to the participants usually having equal powers. There are no formal or general guidelines available for this kind of project, so establishment of a governance structure is the responsibility of the project members, if they consider such a structure to be required.

## ***1.2 The Bothnian Corridor***

The Bothnian corridor is a major transport corridor, connecting the capital areas of Sweden and Finland, along the Gulf of Bothnia. For several years there has been on-going local to regional cooperation between stakeholders within Swedish, and within Finnish, parts of the corridor, to develop the corridor. A specific objective was to include the Bothnian corridor in the new TEN-T policy. In December 2013 the Bothnian corridor was appointed as part of the TEN-T core network (Regulation (EU) No 1315/2013). However, it was not designated as a part of the most significant core network corridors. Consequently, in contrast to the core network corridors, no transnational governance structure has been prescribed in the regulation for this corridor. Nevertheless, there is still a strong need to develop the corridor, so how diverse stakeholders should support this development in a successful way is vital.



**Figure 1.** Map of the Bothnian green logistic corridor (BGLC, 2014)

In parallel with the review of the TEN-T policy, an inter-regional transport project, the Bothnian green logistic corridor (BGLC) project, financed from the Baltic sea Programme 2007-2013, was conducted between August 2011 and March 2014. It gathered 29 partners from five countries, and over 60 associated partners, aiming to develop the Bothnian corridor and its connections. The project involved a number of activities including determining current transport flows and anticipated future needs, locating bottlenecks, identifying needs for technical harmonisation, developing new business logistic concepts, defining a strategic node network, and strengthening cooperation between diverse stakeholders in the corridor (BGLC, 2013). Luleå University of Technology was one of the project partners, responsible for investigating possibilities for collaboration in a corridor management structure, which led to a recommendation for a governance structure for the corridor (Öberg, 2013).

### ***1.3 Research questions***

Currently there is no general framework for designing governance structures for major multi-modal transnational transport corridors, and governance structures vary among initiatives. The aim of the research project this thesis is based upon is to develop a robust, generally applicable framework

The main research question is:

How should governance structures for transnational and multimodal transport corridors be designed?

The sub-questions are:

1. Which variables are important to consider when designing a transport governance structure?
2. How should a transport governance structure be organised (structurally and procedurally)?
3. Which stakeholders should participate in a transport governance structure?
4. How should stakeholders in diverse levels of governance interact in a transport governance structure?

### ***1.4 Role of the researcher***

I graduated as a Master of Science in Environmental Engineering from Luleå University of Technology in 1993. Since then I have worked for over 15 years as a practitioner addressing regional and local transport issues in Sweden, including participation in the development of large transport corridors, particularly the Bothnian corridor. Thus, I had extensive prior knowledge of the practical work processes before beginning the licentiate studies presented in this thesis, which can be both advantageous for understanding and interpreting findings, but may pose challenges for maintaining a distant and critical perspective.

I have personally performed the literature reviews, studies of documents related to other European initiatives, and interviews described in the methodology chapter. I was largely responsible for conducting the Bothnian corridor case study aiming to customise the governance structure to a particular corridor, including arrangement of the focus group discussions and jointly hosting them with my main supervisor. I also participated in formulating the predefined questions used in the international study and workshop together with my supervisors. Further, I both established and provided practical advice for the performance of the international study and cooperation between participating academic research

teams. In the workshop I gave a speech in the first part and then acted as discussion leader at one of five arranged discussion stations. During the BGLC project I gave 11 oral presentations at partner meetings and workshops arranged by the BGLC project. I was also responsible for writing the appended papers, as the single author of Paper I, and first author of the other three. The co-authors of Papers II-IV are the main supervisor and co-supervisor of my licentiate studies, who contributed with thoughts and comments to improve the clarity of the studies, interpretation of the results and discussion. At the attended conferences I have solely presented the papers.

All of these studies have been mainly supervised by Professor Kristina L Nilsson (main supervisor) and Assistant Professor Charlotta Johansson (co-supervisor), with inputs during some of the studies from Dr Catherine Wilkinson and Assistant Professor Ram Pasupuleti. Dr Wilkinson was a member of the Political Science Division, while the other three were members of the Architecture Division at Luleå University of Technology (LTU), Sweden, during the studies. The studies were funded by the Swedish Transport Administration, and two staff members have particularly contributed to the studies: Kenneth Wåhlberg as a contact person and Dr Rikard Engström as both a contact person and participant in the supervision.

## ***1.5 Thesis structure***

This thesis is divided into seven chapters, starting with the above introductory chapter, which describes the research area, its connection to practice and the specific Bothnian Corridor case. It also articulates the overall aim of the research project, presents the formulation of the research questions and the role of the researcher. Chapter 2 outlines the theoretical framework, defines central concepts and presents the theoretical and disciplinary framework of the research. Chapter 3 describes and reviews the combination of methods applied and their implementation in the studies. Chapter 4 summarises the main findings of the studies, presented in Papers I-IV, regarding the research questions. The last two chapters discuss the results, present conclusions and consider needs for further research. Papers I-IV (three presented at conferences and one submitted to a peer-reviewed journal), describing the studies and their results in detail, are appended to the thesis. There are also two appendices, showing the semi-structured interview guide and the invitation to attend the workshop used in the project.

# **2 THEORETICAL FRAMEWORK**

## ***2.1 Action design research approach***

This thesis is based upon a research project addressing collaboration between representatives of European, national, regional and local authorities, organisations, businesses and citizens in the governance of transport corridors. An inductive approach as described by Lipton (1991), weighing evidence and judging logical or inductive probabilities as presented by Hempel (1962), was regarded as most appropriate for addressing the focal research questions rather than quantitative statistical probabilities. When investigating complex socio-economic processes and human activities it is impossible to either identify or quantify all of the variables that may influence the results. The explanatory factors cannot be fully determined (Lipton, 1991), and the results will inevitably be partial (Hempel, 1962).

However, the results of the research need to be interpreted together with their context and stakeholders, since they may vary with changes in time, geographical area, political interests and other contextual variables. Furthermore, as stated by Nowotny, Scott and Gibbons (2001) “the closer interaction of science and society signals the emergence of a new kind of science: contextualised, or context-sensitive, science” (Nowotny, Scott and Gibbons, 2001, preface). One way to consider the context is to interact with the stakeholders, and in this research project findings have been regularly presented to and discussed with the BGLC project partners to seek consensus regarding the optimal approach and foci for the continuing research process. This could be regarded as a form of participatory research approach, although in literature participatory research is sometimes connected to giving voice to marginalised groups of stakeholders (Hall, 2005). Participatory research is performed jointly with stakeholders who share power of the research process, “The key difference between participatory and other research methodologies lies in the location of power in the various stages of the research process” (Cornwall & Jewkes, 1995, p.1667-1668). The power to take decisions affecting the research process has been shared between the research team and the stakeholders of the BGLC project in certain stages, although the main responsibility has remained with the research team.

The research approach can also be considered as a type of action design research (ADR). ADR originates from information system research, and includes an integrated process of building, using and continuously evaluating an IT artefact (Sein, et al., 2011). According to Sein et al. (2011) four stages of a research process can be distinguished. In the first stage the problem is described. In the second the artefact is built with stakeholders participating in the design and evaluation. In the third stage the artefact is used and adjusted, following reflection upon it in relation to a class or type of problems. Finally, general conclusions are drawn regarding a type of problem. The aim of this research project is to develop a general framework for designing governance structures for transport corridors. Analogously to the ADR stages, a *multi-optional governance structure* for transport corridors was designed as a type of artefact, based on results from the studies and participation of Bothnian corridor stakeholders. According to the ADR typology the research is now at the end of stage two, ready to enter stage three, in which the governance structure will be used and evaluated. The main difference between ADR and the performed research process is that the generalisation of results has been continuously considered.

## **2.2 Transdisciplinary research**

This research context combines both social and technical elements. It is anchored in the technical field of traffic planning and development of corridors for efficient transports, but the main focus of the project is on the management and governance of transport corridors. Therefore, the research is also strongly combined with in the social scientific field of governance. The required integration of diverse disciplines is challenging, but it can provide new and deeper perspectives

Rosenfield (1992) describes several modes of cross-disciplinarity in a research process: *multidisciplinary*, if researchers from diverse disciplines are involved, but their work is highly independent; *interdisciplinary*, if researchers from diverse disciplines work together, but maintain their discipline-based perspectives; and *transdisciplinary* if researchers from diverse disciplines work together with a

joint perspective, using shared adapted frameworks and theories. The concept of transdisciplinary research is even more widely defined by Hirsch Hadorn et al. (2008), as involving cooperation not only between different disciplines but also between academia and other social strata. A transdisciplinary approach has been adopted in the project this thesis is based upon, with an individual researcher combining disciplines (Stokols, 2006), integrating views of authorities, companies and other stakeholders in the Bothnian green logistic corridor project.

## ***2.3 Governance theory***

The verb govern is generally defined as steering, ruling, controlling or leading people, corporate or political bodies, processes, actions or courses of events. In this research project the related noun governance is referred to as a shift in society where matters earlier handled by the national government now involve a number of stakeholders influencing the outcome or sharing the responsibilities (Giuliano, 2007; Romein et al., 2003; Pierre & Peters, 2000). This applies also in the fields of transport planning, investment and policy making (Giuliano, 2007; Romein et al., 2003). Pierre and Peters (2000) present a historical review of the rise of this form of governance, which emerged as a reaction to the strong governmental control of society after the Second World War, with increased welfare responsibilities in Western Europe and the USA. Eventually the costs of public services were perceived as too high, breeding discontent, and during the 1980s' a more market-oriented attitude led to tax reductions and greater engagement of the private sector. In the following decade the role of the government in relation to other stakeholders in processes to achieve social-economic targets was debated. The complete reasons for the appearance of, and interest in, governance can be argued to depend on numerous factors driven by socio-economic changes, but a common feature is the need for broader participation in decision-making and policy implementation (Ansell & Gash, 2007; Emerson et al., 2012).

Governance is a wide concept, so it is often narrowed according to the context. Numerous examples of narrowed governance models can be found in the literature, including environmental governance (Lemos & Agrawal, 2006) relating to the focal topic, and participatory governance (Baiocchi, 2003) concerning the process of citizens participating in public decision-making. Multi-level governance refers to decision-making based on interactions between authorities in diverse vertical societal levels (local, regional, national, European and international), and other parts of society in a horizontal level (Bach & Flinders, 2005). Further, collaborative governance is defined by Emerson (2011) as "the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished" (Emerson, 2012, p.2). This is a broader definition than that proposed by for instance Ansell and Gash (2007), who limited the term to cooperative projects initiated by the state.

Emersons (2012) definition of collaborative governance stated above includes the aspects of multi-level governance in the sense of allowing stakeholders at various levels and diverse parts of society participate in decision-making. It emphasises the structural and procedural collaboration involved, which is the main concern of this thesis. Thus collaborative governance seems most applicable in the research project this



thesis is based on. However, there are several complexities to consider when numerous stakeholders are involved in a joint initiative, including variations in organisations' and individuals' procedures and culture (Huxham et al., 2000). The collaborative processes also require examination, because commitment, trust and clear targets (inter alia) are regarded as important for a successful outcome (Huxham et al., 2000). Ansell and Gash (2007) and Emerson et al. (2012) both derived frameworks for collaborative governance based on extensive literature reviews and case studies. However, both of them focus on variables related to the process *per se*, for example commitment of participants and incentives for participation that are important for practitioners and researchers to consider when establishing a collaborative governance structure. This research project is focused on a governance structure in a more structural sense referring to proposed thematic groups, core stakeholders and strategic advisors, but it also includes variables important for the process like transparency and communication.

## **2.4 Definitions of terms**

The following definitions are presented to clarify the use of key terms in this thesis.

### **Transport corridor**

Several definitions of transport corridors have been published, such as "one or more primary transportation facilities that constitute a single pathway for the flow of people and goods within and between activity centers, as well as the abutting land uses and supporting street network" (Williams, 2004, p.5). Another, by Reiss (2006), provides a detailed description, stating that a transport corridor is "A largely linear geographic band defined by existing and forecasted travel patterns involving both people and goods. The corridor serves a particular travel market or markets that are affected by similar transportation needs and mobility issues. The corridor includes various networks (e.g., limited access facility, surface arterial(s), transit, bicycle, pedestrian pathway, waterway) that provide similar or complementary transportation functions. Additionally, the corridor includes cross-network connections that permit the individual networks to be readily accessible from each other" (Reiss, 2006, p.4). This definition is used in this thesis. However, solely freight or passengers may be conveyed in a specific transport corridor, or via a single transport mode, but if so it should be noted.

### **Green transport corridor**

The concept of green corridors is explained in a report made by the Swedish Transport Administration (Trafikverket), the Swedish Maritime Administration (Sjöfartsverket) and the Swedish Governmental Agency for Innovation systems (Vinnova) (2012). The report states that the concept originates from a European Commission initiative aiming at developing a "greener" transport policy that meets the climate challenge while increasing European competitiveness, and "the green corridors involve reducing the impact on environment and climate and enhancing the safety and efficiency of freight transport" (Swedish Transport Administration, 2012, p.3). This definition is used in this thesis, but with the incorporation of passenger transport.

## **Trans-European Networks for Transports (TEN-T)**

The TEN-T network has been described in EU Regulation No 1315/2013 as follows: "The trans-European transport network comprises transport infrastructure and telematic applications as well as measures promoting the efficient management and use of such infrastructure and permitting the establishment and operation of sustainable and efficient transport services". The regulation also states that "The infrastructure of the trans-European transport network consists of the infrastructure for railway transport, inland waterway transport, road transport, maritime transport, air transport and multimodal transport" (Regulation (EU) No 1315/2013, p.6)

## **Stakeholders and actors**

The term stakeholder is widely used, and several definitions have been published. Eden and Ackerman (1998) state that stakeholders are "people or small groups with the power to respond to, negotiate with, and change, the strategic future of the organization" (Eden and Ackerman, 1998, p.117). Bryson (2004) advocates "consideration of a broader array of people, groups or organizations as stakeholders, including the nominally powerless" (Bryson, 2004, p.22) in this context. In this thesis the definition of a stakeholder encompasses any actor, state or non-state authority, organisation, private entity, academic institution or individual that is affected by, or merely has an interest in an initiative or its outcome.

## **Variables**

Variables are descriptors — "sets of related attributes (categories, values)" (Babbie, 2013, p.13, Figure 1-1) — of the state of a thing or process. An example is length, which can have a set of attributes such as short, medium or long. Another example that is particularly relevant in the context of this thesis is a corridor's connections to on-going transport initiatives, which may be present, absent, weak or strong. If present, the specific initiatives that are connected, and the connections' influence (if any) on the governance structure may be of interest.

# **3 METHODOLOGY AND IMPLEMENTATION**

## **3.1 Qualitative methods**

Qualitative research methods were chosen, partly because of the need for deeper understanding of the research issues than current quantitative methods could provide, and partly because transport corridor management structures are often connected to a certain initiative so a quantitative approach may not provide enough contextual information for a relevant interpretation of the results. Strauss and Corbin (1998) refer to qualitative research as a process of understanding concepts and relationships in a non-quantitative manner, suitable for capturing thoughts and views, particularly associated with complex problems involving human activities. The qualitative research methodology was formed with an interpretative approach (Wagenaar, 2011), in which the research process includes decisions of research methods and study designs needed in further steps, depending on the achieved results and recognised gaps of information.

The studies have been performed using methods described in more detail in sections 3.1.1 – 3.1.6 below. Results from the studies have been combined for triangulation (Vidovich, 2003), to validate conclusions by examining their consistency with knowledge drawn from various sources. The conclusions were then used in the process of building a framework for designing transport governance structures for transnational transport corridors.

### 3.1.1 Literature reviews

Literature reviews are commonly used to capture the state-of-the-art understanding of a problem in order to avoid repeating previous analyses, identify knowledge gaps and studies required to complement earlier research, and establish robust foundations for planned research activities. Two demarcated literature reviews were performed during this research, with elements of both a traditional narrative review and a systematic review (Jesson et al., 2011). A traditional narrative review is distinguished by a subjective approach to finding and using relevant literature which can then be synthesised critically and logically, and a systematic review is based on a structured approach with a predefined and replicable framework for finding relevant literature synthesising acquired data (Pai et al. 2004, Jesson et al. 2011).

Relevant journal articles and books were searched for systematically in the Web of Science, Emerald, Scopus and Libris databases, using central key-words singly and in various combinations. In the first literature review, performed during April 2012, the keywords were *transport*, *transport corridors*, *governance*, *multi-level governance* and *decision-making process*. The keywords were combined when searches retrieved more than 200 articles and there was a need to narrow the search. The Scopus database was searched using the following pairs of keywords *transport* and *governance*, *transport* and *multi-level governance*, *transport* and *decision-making*. The Web of knowledge database was searched using the keywords *multi-level governance*, *multi-level governance* and *transport*, *transport* and *governance*, *transport* and *decision-making process*, *transport corridors* and *decision-making process*. Libris database was searched using the keywords *multi-level governance*, *transport* and *governance*, *transport* and *multi-level governance*, *transport* and *decision-making process*. Additional literature presenting research on management and organisation in relation to transport was defined with the assistance of experts based at the Department of business administration, technology and social science of Luleå University of Technology, Sweden. In the second literature review, performed during June 2013, the key-words used were *governance model*, *non-profit organisation*, *strategic alliance*, *EEIG*, *PPP* and *network governance*, both singly and in every permutation of pairs. As in the first review, when a search retrieved more than 200 articles, the key-words *transport* and *transnational* were added in separate searches to narrow the search.

It should be noted that although the databases were searched systematically, the keywords were selected subjectively, and the retrieved materials were examined subjectively to locate relevant books and articles. No structured quality assessment was applied to the material, which is common practice in a systematic review (Pai et al., 2004), because at this stage there was no preconceived view of how its quality should be assessed. However, the databases utilised are commonly used for searches of scientific literature. Information acquired from the retrieved literature was categorised in themes that emerged

from the literature studies, and synthesised into new knowledge. No preconceived framework was used. The results were specifically used in Papers I and II, which describe the applied procedures in detail.

### **3.1.2 Studies of European transport initiative documents**

The main purpose of the studies of other interregional and EU transport initiative documents was to gain knowledge about how management structures had evolved in the initiatives, and identify lessons that could be learned from previous considerations in the same field of interest, but a different context. The first studied EU initiative was the work of the earlier appointed nine European coordinators. The first studied EU initiative was the previous stage of TEN-T development, in which priority projects were designated, and European coordinators were assigned to nine of them, to facilitate their progress. These coordinators were expected to have gained knowledge and experience in governance and cooperation processes in the course of their work. We decided to examine the European coordinators' annual reports from 2010 and 2012 (listed in the references). Their statements regarding management structures were gathered and categorised into themes emerging from the studied reports. Then the statements in each theme were synthesised in a narrative manner. The results have been communicated in a BGLC project report (Öberg, 2013).

Secondly, two European Commission initiatives were studied. One was the network for competitive rail freight corridors launched in 2010, governance of which was defined in EU Regulation No 913/2010 and studied in a descriptive mode. The other was the TEN-T policy review, which started in 2009, and led to a proposal for new guidelines published in 2011 (European Commission, 2011a), including recommendations for governance that were studied in a descriptive mode. Both of these initiatives are further described and discussed in Paper III. In December 2013, a regulation for the guidelines for developing the TEN-T network was adopted (Regulation (EU) No 1315/2013). The regulation contained extended information about governance, and it was considered in Paper IV.

Finally, the governance processes in the East West Transport Corridor project, an inter-regionally driven transnational transport project, was examined as described in a project report that discusses governance options and presents recommendations for managing the corridor (Källström, 2012), and the project's final strategy and action report (East west Transport Corridor Project, 2012). The considerations and decisions taken in this initiative are further discussed in Paper III, in relation to the European Commission initiatives mentioned above.

These initiatives were studied for various reasons. The TEN-T initiative has been a central concept for developing European level transport for over 15 years, and the policy revision between 2009 and 2013 will strongly influence the development of major transport corridors such as the Bothnian corridor. The initiative to develop competitive rail freight corridors is of particular interest since the TEN-T regulation refers to the governance structures generated for them as important to consider when forming governance structures for TEN-T core network corridors (Regulation (EU) No 1315/2013), and the Bothnian corridor has been previously promoted essentially as a rail corridor. Further the East West Transport corridor project is an inter-regionally driven project, like the BGLC project, and its participants addressed and reached an expressed consensus regarding governance before the project was recently

finalised. There are many other initiatives and projects that could be further examined and the international study, described in the next chapter 4.1.3 attempted to do so.

### **3.1.3 The international study and workshop**

In conjunction with the BGLC project an international scientific study was performed, to gather information about governance experiences in research cases where other universities, research centres or similar institutions had participated. The study was procured, according to relevant regulations, with LTU as the responsible party for the tender procedure and supervision of the project. Research groups from the VTT Technical research centre in Finland and the University of Thessaly in Greece were assigned to the task, and VTT was responsible for writing a conclusive report (Eckhardt, 2013a).

The study was based on the following 15 questions that were presented by LTU to the project groups in the tender documents:

- What type of processes has been used creating the management structure (agreements, partnerships, negotiations, coordinator, collaboration)?
- Who has been creating the management structure (main stakeholders, academia)?
- How was the management structure organised (Coordinator, management group, network, ad hoc structures for specific questions)?
- Which stakeholders participated in the management structure (states, regions, local authorities, companies, interest organisations etc.)?
- How were the participating stakeholders selected?
- Was any stakeholder responsible for the management structure? In that case who and why this specific stakeholder?
- How has business, academic, political actors been participating?
- What authorities and powers did the management structure have?
- How has the accountability of the management structure been secured?
- Which specific issues, goals and visions (if there are any) does the management structure work with?
- Which communication processes have been used by the management structure towards the stakeholders (large meetings, competence development etc.)?
- How did the management structure affect procedures of developing the transport corridor (planning, financing)?

- Did you find the management structure well-functioning regarding results for development?
- What do you think has been especially important for a positive result?
- What do you think needs to be considered and improved in future work?
- Based on your experience – how would you now create a management structure?

To gather information from the stakeholders of BGLC an open workshop was held as part of the tasks in the procured international scientific study. An invitation to attend the workshop (presented in Appendix 2) was distributed to all BGLC and GreCor<sup>1</sup> project partners. The workshop was conducted in two parts. In the first invited speakers gave lectures and in the second part all participants were actively discussed corridor management in a “learning café”. The latter was arranged with five stations, at each of which there was a stationary discussion leader and a specific question was discussed, while five groups of the other participants sequentially circulated. When each new group arrived at a station the discussion leader continued the discussion by the previous group. Finally the five discussion leaders summarised the discussion at their station in a plenary session (Eckhardt, 2013b). This method was referred to by VTT. Methods of conversation and dialogue for knowledge building emerged in the 1980s and 1990s and the World café method is referred to in literature where dialogue and conversation in small groups circulating between tables, discussing key questions, leads to the building of common knowledge (Tan & Brown, 2005). Another similar method is Open space technology (Owen, 2008) where the agenda is set by the participants themselves by letting participants with a strong interest be a discussion host for that specific subject, the participants can then attend any discussion group they prefer, and change groups whenever they like during the meeting.

### 3.1.4 The Bothnian corridor case study

The case study focused on the Bothnian corridor, aiming to identify important variables for customising the developed framework, the *multi-optional governance structure*, to the specific requirements for a particular corridor. The analysis, described in more detail in Paper IV involved description of the case, communication with representatives of existing cooperative structures in the Bothnian corridor and focus group discussions (using methodology described in section 3.1.5) with project stakeholders.

The performed case study of the Bothnian corridor was by definition a descriptive, particular, heuristic case study. The first requirement for using the case study epithet is that there is a clear limitation of the studied phenomenon (Merriam, 2009). The Bothnian Corridor has a distinct limitation in its geographical stretch and in this case it is combined with a clear topic, which is management structure. It was also particular, since it was a specific context-based case, descriptive since the Bothnian corridor context was described, and heuristic, since new knowledge was formed during the course of the study and important variables for customising a management structure were identified. The case also represents a type of

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<sup>1</sup> The GreCor project is a green corridor project covering the transport corridor between Oslo and Rotterdam.

transport corridor found across Europe, where management structures need to be formed in the near future. The Bothnian Corridor case study can also be classified as instrumental, since it drew on insights into the subject and sought possible generalisations, rather than intrinsic, i.e. intended solely to increase understanding of a specific case (Merriam, 2009).

The main strengths of qualitative case studies are the possibilities they provide to gain understanding of real-life, complex situations, influenced by numerous variables (Merriam, 2009). A single case has a weakness with the difficulty of generalisation, since it can only provide information on the specific case. However, with an extensive description it can provide deep insights into the situation, which may be informative in a broader perspective (Merriam, 2009). It is difficult to find a single case that is representative for all types of cases, but insights from single case studies can be used in theory-building (Yin, 2003), and provide important inputs for generalisations. Insights from this case study have been used in developing the multi-optional governance structure.

### 3.1.5 Focus group discussions

Focus groups are anticipated to generate more discussion than interviewing stakeholders separately, as the participants can react to each other's comments, and attention is transferred from the interview leader, in one-to-one meeting, to several participants' views (Kreuger & Casey, 2000). Therefore, focus groups were deemed most suitable for addressing the focal problem, since creating a management structure requires cooperation, collaboration, common visions for the future and understanding of other stakeholders' reality. The focus group discussions were used here to gather Bothnian corridor stakeholders' reactions to and views of the developed *multi-optional governance structure*.

Kreuger and Casey (2000) characterise focus groups as groups of four to twelve people (with similar importance for the focal research topic) who engage in discussions led by a well-trained, neutral interviewer based on predefined questions leading from general to specific knowledge and generating results revealing the participants' views and opinions. For the focus group discussions with Bothnian Corridor stakeholders five focus groups were arranged, with six to seven people in each group representing various public and private stakeholders connected to the transport project. The groups had no designated leader, but someone in every group spontaneously acted as in this capacity. The preconceived *multi-optional governance structure* framework for a transport corridor was used as a basis for the discussions (see Appendix 3 for the focus group discussions guide). The discussions lasted approximately 20 minutes and were recorded and later transcribed. Every participant was considered equally important and treated anonymously in the following analysis and presentation process. Detailed information about the settings of the focus group discussions is provided in Paper IV.

In the analysis and interpretation phase, data from the focus group discussions were categorised into four themes, based partly on the discussion guide and partly on the discussions. Then the views expressed by the participants related to each theme were presented in a narrative manner. The information derived from the focus group discussions was then applied to identify customising variables for adapting the governance structure to a particular transport corridor. Use of focus groups in this manner has emerged in the business sector for developing consumer products, and focus groups are

widely used for product development, policy or program development and testing (Kreuger & Casey, 2000). Generalising results from focus groups might be difficult, but findings from a specific focus group can provide information that is useful also in other circumstances (Kreuger & Casey, 2000). Results from these focus group discussions have been used in developing the multi-optional governance structure.

### **3.1.6 Interviews with key European transport corridor personnel**

The nine European coordinators referred to in section 4.2 were the initial targets for interviews, but arranging interviews with them proved to be very challenging. Therefore, other senior representatives actively involved in the created transport governance structures of two railway transport corridors (Brenner and Rotterdam-Genoa), were interviewed initially. These railway corridors represent the most advanced transport corridor governance structures according to the document studies in section 3.1.2 and discussions with BGLC stakeholders. Four individuals were interviewed in three interviews (two singly and two as a pair).

The three interviews were performed in March-August 2013 in English by telephone using a semi-structured questionnaire (Appendix 1), which was not shown to the interviewees in advance. The 15 predefined questions used in the international study in section 3.1.3 were used as a basis for the questionnaire, adapted to the circumstances of an interview situation. At the start of each interview the interviewee was informed about the aim of the interview and told that the results would be used both in the BGLC project and this doctoral research with subsequent publication. They were also informed that their names would remain anonymous in the presentation of results, but since few interviews were anticipated, the anonymity may be limited. English proved to be a second language for both the interviewer and the interviewees, but no communication problems were detected, at least by the interviewer. The interviews lasted about one hour and were recorded and thereafter transcribed. The results were categorised in themes emerging from the questions posed in the semi-structured questionnaire and responses from the interviewees, the themes were then synthesised in a narrative manner. The results have been presented in a BGLC project report (Öberg, 2013).



## 4 RESULTS

### 4.1 Summaries of Papers I-IV

Table 1 presents an overview of the papers I-IV, including the main questions addressed and methodology applied in the studies they describe. The main findings reported in all four papers are presented in the text below.

**Table 1.** Overview of the main questions addressed and methods applied in the studies described in Papers I-IV.

	Main question	Methods applied
Paper I	Which considerations are of specific importance when creating a management structure for transport corridors?	Literature review
Paper II	What structural and procedural aspects are relevant for developing a transnational transport corridor management in a European context?	Literature review  International scientific study and workshop
Paper III	How are stakeholders attached to governance structures, especially concerning the aspect of multi-level governance?	Studies of other European transport initiative documents
Paper IV	Which variables can be used to customise a <i>multi-optional governance structure</i> to a particular transport corridor?	Case study including focus group discussions.

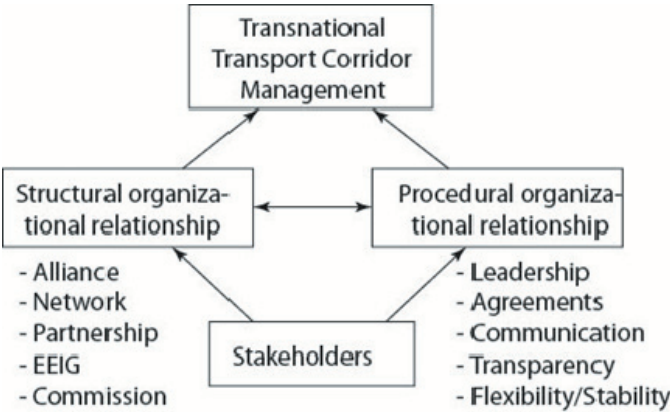
#### Paper I: How to create a transport corridor management- a literature review

In paper I the results from the first study in the research process, the structured literature review to acquire published knowledge of management, especially transport management structures, was presented and discussed. One finding was that management structures must always be adjusted to the real context. Another was that governance based on joint activities of public, private and other stakeholders, is becoming increasingly common, both generally and in transport initiatives. A number of variables, and recommended attributes, to be considered when creating a management structure were also identified, including the following. A strong leadership with power, engagement and sufficient administrative facilities was considered highly beneficial. An appointed coordinator could act as a driving force for progress, mediation of conflicting interests and distribution of information among stakeholders. Further it was recognised that delegating more power to a management structure increases the associated responsibility, so it is important to ensure that it has the resources required to perform the assigned tasks. Broad stakeholder inclusion was preferred, as well as formalised partnerships since they

provide clear means to delineate stakeholder’s obligations. A need to allow procedural changes in routine activities and the importance of communication in several forms was also identified. Finally, bottom-up effectuation processes, allowing stakeholders to contribute to meeting both common goals and their own goals were identified as valuable complements to more traditional top-down steering. Three areas of concern were emphasised: broad stakeholder inclusion, communication and effectuation processes.

**Paper II: How to create a transnational transport corridor management – structural and procedural public and private cooperation**

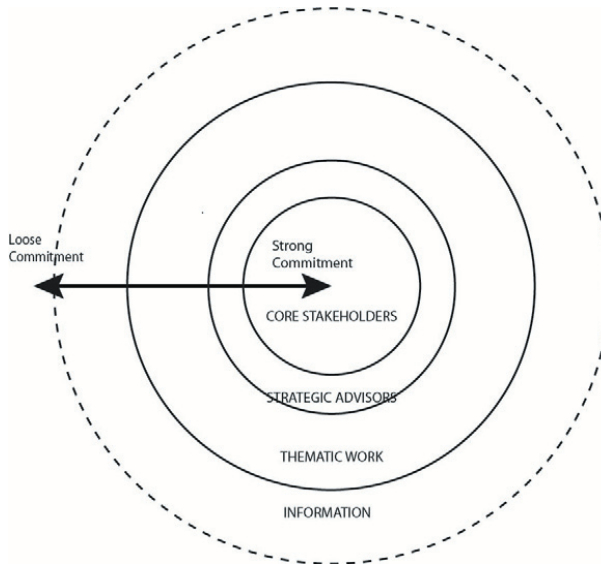
In paper II the need to consider both structural and procedural components of a management structure was discussed. Conclusions were drawn from a review of literature concerning governance models, and the results from the performed international study including the workshop. As in the previous paper a main conclusion is that the context should always be considered. Regarding the physical form of a governance structure numerous options have been cited, including alliances, partnerships, networks, European Economic interest groupings (EEIGs), all with different strengths of commitment to the management structure. Crucial identified procedural variables included communication, transparency and flexibility. Leadership is also important and can be regarded as either a structural or procedural variable; here it is regarded as procedural, focusing on the mode of leadership.



**Figure 2.** Relations between structural and procedural aspects of an organizational relationship. Overview of results presented in Paper II.

Numerous and diverse stakeholders are affected by and/or involved in the development of major transnational transport corridors. Their participation can be promoted by maintaining diverse structural

options, allowing some stakeholders to have strong connections with the management structure and certain responsibilities, while others have weak connections or loose associations. To arrange a governance structure allowing diverse commitments from the stakeholders a *multi-optional governance structure* was developed. It was proposed to be composed of both strongly committed core stakeholders and others participating in thematic groups or merely engaged in a very “loose” network for exchanging information. Important decision-makers, possibly from national or EU levels, were suggested to be connected to the structure as strategic advisors.



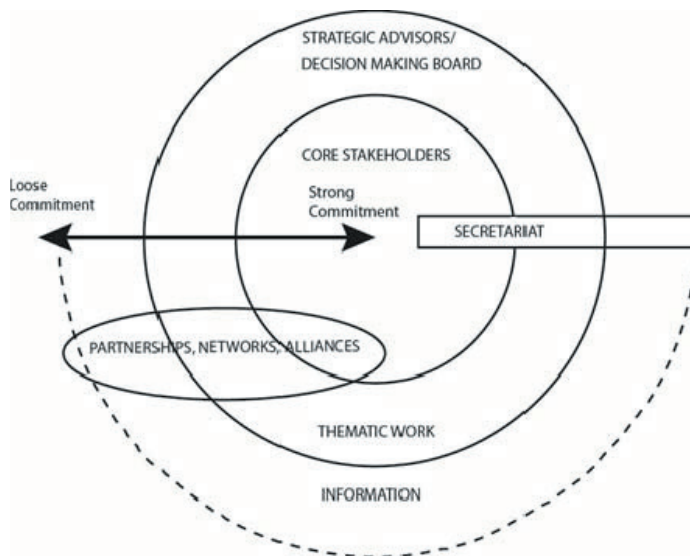
**Figure 3.** Schematic outline of a multi-optional transport corridor management structure (presented in Paper II)

### **Paper III: How to create a management structure for transport corridors**

In this paper management structures of three European transnational transport corridor initiatives were analysed through document studies: the rail network for competitive freight and the trans-European network for transports (TEN-T), both initiated by the European Commission, and the regionally initiated East west transport corridor project. The regulation concerning the Rail network for competitive freight (Regulation (EU) No 913/2010) and the proposal for a regulation concerning TEN-T (European Commission, 2011a) both include prescriptions for governance of the respective initiatives. In the rail initiative mainly representatives from the rail sector are appointed to participate. A possibility for broadening interactions with stakeholders is considered in the paper.

In the TEN-T proposal a platform for cooperation for certain designated transport corridors is described, but little detail of how it would work in practice is provided. Concerns about how diverse stakeholders in several transport modes, both freight and passenger transport would be able to connect to this TEN-T

governance structure is raised in the paper. In the East west transport corridor case the possibility to attach many stakeholders was considered. However, any specific structure selected is bound to suit some stakeholders, but not others. The main findings were that a multi-level governance perspective should be more clearly adopted in these initiatives. Including a broad group of stakeholders enables joint efforts towards a set of goals, which can strengthen the outcome of an initiative. To address this need a refined *multi-optional governance structure* was proposed as an option. The refined structure enhanced the strategic advisors' function, including harmonizing services in the transport corridor, or similar tasks. Further, a need of a secretariat was clarified.



**Figure 4:** Refined outline of a multi-optional governance structure (presented in Paper III)

## Paper IV: Governance structure for transport corridors

The objective of the study described in this paper was to adapt the *multi-optional governance structure* developed in the previous research to the context of a particular transport corridor, using results obtained from a case study of the Bothnian corridor, with a descriptive phase and focus group discussions with Bothnian corridor stakeholders. Three variables to customise the *multi-optional governance structure* were identified based on insights from the case study: the existing management structures, the corridor connections to on-going initiatives and stakeholders' intentions.

The results from the focus group discussions illustrate the variety of diverse stakeholders' intentions and perceptions of transport corridor management. The strength of a *multi-optional governance structure* is its flexibility in encompassing diverse stakeholders and organisational structures. However, there is need

for a shared view of main targets and core stakeholders to gain acceptance and legitimacy for such a structure, which is challenging to meet. Implementing parts of a *multi-optional structure* initially, and building it gradually is suggested as an option.

## 4.2 Design of a transport governance structure

The combined results presented in Papers I-IV, and information from the two studies presented in the BGLC project report (Öberg, 2013) — the study of the work of the European coordinators and the interviews — are analysed in this chapter to address the research questions. Table 2 shows in which papers the research questions are mainly addressed, with comments when additional information was gathered from studies performed but not referred to in the papers.

**Table 2.** Overview of the research questions and the paper in which they were mainly addressed. Results from performed studies not referred to in the papers are noted under comments.

Research question	Paper				Comments
	I	II	III	IV	
Sub-question 1: Which variables are important to consider when designing a transport governance structure?	x	x			Variables were also identified from results of the document studies of the work of European coordinators, and the interviews.
Sub-question 2: How should a transport governance structure be organised (structurally and procedurally)?		x			The interviewees referred to their governance structure. Analysis of the work of the European coordinators showed that transport corridor agreements between states often include governance directives.
Sub-question 3: Which stakeholders should participate in a transport governance structure?	x	x	x		The interviewees gave their views on stakeholder participation.
Sub-question 4: How should stakeholders in diverse levels of governance interact in a transport governance structure?	x	x			European coordinator activities partly consist of communicative tasks to facilitate interaction between stakeholders. In the interviews thoughts on interaction in practice were expressed.
Main research question: How should governance structures for transnational and multimodal transport corridors be designed?	x	x	x	x	Input from findings related to the sub-questions.

**Sub-question 1: Which variables are important to consider when designing a transport governance structure?**

In paper I a number of important variables and recommended attributes are described that should be considered when designing a transport governance structure: a coordinator; strong leadership; correspondence between power, resources and accountability; formalised agreements; broad stakeholder inclusion; arrangements for procedural changes; communication between stakeholders in the governance structure and others outside the structure; and complementary top-down and bottom-up processes. The main conclusions of the international study (Eckhardt, 2013) directly confirm the importance of some of these variables and recommended attributes, including need for a participation of stakeholders from both public and private sectors and various levels of governance (regional, national); integrated procedures in routine tasks, and communication. Other variables and recommended attributes noted in the international study are the need of clear leadership, clear objectives, recognition of practical tasks correlated to existing policies, transparent motivation and social acceptance of the targets. The international study is one of the foundations for Paper II, where the importance of the procedural variables communication, transparency and flexibility allowing appropriate adaptation to new or changed contextual circumstances were recognised. The importance of formalised agreements and communication are confirmed also in the results from the analysis of the work of the European coordinators, and results from the interview study support formalised agreements and the positive effects of transparency, both studies presented in the BGLC project report (Öberg, 2013).

The variables and recommended attributes can be classified as organisational or procedural, as shown in Table 3. However, they could all arguably be classified as both organisational and procedural, for example the leadership could be regarded as both part of the physical structure, an organisational variable, and part of the procedural arrangements. Decisions regarding classification of the variables were guided by the context in which they were mainly identified in the studied material.

**Table 3.** Variables to consider, and recommended attributes, when designing a transport governance structure.

Variables and recommended attributes	
Organisational	Procedural
Formalised agreements	Communication
Broad stakeholder inclusion	Transparency (motivation, procedures)
Leadership (strong, clear)	Procedural adaptability
Coordinator	Clear objectives
Powers/resources/accountability	Flexibility
Top down/bottom-up	Social acceptance

### **Sub-question 2: How should a transport governance structure be organised (structurally and procedurally)?**

Structural possibilities for governance structures are focal concerns in Paper II. Since the procedural aspects have been considered in the comments regarding sub-question 1, the focus here is on the structural aspects. Several options are available for governance structures, such as alliances, partnerships, network and commissions. The differences between them are hazy, and in most constellations the participants have considerable power or authority to decide the strength of commitments to specific partnerships or networks, and whether or not to formalise agreements. Furthermore, even if there are signed agreements unpredictable events may occur or partners may behave unexpectedly, making informal agreements equally important. Formalized agreements tend to be used for “strong” commitments. For example, certain requirements including formalized agreements must be met to form a European Economic Interest Grouping, EEIG (Council Regulation, 1985). An EEIG is in operation in one of the corridors selected for interviewing associated personnel, and a platform solution in the other (Öberg, 2013). The interviewees were pleased with their respective solutions. Those who operated within an EEIG found it useful for strategic and political purposes, while the others found the platform solution to be beneficial for bringing diverse interests together.

Regardless of the selected structural form or forms, there is a need for facilitation of the processes. Appointment of an independent organisation or coordinator to manage the cooperation and progress is proposed in Paper II. This is regarded as a suitable option for this type of cooperation, with a number of participants and no single dominant stakeholder, specified targets and need of certain competence, according to both literature (Provan & Kenis, 2007), and discussion in the workshop (Eckhardt, 2013). It is recognised in the reports from the European coordinators that governmental or EU initiatives are likely to include information about governance structures and possible working groups for addressing specific issues (Öberg, 2013).

### **Sub-question 3: Which stakeholders should participate in a transport governance structure?**

Broad stakeholder inclusion was identified as important in the first literature review (Paper I). The need for participation of diverse stakeholders and an inclusive attitude towards stakeholders were further confirmed in the international study and workshop (Eckhardt, 2013; Paper II). Current European transport initiatives were critically discussed in this respect in Paper III, and a stronger multilevel governance perspective in European transport initiatives was recommended. Then existing European transport initiatives was critically discussed in paper III, and a stronger multilevel governance perspective in European transport initiatives was proposed. Nevertheless, awareness that all participating stakeholders have different motives for their involvement in an organisational relationship is also needed (Paper II). Stakeholders who can see the benefits of the governance structure and their participation are more likely to support and commit to it.

The interviewees were all involved in major transport corridors for railways appointed by the European Commission. During the interviews the interviewees were asked to identify crucial stakeholders in a multimodal transport governance structure. In their opinions, supra-national (EU), national and regional government officials and politicians from all levels, those being responsible for infrastructure, and operators are crucial stakeholders, and the stakeholders should represent interests in all included transport modes (Öberg, 2013). Their answers are interpreted as a support for the need of a multi-level governance approach and broad stakeholder participation. On the other hand they also raised concerns that including a large number of stakeholders might lead to more of a discussion forum than a governance structure, and consequently slow progress and poor results in practice.

Finally, as noted in Paper II, the engagement, abilities and positions of the individual representatives are always important, because although the term stakeholder usually refers to companies, authorities or other organisations it is always individuals who interact. Thus, the involvement of high-level representatives of authorities, companies and other participating organisations is beneficial for establishing a strong and powerful management structure.

#### **Sub-question 4: How should stakeholders in diverse levels of governance interact in a transport governance structure?**

In the above comments regarding sub-question 1, variables and recommended attributes related to the design of a governance structure are identified and the interaction practices are closely related to them. Focusing on the interaction *per se*, communication and formalised agreements seem specifically applicable. A large part of the European coordinators' activities consist of communicative tasks to facilitate the development of the priority projects, often railway axes, in matters such as financing or technical harmonisation. Examples of these activities are establishing contacts with main stakeholders and both arranging and participating in seminars and other forums to discuss issues with stakeholders from different levels of governance and diverse parts of society (Öberg, 2013). These activities concern interactions between stakeholders within the governance structure, between stakeholders within the governance structure and other actors, and between other actors outside the structure. Another aspect discussed during one of the interviews with key personnel, was the optimal times to involve stakeholders (Öberg, 2013). As there are large numbers of stakeholders it might not be necessary to involve all of them in every procedure or consideration of every issue. The literature reviews, document studies, interviews and the international study all indicated that formalised agreements or contracts can be very beneficial in this context, by clarifying the frequencies, format, forums and nature of interactions.

#### **Main question: How should governance structures for transnational and multimodal transport corridors be designed?**

Social trends (particularly in this context the increasing spread of governance, involving joint activities by various stakeholders to achieve socio-economic objectives), should be taken into consideration when designing major transport governance structures. This is mainly discussed in Paper I. When formulating governance structure both organisational and procedural variables need to be considered, as discussed in Papers I and II, and there are many available structural options to form a governance structure (Paper



II). Development of major transnational and multimodal transport corridors affects and/or involves numerous stakeholders, and diverse public, private and other stakeholders may participate in a governance structure (as discussed in Papers I and II, and further considered in Paper III). However, they will have highly varying degrees of need and desire to be involved, and both formal and informal agreements are likely to be required.

To address the need for broad stakeholder inclusion, allowing for differential commitments and various structural forms, a general *multi-optional governance structure* was developed and presented in Paper II. In this governance structure one thematic group could be organised as a network while another could be organised as a partnership or alliance, all attached to the governance structure with driving core stakeholders facilitating the processes through a secretariat or similar body. It was suggested that important decision-makers who were unable to participate in the proposed types of thematic groups or networks could participate as strategic advisors. However, if numerous stakeholders are involved the processes may be slow, but that could be avoided through the core stakeholders acting as driving forces to meet the main objectives. The *multi-optional governance structure* was subsequently refined through a more detailed visualisation and introduction of the possibility of expanding the role of strategic advisors to participate in decision-making regarding operational aspects of the corridor, e.g. harmonisation of services across national borders (Paper III). Nevertheless, the literature reviews discussed in Papers I and II, and the international study including the workshop (Eckhardt, 2013) all revealed that there is no overall solution for designing governance structures, it is always essential to consider the context.

To adapt the developed general *multi-optional governance structure* to the context of a particular transport corridor the following customising variables were identified in Paper IV: existing management structures, the corridor connections to on-going initiatives and stakeholders' intentions. Exploration of the various stakeholders' intentions in Paper IV shows that although diverse stakeholder interests are anticipated there must be sufficient agreement between stakeholders for a governance structure to be useful. Thus, clarification of common objectives and core stakeholders is recommended. Further, involving many stakeholders might lead to an extensive structure so gradual implementation is recognised as an option.

## 5 DISCUSSION

In the on-going project this thesis is based upon several studies have been performed, applying several qualitative methods. The strength of this approach lies in the possibilities to combine and triangulate results from several sources. The results have generally been consistent, which has validated the findings, eased the interpretation and simplified both the conclusions and discussion. If the material had shown severe discrepancies it would have been essential to weigh and judge the reliability of each study. However, examination of a particular corridor in more detail, or other corridors, might reveal more contradicting indications to consider. Most of the studies could be performed to a largely as planned, but not the interview study. Initially the European coordinators were the target interviewees, but they are busy individuals and since they were connected to this work through the European Commission, the

request to interview them was passed to European Commission civil servants. Although they gave helpful response, it was not possible to reach the coordinators to arrange interviews. Therefore other key personnel involved in European transport corridor management were selected for interviews to learn from their experiences. In total the results from the studies provided ample foundations for developing a framework for designing governance structures for major transport corridors, a *multi-optional governance structure*.

The proposed *multi-optional governance structure* has been developed with the aim to involve diverse stakeholders in joint actions to achieve shared goals for the overall objective of developing a well-functioning and efficient transport corridor. Stakeholders from various levels of governance and parts of society, and connected initiatives, can be linked to the structure in various ways. To allow such diverse participation while maintaining good prospects for smooth and acceptably rapid progress the structure is proposed to be driven by engaged and accepted core stakeholders is recognised. It is assumed that acceptance for the core stakeholders will be gained through a mandate, formalised on a national or overstate level, or given by the stakeholders themselves, or a combination of both. Procedural aspects of running such governance structures have also been considered, and incorporated in the framework. Having this framework ready, one could ask if it is applicable in practise.

There are several indications that the framework will be applicable. Notably, conducting the research in conjunction with the Bothnian green logistic corridor project enabled the project partners' experiences and views to be utilised in the development process. This gave validity to the outcome, although it also raised concerns, especially regarding differences in the project partners' perceptions of a governance structures' objectives and possible core stakeholders. This indicates need for additional stakeholder discussions in this case to create a common view of these fundamental aspects of a governance structure. It also shows the complexity of the customising variable stakeholders' intentions, and further exploration might distinguish additional variables that require customisation.

Clearly, challenges will emerge that need to be addressed when applying the *multi-optional governance structure* in practice. The framework developed in this research project makes no assumptions about precisely how the participation and decision-making processes will be formulated and established. These aspects need to be explored in practice when a governance structure is created. Further challenges are posed by the transnational context and associated differences in priorities, cultures, hierarchies and stakeholders' mandates in different countries, and also the concept of governance might be more or less common in concerned states. Further, participation may be constrained by variations in prerequisites for different modes of transport, for instance financing and apportionment of public versus private sector responsibilities. Testing the *multi-optional governance structure* in practice would provide possibilities to address many of these concerns, and identify reasons for acting in a particular way. Identifying factors of specific relevance to the development of green corridors is of particular interest since combining efficiency with sustainability is a major priority for modern European transport systems (European Commission, 2011b). Tests and analysis of selected cases may not provide comprehensive solutions, but may provide valuable insights for refining the proposed *multi-optional governance structure*.

## 6 CONCLUSIONS

Development of transport corridors is a central element of several major transport initiatives instigated by the European Commission and various inter-regional transnational transport projects. Governance structures are used to steer and support their development, but there are no general guidelines for arranging the structures, and the arrangements vary among initiatives. Thus, the main objective of the on-going research project this thesis is based upon is to develop a framework for designing governance structures for transnational and multimodal transport corridors. Qualitative methods have been applied, including literature studies, studies of European transport initiative documents, an international study of other transport corridors and a workshop, interviews of key personnel involved in European transport corridor management and a case study of the Bothnian corridor, with focus group discussions.

Main outcomes from the studies, which led to the proposed *multi-optional governance structure*, included the following. Firstly, recognition of the need for broad stakeholder inclusion. Secondly, identification of a number of possible structural options for a governance structure, and hence recognition of the desirability of allowing diverse links to the structure in order to facilitate participation of diverse stakeholders with varied needs, intentions and levels of commitment. To accommodate such diversity a need for strongly committed core stakeholders to drive progress, with the assistance of a secretariat to facilitate the activities, was also recognised. Thus, the *multi-optional governance structure* incorporates all of these features. Thematic groups can link to the proposed structure through various kinds of relationships, e.g. partnerships, networks or alliances, with varying degrees of commitment, depending on the stakeholders' desires. Important decision-makers, possibly from national or EU levels, can be connected to the structure as strategic advisors (or in other capacities, if they proved to be more appropriate). Exploration of the option to form a decision-making group with these strategic advisors to facilitate harmonisation of the systems (human or technical) within the transport corridor is recommended. The proposed structure is also intended to encompass complementary top-down and bottom-up involvement. In order to customise the *multi-optional governance structure* to a particular transport corridor three key variables were identified: existing management structures, the corridor's connections to on-going initiatives and stakeholders' intentions.

Regardless of which structural form or forms that are used for a governance structure, the procedural part, how processes are performed, are important to ease well-functioning governance. Important procedural variables to consider, and desirable attributes to incorporate in the multi-optional governance structure, were also recognised. These included: communication between stakeholders in the governance structure, and between participating stakeholders and others; transparency in stakeholders' motivation and work procedures; awareness that the engagement in such a structure might affect routine work procedures; clear objectives; flexibility to adjust the structure to meet changing needs; and social acceptance of the objectives.

Identified advantages of the proposed *multi-optional governance structure* include the inclusive attitude towards diverse stakeholders and the possibility to streamline different stakeholders' activities into joint efforts to accomplish common goals. Identified challenges are mainly connected to adapting the

structure sufficiently to the context of a particular corridor. The customising variable stakeholders' interests is especially important to explore since it is multifaceted and numerous factors may influence stakeholders' engagement and acceptance of common targets and core stakeholders. Further challenges are posed by the variations in processes, cultures and stakeholders' mandates among concerned countries and regions within countries.

When implementing the Bothnian corridor initiative the derived framework could be potentially applied. It is assumed that it would be implemented gradually. Another possibility is to monitor governance development in existing and new transport corridors, and draw conclusions based on comparative studies of applied governance structures and the *multi-optional governance structure*. Further research to refine the *multi-optional governance structure* is also required to encompass a deeper knowledge of the complexities of stakeholders' intentions and national constraints. Finally in a broader perspective, further research is needed to gain extended knowledge of how transport governance structures can promote the development of green transport corridors and thus improve both the efficiency and sustainability of our transport systems.

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## *Paper I*



# HOW TO CREATE A TRANSPORT CORRIDOR MANAGEMENT- A LITERATURE REVIEW

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## ABSTRACT

The European Commission has adopted a proposal to develop the trans-European network for freight and passenger transports (TEN-T). A multimodal core transport network for Europe has been proposed, as part of the TEN-T (including all modes of transport; roads, railways, airports and canals). As parts of the core network, ten core network corridors have been appointed. They will be used as instruments for implementing the entire core network. European Coordinators will facilitate the implementation of the core network corridors, in cooperation with corridor platforms to be established by Member States concerned. There is no overall solution to how this core network with partly appointed network corridors would be managed, and how the corridor platforms will be synthesized and inter-organized to accomplish seamless transnational transport solutions.

This literature review pinpoints three areas of specific importance for future work in creating transport corridor management structures. First, broad stakeholders inclusion, where formalized partnerships in agreements are suggested. Second, several ways of communication between stakeholders to ensure common progress, and third, to complement the dominant causation processes with effectuation processes to capture the stakeholders own driving forces towards common goals.

## 1 INTRODUCTION

In the white paper about transport the European Union (EU) states that to meet the future challenges there is need of an efficient core network for multimodal passenger and freight transport (including all modes of transport; roads, railways, airports and canals). Freight corridors needs to be developed optimized in energy use reaching for low emissions, although reliable, with improved logistic solutions, and at low administrative costs. More energy-efficient modes should be used, meaning a shift from road freight to rail and waterborne transport over medium and long distances by using efficient and green transport corridors (European Commission, 2011).

On the 19<sup>th</sup> of October 2011 the European Commission adopted a proposal to develop the trans-European network for transports (TEN-T). A multimodal core transport network for Europe has been proposed. As parts of the core network, ten core network corridors have been appointed. They will be used as instruments for implementing the entire core network. European Coordinators, designated by the Commission, will facilitate the coordinated implementation of the core network corridors, in cooperation with corridor platforms to be established by Member States concerned. The corridor platform shall be composed of representatives of the Member States concerned and as appropriate, other public and private entities. Each corridor platform will establish a multi-annual development plan, including investments and implementation, as a management structure. The European coordinator shall

chair the corridor platform. The corridor platform may be established as a permanent legal entity (European Commission, 2011).



**Figure 1 EU Core network map (European Commission, 2011)**

It is clearly described in the proposal that from a situation where Member States have been main actors in transport infrastructure developments, now other key actors like for example regional and local authorities, transport operators and private entities are becoming more important. The Commission therefore used the form of a regulation to be binding for all parties.

There is no overall solution for how this core network with partly appointed network corridors would be managed, and how the corridor platforms will be synthesized and inter-organized to accomplish seamless transnational transport solutions. The stipulated question at hand leads to the field of research in transport combined with multi-level governance. The problem of traditional multi-level governance is how the different levels should interact in a way that is prosperous to the intended development. Within the transport sector the research on governance are quite limited.

This review is investigating scientific research on creating sufficient transport corridor management structures: how stakeholders can be attached to a management structure; which stakeholders are crucial to the management structure; important considerations for successful collaboration etc. The findings from the literature review are structured in themes. The themes, chosen by the author, emerging from the present literature review, are:

- Governance and governance networks
- Institutional arrangements
- Coordination
- Key-factors for consensus and success
- Business networks
- Processes for creating management structures

Finally, the findings will be synthesized and discussed regarding conclusions for future work in an EU context, developing the transport corridors to better meet future demands of more efficient and greener transport, in terms of:

- Important considerations in creating transport corridor management structures
- Finding a method for creating management structures

## 2 RESEARCH METHODS

A literature review has been conducted during April 2012 covering three databases Scopus, Web of science and Libris. The review has a systematic approach, using keywords to find articles of interest, which then serve as a knowledge base for finding themes for the analysis in an iterative process, so called grounded theory. The analysis itself is a qualitative synthesis of knowledge found in the articles.

SciVerse Scopus is the world's largest database of abstracts and citations assessed and peer reviewed literature. The database contains 45.5 million records in technical, medical, social, arts and human sciences (SciVerse Scopus, 2012).

Web of science is a reference database that provides access to multiple databases, covering nearly 12 000 scientific journals in engineering, social, and humanities, and over 150 000 conference proceedings (Thomson Reuters, 2012).

Libris is a Swedish national search service providing information on titles held by Swedish university and research libraries, as well as about twenty public libraries. Here you can find books, reports, periodicals, articles, electronic resources, etc. At present the Libris database contains 6.5 million titles (National library of Sweden, 2012).

Keywords in the search were *transport*, *transport corridors*, *governance*, *multi-level governance* and *decision-making process*. The keywords were chosen by the author with the intention to find knowledge about the described task of investigation. The keywords were combined when there was a need of reducing the number of articles for further handling, 200 articles was regarded as a maximum limit per search. Search combinations were in Scopus (transport and governance, transport and multi-level governance, transport and decision-making), Web of knowledge ( multi-level governance, multi-level governance and transport, transport and governance, transport and decision-making process, transport corridors and decision-making process) and Libris ( multi-level governance, transport and governance, transport and multi-level governance, transport and decision-making process). The author then browsed a total of about 500 scientific articles and books, by reading the titles. From these articles 19 were chosen by the author to be further examined. Criterion for further examining was that it comprised the actual topic.

Additional literature comprising research in the field of management and organisation in relation to transport was defined by contribution from experts at the Department of business administration, technology and social science at Luleå University of Technology, Sweden

The literature review resulted in the six themes, elaborated and described below.

## 3 FINDINGS FROM THE LITERATURE REVIEW

The development of major transport corridors is a complex planning task. It cuts through layers of governance, administrative and even national borders. On top of that, different disciplines are involved. Romein et.al. (2003) recognize that large-scale infrastructure planning implicates changed use of land areas, new logistic possibilities, economic opportunities, urban development and environmental interference. Ferrari & Musso, (2011) clarifies that specific stakeholders need to have a wider perspective than just their own jurisdiction to be able to take advantage of the fact that they are part of a larger transport system.

### 3.1 Governance and governance networks

The general trend in society is that government issues to a higher extent have become governance issues, where government refers to the structure and function of public authorities

and governance refers to joint actions between authorities, private actors, organizations and citizens in governmental issues (Giuliano, 2007, Romein et.al. 2003).

Coen and Thatcher (2008) has recognized an extended use of network governance on the European level. Network governance are specified by a multi-level linkage between actors from national, European and international levels and the public and private sector, a shift from formal authorities to organizations or individuals who act as coordinators and that the governance is moving away from hierarchy towards discussion, negotiation and soft law (norms). European Commission, national governments and independent regulatory agencies have pushed formation of regulatory networks in Europe in the late 1990s and early 2000s to harmonise European single market, often in key sectors like telecommunications, financial services and energy. Delegation to these networks has been made both from the Commission and from domestic independent regulatory agencies. However the network governance is limited since these networks are given few formal powers and few resources to cope with their wide range of tasks.

### 3.2 Institutional arrangements

A case study in Australia (Legacy et.al, 2012) examining two governance models for the delivery of sustainable transport policy with integration between the field of transport and the field of land use, states that even though an organizational integration of different tasks takes place it does not assure that the procedural governance is improving, meaning involvement and information flows between different stakeholders. Usually organizational restructuring are top-down steered and unless cultural and procedural changes are evolved, practical work might not be affected. To encourage cultural and procedural changes, networks are suggested to manage vertical integration from strategy to effectuation, stakeholder base should be enlarged and interaction between groups encouraged.

According to research on the infrastructural mega corridor Randstad – Flemish Diamond, there is need of new institutional arrangements to accomplish a desirable development of major transport corridors. The suggestion is that planning should enhance the inclusion of different actors and disciplines, like regional quality of life (Romein et.al., 2003).

A survey by Vega and Penne (2008), of institutional arrangements to handle planning and development of investments in transport infrastructure in USA, finds that multi-state or mega-region (areas where labour market, transport solutions, city development etc. are integrated) institutions are a proper basis for strategic decisions. These institutions can be formalized in different ways and none can be pointed out as the universal solution. A regional framework of governance is assumed positive from a policy perspective, but on the other hand raises questions about where regional limits are set, and how regional frameworks are coordinated. Some examples of regional initiatives regarding transport issues in the USA (Vega & Penne, 2008) are:

- The Delta Regional Authority (DRA) that encompasses 240 counties and parishes in Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee and is led by a federal co-chairman appointed by the president of the USA and the eight state governors. It aims for better quality of life and strengthened economic development. They hold a grant program which between 2000 and 2005 comprised 48,5 million dollars for different projects. The projects also received funding from other federal funds with 213 million dollar and private funds with 493,4 million dollars.
- The Ohio-Kentucky-Indian Regional Council of Governments (OKI) has just over 100 members from governmental, social and civic groups from nearly 200 communities in the eight county and three-state regions. It also aims for better quality of life and



strengthened economic development. OKI has final authority over all federal funding for transport in the region.

A transport governance review in the context of Leeds city region was carried out to find appropriate governance arrangements for future transport planning and delivery (English & Spear, 2009). Some of the general remarks made in the study are that:

- strategic decision making must be balanced by regional and local diversities.
- stronger powers to an organization should call for stronger accountability which might lead to a higher extent of political leadership.
- stakeholders support needs to be secured.
- before a governance scheme is launched it should be clear how decisions are made.

### 3.3 Coordination

The national level, being in between supranational and subnational levels might be the most appropriate level to manage multi-level planning regarding infrastructure in megacorridors, is brought forward in an article where the infrastructural megacorridor Randstad – Flemish Diamond is studied as an example (Romein, et.al. 2003). This due to that the national level is a player that can raise objections directly to the European Commission. However it is important that the national level does not keep the planning issues to themselves, but invite regional and local interests to participate, together with the national level in other countries, when cross-border corridors are concerned. It is further suggested that a “policy monitor” could be implemented at a corridor level. A policy monitor should note all initiatives in connection to the corridor and disseminate this information to the stakeholders, and also detect possible conflict areas (Romein et.al., 2003).

Interaction and communication between participants is of great importance in multi-actor planning projects. It leads to the need of a new type of expert, a specialized process manager that holds a combined knowledge in problem structuring and problem solving in addition to negotiating skills (Walter & Scholz, 2006).

### 3.4 Key-factors for consensus and success

The decision-making process in transport policy and investment issues is examined by Giuliano (2008) in the example of the Alameda transport corridor, the construction of a rail transport corridor connecting the ports of Los Angeles and Long beach with transcontinental rail lines, regarded as a successful case. Mostly it is regarded successful bringing stakeholders interests together and forming joint agreements to push the work forward. The corridor was constructed and is now operated by a joint authority. Originally another joint authority was formed with board members from the ports, a regional agency and all eight cities concerned. The board was then reconstructed to consist only of the major financial stakeholders: two ports, a regional agency and two large cities. Separate memorandum of agreements was negotiated with each city respectively. The key factors for reaching consensus without increased expenses were (Giuliano, 2008):

- Major stakeholders had experience from this type of projects.
- The importance of the project was clear.
- Major stakeholders had financial and political power.
- Key public agencies agreed to the project.
- Risks (financial) were identified and distributed among the major stakeholders.
- A strong leadership.

The project emerged from a “bottom-up process”. Since the local and regional interests were compatible engagement from many actors were achieved.

Critical success conditions of collaborative planning were explored by Walter and Scholz (2006) in five rather large urban transport planning projects in Gothenburg (Sweden), London (United Kingdom), Milwaukee (United States), Tokyo (Japan) and Mexico City (Mexico). The results implied these critical success factors (Walter & Scholz, 2006):

- Devoted management for the network.
- Large variety of actors.
- Extensive use of *knowledge integration methods* (ways of communicating and learning from each other) in combination with a high network density (many contacts).
- Extensive use of *unilateral methods* (one-way information to prepare the ground for higher involvement).
- Letting the project into ordinary planning procedure.

In Switzerland Sager (2007) studied success factors influencing policy making by reviewing 62 evaluations of transport policy measures. Success consisting of both implementation and effectiveness of the policy measures, in terms of output (products), outcome (changes in behavior of the target group) and impact (effects on actual problem) was studied. Four relevant conclusions were found:

- Public policies, in Switzerland, should be implemented at a medium/high federal level.
- A strong administration is crucial for success. Strong in this case referring to high professionalism, independency, centrally organised and active at supra-local level.
- Policy design. Procedural changes were successful measures.
- Planning consensus, compromise-finding processes in choice of means and implementation.

Overall, politics were found to be of high relevance in production of outputs, but did not matter to the actual effectiveness of the measure. Then the policy design became most important (Sager, 2007).

### 3.5 Business networks

According to Lorenzoni et.al. (1995), network on the leading edge in business life needs to handle both flexibility in markets and long-term commitments and those networks seem to benefit from strategic guidance and governing from a “strategic centre”. The role of this centre is to create value by:

- *Strategic outsourcing* – partners need to be problem solvers and initiators.
- *Capability* – develop competence of partners and make them share their knowledge.
- *Technology* – borrow ideas from others and develop them further.
- *Competition* – encourage positive competition within the network.

The strategic centre is an attractive business partner. Core competencies for the central firm are (Lorenzoni et.al., 1995):

- *The idea* – creating a vision for both the central firm and the participating firms.
- *The investment* – a strong brand and systems for developing and support partners.
- *The climate* – create a climate of trust.
- *The partners* – methods for attracting and selecting partners.

Examples of successful companies that are working strategically in building up partners and their abilities and competencies are Toyota, Nike and Bennetton (Lorenzoni et.al, 1995).

Dyer and Nobeoka (2000) describes how the Toyota production system has dealt with network-level knowledge-sharing processes. They have routines designed to facilitate knowledge transfer, both explicit and tacit knowledge. Toyota subsidized the network when established to be able to give substantial benefits for participating members. The network has also a strong shared identity in the many knowledge-sharing processes connected to it. To

prevent “free riders” they have established rules where new members have to agree to openly share knowledge from their production to become part of the network. The most important network-level processes are:

- *the supplier association* (network-level forum for social fellow-ship, sharing norms and generally explicit knowledge),
- *Toyotas operations management consulting division* (a network level unit for handling knowledge collection, storage and spreading, provides free on-site assistance to suppliers),
- *voluntary small group learning teams* (sub-network forum for smaller groups of suppliers)
- *inter-firm employee transfer*.

There are many ways of communication that creates a high inter-connectedness among members in Toyotas network. Toyota also works with rotating memberships in groups and scanning best practices outside Toyota to bring new knowledge in to this strong tie network (Dyer & Nobeoka, 2000).

Gulati and Singh (1998) have studied why different types of inter-firm alliances are chosen, with few or many hierarchical controls, two important factors has shown to be *coordination costs* and *appropriation concerns*. Coordination costs consist of the work of sharing tasks, coordination to accomplish the whole task and communication costs between organizations. Appropriation concerns originate from behavioural uncertainty and contracting problems. Authority structures in hierarchical governance forms of alliances usually consist of plans, rules, programs and procedures. This simplifies decision-making, prevent disputes and decrease the need of communication. Analyses of 1 570 alliances in USA, Japan and Europe (Gulati & Singh, 1998), from 1970 to 1989, showed that the greater anticipated coordination costs the more hierarchical governance structure was used. Trust was captured in several ways. Repeated ties between the firms lowered the use of hierarchical structures. There was greater trust between local alliances than cross-regional alliances in Europe.

### 3.6 Processes for creating management structures

There are several alternative forms to deal with regional and mega-regional planning and transport infrastructure development and financing. It seems difficult to find a universal structure (Vega & Penne, 2008). It depends on the context and the stakeholders involved.

Performance measurement frameworks are mainly used with a managerial purpose, ensuring progress of the work towards specified goals. Pei et.al., (2010) reviews different performance measurement frameworks and describes the performance prism framework which incorporates stakeholders interests in a broad sense. The perspectives are:

- *Stakeholders satisfaction*. Who are the key stakeholders and what are their interests?
- *Strategies*. What strategies must be developed to satisfy the key stakeholders?
- *Processes*. What critical processes are required for the strategies?
- *Capabilities*. What capabilities are needed for the critical processes?
- *Stakeholder contribution*. What contributions from stakeholders bring forward these capabilities?

By using this model different stakeholders interests are recognized and connected to a common path towards improvement (Pei, et. al. 2010).

Back-casting is another known method where goals and future targets are visualized and the path to reach these future objectives is elaborated. In a scenario study, planning for green mobility in Bromma, Sweden, four approaches to handle actors in these studies were made (Wangel, 2011).

- Stakeholder analysis approach. To find who actually is a stakeholder, actors can be categorized. Categorizing could be done by grouping stakeholders due to their influence /attitude, if they are affecting, being affected or both or being supportive or not etc.
- Social network approach tries to describe the social interrelations between participating stakeholders. This analysis can become quite personal, looking into current interactions, informal relations and earlier conflicts. The relations are also dynamic over time.
- Governance model approach can be approached to either an existing governance model or to a process of synthesizing a new governance model. A basis for reflections is created by formulating questions like “How are goals set? How are decisions made
- Policy and change approach is taking into account different restraints in reality when change is being made. An example of this approach is a policy window - within a certain time frame different streams of problems, policies and politics where different actors are involved can be joined in a favourable way.

Vega and Penne (2008) describes how lobby interests have pushed for an incorporation of regional approaches to federal and local transport planning in USA. The federal government has then launched a corridor program, conducted from the department of transportation. The corridor program initiative encourages public-private partnerships regarding development, management and financing of transport corridors. When a corridor is included in the Corridor program a process starts where states, municipalities, native interest organizations and federal agencies draw a Corridor program development agreement. By this agreement all different actors (both public and private) make a commitment to the corridor and settles responsibilities about financing, planning process, operations, maintenance and more. It also includes objectives of the corridor and performance measures. The states and the transport department are making formal agreements that in detail determine the commitment of federal, state and local governments and how the private sector is anticipated to contribute.

In creating new firms, causation, which is an ordinary decision process, can be complemented by effectuation. Sarasvathy (2001) explains that the causation process has set an effect or goal in the beginning and focus is on selecting means to get there. An effectuation process on the other hand, has a set of means to start with and then focuses on selected effects or goals that can be created with that set of means. The general overarching goal can however be the same. Effectuation makes it easier to be more flexible in changing goals over time and making use of contingencies as they arise. Causation processes focuses on the predictable in the uncertain future, while effectuation processes focuses on the controllable in the uncertain future. To refer to a simplified example (Sarasvathy, 2001): If there is a firm trying to get into the market in a causation process it analyses the market carefully, make strategies to capture market shares, and starts. The market is independent of the firm. In an effectuation process the firm together with others create a market themselves by getting enough stakeholders and let them buy into the firm. A network of partnerships and pre-commitments form the market.

Regarding the transport governance review in the context of Leeds city region, according to English and Spear (2009), partner authorities and stakeholders influence has been important during the entire process, to ensure smooth implementation. In the first stage the scope of the study was agreed upon and the scope consisted of relation to other bodies, governance and decision-making structure, geographic coverage, funding sources and timing (when specific reforms could be implemented). At the second stage other similar initiatives were analysed, in the United Kingdom and internationally. Interviews were also held with stakeholders. In the third stage, which is in progress, governance models are being presented to guide the discussions between stakeholders.

## 4 DISCUSSION

When further developing the regulation from the European Commission in creating transport corridor management structures, the above presented research gives advices from a large amount of examples, where consistency between examples strengthens the message.

**Table 1 Overview of main results presented in 3.1-3.7**

Passage	Keywords	References
Governance and governance networks	Broad joint action, negotiation, delegation followed by powers.	Giuliano, 2007; Romein et.al. 2003; Coen & Thatcher, 2008.
Institutional arrangements	Procedural changes, inclusion, multi-state/multi-regional framework, balance regional/local diversities, accountability.	Legacy et.al, 2012; Vega & Penne, 2008; English & Spear, 2009.
Coordination	National level key player, policy monitor, process manager.	Romein et.al. 2003; Walter & Scholz, 2006.
Key-factors for consensus and success	Agreements, treaties and policy initiatives, strong leadership, strong major stakeholders, strong administration, stakeholders support, actor diversity, integrating in regular processes, communication, compromises, procedural changes.	Romein, et.al. 2003; Giuliano, 2008; Walter & Scholz, 2006; Sager, 2007.
Business networks	Strategic centre, network level processes for high inter-connectness, greater trust- less need of hierarchy.	Lorenzoni et.al., 1995; Dyer & Nobeoka, 2000; Gulati & Singh, 1998.
Processes for creating management structures	No universal method, stakeholders interests, performance prism, back-casting. Corridor program development agreement, causation and effectuation processes, stakeholders inclusion.	Vega & Penne, 2008; Pei, et. al. 2010; Wangel, 2011 Sarasvaty, 2001; English & Spear, 2009

### 4.1 Important considerations in creating transport corridor management structures

A coordinator, policy monitor, or process manager with negotiation skills could be fruitful to disseminate information between stakeholders and be a first level for handling disputes. This is something the European Commission already decided on for the network corridors. This should be a possibility also for the other transport corridors in the core network.

When creating a network with a coordinator and a set of tasks, powers and resources must follow it up. This has specifically to be considered when it is a transnational corridor platform where procedures and responsibilities can differ between countries. With strengthened powers there is also a need for higher accountability.

A governance structure should be procedural, not just organizational. Otherwise there is a risk for work going on as usual. A new structure must be connected to standard planning processes. The whole chain of action should be involved, from planning to operational issues.

Stakeholders should be involved from the start, in a broad manner. The transport corridor project should be perceived as being of high importance with strong support for the project from public agencies and others, with stakeholders willing to compromise for the importance of the entire project.

The national level is a key player regarding transnational corridors since it can raise objections towards the European Commission. The European Commission has appointed the

concerned member states to establish the corridor platforms for the network corridors. For the other corridors in the core network it could be an alternative, but then member states, at this moment, have to decide on cooperation themselves. A strong leadership is however important with a strong and devoted management, and a well-functioning administration with high knowledge. Major stakeholders with experience and powers are desirable.

Communication between actors both in one-way communication and other forms of conferences or group meetings is crucial to create a common path forward. Joint agreements, memorandums, treaties and more, are expected to settle a common view of understanding.

## 4.2 Finding a method for creating management structures

The performance prism model takes a starting point in the stakeholders needs with asking who the stakeholder is, what the stakeholders want and how to accomplish this with strategies, processes, capabilities and stakeholder contribution. By using the back casting analysis in approaches to handle stakeholders, the stakeholder analysis is very interesting, finding out who is stakeholder, similar to the first step of the performance prism model. The back casting - social network approach is anticipated to be more useful with an existing network where there are social interrelations to be evaluated. The back casting - governance model approach is quite similar to the performance prism model, where questions are formulated for reflection how to synthesize a governance model. The back casting - policy and change model is not suitable in this particular case since it has already been decided to bring the transnational transport corridors forward in the EU. With the stakeholder perspective as a base the bottom-up process might be able to meet the top-down process the creation of the transnational transport corridors really are.

The corridor state program initiative in USA has several similarities with the European Union initiative, encouraging public-private partnerships, management and financing of transport corridors. The formal agreement made at the start of the developing process between different actors on responsibilities and contributions of different actors and objectives of the corridor, including performance measures, is an interesting approach that needs to be considered.

So far the European Commission has used a causation process for the network corridors, where the corridor platforms shall outline development plans, including investments and implementation. With a regulation comprising all actors there is clearly a will to enforce the transport corridors over Europe. An effectuation approach could however be used as a complement in implementation to strengthen the set objectives even further and make use of stakeholder engagement. Discussing with the stakeholders what they can and what they want to contribute with and building strong partnerships in the direction of the overall goal.

The Leeds case shows clearly the importance of including stakeholders in a changing process. Formalized partnerships between authorities are used also in this case.

Finally, the Toyota model as an example of a strategic centre gives inspiration from business life to this public authority driven project. The strategic centre partner might be interpreted as the lead organization, the member states, for the network corridors. They create a vision, make it an investment to join, encourage trust and actually choose the partners. The strong role of communication to harmonise the thoughts of the future and strengthen competencies are effectuated through many network activities and connections between partners. A broad network level forum makes it possible to reach many stakeholders. With several specific topic committees issues like financing and planning can be prepared in smaller groups. A secretariat can provide information and help to stakeholders, and smaller sub-networks can be formed for specific demonstration projects.



## 5 CONCLUSIONS

Designing a management structure, suitable to a specific task in a specific time, is to a large extent effected by the contextual settings. Designing a methodology to design management structures needs to account for different factors of contextual character that influence the managements outcome and impact.

To sum up the discussions of this paper, future work must specifically address three areas of importance. First, a broad stakeholders inclusion, clarifying who they are and what desires they have and how they can be strengthening the project. Formalized partnerships in agreements are suggested. Second, ensure several ways of communication between stakeholders to facilitate common progress, larger information conferences mixed with smaller operational groups for specific topics. Third, complement the dominant causation processes with effectuation processes to capture the stakeholders own driving forces towards common goals.

This paper can be used for discussions on how to proceed in creating management structures for transport corridors in Europe. Further literature studies are foreseen, especially in the area of network governance, and further research is needed on how other sources can contribute to prosperous corridor management structures, like connection to other EU initiatives (for example directive on competitive Rail freight management), experiences from on-going transnational projects regarding transport corridors. Proposals on how to manage the challenges and hindrances can be charged in a management model of transnational transport corridors.

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## *Paper II*



# **How to create a transnational transport corridor management – structural and procedural public and private cooperation**

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## **1. Background and introduction**

A proposal to develop the multimodal trans-European network for transports (TEN-T) has been agreed upon by the Commission, the Council and the Parliament on 29<sup>th</sup> May 2013 (European Commission, 2013). The intention is to develop an efficient and integrated transport network for all four modes of transport (sea, rail, road and aviation) to serve the need of passenger and goods transports within European Union (EU) and in connection to countries outside EU. The TEN-T structure consists of two parts: a Comprehensive Network and a Core Network.

The European Commissions' proposal for TEN-T guidelines (European Commission, 2011) say that there will be Core Network Corridors leading the way for implementing the entire Core Network. It is further stated in the proposed guidelines that each Core Network Corridor will have a European Coordinator facilitating implementation together with corridor platforms, being established by concerned Member States. The European Coordinators will be assigned by the European Commission. The corridor platform may be established as a permanent legal entity. According to the proposed guidelines participants in the platforms should be the representatives of Member States concerned and other public and private entities and every corridor platform need to form a multi-annual plan for development.

It is recognized by the European Commission that from having one main actor in society developing transport infrastructure in the European Union, Member States, there are now several

actors involved like regional and local authorities, transport operators and private entities. The guidelines are therefore proposed to be in the form of a regulation, to be binding for all parties (European Commission, 2011). However, these proposed guidelines do not provide details for how the Core Network Corridor managements will be synthesized, how collaboration and management within a corridor platform will be designed, or how interaction between the Core Network Corridors and the rest of the Core Network will be accomplished. Another appropriate question is how management structures for activities in the parts of the Core Network outside the appointed corridors should be formed.

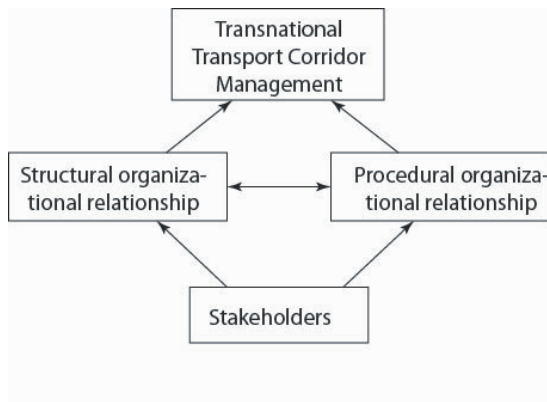
The Bothnian Corridor is a transport corridor stretching from northern Scandinavia down to Mjölby (close to Stockholm) and Helsinki. It is part of the Core Network, but not one of the appointed corridors. This means that it is up to concerned actors to create a transnational corridor management for developing the corridor. The Bothnian green logistic corridor project (BGLC) is running 2011-2014 and is partly financed by the European Union, bringing 29 stakeholders together from 5 countries; regional authorities, cities, national authorities/ministries, ports, associations and universities. Luleå University of Technology (LTU) is a partner in the BGLC project, and research leader for activities leading to a recommendation for a management structure to develop the Bothnian Green Logistic Corridor.



**Figure 2 Bothnian Green Logistic Corridor map (Bothnian Green Logistic Corridor project website, 2013)**

In order to be able to suggest a suitable management structure there are several factors to be considered, like which structural form it should have, who should participate and how the participation processes should look like. This paper aims to discuss how to create a transnational transport corridor management asking:

- What structural and procedural aspects are relevant for developing a transnational transport corridor management in a European context?



**Figure 3 Relations between structural and procedural aspects of an organizational relationship**

## **2. Methodology and research methods**

The main aim for the research is to provide a basis for developing a methodology to create customized management structures for transnational transport corridors. The research methodology is based on a qualitative approach using a combination of literature reviews, document studies, interviews and observations (Danermark, 1997). Using diverse methods a triangulation is created (Vidovich, 2003), where the outcome is supported by several sources of information. The studies are conducted integrated with the on-going BGLC project. Literature reviews has been performed to gain knowledge of earlier scientific findings on governance structures, especially within transport. A scientific study in a European context has been made in collaboration with University of Thessaly in Greece (UTH) and VTT technical research centre in Finland (VTT) to gather information from experiences in other transport corridor initiatives. In connection to the study a workshop was held to discuss the findings from the study and views of

different actors on transnational transport management structures. The authors participated in the workshop. Semi-structured interviews of representatives from transnational transport corridor initiatives have started, and information will be gathered from additional transport corridor initiatives. The information collected will be used in developing a framework for creating customized management structures for transnational transport corridors.

This paper comprises discussions of findings from a scientific literature review focusing on models of cooperation, the scientific study in a European context and the workshop. The research methods for these parts are therefore presented in more detail.

A scientific literature review was made in June 2013 in the databases Web of Science, Emerald and Scopus. Key-words were chosen by the author to comprise the subject of research. The key-words used were *governance model*, *non-profit organisation*, *strategic alliance*, *EEIG*, *PPP* and, *network governance*. They were all systematically searched for, solely and combined to each other in pairs of two. When there were over 200 hits in a search, the key-words transport and transnational were added in separate searches. This way the number of articles was limited to a manageable amount. The author then browsed the titles of the articles, and 32 articles were found relevant for reading and analysing. One additional article from a chosen articles literature references were also examined.

The scientific study in a European context was performed January-May 2013, with VTT as coordinating part, responsible for the report where the findings from both research teams and the workshop are presented (Eckhardt, 2013a). LTU procured the two research actors for performing the study. Based on experiences from previous research in transnational transport corridor projects, the contractors should elaborate on fifteen questions, pre-identified by LTU, regarding structural and operational management, and its impact on the outcome of the project. The study was deepened by additional case studies, where UTH looked into the management structure of a European intermodal logistics service provider and VTT examined the Brenner Corridor transport structure.

As a part of the study, VTT was responsible for arranging a workshop in close collaboration with LTU (Eckhardt, 2013b). It was held 23<sup>rd</sup> of April 2013 in Örebro, Sweden. It was also arranged in collaboration with CLOSER, a Swedish national arena for transport efficiency. This cooperation aimed for the possibility for participants in another green transport corridor project GreCOR (Oslo-Randstadt) to join, since they had a similar interest in transport corridor management issues. At the workshop there were 48 registered participants from Sweden, Finland, Denmark, Germany, Italy and Poland covering representatives from academia, consultants, regional and local authorities and business actors. The workshop was divided in to two parts, first there were lectures from invited speakers, and then a learning café, with five stations. The participants were divided into five groups and visited each station, which had a stationary chairman and a specific theme to be discussed. The five themes were: Management structure organization; Operation of the management structure; The impact of the management structure on corridor development; Ideal corridor management and Case: BGLC specific features.

### **3. Findings of research study**

First of all, the results display the use of a broad terminology in this field. Organizational relationship has therefore been used in this paper as an encapsulated term for alliances, partnerships, networks, commissions and European economic interest group (EEIG).

#### **3.1 Structural forms of organizational relationships**

Teng and Das (2008) state that there are three basic forms of alliances according to literature: joint ventures, minority equity alliances and contractual alliances. Joint ventures are jointly owned entities which represent the most integrated form and are suitable in more complex collaborations. Minority equity alliances consist of alliances where either one or more partners buy shares in the other partners businesses or one of the businesses. A contractual alliance does not involve equity share, the separate entities state their joint work in a contract.

This division of forms of alliances emerges from literature of inter-firm alliances and might not encompass all types of partnerships or networks emerging from the public sector. Provan and Kenis (2007, P 231) mean that networks are not legal entities such as joint ventures or equity-based alliances, and they define network in their work as “three or more legally autonomous

organizations that work together to achieve not just their own goals but also a collective goal”. Networks can be contracted, but also self-initiated or mandated.

Bäckstrand (2008) has studied partnerships in the area of climate issues, and according to her there are mainly three types of partnerships; private, governmental and hybrid partnerships. Governmental partnerships also include subnational networks driven by regional or local authorities, but where business and interest groups can be included. The hybrid partnerships, or public private partnerships (PPP), are formed between public and private actors and include several stakeholders. PPP is considered as a co-operation between public and private actors to jointly accomplish something together that they could not have done on their own (MacDonald, 2012; Rufin, Rivera-Santos, 2012; Steijn, Klijn, Edelenbos, 2011). Partnerships can legally have different forms. Some are arranged as new organizations, with their own secretariats, while others are more loosely connected.

The European economic interest grouping (EEIG) was launched as a legal instrument for transnational cooperation by the European Commission in 1989 (Commission of the European Communities, 1989). An EEIG is a separate legal entity and is formed by the founders drawing up a contract clarifying the intentions of the EEIG, voting rights and more (Council Regulation, 1985). Mazza (2006) describes a cooperation working in the form of an EEIG, ESCA – European centre for space applications, where small and medium-sized firms and academia can promote space research and initiate cooperation. An EEIG was chosen because of its light structure, to avoid high starting investments, flexibility in adjusting members coming in or dropping out of the partnership, and being able to act as a juridical body signing documents and receive funding. Baudiment (2004) describes another EEIG being formed to strengthen studies about the future, to promote future thinking. Two public and five private members were initiating the group.

Another type of organizational relationship is commissions. They often work with sustainable development in a given area in a broad sense driven from a state, or overstate, level. Myint (2003) describes the Mekong River Commission and the International Commission for protection of the Rhine, both initiated in the 1950s. They have well developed organizations with permanent secretariats and different working groups/divisions.



The importance of a firm and stable management structure was brought forward in the workshop, with steering committees and support from political representatives. It was further discussed the need of simplicity when many stakeholders from different countries are involved. The creation of a joint company was suggested as a thinkable solution. However, as the objectives change also the management structure must be allowed to change (Eckhardt, 2013b).

#### *Participants in organizational relationships*

When entering an organizational relationship the actors have different motives for participating. Nielsen (2010) proposes that strategic fit between participating firms, is an important factor for the outcome of an alliance in forms of new ideas, new skills and more. Strategic fit being how the motives for each partner to enter an alliance match each other.

Having an inclusive attitude towards stakeholders was considered important by the workshop participants. EU was mentioned as one of the key stakeholders as the development of transnational transport corridors in Europe is often dependent on EU-funding. It is further wished for a strong connection to relevant business actors (Eckhardt, 2013b). Eckhardt and Leviäkangas (2013) argues for a diverse participation from representatives from different layers of governance and that advisory groups can be an option for capturing business or terminal interests.

An example of the importance of participation from different layers is described by Myint (2003) studying the ICPR, established around 1950, where two legally binding conventions were unsuccessful due to lack of trust between states and lack of political interest in the issues. However, an accident leading to pollution changed the political focus and an action plan was formed, which worked successfully. The Action plan also led to involvement from different governance layers, with participation from local and non-state actors. These links between governance layers were lacking in the two first initiatives.

Previous knowledge of potential partners influences the choice of partners. Organizations choose known partners more frequently for a partnership. It lowers start-up costs and uncertainty of partner behaviour (Gulati, 1998). The individual interest and position is another factor. Although

it is organizations joining each other in different kinds of relationships, it always relies on the individuals in that organization how joint assignments are performed. Participating representatives, working on a high level in their own organization, is recognized in the workshop as important to have a strong and effective management structure (Eckhardt, 2013b). It is found by Tallman and Shenkar (1994) that the more uncertainty in an international co-operation, it is more likely that it is followed through in a market where key managers have a personal interest.

According to Eckhardt and Leviäkangas (2013) transport corridor development is often publicly driven when it is established. After conducting studies by academia and consultants, interest from business actors emerges and eventually the corridor development gets business driven.

### **3.2 Procedural management in organizational relationships**

The organizational structure is important in a relationship, but it is even more important for the outcome to manage the procedural governance (Steijn, Klijn, Edelenbos, 2011). Myint (2003, P 106) claims that “governance nowadays is a phenomenon of managing and networking issues, interests and actors to produce actions that are transparent in process and effective in achieving stated goals of regimes”.

Even though customization of work processes is crucial for outcomes in a relationship there are generally barriers for changing to be aware of. Although the organization might lack routines for handling changes, procedures might need to be changed at individual basis. It is often found difficult to proceed from the planning phase to the actual collaboration phase (Greasly, Watson, Patel, 2008). If the tasks performed in the organizational relationship can be adopted as a natural part of the ordinary work it might easier be realized. To achieve this, objectives should be pursued to stay in line with existing policies and programs (Eckhardt, Leviäkangas, 2013).

#### *Leadership*

Provan and Kenis (2007) have studied the effectiveness of different network governance forms and they have chosen three categories of governance forms, shared governance, lead-organization and network administrative organization (NAO), and discussed in which context they are preferable. Shared governance is where the interaction between participants is high, and therefore

no specific leadership is needed. It may be most suitable in small, multi-firm strategic alliances and partnerships designed to develop new things. A lead-organization often occurs when one partner is more powerful or has a larger responsibility compared to the others. A network administrative organization (NAO) is a separate entity, not a part of the joint relationship. It could be a single coordinator or an entire organization. It is considered to be suitable when there are many participants, clear and accepted goals and need for high competence within the network. NAO as well as a coordinator was perceived as success factors of a management structure at the workshop (Eckhardt, 2013b).

It is notable that having a leadership does not necessarily mean leaving the decision-making to a lead organization or NAO. Decision-making in a public private partnership is described by Velotti, Botti and Vesci (2012) as both a top-down and bottom-up process. The way forward is agreed upon together, the steering is not the main issue, and the public servant is not expected to be in control.

#### *Formal and informal agreements*

Agreements are important for a relationship and they can be both formal and informal. Formal agreements are often written contracts or Memorandum of Understandings (MoU), while informal agreements are relational, mostly based on trust, and has reputational and ethical importance. They both work to control the behaviour of the partners. A partnership or alliance tends to rely on both formal and informal parts. Written agreements cannot cover everything that might occur in a relationship (Sharma, 1998; Rufin, Rivera-Santos, 2012; Cayian, 2010; Wilson, Pelham, Duffield, 2010).

When governmental agencies are partners in a relationship there is also an aspect of using public funding, and the need of transparency in transactions as well as relations to private companies. Therefore formal contracts are of higher importance in such a context than in inter-firm relationships (Rufin, Rivera-Santos, 2012).

There should be clear goals for the organizational relationship and clear responsibilities for the participants (Eckhardt, Leviäkangas, 2013). It was discussed in the workshop that there might be

reason to have different contract arrangements for different participant in a relationship, depending on their interests and abilities, and agreements should encompass visions, strategies, goals and an action plan with joint activities and priorities (Eckhardt, 2013b). Another way of handling goals is found in the C40 cities leadership group described by Román (2009) as governance where municipalities cooperate. It is considered successful and a strong feature is to promote 'drivers for action' rather than focusing on specific needs.

Guiding principles, as a form of written agreement, of how the work should be performed within a relationship might conform expectations from the partners. Sundin e. a. (1998) describes processes for cooperation in the greenhouse gas protocol initiative. Social controls in the form of guiding principles were developed in the start of the project including accuracy, relevance, consistency, addressing all relevant issues and transparency. It was suggested in the workshop that rules for handling disagreements and monitor outcomes can be established (Eckhardt, 2013b).

Both formal and informal contracts contribute to accomplish procedural fairness in a relationship. Procedural fairness referring to partners perceiving their own contribution in relation to their outcome as fair compared to other partners. Zhang and Jia (2009) argues that procedural fairness is important to a PPP:s outcome.

### *Communication and transparency*

According to Myint (2003) free flows of information and allowing connections between actors networks is important for a well-functioning relationship. Communication is regarded a key factor for corridor development. One reason is to gain acceptance and understanding from both the stakeholder and the public in general (Eckhardt, Leviäkangas, 2013). Sharma (1998) even means that interaction between partners should occur as frequent as possible. Communication activities also keep up the interest in the issues. Tallman and Shenkar (1994) states if the commitment of participating firms is low in a partnership, there is need for continuous reminders of the value of the cooperation.

Communication and transparency was also brought forward as being a key issue by the workshop attendants and they saw need of larger conferences in larger intervals, and more frequent work group meetings for a transport corridor management structure (Eckhardt, 2013b). Both the internal communication inside the relationship and the external communication towards other actors, for instance lobby activities, were seen as essential in the workshop (ibid.).

### *Flexibility*

An organizational relationship might be created to last for some time, to have certain stability. In the same time it has to have certain flexibility if there is need for partner changes or adjustment of objectives. In order to stay relevant the key is continuous evaluation of both the structural and procedural parts of the relationship, and adjustment to a surrounding evolution with new demands (Sharma, 1998; Provan, Kenis, 2007). In the workshop continuous development through regular adjustment of a management structure was recognized as a winning concept (Eckhardt, 2013b).

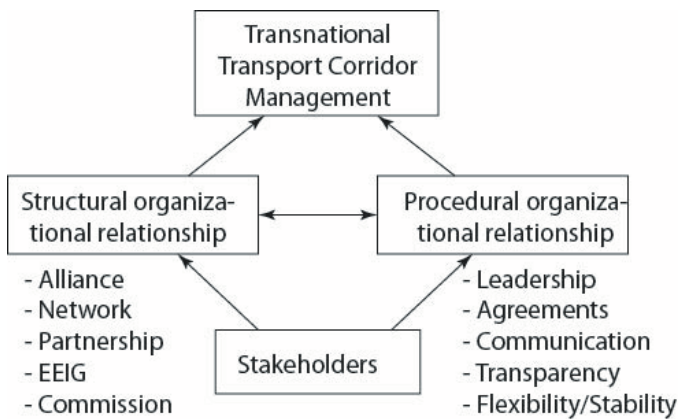
When the project form is used in organizational arrangements, evaluation and adjustments are a natural part of the project cycle, and make it possible to keep flexibility (Bäckstrand, 2008; Wells, Weiner, 2007).

According to Provan and Kenis (2007) network evolution is to be expected. For example if a shared network attracts more participants the form of the relationship is not sufficient. A shared governance network is likely to change towards a participant governed and then to a NAO. When a NAO is established it is unlikely to move back towards shared governance since it is so formalized, efforts have been made to establish the administrative organization and several partners are often involved.

One example of an organizational relationship that have lasted, being assessed and evolved to accustom to their surroundings is the pollution prevention partnership in Colorado, described by Ferraro (1994), and formalized in 1991. This partnership is still alive as the Colorado environmental partnership (Colorado environmental partnership website, 2011). After assessing their future in 2001 it adjusted its mission due to the fact that some initial concerns were solved and new had emerged. It might be considered as an example of flexible stability.

#### 4. Discussion

The results implicate a need for consideration of both structural and procedural parts when creating an organizational structure.



**Figure 3 Overview of main results in 3.1-3.2**

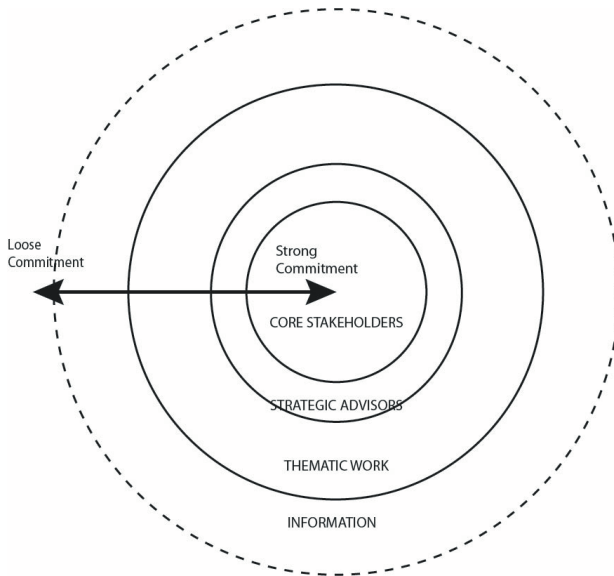
It is recognized in a previous literature study by Öberg (2013) that the trend in society is that issues earlier handled by government or a single authority are turning into governance issues, where authorities, organizations, business and citizens need to work jointly to achieve society goals. To realize the implementation of TEN-T it is stated in the proposed guidelines that they should encompass all actors (European Commission, 2011). Diverse participation from representatives from different levels of governance in transport corridor management structures is vital (Öberg, 2013; Eckhardt, Leviäkangas, 2013). However, it should be recognized that the motives for participating actively in an organizational relationship might differ, especially between public actors and private actors. It is important to find win-win solutions (Ferraro, 1994).

#### **4.2 Structural forms of organizational relationships**

The different forms of alliances, partnerships, networks etc. can all be structured in a more integrated, stable manner or a more loose and flexible manner. It is difficult to say that one form is better than another, which Steijn, Klijn and Edelenbos (2011) also states regarding PPP:s. The key to a suitable structure is the context and the stakeholders' wishes and intentions. The workshop gives a strong indication of stakeholders' interest of a firm and stable management structure (Eckhardt, 2013b).

Since every actor has its own interests and motives for participating there might be necessary to create a structure with different options for participating. The larger structure for the euroProspective network is described by Baudiment (2004), apart from the core participants in the EEIG, a large network was formed consisting of four parts: the organisations which made formal contracts for implementation, individuals with specific competence, partner club for funders and supporting authorities, and project teams for specific projects. In the work with the greenhouse gas protocol project Sundin e.a. (1998) describes large open meetings for discussing different opinions in sensitive topics.

If a multi-optional structure is needed, which allows for diverse options for how to participate, to encompass many actors, it has to be facilitated. A structured leadership is relevant in larger constellations according to Provan and Kenis (2007), and a NAO is suggested when there are many participants, as assumed in for instance the TEN-T work. A strong leadership has also been discussed by Öberg (2013) as an important consideration when creating a transport management structure, mostly considering engagement, experience, powers, and a well-structured administrative support to facilitate the management function. A core structure of the most concerned actor or actors may initiate this multi-optional structure.



**Figure 4 Outline of a multi-optional transport corridor management structure**

#### **4.3 Procedural management of organizational relationships**

Accomplishing joint tasks often leads to adjustments of the ordinary work processes for each partner. Keeping the objectives for the organizational relationship in harmony with the objectives of participating partners organizations can support the adjustment process (Öberg, 2013; Eckhardt, Leviäkangas, 2013).

Both formal and informal agreements are foreseen in a transport corridor management structure. In the workshop it was discussed about diverse contract arrangements for different partners (Eckhardt, 2013b). If a multi-optional structure is created with options to join the work, for instance in a more loose network or in a stronger connected core activity, there is room for differentiated contracts and attachment solutions. It opens for possibilities to utilize the stakeholders own driving forces towards common goals in an effectuate process. Sarasvathy (2001) explains the difference between causation and effectuation processes. Causation processes refers to setting goals and then mapping out the road towards the goals. A process used frequently in public policy implementation of today. Effectuation, on the other hand, is not as commonly



used. It is described as a stakeholder looking at its assets, starting to make use of them and at the same time acting towards a common overarching goal. The processes complement each other. Öberg (2013) suggests that the dominant causation processes could be complemented by effectuation processes when creating a transport corridor management.

Communication and transparency are key issues to keep stakeholders' and the general public's interest in, and knowledge of, progress towards common goals and keeping working processes fair and reliable (Rufin, Rivera-Santos, 2012; Eckhardt, Leviäkangas, 2013; Myint, 2003; Sharma, 1998; Tallman, Shenkar, 1994; Sundin e.a., 1998). Ensuring several ways of communication between stakeholders is crucial to facilitate joint progress (Öberg, 2013).

Continuous evaluation and adjustment of an organizational relationship is the key for necessary flexibility to stay relevant (Sharma, 1998; Provan, Kenis, 2007). Adjustments should comprise everything concerning the relationship, from objectives to participants and processes. Allowing participants to change their engagement may lead to structures that correspond to the stage of development in the transport corridor. Business interests may increase as the transport corridor develops (Eckhardt, Leviäkangas, 2013).

## **5. Conclusion**

There is no overall solution for transport corridor managements that fits all situations. The current context is important, and the consideration of both structural management forms and procedural management.

There are several possibilities to form organizational relationships in diverse constellations, from loose attachments to creating joint new entities. It is recognized that many actors need to be involved to be able to develop transnational transport corridors. In order to arrange for diverse actors to be attached to the joint work, a multi-optional structure is suggested, a structure of both loose attachments and more committed and strong relationships, where all actors can find a suitable level of engagement. A core of the most concerned actor or actors is suggested to facilitate a multi-optional structure. It is most likely to be managed by a network administrative organization (NAO).

Key procedural factors for a successful outcome in an organizational relationship are connected to the context. In regard to gathered information in this paper, the most important procedural factors for a transnational transport management structure are estimated to be communication, transparency and flexibility; Continuous information and dialogue are needed, both internally and externally, where all participants can join in setting the path forward; transparency in letting participants have access to meetings, documents and decision-making processes; flexibility with a systematic assessment and adjustment of the management structure.

Further research is needed to deepen the knowledge of transnational transport corridor management structures and procedures. Empirical studies are proceeding integrated with the Bothnian Corridor project, with interviews of representatives from transnational transport corridors, and learning from additional European transport initiatives.

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## *Paper III*





## How to create a management structure for transport corridors

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### Abstract

The findings in this paper are part of a larger research study aiming to develop a methodology for creating customized management structures for transnational transport corridors. In the paper management structures in two EU transport initiatives and one interregional transport corridor have been analysed. A multi-level governance perspective is suggested to be more clearly adopted in transnational transport corridor initiatives. A multi-optional structure is introduced as an instrument for strengthening the participation of diverse stakeholders, providing differentiated structures for commitment to the initiative, still ensuring key stakeholders strong commitment.

*Keywords:* transport corridor; green corridor; multi-level governance; transport corridor management

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### Résumé

Les conclusions de cette étude font partie d'une étude plus large visant à développer une méthodologie pour la création de structures de gestion personnalisées pour les corridors de transport transnationaux. Dans ce papier, les structures de gestion de deux initiatives de transport de l'UE et un corridor de transport interrégionaux ont été analysés. Un point de vue de gouvernance multi-niveaux suggère alors qu'elles soient adaptées de manière plus claire dans les initiatives et corridors de transports transnationaux. Une structure multi-option est présentée comme un instrument pour renforcer la participation des diverses parties prenantes, en fournissant des structures différenciées pour l'engagement à l'initiative, et en assurant un fort engagement aux principales parties prenantes.

*Mots-clés:* axe de transport; corridor vert, gouvernance multi-niveaux, gestion de corridor de transport.



## 1. Introduction

The Bothnian Corridor is a transport corridor stretching around the Bothnian Gulf, the coastline of Finland and Sweden, down to the capital areas of Sweden and Finland. The Bothnian green logistic corridor project (BGLC) aims to develop sustainable and efficient transport possibilities and business concepts in the corridor and its connections. There are nearly 30 partners in the project, which to a large extent is financed by the EU. Luleå University of Technology (LTU) is a research partner in this project, and is responsible for suggesting an appropriate management structure for the BGLC transport corridor.



Fig. 1 Bothnian Green Logistic Corridor map (Bothnian Green Logistic Corridor project website, 2013)

Management cultures in society change over time. Today it is generally recognised that issues traditionally handled by governments, like transport infrastructure development, are instead being handled in actions shared by authorities, private actors, non-governmental organizations etc. in various constellations (Giuliano, 2007; Romein et.al., 2003). With a strong interdependence between actors in decision-making processes, they become more challenging with collaborative, dialogue and network initiatives to support the process. (Nilsson, 2010; Szydarowski & Tallberg, 2013). The concept of multi-level governance is based on an increased interdependence in decision-making between formal authorities at different levels in a vertical dimension, and authorities and other actors in society in a horizontal level (Bach & Flinders, 2005).

LTU's research is aiming for developing a methodology to create customised management structures for transnational transport corridors in general, and the Bothnian Corridor is one case where the outcome of the research has the potential of direct implementation in practice, adjusted in consent with concerned actors.

To be able to suggest a suitable management structure many factors need to be considered such as which type of legal form it should have, who should participate, how does it relate to present management cultures, and which processes are crucial to make it work effectively.

The aim with this paper is to discuss how to develop management structures for transnational transport corridors by analysing management structures in EU transport initiatives and an interregional transport project, especially concerning the aspect of multi-level governance.

## 2. Research methodology and implementation

The overall research perspective of management structures in the BGLC project is based on qualitative methodology with a combination of literature and document studies together with interviews and direct and indirect observations (Danermark, 1997). This combination of methods creates a triangulation, where results from different sources and perspectives can corroborate with each other (Vidovich, 2003). Several studies of



management structures are conducted as a part of the on-going BGLC project. Literature reviews have been performed of previous research within the fields of governance and transport. A study of research experiences of transport projects regarding management structures has been made in collaboration with University of Thessaly in Greece (UTH) and VTT technical research centre in Finland (VTT) (Eckhardt, 2013). As a part of this study an open workshop was held in Örebro, in April 2013, where concerned actors from five countries and diverse sectors of society could discuss their views of transport corridor management structures. Öberg and Nilsson were participative observing the workshop. Knowledge and experiences from additional transport initiatives will be gathered partly by interviews, which are in progress. The empirical material will be analysed in an abductive way searching for tracks, similarities and differences in relation to the context (Strauss & Corbin, 1998). A framework will be developed for creating customised management structures for transnational transport corridors using the assembled information.

In this paper an analysis of three management structures is discussed, two recent EU transport corridor initiatives and an interregional transport corridor project. East west transport corridor II has been chosen as an example of interregional transport projects since it was finalised during 2012 and within the project it was considered in a transparent way how to proceed in regard to management structures.

### **3. Description of other management structures in transport corridor initiatives**

In this section the management structures of the three initiatives are briefly described and a compared and combined analysis is discussed in section 4.

#### *3.1. Rail network for competitive freight*

The regulation for a European rail network (EU Regulation EC 913/2010, 2010) for competitive freight is an initiative towards seamless rail freight transport corridors in Europe, launched in 2010. How governance of these transport corridors should be performed is defined in the regulation. It is proposed to establish an executive board with representatives from concerned Member states. The executive board should set the objectives for the freight corridor and oversee the activities connected to those objectives. Next step is to establish a management board composed of the infrastructure managers, and the body allocating rail capacity to the operators, if such a body exists. A main task for the management board is to outline an implementation plan. The management board can be a separate entity, a European economic interest group (EEIG). Further the management board should set up two advisory groups, one for terminals and one for railway undertakings.

To avoid overlapping governance structures, already existing initiatives should be taken into consideration (EU Regulation EC 913/2010, 2010). Specifically mentioned initiatives are Trans-European transport network (TEN-T), see description below, regarding infrastructure development, European rail traffic management system (ERTMS) focusing on harmonization of traffic control systems, and rail net Europe (RNE) being a support in facilitating international rail traffic.

According to the handbook on the regulation concerning a European rail network for competitive freight (EU DG-MOVE staff working document, 2010) the ERTMS corridors are of high importance when establishing a governance structure for rail freight corridors since they in several cases comprise the same corridors as the rail freight corridors and they have a governance structure already in place.

#### *3.2. Trans European network for transport (TEN-T), Core network corridors*

A recent initiative is the review of the trans-European transport network TEN-T, where a proposal for new guidelines has been presented (European Commission, 2011a). It aims for a European well connected transport network, for freight and passenger transport, for rail, road, maritime and air transport. The overall network structure is divided into two layers, a comprehensive network and a core network. For the comprehensive network accessibility and cohesion in the European Union is in focus, while the core network consists of the strategically most important parts of the network. The Core network should constitute a backbone network for transport and serve large transport streams.

In the European Commission proposal for guidelines (European Commission, 2011a) it is stated that core network corridors will lead the implementation of the entire core network. The core network corridors will be managed by a coordinator, appointed by the European Commission, together with a corridor platform. Corridor



platforms will be formed by involved member states. Participants in the corridor platform should be representatives of member states involved, and other public and private actors. Each corridor shall develop a plan for development of the corridor.

In the proposed guidelines (European Commission, 2011a) it is further mentioned that existing management structures for a European rail network for competitive freight and European deployment plan for ERTMS should be considered when core network corridors are being developed.

### *3.3 East West Transport corridor (EWTC)*

The East west transport corridor project is a partly EU-financed project aiming to develop and work for efficient and environmentally friendly transport of goods in the east-west direction in the south Baltic region. Partners are representatives from local, regional and national levels in Denmark, Sweden, Germany, Lithuania and Belarus and Swedish and Lithuanian governments support it. The project was carried out during 2009 – 2012. One of the tasks in the project has led to the development of a structure for future cooperation in the corridor even after the project (East west transport corridor project website, 2012). In parallel there is the EWTC association that was founded 2010 with members from 12 countries, several outside EU (East west transport association website, 2013). One challenging characteristic for the EWTC project is a varied collection of stakeholders, geographically dispersed and from varying parts of society; Political actors, national and regional authorities, business life, pressure groups and academia (Källström, 2012). In relation to the EU initiatives the transport corridor is only partly a part of the European core network and not part of the rail freight corridors (ibid.).

In finding a suitable management organisation form for EWTC, Källström (2012) articulates four possible options for development of management structures. One option is a non-profit organisation or association, and such organisations can have diversified legal constitutions, but the members are in most cases considered as being equal in the sense of obligations and voting rights. An association is presumed to give small opportunities to encompass different members interests, especially regarding business actors. Further the large amount of inhomogeneous stakeholders might make managing demanding. The organisation also has to follow the laws of the country where it is registered, which can hamper the international focus. The second option, strategic alliance, is presented as an inter-firm cooperation and is therefore not considered to be a suitable option for a transport corridor management with stakeholders from many sectors in society. The third option refers to the EU initiative on rail freight corridors EC 913/2010, which is recognised with clear objectives and a given mandate from the European Union to involved member states to arrange a governance structure. There is no such current mandate from EU or national level regarding the EWTC corridor why it is not considered as an appropriate option.

The fourth option is to create a European economic interest grouping, EEIG. An EEIG offers a form of cooperation for legal bodies, companies or individuals in the EU member states and the European economic area (EEA), which also Iceland, Norway and Liechtenstein are part of and no investment capital is needed (Commission of the European Communities, 1999). The grouping is a separate entity that can act in its own name and the members have the power to construct how the grouping shall be run, for instance for voting rights. Källström (2012) suggests an EEIG. He argues that an EEIG could emerge from the existing association and be created under the circumstances of a firm commitment of stakeholders, national and regional authorities, major infrastructure owners and major operators. This report also presents the advantages of an EEIG as a steady structure, but at the same time flexible in the sense of easy procedures for changes in the memberships. Nevertheless, it also acknowledges that the need for setting up an EEIG needs preparation work where the partners have to formulate a common business scope and commit to the structure.

A way of working together in an EEIG in EWTC is suggested by Källström (2012) as follows: A high level policy board, for key organisations that might not want to join as members, is attached to the EEIG but not a part of it. The EEIG comprises a member assembly, a management board and a secretariat. The member assembly consists of both public and private actors. They should formulate general objectives together with a high level group, among other things. The management board appoints thematic advisory groups and ensures and controls the on-going activities. The members of the EEIG are suggested to be those with a direct interest in the transport corridor.



However, in the EWTC strategy Action plan (East west transport corridor project, 2012) some hesitation towards an EEIG is presented, mostly based on the fact that actors from outside EU and EEA cannot be full members. The EWTC governance structure is instead proposed to stay as an association, based on contractual relationships. The association concept is however planned to be evolved. According to this EWTC Strategy plan a small executive committee of three persons should be formed for taking decisions between annual meetings. An advisory board is being set up with a broad representation of 10-15 persons and acting as an idea generator and for guidance to the executive committee and secretariat. The secretariat will be strengthened, organized as a staffed central secretariat, and geographical regional secretariats. Regional secretariats are represented in the advisory board to address geographically specific issues contributing to the overall goals. To engage important key stakeholders that for some reason are not part of the organisation they can be invited as observers. Temporary workgroups with partners will be formed for issues of specific interest.

#### **4. Reflections**

##### *4.1 Management in EU initiatives for transport corridors*

The transport area is an active field within EU. This review gives an insight in the stream of initiatives that is constantly influencing the management structures. In the analysed initiatives existing management structures serves as a base for new structures, adjusted to changing and emerging demands. In this way earlier efforts are utilised. The national level of governance often plays a central role in the EU initiatives, Member states are given tasks they need to fulfill, which enhance the mandates for implementation of an initiative.

Many initiatives are focusing on rail traffic, and there is a common desire to strengthen the rail option for medium and long distances to reduce environmental impact (European Commission, 2011b). However, the TEN-T initiative holds a wider concept than just rail traffic, with all modes of transport including both passenger and freight transport, implicating that more stakeholders should be engaged in the processes. The proposed TEN-T guidelines recognize that infrastructure planning of today involves several actors like authorities from a national, regional and local level as well as transport operators and other public and private actors (European Commission, 2011a). The corridor platforms stated in the proposed TEN-T guidelines open for diverse stakeholder participation, despite that the guidelines per se does not provide details of the platform participation or work procedures.

The initiative for a rail network for competitive freight discussed above, foremost engage state authorities, infrastructure managers, bodies for allocating rail capacity to the operators, railway undertakings and responsible actors for terminals in the management structure. Key stakeholders of the different transport modes including both freight and passenger transport might also be attached to corridor platforms, suggested in the proposed TEN-T guidelines (European Commission, 2011a). They may be most important for decision-making in the current question at hand, but it is also of importance to interact in a broader sense. A broad interaction can have several purposes such as to increase knowledge about the efforts, to let other actors align their own goals with a common goal and increase the dialogue with stakeholders. There is a contradiction though, between many participants with various views to encompass, and few participants, being more flexible in decision-making and making adjustments.

##### *4.2 Management in interregional transport initiatives*

When regional or local governance levels are leading international and interregional transport projects there is a difficulty in the fact that the national level to a large extent holds the mandate to implement the outlined plans (Tallberg & Hansson Malm, 2013). This makes it important to engage authorities on the national levels of governance when interregional transport projects are performed. Another thing to be considered is differences in mandate for levels of governance in different countries (Tallberg & Hansson Malm, 2013).

Without national and EU directives, designing a governance structure is likely to be an issue for the participating stakeholders in an interregional initiative. In the case of EWTC there is a structural similarity between the EEIG concept described by Källström (2013) and the management structures for rail freight corridors and the proposed new TEN-T guidelines described in section 3.1-3.2. Developing a management structure with high similarity to



EU initiatives makes it easier to adapt to, or attach to such an initiative in a later stage. On the other hand the arguments brought forward in the strategy plan (East west transport corridor project, 2012) are understandable, about not being able to incorporate members outside the EEA. Keeping the association makes it easier to encompass stakeholders on an equal basis, and the association structure is shaping to stay flexible and action-oriented although consisting of many members. The proposal in this strategy plan is also building further on the existing structure, like in the EU initiatives. Still, another consideration is that even though an association works well for many stakeholders it might not be an option for others to commit to, for instance if the chances of fulfilling their own organisations goals by participating is perceived to be small.

#### *4.3 Towards a Multi-optional structure*

As discussed above, it is recognized that multi-level governance is a way of working together in society to achieve common goals and policies. Considering multi-level governance as both a vertical and horizontal combination where authorities from local, regional, national and EU levels work together with other actors from the different levels it can easily become too many participants which makes it unmanageable. It can also lead to attachment of many peripheral actors to the actual issue, unaware of present restrictions, mainly concerned about single objectives. On the other hand it rises opportunities for collective efforts to accomplish development by providing an arena for discussion, find best practices or compromises to move forward towards an overarching goal.

In a previous paper Öberg and Nilsson (2013) have discussed a multi-optional structure as an instrument to create transport corridor management structures suitable for all stakeholders. The key is to offer different types of commitment in the same overall structure as outlined in figure 2 below. Core stakeholders being the most engaged ones, could form a strong commitment in an EEIG or a contractual partnership. The core stakeholders can differ depending on the actual initiative. Strategic advisors are important to attach to the structure, especially from national and EU level, to involve important decision-makers, if they are not part of the core stakeholders. The strategic advisors could even function as a decision making board with participants from both concerned states and EU. Decision-making could be connected to the specific corridor for instance regarding harmonising of rules for transport in the corridor to strengthen the corridors performance, if the participants can be given mandate for this sort of decisions.

Thematic work can concern specific topics and be arranged in the form of alliances, partnerships, networks, discussion forums etc. Stakeholders can attach to the arrangements focusing on their area of knowledge and wish of structural connection. Stakeholders not actively participating in any thematic work can be attached to a looser network for the possibility of information exchange and perhaps later participation. A secretariat to facilitate and coordinate the work is suggested, in line with research made by Provan and Kenis (2007). They have studied network governance, and state that when there are a large number of participating actors combined with distinct objectives and need of high proficiency in the network, a separate network administrative organisation (NAO) can be appropriate to lead the work.

The multi-optional structure has similarities to the structures of the management models suggested in the handbook for rail freight corridors (EU DG-MOVE staff working document, 2010) and the proposed TEN-T guidelines (European Commission, 2011a). There is however a distinct difference, the multi-optional structure emphasises a broad participation from stakeholders by arranging the work into both loose and strong commitment opportunities. This way the participation can be widened in the sense of multi-level governance. Further the possibilities to form decision making boards with mandate to handle specific issues concerning the transnational transport corridor needs to be explored.

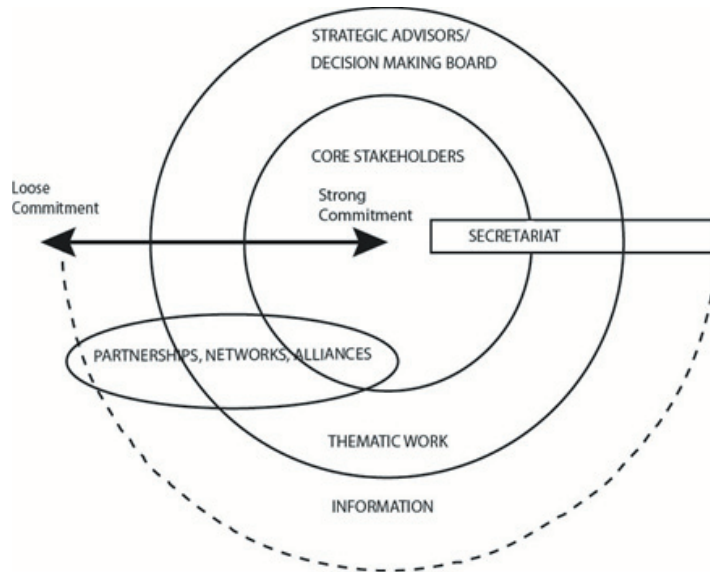


Fig. 2 Refined outline of multi-optional transport corridor management structure (Öberg and Nilsson, 2013)

## 5. Conclusions

All examples of EU initiatives and the interregional project examined in this paper give insights in how the choice of management structure in new initiatives is clearly affected by existing structures. Existing structures are considered as an important starting point when a new progressed structure is needed according to new emerging demands. Earlier efforts and governance structures are therefore well utilised. In the analysed EU initiatives the governance structures are mentioned as a part of the implementation of the initiatives, involving the national level of governance. For interregional projects there are no such directives to consider and therefore more options available for choosing a governance structure. When these governance structures are formed it is important to remember that engagement from the national level of governance is of high importance, since financing and implementation of activities to develop transport corridors often need support from, or is controlled by this level of governance.

However, an inclusion of, and broad interaction with, interested stakeholders in management and implementation processes is important for both EU and interregional initiatives, since joint actions can support, and even adjust the objectives. Therefore, a multi-level governance perspective, both vertical and horizontal, should be adopted more clearly in transnational transport corridor initiatives. A multi-optional structure combining strong and loose structures for commitment emphasises a broad participation and accommodation of many stakeholders, still ensuring key stakeholders strong commitment. The multi-optional structure also suggests strategic advisors to be attached to the governance structure, where both EU and concerned states are represented. The possibility to also let such strategic advisors form a decision making board with mandate to strengthen transport options in the specific corridor should be further explored.

The multi-optional governance structure needs to be tested and evaluated in practice, before it can be accepted. It is a general structure and when using it in a particular transport corridor it must be customised to the context. The Bothnian Corridor will be used as an example to define, in a theoretical approach, important customising factors for the multi-optional structure. Focus groups are planned to be held the 7<sup>th</sup> of January 2014 with the partners of the BGLC project to encompass their views of the proposed multi-optional structure and the customizing factors. In the next steps the structure can be launched in practice by key stakeholders. During this





process it is important to be receptive to the stakeholder's views and desires. Further research is then needed to follow the outcome of the management structure as well as stakeholders views, to capture the need of adjustments.

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## *Paper IV*



## Governance structure for transport corridors

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### Abstract

Studies reveal that there is not any general methodology available on how to design governance structures for multimodal, transnational transport corridors in Europe. To address this issue a general tool to design such governance structures was developed integrated with the Bothnian green logistic corridor project located in northern Europe, a multi-optional governance structure emphasising a multi-level and broad stakeholder inclusion. In order to use such a structure in practice it needs to be customised for a particular transport corridor. In this paper three variables are identified for customising a multi-optional governance structure. The relevance of these variables is explained through the case study of the Bothnian corridor: existing management structures, the corridor connections to on-going initiatives and stakeholders' intentions.

As a part of the case study, and to clarify stakeholders' intentions for the Bothnian corridor, a first set of discussions in the form of focus groups have been held with part of the stakeholders to discuss the suggested multi-optional governance structure. The results show a broad spectrum of views of who should be core stakeholders, which objectives should be considered and which formalised structure should be used. The multi-optional governance structure can accommodate activities in a variety of partnerships, networks or similar, covering several objectives and driving stakeholders. However, to clarify joint intentions a common view of main objectives and suitable core stakeholders is desirable, but it is also recognised as a challenge to accomplish such a common view. With an aim to design a broad and inclusive governance structure, implementing parts of such a structure, and build it successively can be an option.

**Keywords:** transport, governance, management structure, transport corridor, multi-modal transports

### 1. Introduction

Reaching for goals in society of today often involve several actors active participation, and the concept of governance has advanced from an earlier focus on governments as single authorities to accomplish desired changes to a multi-actor achievement, also within the field of transport infrastructure (Giuliano, 2007; Romein et al, 2003). Pierre and Peters (2000) describe the historical perspective of governance when after the Second World War governments in Western Europe and USA increased their intervention in society and strengthened their responsibilities especially concerning extended welfare and public services. Then during the 1980s' public expenses were questioned and a market-based approach

developed with decreased taxes and a larger influence of private actors, followed in the 1990s' by new thoughts about the roles of governments and other public and private actors as well as the participatory processes in reaching community goals (Pierre & Peters, 2000). Also in the 1990s' the formerly European Union with then only twelve member states, aimed to accomplish a smooth transport system which provided for efficient and competitive transports across Europe to support a European inner market (European Commission website, 2014).

The European parliament and Council decided in 1996 upon the first guidelines to develop trans-European networks of transport (TEN-T) (European Commission and Council, 1996). The recent review of the TEN-T policy resulted in an adoption of a regulation (Regulation (EU) No 1315/2013). The regulation describes a comprehensive network covering all member states, and a core network comprised of a series of the strategically most important transport corridors, to be implemented by 2030. According to the regulation parts of the core network are designated as core network corridors, and they will act as a tool for implementation of the whole core network. The regulation further proclaims that the core network corridors should focus on integrating different modes of transport, harmonising operative systems and coordination of infrastructure development. For governance of the core network corridors it is formulated in the regulation that a European coordinator will be assigned to each corridor to coordinate and ensure progress in development of the corridor and a corridor forum is launched for consultation, formed by the concerned member states and the coordinator. Apart from transport initiatives driven from the European level like the TEN-T revision, there are also inter-regional initiatives to develop transnational transport corridors.

Within the recently finalised, inter-regionally driven, transnational transport corridor East west transport corridor project (EWTC), covering east-west transports in the European south Baltic region with connections to Russia and China, possible directions for future management structures in the corridor was investigated by Källström (2012). He recommends, as a management structure for the EWTC, to create a European economic interest group (EEIG) which is a European tool for cooperation. However, the stakeholder consortium has preferred to stay on as an association mainly because of difficulties to accommodate non-European stakeholders in an EEIG (East west transport corridor project, 2012).

The transnational and inter-regionally driven Bothnian green logistic corridor (BGLC) project has been an on-going transport project in northern Europe for the last three years (BGLC project website, 2013). One area of research in the project was corridor management, and a general tool to design governance structures for transnational, multimodal transport corridors was developed emphasising a multi-level and broad stakeholder inclusion, named a multi-optional governance structure, described in detail in section 3. This structure was recommended for the Bothnian corridor, but in order to advance from a theoretical structure to be used in reality it needs to be adapted and detailed developed to the specific context. The structure has to be customised for a particular transport corridor. For the process of customising, variables that need to be considered are determined. Each variable can be described with attributes, or as Babbie (2013, p.12) explains "variables are sets of related attributes". An example is the variable wind power, which can have a set of attributes such as no wind, gentle wind or strong wind.

The aim of this article is to identify variables to customise a multi-optional governance structure through a case study of the Bothnian transport corridor. This article is structured in four main parts. First the Bothnian transport corridor case is described in section 2. Secondly, the research that led to the development of an inclusive multi-optional governance structure is reviewed in section 3. Thirdly, results from a first set of focus group discussions with Bothnian corridor stakeholders about the multi-optional governance structure are presented in section 4. Finally, customising variables for the multi-optional governance structure are identified in section 5, followed by a conclusion in section 6.

## **2. The case of the Bothnian corridor**

The Bothnian green logistic corridor project (BGLC) running 2011-2014, encompasses the Bothnian corridor and its connections. The transport project aims to strengthen transport possibilities between areas of northern Scandinavia, which are rich in natural resources such as ore, and central Europe (BGLC project website, 2013). Project activities include the development of sustainable transports and innovative business approaches, as well as a management structure to ensure continuous development. Luleå University of Technology has as partner in the project, been responsible for suggesting a management structure that is suitable for the Bothnian corridor.



**Figure 1 Map of the Bothnian corridor with its' connections (adapted from BGLC project website, 2013)**

Currently, no transnational management structure for the Bothnian corridor exists. However cooperation structures exist within both the Finnish and Swedish sections of the corridor. On the Swedish side, the railway corridor has been pushed by projects comprising parts of the corridor. Also, local and regional authorities, together with an association for rail passenger traffic are collaborating together in a common formalised Bothnian corridor project (O. Tiderman, project manager for the Bothnian Corridor project, personal communication 17<sup>th</sup> of October, 2013). On the Finnish side there is a similar, albeit less formalised, group called Main line group, structured as a network with a secretariat function (J. Lindfors, Region of Tampere, personal communication 18<sup>th</sup> of October, 2013). This network main focus is to strengthen the development of rail infrastructure in order to support economy and industrial growth. Participating actors in this network include regional authorities, ports, cities and development centres.

The Bothnian corridor is part of the TEN-T core network, but not one of the core network corridors where governance structures have been defined in the regulation (Regulation (EU) No 1315/2013). This

means that there are no directives from the European Commission of management structure for this particular transport corridor. However, the core network is supposed to be implemented through the core network corridors. Regarding the core network corridors the regulation state that they will be focused on “(a) modal integration, (b) interoperability, and (c) a coordinated development of infrastructure, in particular in cross-border sections and bottlenecks” (Regulation (EU) No 1315/2013, p.20). To ease the alignment of a governance structure for the Bothnian corridor to the entire core network in a later stage, the objectives and approach of the core network corridors should be carefully considered. Consequently, a management structure in the BGLC project should consider focusing on the geographical stretch appointed as part of the core network. Further, there are many stakeholders concerned with the tasks that the core network corridors will focus on, including several modes of transport and both freight and passenger transports. A management structure for the Bothnian corridor would then need to reflect this broad range of stakeholders.

### **3. Towards a multi-optional governance structure**

The research regarding transport corridor management was conducted with a qualitative approach, through a number of studies integrated with the Bothnian green logistic corridor (BGLC) project. Scientific literature reviews were performed targeting transport corridors and multi-level governance (Öberg, 2013a), and in addition examples of governance models (Öberg & Nilsson, 2013). Transport initiatives on a transnational level in a European context, was examined through document studies (Öberg, Nilsson & Johansson, 2013) and by gathering experiences from other transport corridor projects, in collaboration with University of Thessaly in Greece and VTT Technical Research Centre in Finland (Eckhardt, 2013a). An open workshop was arranged in April 2013 with participants from six countries and different parts of society to discuss corridor management (Eckhardt, 2013b). Results from the studies were combined which lead to an outcome supported by several sources of information, a process known as triangulation (Vidovich, 2003). The gathered information resulted in the recommendation of a multi-optional governance structure for the Bothnian corridor (Öberg, 2013b).

Main outcomes that have served as a basis for developing a multi-optional governance structure were firstly, to encourage a broad stakeholder inclusion. Extensive stakeholder's participation was considered as one key success factor in the scientific literature review mentioned above (Öberg, 2013a), when corridor management in other transport projects were examined, and also during the workshop the importance of an inclusive attitude towards interested actors was discussed and considered preferable (Eckhardt, 2013a; Eckhardt, 2013b). This fits into the processes in today's society where government issues are turning into matters of governance, where instead of a single responsible authority several stakeholders, from both public and private sector are involved to fulfil society targets (Giuliano, 2007; Romein et al, 2003). The suggestion of differentiated arrangements for diverse participants commitment in a transport corridor management structure was proposed in the workshop (Eckhardt, 2013b).

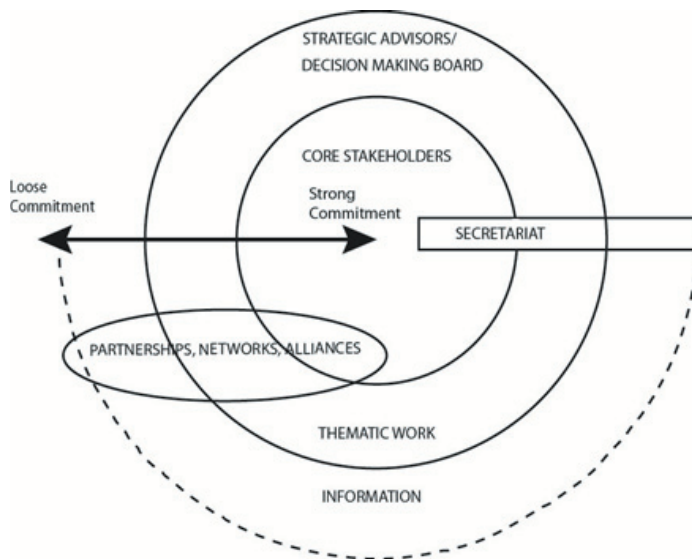
Secondly, by recognising that several structural options can be used for a transnational transport corridor management, depending on the target and preference of the stakeholders, an ambition to allow for a structural variety to ease the attachment of diverse stakeholders, and areas of development, was conceived. The scientific review by Öberg and Nilsson (2013) revealed many possibilities of management



structures, like joint companies and alliances (Teng & Das, 2008), partnerships (Bäckstrand, 2008) and networks (Provan & Kenis, 2007). While the discussion of joint companies and alliances mostly referred to the business sector, the discussion of partnerships and networks encompassed a variety of participating actors from both public and private sector. European Economic Interest Groupings (EEIG) as another structure for cooperation were referred to in the scientific literature review (Öberg & Nilsson, 2013), exemplified by Mazza (2006) and Baudiment (2004). During the workshop a European grouping of territorial cooperation (EGTC) was considered an option at least to help form a transport corridor management structure (Eckhardt, 2013b). Both an EEIG and an EGTC aims for a simplified transnational cooperation, but while an EEIG is developed for interests of economical character and open for private business actors, an EGTC aims for public cooperation (Council Regulation (EEC) No 2137/85; Regulation (EC) No 1082/2006). Moreover the strength of the commitment can vary for alliances (Teng & Das, 2008), partnerships (Bäckstrand, 2008) and networks (Provan & Kenis, 2007), while a stronger commitment is needed for joint ownership of an entity (Teng & Das, 2008) or a European economic interest grouping (Council Regulation (EEC) No 2137/85). Further, a strong leadership in the sense of financial powers, administrative capacity and political support, is considered as preferable (Öberg, 2013a). Provan and Kenis (2007) have looked into network leaderships and state that a larger independent secretariat might be suitable when there are many actors involved and explicit objectives have been outlined.

A multi-optional governance structure offers a diverse range of possibilities for stakeholders to attach to the work, depending on the form that is most suitable for the actor, a strong or loose commitment, perhaps as a strongly committed core stakeholder, or as a participant of a thematic work, or simply as a participant in a network to receive information. An outline of such a governance structure is shown in Figure 1 below (Öberg, Nilsson & Johansson, 2013). Strongly committed core stakeholders lead the joint efforts forward, engage important key stakeholders, and ensure a firm structure, with a secretariat facilitating their efforts. With a high level of flexibility on how the thematic groups are structured already existing initiatives can also be aligned to the multi-optional structure. This structure allows multiple stakeholders to be involved, without hampering the pace of progress.

The core stakeholder group, consisting of the most actively engaged stakeholders could consist of representatives from EU, national ministries, infrastructure authorities, regional and local authorities, larger operators and terminals. Strategic advisors can be important decision-makers who for some reason are not participating as core stakeholders. For the thematic work, partnerships or networks or alliances or similar could be used. The information network is perhaps the most loosely formed commitment, where participants just receive information about the work. Interoperability in a transport corridor is a prerequisite to be able to perform smooth transport conditions. Therefore it is suggested to explore the arrangement of a decision making board which could facilitate progress in operational aspects at a corridor level.



**Figure 2 Outline of multi-optional transport corridor management structure (Öberg, Nilsson & Johansson, 2013)**

The multi-optional governance structure includes a broad stakeholder composition and has a distinct multi-level governance perspective. The multi-level governance concept is based on the need of joint efforts between authorities on different levels, as well as between authorities and other actors in the different levels (Bach & Flinders, 2005). This structure allows for a possible interface between top-down and bottom-up perspectives, an approach also pleaded for by Panagakos and Psaraftis (2013), and it gives opportunities for single partnerships and efforts to be aligned in a larger perspective, aiming for a better coordination between areas of transport development. However, the multi-optional governance structure has to be adapted to suit the specific transport corridor in which it is applied. There is no single universal solution for transport management structures; they have to be customised for adapting to the current context (Öberg, 2013a; Eckhardt & Leviäkangas, 2013; Vega & Penne, 2008).

#### **4. Focus group discussions with stakeholders about application of the multi-optional governance structure in the Bothnian corridor**

As a part of one of the workshops in the BGLC project focus group discussions were held on 7<sup>th</sup> of January 2014, at Arlanda, Stockholm. First a brief introduction was given about the scientific work integrated with the BGLC project leading towards a recommendation of a multi-optional governance structure (as described in section 1 and 2), and the specific context of the Bothnian corridor case (as described in section 3). The participants were representatives from ports, regional authorities, consultants, academia, a terminal company, municipalities/cities, a national transport administration and a passenger transport company. Five focus groups, with six to seven people in each group, with a variety of participating organisations, was composed. No specific leader was appointed for the group

work but spontaneously someone in every group took the lead to bring the discussions forward. Each group had a paper with an outline of a multi-optional governance structure (figure 1) and four pre-defined questions about a management structure for the Bothnian corridor to be discussed: Which objectives should the management structure have (development of corridor, infrastructure, planning, operative management, logistics, lobbying, harmonising services)?; Who are the core stakeholders?; Where would your organisation participate in this structure (tentative)?; Which are the strengths/ weaknesses/ threats/ opportunities with this management structure? The discussions were taped and lasted 20 minutes. All individual voices were handled equal and anonymous in the research process. According to the direction of the discussions four aspects were identified for presentation of the results: geography, structure, objectives and core stakeholders. The focus group discussions are described aspect by aspect, followed by a summary.

#### **4.1 Geography**

One view was that the geographical area of the Bothnian corridor as appointed by the European Commission in the TEN-T structure (Regulation (EU) No 1315/2013) is just appropriate for a corridor management structure, and it also brings an EU-label, considered to be important for the legitimacy of a management structure. Another view was that the appointed area is too large for a management structure. This is connected to that the area encompasses several countries with diverse organisations, climate and bottle-necks. Therefore it can be difficult to engage all, for instance engage actors from Germany in border crossing problems between northern Norway and Finland. To over-bridge this, sub-groups for the Swedish and the Finnish side respectively was mentioned as a solution. On the other hand a third view was that the appointed area is too small-scale, since the corridor is depending on transport flows to and from the area, the entire catchment area as well as further transit areas should also be attached to a corridor management structure. Engaged actors outside the core area were regarded as important to strengthen and develop the system.

#### **4.2 Structure**

One thought was to set up a non-profit stakeholder management company, which acts on behalf of cargo owners or forwarder companies, where the management company tenders to get the best possible operators. This was considered to be of most interest in peripheral regions where there is a limited amount of freight to be transported to and from the area, and therefore cooperation could be beneficial. However, the need of public support was anticipated to start up this management company. Another thought was to arrange an arena where public and private actors can meet and where both short and long-term perspectives can be handled. Such an arena could be created as a cluster by local and regional authorities. The cluster should facilitate cooperation, organise meetings, coordinate actions and interests, and collect information of investments and their effects. A third opinion consisted of a form of intermodal terminal or a cluster of terminals, perhaps a maritime cluster. Such a terminal or cluster was said to be coordinated by a public actor, but all interested stakeholders would have the opportunity to participate.

Further a fourth discussed possibility was a large cargo booking centre to optimise transport flows. Perhaps this was considered to be conducted by a new unit within the transport agencies. As a fifth option the possibilities of an extension of the structure of the EU initiative for a competitive rail freight

network (EU Regulation (EU) 913/2010) were ventilated. The Bothnian corridor connects to the Rail freight corridor 3, and the possibility to encompass the Bothnian corridor and extend the already existing governance for the rail freight corridor was discussed, at least for a one-stop-shop, which is a single contact point giving access to information needed for transports along the whole corridor, across country borders etc. Some meant, though, that it is perhaps enough complicated with the already appointed rail freight corridor. A sixth suggestion described a multi-optional governance structure, a platform structure with core stakeholders and other actors more loosely attached to the structure, for those who work in the Bothnian corridor area. This structure should enhance the multi-level governance perspective where EU is the outermost umbrella. The Bothnian corridor platform was regarded important to keep as a label and it could be used as an umbrella structure for cooperation in the corridor area.

#### **4.3 Objectives**

The predefined examples of objectives for a transport corridor management structure were development of corridor, infrastructure, planning, operative management, and logistics, lobbying and harmonising services, and they were all mentioned as important. In addition to these links to other corridors, maintenance, analysis and follow-up also were proposed as objectives. One proposed conclusion was that any objective important for cooperation between stakeholders might be of interest, to different degrees, varying over time. Another view was the fear of a management structure becoming too wide, considering geographical and technical differences in the Bothnian corridor area. A stronger focus on technical development of the corridor was foreseen with additional business oriented actors involved. An alternative view was that all these administrative issues should be arranged in line with the TEN-T concept to ease a later attachment to the appointed core network corridors.

Lobbying, sharing information, coordination and developed cooperation was thoroughly discussed as possible objectives for a transport corridor management. The difficulty of not interfering with any other parts responsibilities in such a new transnational constellation was ventilated, especially since the responsibilities differ between actors in different countries. For instance ports in Poland are often state owned, while it is common in Sweden with municipalities being owners of the ports, also heavily investing in port facilities. An example of coordination is to harmonise planning by providing a larger transparency between actors, including assistance to the national actors in the infrastructure investment planning. The role of a transport corridor management was proposed to be an opportunity to meet between business and public actors, to proceed on various topics.

New ideas of developed cooperation were expressed, seeing corridor management as a catalyst for new business opportunities, to facilitate clusters for actors responsible for terminals, operators and cargo owners. Some cargo owners have their own transport chains that could be performed more effective combined with other transport chains, for instance in the grocery business. Another view was that short-term and long-term perspectives should be kept apart, with a focus on short-time perspectives and smaller efforts like new innovative solutions, logistic concepts etc. to utilise existing infrastructure in a more efficient way. Also the importance of having accessible terminals for everyone was mentioned, as well as addressing the difficulties of getting terminals and operators to a higher degree consider railway transports.

#### **4.4 Core stakeholders**

As one alternative, transport terminals were proposed to be core stakeholders. Both wet and dry terminals were mentioned, referring to that wet terminals are situated by the sea or inland water ways and thereby handle waterborne freight, and dry terminals are situated in the inland for transshipment between land transports. Terminals are often well connected to both public and private stakeholders as well as several modes of transport. Another option was that with a wide scope of objectives, the transport agencies in respective country could act as coordinators for the corridor. It was pictured as an enlarged transport agency that communicates with other stakeholders about their needs. But transport agencies even in their present role were suggested to play an important part of a management structure. The importance of public and private actors working together was discussed, and the need to integrate transport operators. A third view was that a concentration of stakeholders is needed, although terminal operators, end user groups and national and regional administrations were mentioned as crucial participants in a management structure. An opposite view was to encourage a wide perspective, where all committed actors should be core stakeholders, adjust their own priorities and contribute to the common corridor development. Those who are responsible for the actual transport flows in the corridor were considered especially important.

Discussions about the private sector showed that one perception was that the forwarder companies should be core stakeholders, another perception was that the main part of the initiatives should involve companies or operators, while a third and opposite perception was that business actors should enter in a later stage when the concrete business cases are clearly visible. The problem of which operators to invite was also considered, and to define a certain category might be a solution. It was suggested that to get interest from terminals, industries or operators there should be a clear picture of the advantages of participating. Regarding the public sector it was discussed that tasks like lobbying, information exchange and infrastructure planning is usually performed by public actors in a corridor perspective. One view was that regional authorities are seen as core stakeholders to hold the work together in a longer perspective, a “long-term glue to secure the aims or the vision for the corridor” even though they do not conduct traffic in the corridor. It was mentioned that all the largest Finnish cities are concerned with the Bothnian corridor stretch, so the cities also play an important role. Cooperation between countries at a national ministerial level was seen as important, although it was considered unsure whether the ministerial level actually would want to participate in a transport corridor management structure without a mandate from the European Union. Also a bottom-up perspective was regarded as necessary.

#### **4.5 Summary of the focus group discussions**

The perceptions of a corridor management for the Bothnian corridor are highly diversified between the participating actors. The diversities are clearly revealed in the discussions and are recognised in all aspects, partly because the predefined questions to a high extent depend on each other. For instance if the corridor management is suggested to be structured as a privately owned company, then core stakeholders are likely to be private actors and the objectives are focused on private actors' needs. Nevertheless, both public and private actors are recognised as important stakeholders to develop a transport corridor. Public actors like national, regional and local authorities or cities, often have general assignments to facilitate development and growth, and are normally in charge of allocation of public

funds for infrastructure investments. Private actors, like operators and forwarding agents, handle the actual transport flows and lead the choice of transport mode or transport path.

## **5. Identifying three variables to customise the multi-optional governance structure**

Three customising variables to adapt the multi-optional governance structure to a particular corridor are identified: existing management structures, the corridors connections to on-going transnational initiatives, and stakeholders' intentions. They are identified through the case study of the Bothnian corridor referring to a description of the Bothnian corridor case and the outcome from the focus group discussions regarding the Bothnian corridor (section 2 and 4).

In the case study of the Bothnian corridor in section 2, it was inevitable to take on-going transnational initiatives (TEN-T) into consideration as well as the existing management structures on the Finnish and Swedish side of the corridor. The TEN-T revision has permeated the transport agenda in Europe for many years, and with a new regulation giving the Bothnian corridor the status of core network this must be related to. Larger EU or other transnational initiatives that can effect development of, or investments in the corridor needs to be taken into account. When a corridor management structure is formed in a new geographical setting or for a certain topic, existing management structures and engagement is an important starting-point, which should be taken advantage of. Stakeholders already involved in transport corridor development might need to be involved in a new governance structure as well. Similarly is as an example the governance of rail freight corridors (Regulation (EU) No 913/2010) mentioned in the new TEN-T regulation (Regulation (EU) No 1315/2013), to ensure coordination when forming new governance structures.

Existing management structures and the corridors connections to on-going initiatives are quite easy accessible, while the factor stakeholders' intention is more complex to describe. This factor emerges from the fact that a multi-optional governance structure has an inclusive character and must be formed by concerned stakeholders, especially the core stakeholders. By not excluding any stakeholder it attempts to bridge the gap between top-down and bottom-up steering. However, the results from the conducted focus group discussions with Bothnian corridor stakeholders clearly indicate highly diverse perceptions of what a transport corridor management structure should look like and encompass. During the discussions of diverse aspects of geography, structure, objectives and core stakeholders, several initiatives were discussed, all part of the stakeholders intentions. Each and every one of these initiatives has its own structure, objectives and driving stakeholders, but still contributing to a common transport corridor development. The multi-optional governance structure offers an arena to bring initiatives together for coordination and to enhance each other. But for this overarching structure to gain legitimacy, conformity of the main objectives among the stakeholders, as well as identifying engaged and strong core stakeholders would support the progress.

Anticipated challenges in implementing the multi-optional governance structure ergo lies within the factor of stakeholders' intentions. Drawing on the experiences from the performed research integrated with the Bothnian green logistic corridor (BGLC) project, the process to bring the stakeholders together in an overarching goal, as well as to find suitable and legitimate core stakeholders to take responsibilities

to drive the process, might need extra efforts. With many stakeholders this task gets more complicated. An additional difficulty is the transnational perspective where responsibilities and traditions can differ between levels of governance in concerned countries.

## **6. Conclusion**

A multi-optional governance structure aims for efficient governance with inclusive and broad stakeholder participation, where a top-down perspective meets the bottom-up perspective. In society of today a diversity of actors influences development and decision-making, and a multi-optional structure allows for all stakeholders to participate in the structure in varied forms. Partnerships, network, alliances or similar are indicated for cooperation on various topics. Those topics can be a specific geographical area or a specific activity, like to harmonise services, or develop a specific mode of transport. The multi-optional governance structure then provides for a coordinated structure, where the diverse need of transport partnerships and co-operations can be part of a larger Bothnian corridor management structure and strengthen common progress. Strongly committed and preferable powerful stakeholders, with a high acceptance from the stakeholders, are proposed to drive the structure. But in order to use a multi-optional governance structure for transnational transport corridor management in practice, it needs to be customised to the particular transport corridor.

Three customising variables for a multi-optional governance structure are determined through the case study of the Bothnian corridor: existing management structures, the corridor connections to on-going initiatives and stakeholders' intentions. While the first two mentioned variables are quite rapidly investigated, stakeholders' intentions are more challenging to capture. With many stakeholders there are often numerous perceptions of which improvements are needed and how to fulfil those needs. A multi-optional governance structure can manage a broad range of views and initiatives, but it needs legitimacy to coordinate initiatives. Thus a joint perspective of the main objectives and suitable core stakeholders is preferred, which is recognised as a challenge.

The focus groups discussions with stakeholders show a wide range of views of how a corridor management can be structured. In the Bothnian corridor case further investigations with focus on synthesising stakeholders' views into a larger perspective would be useful to accomplish a common view of corridor management. In addition, for further discussions an extended amount of stakeholders need to take part of the discussions, especially actors from business life, since they were under-represented in this discussion. Within the BGLC project it has been recognised in the final BGLC strategy that a forum for transport buyers, forwarding agents, transport operators, terminal operators and regional authorities could serve as a start to build a multi-optional governance structure (BGLC project, 2014).

The theoretical multi-optional governance structure needs to be further tested and evaluated in practice. Hopefully this can be done integrated with the development of a corridor management for the Bothnian corridor. Future research could also consider how the green aspect of these transport corridors, ensuring both a low environmental impact and efficient transports, is reflected in a transnational transport corridor management structure.

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## *Appendix I*



## **Semi-structured Interview guide - Management structures to develop transnational transport corridors**

### ROLE OF THE INTERVIEWEE

1. What is your role as a xxx (tasks, responsibilities)?

### ORGANISATION

2. Can you briefly tell about the management and cooperation structures that are used in your transport corridor?
  - Organization (ministry level cooperation, corridor platform, working groups on themes, network)
  - Does it have any connections to other areas of disciplines besides transport (land use, regional economic development)
  - Is it permanent or flexible structures? (or ad-hoc – for specific questions)
  - Who has created the management structures (main stakeholder, coordinator, other stakeholders)?
  - Which stakeholders participate in the management structure (states, regions, local authorities, companies, interest organizations etc.)?
  - How were the participating stakeholders selected?
3. Developing sustainable transport, how is the environmental aspect reflected in your management structure?
4. What type of processes has been used creating and enabling the management structure (work with agreements, MoU, partnerships-- negotiations, collaboration)?
5. Who is responsible for the continuous work of the management structure? Why that specific stakeholder? If there is a secretariat, who owns it?
6. Is this structure a top-down or bottom-up structure?

### *Corridor platform and European Coordinator*

In the proposed new guidelines for implementing the TEN-T, core network corridors are appointed. The guidelines describe that a corridor platform should be formed with participating Member states and actors from public and private sector, and it could be an EEIG. An European Coordinator will also be appointed to chair the group.

7. How do you think this will affect the existing structure (will it be adjusted, participants, modes of transport)?

8. Under which circumstances do you think a corridor platform is an option for a management structure?
9. What should be the role of a platform? (which powers, issues, what decisions, possibilities of deciding funding, connections to other areas of disciplines (land use, regional economic development))
10. Who should be the organizer of such a platform?
11. Who should participate? Selected how?
12. What are the advantages or disadvantages with a European Coordinator?

#### OPERATION

13. Which issues does the management structure work with (funding, infrastructure, terminals, capacity)?
14. Which goals and visions do they have? Who set them?
15. What mandate (decisions of funding, planning, monitoring)
16. How have different actors been participating (business, academic, political, actively – non actively)?
17. How has the accountability of the management structure been secured?
18. Which tools have been used to measure performance of the project?
19. Which communication processes have been used by the management structure towards stakeholders (press information, large meetings for many stakeholders, competence development etc.)?

#### IMPACTS ON CORRIDOR/PROJECT DEVELOPMENT

20. How has the management structure affected procedures of developing the transport corridor (planning, financing)?
21. Do you find the management structure important regarding results for development? Why/why not?

#### INSIGHTS

22. What have been the biggest challenges for you in your work?
23. How have you addressed those?

#### FUTURE RECOMMENDATIONS

- IN DEVELOPING MANAGEMENT STRUCTURES FOR MULTIMODAL, TRANSNATIONAL, TRANSPORT CORRIDORS

#### IN YOUR OPINION..

24. Under which circumstances do you think transnational management structures are needed for developing a transport corridor (being part of the TEN-T core network, several nations involved)?  
Are you thinking of any specific type of structure (a group/coordinator/network/platform)?
25. When you think about participants in a management structure:
- Are there any crucial participants?
    - Levels of governance (EU, national, regional, local)
    - Businesses (larges, mediumsized, small)
    - Operators/forwarders
    - Academia
    - Politically strong actors (politicians, parties)
    - Interested actors (environmental groups, NGO)
    - Influential actors
  - Should someone have a leadership – who and why?
26. What should be the role of a management structure?
- Which issues (development of a transport corridor)?
  - Connections to other areas of disciplines (land use, regional economic development)?
  - What mandate (decisions of funding, planning)?
27. What needs to be considered and improved in future work for your transport corridor?  
(cooperation between levels of governance like joint MoU, involve other actors, communication)
28. What are your thoughts of permanent secretariats for development of transport corridors?
29. In your opinion – is there a need for more cooperation between corridors on a European level?  
(European planning body or agency)
30. Should the European Union have a larger responsibility for European networks like TEN-T  
(planning, financing)?
31. With future multimodal transport corridors and a large amount of stakeholders, what are the most important considerations for creating a suitable management structure? (certain key-actors, national level, coordinator, specific timing, horizontal / vertical cooperation, funding)
32. That was the last question. Is there anything else that you want to add to this interview?





## *Appendix II*



## INVITATION

### Green transport corridor management workshop

**Time:** Tuesday 23.4.2013 10 a.m- 5 p.m.

**Location:** Örebro castle, Kansligatan 1, Örebro, Sweden

International transport corridors involve several stakeholders in different countries creating challenges for the management structure. This workshop is organised in order to identify good practices and to develop ideal corridor management structure.

The workshop is directed to public and private stakeholders involved in transport corridors.

**Registration:** by the 16<sup>th</sup> of April 2013 at  
[https://www.lyyti.fi/ilmoittaudu/VTI\\_3697](https://www.lyyti.fi/ilmoittaudu/VTI_3697)



## Preliminary programme

9.30	Registration and coffee
10.00	Opening of the workshop, Jerker Sjögren, Lindholmen Science Park
10.10	The management of the Brenner corridor, Sandro Francesconi, Brenner base tunnel
10.40	Corridor Rotterdam-Genua, Stefan Wendel, Managing director, EEIG Corridor Rotterdam - Genoa EWIV (tbc)
11.10	Introduction to corridor management case studies and case study results, Jenni Eckhardt, VTT Technical Research Centre of Finland
11.30	Corridor management case study results, Teti Nathanail, University of Thessaly
11.50	Lunch break
13.00	The aim and organization of the workshop, Prof. Pekka Leviäkangas, University of Oulu
13.15	Workshop
15.15	Coffee break
15.45	Summary of the workshop
16.15	Discussion, moderator Prof. Pekka Leviäkangas, University of Oulu
16.45	Closing of the workshop, Prof. Kristina Nilsson, Luleå University of Technology

### More information from organizers:

Bothnian Green Logistics Corridor BGLC

- Maria Öberg, Luleå University of Technology, maria.o.oberg@ltu.se
- Jenni Eckhardt, VTT Technical Research Centre of Finland, jenni.eckhardt@vtt.fi

### CLOSER

- Jerker Sjögren, Lindholmen Science Park, jerker.sjogren@lindholmen.se



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## *Appendix III*



# What do *you* think?

## Focus groups 20 minutes

### THE BOTHNIAN CORRIDOR – MANAGEMENT STRUCTURE

- Which objectives should the management structure have (development of corridor; infrastructure, planning, operative management, logistics, lobbying, harmonizing services)?

.....

.....

- Who are the Core stakeholders?

.....

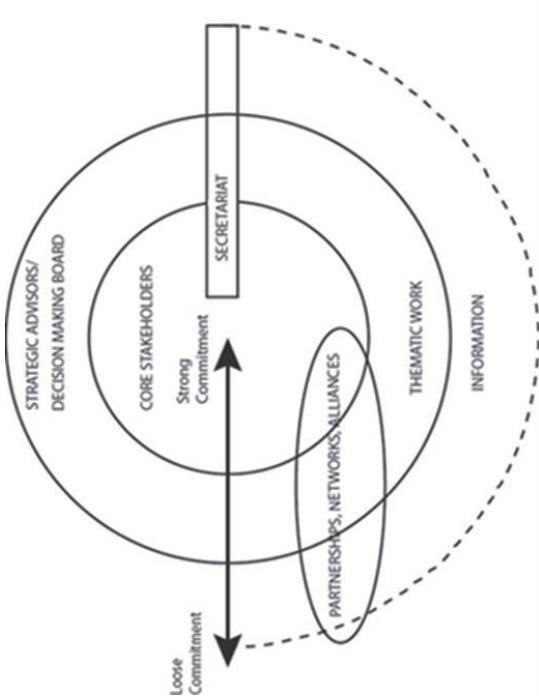
.....

- Where would **your organisation** participate in this structure (tentative)?

.....

.....

- Which are the **strengths/ weaknesses/ threats/ opportunities** with this management structure? ->



Strengths	Weaknesses	Threats	Opportunities







