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## INTERMODAL TRANSPORT IN THE POLICY DOCUMENTS CONTEXT

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**Abstract:** *It is the policy analysis and policy-making processes, along with the structure and content of the resulting documents that make strategic transport planning different from one country to another. A national transport policy, as an umbrella strategic planning document, should meet multiple goals the relative importance of which changes over time. A need for intermodal solutions emerged as far back as the 1970s, and political interest in intermodal transport has grown considerably since. To promote intermodal transport has become one of the key goals in national and European Union transport policies alike. Strategic planning objectives and key elements have been analysed against the backdrop of several European national transport policies, and the summary presented in the paper.*

**Keywords:** *strategic planning, transport policy, public policy instruments, intermodal transport*

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### 1. INTRODUCTION

Strategic documents for transport development constitute a prerequisite for coordinated investment activity, paving the way to the growth of a national transportation system. In different countries, however, they are named differently: (national) transport strategy, transport development strategy, transport policy, strategic plan, master plan etc. They are invariably structured differently, even if the name is the same. The differences in the structure and contents of transport policy strategic documents arise from different approaches to *strategic transport planning* (STP), but also from a regulatory framework in which policy is created, economic, social, cultural and other social divides. They are the result of the current situation, capacities and needs of transport infrastructure, institutions and human resources; the existing opportunities to define specific plans for a country's economic and social development; the potentials and interests of scientific and research institutes in the sector, but, more than anything, the priorities of the government and relevant ministry. These differences, which in principle exist in all transport modes, are also incorporated in strategic documents related to *intermodal transport* (IT).

In order to get an IT overview in the STP process, and to identify the policies and instruments the countries are using today to shape the IT sector, the transport strategic documents of more than 20 European countries have been reviewed. Three different approaches have been identified to the role of intermodal transport in those documents: (1) intermodality has been incorporated in STP as a principle (in the countries with developed IT); (2) intermodality is treated as a formal objective, and the STP is actually based on transport modes; (3) the approach

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brought into line with the EU policy, but only as a matter of convenience, most often to benefit from the EU funds.

The paper has defined and described a national transport policy as a document. It overviews and discusses the objectives and instruments of IT national transport policies in several European countries and Serbia, offering conclusions, too.

## 2. INTERMODAL TRANSPORT IN NATIONAL TRANSPORT POLICY

*National Transport Policy* (NTP) is a document adopted by the government or the parliament, defining clear objectives and general guidelines as to how to achieve them. It should be quite generic, but with clear courses of action to apply in different circumstances in the future. This is a landmark document for all parties and their strategic plans. Together with the NTP, follow-up strategic documents are the elements of a state transport policy, too. The policy instruments (laws, regulations, programmes, and actions resulting from the policy) used to materialize the policy should reflect and reinforce its purposes.

A NTP is expected to meet multiple objectives the importance of which changes over time. With a shifting focus though, problems in the field of infrastructure development topped the list of priorities in the past. Different transport modes have been considered separately. To boost efficiency, a need for intermodal solutions to make a better use of different modes of transport emerged as far back as the 1970s, but a satisfactory level of interoperability within the transport modes is yet to be achieved. The transfer process at terminal and a multilateral legal framework which is still adapted to all modes separately is just one of the typical examples.

The EU *Common Transport Policy* (CTP) has a strong impact on the NTPs of the European countries, both EU members and acceding countries. Each one of the four White Papers (1992, 2001, 2006 and 2011) defined objectives and instruments of CTP. They constantly reaffirm the integration across all modes, interoperability and coordination as key preconditions for the development of IT. Practice is still modal though, but multimodal issues are now taken into account in the process of planning. The domination of road transport and the restructuring of railways in order to increase their competitiveness will for a long time remain a challenge for all IT actors, especially in the context of a single market policy and transport as a commercial activity, based on a free choice by service users.

The challenges of IT strategic planning have been addressed in different ways, depending on strategic planning and the structure of objectives. In some cases there are explicit NTP goals, objectives and policies to be used for action, but sometimes they are incorporated in freight transport or logistics development documents. The differences are also visible in the wording of the objectives. Some are defined as general objectives, and others as specific objectives or even indicators (Table 1, Hungary: ratio of combined goods transport). Objectives as they are defined in NTP are presented in Table 1.

The vision of transport system development, along with general NTP objectives, shape the approach to strategic planning of freight transport and, therefore, IT. In some countries, the approach is still modal, with, possibly, formal commitment to IT. This is usually happening in the states that established their NTPs years before the adoption of CTP 2011, such as Slovakia (MoTPT, 2005). In the NTPs adopted shortly before or after the adoption of CTP the approach has changed considerably; freight transport is a separate issue and there are specific objectives related to intermodality. On the other hand, they usually fail to offer the explicit policies and instruments to carry out the objectives. The objectives are merely formal, like in Hungary (MoTTE, 2007) or focused on the use of the EU funds, like in Bulgaria (MoTITC, 2010). There are countries which have defined their objectives not only for different transport modes, but also for IT (Russia (MoT, 2008) and Serbia (GovSRB, 2008)).

Table 1. Overview of the NTP goals concerning intermodal transport

| COUNTRY                              | GOALS/PRIORITIES/OBJECTIVES   |
|--------------------------------------|---|
| <b>Bulgaria</b><br>(MoTITC, 2010)    | <ul style="list-style-type: none"> <li>- Development of the logistics infrastructure</li> <li>- Fulfilling the European infrastructure and services standards along the TEN-T axes</li> <li>- Assuring transparent and harmonized conditions for competition between and within the different transport modes</li> </ul>    |
| <b>Croatia</b><br>(MoMTI, 2014)      | <ul style="list-style-type: none"> <li>- Improvement of transport connectivity and coordination with neighbouring countries</li> <li>- Improvement of freight accessibility inside Croatia</li> </ul>   |
| <b>Finland</b><br>(MoTC, 2007)       | <ul style="list-style-type: none"> <li>- Maintaining competitiveness in logistics: The trunk network development programme and high-quality logistics services</li> </ul>   |
| <b>Germany</b><br>(FMoTDI, 2008)     | <ul style="list-style-type: none"> <li>- Avoiding journeys - ensuring mobility</li> <li>- More transport to rail and inland waterway</li> <li>- Upgrading more transport arteries and hubs</li> <li>- Good working conditions and good training in the transport sector</li> </ul>  |
| <b>Hungary</b><br>(MoTTE, 2007)      | <ul style="list-style-type: none"> <li>- Increasing the ratio of combined goods transport</li> <li>- Improve efficiency of intermodal logistic centre</li> </ul>  |
| <b>Spain</b><br>(MoPW, 2013)         | <ul style="list-style-type: none"> <li>- Boost the Spanish logistics sector as an engine of our economy</li> <li>- Develop an intermodal network that allows shuttling between nodes and provide complete and integrated logistics services</li> <li>- Maximize Spain's role as a gateway</li> </ul>                        |
| <b>United Kingdom</b><br>(DfT, 2011) | <ul style="list-style-type: none"> <li>- Leveraging short term private sector investment</li> <li>- Improving the longer term capacity, performance and resilience of our congested road and rail networks</li> <li>- Reducing unnecessary regulation;</li> <li>- Attracting and retaining high calibre recruits</li> </ul> |

Croatia, which adopted a NTP in 2014, defines all objectives as an intermodal list of objectives. These objectives constitute the main goal - to establish a sustainable and efficient Multimodal Transport System (MoMTI, 2014). Spain, which defines its policy both in terms of different transport modes and IT, has a more specific approach. It defines activities for all modes so as to promote intermodality, first of all through a system of stimulations and support. It favours transformation of operators of different transport modes into logistic and intermodal operators, integration of smaller operators in transport chains and strengthening of intermodal operators or expansion of their role on the European and international market (MoPW, 2005).

The countries which have been the first to abandon the modal approach, such as Great Britain, Finland and Sweden, are being focused on the analysis of transport chains, not the analysis of the condition of different transport modes. Great Britain shifted its attention to the movement of different types of goods, and now has a more active overview of the future needs, sources, objectives and influences of the flows of goods, including the key routes. It also examines the possibility of supporting the logistics. Strategic document *Delivering a Sustainable Transport System: the Logistics Perspective* (DfT, 2008), following the NTP, provides a detailed analysis of movement of goods within the national transport corridors and examines the possibility of facilitating effective movement of goods and reducing negative effects by joint efforts made by the government and economic actors. This document is followed by the *Logistics Growth Review* (DfT, 2011) including a diverse package of measures to target real barriers to growth identified by businesses across the sector - from freight transport operators to logistics users in the manufacturing, wholesale, retail, postal services and waste sectors.

Although they have a similar approach – a long distance transport development trend is to be concentrated on specific routes and transport corridors - Finland and Sweden's NTPs place a stronger emphasis on innovative solutions, exploiting the potential provided by communications technology to create an intelligent transport system (ITS). The follow-up strategic documents, Finnish and Swedish ITS Strategies (MoTC, 2013; SRA, 2010), are the first of intermodal nature in Europe. In the Finnish ITS Strategy the long-term goal is to digitize logistics.

Over the past ten years, five documents related to IT strategy, policy or other form of IT development have been produced in Serbia. The umbrella document is the Strategy (GovSRB, 2008), with a separate chapter on the development of IT. In a nutshell, at this point in the IT development an emphasis should be placed on institution building, eliminate infrastructure bottlenecks, build a terminal network and logistic centres, improve the organisation of actors in the IT chain. The role and assistance of the state are vital in this, especially in terms of funding and proper conditions for financing the IT infrastructure. Even though it came out together with a proper action plan, it remained a dead letter.

Besides the Strategy, another two projects have been carried out within the framework of IT development and terminal networks. These are IMOD X (The Project Intermodal Solutions for Competitive Transport in Serbia, 2004-2006) and The General Master Plan for Transport in Serbia 2008/2009. A strategic document no. 4 is the Serbia Intermodal Transport (G2G), dealing with the education of IT actors in Serbia. However, it's just one of the five projects, the last one, which treated a specific problem - the introduction of a Serbia-Austria intermodal train.

### 3. POLICY INSTRUMENTS FOR INTERMODAL DEVELOPMENT

Regardless of the approach taken to strategic planning, the different leverages used to influence freight transport are similar to one another, as well as to those used in the past. Although most countries still act based on the infrastructure investment policy, fiscal policy and encouraging a change of behaviour, there is an increasing support to training programs, new regulatory frameworks and regulatory reforms, and a tighter supervision of the enforcement of regulations. In order to give a systematic presentation of policy instruments defined in the analysed strategic documents, they have been classified in different areas of activity and followed by specified objectives and policies whose realization they have been defined for (Table 2). Such an approach gives the same importance to all of the elements of the control cycle. A minimum group of elements includes objectives and instruments, as well as indicators, which have not been addressed by this paper, while further developments should include laws, competent authorities and financing, which are indispensable in the realisation of a policy.

Table 2. Overview of the NTP instruments concerning intermodal transport

| GOAL  | POLICY  | MEASURE/INSTRUMENT   |
|---|---|--|
| <b>Area of activity: Atmospheric pollution</b>                      |   |  |
| Environmentally-friendly transport                                  | Encourage the use of rail and water transport | Continue with low duty on red diesel; zero duty on bunker fuels; tonnage tax for shipping companies; and the exclusion of electric rail freight from the climate change levy |
|   |   | Financial incentives through mode shift programmes   |
|   |   | Increased funding for combined transport   |
| <b>Area of activity: Public finance</b>                             |   |  |
| Efficient public finance in infrastructure                          | Better accessibility                          | Improving and developing railway connections with other modes  |
|   |   | Improving inland access to major ports   |
|   | Funding as the basis for service level        | Adaptation of the main rail corridors to international standards   |
|   |   | Equip infrastructure for multimodal interconnection with advanced ITS technologies   |
|   |   | Interoperability on the rail by ERTMS  |
|   |   | Redesign transport services funding and discontinue separate funding for modes of transport  |
|   |   | Facilitating access to capital for commercial investment   |
|   |   | Support the equipping of terminals with progressive trans-shipment technologies  |
|   |   | Support the establishment of public terminals  |
| Create conditions for the private sector to build logistics centres |   |  |

Table 2. Overview of the NTP instruments concerning intermodal transport (continued)

| GOAL  | POLICY   | MEASURE/INSTRUMENT  |
|---|--|---|
| <b>Area of activity: Transport market</b>                   |  |   |
| Transparent and harmonized competitive business environment | Equalize conditions of competition                       | Improvement of the quality/price ratio of the port offer  |
|   |  | Creating a national ports strategy  |
|   |  | Review of regulatory framework for the Freight transport in intermodal competition  |
|   | Improve conditions of competition                        | Completing the Restructuring of the Railway Transport System  |
|   |  | Ensure available information systems to plan and manage supply and demand of transport services   |
|   |  | Create a programme for the support of an expansion of the fleet for combined transport  |
|   |  | Create a programme for subsidies in the initial stage of operation of regular multimodal transport lines  |
| <b>Area of activity: Transport services</b>                 |  |   |
| Competitiveness in logistics                                | Secure qualified and professionally skilled employees    | Provide funding for establishing new and innovative approaches to training  |
|   |  | Regular Summit on labour and education in freight and Logistics   |
|   |  | Invest in logistics competence and related research and development   |
|   | Improve efficiency of logistic chains                    | Simplification and homogenization of the existing procedure in different modes to perform administrative and customs controls                   |
|   |  | Review regulatory requirements for all freight sectors on a regular basis to ensure that they remain appropriate                                |
|   |  | Conduct an assessment of business logistics competitiveness in each government term   |
|   |  | Make logistics services available to small and middle-sized businesses  |
|   |  | Integrate the ITS concept of Green corridors and intermodal terminals   |
|   |  | Border bottlenecks elimination  |
|   |  | Facilitate bundling of goods flows by the agro-logistics pilot and the consolidarity programme  |
|   |  | Promote the implementation of electronic operating procedures and find a way to encourage small transport operators to use electronic solutions |
|   |  | Integration and improvement of existing codes of good practice in the sector of Logistics and Transport   |
|   |  | Intelligent logistics   |
|   | Fully automated data transfer within the transport chain |   |

#### 4. CONCLUSION

The conclusion is that the approach, form and content of NTP documents differ significantly from country to country, as well as objectives, policies and instruments related to the development of IT in these documents. Consequently, the countries can be classified in different ways. The most obvious are the divisions into (1) the countries that have incorporated intermodality as a principle within their strategic planning; (2) the countries addressing intermodality at the level of a formal objective, while in practice transport planning remains separate for each transport mode; (3) the countries whose approach follows the policy of the EU, but only as a matter of convenience and a way to use the EU funds.

As for the countries with an insignificant IT share in the transport market and limited IT potentials, as well as the countries in transition or those in the EU integration process, like Serbia, it is vital to take into account the experiences regarding inconsistencies, the characteristics of the environment, realistic possibilities of the public administration, the genuine capacity of institutions and their potential for growth. It is unrealistic to expect the NTP to contain all the elements as defined in literature, or based on the practical experience of developed or larger states. Strengthening the economic and institutional potentials of a country

allows for the external definition of general objectives and the creation and adoption of an indispensable umbrella document. These elements should be included in the next cycle of planning and drafting a NTP. Likewise, the order of specification of elements, as well as their application, should be flexible, which will make it possible for the different elements to be added and defined in phases, in order to achieve consistency and comprehensiveness.

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## REFERENCES

- [1] DfT, (2011). Logistics growth review, Department for Transport, British Government, <https://www.gov.uk/government/publications/logistics-growth-review>
- [2] DfT, (2008). Delivering a sustainable transport system: the logistics perspective, Crown, London, UK.
- [3] FMoTDI, (2008). Master Plan for Freight Transport and Logistic, Federal Ministry of Transport and Digital Infrastructure, <http://www.bmvi.de/> (in German)
- [4] GovSRB, (2008). Development Strategy for rail, road, inland waterways, air and intermodal transport in the Republic of Serbia 2008-2015, Official Gazette of the RS 4/2008. (in Serbian)
- [5] MoPW, (2013). Logistics Strategy of the Spain, Ministry of Public Work, Government of the Spain, <http://www.fomento.gob.es/> (in Spanish)
- [6] MoPW, (2005). Strategic Infrastructure and Transport Plan 2005 – 2020, Ministry of Public Work, Government of the Spain, <http://www.fomento.es/>
- [7] MoMTI, (2014). Transport Development Strategy of the Republic of Croatia 2014 – 2030, Ministry of Maritime Affairs, Transport and Infrastructure, <http://www.mppi.hr/>
- [8] MoT, (2008). Transport Strategy of the Russian Federation until 2030, Ministry of transport of the Russian Federation, <http://www.mintrans.ru/> (in Russian)
- [9] MoTC, (2013). Towards a new transport policy. Intelligence in transport and wisdom in mobility. Finland's second generation intelligent strategy for transport, Ministry of Transport and Communications Programmes and strategies 2/2013, <http://urn.fi/>
- [10] MoTC, (2007). Transport 2030: Major challenges, new directions, Ministry of Transport and Communications Publications and Strategies 2/2007, <http://urn.fi/>
- [11] MoTITC, (2010). Strategy for the development of the transport system of the Republic of Bulgaria until 2020, Ministry of Transport, Information Technology and Communications, <https://www.mtitc.government.bg/>
- [12] MoTPT, (2005). Transport policy of the Slovak republic until 2015, Ministry of Transport, Posts and Telecommunications of the Slovak Republic, <http://www.telecom.gov.sk/>
- [13] MoTTE, (2007). Unified Transport Development Strategy 2007-2020, Ministry of Transport, Telecommunication and Energy, Republic of Hungary, [http://s3.amazonaws.com/zanran\\_storage/www.khem.gov.hu/ContentPages/45092222.pdf](http://s3.amazonaws.com/zanran_storage/www.khem.gov.hu/ContentPages/45092222.pdf)
- [14] SRA, (2010). Multimodal ITS strategy and action plan for Sweden – Summary, Swedish Road Administration, <http://www.irfnet.ch/>