

MODERN TRANSPORT CHAINS AND LOGISTICS

Design and management of freight and intermodal transport and the role of Governments:
Possible contributions by the UNECE Working Party on Intermodal Transport and Logistics

EXAMPLES OF AUSTRIAN EXPERIENCES BY VIA-DONAU (AUSTRIAN WATERWAYS COMPANY)

Note: The comments of the Via-Donau Company are reproduced below in *italics*.

I. MANDATE

1. The present document is submitted in accordance with the mandate of the Working Party on Intermodal Transport and Logistics (WP.24) as defined in the annex to document ECE/TRANS/WP.24/117, para. (d), the objective of which is to analyse modern transport chains and logistics, to review technical and legal issues and to develop regional implementation tools and measures. The present document is also issued in accordance with the programme of work 2006-2010 of the Inland Transport Committee, adopted at its sixtieth session, in 2006 (ECE/TRANS/166/Add.1, section 02.9 (d)).

II. BACKGROUND AND APPROACH

2. The programme of work of the Working Party contains the following work element: "Analysis of modern transport chains and logistics that allow for an integration of production and distribution systems providing a rational basis for Governmental decisions on transport demand, modal choice as well as on efficient intermodal transport regulations and infrastructures and taking into account transport safety and security requirements". As expected output the following is stipulated: "Review of technical and legal issues and development of regional implementation tools and measures based on considerations on the role of Governments in this field" (ECE/TRANS/WP.24/117, annex).

3. As the importance of efficient logistics and transport systems for the competitiveness of European economies is increasingly recognized, the Working Party had felt at its forty-seventh session that inter-governmental organizations should participate in the exchange of best practices

and possibly in the coordination of well-focused activities in this field (ECE/TRANS/WP.24/115, paras. 39-43).

4. Modern supply chain management systems and logistics will become of paramount importance for the competitiveness of economies in the UNECE region. They will fundamentally reshape the way goods are supplied, produced, delivered and returned. Driven by consumer demand and the globalization of production and trade, supply and distribution chains are getting longer. Just-in-time (JIT) and just-in-sequence (JIS) supply, production and distribution systems increasingly require reliable, flexible, fast and efficient transport systems. These systems have a crucial impact on modal choices made by the industry (road, rail, inland water, sea and/or air transport).

***Comment:** 'Just in time' is often wrongly associated with the speed of transport, while it really refers to punctuality. What is more, the concept rather relates to meeting the agreed deadlines for delivery or pickup of goods than to the timely arrival and departure of the agreed means of transport. Thus, reliability and countability of transport-logistics processes should be considered as the main performance indicators being relevant for measuring transport-logistics processes and actions. Regular liner services for multimodal and intermodal (container) transport provide the necessary framework conditions for meeting these inquired criteria by the industrial shippers. In this respect multi- and intermodal liner services, both for railway (shuttle trains) and inland waterway transports (container liner services), need to be stimulated and promoted. Additionally, modern ICT concepts and systems increase the transparency of transport-logistics processes. Transport-logistics services (e.g. Tracking and Tracing) which rely on real-time traffic information (e.g. position and status of the transport) will contribute to trustful, punctual, countable and reliable transport processes too. Nowadays such ICT systems are not available in the intermodal market, but are still under development. Example inland waterway transport: Based on existing inland navigation traffic information systems (River Information Services) innovative services for the transport and logistics market actors (e.g. transport carriers, logistics service providers, inland ports) will be identified and developed next.*

***Comment:** Every process starts with a design and planning phase. In the field of transport-logistics this phase is named transport planning, where decisions are taken, which (will) influence directly the later carried out real transport operations. Modal choice decisions are also part of the process design phase, when industrial shippers and/or logistics service providers determine the transport modes to be used (road, rail, inland waterway transport or maritime transport) for a certain transport operation. Currently, ICT-based intermodal transport planning tools are under development; mostly elaborated in international projects (see below) co-financed under EU programmes (e.g. FP5/6, INTERREG).*

Consequently, these and other new up-coming initiatives need to be supported and promoted more intensively in order to attract the entire intermodal sector/market and to prepare a full market implementation in European regions.

- *INTERIM - INtegration in the intermodal goods Transport of non EU states: Rail, Inland/coastal waterway Modes*

- *ECO4LOG: Development of an East border COrridor 4th party LOGistics service approach along the axis Brandenburg-Saxony-Austria with neighbouring accession countries*
- *ptv intermodal guide*
- *PC-Navigo River Information Service*
- *BintraS - Das elektronische System zur Unterstützung von Gütertransporten der Binnenschifffahrt in Deutschland*
- *ETNA- European Transport Network Application*
- *DISMOD - Das GIS-basierte Distributionsplanungstool zur Standortoptimierung und Strukturplanung in der Transportlogistik*
- *And (future) other examples.*

5. At its forty-ninth session, the Working Party analyzed the underlying causes and requirements of logistics determining transport demand, transport quality and land use (location of logistics centers and intermodal terminals).¹ It stressed that Governments need to better understand the requirements of such modern supply and logistics chains, which do not stop at national borders. National transport policies must take account of and respond to these often global challenges and must be coordinated and harmonized at the international level as the impact of transport policy decisions and public financing may otherwise be marginal, ineffective and even counterproductive. If, on the other hand, transport policies provide the appropriate regulatory framework, adequate transport infrastructures and the required skills for private and public actors in this field, they will then be able to provide the basis for efficient, sustainable, safe and secure freight transport and mobility and will ensure a level playing field for all industries involved.

6. The Working Party had felt that it might be able to play a supportive role in this area through an exchange of information and best practices among countries in the UNECE region, by assisting in the development of concepts and indicators to measure these logistical developments and by providing expertise in regulatory or capacity building policies and measures that require an inter-governmental, pan-European approach.

7. With a view to further defining and structuring such activities, the Working Party had invited interested experts to share their know-how and experiences at future sessions of the Working Party and to prepare possibly a list of measures or fields of actions that would allow Governments to influence logistical developments at national and international levels (ECE/TRANS/WP.24/119, paras. 26-34).

8. As requested by the Working Party the secretariat, in close cooperation with a virtual expert group has prepared the present document as a basis for consideration by the Working Party. The document (a) discusses the concepts and importance of supply chains, logistics and freight transport logistics; (b) reflects on the role and areas of action for Governments in this field; (c) provides examples of Governmental initiatives at national and sub-regional level; and

¹ Refer to documents ECE/TRANS/WP.24/2008/1; ECE/TRANS/WP.24/2007/3.

(d) proposes some activities of the Working Party in the field of freight transport logistics that could provide a value-added at the inter-governmental and pan-European level.

III. THE DESIGN AND MANAGEMENT OF FREIGHT AND INTERMODAL TRANSPORT

9. Logistics is "... the process of designing and managing the supply chain in the wider sense. The chain can extend from the delivery of supplies for manufacturing, through the management of materials at the plant, delivery to warehouses and distribution centers, sorting, handling, packaging and final distribution to the point of consumption." This definition, confined to goods and not to services, has been developed in 2001 by the UNECE, ECMT and EC in its "Terminology on Combined Transport". It implies that logistical processes aim at providing goods at least cost and at the place and time required by the customer.

10. While there exist numerous other definitions of logistics, this definition still seems to be of relevance for this paper as it encompasses all important elements of the logistical processes that comprise the total supply chain of goods. Besides administration of the supply chain and the inventory of goods, transport is one of the key elements making up the logistical chain for goods.²

11. Experts agree that efficient logistics systems are and increasingly will become of paramount importance for the competitiveness of European economies. Efficient supply chain management has become a crucial tool for the industry to stay ahead of its competitors and the transport of freight is a very important component of such chains.

12. As this document, in line with the mandate and field of competence of the Working Party, deals mainly with the transport aspects of logistics of goods and its interrelationship with intermodal transport, the term "**design and management of freight transport**" is used thereafter.³ Design and management of freight transport is the planning, organization, control and execution of freight transport operations in a supply chain. This is increasingly undertaken by specialized service providers that often oversee and control the total supply chain from production to final distribution.

² It is estimated that the direct expenditures for logistics and logistical services are in the order of 8-14% of Gross Domestic Product (GDP) in many European countries (France: 10% Germany: 7.8% EU: 13.3%) with an upward trend. They account for between 6-12% of total employment. These figures provide only an order of magnitude as there exist no solid data on the performance of the logistics sector. Also its precise definition and measurement of output and employment are extremely difficult and internationally comparable data do not yet exist.

³ Initially, the expert group had divergent opinions on the use of the term "design and management of freight transport" in the context of this document focusing on freight and intermodal transport. Initially it was considered to use the term "freight transport logistics". However, since the term "logistics" refers to the **wider process of designing and managing the supply chain**, rather than to the **narrower process of designing and managing freight transport within such a supply chain**, it was felt by some experts that use of the term "logistics" in this narrower sense might blur the concept of "logistics" and lead to misunderstanding. It is thus not used in the context of this document. However, it is acknowledged that the term "freight transport logistics" is sometimes used in this narrower sense. The Working Party may wish to contribute to this debate.

13. The rapidly increasing prices for energy have particularly hit the transport component within supply chains. In particular, road transport's overwhelming dependence on oil and the necessity to mitigate greenhouse gas emissions, has and increasingly will result in further increases in costs for this mode of land transport that, in the short term, will be very difficult to avoid.

Comment: New energy saving concepts need to be developed for all transport modes. These are also needed for inland navigation, although this transport mode is one of the most efficient and environmentally-friendly surface transport modes. The development of new propulsion technologies (e.g. highly efficient engine solutions and propulsion devices), hull shapes and means for reduction of frictional resistance (e.g. innovative coatings), leading to lower fuel consumption and emissions, have to be followed and supported.

14. Supply chain managers look for efficiency gains however not only in terms of costs, but increasingly also in terms of service quality. While road transport often has a leading edge in this field, the rapidly growing traffic, particularly on major European roads, has led to serious capacity and congestion problems, not only in urban areas, but increasingly also on long-haul services and outside traditional peak hours. Coupled with a shortage of qualified drivers and crew members (partly due to new and better enforced regulations on working hours and rest periods in road transport), the supply side of the European transport sector is under considerable pressure. At the same time, it faces the challenge to adjust to the growing demands of supply chain managers for cheap, fast, reliable, flexible and transparent operations.

15. The management of freight transport in general and that of intermodal transport operations are very much linked with each other as the concept of intermodality allows and, indeed, facilitates the movement of goods by those modes of transport that are best suited to the requirements of supply chain managers. The movement of goods in one and the same loading unit (container, etc.) or road vehicle allows flexibility in the use of road, rail and/or inland water transport to respond to speed, availability, congestion, traffic bans or mandatory rest periods – provided that the inherent transshipment costs and times of intermodal transport operations can be kept lower than the gains achieved.

16. Until very recently, supply chains developed on the assumption of unlimited availability of transport capacity and cheap oil. Today, however, globalization of production, transport and trade must be seen in the context of energy (oil) supply problems, limited and often deteriorating transport infrastructures and an increasing importance of sustainability.

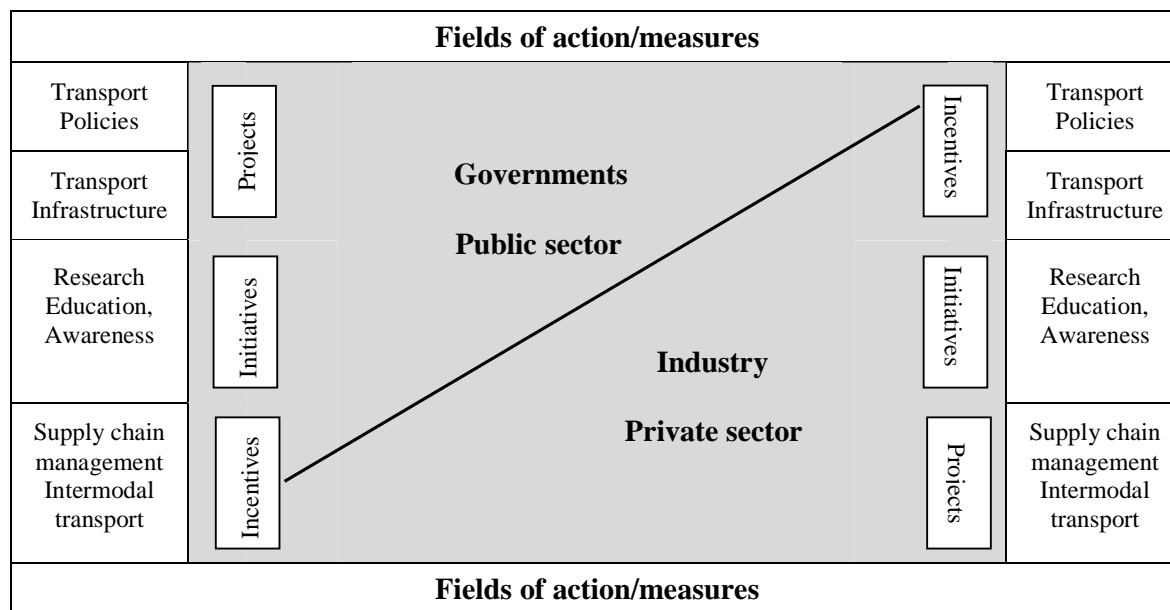
17. Against this background, the predicted increase in European traffic and transport in the order of 30 per cent within the next decade will not be possible unless better logistics and supply chain management systems allow goods to move more rationally and intelligently than in the past. As transport infrastructure will simply not be able to follow the predicted transport increase for ecological and financial reasons, the existing transport infrastructure must be better used, transport volumes may need to be consolidated and intermodal transport solutions must make optimum use of all transport modes and capacities at all places and at all times. This is a challenge for the private sector (supply chain managers, logistics service provider, terminal and transport operators, etc.), but also, and in particular, for Governments.

IV. THE ROLE OF GOVERNMENTS IN THE DESIGN AND MANAGEMENT OF FREIGHT TRANSPORT

18. The planning, organization, control and execution of freight transport operations as part of supply chain management is primarily a business activity. The same holds true for the organization of intermodal transport operations. Nevertheless and as already pointed out, Governments have a very important role to play in this field. Logistical processes organized and optimized by the private sectors do not necessarily constitute optimal solutions for the overall economy or the country as a whole. Governments need to set and maintain the institutional framework as well as the rules of the game to ensure that the design and management of freight transport and intermodal transport services are carried out in line with national transport policy objectives and do respect also other economic, social, environmental and spatial policies, rules and regulations set and enforced by public authorities.

19. However, as indicated schematically in the chart below, Governments are not only responsible for the regulatory, administrative and institutional framework. They are also responsible for the provision of adequate infrastructures, such as roads, railway lines and inland waterways, even though the construction and operation of such transport lines can and is already done in some countries through public-private partnerships (PPP). Also, in many UNECE countries ports, terminals and intermodal freight villages are already successfully financed and operated as PPP.

Responsibilities in the design and management of freight transport



Source: Adapted from the German Masterplan for Freight Transport and Logistics

20. In the field of research, education and awareness there is also considerable room for public-private coordination and cooperation. Finally, the design and management of supply chains and intermodal transport operations are, in most countries, a private business activity,

even in cases where Governments fully own transport companies, such as railway undertakings and/or logistics service providers. But, there is a clear trend towards further privatization and liberalization of transport and logistics markets in all UNECE member countries.

21. Thus, there are basically three fields of action in the design and management of freight transport that are fully or largely under the responsibility of Governments or public authorities at regional, national or local levels, i.e. transport and infrastructure policies, and research, education and raising of awareness.

A. Transport policies

22. Governments are responsible for the appropriate regulatory, institutional and administrative framework conditions to ensure a level playing field among all actors in freight transport, among all transport modes and transshipment facilities and to allow for non-discriminatory, sustainable, safe and secure freight transport in line with national priorities. This includes also public investment policy instruments as well as transport related taxes and duties that influence the efficiency and cost of freight transport and its competitive edge.

23. Governments are also responsible for the coordination and harmonization of transport policies at the international level. Today's supply chains do not stop at national or sub-regional borders. In fact they are often created to overcome frontiers and make use of comparative advantages of different national economies – and, often, different tax and regulatory systems. The same applies to the design and management of freight transport that is increasingly regionally and even globally oriented as are its actors. National transport policies must be coordinated and harmonized with that of other countries and regions to respond to these challenges.

Comment: In January 2006 the European Commission introduced the NAIADES Action Programme (COM(2006)6 final) to strengthen inland navigation throughout Europe. In Austria, the National Action Plan Danube Navigation (NAP) was therefore designed to realise the European targets on a national level and thus to set the course for Austria's navigation policy up to 2015. In the next following actions NAIADES needs to be implemented in all European regions. The recently started PLATINA (FP7-2007) project will contribute significantly hereto. Moreover, the design and set up of national actions on national/country level needs to be supported and promoted. The same becomes also relevant for the Freight Transport Logistics Action Plan (COM(2007)607 final) in the field of transport, logistics and intermodality.

24. Finally, effective transport policy making requires that Governments at federal, provincial and municipal levels understand and take account of the underlying causes and requirements in the design and management of freight transport that determine transport demand, transport quality, modal choice and land use (location of logistics centers and intermodal terminals). This is of particular importance for Eastern European, Caucasus and Central Asian (EECCA) countries whose economies are now also rapidly integrating into global supply chains and transport logistics processes.

Comment: TRACECA, the Transport Corridor Europe – Caucasus – Asia, forms the basis for more intensive traffic and transport relations between Europe and Asia. The corridor starts in the Eastern Europe (Bulgaria, Rumania, and Ukraine) and crosses also Turkey. It is passing the Black sea to the ports of Poti and Batumi in Georgia, further using transport network of the

Southern Caucasus, and a land connection towards this region from Turkey. From Azerbaijan by means of the Caspian ferries (Baku – Turkmenbashi, Baku – Aktau) TRACECA route reaches the railway networks of Central Asian states of Turkmenistan and Kazakhstan. The transport networks of these states are connected to destinations in Uzbekistan, Kyrgyzstan, Tajikistan, and reach the borders of China.

The Pan European Transport Corridor VII, the river Danube, interconnects the Black sea region with Central and South-East Europe, but provides also a gateway function for future Asia traffic and transport relations, like TRACECA. In order to establish prospering relations between Europe and Asia via Black sea regions, future investigations and actions are needed; this primarily in the field of legal framework conditions, traffic flow analyses and transport-logistics concepts. Suitable funding programmes and instruments, which are accessible for both European and Asian entities, will also stimulate this cooperation process.

B. Transport infrastructure

25. Governments are responsible for the provision and maintenance of adequate transport infrastructure and for the rules and regulations for their use. In addition to road, rail and inland waterway networks, Governments are responsible for land use planning and for the provision of suitable locations for ports, intermodal terminals, transshipment and distribution centers as well as freight villages.

26. Authority for such spatial decisions is often vested in local or regional authorities that do not always consider sufficiently the “bigger picture”. Thus, central and/or federal authorities, often in coordination with neighboring countries may have to coordinate or even steer local planning and decision making processes in these cases.

Comment: Traffic and spatial planning form a coherent approach affecting also transport and logistics issues. Under the Structural Funds Programmes 2007 – 2013 adequate sub-programmes (e.g. SEE, CENTRAL) exist, which enable project partnerships on a transnational level (e.g. Danube corridor and its riparian countries, regardless whether EU or non-EU country). The cooperation and interaction between the public and private sector is hereby a very important element.

C. Research, education and awareness

27. In cooperation and with the support of professional organizations, Governments are also in charge of research activities to better understand the impact of supply chain management and logistics on transport services, transport demands and modal choice. Within the European Union, a large number of research projects in this field are carried out under the authority of the European Commission, some of which have addressed specifically the interrelationship between freight transport logistics and intermodality.

28. Use of intelligent transport systems (ITS) is also promoted by public authorities to respond to ever more sophisticated freight logistics systems and to make optimum use of the limited transport infrastructure. Governments play also an important role in promoting the role of freight logistics and supply chain management and to ensure that professionals in the industry have the necessary know-how and experience to take informed decisions. Another important and often overlooked issue is the perception of the general public about the role of freight transport

and logistics for economic development. Public authorities must provide here the necessary information and transparency in line with national and international norms and regulations.

Comment: RIS (Legislation)

There is an increasing need for information exchange between parties in the inland navigation world. In particular, the exchange of traffic related information, information dealing with safety, and transport related information. River Information Services (RIS) offer harmonised information services by providing desired services both for administrations (e.g. ministries) and businesses (e.g. transport carriers, inland ports). The EU-Directive on RIS and the development of EU-projects constitute the basis for implementation actions of RIS in the individual European countries. In order to ensure harmonised implementation of River Information Services throughout Europe, the European Union adopted the Directive on harmonised RIS on inland waterways in the Community. The EU Directive 2005/44/EC entered into force in 2005.

Comment: RIS (Development and Status quo in Europe)

New information technologies in inland navigation began in the last decades of the 20th century with the development of radiotelephone services on inland waterways. This allowed both ship/shore and ship/ship contact for arrangement of passing manoeuvres. Later, the development of high resolution radar for inland navigation and the equipping of the waterways with radar reflectors on buoys and beacons enabled navigation in poor visibility. In difficult traffic situation, centres have been set up in which traffic is monitored by means of offshore radar stations. Now, for usage on board, computers that are connected to the Internet via mobile communication, as well as satellite position-fixing systems, electronic navigational charts and transponders are being developed. On shore, radar stations with target tracking, as well as ship reporting systems with interconnected databases are being installed. Each of these technical systems is capable of supporting several inland navigation services, with the results that synergy can be achieved, if the development and use of these systems is mutually co-ordinated. These new information services including the supporting systems should be harmonised internationally as far as possible to promote cross-border inland waterborne traffic, and to achieve an efficient interplay of diverse services.

Today, River Information Services (RIS) are under implementation in various European countries having access to inland navigation resources. Both in North and Western European regions and waterway corridors (e.g. Germany, the Netherlands, Belgium, France) as well as in Central and Eastern European regions and waterway corridors (e.g. Austria, Slovakia, Hungary, Croatia, Serbia, Bulgaria, Romania, Ukraine) RIS are going to be implemented gradually. All countries have in common that Electronic Navigation Charts (ENC) are realised first, before further services are designed. In this manner, most European countries are now working on the development of Electronic Navigation Charts for their particular countries. Next, services such as Notices to Skippers and Electronic Reporting are being implemented gradually along the European inland waterway networks.

With regard to the Danube corridor, in this respective geographical region the current situation of the implementation of River Information Services (RIS) is similar compared with Western European regions. Also in these countries Electronic Navigational Charts (ENC) have been already developed or are currently under development. Following these development actions,

further River Information Services (e.g. Water level information, Notices to skippers, Electronic Reporting, Traffic information services) are going to be developed and implemented. Most Danube-riparian countries did and/or will also set up RIS Centres, in which this newly developed RIS can be tested, especially before being implemented under real market conditions. It can be summarized that the realisation of RIS Centres is an excellent possibility to design and prepare River Information Service for the inland waterway transport (IWT) industry sector. In the future, new RIS will be developed addressing onto the needs and requirements of transport-logistics operators.

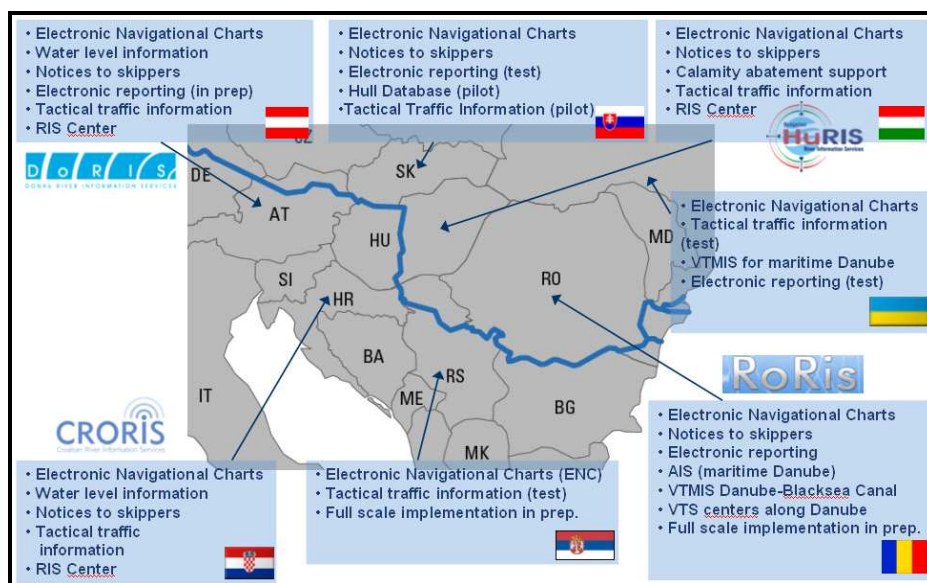


Fig. XX: Status quo of RIS implementation in the Danube corridor (Feb. 2008)

V. GOVERNMENT ACTION AT NATIONAL AND SUB-REGIONAL LEVELS

29. Governments provide only the appropriate regulatory, financial and educational framework conditions within which the design and management of freight transport is carried out. However, it is important for public authorities to act swiftly with the preparation and implementation of such framework conditions, not only to provide, from the outset, a level playing field for all actors involved and ensure transparency and guidance for the industry, but also to establish a comprehensive and consistent framework that allows all public authorities, including those at local and municipal levels to act in line with the same principles. The latter is particularly important for rational land-use planning and the localization of freight villages and freight distribution centers.

Comment: *The location of new inland terminals is one of the most important decisions to be taken, as this activity is affecting significantly the entire future traffic flows and transport-logistics processes of this logistics terminal. Wherever possible, all available transport modes should be taken into account, resulting in trimodal transshipment nodes, offering accessibility to road and rail infrastructure, but also to inland navigation (e.g. Danube, Rhine,...). New inland*

terminals, which did/do not make use of the advantages of trimodal traffic-access, will suffer from future lacking efficiencies and capacities affecting negatively both their proper terminals and their covering economic and geographical catchment areas.

A. Activities at national level

30. Some UNECE member States have already responded to these challenges. They have already or are in the process of identifying, in close cooperation with concerned industry groups and other stakeholders, the role and responsibility of Governments and non-governmental actors in this field. They are also determining appropriate regulatory, financial and educational policy measures that could contribute to more efficient and sustainable freight and intermodal transport systems integrated into modern logistics and supply chains.

31. Germany has, for example, adopted, in early 2008, a Masterplan for Freight Transport and Logistics. This plan was designed to enhance the competitiveness of the logistics industry in Germany and to provide for the optimum design, funding and use of freight transport systems. The plan should also contribute to structural change and sustainable development and should, last but not least, enhance the public perception of the economic significance of freight transport and logistics. The German Masterplan has been prepared through a participatory process with governmental and non-governmental experts from all concerned sectors and identified 27 concrete proposals that should be implemented following a political coordination.⁴

32. Another example is the logistics plan of Portugal that established in already in 2006 integrated regulatory and planning structures for the development of a network of logistics centers at strategic locations in Portugal. The plan supports logistical activities in the country with a view to making better use of the existing transport network and to promote rail and port hinterland transport. For the Government, the plan is a tool to better legislate and to encourage logistical developments. Construction, financing and operation of the logistics centers are left to the private sector.⁵

***Comment:** Selected and practical examples of Action Plans in the field of transport and intermodality affecting Austria:*

⁴ For more information:

<<http://www.bmvbs.de/verkehr/Gueterverkehr-Logistik-,2829/Masterplan.htm>>.

⁵ For details: WP.24 Informal document No. 7 (2007).

#	Multi- and intermodal Action Plans	Transport modes	Geographical scope
1.	National Action Plan on Danube Navigation (NAP) ^{6 7}	Inland Waterway Transport	Austria
2.	NAIADES - Communication from the Commission on the promotion of inland waterway transport ⁸	Inland Waterway Transport	EU-wide
3.	Intermodal Action Plans, prepared on transnational level (within EU projects)		
a)	“Intermodal action plan and integration in regional development plans”, elaborated in the EU-project “INTERIM” ⁹	Intermodal	DE, AT, HR, RS, RO, BG
b)	“Recommendation and Action Plan”, elaborated in the EU-project “ECO4LOG” ¹⁰	Intermodal	DE, PL, AT, SK, HU, SLO
4.	Intermodal Research by European Intermodal Research Advisory Council ¹¹		
a)	EIRAC’s Strategic Intermodal Research Agenda 2020	Intermodal	EU-wide
b)	EIRAC’s Implementation Plan	Intermodal	EU-wide
5.	Freight Transport Logistics Action Plan ¹² (Communication from the Commission COM(2007) 607 final)	Intermodal	EU-wide

B. Activities at sub-regional level

33. At the sub-regional level, in October 2007 a Freight Logistics Action Plan has been adopted by the European Commission as part of a larger freight transport package to enhance the efficiency and sustainability of freight transport including also other issues, such as freight-

⁶ EN: brochure:

http://www.donauschiffahrt.info/fileadmin/group_upload/7/Oeffentlichkeit/NAP/nap_folder_en.pdf

⁷ DE: final report:

http://www.donauschiffahrt.info/fileadmin/group_upload/7/Oeffentlichkeit/NAP/NAP_Endbericht_small.pdf

⁸ http://ec.europa.eu/transport/iw/doc/2006_01_17_naiades_communication_en.pdf

⁹ www.interim-online.eu

¹⁰ www.eco4log.de

¹¹ www.eirac.net

¹² http://ec.europa.eu/transport/logistics/freight_logistics_action_plan/action_plan_en.htm

oriented rail networks, new port policies, motorways of the sea and a European maritime space without borders.

34. The topics put forward in this action plan were based on extensive consultations with stakeholders and cover four broad themes: Innovation, quality, simplification and green transport. Within this framework, the European Commission is developing a road map for the implementation of e-freight that denotes the vision of a paper-free, electronic flow of information accompanying the physical movement of goods. In addition, the freight transport logistics bottleneck exercise is continued with a view to finding practical solutions, including regulatory measures.

Comment: In the field of inland navigation and its traffic and transport information management system 'River Information Services' (RIS), Electronic Reporting in inland navigation is the answer for transforming paper-based information and communication processes into electronic ones. As a final goal, electronic reporting and electronic messaging in general should lead to a paperless environment in inland shipping with the assurance that all necessary information will be available at the right time, in the right place with the appropriate parties, to ensure a fast despatch and simple transparent procedures with appropriate controls and simplified inland water transport processes. An independent international expert group, the Electronic Reporting International (ERI) expert group, consisting of representatives on country level and preparing standards and guidelines for the European Commission, the Central Commission for Navigation on the Rhine (CCNR) and the UNECE, is working on further standardisation and harmonisation activities with regard to Electronic Reporting for inland navigation and transportation.

35. Other issues addressed in the action plan include performance indicators for freight transport logistics and benchmarking of intermodal terminals. Studies on the harmonization of transport documents and their automation as well as on standards for vehicle weights and dimensions enshrined in Directive 96/53/EC are also planned and should be finalized in 2008. Finally, by the end of 2008 a number of "green corridors" are planned to be identified on which short sea shipping, rail, inland waterways and road transport complement each other to enable environmentally friendly transport solutions.¹³

VI. GOVERNMENT ACTIONS AT INTERNATIONAL LEVEL: ACTIVITIES OF THE UNECE WORKING PARTY

36. The responsibilities and measures to be taken by Governments to influence the design and management of freight transport cover a wide field and go very much beyond those usually addressed at the international level by the UNECE Working Party on Intermodal Transport and Logistics. While many of the Governmental responsibilities and measures in this field are not necessarily apt for inter-governmental norms, standards or regulatory measures, an exchange of experiences and best practices among countries at global United Nations or regional UNECE level (covering 56 countries in the pan-European region as well as North-America) may be useful and provide guidance of action at the national level.

¹³ For more information: <http://ec.europa.eu/transport/logistics/freight_logistics_action_plan/action_plan_en.htm>.

37. Also, the above considerations have shown that logistical processes and the design and management of freight transport have an important international dimension that may need to be addressed by consistent and internationally harmonized Government policies. The present programme of work of the Working Party contains already a number of inter-governmental activities that relate directly or indirectly to the design and management of freight transport and its interrelation with intermodal transport. These activities may need to be reviewed and refined in line with the propositions below and might need to be carried out in consultation or cooperation with other UNECE bodies and other competent intergovernmental and non-governmental organizations.

38. The activities briefly described below would fall within the mandate and area of competence of the UNECE Working Party on Intermodal Transport and Logistics (WP.24) and could provide a value-added at the inter-governmental and pan-European level. For some of these activities, such as on civil liability regimes, specific expert groups may need to be established to address very specific and complex technical and legal issues.

A. International policy and regulatory measures

39. In the field of international transport policy and regulatory measures, the following activities relating to the design and management of freight transport within supply chains could be pursued or newly taken up by the Working Party.

1. Monitoring and analysis of national measures to promote intermodal transport

40. The Working Party has already started last year the monitoring and the analysis of national measures to promote intermodal transport as a consolidated follow-up to earlier activities of the ECMT. A survey is currently undertaken by the UNECE secretariat requesting information in twelve policy areas¹⁴ (ECE/TRANS/WP.24/2007/5). Following a first analysis of the results of this survey at the present session (ECE/TRANS/WP.24/2008/5 and addenda), the Working Party may wish to review, insert additional or modify existing parts of the questionnaire on national experiences or plans to influence the design and management of freight transport. These could refer to national action plans, institutional mechanisms for stakeholder consultations and/or regulatory, financial, fiscal or administrative policy measures.

41. On this basis, the Working Party may wish to exchange experiences and best practices to assist Governments in the design, implementation and monitoring of appropriate policy measures. As a concrete output of such considerations, the Working Party could prepare a check list or tool box on possible national and international policy measures and mechanisms to address, from a government point of view, the challenges of logistics and intermodal transport. Such a check list or tool box could also identify possible advantages and disadvantages of such policy measures and mechanisms. One particular aspect to be analyzed, as a follow-up to document ECE/TRANS/WP.24/2008/1, could be governmental policies and organizational measures (such as one-stop shops) to guide the planning, location and organization of intermodal terminals, logistics centers and freight villages in a pan-European perspective.

¹⁴ (1) Importance of intermodal transport in transport policy; (2) National and international bodies; (3) Costs and prices; (4) Networks; (5) Terminals and logistics centres; (6) Interoperability; (7) Financial and fiscal support measures; (8) Regulatory support measures; (9) Operations; (10) Market monitoring; (11) Foster innovations covering all components of the transport chain; (12) Operators in intermodal transport chains.

2. Logistics “Model” Action Plans and Partnership Agreements

42. In 2005, the Working Party had prepared so-called “Model” Action Plans and Partnership Agreements that also include performance parameters and benchmarks for the development of intermodal transport (TRANS/WP.24/2005/3). These models had been approved by the ECMT Ministers of Transport and the UNECE Inland Transport Committee.

43. These public-private cooperation arrangements may need to be reviewed and amended with logistical requirements, revised benchmarks and responsibility parameters, including also supportive governmental policy measures and compliance standards. At a later stage, and as already considered earlier by the Working Party (TRANS/WP.24/2004/5; TRANS/WP.24/105, paras. 17-19) such provisions could be enshrined into a resolution or a legal document, such as the AGTC Agreement.

3. Civil liability regime for pan-European intermodal transport

44. Following completion of work by UNCITRAL on the preparation of a draft Convention on Contracts for the International Carriage of Goods Wholly or Partly by Sea covering civil liability in maritime and associated land transport (hinterland) operations, the Working Party may wish to analyze these provisions in the light of the requirement of new logistical requirements allowing for seamless and competitive European intermodal transport services.

45. Should this analysis reveal that the UNCITRAL convention does not address adequately the specific needs and requirements of pan-European land transport operations and/or would not be likely to come into force in due course, the Working Party may wish to continue its work in this field, taking account of the results of the Freight Logistics Action Plan of the European Commission (work programme element 02.9 (g)).

4. Logistics indicators and statistics on intermodal transport

46. The Working Party may wish to contribute to the development of concepts and indicators to measure logistical developments and to establish benchmarks for the design and management of freight transport within logistical supply chains, including intermodal transport services, networks and terminals. This could include the establishment of reliable statistics on intermodal transport operations covering the transport of containers, swap-bodies, semi-trailers and of complete road vehicles by rail and inland water ways in UNECE member countries. Such work would be complementary to the Logistics Performance Index (LPI) established in 2007 by the World Bank that evaluates the perception of freight forwarders and transport operators. It would try to establish tools to allow countries to evaluate, with econometric models and statistical data, the competitiveness of their economy and the transport sector with regard to its logistical performance.

Comment: Besides, benchmarking activities can be also foreseen to be carried out on regional, country and transnational levels resulting in know-how exchange and transfer processes; this especially for intermodal transport thematic topics between EU Member States, EU Candidate Countries and Third Countries.

47. The specific concept and modalities of work for the preparation of such logistics indicators and statistics would need to be developed in cooperation with other UNECE organs

and competent international organizations, so as to clarify the possible contributions of the Working Party.

B. International transport infrastructure and performance measures

48. Apart from reducing transport demand, Governments can influence the use of transport infrastructure by transport supply side measures, such as building more, larger and better transport infrastructure, by improving its maintenance, by allowing and/or promoting more efficient transport means and by enhancing infrastructure utilization through intelligent transport systems (telematics, organizational measures, such as peak load pricing, cargo consolidation, etc.) - ideally by a combination of these measures.

Comment: See also 'Traffic Avoidance Actions' ideas and projects co-financed under the MARCO POLO-II programme.

Comment: Example of the inland navigation sector in Austria: via donau – Österreichische Wasserstraßen-Gesellschaft mbH was founded on 1 January 2005 by the Austrian Federal Ministry of Transport, Innovation and Technology for the preservation and development of the Danube waterway. via donau is a modern and efficiently run company that operates waterways and executes sovereign functions on behalf of the federal authorities with regard to waterways and waterway transport. In addition to the tasks of federal waterway administration and transport development, via donau carries out pioneering work by planning and managing the Integrated River Engineering Project to the east of Vienna as well as operating a navigation information system called Danube River Information Services (DoRIS). via donau considers itself not only an infrastructure operator but also a competent business partner and service provider that ensures the availability of the Danube as a high-capacity transport route. In co-operation with both national and international partners, via donau implements innovative projects designed to intensify waterway transport.

49. The UNECE has prepared and is administering through its Working Parties on Road, Rail, Inland Water and Intermodal Transport the AGR, AGC, AGN and AGTC Agreements that provide the basic grid of networks and minimum infrastructure standards (in the case of the AGTC also operational standards) for the development of a comprehensive, coherent and efficient pan-European land transport network.

50. In the fields of international transport infrastructure and performance measures, the following activities relating to the design and management of freight transport could be pursued or newly taken up by the Working Party.

1. Review of existing AGTC infrastructure and performance standards

51. The infrastructure and performance standards in the AGTC Agreement, including those contained in its Protocol on inland water transport, could be reviewed with a view to raising interoperability standards and establish benchmarks for an efficient design and management of freight transport and international intermodal transport services . With a view to increasing capacity without major investments in transport infrastructure, this could be achieved with technical measures, such as an increase in the authorized mass per axle of freight trains to 25 tonnes (on specific lines) and authorized train lengths beyond 700 m.

52. In 2005, a survey on these issues had already been undertaken by the Working Party in 15 countries (TRANS/WP.24/2005/5; TRANS/WP.24/107, paras. 13-14). Its results could form the basis for such a review, to be undertaken in close cooperation with the UNECE Working Parties on Rail and Inland Water Transport, responsible for the AGC and AGN Agreements.

2. Optimization of transshipment and logistical procedures

53. Similarly and with a view to optimizing transshipment and logistical procedures, the existing AGTC minimum standards for terminals could be reviewed and amended. Provisions could be considered that address criteria and procedures for optimum location, construction and operation of terminals, freight villages and distribution centers (work programme element 02.9 (e)).

54. Furthermore, additional operational standards and benchmarks could be included into the AGTC and possibly into the AGC, such as those already contained in the “model” action plans and partnership agreements (see above) pertaining to intermodal rail and inland water transport services, border-crossing and gauge interchange stations as well as ferry links and ports.

Comment: Inland terminals (e.g. inland ports, inland rail terminals, freight villages, logistics centers) face plenty of up-coming changes, like globalisation, EU-enlargement, rising energy costs, new traffic corridors/ routes. As a consequence, inland terminals need to establish co-operation and partnership models with sea ports, enabling both parties to manage efficient sea-hinterland operations based on regular transport-logistics services. Besides, inland ports will have to offer new and innovative services to their customers, meaning Value Added Services (VAS), which will meet future perspectives and demands (e.g. automotive, container, energy transport services). Inland terminals should be supported on realising up-coming challenges by adequate instruments, ranging from benchmarking activities towards development of innovative strategic business services.

3. Improvements in port hinterland transport

55. Specific logistical requirements could be included into the AGTC and possibly the AGR and AGC Agreements (or into an UNECE recommendation) with a view to addressing the capacity challenges of European sea ports. With a view to increasing in capacity and efficiency of port hinterland transport services, particularly for the transport of containers by rail and inland waterways, specific minimum infrastructure and performance standards could be developed that would enhance cooperation and linkages between sea ports and inland transport terminals and freight villages.

Comment: As Austria is a land-locked country, sea-hinterland traffic (information) systems and transport-logistics operations constitute a crucial criterion for the economic and social viability of this dedicated region. Hereby, both efficient and sustainable (rail, inland waterway transport [IWT]) traffic (information) systems and transport-logistics services (e.g. rail shuttle trains, IWT container liner services) are essential. Specifically for Austria, strategic sea-hinterland corridors need to be identified and developed, like a) North sea ports, b) Adriatic sea ports and c) Black sea ports.

Comment: The Main-Danube Canal connected the Rhine with the Danube in 1992, creating a 3,500 km-long, continuous waterway between the North sea and the Black sea and bringing

increased transport volume to Western Europe. With nearly 90 million inhabitants, the Danube region is of particular economic interest due to its sheer size alone. The Danube waterway must play its due part in taking on some of the burden of cargo transport in this particular region. The Danube region covers an enormous European market region, which is also open for additional traffic and transport-logistics linkages, like TRACECA.

C. Exchange of information and best practices on research, education and awareness

56. While several elements of its programme of work address already the monitoring by the Working Party of intermodal and logistical developments as well as the exchange of information and best practices among UNECE member States, shippers, freight forwarders and intermodal transport operators, such activities have not yet covered the fields of research, education and awareness relating to the design and management of freight and intermodal transport. As these issues are important for the strategic development in these fields and the acceptance of respective policy measures by industries and the general public, the Working Party may also wish to extend its activities in this field and in particular on the following subjects.

1. Concepts, design, weights and dimensions of intermodal loading (transport) units

57. The Working Party may wish to continue and expand its monitoring activities and its exchange of information and best practices on new concepts, design, weights and dimensions of intermodal loading (transport) units allowing seamless intermodal transport operations and transshipment procedures in the pan-European region.

2. Conceptual design and mechanisms for national logistics action or master plans

58. The Working Party could also exchange information on best practices in the preparation and implementation of national logistics action or master plans, focusing on freight transport logistics and the requirements for intermodal transport. This could be commenced with a simple survey among UNECE Governments to inquire about current and planned activities in this field.

3. Intelligent transport systems

59. The development and use of intelligent transport systems and procedures for an optimum and safe use of vehicles and transport infrastructures will become of increasing importance. The Working Party may wish to monitor these developments with a view to identifying challenges and solutions for intermodal transport and exchange information and best practices. If necessary, the Working Party could develop a compendium of such services and its providers together with a check list on the “pros” and “cons” of such measures, their use and regulatory control.

Comment: With reference to the last FP7-call-topic 2008 ‘co-modal IT-infrastructure’, innovative ICT-based systems and technologies need to be designed and developed providing open and standardised interfaces for all existing and future traffic information systems (see below). Only a consolidation of these individual traffic information systems, related to specific modes of transport, will result in intermodal ITS concepts and services. Future activities will have to focus both on legal and technological frameworks, influenced by the industrial and the administrative sectors.

- Road: GPS/GSM/etc.

- *Rail: European Railway Traffic Management System (ERMTS)*
- *Inland Waterway Transport: River Information Services (RIS)*
- *Maritime Transport: Vessel Traffic Management Information System (VTMIS)*

VII. GUIDANCE BY THE WORKING PARTY

60. The Working Party may wish to review the identified responsibilities and instruments at the disposal of Governments to influence developments in the design and management of freight and intermodal transport as described in this document, particularly in chapters IV and V, and provide comments. Delegations may wish to report on national and regional measures already implemented or envisaged and should evaluate and add to the opinions voiced in the above chapters.

61. In particular, the Working Party is invited to consider possible activities influencing the design and management of freight transport at the international level that could be pursued or taken up by the Working Party. The proposals made in chapter VI of this document should be reviewed and evaluated with respect to their value-added. Other proposals or fields of actions may also be proposed.

62. In summary, the propositions made in this document address the following areas of work.

63. In the field of international transport policy and regulatory measures:

- (1) Monitoring and analysis of national measures to influence the design and management of freight transport with a view to enhancing the use of intermodal transport and preparation of a tool-box of policy measures and mechanisms that, depending on national circumstances, could be utilized to this end. Relevant ECMT resolutions on combined transport should be taken into account.
- (2) Review and possible amendment of the 2005 “Model” Action Plans and Partnership Agreements, including performance parameters for the development of intermodal transport, with logistical requirements, benchmarks and responsibility parameters.
- (3) Analysis of the draft UNCITRAL convention and review of UNECE work on civil liability regimes and provisions for intermodal land transport in a pan-European context.
- (4) Contribution to the development of concepts and indicators to measure logistical developments and to establish benchmarks for the design and management of freight transport, including intermodal transport services, networks and terminals.

Comment: Also WG 32 of PIANC (*International Navigation Association*) is currently investigating in the topic “*Performance Indicators for Inland Waterway Navigation*”. Further information on PIANC: <http://www.pianc.at/> (Contact: PIANC Section Austria/ Österreich)

64. In the field of international transport infrastructure and performance measures:
- (1) Review of the existing infrastructure and performance standards in the AGTC Agreement, including its Protocol on inland water transport with a view to raising interoperability standards and establish benchmarks for an efficient design and management of freight transport and international intermodal transport services. The difficulties and costs in modifying such standards should be taken into account.
 - (2) Review of AGTC minimum standards for terminals with a view to optimizing transshipment and logistical procedures and inclusion of mechanisms for the optimum location, construction and operation of terminals, freight villages and distribution centers, border-crossing and gauge interchange stations as well as ferry links/ ports.
 - (3) Inclusion of logistical requirements into the AGTC (also possibly AGR and AGC) to increase capacity and efficiency of port hinterland transport services.
65. In the fields of exchange of information on research, education and awareness:
- (1) Exchange of best practices on new concepts, design, weights and dimensions of intermodal loading (transport) units taking account of existing weight and dimensional limits enshrined in national, international and sub-regional (European Union) regulations.
 - (2) Exchange of best practices in the preparation and implementation of national logistics action or master plans.

***Comment:** In January 2006 the European Commission introduced the NAIADES Action Programme to strengthen inland navigation throughout Europe. The National Action Plan Danube Navigation (NAP) was therefore designed to realise the European targets on a national level and thus to set the course for Austria's navigation policy up to 2015.*

With special regard to intermodal transport several EU-projects did focus in the past on the design and elaboration of multi- and intermodal Action Plans on a transnational (cross-border) dimension, like done by: INTERIM ("Intermodal action plan and integration in regional development plans") or ECO4LOG ("Recommendation and Action Plan").

In contrast to intermodal Action Plans, intermodal transport research (e.g. research and implantation agendas) is worked out by European Intermodal Research Advisory Council (EIRAC) and related European Technology Platforms (ETP), like WATERBORNE-TP (waterborne; meaning maritime & inland navigation), ERRAC (rail) or ERTRAC (road).

- (3) Monitor the development of intelligent transport system and preparation of a compendium and check list of such services.
