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MITIGATING CONGESTION IN TRANSPORT

**A position document produced by
EUROPEAN SHIPPERS' COUNCIL (ESC)**

The ESC represents the interests of some 100,000 companies involved in international trade, within, to and from the EU. As the main organisation in Europe representing shippers' interests in the area of freight transport, covering all modes of transport, the European Shippers' Council (ESC) very much welcomes the EU-wide debate on 'Mitigating congestion in transport'.

Working with industry to move forward on a common agenda

The debate should be seen alongside other debates and consultation initiatives being steered by the European Commission, such as that concerning the role of logistics in the EU and the development of a freight transport strategy and action plan, and the development of an action plan on the 'Progressive implementation of a rail freight orientated network'. ESC recognizes these to be good initiatives in order for policy makers, opinion formers and decision makers to learn more about European logistics practices in order to better integrate this wider perspective into transport policy and to work closely with industry to move forward on a common agenda.

In moving forward the ESC would urge that the focus of attention shift away from a modal view of congestion, and onto one that considers congestion more from the impact it has on the movement of the freight and the impact on business and its supply chains. This may seem somewhat idiosyncratic, but by focussing on the freight, one is more likely to make decisions that are free from any modal bias, which we will see can in certain cases itself contribute towards congestion, but that are nevertheless in the best interests of European industry.

A congestion overview

Congestion is clearly one of the key issues facing Europe and many other economies today.

Congestion causes delay, increases operating costs, leads to sub-optimal transport operations which require more freight in the supply chain in order to provide a buffer against supply delays, and consequently requires more freight transport, and so actually adds to congestion.

The freight logistics and supply chains served become inefficient which adds costs to the products and materials supplied to our industries and to consumers, and to customers around the world. This makes European business less competitive, allowing other companies to supply the markets, and reduce the number of jobs available in Europe.

There are many commentators, experts and opinion formers who will have a view as to where the congestion lies, what causes it, and how best to resolve it. The ESC is no exception: this paper

will highlight some of the areas of congestion we recognise and, based on some experience in tackling the various consequences of congestion and inefficiency, will cite causes and potential solutions. However, central to this response will be the need to quantify the problems. If there is no attempt to quantify the problems then there can be no meaningful programme or plan to resolve them.

ESC has long argued against knee-jerk reactions from politicians and civil servants that automatically focus on the most visible and often highest profile areas of concern in the minds of the media and general public, when, instead, a more effective response might be found in other areas that lie outside the public view and cognisance.

The ECMT consultation on the issue of mitigating congestion in transport rightly focuses on the following key questions:

- The location of today's congestion hot-spots
- The apparent causes of congestion
- A quantification of the scale of the impact of congestion

To this list the ESC would add two further key questions relating to the identification of:

- the impact of future trends in freight transport supply and demand, and
- potential solutions by industry and other stakeholders, and not simply by government.

This paper provides a brief summary of views and proposals in respect of each of these five areas (above).

The location of today's congestion hot-spots

The congestion hot-spots are well known to industry and governments: they centre around key transport corridors, large hubs (airports, ports, road and rail freight terminals and distribution centres), and around and within major urban conurbations.

Nevertheless, there are few hotspots that are congested all the time. They all have their periods of peak demand and slack periods. This implies there is spare capacity if usage can be spread into the periods of lower demand.

Efforts and progress can be made in this direction; ESC and its members have already been involved in many initiatives. Nevertheless, to expect industry to be able simply and easily to comply with such a wish is to ignore the realities of business, supply and demand, and the difficulties of change, all of which will be made clearer later in this paper.

The apparent causes of congestion

Conflicts between passengers and freight users

Much of the transport infrastructure is shared between passengers and freight. Invariably, passengers are given the priority access on account that they are vocal, can vote for those politicians that focus on their transport needs, and are often more profitable to carry. Nevertheless, it is unclear as to whether it is economically more prudent to accommodate passengers first and foremost, rather than freight users supplying factory production lines and filling the shop shelves.

Indeed the value-judgement may change given the time of day, day of the week, week of the month, month of the year. ESC's understanding of this issue suggests that few Member States have attempted to measure this, and where some attempts have been made (for example in the UK) the measurements used to identify the value to the country are different for passengers than those used for freight: the former is easier to quantify; the latter tends to focus mainly on the environmental and social costs and benefits rather than economic costs and benefits.

The result of this, is that freight may often be deliberately delayed in order that passenger services may run on time. Should a passenger service become delayed, invariably they are allowed to catch-up time by taking priority over freight services. A consequence of this can be 'bunching' of freight services, especially at junctions or nodal points (e.g. terminals).

Ignoring trends and forecasts

Trying to predict economic and social trends that impact freight distribution and logistics can be notoriously difficult. Understanding the trends and their likely impact on infrastructure and services is vital to preventing congestion. There are a number of examples around Europe where congestion has arisen arguably because either little attention or significance was given to forecasts and analyses of trends, or there was a lack of appropriate forecasts and analysis of trends in the public domain.

We have seen this in the case of growing containerised imports, especially from the Far East and China, channelling through the principal container ports of the US and Europe as a consequence of greater sourcing of materials and goods from these new economies. No one appeared to have noticed the trend and so a shortage of shipping and port capacity arose, and delays appeared – most visibly in and around the major ports of Europe and the USA, but also on the key road and rail links serving these ports.

At the regional level, manufacturing industry in Europe has migrated eastwards following the expansion of the EU. Yet, according to various commentators at the ESC's 2006 Shipper Forum, some of the transport infrastructure is not able to accommodate the growing demands being placed on it; a shortage of equipment and (in the case of road freight) drivers, has caused problems for these companies locating in the east of Europe. Again there appears to be a disconnect between business strategy and transport planning. The result is congestion that might otherwise have been avoidable.

Supply and demand trend analysis and forecasts are seen as increasingly important if congestion is to be avoided.

Difficulties in changing practice and behaviour

Changing the business model in order to utilise transport capacity available at times of lower demand can present a whole raft of other costs and issues:

- difficulties over the implementation of new shift patterns required,
- sometimes involving new contractual terms and conditions,
- higher wages for working at unsocial hours,
- increased absenteeism among employees,
- operating restrictions due to local night-time curfews on transport and business activity,
- increased costs to introduce and implement noise abatement schemes, and
- higher overheads such as lighting, heating, staff facilities and so forth.

Additionally, extra pressure would be placed on supporting services (such as customs and the administrative and management personnel of third party transport providers) to operate the same hours.

This assumes also there is a willingness to change, an understanding of the consequences and costs of existing practices and behaviour, the knowledge, experience and expertise necessary to know how best to change¹, and the cooperation of and coordination with others in the supply chain to implement necessary and appropriate change alongside.

In work carried out in 2005 by FTA and other key stakeholders in the UK maritime (container) supply chain following the peak-season port congestion crisis of 2004, a number of examples of where change could be made were highlighted; these in particular focussed on improvements to the input and flow of information about the consignments, the shipping instructions and arrival times, and also to improved lines of communication that ensured all those in the logistics and transport chain received the information they required in order to optimise their part of the operation.

A copy of the document produced by this group is attached (Annex 1) which summarises the various findings and proposes some guiding principles that should be followed by stakeholders in the supply chain.

This work helps to demonstrate that when shippers and service providers examine the movement of freight as part of a supply chain, optimal solutions can be found which often justify the use of transport solutions involving rail, coastal, short sea and inland shipping services. Shippers will choose these alternative transport solutions even if they turn out to incur higher freight rates, provided they deliver the solutions that ultimately result in cost savings and efficiencies in the total supply chain.

Congestion caused by compliance

Trade and transport may, in large part, be liberalised but it is also highly regulated. Customs requirements (dealing with tax, duty, fraud, trafficking), port health requirements (preventing disease and pests from being introduced into Europe in freight and even in the packing material and pallets), anti-terrorist security requirements, statistical reporting, safety requirements, employment and working rules (e.g. working time), transport restrictions (e.g. week-end and night time restrictions, other access restrictions on weights and dimensions), access charging requirements: all these and more, in some way impose restrictions that reduce the efficiency of transport and optimal logistics and supply chain solutions.

¹ This is a growing area of concern for ESC, since so many companies have outsourced their expertise and today increasingly rely on third parties to manage these aspects of the business.

ESC readily acknowledges the highly professional job done by many third party logistics providers and supply chain management companies for their clients, and the potential for reducing inefficiency and unnecessary costs through use of such services; yet it also serves to remove a companies ability to constructively work with the service providers in a meaningful way to seek new solutions, better practices and optimise operations across the supply chain. This can result in demands being placed on service providers to perform in ways that might contribute to making the logistics less efficient and also adding to congestion.

The role of the shipper, is crucial in this area: he or she should have the knowledge and experience that will enable their company to work in partnership with their service providers to achieve the best possible solutions, and recognise the implications on their business from congestion, and seek ways of minimising it or bypassing it.

Physical controls and charging mechanisms (e.g. congestion charges) will direct freight and transport along specific routes and through specific terminals and ports/airports. In the case of certain controls on imports and exports, the governmental authorities will insist on transit of goods through a specific terminal where the checks can be fulfilled; not every terminal has the required facilities. The USA will only accept shipments that come from ports recognised under the Container Security Initiative (CSI). Air freight must be scanned or physically screened at secure premises operated by regulated agents or carriers unless it comes from a security-approved shipper.

These routes may be far from ideal, but in order to comply with the requirements, they are necessary. A move away from physical controls is seen as positive by industry, yet not always possible, and the transition painfully slow as different administrations and departments struggle to link and coordinate their compliance systems.

Access charging may also encourage freight to use routes that might be less congested, or else use them at less congested periods in order to qualify for a lower charge.

This issue is not restricted to the impacts of transport and security regulations; health and safety regulations, for example, may also cause congestion: on the railways, for example, maintenance and renewals work may be restricted to certain times of the day (usually night time) and require the closure of whole sections of the network even though only one rail or track is being worked on. Many observers claim the requirements are far too excessive, and cause major delays or even diversions, especially to freight trains that operate at the same times as the works are scheduled. Furthermore, overrunning track maintenance work will often have a knock-on effect on services, passenger and freight; yet (as has already been explained above) it is often the passenger train service that will be given priority access, further delaying the freight and causing a bottleneck in the logistics chain and forcing many to revert to road freight alternatives and contributing this time to road congestion.

A quantification of the scale of the impact of congestion

If one is to ensure the most effective strategy and plan for tackling congestion, it is first important to identify the criteria by which one measures the impact of congestion and to quantify the benefits of different solutions.

The ESC suggests that the only way to properly identify the impact of congestion in order to focus first on the solutions that yield the greatest benefit is to determine appropriate measures. We believe that the true measurement of efficient transport is that of service performance. ESC has long promoted the joint-development by all industry stakeholders (carriers, shippers, agents, terminal operators etc) of service performance indicators (SPIs) and standard measurements of performance for door-to door movements of freight involving rail, or short-sea, or road or air freight for the main trunk-haul.

ESC along with FTA assisted with just such a project for a door-to-door logistics chain where short-sea shipping was used for the main trunk haul. This project was funded by the Ministries of Transport for The Netherlands and Sweden in 2001. The indicators have never been formally introduced or implemented; nevertheless, there has been continuous interest since from the short-sea sector and the rail freight sector. In this regard, ESC has recently learnt of a similar initiative being formulated by the Global Institute of Logistics to measure performance in the ports sector – an area which many believe lacks transparency and where productivity and service performance appears to differ between ports and terminals yet is difficult to quantify.

Prior to the short-sea shipping SPI project, the ESC also assisted a cross-industry group, to develop SPIs for the air freight sector. This project was later adopted by the IATA cargo interest group known as Cargo 2000. It has been pursuing the phased implementation of standard

performance measurements globally for over six years; progress has been sporadic, but early results of performance between major air freight hubs have been produced for over a year, and enable a degree of benchmarking to be undertaken and provide indications as to where and when in the chain performance is being impeded.

The impact of future trends in freight transport supply and demand

Based on ESC's interpretation of various market trends and forecasts in the public domain one can surmise that:

- demand for **shipping** will increase (deep-sea and short-sea) and hence place greater demands on the ports and connecting infrastructure.
- **Air freight** will continue to grow also, with similar demand on the airports and surrounding infrastructure (although some predict a slowing if and when emission trading and higher fuel/environmental taxes are introduced).
- **Rail freight** will become more competitive as competition increases, stimulating an improvement in efficiency and service performance, and attract more freight to it, provided the infrastructure can be provided to carry it.
- **Road freight** will continue to grow in demand, but perhaps look at more efficient use and new technologies to offset various cost increases and environmental pressures.

From a shippers' perspective the future they will need to prepare for and plan around could include some of the following trends:

- Higher operating costs
 - o Fuel costs
 - Oil price remaining high
 - Duty rates high for traditional diesel/petrol
 - Congestion increasing consumption
 - Increases from access charges currently being considered for all modes of transport and use of ports and terminals.
 - o employment costs
 - driver costs
 - longer operational hours (24/7)
 - training costs to improve performance (e.g. driving skills to reduce fuel consumption) and increase security awareness
 - o security costs
 - training
 - systems
 - physical security measures (fences, cameras, identity badges etc)
- Lower trunk haul freight rates
 - o Consolidation increasing opportunities for maximising economies of scale
 - o Greater competition in transport
 - Liberalisation of rail
 - More short-sea and coastal shipping to bypass congested ports
 - More competition from and between regional airports as increased environmental restrictions on the larger hub airports restrict capacity, and more open skies agreements allow more services to fly to and from more airports
 - Potential incentives for reduced road freight costs from road user charging providing an incentive to use the network at less congested times, but potentially offset by an increase in congestion charges especially in urban areas
- Higher door-to-door rates

- Consolidation could lead to less choice – especially for international logistics operations and the potential of higher rates caused by
 - An inexperienced customer base, having outsourced much of their experienced in-house personnel (e.g. shippers)
 - Potential monopoly or oligopoly raising rates higher from market dominance on such things elements of the logistics chain that they perhaps control, etc
 - A reliance on service provider for much of the supply chain management and supporting logistics
- Higher rates from higher quality, better performing, more optimal use of logistics services may in itself not represent a problem if the over all supply chain costs are reduced; but not all companies measure their supply chains in a way that determines this: nevertheless their number is growing;
- Leaner supply chains reducing waste
 - Reducing unnecessary transport through changes to the supply chain (e.g. improving packaging, and loading units to maximise the carrying capacity per trip)
- Higher visibility in the supply chain
 - Technology to track and trace
 - Greater stock/purchase control through more monitoring of supply and demand using key indicators
 - Greater need for visibility of the supply chain to monitor security measures
- Potentially shorter supply chains that need enhanced reliability or where greater demand exists from consumers for more environmental responsibility through lower transport miles/kms
 - Moving the production or sourcing of products closer to the markets.

This does not represent a comprehensive list of possible developments. However the impacts of these potential developments can be significant.

Potential solutions by governments, industry and other stakeholders

A brief assessment of the above trends and analysis of supply and demand all point to the following solutions:

Governmental solutions:

- need for more transport infrastructure, not less.
- better information to monitor and match supply of infrastructure with demand whilst still maintaining competition in the market place.
- Better regulation, and less regulation where appropriate,
- more flexible planning controls in order to remove barriers to the evolution of new and innovative transport, logistics and supply chain solutions, and
- further efforts to deregulate and create an environment where competition can thrive.
- Investment in intelligent transport systems (e.g. traffic management systems) that improve capacity utilisation of transport infrastructure,
- development and implementation of technology to enable more effective control, regulation and enforcement of the rules and laws governing trade and transport.
 - Shared data and databases across Europe and internationally, where appropriate (such as in the area of anti-terrorism and detection of organised crime),
 - targeting of rogue operators and traders
 - simplifications, less controls and less bureaucracy for the majority, legitimate trade and transport

Industry solutions:

- better information to monitor and match supply of services with demand whilst still maintaining competition in the market place.
- smarter use of logistics and freight transport and greater emphasis on supply chain management to offset increases in costs.
- More skilled and trained personnel, and not simply within the service provider community but also with their customers.
- more coordination in the supply chain, between operators and their customers, and between network users and the infrastructure operators in order to improve the utilisation of transport, equipment and infrastructure
- Greater use of technology such as tracking and tracing systems and basic communications infrastructure

CONCLUSIONS

Congestion is not something that will simply be solved through governmental or EC intervention; indeed the message from this paper suggests that governments' role is best served by facilitating industry initiatives: training, development of best practices, supply and demand forecasts, the development and then the implementation of monitoring tools such as Service Performance Indicators (SPIs) which will further identify and quantify the impact of barriers to the efficient operation of freight services.

Where direct action may be required from government and the EC is in better regulation which allows the more efficient use of infrastructure, and investment in enhanced and new infrastructure where indicators (performance, demand forecasts etc) have shown these to be required. Also a continuing regulatory and enforcement effort is required to ensure the creation of a competitive, deregulated and liberalised transport environment in which sustainable services can thrive.

ANNEX 1

'Beating Port Congestion' – a report produced by the UK's Freight Transport Association on behalf of key stakeholders in the UK's maritime (container) supply chain.