

# 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 starts 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**

<b>Passage</b>	<b>Keywords</b>	<b>References</b>
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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## REFERENCES

- Coen, D. & Thatcher, M. 2008, "Network governance and multi-level delegation: European networks of regulatory agencies", *Journal of public policy*, vol. 28, no. 01, pp. 49-71.
- Dyer, J. & Nobeoka, K. 2000, "Creating and managing a high-performance knowledge-sharing network: The Toyota case", *Strategic Management Journal*, vol. 21, no. 3, pp. 345-367.
- English, J. & Spear, J. 2009, "Reviewing transport governance: the case of Leeds, UK", *Proceedings of the Institution of Civil Engineer, Municipal engineer*, vol. 162, no. 3, pp. 141-148.
- European Commission, 2011, map of core transport network, web-page: [http://ec.europa.eu/transport/infrastructure/revision-t\\_en.htm](http://ec.europa.eu/transport/infrastructure/revision-t_en.htm)
- European Commission, 2011, Proposal for a regulation of the European parliament and of the council on union guidelines for the development of the trans-European transport network, COM/2011/0650 final/2-2011/0294(COD). Brussels.
- European Commission, 2011, White paper, Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system, COM (2011) 144 final, Brussels.
- Ferrari, C. 2011, "Italian ports: Towards a new governance?", *Maritime policy and management*, vol. 38, no. 3, pp. 335-346.
- Giuliano, G. 2008, The changing landscape of transportation decision making, Transportation Research Board, Commission on Sociotechnical Systems, National Research Council, National Academy of Sciences, Washington.
- Gulati, R. & Singh, H. 1998, "The architecture of cooperation: Managing coordination costs and appropriation concerns in strategic alliances", *Administrative Science Quarterly*, vol. 43, no. 4, pp. 781-814.
- Legacy, C., Curtis, C. & Sturup, S. 2012, "Is there a good governance model for the delivery of contemporary transport policy and practice? An examination of Melbourne and Perth", *Transport Policy*, vol. 19, no. 1, pp. 8-16.
- Lorenzoni, G. & Badenfuller, C. 1995, "Creating a strategic center to manage a web of partners", *California management review*, vol. 37, no. 3, pp. 146-163.

- National library of Sweden, about Libris, web-page: [http://librishelp.libris.kb.se/help/about\\_libris\\_eng.jsp?redirected=true&pref\\_is\\_set=false&textsize=&contrast=&language=en](http://librishelp.libris.kb.se/help/about_libris_eng.jsp?redirected=true&pref_is_set=false&textsize=&contrast=&language=en) [2012-08-07]
- Pei, Y., Amekudzi, A., Meyer, M., Barrella, E. & Ross, C. 2010, "Performance Measurement Frameworks and Development of Effective Sustainable Transport Strategies and Indicators", *Transportation Research Record*, vol. 2163, no. -1, pp. 73-80.
- Romein, A. 2003, "The multi-scalar complexity of infrastructure planning: Evidence from the Dutch-Flemish megacorridor", *Journal of Transport Geography*, vol. 11, no. 3, pp. 205-213.
- Sager, F. 2007, "Making transport policy work: polity, policy, politics and systematic review", *Policy and politics*, vol. 35, no. 2, pp. 269-288.
- Sarasvaty, S. 2001, "Causation and effectuation toward a theoretical shift from economic inevitability to entrepreneurial contingency", *Academy of Management Review*, vol. 26, no 2, pp. 243-263.
- Sciverse Scopus, about Scopus, web-page: <http://www.info.sciverse.com/scopus/scopus-in-detail/facts> [2012-08-07]
- Thomson Reuters, about Web of Science, web-page: [http://thomsonreuters.com/products\\_services/science/science\\_products/a-z/web\\_of\\_science/](http://thomsonreuters.com/products_services/science/science_products/a-z/web_of_science/) [2012-08-07]
- Vega, H. & Penne, L. 2008, "Governance and institutions of transportation investments in US. Mega-regions", *Transport*, vol. 23, no. 3, pp. 279-286.
- Vickerman, R. 2008, "Multi-level policy making in transport: The problems for border regions", *International journal of public policy*, vol. 3, no. 3/4, pp. 228-245.
- Walter, A. & Scholz, R. 2007, "Critical success conditions of collaborative methods: a comparative evaluation of transport planning projects", *Transportation*, vol. 34, no. 2, pp. 195-212.
- Wangel, J. 2011, "Change by whom? Four ways of adding actors and governance in backcasting studies", *Futures*, vol. 43, no. 8, pp. 880-889.