Company Management

DIGITALIZATION ITINERARY IN LOGISTICS

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INTRODUCTION

This Training Programme is a product of the DIGinLOGS project, co-financed by the European Commission in the framework of the Erasmus+ programme, KA2220-VET - Vocational Training Cooperation Partnerships The output O1 "Training Programme" is to facilitate the acquisition of digital knowledge and competences for vocational training (VET) professionals in the logistics sector. This result 01 involves the development of the modules that make up the training itinerary defined jointly by the partners (01.2) derived from a report on the detection of the digital needs of the sector resulting from the qualitative and quantitative study of the partners' field (01.1).

Digitalisation in the logistics sector in Europe and worldwide is key to the interconnection of global supply chain flows. The management of the company will develop in a modular way, with the physical internet coming to the fore.

Although different European programmes are oriented towards the digitalisation of the sectors, the data collected in the partner countries of the project (France, Greece, Spain,) show the need to train teachers and trainers in digitalisation in order to adapt to the training needs in digitalisation demanded by the companies.

The training programme is the result of the different phases of work carried out by the consortium since February 2022 of the project. The first phase included an international observatory derived from surveys to companies, teachers of educational centers, trainers as well as different focus groups carried out in all partner countries and a study provided by INYCOM on the digitalisation trends of the logistics sector. A final report is prepared with all the results provided by the different partners. In this same phase, an innovative and futuristic itinerary has been defined in order not to be outdated when the different training actions are implemented. The itinerary consists of four modules to be developed:

1. Company management
2. Physical Internet
3. Supply Chain Digitalization
4. Analysis KPIs

Module			Unit	
n°	Description	Partner	n°	Title
M1	COMPANY MANAGEMENT	Action Sinergy	1.0	Module 1. Initial Chapter
			1.1	Digital Transformation and Strategy
			1.2	Composable Company
			1.3	Sustainable Networks
			1.4	Supply Chain Disruptions
			1.5	Module 1. Final Chapter
M2	PHYSICAL INTERNET	CIFPA	2.0	Module 2. Initial Chapter
			2.1	Physical Internet, Definition and Topics
			2.2	Horizontal Collaboration
			2.3	Systems & Technologies for Interconnected Logistics
			2.4	Global Supply Network Coordination and Collaboration
			2.5	Module 2. Final Chapter
M3	SUPPLY CHAIN DIGITALISATION	AFT	3.0	Module 3. Initial Chapter
			3.1	Management And Optimization of Information Flows
			3.2	It Solutions for Logistics Operations
			3.3	Converting Business Models to New Paradigms
			3.4	Evolution & Complexity
			3.5	Module 3. Final Chapter
M4	ANALYTICS. GLOBAL, MANUFACTURING AND LOGISTICS KPIS	INYCOM	4.0	Module 4. Initial Chapter
			4.1	Big Data. All Data Are Our Data
			4.2	Data Management
			4.3	Bi Tools
			4.4	KPIs. Definition And Design
			4.5	Module 4. Final Chapter

Once the itinerary has been defined, the structure of the training programme is agreed upon and the programmes of the four modules that make up the digitisation in logistics itinerary are designed by the four partners, always trying to adapt them to the profile of the users that make up the target group to which the training actions are addressed.

OVERVIEW

Course Title

Company Management

Duration

30 hours of total work

Level

Level 5 EQF according to the European Lifelong Learning Framework

Recipients

Teachers and trainers of logistics sector

Objective:

The main objective of the course is to improve digital competence in logistics by knowing the systems and technologies of interconnected logistics.

The training program is available in four languages: English, Greek, French and Spanish.

Competencies standard

The participant be able:

- To analyze the impact of digital transformation on the logistics industry, including changes in customer expectations, supply chain management, and the role of logistics in the broader economy and to develop a strategic plan for digital transformation in logistics, including an assessment of the organization's current technology infrastructure, resources, and capabilities, as well as an evaluation of the competitive landscape and future opportunities.
- To design modular business processes that can be easily assembled, disassembled, and reconfigured as needed. Being able to understand how to use cloud computing, containerization, and other technologies to create a flexible and scalable infrastructure.
- To analyze the role of digital technologies in driving sustainable networks in logistics, including the use of data analytics, artificial intelligence, and blockchain to improve transparency, reduce waste, and increase efficiency.

- To know key concepts and types of supply chain disruptions, including natural disasters, transportation disruptions, supplier bankruptcy, and demand fluctuations, and the impact these disruptions can have on logistics operations.

Participant profile

After the training, the participant will have knowledge, digital skills that can be quickly verified and used in practice. It is based on a theoretical knowledge of new technologies and systems that facilitate the interconnection of logistics. It will provide a solid foundation for future activities related to digitalization in logistics both nationally and internationally. The participant will be aware of and familiar with the systems and technologies that facilitate the interconnection of logistics.

He/she will have technological tools, news and case studies, analysis, and predefined guidelines.

The participant will know how to use the system effectively and will be able to operate inside it. You will be able to apply the knowledge acquired to classroom teaching to future logistics workers. You will discover what challenges future workers in the sector will face and how to adapt using the digital skills shown in the training.

The participant will be able to apply the digital techniques and strategies learned in the activity.

UNITS

Unit 1 Digital Transformation and Strategy

Unit 2 Composable Company

Unit 3 Sustainable networks

Unit 4 Supply Chain disruptions

LEARNING OUTCOMES

GLOBAL LEARNING OUTCOMES
The participant be able:

- To know all major information management technologies and their major functionalities, used by enterprises in the supply chain.
- To have identified the benefits and objectives of da logistics process.
- To determinate how to build the right indicators and the digital means to collect the information for its implementation
- To connect operational indicators with sustainable objectives utilizing the right tools and information systems to support their analysis.

SPECIFIC LEARNING OUTCOMES RELATED TO UNITS

UNIT 1 DIGITAL TRANSFORMATION AND STRATEGY

Competency standard Be able to analyze the impact of digital transformation on the logistics industry, including changes in customer expectations, supply chain management, and the role of logistics in the broader economy and to develop a strategic plan for digital transformation in logistics, including an assessment of the organization's current technology infrastructure, resources, and capabilities, as well as an evaluation of the competitive landscape and future opportunities.

Learning Outcome Unit	
Be able to develop a strategic plan for digital transformation in logistics, including an assessment of the organization's current technology infrastructure, resources, and capabilities, as well as an evaluation of the competitive landscape and future opportunities.	
Knowledge	Skills
The participant will be able to define the key concepts and trends related to digital transformation and strategy in logistics, including the technologies, applications, and business models that are driving changes in the industry.	**The participant will be able** to identify the key challenges and barriers to implementing digital transformation in logistics, including issues related to data privacy, security, and governance, as well as organizational culture, change management, and talent development. S/he will also be able to analyze complex data, identify patterns and trends, and make data-driven decisions
Assessment criteria	

a) The student makes an assessment of the organization's current technology infrastructure, resources, and capabilities.

b) The student identifies and critically evaluates the benefits and risks of different digital technologies and platforms for logistics, such as blockchain, artificial

intelligence, and the Internet of Things (IoT), and their potential applications in logistics operations.

c) The student is able to identify the distinctive features of different digital tools and platforms for logistics such as transportation management systems (TMS), warehouse management systems (WMS), and electronic data interchange (EDI),

UNIT 2 COMPOSABLE COMPANY

Competency standard- Being able to design modular business processes that can be easily assembled, disassembled, and reconfigured as needed. Being able to understand how to use cloud computing, containerization, and other technologies to create a flexible and scalable infrastructure.

Learning Outcome Unit
Be able to understand the characteristics of a composable company and use different technologies to build a modular business process in the framework of an ecosystem strategy that involves partnering with other companies, startups, and developers.

Knowledge	Skills
Knowledge – Be able to understand the concept of composable company, its principles, and its benefits, the different components of a composable company, such as microservices, APIs, platforms, and ecosystems and the technologies that could be used in order to build it,	The participant will be able to design modular business processes that can be easily assembled, disassembled, and reconfigured as needed

Asessment criteria
a) The participant knows how the key components of a composable company work together to create a flexible and scalable organization.

b) The participant is able to use cloud computing, containerization, and other technologies to create a flexible and scalable infrastructure.

c) The participant is able to develop an ecosystem strategy and understands how to create a value network and how to collaborate with external partners.

UNIT 3 SUSTAINABLE NETWORKS

Competency Standard – The objective is for the student to be able to analyze the role of digital technologies in driving sustainable networks in logistics, including the use of data analytics, artificial intelligence, and blockchain to improve transparency, reduce waste, and increase efficiency.

Learning Outcome Unit
Be able to develop critical thinking and problem-solving skills related to sustainable networks in logistics, including the ability to analyze complex data, identify patterns and trends, and make data-driven decisions to improve sustainability.

Knowledge	Skills
The participant **will be able to understand** the key concepts and principles of sustainability in logistics, including the environmental, social, and economic impacts of logistics operations and understand how digital technologies could be used in order to achieve sustainable networks.	The participant **will be able to identify** develop strategies for designing and implementing sustainable networks in logistics, including assessing the organization's current practices and developing a roadmap for improvement.

Asessment criteria
a) The participant evaluates the benefits and challenges of sustainable networks in logistics, including the potential impact on costs, quality, and service levels.

b) The participant is able to analyze complex data, identify patterns and trends, and make data-driven decisions to improve sustainability.

c) The participant is able to describe the role of digital technologies in driving sustainable networks in logistics, including the use of data analytics, artificial intelligence, and blockchain to improve transparency, reduce waste, and increase efficiency.

UNIT 4 SUPPLY CHAIN DISRUPTIONS

Competency Standard: introduce key concepts and types of supply chain disruptions, including natural disasters, transportation disruptions, supplier bankruptcy, and demand fluctuations, and the impact these disruptions can have on logistics operations.

Learning Outcome Unit
Be able to understand the importance of supply chain resilience and the role of digital technologies, such as predictive analytics and supply chain visibility tools, in building a more resilient supply chain.

Knowledge	Skills
The participant will be able to understand the importance of supply chain resilience and the role of digital technologies, such as predictive analytics and supply chain visibility tools, in building a more resilient supply chain.	The participant will be able to analyze the factors that contribute to supply chain disruptions, such as lack of visibility, inadequate risk management strategies, and inadequate communication and coordination among supply chain partners and evaluate the consequences of supply chain disruptions on logistics performance and customer service, including delays, stockouts, and increased costs.

Evaluation criteria

a) The participant develops strategies for identifying and mitigating supply chain disruptions, including risk assessment and mitigation planning, contingency planning, and alternative sourcing and distribution strategies.

b) The participant is able to perform supply chain risk management, including the use of risk assessment tools, contingency planning, and collaboration with supply chain partners.

PEDAGOGY AND METHODOLOGY IN THE COURSE

The courses derived from the Digitalization Itinerary in Logistics (PROJECT KA220- VET DIGinLOGS) are MOOC courses (Massive Online Open courses). All four modules have the same structure. They are divided into units and various pedagogical resources are used: Audiovisuals, Power Point presentations, links of interest, documents, tasks and questionnaires. All tasks or case studies have their solution. They can be done at the pace desired by the participant; resources can be downloaded to be used in the classroom. At the end of the training action, you can download the badge of having completed the course.