TRAINING PROGRAM N. 2

Intermodal transport and sustainability

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Deliverable	D.5.3.2 Training programme for technical and transversal skills
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Sommario

1. GENERAL OUTLOOK AND NEEDS

Transport activities play an essential strategic role for the economic development of an area but, at the same time, they represent one of the economic sectors that mostly give a significant pressure over environmental and natural resources.

Road transport remains today the main transport source across Europe and, despite the slowdown in mobility caused by the recent economic crisis and its following restart, the quality of the environment is heavily compromised by the growing number of vehicles circulating across roads and motorways, by the seniority of the circulating fleet and because of the scarce diffusion of “environment friendly” fuels.

Furthermore, air and noise pollution, soil consumption, land fragmentation, interference with ecosystems and biodiversity, visual disturbances, damage of historical and artistic assets and sites, frequently are "side effects" of transport and results of unsustainable mobility policies.

Today performing a “sustainable mobility” is one of the strongest tools that can be used in order to balance the need for an efficient and effective movement of goods and passengers with those concerning the environment protection for future generations. “Sustainable mobility” encompasses all those transport solutions that are able to reduce the negative effects of freight and people transport, considered both economically, socially and environmentally.

Focusing on goods transport, combined road-rail transport is one of the ways to shift cargoes over medium routes reducing impacts on the environment; by transferring shipments from road to rail it is possible to reduce energy consumption, to contribute to environment protection and, last but not least, to help reducing overall transport costs.

It thus becomes for firms and operators necessary to be aware about the opportunities for such a modal shift, to be able to understand how cargoes can be efficiently and effectively transferred from road based transport services to intermodal ones and to evaluate the environmental and economic benefits that can be reached.

2. EDUCATIONAL AIMS

In line with the community guidelines concerning the reduction of the negative externalities produced by transport and logistics activities, the training program wants to show how it is possible, changing the point of view, to redefine the traditional business models and therefore transform those that are commonly considered as potential threats to growth opportunities.

With higher attention environmental sustainability can become one of the main sources of competitive advantage; firms’ transport and logistics processes, probably not always very careful about their negative effects such as the environmental ones, can increase their strength since today more than in past they are key processes and drivers of business growth and success.

Through an accurate analysis and framing of transport systems and chains, the course aims to train technicians able to participate to the reorganization of the transport processes considering them from a sustainable perspective. The participants will be able to analyze, for the different transport modes, the consumed resources (e.g.: fuel/energy) and to evaluate how it is possible to reduce their consumption thus improving their performances both from an economic and an environmental point of view; in other words participants will be able to reach overall better transport results reducing the quantity of used resources.

3. PARTICIPANTS

The course aims to upgrade the skills of those operators that, within firms, are involved and specialized in the organization of logistics processes considering them in a sustainable perspective. In particular it will developed the ability to operate and contribute to the reorganization of transport processes through techniques and tools specifically thought to reduce their impact on the environment.

The skills acquired at the end of the training program will enable to operate in order to reduce the costs of the supply chain, to reduce the environmental impact of logistics and to draw or implement energy saving processes.

4. LEARNING METHODOLOGIES

Lectures, case studies, brain storming, problem solving, learning by doing.

5. FINAL EVALUATION

At the end of the training program participants' knowledge will be evaluated using a multiple-choice test prepared by the teachers based on the topics dealt with during the lectures.

6. PROGRAM STRUCTURE

MODULE N.	TITLE	HOURS
1	Transport, logistics and supply chain management fundamentals	8
2	Intermodal transport systems: vehicles, infrastructures and organization	12
3	Green logistics and sustainability	8
4	Economic and financial basis	12

7. SKILLS AND CONTENTS

MODULE N. 1

Skills

To be able to understand and evaluate the logistics and supply chain performance of a company

Contents

Definition, evolution and recent trends of logistics and supply chain management; logistics basic glossary; the logistics system components: transport, warehouses, logistics network, logistics activities (handling, packaging, labeling, etc.); system costs; logistics service level.

MODULE N. 2

Skills

To be able to understand and evaluate how transport processes can be combined to improve performances

Contents

Modes of transport: maritime, road, rail and air; the origins of the intermodal transport; types of intermodal transport; intermodal transport units; intermodal vehicles, infrastructures and operators; organization of

intermodal transport; strengths, weaknesses, opportunities and treats of intermodal transport; European policies; innovative technologies, practices and future trends

MODULE N. 3

Skills

To be able to evaluate the different energy solutions available for firms; to be able to prepare transport process changes in a green perspective

Contents

Energy scenarios; energy efficiency; renewable energy sources; green fuels; strategies for consumption reduction: managing and technical aspects; reverse logistics; eco-friendly logistics; transport and logistics externalities; ICT solutions, safe and eco driving; funding opportunities

MODULE N. 4

Skills

To be able to understand and evaluate technical and economic-financial aspects of the various transport modes

Contents

Technologies, organization, economies, markets, policies and standards of transport processes; economic and financial elements; KPIs; logistics costs; management control