

0. FOREWORD

Kindly written by the Vice President of the European Commission and Commissioner of Transport, Siim KALLAS.

1. INTRODUCTION

Chapter starts with description of the current state of affairs regarding global intermodal trends. Afterwards, a description of the main drivers for future change is provided in order to understand the challenges the transport and logistics industry will face. It ends with possible pro-active solutions in terms of sustainability, efficiency, collaboration and innovation as fundamental drivers of long-term European and industrial survival.

2. FACING THE CRISIS

Chapter begins with an overview of the current world trade, GDP and oil price developments, in EU and BRIC countries, having an impact on supply chains and port-hinterland implications. It consequently analyses the impact of the crisis on the intermodal container market and evolution of Combined Transport consignments in general. The chapter ends with a brief scenario of rail freight forecasts.

3. EU TRANSPORT POLICY

Chapter starts with a brief description of the latest developments in EU transport policy (the 2011 White Paper), the chapter then switches to operational intermodal EU funding opportunities (Marco Polo granted projects), continued by an overview of "Green" EU legislative measures, while a brief outline of intermodal research and innovation policy is included. Afterwards, an analysis of a selection of national transport policies is given, including graphs with CO₂ emissions split according to transport modes for each country. The selection of maps includes: intermodal freight terminals in France, Germany, Netherlands; transit corridors and infrastructure projects Bulgaria, Poland, Romania and Spain as well as locations of various manufacturing brands in Serbia and Turkey.

4. TRANSPORT NETWORKS

Overview of recent evolutions concerning Deep Sea freight flows; benefits and perception of Short Sea Shipping in intermodal transport chains. Maps give insights on operators and routes of SSS, rail-ferry, LoLo, RoRo within the Baltic, Black Sea and North Sea areas. Afterwards, navigable inland waterways are presented in terms of port-hinterland corridors, selection of bottlenecks, important economic areas and a listing of inland port container statistics is also offered. Selection of rail corridors which is analyzed in terms of path parameters, border crossing time values, costs and rate structures. The chapter continues with an analysis of a wide range of intermodal terminal locations and port connections, terminal performance indicators, terminal network on EU logistics cluster level, flows of combined rail-road traffic from Northern range to Central Europe. A description of the new European Intermodal Route Finder (EIRF) tool is included (enabling users to search for intermodal alternatives between 860 terminals located in 29 European countries).

The chapter concludes with a study of the TEN-T network, revealing its ambitions for the coming 15 years.

Fact Sheets (brief overview strategies/statistics/flows):

- The Port of Barcelona: a dynamic and expanding hinterland.
- The Port of Strasbourg: a major logistics and industrial hub.
- The Port of Hamburg.
- The FLAVIA project.

5. FREIGHT FLOWS AND TRADE VOLUMES

Chapter starts with global ocean container flows and volumes; a snapshot of cargo traffic as well as container port traffic and shipping traffic. Afterwards, a European overview of trade volumes and freight flows is presented in terms of extra-European imports and exports. Intra-European flows are analyzed, with a focus on the automotive industry alongside intermodal corridors. A case study on the Scandinavian region is afterwards given, with a focus on mining and forest-based industries. Finally, European freight flows are analyzed through modal split (differentiated by road, rail and inland waterways) as well as volumes.

A methodology on how to obtain knowledge to calculate new and potential cargo flows is elaborated upon. The chapter concludes with a concrete market case for potential intermodal services based on top-20 import/export commodities between two states and benefits on company level, arising from launching new intermodal services.

6. PLAYERS

The introduction is dedicated to decision factors of players in various regions to determine their transport preferences. Afterwards, some of the most important ingredients for transport suppliers to attract potential users are briefly touched upon. Subsequently, a selection of players is provided both for global deep sea shipping lines and European inland operators, grouped by geographical location, elaborating on their modal split, current and planned intermodal cross-border, port-hinterland or domestic services. The vast network of North-West European gateways and port terminals, container depots and players get attention as well as Central and Eastern European freight operators, corridors and market tendencies.

The motivation of ten large shippers to develop intermodal services are elaborated upon, their partners and future ambitions. Lastly, advice about successful alliances in new intermodal networks is given in terms of legal requirements and prior agreements to be made between stakeholders.

Fact sheets:

- IberianLink.
- BarceLyon Express.
- European Gateway Services, ECT Rotterdam.
- Polzug Intermodal.

7. GREEN TRANSPORT

This chapter elaborates on performance indicators (including sustainable “green” decision factors) influencing transport mode choices, depending on actors’ role in the supply chain. Transport emissions and forecasts by transport mode. A selection of horizontal/vertical transshipment techniques is afterwards presented taking into consideration functionalities, advantages and disadvantages. The chapter continues with nine benchmarked European “Super Green” corridors. The chapter ends with the Logistics Roadmap of the European Green Car Initiative.

Fact sheets:

- MetroCargo.
- Last-Km Locomotive, Bombardier.

8. LOGISTICS AND DISTRIBUTION CONCEPTS

Chapter presents several modern logistics and distribution concepts. Elaboration on the concept of ‘Freight Villages’ including a ranking by performance indicators of the ‘top-20 locations in Europe’. Furthermore, a case-study concerning Mediterranean port-hinterland connections and cost-saving strategies is presented. Another case study presents transport market service characteristics, requirements, functionalities, cost and time performance indicators as well as freight flows in the South East and North Adriatic areas. The chapter continues with the Circle Line Concept, a tool to switch cargo from road to waterways, especially in congested port city regions.

Legal observations regarding new co-modal transport networks are elaborated upon, including horizontal/vertical agreements, competitive information exchange and market share constrains. Furthermore, the issue of intermodal air-rail solutions is discussed upon. The chapter concludes with intermodal distribution solutions for urban environments by analyzing two case-studies: the Cargo Hopper and the Beer Boat in two European cities.

9. DEVELOPMENTS IN TECHNOLOGY

This chapter starts with a comparison of maritime versus continental loading unit characteristics, benefits and challenges. It afterwards zooms in on a new loading unit combining the advantages of a container, swap body and trailer for road, rail, short sea and inland waterways. A selection of horizontal/vertical transshipment techniques is afterwards presented taking into consideration functionalities, advantages and disadvantages.

Fact sheets:

- Sustainable Supply Chain logistics, Siemens.
- Reducing emissions through intermodal transport, Procter & Gamble.
- Eco-efficient terminals, APM terminals.
- Intermodal transport and renewable energies, Eco Plus