EUROPEAN FREIGHT TRANSPORT

Modern logistics solutions for competitiveness and sustainability

Free movement of goods is one of the fundamental freedoms of the EU, and the European Commission is working to make it a sustainable reality.

Europe's transport policy continues to suffer from an imbalance in the utilisation of the different modes of transport. The costs that companies face in making sure that their goods are delivered at the right time and place are growing: they result from infrastructure congestion, high fuel prices and tolls, not to mention the costs of CO_2 emissions to society. All of these costs are increasing for road transport in particular.

The lack of adaptation of some modes, the fact that external costs are not included in the price of road transport, and the lack of enforcement of social and safety rules are well known reasons for the imbalance between modes. Another factor is the lack of awareness of the potential of sustainable logistics and intermodal solutions.

For some journeys, road transport can be most efficient, but for others, combined options whether with rail, short-sea shipping or inland waterways, are better. Choosing the best option for any given journey will make transport operations more efficient, cost-effective, sustainable, and help our economies to become more competitive in a win-win environment.

This brochure aims to show the range of activities under way, and to raise interest in intermodal transport solutions and related logistics.

Intermodal transport logistics

- **Quality intermodal logistics,** making use of improved quality standards, training, promotion, intermodal statistics, and multimodal liability, will make freight transport more efficient;
- **Short-sea shipping and inland waterway transport** make better use of two key transport resources – our rivers and the seas around Europe;
- **Rail transport** needs to be better organised to favour cross-border freight transport;
- **Technical standardisation** can make intermodal transport more efficient and cost-effective.

Supporting measures

- **Marco Polo:** The Marco Polo programme supports new intermodal services.
- **Motorways of the sea:** The Commission supports the development of new corridors for intermodal freight transport with sea transport at its core.
- **Targeted research:** EU support is targeted towards policy needs for new tools and cooperations to develop efficient intermodal transport and related logistics.

Directorate-General for Energy and Transport

EUROPEAN COMMISSION

FREIGHT TRANSPORT CAN BE IMPROVED IN EUROPE THROUGH QUALITY INTERMODAL LOGISTICS

For most cargo owners, speed, cost and on-time delivery are the main concerns. However, as to *how* their freight is physically transported, they are generally open to innovation. Naturally, if they are satisfied with the transport services provided, most cargo owners have little desire to change. With regard to transport operators, past investments in equipment, training and building relationships with service providers, all result in a natural reluctance to alter their business model in a particularly competitive environment.

For many reasons, freight transport is growing strongly in Europe and worldwide. Road transport takes an ever-increasing share of the volume of freight transported. This leads to congestion, reduced reliability, environmental damage, and rising costs.

Freight transport should be considered as a key component of an *integrated logistics system* in which the choices made will influence the efficiency and operating costs of a fully integrated, sustainable business.

Intermodal transport gives the cargo owner greater choice

Whether use is made of in-house transport services or external service providers, decisions relating to transport modes ought to be placed at the heart of the business. These decisions are central to the logistics strategy of any company and will increasingly become the focus of the overall business plan. Businesses across Europe are beginning to realise that the decisions they take in terms of logistics and transport have a direct impact on their overall image and efficiency and are crucial for their long-term competitiveness, and therefore for their clients at home and abroad.

The Commission is promoting a modern approach and suggests a gradual evolution towards a future intermodal European transport design, mainly through voluntary schemes which will promote quality in intermodal transport logistics. Quality will be ensured by focusing on competence, training, sustainability, reliability, efficiency and cost effectiveness.

We have to get transport operators to open their minds to intermodal transport, rather than thinking in one dimension. We certainly need new infrastructure in order to build up a truly European transport network. But we must make much better use of existing infrastructure, rather than simply investing in new infrastructure in the sense of superstructure. For example, European railways are – as a whole – only operating at 60-70 % of capacity. Change could be achieved by intelligent signalling systems, and making better use of the possibilities of cooperation along corridors.

The natural evolution will be towards more intermodal transport, through stimulation by public authorities and the EU, as well as through alliances and mergers between companies, which themselves find the best ways to combine modes.

Klaus Ebeling

Secretary-General, European Intermodal Association

INTERMODAL TRANSPORT LOGISTICS

Quality standards

Quality in transport logistics and intermodality is crucial for Europe. This quality needs to be recognised and therefore quantifiable and comparable at business level through standards that will lead firms, of all sizes, to strive for excellence. Such a quality system can become a vital marketing tool and enhance fair competition.

Training

Studies show that there are simply too few people working in Europe who possess the skills and knowledge needed to organise transport and related logistics over several modes. Therefore, the Commission wants to encourage improved education and training relevant to this sector. This issue could be addressed by allocating training on transport logistics and intermodality more prominence in higher education and providing a basis for European training. As a matter of course, it ought to be recognised as a key element in the award of any quality label.

Promotion

Promoting short-sea shipping aims at a modal shift from road to sea in order to reverse unsustainable trends in transport. Twenty Shortsea Promotion Centres currently operate in Europe. Led by business interests, they work for the benefit of short-sea shipping in line with EU policy. The Centres aim to convince cargo owners, forwarders and other industries of the advantages of short-sea shipping. They distribute information, give advice and directly approach different players in the supply chain. The Commission strongly supports the work of these Centres and their European Shortsea Network and expects this support to be at least matched at national level by the Member States and industries.

http://www.shortsea.info/

Major tasks lie ahead such as raising public awareness of the potential of intermodal transport in a broader sense, and bringing the relevant players together to create conditions more favourable to intermodal transport. Based on the successful experience with Shortsea Promotion Centres, the Commission is investigating the potential to widen this scope to support the promotion and development of intermodal land transport in a similar way.

Intermodal statistics

There is a clear lack of intermodal statistics in Europe. The Commission is working together with the industry to establish a system for the collection of intermodal statistics. The European Intermodal Observatory started in 2005 to monitor the market and will be further developed in the future.

Short-sea shipping

Short-sea shipping is the only intermodal mode that has kept pace with the fast growth of road transport; both modes had 25 % growth in terms of tonne-kilometres carried between 1995 and 2002. Short-sea shipping carries 41 % of all tonne-kilometres in Europe while road transport carries 45 %.

One problem for short-sea shipping is that transport users still do not perceive this mode as being fully integrated into the intermodal supply chain. This problem could be overcome by managing and commercialising logistics chains involving door-to-door short-sea shipping as an integrated service. Customers need a single contact point with responsibility for the whole intermodal chain. This requires efforts from all parties but will also bring benefits to them all.

The Commission is working towards simplifying the administrative complexity of short-sea shipping. A directive on reporting formalities for ships entering or leaving ports is already in place. Furthermore, the ongoing development towards 'single windows' in port offices will further ease industry's dealings with administration. The efficiency in ports as nodal points between land and sea is also integral to the success of short-sea shipping.

http://europa.eu.int/comm/transport/maritime/sss/index_en.htm

Multimodal liability

Traditionally, regulation of freight transport activities has been mode-specific. Therefore intermodal operations not only need to meet various national requirements, but must also address different international regulations for each mode. Likewise, the documentation required varies – often only slightly – between modes, adding to the administrative burden. The Commission wants to facilitate the use of intermodal solutions.

Inland waterway transport

The new Directive on River Information Services, which ensures the development and interoperability of such services, will improve the efficiency, reliability and safety of inland waterway transport (IWT) and so support its integration into modern logistics chains.

Inland waterway transport is an obvious choice to shift transport to less energy-intensive, cleaner and safer transport modes and is a key part of the European Commission's efforts to alleviate Europe's congested road networks. The 2006 NAIADES Action Programme sets out how the Commission will tackle the obstacles that prevent IWT reaching its full potential. The programme focuses on the five strategic, inter-dependent areas, necessary for a comprehensive policy: market, fleet, jobs and skills, image and infrastructure.

Rail transport

Although rail market integration is now well under way, additional efforts are needed since rail systems are still very much organised along national lines. EU legislation will lead to the complete opening of the rail freight market to competition by 1 January 2007, allowing the creation of a truly integrated European railway area. First results show that those Member States which have already opened their markets have seen rail transport increase significantly: the sector has become more competitive and railway undertakings have been encouraged to better adapt to the demands of industry and the forwarders.

New railway undertakings have emerged to start transport services in new markets, in particular container transport, thus contributing to a modal shift towards rail transport. Interoperability remains a key issue for the further integration of rail markets as too much time and resources continue to be spent on overcoming the lack of technical and operational standardisation in the railway sector. Recent proposals from the Commission should ultimately lead to a fully functioning internal market for safe, efficient and sustainable transport by rail, and therefore trigger real and significant growth in rail and combined transport.

Technical standards

Common technical standards widely accepted by manufacturers and operators are the key to making intermodal transport more efficient, and a more attractive option for operators and users alike.

The European Commission aims to encourage the development of appropriate new standards, although in most cases it is appropriate that industry takes the lead. One example is the Commission's 2003 proposal to industry to develop common standards for a European Intermodal Loading Unit (EILU), which would be usable on all modes of transport and optimise the average loading capacity between those modes.

This proposal, which could help save an estimated 2 % of aggregate average logistics costs, has yet to be examined by the Council and the Parliament.

The EILU – which would be a voluntary standard – would maximise the space for the transport of European standard pallets, match the capacity of swap bodies and meet the requirements of rail, road, sea and inland waterway transport; it would therefore facilitate modal transfer and generate commercial benefits.

http://europa.eu.int/comm/transport/intermodality/legislation/standardisation_en.htm

A further area where standardisation needs to be examined carefully is information technology (IT). IT solutions are crucial for logistics and intermodality and can ensure extensive advantages for businesses.

SUPPORTING MEASURES

Marco Polo

Establishing alternatives to road transport requires investments to get new services up and running or to improve existing services. Often the fundamental barrier to setting up such new rail, inland waterway or short-sea shipping services is the fact that potential customers want to witness the services in action, and running regularly, before committing to use them.

The EU's Marco Polo programme is investing €25 million per year from 2003-06 in support of the start-up of new services, and with the objective of overcoming structural barriers to intermodal services. EU funding is being used to subsidise the initial operations while there is an insufficient number of customers to support them, but the services are intended to be commercially viable once the subsidy period ends. Marco Polo also supports catalyst actions and 'common learning' actions, to overcome structural market barriers and share know-how amongst operators, users, freight forwarders, customers, etc.

The programme thus aims to shift the total expected volume increase in freight transport – around 12 billion tonne-kilometres per year – onto short-sea shipping, rail and inland waterway transport. The achievements of Marco Polo demonstrate that this is a realistic target. The programme will be continued in a new phase from 2007-13, for which the Commission has proposed a substantially increased budget of €100 million per year.

http://europa.eu.int/comm/transport/marcopolo/index_en.htm

NEW ROUTES TO PORT

Antwerp, one of the world's busiest ports, is keen to promote inland waterway and rail transfers with its hinterland in order to reduce road transport, which accounts for two-fifths of this traffic. The Antwerp Intermodal Network (AIN), supported by Marco Polo, is developing new services for container traffic to and from inland ports on three corridors – north, east and south of the port – and on the rail corridor to Cologne. "These are short distances, generally less than 100 km, so there is fierce competition from road transport," says Koen Cuypers, AIN project manager at the Port Authority. "It takes time to convince cargo owners to change their habits, and they need to see reliable and regular services before doing so, making it difficult to fund the start-up phase. And often when senior management favours changing mode, it takes a while for those lower down to make those changes."

BYPASSING THE ALPS

Trans-alpine traffic is a key target for modal shift, in order to reduce the number of lorries using the limited number of crossings in this sensitive environment. With Marco Polo support the project named 'Developing the Tauern corridor for unaccompanied intermodal rail-road services enforced by independent railway undertakings' (DUE), aims to build up a daily block train service using the Tauern corridor to the east of the Alps (from Munich, via Salzburg and Villach, to Cervignano, close to the port of Trieste). Critical to service reliability is the use of multi-voltage locomotives able to operate on all the networks concerned. "Our goal is 90 % punctuality, and that depends on the quality of the locomotive. Our test runs showed that some modifications were required to ensure this, but now we are running services four days a week," says Armin Riedl of Lokomotion Rail, the company leading the project. "There are high volumes on this route, which also connects to Slovenia and Turkey, but it is difficult to persuade operators to change from trucks, and it takes time to build up the service, which will run at a loss at first."

Motorways of the sea

Encouraging increased use of intermodal freight transport in Europe makes better use of our resources. In transport terms, the seas around our coasts are vastly under-used and there is significant potential on a number of corridors to transfer freight from land-based to sea transport.

With the concept of 'motorways of the sea', the aim is to move to a new dimension for short-sea shipping. This step forward is comparable to the evolution experienced with the introduction of high-speed railways for passenger transport, and heralds a completely different scale of operation with different markets and needs. The Commission and the Member States are working towards the creation of transport services that do not currently exist, requiring new infrastructure investments to be considered over long-term periods of 15 to 20 years. The concept will concentrate traffic on selected intermodal transport corridors, and foster the partnership and cooperation needed to make short-sea-based intermodal chains even more attractive. It is expected to trigger significant improvements for regional development and employment, through reduced congestion and expanded local transport and logistics activities.

The backbone of motorways of the sea would be reliable, regular and frequent short-sea services between selected ports with efficient and non-congested intermodal transport connections, including rail and inland waterway transport.

Frequent, good quality services can provide an attractive alternative to road transport in terms of both cost and duration of transport. However, to be truly competitive, they must be easy to use. Information services allowing users to book, track and manage transport across the different modes are therefore an integral part of the concept.

The success of the motorways of the sea initiative depends on coordination and cooperation between the different actors involved, i.e. ports, shipping operators, land transport operators, logistics companies and public authorities. Widespread commitment from users is needed for enabling new routes to attract sufficient traffic, making them economically viable and attractive to customers in the long term.

Over longer distances, short-sea shipping generally provides a cheaper, cleaner and more reliable service than road transport. The perception of shipping is changing and at the same time shipping companies are becoming much more open to working with partners to overcome problems and make intermodal transport chains more efficient.

We need a mixture of policy initiatives to create a more level playing field between the modes, and promotion and education initiatives to demonstrate to cargo owners that intermodal transport works. Fundamentally it is in the interests of road transporters to remove bulk goods and containers which are not time-sensitive from the roads, and short-sea shipping can often provide an effective alternative.

Mike Elsom

European Shortsea Network

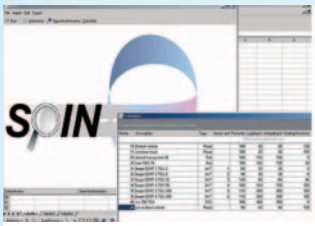
As part of the trans-European transport network (TEN-T), the Commission can provide funding for these motorways of the sea. Four corridors have been selected in which EU support will be available, as illustrated on the map (below). These are the Baltic Sea, north-west Europe (the Atlantic arc, Irish Sea and North Sea), western Mediterranean and eastern Mediterranean. The Commission aims to have a network of motorways of the sea operating by 2010.

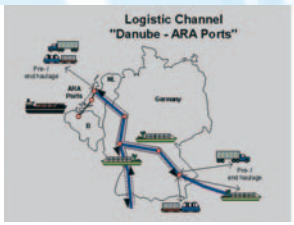
http://europa.eu.int/comm/transport/intermodality/motorways_sea/index_en.htm

Targeted Research

To help overcome reluctance to invest in new, more flexible transport technologies, the EU – as part of its R&D framework programmes, which cover a wide range of scientific fields – has supported many projects seeking to give operators the tools they need to run intermodal services effectively. The Commission allocates millions of euro each year to support research teams across Europe and develop effective and efficient technologies for intermodal transport services. By bringing together researchers from different Member States, this support also encourages the development of technologies with wide application. EU research funding is targeted closely towards policy aims.

http://europa.eu.int/comm/transport/intermodality/research/future_en.htm





FINDING A BETTER WAY

The 'Scanning the potential of intermodal transport' (SPIN) project has created a series of tools to help cargo owners plan routes across alternative modes of transport, showing them which modes are most effective for a given journey. The 'quick scan' system, accessible on the project website, gives an immediate idea of the most appropriate mode for a given corridor. "The 'advanced scan', using our software system together with the timetable information from intermodal operators, gives the user a time and cost comparison for all available modes on a given door-to-door route," says Marcel Huschebeck of project partner PTV. "SPIN also developed a 'macro scan' for regional authorities to identify the corridors on which to focus policy to foster intermodal transport."

http://www.spin-eu.com/

REFLOATING DANUBE TRANSPORT

Freight transport on the Danube waterway has been declining during the past decade, due to challenging navigation conditions, economic change since the fall of the Iron Curtain, and also blockages caused by the bombing of bridges in Novi Sad (Serbia) in 1999.

The 'Advanced logistic solutions for the Danube waterway' (ALSO Danube) project has used information technology tools to help to reverse this trend and integrate inland navigation into intermodal transport chains. "These tools bring together traffic management and transport management in inland navigation, and provide comprehensive, timely and accurate information for the whole logistics chain," says Mario Sattler, project manager at Via Donau, the project coordinator. "Operators can plan loading and transport schedules, know the position of cargoes at all times, and change plans en route."

ALSO Danube also contributed significantly to the development of harmonised river information services (RIS) in Europe, with a special focus on the transport management related components of RIS.

http://www.alsodanube.at/index.html

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MOVING FORWARD

The single market for goods in the EU means more and more freight journeys are made between and across Member States. Action at EU level is required and is particularly important since it is on longer journeys that intermodal transport is most efficient, in comparison with road freight. With this in mind, the European Commission has taken a number of initiatives and plans several more – as outlined in this brochure – to encourage and promote the development of intermodal services and the related transport logistics.

Combating Europe's worsening road congestion – and the increased costs and environmental damage it causes – requires new attitudes and recourse to resolutely modern logistics and transport systems. A systematic transport analysis will demonstrate that in a lot of cases intermodal transport options provide reliable, cheaper and more efficient means to transport freight in Europe. In addition, intermodal solutions are more sustainable.

To attract greater traffic volumes to intermodal systems however, requires a change in our way of thinking as well as a change in practice. Above all, cooperation amongst all parties involved is vital. All the players involved in promoting the shift to intermodal transport stand to gain considerable image benefits, as improved sustainability and competitiveness will be particularly valuable to suppliers, customers and the general public.

The European Commission's Directorate-General for Energy and Transport develops and implements policy in these closely linked areas. The 2001 White Paper, **European transport policy for 2010: Time to decide,** sets out 60 practical measures designed to bring about significant improvements in the quality and efficiency of transport in Europe by 2010, and to achieve a rebalancing between the modes of transport. Intermodal transport means making the best choice of mode for a given journey, favouring those which are most cost-effective, environmentally friendly, and reliable – in terms of journey time. Effective management of logistics for any company includes developing a strategy for modal choice, rather than simply leaving this to transport operators.

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