



**YEP MED**

## **YOUTH EMPLOYMENT IN PORTS OF THE MEDITERRANEAN**

Work Package (WP3): Youth Advisory Services

Output (3.1): Design of Operational Skills Matching

MethodologyActivity (3.1.1): Identification of Professional  
Profiles

### **LP'S IDENTIFICATION OF PROFESSIONAL PROFILES**

**PP7\_ Fundación Valenciaport**

**Document Version:** Final

#### **Purpose of the deliverable:**

This deliverable contributes to further precisising at a regional scale the professional profiles that cannot be covered or that have growth potential. An analysis of sub-sectors identified and labor market needs is developed to attain this.



ENI  
CBCMED  
Cooperating across borders  
in the Mediterranean



Project funded by the  
EUROPEAN UNION



REGIONE AUTÒNOMA DE SARDIGNA  
REGIONE AUTONOMA DELLA SARDEGNA



YEP MED

# STUDY ON PROFESSIONAL PROFILES REQUIRED BY COMPANIES IN THE PORT COMMUNITY OF VALENCIA

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FUNDACIÓN  
VALENCIAPORT





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# INTRODUCTION

The present study is the result of **activity 3.1.1 DESIGN OF OPERATIONAL SKILLS MATCHING METHODOLOGY** corresponding to the deliverable "**Identification of professional profiles of the Valencia's port community**" of work package 3 of the **YOUTH EMPLOYMENT IN PORTS OF THE MEDITERRANEAN** (hereinafter **YEPMED**) project.

The **YEPMED** project (<http://www.enicbcmmed.eu/projects/yep-med>) funded by the **ENI CBC MED** programme of the **European Commission** has as its main objective to **match labour market skills needs and dual vocational training supply in the Mediterranean port communities sector in order to contribute to job creation and facilitate productive economic growth**. The project involves partners from 8 port communities in 7 countries of the Mediterranean basin (**Spain, Italy, France, Tunisia, Lebanon, Egypt and Jordan**) and will run from **September 2020 to September 2023**.

The **general objective** of the study was to **identify the most sought-after occupations which are difficult to cover by the port logistics companies in the port of Valencia and to identify the training needs** from the perspective of **Vocational Training (VET)** in order to adapt them and satisfy this demand.

The **specific objectives** were as follows:

- ✓ Identify the professional profiles that are in demand and difficult to cover by the companies in the Valenciaport cluster.
- ✓ Define the competences required for each profile.
- ✓ Define the knowledge, skills and experience required for each professional profile.
- ✓ Prioritise profiles in: main, other and transversal, for the trade, logistics and transport sub-sectors.
- ✓ Identify the knowledge and make visible the active offer of vocational training students among the companies of the port community.



The phases of this project consisted of the following:

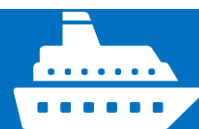
- ✓ Phase 1. Start-up of the study.
- ✓ Phase 2. Characterisation of Valenciaport's port activity and trend analysis.
- ✓ Phase 3. Analysis of demand, analysis of the professional profile needs of the companies that make up the cluster.
- ✓ Phase 4. Characterisation of the professional profiles demanded by companies.
- ✓ Phase 5. Analysis of the offer of linked VET degrees.
- ✓ Phase 6. Drawing up conclusions and recommendations.
- ✓ Phase 7. Presentation of the results of the study.

The **methodology was** based on the following **qualitative and quantitative techniques**:

- **Documentary analysis** in which the following have been selected, studied and contrasted: reports, articles and other bibliographic sources related to the logistics / port sector; statistical data provided by the National Institute of Statistics (INE); press releases and news related to the port community of Valencia; specialised websites; information on the labour market provided by the SEPE; etc. Although this analysis has been transversal to the whole project, it has been particularly relevant in Phase 2.
- **Interviews with experts** in the logistics / port sector, linked to the different segments and knowledgeable about international trends, the reality of the port community of Valencia and professional profiles. The interviews were used to focus and obtain information in Phases 2, 3, 4, 5 and 6.
- **Interviews with Vocational Training centres, with the aim of** finding out about their offer, their assessment of the different modalities and their relationship with companies, as pursued in Phase 5.
- **On-line survey**, addressed to a **representative sample of companies in the logistics / port sector of the port community of Valencia**.

Specifically, 81 companies belonging to different economic activities in the logistics / port sector in Valencia took part in the survey, including some of the largest. The online survey was chosen because it is a quick method with a high response capacity.

**81 SURVEYED  
COMPANIES**



The online survey was carried out in February 2021. The results of the online survey are presented in chapter 2 in the form of tables and graphs. The design and orientation of the questionnaire has been based on the information in chapter 1, in particular the information collected through the expert interviews. The data



have been presented in a detailed way, segmented by economic activity or company size. Multivariate analyses have also been carried out in order to identify typologies of enterprises, processed by means of the Statistical Package for Social Sciences (SPSS) software, according to the answers provided to the key questions.

- **Working table and completion of the Delphi questionnaire**, aimed at defining the professional profiles and prioritising them; based on the information obtained in interviews and online survey. This activity took place on 21 April 2021.



# CHAPTER 1/ CHARACTERISATION OF THE PORT COMMUNITY OF VALENCIA

The aim of this section is to provide a general characterisation of the port community of Valencia to serve as a contextual framework for the analysis of the human resources working in it.

More specifically, the points under study are as follows:

- Positioning and actors of the port community.
- Macroeconomic dimensions and employment.
- Main trends.
- SWOT analysis oriented towards the needs of the Valencia port community profiles.

## 1.1/ POSITIONING AND ACTORS OF THE PORT COMMUNITY

The **Port Authority of Valencia (APV)**, under the trade name of **Valenciaport**, is the public body responsible for the management of **three state-owned ports (Valencia, Sagunto and Gandía)**. Valenciaport is a leading port in the provision of services, in eco-efficiency and in the sum of added values that enable it to constantly improve its competitiveness.

Valenciaport has terminals for container, solid and liquid bulk, ro-ro, car and passenger traffic in Valencia. Multi-purpose and project cargo gas, bulk and vehicles in Sagunto and passengers and general cargo in Gandía.

The port of Valencia is  
**5th in the European  
ranking and in the top  
27 in the world ranking**  
in TEUs moved.

From its terminals it serves a port hinterland that represents more than 50% of the GDP of the Spanish economy. The 3 main shipping lines in the world (COSCO, Maerks and MSC) manage the container terminals of Valenciaport and have placed the Valencian





port in the **top 27 of the world ranking** (Table 1) and **fifth position in the European ranking** with more than 5.4 million TEUs<sup>1</sup> mobilised in 2020 (Graph 1).

Table 1. Ranking of the world's largest container ports in 2020, by throughput (in thousands of TEUs\*)

Ranking	Port	TEU
1	Shanghai	43,501,400
2	Singapore	36,870,940
3	Ningbo-Zhoushan	28,734,300
4	Shenzhen	26,553,000
5	Guangzhou	23,191,500
6	Qingdao	22,004,700
7	Busan	21,598,948
8	Tianjin	18,356,100
9	Hong Kong	17,961,000
10	LA/LB	17,326,718
11	Rotterdam	14,349,446
12	Dubai	13,486,000
13	Shanghai	13,486,000
14	Port Kelang	13,244,414
15	Antwerp	12,031,469
16	Xiamen	11,410,000
17	Tanjung Pelepas	9,846,106
18	Kaohsiung	9,621,672
19	Hamburg	8,750,000
20	NY/NJ	7,585,825
21	Ho Chi Minh City	7,552,642
22	Colombo	6,850,000
23	Jakarta	6,170,468
24	Tanger Med	5,771,220
25	Yingkou	5,673,100
26	Piraeus	5,437,000

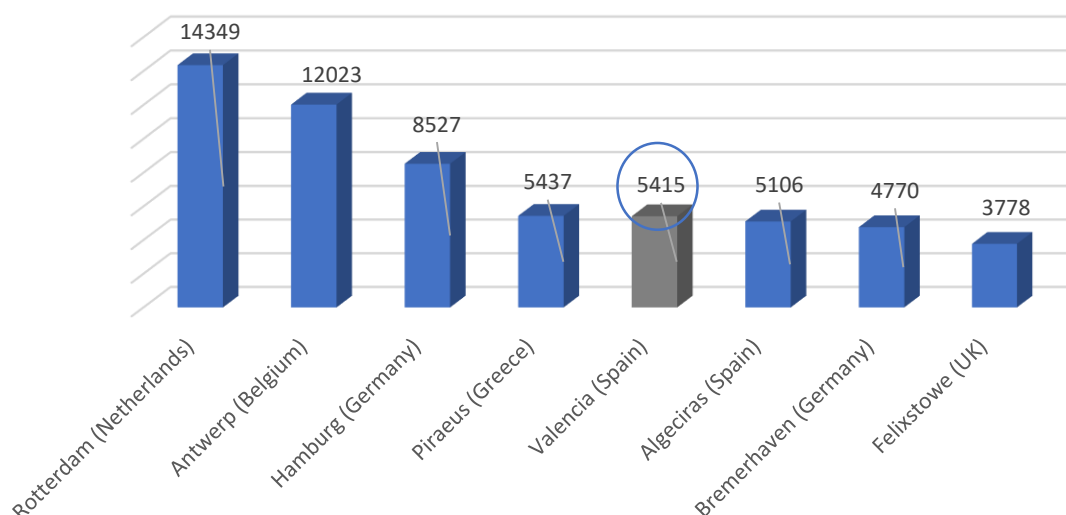
<sup>1</sup> A TEU is the cargo capacity of a standard 20-foot (6.1 m) container.



Ranking	Port	TEU
	<b>VALENCIA (INCLUDING SAGUNTO)</b>	<b>5,428,307</b>

Source: Own elaboration based on Alphaliner.

Graph 1. Ranking of Europe's largest container ports in 2020, by throughput (in thousands of TEU\*)



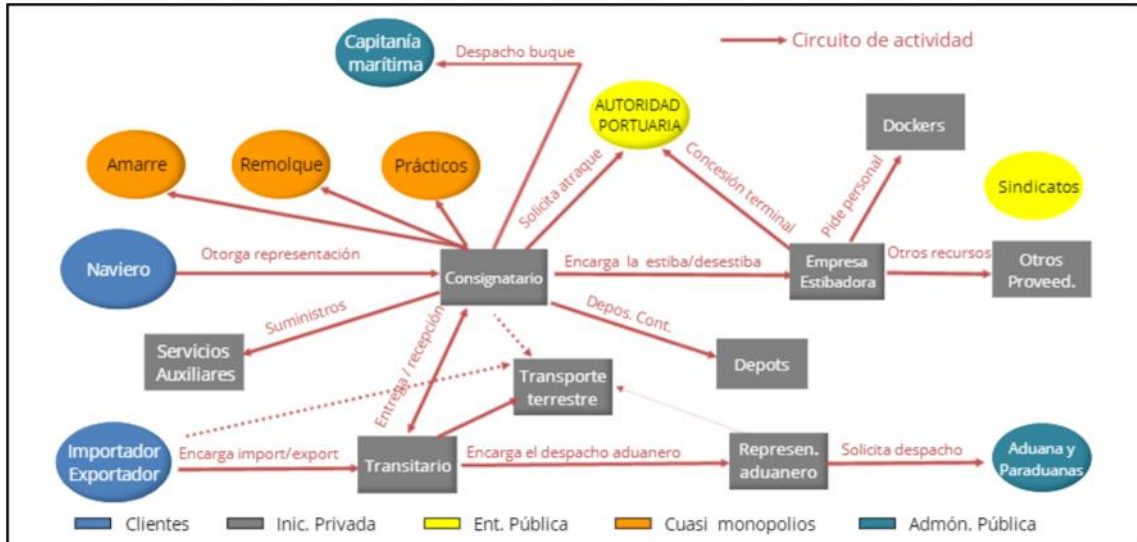
Twenty - foot Equivalent Unit means Twenty Foot Equivalent Unit.

Source: Shanghai Maritime University

On the other hand, the **network of people** directly related to the port's own activity is called the **Port Community** or, in its **cluster** conception, the **Port-Logistic Community**. It integrates all those public and private agents with functions and attributions in the services generated "within" the port itself, who intervene directly or indirectly in the section of the global supply chain that crosses this transport node, in a more physical sense (Diagram 1).



Scheme 1. Map of public and private stakeholders in the Valencia port community



Source: Huet (2000)

Among the various agents, it is worth highlighting the following (Monfort et al., 2011b, Port Services Course of the Valenciaport Foundation):

- ✓ **Customs (Custom-house, customs):** the administration responsible for monitoring the entry and exit of goods into and out of the country (in the case of EU countries, the Community territory) and for collecting customs duties and other taxes on the traffic of goods, as well as enforcing the legal rules of monetary and economic control.
- ✓ **Official Inspection Services:** These are the services developed by certain bodies of the General State Administration, which are responsible for the control and inspection of imported and exported products, in order to ensure that they meet the appropriate hygienic-sanitary, commercial quality and industrial safety conditions.
- ✓ **Customs representative:** is the natural or legal person who is the importer's and exporter's legal representative before Customs, responsible for carrying out before Customs, and also before the Official Inspection Bodies, the corresponding customs clearance formalities for the goods, in any of the cases, import, export or transit.
- ✓ **Shipowner:** is the person who, whether or not he is the owner, equips and equips the ship, making it technically and legally seaworthy. In other words, he is the one who prepares the ship for its operation, obtaining a return on the freight of goods or passenger transport.



- ✓ **Shipowner:** is the person who, in his own name, assigns the vessel to the transport of persons or goods. In other words, he is the owner of the maritime transport company. There are two types of shipping companies: the owner-shipowner, who commercially operates his own ship, and the charterer-shipowner, who operates a ship that is not his own on a charter basis.
- ✓ **Port Authority:** 'Port authority' or 'managing body of the port' means a body which, whether or not in conjunction with other activities, has as its objective, in accordance with national legislation or regulations, the administration and management of the port infrastructure and the coordination and control of the activities of the different operators present in the port or port system concerned. It may consist of several separate bodies or be responsible for more than one port.
- ✓ **Master or Shipmaster:** is the person who assumes the technical direction and responsibility for navigation and who also has and exercises legal, notarial, procedural and governmental responsibilities on board.
- ✓ **Harbour Master:** this is the body responsible for the control of maritime traffic. Its most representative functions include authorising or prohibiting vessels from entering or leaving national waters, demarcating anchorage and manoeuvring areas, and setting berthing criteria for vessels carrying dangerous goods.
- ✓ **Ship's Agent:** is the natural or legal person who acts in the name and on behalf of the shipowner or ship operator. He/she takes care of the administrative, technical and commercial formalities at the port related to the entry, stay and departure of the ship.
- ✓ **Ship chandler (supplier):** is the company in charge of supplying the berthed ship with the services it needs to continue its navigation. It is usually coordinated with the ship's consignee to ensure that the call is not delayed beyond the time strictly necessary.
- ✓ **Stevedoring company:** company in charge of carrying out port handling operations (loading, unloading, handling, reception and delivery) of goods. It is generally the holder of an administrative concession granted by the corresponding Port Authority, which entitles it to use, on an exclusive basis, a space located in the vicinity of the quay edge, where it carries out its work.
- ✓ **Tug Company:** a company providing the port service of port towage, the purpose of which is the nautical operation of assisting the movements of a vessel, known as towing, following the instructions of the master of the vessel, by means of the assistance of one or more other vessels, known as tugboats.
- ✓ **Port pilots (pilot service):** They provide the port pilotage service consisting of advice to the ship's master, to facilitate the entry of the ship into the port, the departure and the nautical manoeuvres within the port.





- ✓ **Mooring and unmooring company:** company that provides the port mooring service, the purpose of which is to collect the mooring lines of a vessel, carry them and secure them to the elements provided for this purpose in the berthing facilities (bollards or bollards), following the instructions of the ship's master. The unmooring service consists of unmooring the mooring lines in the order established by the master when the vessel is unmoored.
- ✓ **Exporter:** The natural or legal person who legally sends national or nationalised products abroad, for the purpose of their use and consumption abroad.
- ✓ **Importer:** A natural or legal person who purchases goods from abroad or who contracts services provided by persons from other countries.
- ✓ **Railway Undertaking:** company responsible for the physical execution of rail transport, for which it has the necessary means: traction elements, wagons or platform, etc. In the European Union, it pays a fee to the railway infrastructure management body, which depends on the State Administration of each country, which also grants the operator's licence.
- ✓ **Rail Operator:** An undertaking that can request infrastructure capacity and intermediate in the rail transport market. They are usually shippers, passenger or freight forwarders and combined transport operators. It organises rail transport but does not legally need to have the means.
- ✓ **Logistics operator (logistics supplier):** a company that carries out activities that add value to the core business of its customers, such as transport, storage, distribution, inventory maintenance, stock control, order processing, packaging, assembly, transmission of information, collection on behalf of the customer, etc.
- ✓ **Freight forwarder:** a natural or legal person whose function is to organise the transport of goods on an international scale as a whole. He is an intermediary between the exporter and the transport companies. It is the person who knows the whole chain and who organises the link between the different modes of transport, ensuring the continuity of transport through different means of transport.
- ✓ **Land transport operator (haulier),** whether self-employed or fleet operator is the natural or legal person who holds an authorisation to provide land transport services. In the legal texts, he/she is referred to as a carrier.



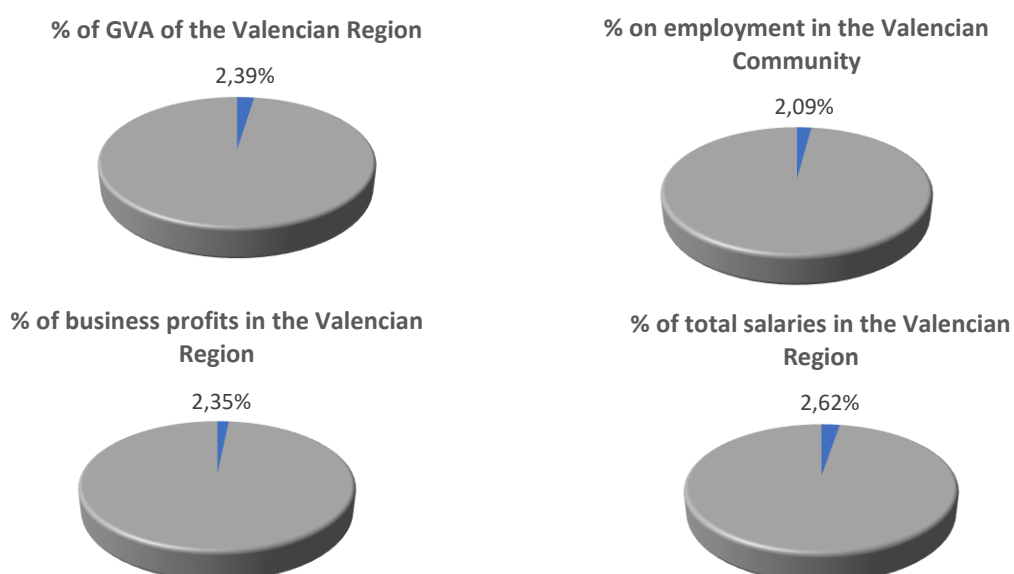
## 1.2/ MACROECONOMIC DIMENSIONS AND EMPLOYMENT

A study carried out in 2016 by the Port Authority of Valencia showed that **the port activity of the ports of Valencia, Sagunto and Gandía is a generator of wealth and employment for the region**. Specifically, the port activity of the three ports showed the following results in 2016 (Graph 2): <sup>2</sup>

- ✓ **2.09% of employment in the Valencian Community**, with nearly **39,000 jobs**.
- ✓ **2.62% of total wages in the region**, with a value of almost 1.25 billion euros.
- ✓ **2.39% of the Gross Value Added (GVA) pm**.
- ✓ **2.35% of business profits in the Valencian Community**, with more than 1,000 million euros.

These data also show that employment in the three ports **is more productive than the average employment in the Valencian Community**. This is due to the fact that the percentage of employment is lower than the results achieved in Gross Value Added, company profits and total wages.

Graph 2. Economic impact of the ports of Valencia, Sagunto and Gandia on the region (2016)



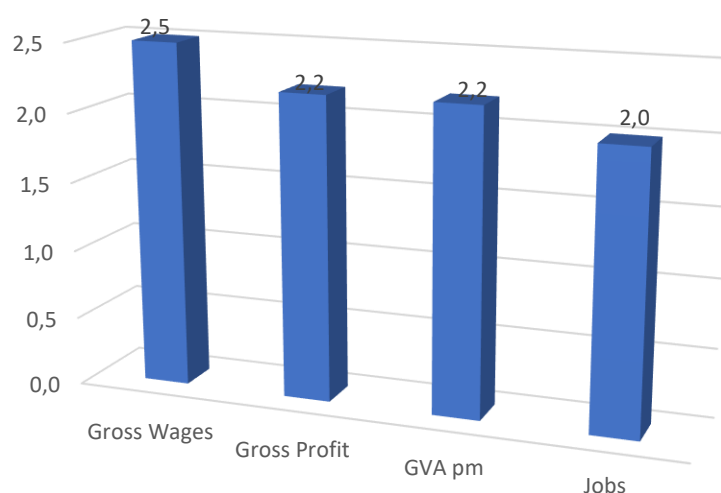
Source: Own elaboration from <https://www.valenciaport.com/autoridad-portuaria/sobre-valencia-port/impacto-economico/>

<sup>2</sup> <https://www.valenciaport.com/autoridad-portuaria/sobre-valencia-port/impacto-economico/>



Of the three ports, the **port of the city of Valencia** is the one which accounts for the bulk of the economic impact on the Valencian Community, as shown in Graph 3. This port accounts for 2% of employment, 2.5% of gross wages, 2.2% of GVA pm and 2.2% of gross profit.<sup>3</sup>

Graph 3. Economic impact of the port of Valencia on the region (2016) (%)



Source: Own elaboration from <https://www.valenciaport.com/autoridad-portuaria/sobre-valencia-port/impacto-economico/>

In addition, the port community of Valencia is also a regional benchmark in terms of **environmental sustainability**, **internationalisation** and **innovation**, as will be explained later.

On the other hand, the INE monitors **employment data** linked to the activities of the port community, providing figures for the province of Valencia and the Valencian Community. The CNAE referred to are: **49 - Land and pipeline transport** and **52 - Warehousing and support activities for transport** (Table 2).

Table 2. National Classification of Economic Activities (CNAEs) for which updated data is available for the province of Valencia and the Autonomous Community of Valencia.

National Classification of Economic Activities
49.- Land and pipeline transport
52.- Warehousing and support activities for transport

<sup>3</sup> <https://www.valenciaport.com/autoridad-portuaria/sobre-valencia-port/impacto-economico/>



In both activities, there is evidence of a **significant recovery in employment** since 2015. In fact, the levels reached in 2019 are higher than those of 2010, that is to say those obtained during the first years of the previous economic crisis (Tables 3 and 4).

In the activity of 49 Land and pipeline transport, employment in the province of Valencia in 2019 totaled 41,400 jobs, which accounted for 59.5% of the total in the Valencian Community and 6.7% in Spain (Table 3).

Table 3. Evolution of employment in 49 National Classification of Economic Activities (CNAE 49)  
Inland and pipeline transport (in thousands)

Year	Province of Valencia	Community of Valencia	Spain
2010	37,7	62,6	581,2
2015	34,6	57,6	529,4
2019	41,4	69,6	618,4

Source: Own elaboration based on INE

**On the other** hand, it is worth highlighting the **significant growth in employment in the province of Valencia and in the Valencian Community**, between 2010 and 2019, in the activity of Warehousing and activities related to transport. In the province of Valencia, specifically, it has gone from 7,100 workers to 17,000. In 2019, this employment represented, within the framework of this CNAE, 64.4% of the Community of Valencia and 7.7% of Spain (Table 4).

Table 4. Evolution of employment in 52 National Classification of Economic Activities (CNAE 52)  
Warehousing and activities allied to transport (in thousands)

Year	Province of Valencia	Community of Valencia	Spain
2010	7,1	11,2	157.0
2015	13,4	17,8	175.3
2019	17,0	26,4	220.4

Source: Own elaboration based on INE.

However, it must be taken into account that, in some economic activities specific to the port community (50 - Maritime and inland waterway transport), it is not possible to access updated statistical data linked to the province of Valencia and the Valencian Community. Nor is it possible to obtain three-digit data for CNAE 49 and 52.





The **most difficult occupations to fill** in the Valencian Community are related, for years, to **employment linked to maritime activity**.

**However, it** should be noted that, according to SEPE data from the last quarter of 2020, **18 of the 20 occupations that are most difficult to fill (in the province of Valencia) are linked to maritime activity**, particularly with regard to employment on ships. These occupations have been difficult to fill since previous years.

Table 5. Hard-to-fill occupations in the province of Valencia (fourth quarter of 2020)

Code	Description
151.101.4	naval refrigeration engineers
8340.104.8	deckhands
3151.103.6	naval engineers
3151.104.7	coastal mechanics
3151.105.8	naval mechanics
3152.104.4	merchant ship pilots
3152.106.6	ship pursers
3721.104.4	professional sportsmen and women
3722.102.9	sports coaches
3833.101.5	radio-electronic officers of the merchant navy
5110.101.5	SHIP COOKS
5821.101.8	passenger ship attendants
5821.103.6	ship's stewards
5821.104.5	ship stewards
8192.101.0	boilermakers (master craftsmen)
8192.102.1	ship's engine oilers
8340.101.5	specialised ship firefighters
8340.102.6	deck petty officers (except fisheries)
8340.103.7	deck seamen (except fishermen)
3151.102.5	chief engineer officers of merchant vessels
151.101.4	naval refrigeration engineers
8340.104.8	deckhands
3151.103.6	naval engineers
3151.104.7	coastal mechanics
3151.105.8	naval mechanics
3152.104.4	merchant ship pilots
3152.106.6	ship pursers
3721.104.4	professional sportsmen and women
3722.102.9	sports coaches
3833.101.5	radio-electronic officers of the merchant navy
5110.101.5	SHIP COOKS
5821.101.8	passenger ship attendants



Code	Description
5821.103.6	ship's stewards
5821.104.5	ship stewards
8192.101.0	boilermakers (master craftsmen)
8192.102.1	ship's engine oilers

Source: <https://www.sepe.es/HomeSepe/empresas/informacion-para-empresas/profesiones-de-dificil-cobertura/busqueda-ocupaciones-dificil-cobertura.html?mgnlFormToken=fc93f80b-d0af-476b-babd-2aa040e415f7>



## 1.3/ MAIN TRENDS IN THE LOGISTICS / PORT SECTOR

Some of the most important trends in the international port and logistics sector that are transferable to the port community of Valencia are set out below.

These trends (Table 6) have been identified both from interviews with experts from the Valencia port community and from the review and analysis of various documentary sources.

### TRENDS

These are the **new international scenarios and priorities** towards which the **logistics / port sector** must converge.

Table 6. Major international trends

Trend		Highlights
1	<u>SENSORISATION OF THE PORT'S PHYSICAL ENVIRONMENT.</u>	1.1. Installation and optimisation of <b>equipment and sensor networks</b> . 1.2. Financing of the new resources through the <b>Connecting Europe Facility (CEF)</b> .
	<u>PREDICTIVE MODELLING AND DATA ANALYSIS</u>	2.1. <b>Technological information</b> management (e.g. through Big Data). 2.1. Application of <b>predictive models</b> .
	<u>OPTIMISATION AND INTEGRATION OF OPERATIONS</u>	3.1. <b>Single management</b> of port activity areas. 3.2. <b>Synergies and synchronisation</b> between the different areas. 3.3. Terminal and vehicle <b>automation</b> .
	<u>INFORMATION SECURITY AND VISIBILITY</u>	4.1. Blockchain installation ( <b>logistics traceability</b> ). 4.2. Implementation of <b>4.0 technology and drones</b> .
5	<u>ENERGY AND ENVIRONMENT</u>	5.1. <b>Energy efficiency and self-sufficiency</b> . 5.2. <b>Decarbonisation and elimination of emissions</b> . <b>Circular economy</b> .
	<u>SAFETY AND SECURITY</u>	6.1. <b>Innovations in physical protection / ergonomics</b> . 6.2. Implementation of <b>cyber-security models</b> .
	<u>COMPLEXITY AND REGULATORY REQUIREMENTS</u>	7.1. <b>Regulatory changes</b> are more frequent than in other sectors. 7.2. Demanding <b>responsiveness and flexibility</b> from companies.
8	<u>NEW BUSINESS MODELS.</u>	8.1. <b>Technification and process improvement</b> . 8.2. <b>Global digital platforms</b> . 8.3. <b>Full traceability</b> .
	<u>PORT / CITY INTEGRATION AND COLLABORATION</u>	9.1. <b>Social sustainability / Corporate Social Responsibility (CSR)</b> .



Trend		Highlights
		9.2. <b>Joint commitments</b> (port and local community).
	<u><b>ROAD CONNECTIVITY AND INTERMODALITY</b></u>	10.1. Agreements with <b>local community and other regions</b> . 10.2. Promotion of <b>rail intermodality</b> .
	<u><b>REALIGNMENT OF PROFESSIONAL PROFILES TO MEET INNOVATION CHALLENGES AND PROJECTS</b></u>	11.1. <b>Realignment</b> of occupational profiles. 11.2. Elaboration of <b>qualification needs diagnoses and implementation of training plans</b> .

## 1. SENSORISATION OF THE PHYSICAL ENVIRONMENT OF THE PORT

Sensorisation is a technological trend that has gained ground internationally in recent years in very different economic sectors and value chains.

In particular, the sensorisation of port facilities involves the implementation of **new technologies** <sup>(4)</sup>e.g. 4.0 resources), with the main objective of both identifying and tracking the presence of goods and other objects and carrying out measurements. In addition, the use of new technologies and digitisation processes has been reinforced in the 2020 / 2021 **pandemic**. <sup>5</sup>

In the context of this trend, it should be noted that the **European Green C Ports project** has foreseen an initial investment of 1.3 million euros in the implementation of equipment and sensor networks, half of which will be financed through the Connecting Europe Facility (CEF) funds. <sup>6</sup>



## 2. PREDICTIVE MODELLING AND DATA ANALYSIS

Another trend is marked by the utilities generated by technical components and other resources, such as **Big Data** or the management of massive devices. Such resources serve as tools for the application of models that gather the most accurate (technological) information; in order to develop predictions on the evolution of the main dimensions that determine port management.

<sup>4</sup> In this sense, it is worth highlighting, for example, the existence of the Ports 4.0 programme, promoted by the Ministry of Transport, Mobility and Urban Agenda. It is mainly aimed at financing the implementation of this type of resources. It is conceived as "a corporate open innovation model adopted by Puertos del Estado and the Spanish Port Authorities to attract, support and facilitate the application of talent and entrepreneurship to the Spanish public and private port-logistics sector in the context of the 4th industrial revolution". <http://www.puertos.es/es-es/Paginas/ports40.aspx>

<sup>5</sup> UNCTAD (2020), *Pandemic reduces global maritime trade and transforms industry*. Press release. <https://unctad.org/es/press-material/la-pandemia-reduce-el-comercio-maritimo-global-y-transforma-la-industria>

<sup>6</sup> See El Mercantil 17/6/2020. <https://elmercantil.com/2020/06/17/el-puerto-de-valencia-agudiza-sus-sentidos-con-la-sensorizacion-de-sus-instalaciones/> (17/06/2020).





### 3. OPTIMISATION AND INTEGRATION OF OPERATIONS

Another trend to be highlighted is linked to the promotion of a single management of the different areas of port activity, generating integrations and promoting synergies and **synchronisations**.

This implies the incorporation of technological innovations, in particular regarding the **automation** of terminals and vehicles.

### 4. INFORMATION SECURITY AND VISIBILITY

Linked to the issues described above, another trend is associated with the need to guarantee at all times, by means of **technological devices** (drones or blockchain technology such as the TradeLens platform, for example), the **traceability** of logistics or port activity in terms of **security and visibility** of information.<sup>7</sup>

### 5. ENERGY AND ENVIRONMENT

International trends call for a redoubling of efforts in terms of **energy efficiency and self-sufficiency, decarbonisation and the elimination of emissions**, as well as the incorporation of instruments that contribute to progress in the **circular economy**.

The significant results achieved in recent years in the area of environmental sustainability by the Valencia port community lay the foundations for facing the new challenges in this area.

In order to reinforce the trend and challenges in the European Union, the **European Green Pact** has been agreed in 2019 to provide a roadmap for a sustainable economy to make the continent emission neutral by 2050.<sup>8</sup>



Related to the commitment of the port community of Valencia to this trend, it should be noted, for example, the celebration, in 2018, of the GreenPort Cruise & Congress.

<sup>7</sup> For further information, see for example Juárez, H. H. (2020), "Trazabilidad de la cadena logística. Hacia una visión integral y sistémica de las operaciones aduaneras", *Jurisprudencia argentina*, nº1, fascicle 10. Págs. 27 - 41.

<sup>8</sup> [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_es](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_es)



And, more recently in 2020, it should be noted that the Green C Ports project was honoured by the EnerTIC Awards 2020, in the innovation and technology awards for energy efficiency in the digital era, in the Resilient Infrastructure category. In addition, in 2020, the port renewed (for the sixth time) the Port Environment Review System (PERS) certification, part of EcoPorts.

## 6. SAFETY AND SECURITY

International trends call for increased efforts to eliminate incidents and accidents. This requires incorporating improvements in the areas of **physical protection, ergonomics and cybersecurity models**; by virtue of the innovations (technological or otherwise) that have been obtained.

However, in recent years, significant progress has been made (in the port community of Valencia) in the areas of **prevention, safety and occupational health and safety**.

## 7. COMPLEXITY AND REGULATORY REQUIREMENTS

Logistics and port activity or **international trade** are among the most regulated economic and business areas, at regional, national and European level.

Regulatory complexity and requirements have grown in recent years. Consequently, this new situation calls for the need for companies to be continuously more responsive and flexible in adapting to new legal requirements.

## 8. NEW BUSINESS MODELS

Another trend is related to the new demands on logistics or port companies to incorporate **innovations** in their business models, in accordance with the new challenges and opportunities that the sector presents. This trend means continuing to advance in the **technification or improvement of processes** by means, for example, of **global digital platforms** for customer relations or new actions that guarantee **total traceability**.

## 9. PORT / CITY INTEGRATION AND COLLABORATION

Another important point is related to the need to strengthen ties and combine objectives between the port and the local community. This trend calls for joint commitments, in



terms of social sustainability or **Corporate Social Responsibility (CSR)**, in areas such as training and employment, respect for the environment, working towards intermodality or promoting a shared identity.<sup>9</sup>

## 10. ROAD CONNECTIVITY AND INTERMODALITY

Further developing and improving connectivity and intermodality, in partnership with the local community and other regions, is another international trend. In particular, there is increased interest in promoting **rail intermodality**, either because it is more environmentally sustainable or often more efficient.<sup>10</sup>

## 11. REALIGNMENT OF PROFESSIONAL PROFILES TO MEET INNOVATION CHALLENGES AND PROJECTS

Logistics and port companies are one of the sectors most exposed to innovations and transformations, due to the **technological advances** (4.0 resources, Big Data, Artificial Intelligence, etc.) that are constantly taking place, to the new demands of the global environment or to continuous regulatory changes. Consequently, the objectives and tasks of jobs, whether sector-specific or cross-sectoral, require continuous readjustment. And this, at the same time, implies defining and implementing qualification needs diagnoses and, on the basis of these diagnoses, adjusted training plans.

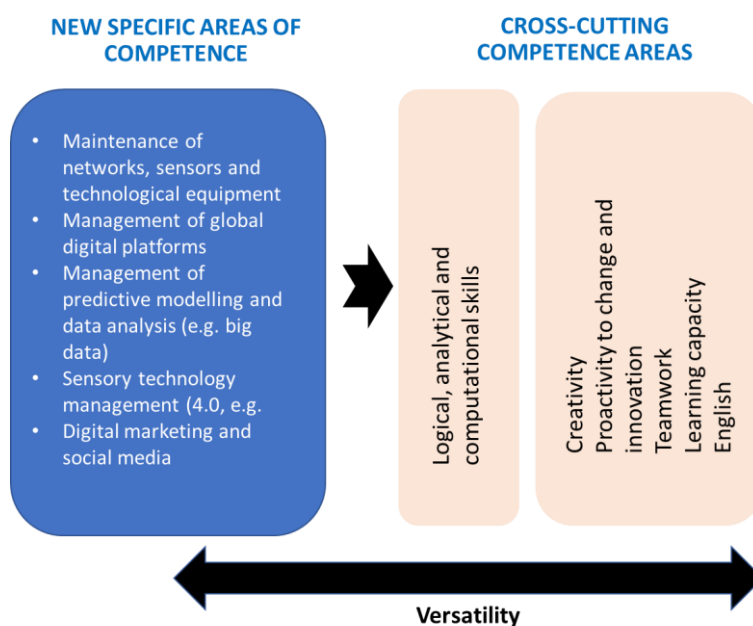
This trend is therefore marked by the need for workers to assimilate and deploy **new digital skills** and to be able to apply greater analytical skills. More **versatile professional profiles** and more multidisciplinary work within **matrix organisational structures** are increasingly in demand. At the same time, knowledge and use of **English** is a requirement as well as an added value.

<sup>9</sup> To investigate the possibilities and ways of port-city cooperation, see for example Maratuech Pinzás, J. A. (2015), *Modelo de gestión para la integración ciudad - puerto en función a la cadena logística en el puerto del Callao*, Doctoral thesis, Universidad Politécnica de Catalunya & Universidad Peruana de Ciencias Aplicadas.

<sup>10</sup> Between 2007 and 2018, in terms of tonnage, maritime-rail transport grew by 26.5% in Spain, while the overall figures for multimodal chains show a decrease of 0.9% in the same period. Ministry of Transport, Mobility and Urban Agenda, *Annual Report of the Transport and Logistics Observatory in Spain (2019)*. P. 256.



Figure 4. New professional profiles and areas of competence



Source: Own elaboration based on documentary review and expert interviews.

In relation to the professional profiles, it should also be highlighted that **vocational training is** a very important way for the labour insertion or for the requalification of workers in the logistics/port activity.

The training cycles best suited to the specific occupations of the logistics / port sector are two: **International trade**, on the one hand, and **transport and logistics**, on the other.



Vocational training, both dual and non-dual, is also one of the **priorities of the** Community of Valencia's **education and employment policy**.<sup>11</sup>

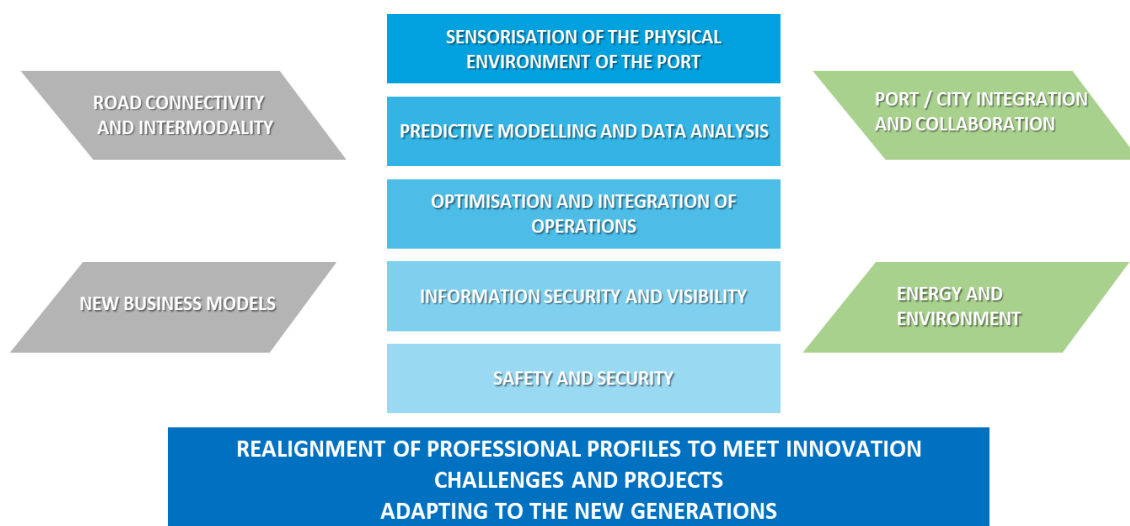
<sup>11</sup> With regard to Dual Vocational Training, in particular, it should be noted that the Vocational Family of Commerce and Marketing, in the field of higher education, is the third with the highest number of agreements in the province of Valencia. During the academic year, 93 agreements were signed. In the Transport and Maintenance of vehicles family, 142 agreements were signed, of which all were for intermediate cycles (see INFYDE, *El modelo de FP dual en la Generalitat Valenciana, Report on the province of Valencia 2019*).



It should also be noted that many of the most highly qualified jobs are filled by **university graduates**. There is no specialised university degree in the logistics/port sector in the region, although work is being done on this.

On the other hand, there is a postgraduate offer, with the **Master's Degree in Port Management** and Intermodal Transport (MGPT), endorsed by the Polytechnic University of Valencia, being an effective means of access for university graduates to the port community of Valencia.<sup>12</sup>

Graph 5. Trends in the logistics / port sector



<sup>12</sup> <https://www.fundacion.valenciaport.com/oferta-formativa/programas-de-postgrado/master/mast03es/>



## 1.4/ SWOT ANALYSIS ORIENTED TOWARDS THE NEEDS OF THE PROFILES OF THE PORT COMMUNITY OF VALENCIA

A SWOT analysis has been carried out to identify the **key or critical points** that characterise the Valencia port community, in order to study how human resources are adapted to the new circumstances and challenges.

Table 7 includes a diagnosis of the port community of Valencia, taking as a reference the **SWOT** dimensions (**Strengths, Weaknesses, Opportunities, Threats and Weaknesses**), oriented towards the needs of the professional profiles.

The SWOT analysis has been carried out on the basis of two main sources of information:

- Interviews carried out with experts from the logistics / port sector of the port community of Valencia.
- Documentary review of the logistics / port sector.

Table 7. SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) of the Port of Valencia

WEAKNESSES	THREATS
1. The <b>DECISIONS</b> of some companies are taken in headquarters not located in Valencia and its surroundings. 2. Lack of <b>INNOVATION CULTURE</b> in some companies. 3. Low presence of <b>INTERMODAL TRANSPORT</b> by rail. 4. Shortage of specialists and workers with the capacity to face the challenges of <b>DIGITAL TRANSFORMATION</b> .	1. <b>INCREASED INTERNATIONAL COMPETITION</b> (sometimes not sufficiently regulated). 2. Some <b>DYNAMICS OF INTERNATIONAL TRADE</b> (e.g. <b>PROTECTIONISM</b> ). 3. CONTINUOUS <b>REGULATORY CHANGES</b> requiring readjustment.
STRENGTHS	OPPORTUNITIES
1. <b>GOOD POSITIONING</b> of the port at international level, thanks to: It is among the main European ports in <b>IMPORT - EXPORT</b> . It has a relevant percentage in <b>BILLING IN TRANSBORD TRAFFIC</b> . Good <b>MARITIME-TERREST CONNECTIVITY</b> . It has <b>MODERN AND INTEGRAL INFRASTRUCTURES</b> . Privileged <b>GEOSTRATEGIC</b> position. 2. <b>INNOVATION PLAN</b> (interest in <b>SMARTPORT</b> ). 3. Good practices of the port in <b>ENVIRONMENTAL SUSTAINABILITY</b> that are international benchmarks. 4. Good <b>INTERACTIVITY</b> between the port and the local community. 6. Support for the <b>ARTICULATION OF THE VALUE CHAIN (SOCIAL CAPITAL)</b> .	1. The <b>MEDITERRANEAN SEA</b> is expected to become one of the main <b>POLES OF DEVELOPMENT IN THE FUTURE</b> . 2. Promotion of <b>INTERMODALITY BY RAIL</b> (e.g. through European policy). 3. Channels for <b>OPEN INNOVATION</b> in <b>DIGITAL TRANSFORMATION</b> (collaboration with R&D&I centres, technology companies or incubators).

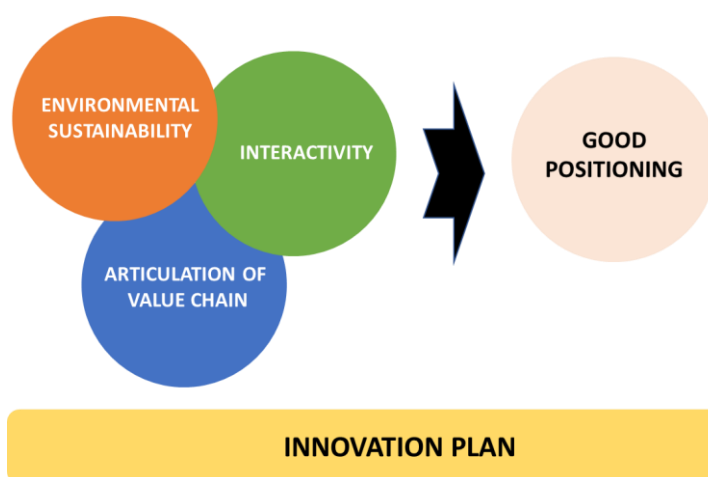




## STRENGTHS

**Strengths** are the **positive internal critical factors** that the Valencia port community has at its disposal.

Chart 6. Strengths of the Valencia port community



Thus, firstly, as far as strengths are concerned, it should be emphasised that the port of Valencia has a **good international position**, mainly for five reasons: it is one of the main European ports for import-export; it is a transshipment port; it enjoys good maritime-land connectivity; it <sup>13</sup>has modern and comprehensive infrastructures and it also enjoys a privileged geostrategic position.

In addition, some of the Port of Valencia's advances in terms of **environmental sustainability** are international benchmarks. This **leadership** is, in turn, an element of great importance which supports the viability of its facilities for the future, considering international trends.

Likewise, the definition and implementation of an **innovation plan**, particularly in terms of Smartport and digital transformation, provides a reference framework on which to plan and develop future R&D&I actions.

<sup>13</sup> The port of Valencia has the highest Port Connectivity Index (PCI) in Spain (Source: United Nations Conference on Trade and Development): United Nations Conference on Trade and Development <https://www.valenciaport.com/negocio/indice-de-conectividad-portuaria/>



On the other hand, the **capacity of the** port and the local community (city, province and Autonomous Community) **to be linked together** is another positive aspect which will serve as a lever for the promotion, growth and strengthening of the port in the years to come.

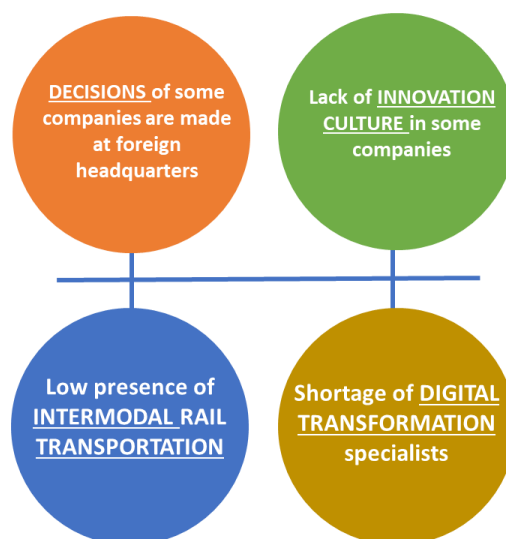
Finally, it should be added that in recent years, **social capital** has been generated among the actors in the value chain, thanks to a large extent to the spaces for collaboration fostered by various bodies, as indicated by the companies and other entities present in the port. In this way, growth and innovation in the port will depend, to a large extent, on the capacity to promote articulation and cooperative strategies in the value chain.

## OPPORTUNITIES

**Opportunities** are the **critical factors**, at the **external** level, that can be exploited for growth and improvement of the positioning of the port community of Valencia.

It must be borne in mind, however, that the growth of the port of Valencia will have to focus on the **North Terminal**. This terminal also aspires to become one of the **main international benchmarks** in environmental sustainability, to become a pole of attraction for qualified workers and, at the same time, to be a new agent of dynamisation of the economic activity of the region.<sup>14</sup>

Graph 7. Opportunities of the Valencia port community



<sup>14</sup> <https://elmercantil.com/2020/11/13/el-puerto-de-valencia-licitara-sus-actuaciones-en-la-terminal-norte-a-principios-de-2021/>



The growth of the port of Valencia will be driven mainly by the **new terminal**.

On the other hand, it must be stressed that it is a great opportunity for the port of Valencia to be located in an **expansive geographical area with ample possibilities for development**, such as the western part of the **Mediterranean Sea**, in order to continue to grow in terms of positioning.

It should also be borne in mind that the promotion of **rail intermodality**, driven for example by bodies such as the European Union, provides an opportunity for innovation and the expansion of logistics infrastructures.

In turn, the opportunities created in terms of **open innovation in the context of** the challenges of digital transformation must be considered, especially to the extent that these can be channelled through cooperation between the main actors in the value chain, on the one hand, and R&D&I centres, technology companies or incubators, on the other.

To all this must be added the **synergies** that can be generated, through the combination of all the opportunities outlined here, in order to continue to drive the continuous improvement, innovation and growth of the port.

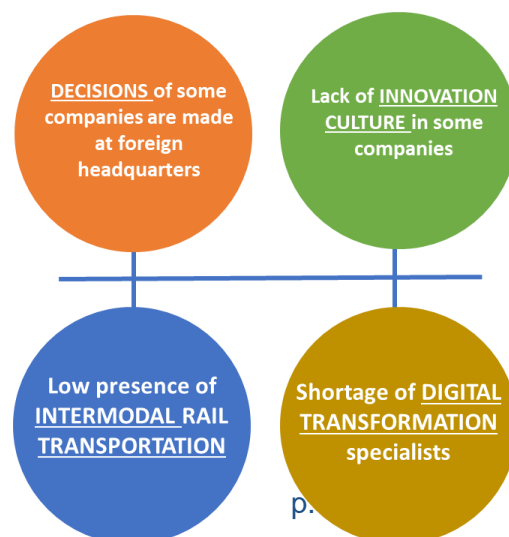
## WEAKNESSES

Weaknesses are the **critical internal** negative **factors** that need to be eliminated or at least reduced.

Therefore, as far as weaknesses are concerned, it should be noted that the **decisions of an important part of the port's companies are taken outside Valencia**, often even outside Spain. This can make it difficult both to adapt the strategies of the companies to the needs and opportunities of the port and to align them with the global interests of the value chain.

On the other hand, although significant progress has been made in the area of R&D&I, some companies are still **not sufficiently aware** of the need for innovation in technology and processes.

Graph 8. Weaknesses of the Valencia Port Community





Another weakness is linked to the fact that **rail transport**, despite the opportunities it presents, is unusual and accounts for a **small share of freight**. Major investments are needed in road and logistics infrastructure, inside and outside the port, to boost rail intermodality.

As far as human resources are concerned, the **lack of specialists** to lead the implementation and maximisation of new technologies and the **lack of digital skills** of a significant part of the workforce in handling the new technological tools are the main weaknesses to be taken into account.

The port community of Valencia will have to gradually incorporate **specific professional profiles in new technologies** aimed at leading the implementation of digital transformation processes. However, at the same time, it will be necessary for all workers to assimilate and deploy new **digital skills** such as 4.0 technology and Big Data, management systems such as ERP, CRM, among others.

In other words, **digital transformation requires the cross-cutting involvement of workers from all types of professional categories and jobs**.

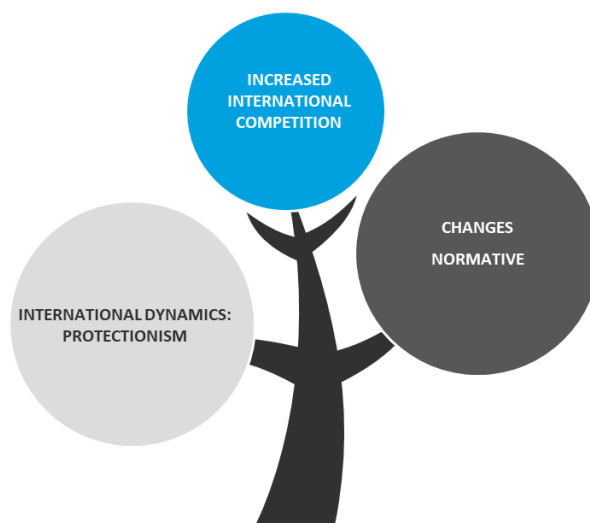
## THREATS

**Threats** are the **external negative aspects** that could hinder the achievement of the objectives of the Valencia port community.

Thus, in relation to the threats, it is worth highlighting the **increase in international competition** which, on occasions, is not sufficiently regulated, especially in developing countries.



Graph 9. Threats to the Valencia port community



In addition, it is important to take into account certain international trade dynamics that may be increasingly prevalent in some territories (linked to **protectionism**, for example) and that may hinder trade transactions.<sup>15</sup>

Finally, another element to consider is **regulatory changes**, which often require companies and workers to continuously readapt to new regulations. This may involve various issues such as, for example, delaying the implementation of projects, reorganising companies, developing training processes and discarding some equipment.

<sup>15</sup> UNCTAD (2020), *Pandemic reduces global maritime trade and transforms industry*. Press release. <https://unctad.org/es/press-material/la-pandemia-reduce-el-comercio-maritimo-global-y-transforma-la-industria>



## CHAPTER 2/ RESULTS OF THE ONLINE SURVEY OF COMPANIES IN THE VALENCIA PORT COMMUNITY

The results of the online survey addressed to all the companies in the port community of Valencia are presented below.

The questionnaire has been divided into the following blocks and number of questions:

- ✓ Company identification and challenges (11 questions).
- ✓ Worker profile and employment (7 questions).
- ✓ Continuous training (5 questions).
- ✓ Knowledge and assessment of the Vocational Training offer (10 questions).

The online questionnaire is included in [Annex 1](#).

The survey was carried out in [February 2021](#). A team of professionals from the Valenciaport Foundation and INFYDE has been in charge of monitoring the completion of the online questionnaire by telephone, in order to obtain as many responses as possible.

The **number of responses obtained amounted to 81**. This is a **significant and representative** number of the total universe of companies in the port community of Valencia. This representativeness has been reinforced by the fact that a significant number of companies from the different economic segments of the port of Valencia have answered the questionnaire.

The survey has been answered by a **representative number of companies**, belonging to the **different economic activities** of the port community of Valencia.

Specifically, the number of responses by economic activity was as follows: <sup>16</sup>

<sup>16</sup> The sum is higher than 81 because companies had the possibility to choose between several answers (multiple choice).





- ✓ Logistics operators / freight forwarders: 43
- ✓ Road hauliers: 31
- ✓ Customs agents / Customs representative: 20
- ✓ Consignees: 18
- ✓ Terminalists: 10
- ✓ Shipping companies: 7
- ✓ Companies located in other activities: 17



At the same time, it is important to bear in mind that, among the companies that responded to the questionnaire, are the **largest in the** port community of Valencia.

Obtaining descriptive data on the companies (such as size or economic activity, for example) has allowed the exploitation of segmented data, with the aim of achieving a more individualised and detailed study of the reality of the port community of Valencia. Likewise, the processing of the data, using the SPSS software, has made it possible to carry out **multivariate analyses** (factorial or multiple correspondence), by combining and graphically representing the responses linked to the most important questions.

The results, which are presented in the following pages, are divided into the following sections:

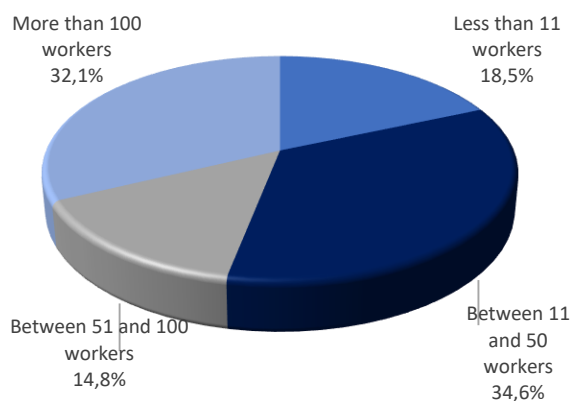
- ✓ Situation and challenges of the port community of Valencia.
- ✓ Worker profile and employment.
- ✓ Continuous training.
- ✓ Vocational training.
- ✓ Presence of Vocational Training students.



## 2.1/ CHARACTERISTICS OF THE ENTERPRISES / RESPONDENTS

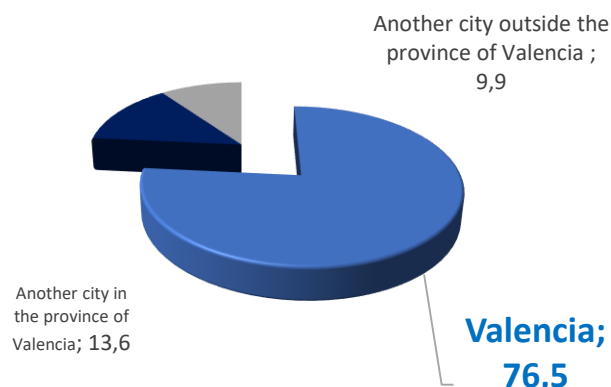
The following graphs show the distribution of the companies surveyed according to **company size**, **location** and the place where **they make the main decisions**.

Graph 10. Distribution by size of the enterprises that participated in the online survey (%)



In line with the above, the companies participating in the online survey are of **varying sizes**. 34.6% have between 11 and 50 employees, 14.8% have between 51 and 100 employees, 32.1% have more than 100 employees and 18.5% have fewer than 11 employees (Graph 10).

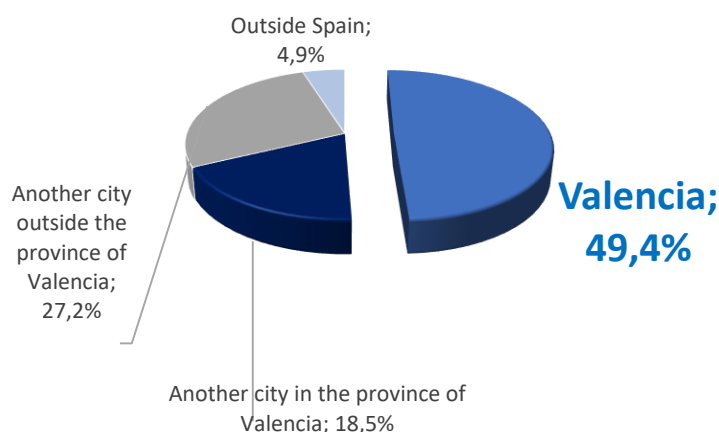
Graph 11. Location of the enterprises that participated in the online survey (%)



**76.5% of the companies are located in the city of Valencia**, another 13.6% in other towns in the province of Valencia (Torrent, Ribarroja de Turia, Alzira, etc.) and 9.9% elsewhere (Graph 11).



Graph 12. Location of the headquarters of the companies that participated in the online survey (%)



Source: On-line survey addressed to companies in the port community of Valencia.

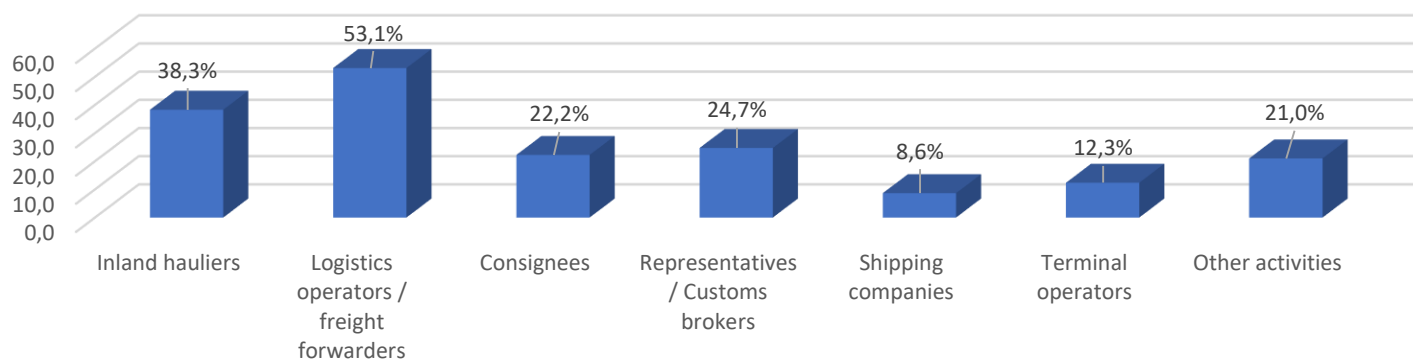
**49.4% of the companies** that responded to the survey **have their headquarters in the city of Valencia, where the main decisions are taken**. 27.2% have their headquarters in other Spanish cities (Madrid, Barcelona, etc.) outside the province of Valencia, 18.5% in other cities in the province of Valencia and 4.9% abroad (Hamburg, Singapore, etc.) (Graph 12).

As mentioned above, the companies that responded to the online survey belong to **different activities**, of which four stand out above all: logistics operators / freight forwarders -53.1%-, inland hauliers -38.3%-, customs agents / representatives -24.7%- and shipping agents (22.2%). This has contributed to having a representative sample of the different economic activities of the port community of Valencia (Graph 13).<sup>17</sup>

<sup>17</sup> This question, as can be seen, was a multiple-choice question, so that companies had the option of selecting different answers related to their activity.



Graph 13. Economic activity of the enterprises that have participated in the online survey (%)  
(multiple response)

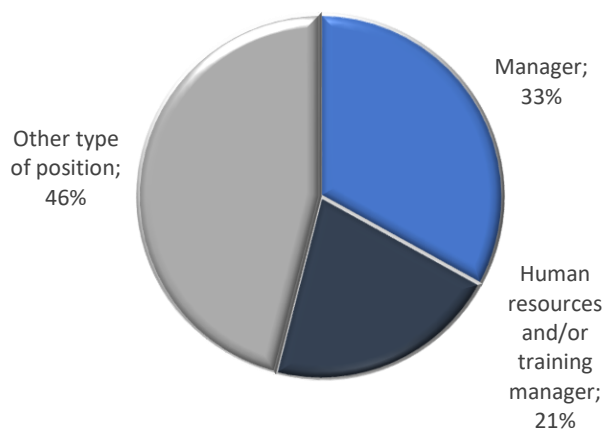


Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

33% of respondents to the online survey are managers, 21% are responsible for human resources and/or training and 46% hold other positions such as logistics managers, financial managers, commercial managers, etc. (Figure 14). (Graph 14).

Graph 14. Job title of respondents to the online survey (%)



Source: On-line survey addressed to companies in the port community of Valencia.

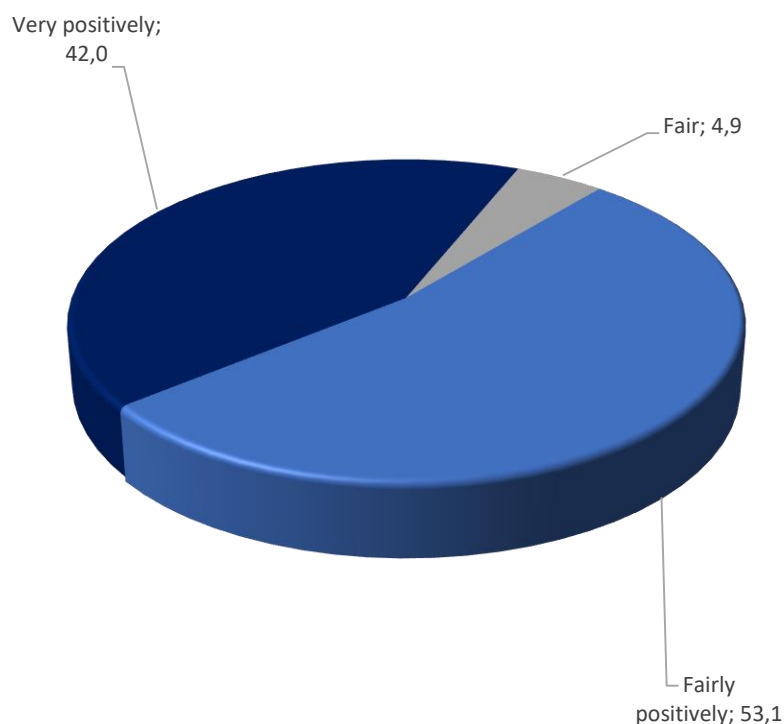


## 2.2/ SITUATION AND CHALLENGES OF THE VALENCIA PORT COMMUNITY

The aim of this section is to find out the company's perception of the **positioning, expectations and challenges** of companies in the Valencia port community.

Thus, the first of the questions relates to the **company's positioning in the market**. Forty-two percent of the companies surveyed rate the positioning very positively and 53.1% quite positively. 4.9% of the companies rate it as average (Graph 15).

Graph 15. How do you currently rate the positioning of your company in the market? (%)



Source: On-line survey addressed to companies in the port community of Valencia.



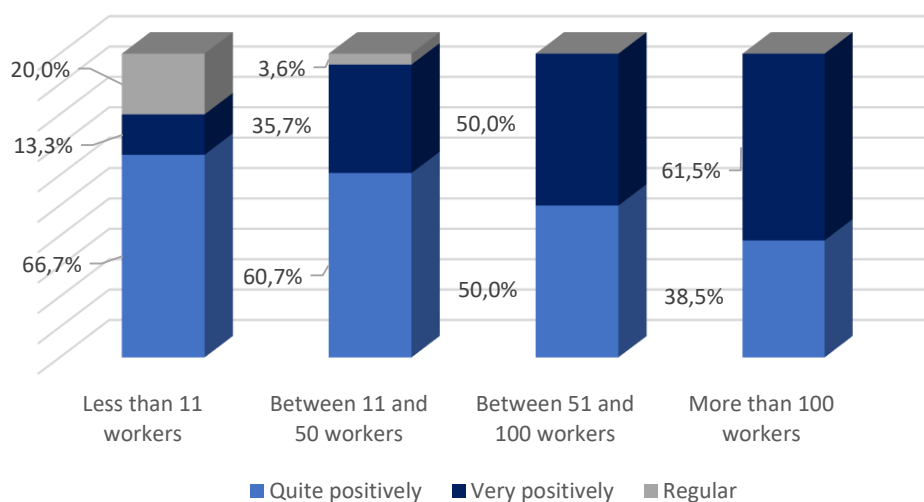
Companies, particularly **larger** ones, tend to **rate their market positioning favourably**.

Positive ratings are in the majority among companies of all sizes. Moreover, none of the companies reveal any negative responses (Graph 16).

In general, **companies are more satisfied the larger they are**. For example, 20% of companies with less than 11 employees rate their positioning as average. On the other hand, all companies with more than 50 employees rate it very or fairly positively (Graph 16).

**Satisfaction with market positioning is general** across all economic activities, although to a lesser extent among **terminal companies**.

Graph 16. How do you currently rate the positioning of your company in the market? (%) (by company size)



Source: On-line survey addressed to companies in the port community of Valencia.

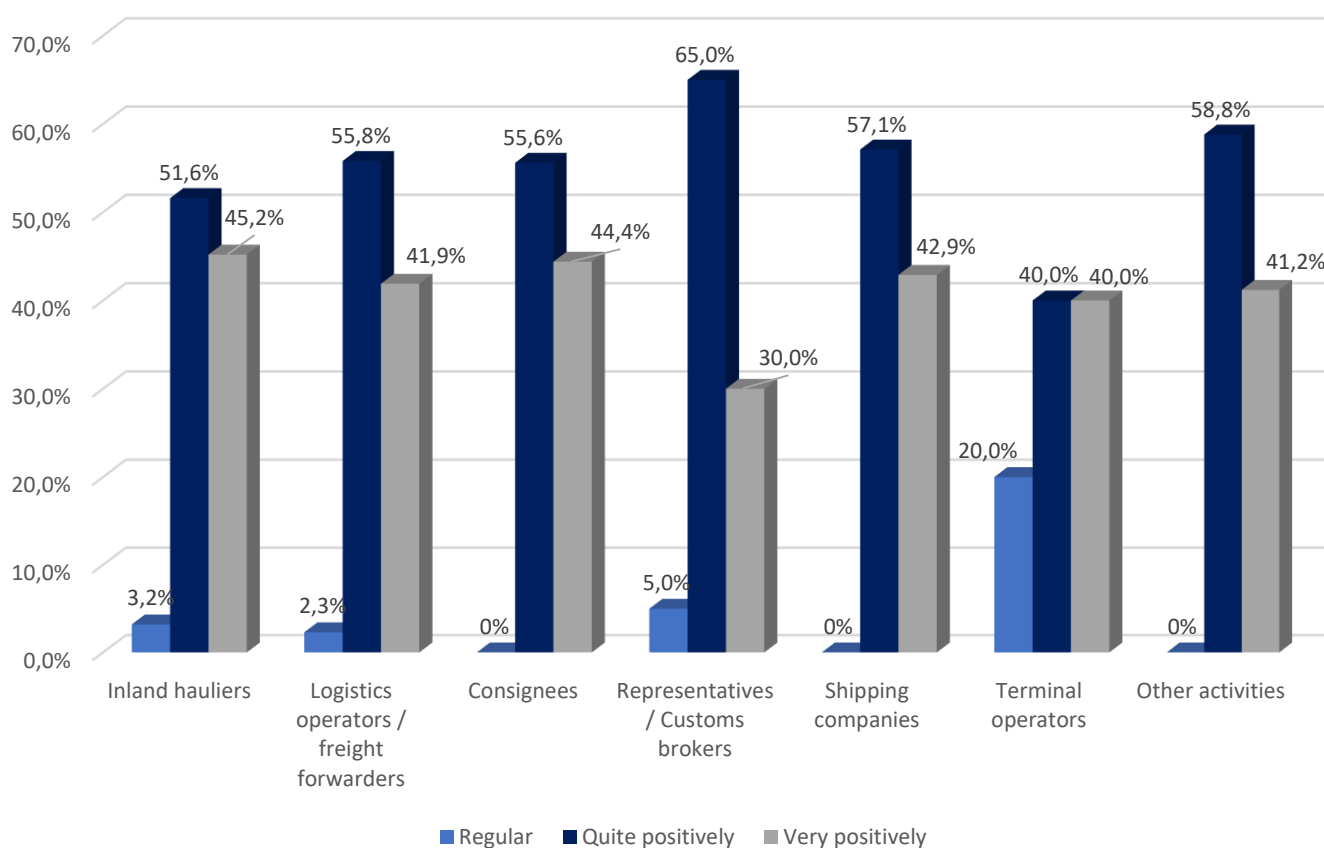
On the other hand, as can be seen in Graph 17, the market positioning of the companies is clearly perceived as satisfactory in all economic segments.

The least favourable opinions are held by the terminal companies, with 20% indicating that the positioning is average. In any case, among these companies, 40% define it as very positive and another 40% as fairly positive (Graph 17).





Graph 17. How do you currently assess the positioning of your company in the market? (%)  
(multiple answer) (according to economic activity)



Companies had the option to select more than one response.

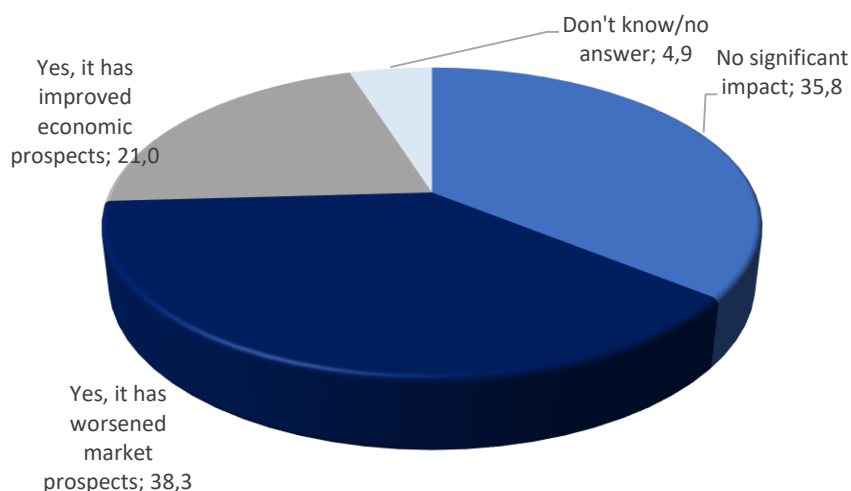
Source: On-line survey addressed to companies in the port community of Valencia.

It should be noted that **56.8% of companies state that the COVID - 19 pandemic has not worsened their market prospects**. Specifically, 35.8% say that it has not had a significant impact (neither positive nor negative) and 21% say that it has improved the economic outlook (Graph 18).

Nearly 3 out of 5 companies indicate that **the pandemic has not negatively affected their economic activity**.



Graph 18. Has the COVID pandemic had an impact on your business? (%)



Source: On-line survey addressed to companies in the port community of Valencia.

**Larger companies are more likely to report that COVID-19 has not had a negative impact on their business.** It should also be noted that, among companies with between 11 and 50 employees, half say that their market prospects have worsened as a result of the pandemic. Among companies with fewer than 11 employees, those that have been neither negatively nor positively affected stand out - 53.3%. Similarly, 40% have seen their situation worsen (Graph 19).

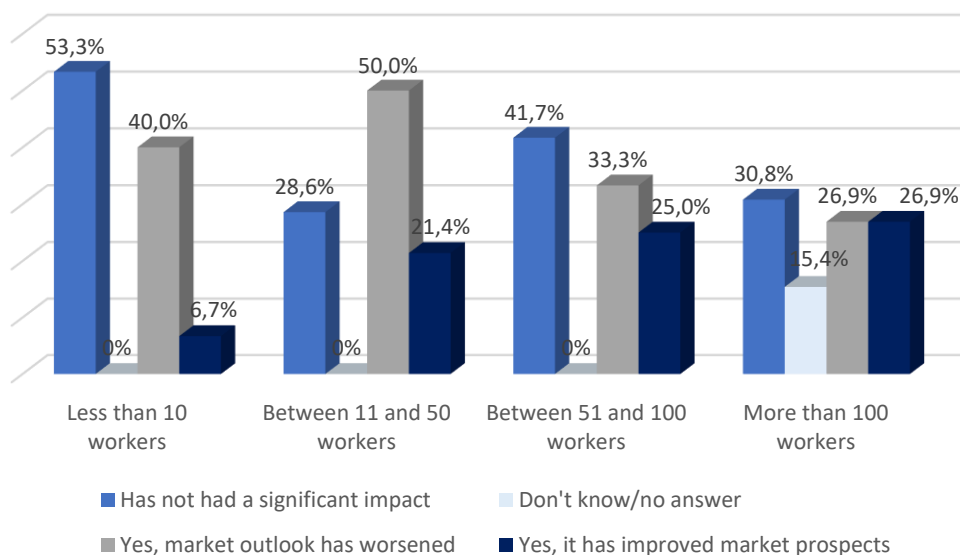
Since the **first State of Alarm** was declared in **March 2020**, the port of Valencia has not ceased its activity, nor has the Port Authority. This has been due either to access to teleworking, in occupations mainly of a transversal nature, or to the use of security measures in those jobs where face-to-face work has been essential.

It should be noted that the Port Authority of Valencia drew up a **contingency plan** aimed at the progressive and dynamic incorporation of workers (essential and non-essential), in accordance with the needs, the rules and the evolution of the pandemic. The aim was to ensure that **teleworking** could continue in most of the jobs that did not belong to the essential services and that could maintain this situation by performing 100% of their tasks, while at the same time favouring situations of work and family reconciliation.<sup>18</sup>

<sup>18</sup> <https://www.valenciaport.com/la-plantilla-de-la-autoridad-portuaria-comenzara-a-incorporarse-a-sus-puestos-a-partir-del-25-de-mayo/>



Graph 19. Has the COVID pandemic had an impact on your business? (%) (by company size)



Source: On-line survey addressed to companies in the port community of Valencia.

The annual report, published by UNCTAD in 2020, highlighted this **contingency plan** as a good practice. It also highlighted three other benchmark experiences: <sup>19</sup>

- ✓ Promoting the exchange of data between companies in the port community, with the aim of guaranteeing fast, secure and real-time access, by means of the enhancement of the **ValenciaportPCS tool** ([www.valenciaportpcs.com/en/](http://www.valenciaportpcs.com/en/)).
- ✓ Campaign **#AlPieDelCañon**, with the aim of disseminating and highlighting the work of the actors in the logistics chain.
- ✓ 10 million in emergency and compensatory measures to **provide liquidity to companies**.

Differentiating now by type of **economic activity**, it must be said that, to a large extent, **the impact of the pandemic has been asymmetric**. Thus, there are **economic segments in which a significant percentage of companies highlight that the pandemic has worsened their market prospects**. These are above all customs representatives / agents - 60% -, logistics

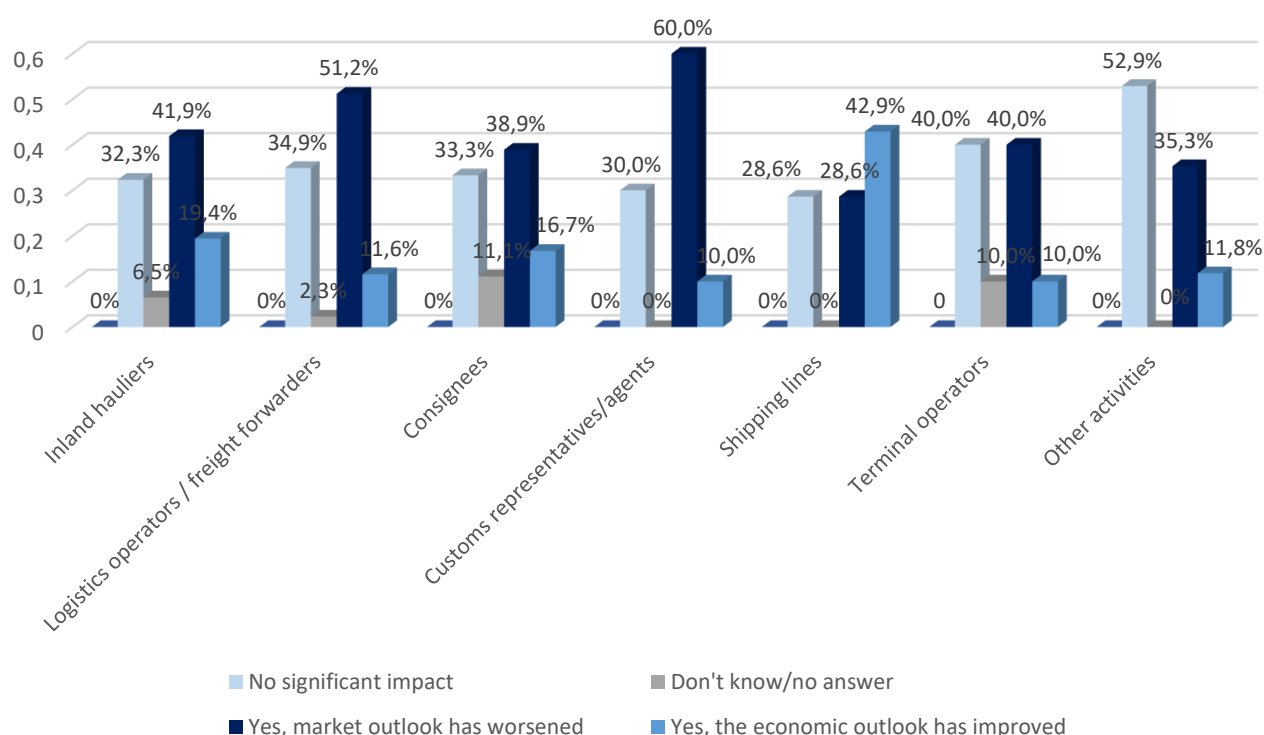
**Customs representatives/agents, logistics operators/forwarders and inland hauliers are the sectors most affected by the pandemic.**

<sup>19</sup> UNCTAD (2020), *Review of maritime transport*. [https://unctad.org/system/files/official-document/rmt2020\\_en.pdf](https://unctad.org/system/files/official-document/rmt2020_en.pdf)



operators / freight forwarders - 51.2% - and inland hauliers (41.9%) (Graph 20).

Graph 20. Has the COVID pandemic had an impact on your business activity? (%) (multiple answer) (according to economic activity)



Companies had the option to select more than one response.

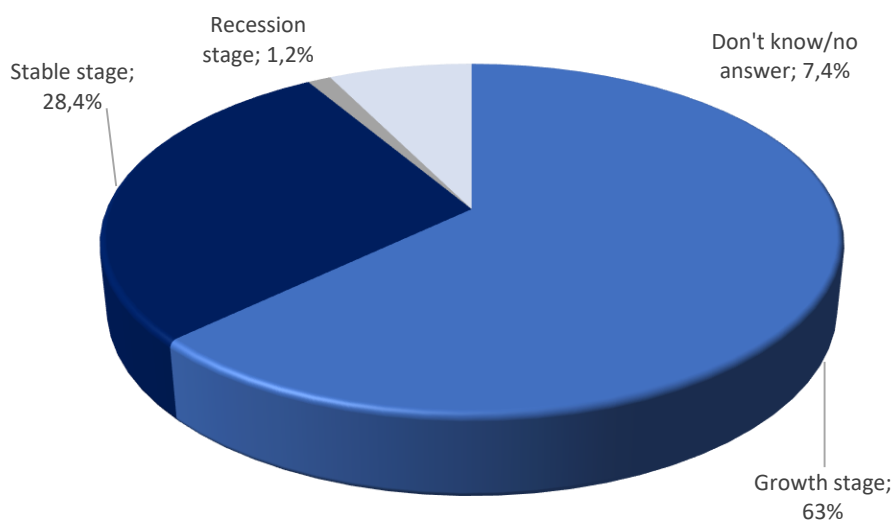
Source: On-line survey addressed to companies in the port community of Valencia.

On the other hand, it is in shipping companies that the economic outlook has improved the most, as 42.9% of the companies reveal. Meanwhile, it is in the companies grouped in "other economic activities" where the impact of COVID - 19 has been less, either positively or negatively. This is what 52.9% of these companies state (Graph 20).

Looking ahead to the next three years, **most companies are optimistic**. Specifically, 63% expect to go through a period of growth and 28.4% of stability. Meanwhile, 1.2% expect to face a period of recession (Graph 21).



Graph 21. What kind of stage does your company expect to go through in the next three years?  
(%)

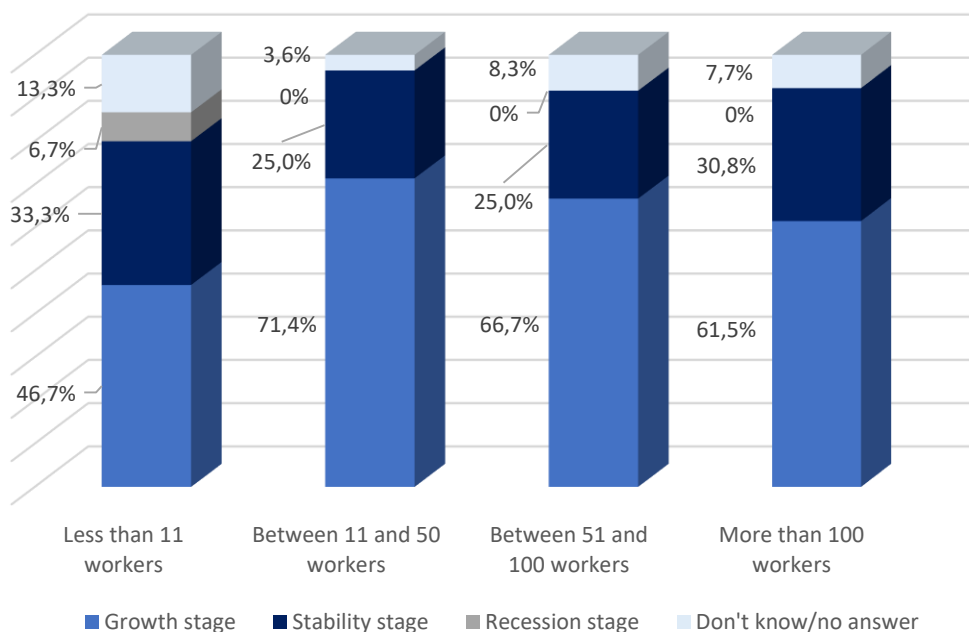


Source: On-line survey addressed to companies in the port community of Valencia.

It is **the smaller companies that are less optimistic**. In this group of companies with fewer than 11 workers, in fact, some - 6.7% - warn that they may experience a recession over the next few years. These companies, as noted above, are also the worst positioned and the most affected by the pandemic (Graph 22).



Graph 22. What type of stage does your company expect to go through in the next three years?  
(%) by company size)



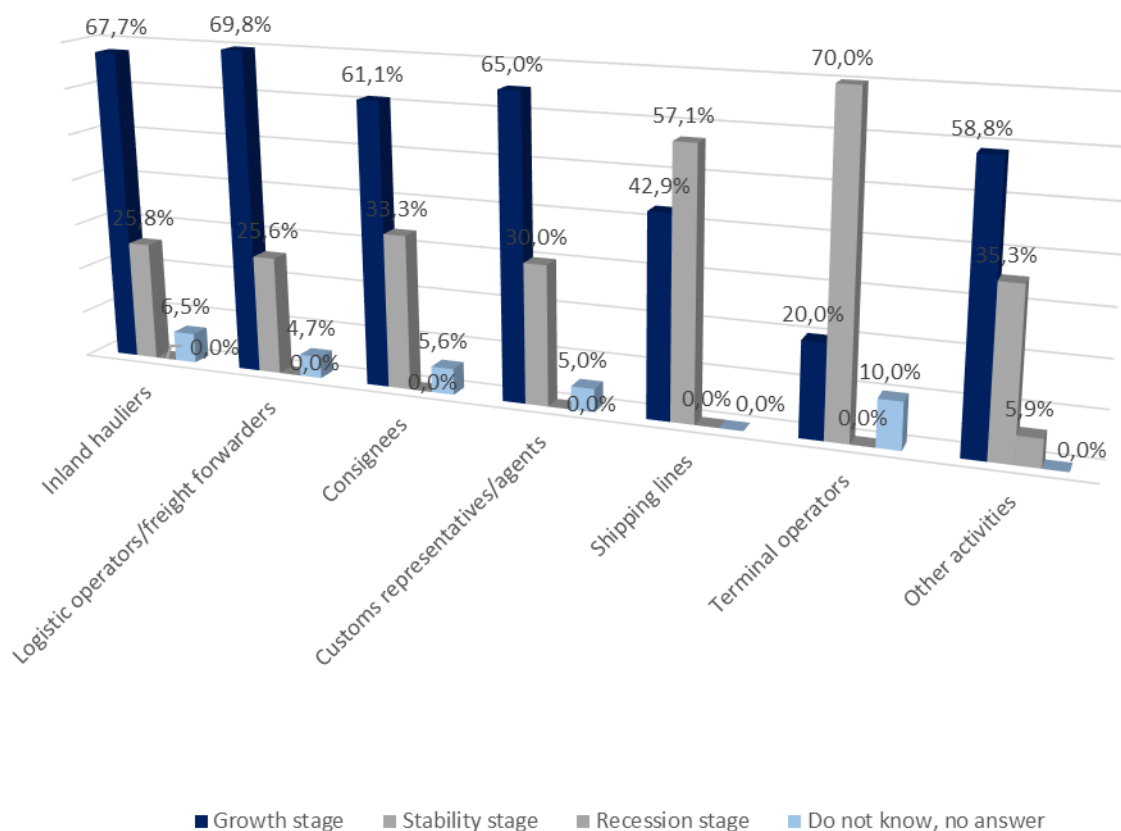
Source: On-line survey addressed to companies in the port community of Valencia.

In all economic activities, with the exception of those linked to **terminal companies** and **shipping companies**, the majority of people say that they are going through a period of growth. It should be borne in mind, as mentioned above, that terminal companies are the ones that perceive themselves to be the worst positioned in the market (Graph 23).





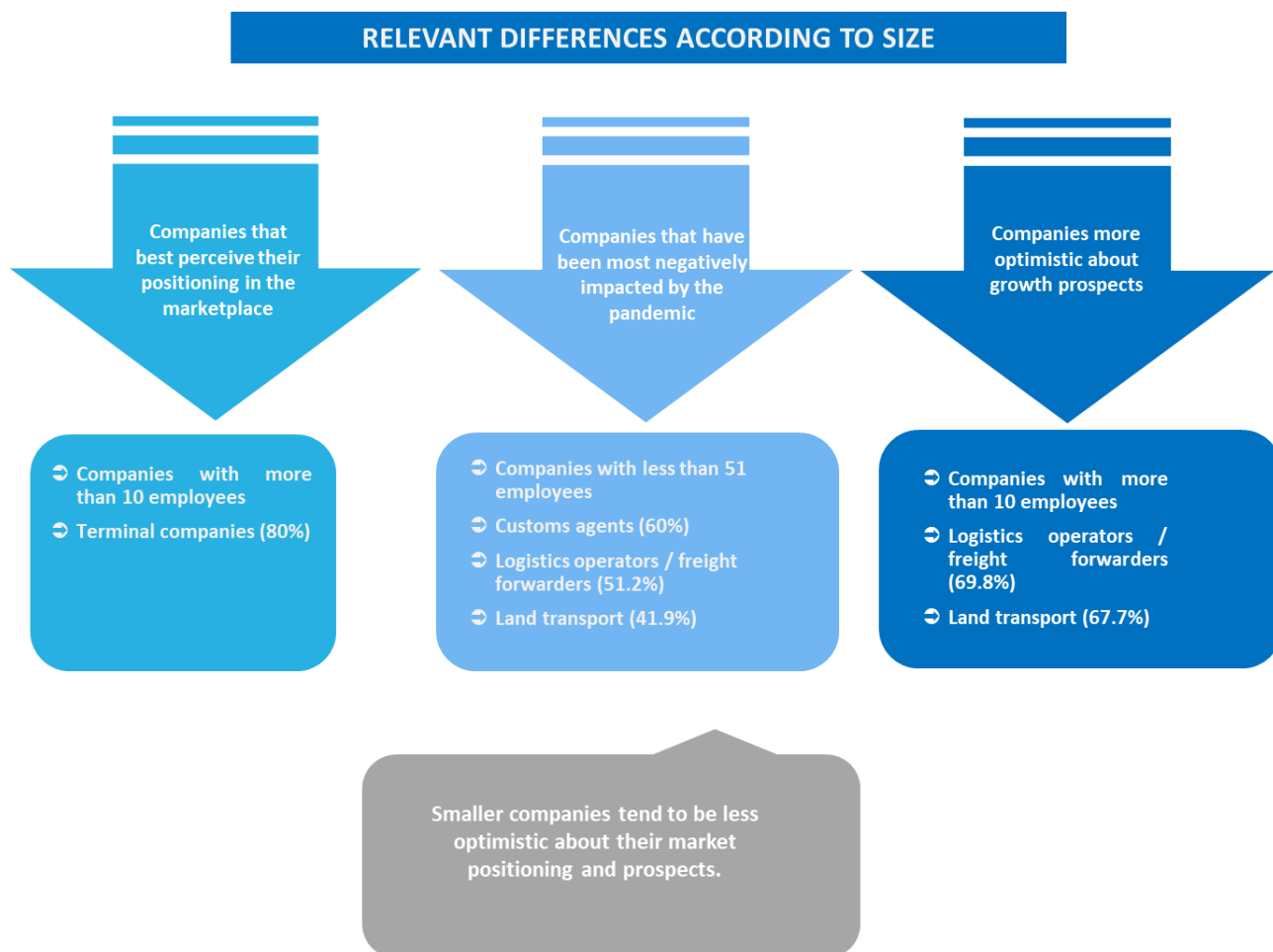
Graph 23. What type of stage does your company expect to go through in the next three years?  
(%) (by economic activity)



Source: On-line survey addressed to companies in the port community of Valencia.



## SITUATION AND PROSPECTS OF THE COMPANIES OF THE PORT COMMUNITY OF VALENCIA



### 2.2.1. ASSESSMENT OF IDENTIFIED TRENDS

Companies were also asked about their commitment to the **trends identified above**. **Eleven questions were** asked to find out whether companies are committed to them, on a scale of 1 to 5, where 1 is not at all and 5 is fully committed. Overall, companies expressed an interest in these trends.



The most favourable responses have been linked to these aspects (Table 8):

- ✓ Adaptation to new regulations (European, state guidelines, etc.) (4.4 arithmetic average).
- ✓ Safety and security (physical protection, ergonomics, cybersecurity models, etc.) (4,3).
- ✓ Sensorisation of the port's physical environment (4.0 technology, Internet of things, etc.) (4.1).
- ✓ New business models (global digital platforms for customer relations, full traceability, incorporation of start-ups, etc.) (4.1. ) (4,1).

Table 8. Indicate whether your company is committed to the following trends

Response	Arithmetic mean	Response rate
Adaptation to new regulations (European, state guidelines, etc.)	4,4	95,1
Safety and security (physical protection, ergonomics, cybersecurity models, etc.)	4,3	93,8
Sensorisation of the port's physical environment (Technology 4.0, Internet of Things, etc.)	4,1	85,1
New business models (global digital platforms for customer relations, full traceability, incorporation of start-ups, etc.). )	4,1	93,8
Road connectivity and intermodality	4,0	82,7
Readjusting professional profiles to meet innovation challenges and projects	4,0	86,4
Optimisation and integration of operations (automation of terminals and vehicles, synchronisation of maritime traffic in the port, etc.).	3,9	88,9
Energy and Environment (energy efficiency and self-sufficiency, decarbonisation, circular economy, low emissions, etc.)	3,9	85,2
Predictive modelling and data analytics (predictive maintenance, Big Data, mass device management, etc.)	3,8	85,2
Information security and visibility (blockchain for logistical traceability, drones, etc.)	3,7	86,4
Port/city integration and collaboration (social sustainability, co-ordination forums, etc.)	3,7	96,3

Rating is from 1 to 5, with 1 being not at all and 5 being totally. Source: On-line survey addressed to companies in the port community of Valencia.

On the other hand, factor analysis has made it possible to define groups of companies, according to their linkage to trends. This is a statistical technique which, according to the levels of correlation between the responses, identifies groups of companies. Thus, the



following two groups can be highlighted, which bring together companies aligned with common trends (Table 9 and Graph 24).

A first group (**Group 1: Technological and environment-related challenges**) is mainly committed to the following issues:

- ✓ Sensorisation of the port's physical environment (Technology 4.0, Internet of Things, etc.).
- ✓ Road connectivity and intermodality.
- ✓ Predictive models and data analysis (predictive maintenance, Big Data, management of massive devices, etc.).
- ✓ Port / city integration and collaboration (social sustainability, coordination forums, etc.).
- ✓ Optimisation and integration of operations (automation of terminals and vehicles, synchronisation of maritime traffic in the port, etc.).

The second group (**Group 2: Challenges linked to human resources, business models and regulations**), meanwhile, is associated with challenges arising from the areas of human resources, business models or regulations. Such trends are as follows:

Some of the Group 1 **trends**, such as digital transformation, are aligned with **Valenciaport's Innovation Plan**.

- ✓ Adaptation to new regulations (European and state guidelines, etc.).
- ✓ Safety and security (physical protection, ergonomics, cybersecurity models, etc.).
- ✓ New business models (global digital platforms for customer relations, full traceability, incorporation of start-ups, etc.).
- ✓ Readjusting professional profiles to meet innovation challenges and projects

The first two trends are the ones that attract the most support from companies. What they have in common is that they are closely linked to legal requirements.



Table 9. Company typology according to type of challenges\* (factor analysis)

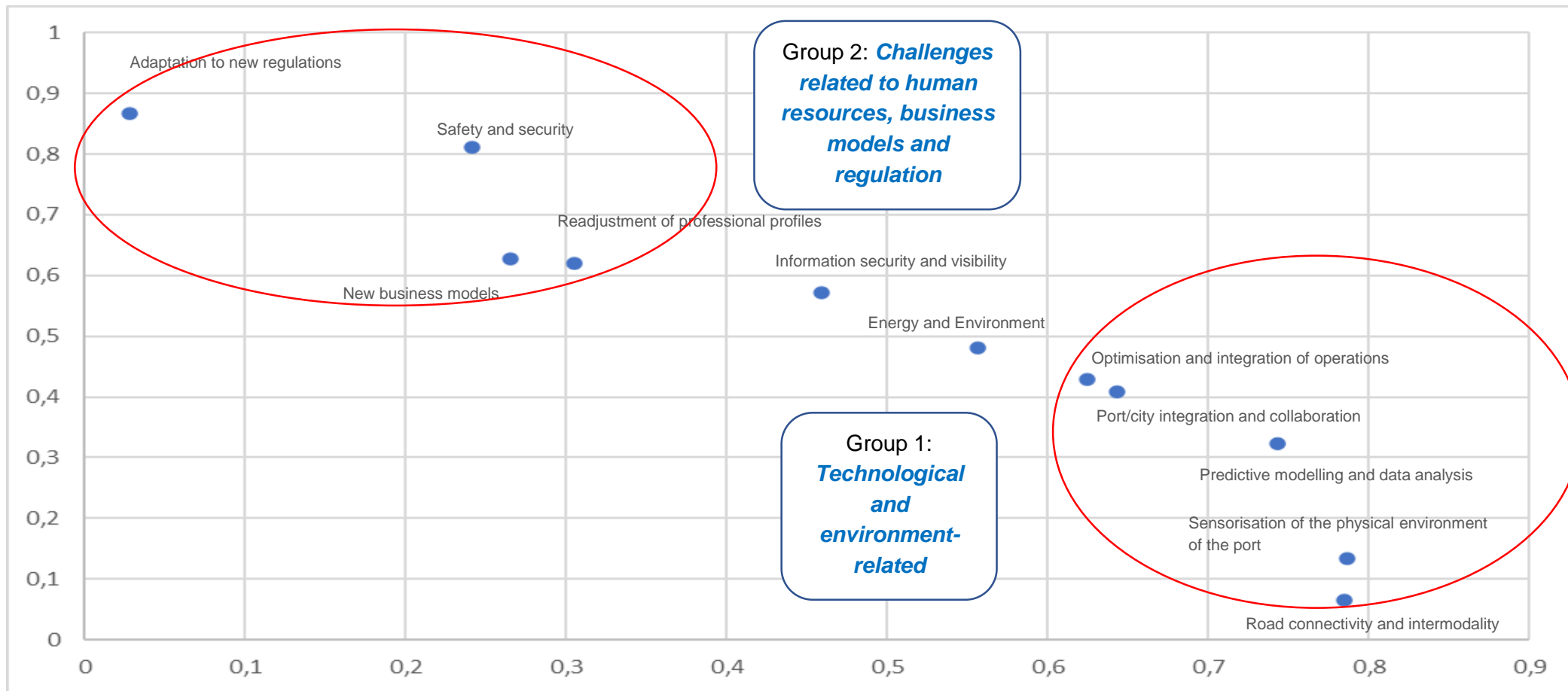
Trends	Group 1: Technological and environment-related challenges	Group 2: Challenges related to human resources, business models and regulation
Sensorisation of the port's physical environment (Technology 4.0, Internet of Things, etc.)	0,786	0,133
Predictive modelling and data analytics (predictive maintenance, Big Data, mass device management, etc.)	0,743	0,323
Optimisation and integration of operations (automation of terminals and vehicles, synchronisation of maritime traffic in the port, etc.).	0,624	0,428
Information security and visibility (blockchain for logistical traceability, drones, etc.)	0,459	0,572
Energy and Environment (energy efficiency and self-sufficiency, decarbonisation, circular economy, low emissions, etc.)	0,556	0,481
Safety and Security (physical protection, ergonomics, cybersecurity models, etc.)	0,241	0,812
Adaptation to new regulations (European, state guidelines, etc.)	0,028	0,866
New business models (global digital platforms for customer relations, full traceability, incorporation of start-ups, etc.)	0,265	0,627
Port/city integration and collaboration (social sustainability, co-ordination forums, etc.)	0,643	0,408
Road connectivity and intermodality	0,785	0,065
Readjusting professional profiles to meet innovation challenges and projects	0,305	0,62

Scores are Pearson's R scores where 0 means lower correlation and + - 1 means higher correlation.

Source: On-line survey addressed to companies in the port community of Valencia.



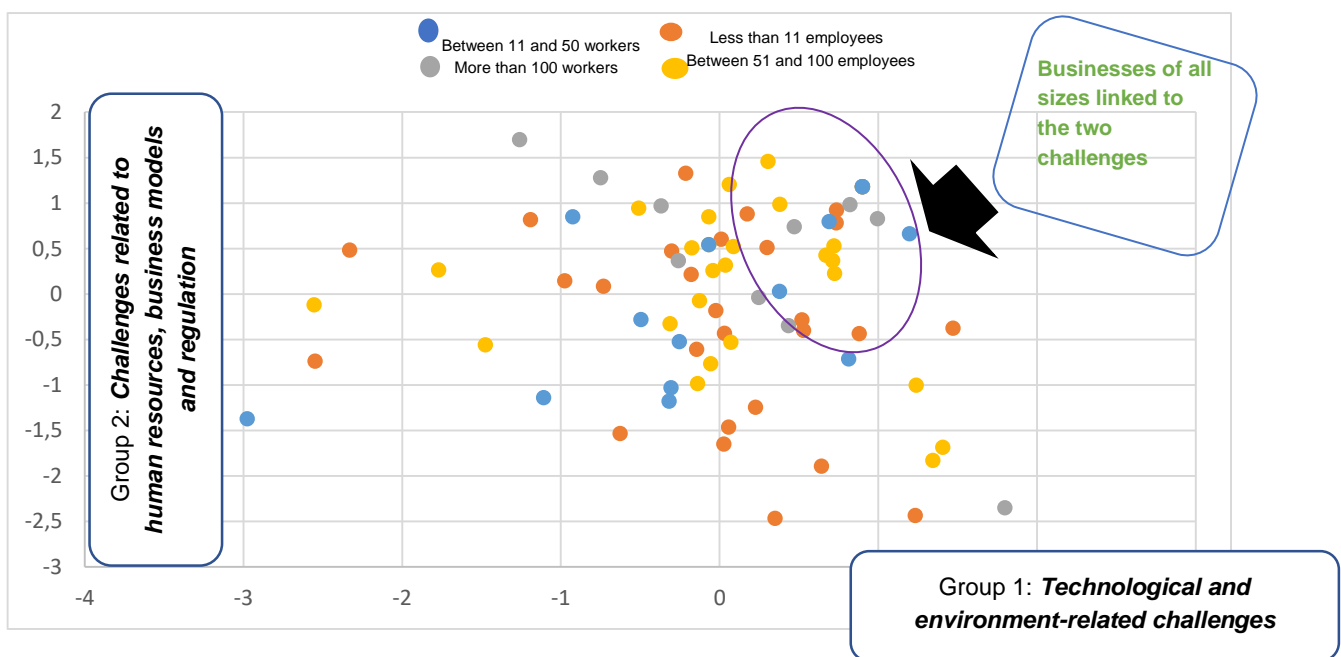
Graph 24. Graphical presentation of companies' positioning with respect to challenges\* (Factor analysis)



In the following graph 25, we will analyse whether there are differences between the companies, according to their size, with respect to their linkage to the two groups identified by the factor analysis.

As can be seen, **companies of all sizes are linked to both types of challenges**. This is important, especially considering that smaller firms have fewer resources (human, financial, etc.) to face challenges, especially those of a technological nature.<sup>20</sup>(Graph 25)

Graph 25. Graphical presentation of the positioning of companies with respect to challenges (according to company size) (Factor analysis)



Scores are Pearson's R scores where 0 means lower correlation and + - 1 means higher correlation.

Source: On-line survey addressed to companies in the port community of Valencia.

One of the trends identified above was the **readjustment of professional profiles to meet innovation challenges and projects**. In this sense, the companies were asked which actions are important within the scope of this trend, with the aim of meeting **the challenges and innovation projects**. The questionnaire included nine types of actions to be assessed by the companies of the port community.

<sup>20</sup> This analysis cannot be carried out according to economic activity, as a significant number of companies have answered that they belong to different segments (multiple response).



As can be seen, the initiatives that have achieved the greatest adherence by companies are the following (Table 10):

- ✓ Create an agile portal with job offers and demands in the sector for recruitment (72.8%).
- ✓ Launch a joint training plan for companies in the port-logistics sector (59.3%).
- ✓ Working together to attract and retain talent (46.9%).
- ✓ To have tools that allow us to regularly analyse the evolution of the sector in terms of training and employment (42%).

Table 10. Important actions to achieve the realignment of professional profiles to meet innovation challenges and projects (%) (multiple answer)

Actions	
Create an agile portal with job offers and demands in the sector for recruitment.	72,8
Launch a joint training plan for companies in the port-logistics sector.	59,3
Working together to attract and retain talent.	46,9
To have tools that allow us to regularly analyse the evolution of the sector in terms of training and employment.	42,0
Create an observatory of trends in the port-logistics labour market.	38,3
Elaborate diagnoses of training needs within the port logistics sector (e.g. through annual company surveys).	33,3
Promote policies of the Generalitat that facilitate recruitment in the sector.	32,1
Set up a multi-stakeholder round table for dialogue on the challenges of training and employment.	27,2
Propose and encourage collaboration with other leading Autonomous Communities in this area.	14,8

Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

In the light of these data, companies assess as appropriate different measures and areas of intervention, aimed at favouring recruitment, monitoring the evolution of the labour market or promoting training and attracting workers, for example.

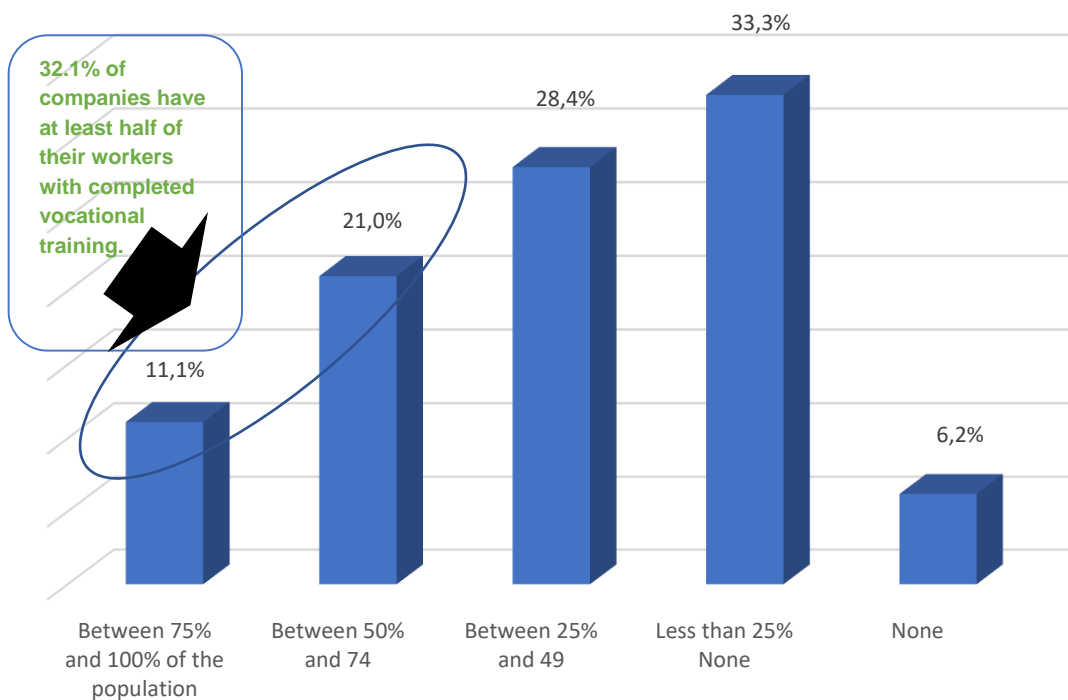
## 2.3/ PROFILE OF WORKERS AND EMPLOYMENT

The aim of this second block of questions is to analyse the professional profiles and employment of the companies in the port community of Valencia.

Thus, firstly, it should be noted that, in 54.3% of the companies, **more than half of the workforce has Vocational Training or university studies** (Graphs 26 and 27). Specifically, 32.1% of the companies have at least half of their workers with Vocational Training studies (Graph 26). This figure drops to 22.2% in the case of those with university studies (Graph 27).

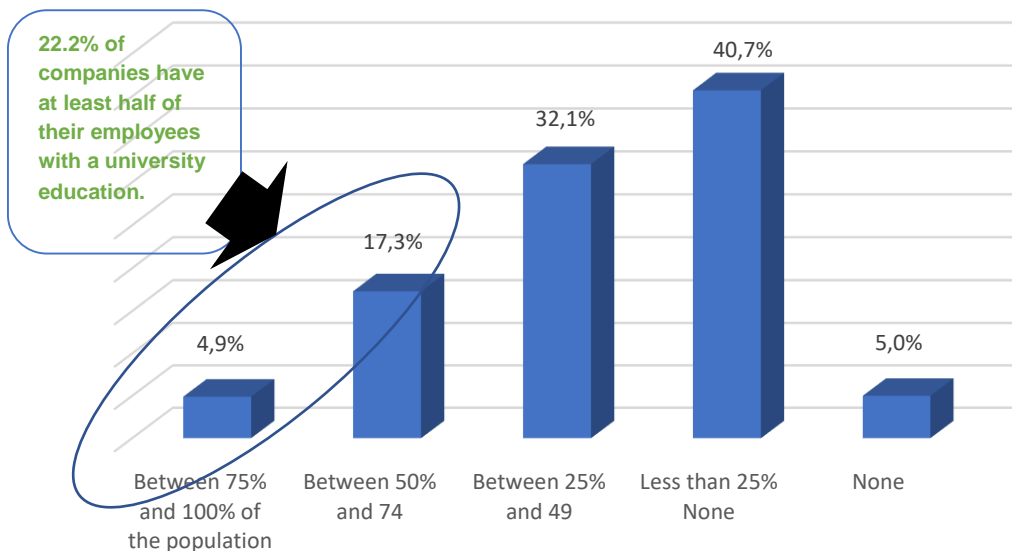
The **lack of specialised studies**, on the part of a significant percentage of workers, can **hinder** the **implementation of innovation plans**.

Graph 26. Approximate distribution of employees in your company with vocational training degrees (%)



Source: On-line survey addressed to companies in the port community of Valencia.

Graph 27. Approximate distribution of employees in your company with a university degree (%)



Source: On-line survey addressed to companies in the port community of Valencia.

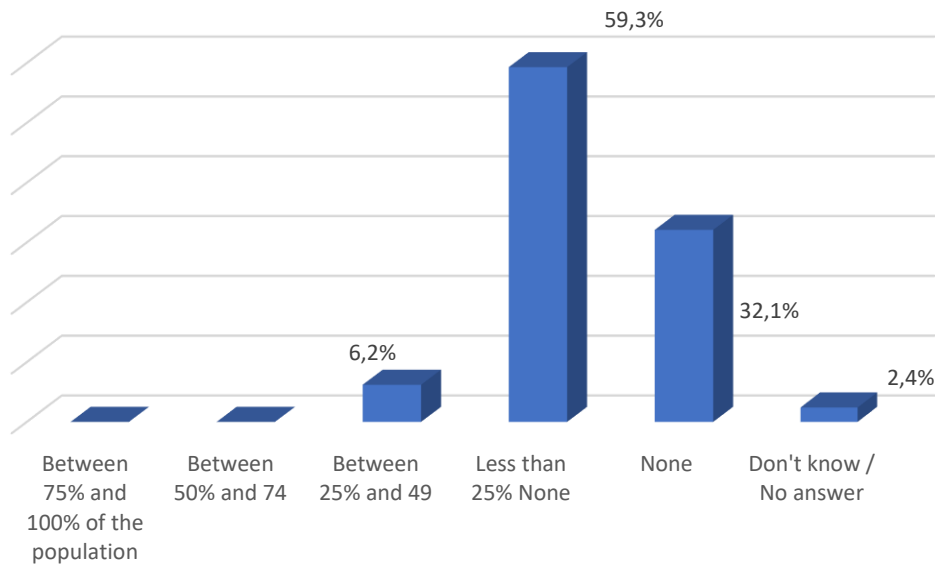
The lack of specialised studies, in some groups of workers, may require a greater effort on the part of companies for **continuous training**.

In the light of the above, workers with **non-specialised studies**, i.e. not linked to vocational training or university, still make up a significant percentage. This may make it difficult, for example, for companies in the port community to become involved in **innovation processes** (especially of a technological nature), which would require the deployment of **more complex skills**.

Another important fact is linked to the distribution of workers by age. In this respect, it should be noted that **32.1% have no workers under 25 years of age** (Graph 28). However, for the time being, this does not tend to hinder generational replacement, since in only 3.7% of companies, at least 50% are over 55 years of age. Moreover, 18.5% of companies have no employees over 55 years of age (Graph 29).

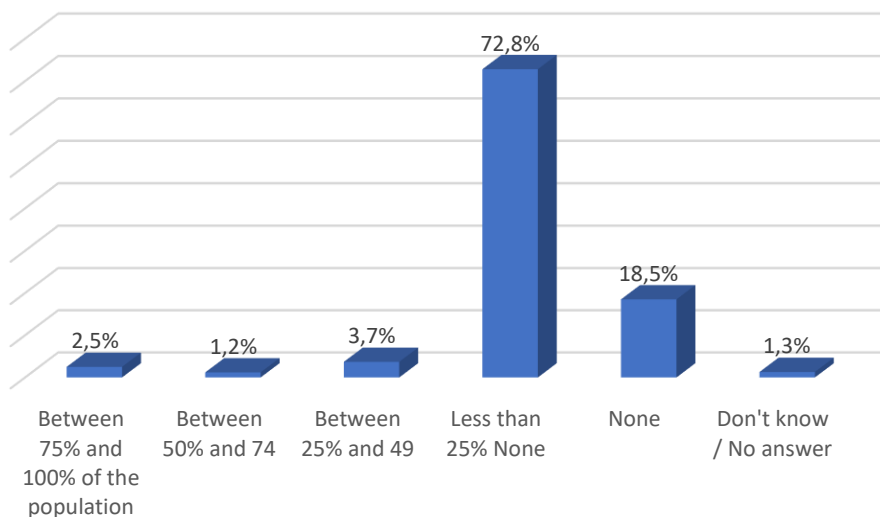
There are no perceived **difficulties of generational replacement, despite the fact that almost a third of the companies do not have workers under 25 years of age**.

Graph 28. Approximate distribution of workers aged 25+ (%)



Source: On-line survey addressed to companies in the port community of Valencia.

Graph 29. Approximate distribution of workers aged 55+ (%)

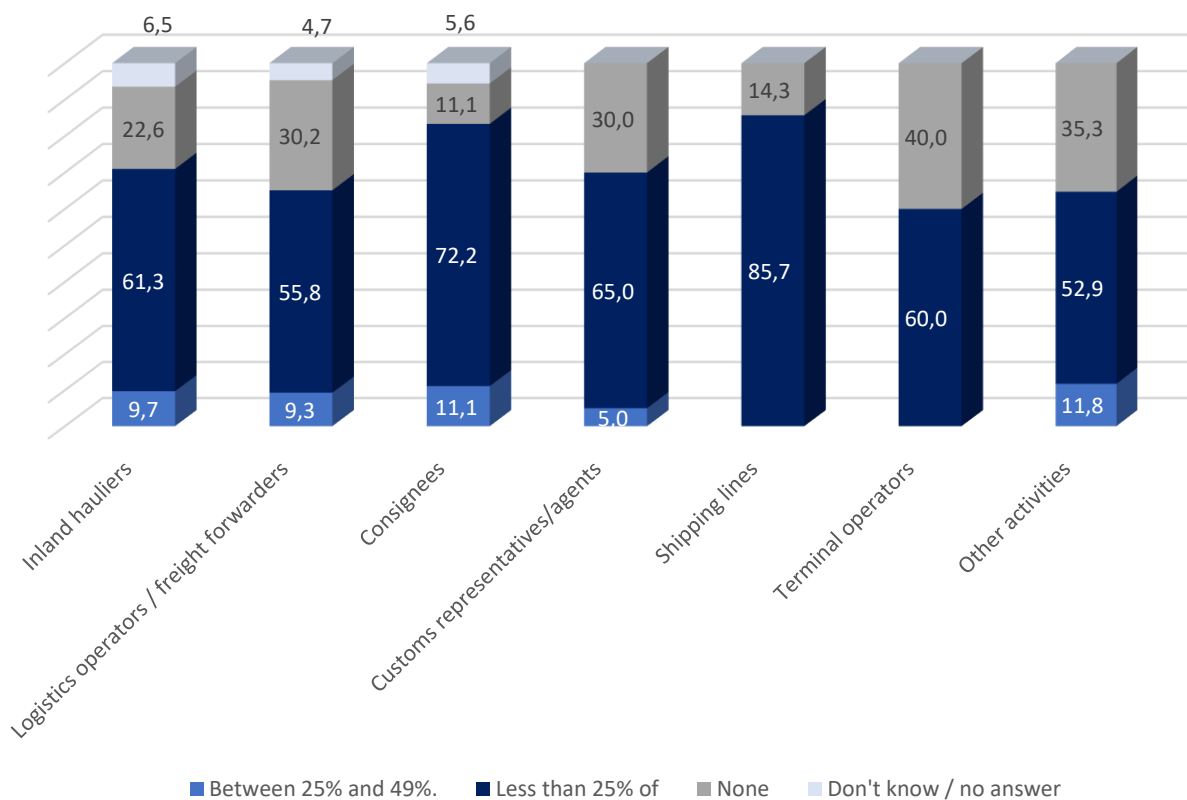


Source: On-line survey addressed to companies in the port community of Valencia.

There are some relevant differences in the age distribution of workers, depending on the activity.

Thus, for example, 40% of terminal companies and 35.3% of those classified as belonging to "other activities" have no workers under 25 years of age. Conversely, **shipping companies have the highest percentage - 85.7% - of workers under 25 years of age** (Graph 30).

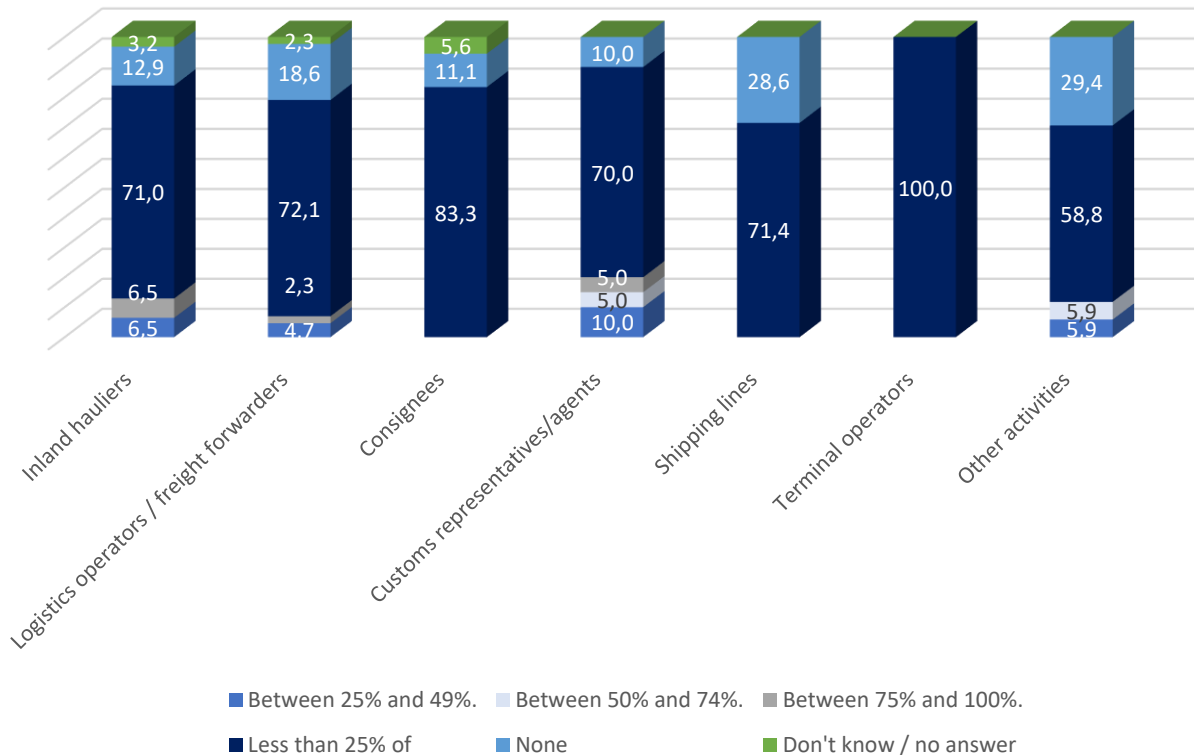
Graph 30. Approximate distribution of workers under 25 years of age (%)  
(by economic activity)



Source: On-line survey addressed to companies in the port community of Valencia.

It should also be noted that, with the exception of terminal operators, in the rest of the economic activities there are some companies that **do not have workers over 55 years of age**. In shipping companies, in fact, the number of companies without workers over 55 years of age amounts to 28.6%. Among representatives/customs agents, there are companies with a higher presence of workers over 55 years of age, as 10% of them comprise at least 50% of the workforce (Graph 31).

Graph 31. Approximate distribution of workers aged 55+ (%) (by economic activity)



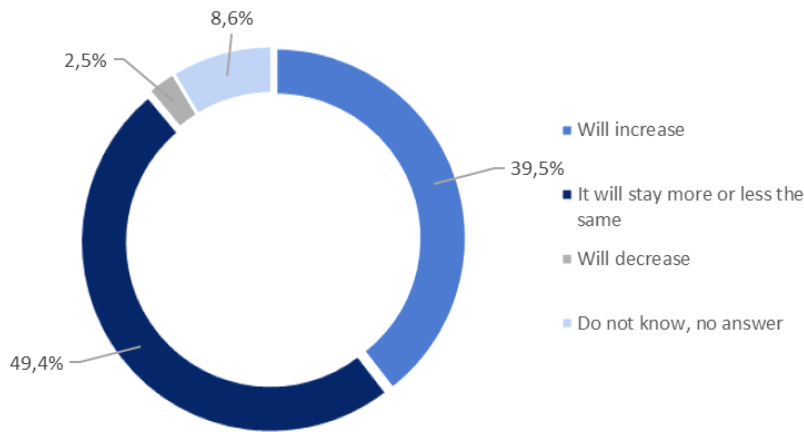
Source: On-line survey addressed to companies in the port community of Valencia.

**Employment is expected to increase in all economic activities.**

It is very significant that **39.5% of the companies indicate that they expect to increase the volume of employment over the** next few years (Graph 32). Inland hauliers -48.4%-, logistics operators / freight forwarders -46.5%- and customs agents / representatives -40%- are the activities that have the most optimistic forecasts (Graph 33).

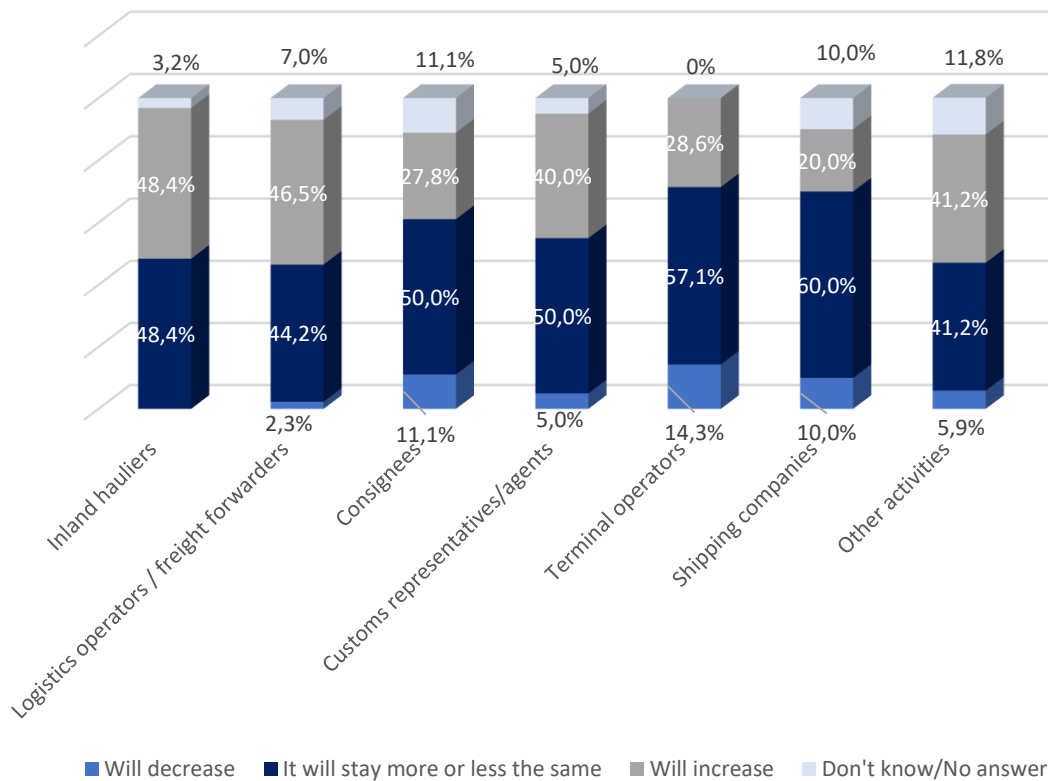
These data are all the more relevant given that the survey was answered at a time of economic crisis or uncertainty, as a result of the COVID-19 pandemic. In fact, only 2.5% indicated that their employment figures were likely to fall (Graph 32).

How is employment in your company expected to develop over the next three years? (%)



Source: On-line survey addressed to companies in the port community of Valencia.

Graph 33. How is employment in your company expected to develop over the next three years? (%) (by economic activity) (multiple answer)



Companies had the option to select more than one response.

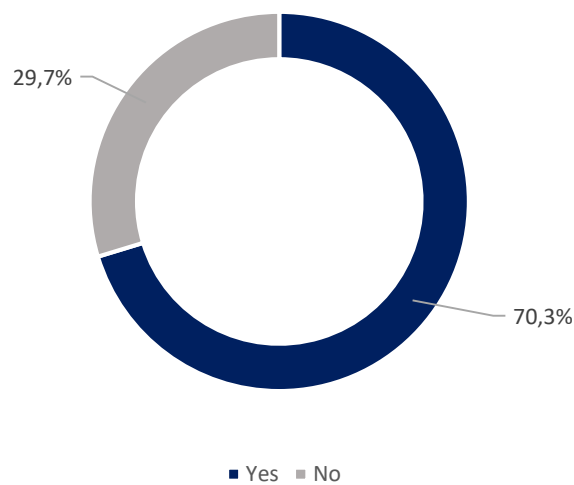
Source: On-line survey addressed to companies in the port community of Valencia.



**7 out of 10  
companies** are  
planning to hire  
over the next three  
years.

On the other hand, **70.3% say that they plan to hire workers in 2021, 2022 or 2023** (Graph 34).

Graph 34. Companies planning to hire workers in one of the following years: 2021, 2022 and 2023 (%)

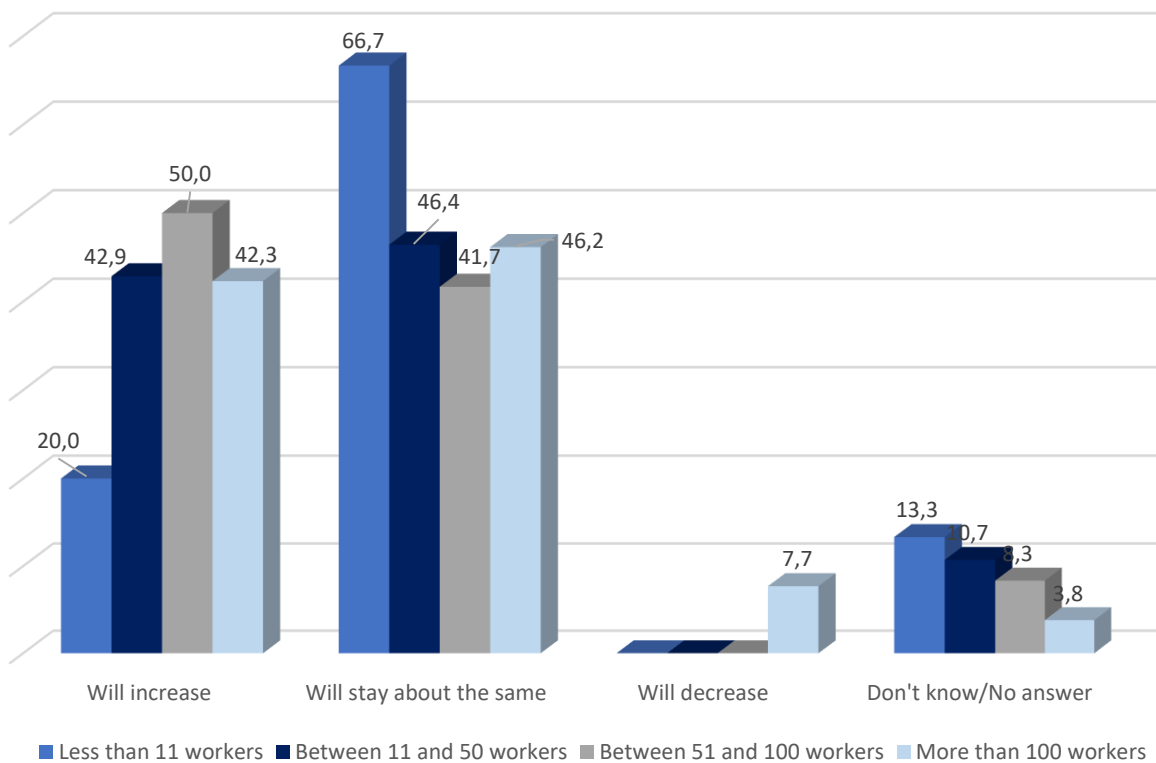


Source: On-line survey addressed to companies in the port community of Valencia.

Among companies with more than 10 employees, at least 40% expect to increase their employment figures over the next few years. The highest figure - 50% - is among firms with between 51 and 100 employees. In companies with less than 11 employees, the figure drops to 20% (Graph 35).

Firms with **more than  
10 employees** have  
**better prospects for  
job creation**

Graph 35. How is employment in your company expected to develop over the next three years?  
(%) (by company size)

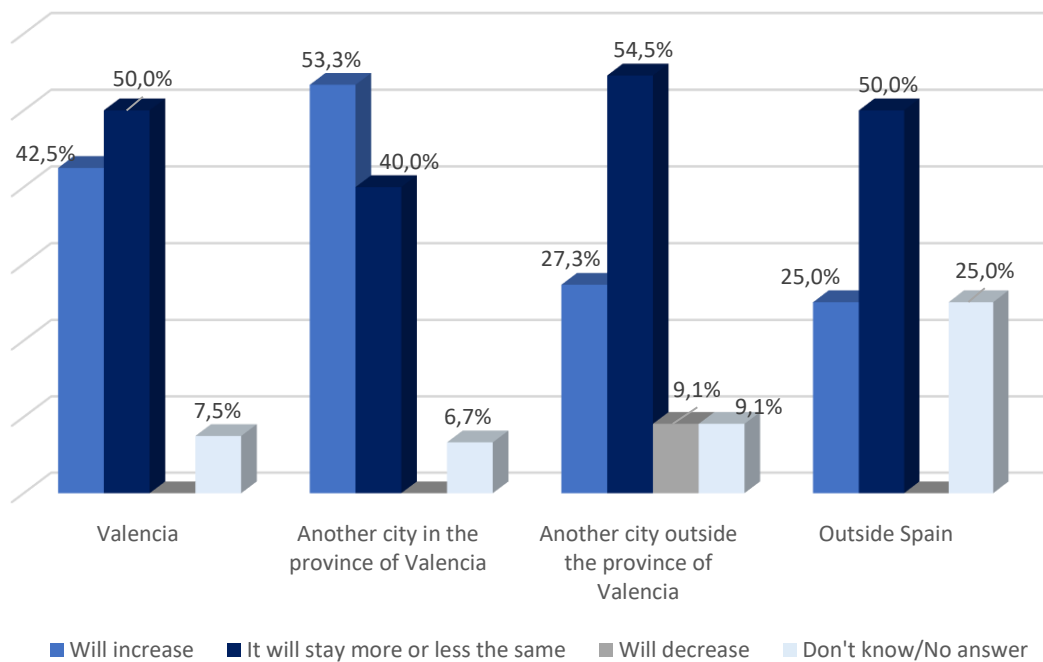


Source: On-line survey addressed to companies in the port community of Valencia.

The companies with headquarters in the **city of Valencia** or in the **province of Valencia** are the ones that above all plan to increase their employment figures. This was stated by 42.5% of the former and 53.3% of the latter (Graph 36).

Companies whose **decision-making centre** is Valencia and its geographical environment are the ones that indicate that they have **the best**

Graph 36. How is employment in your company expected to develop over the next three years? (%) (by location of the headquarters where the main decisions are made)

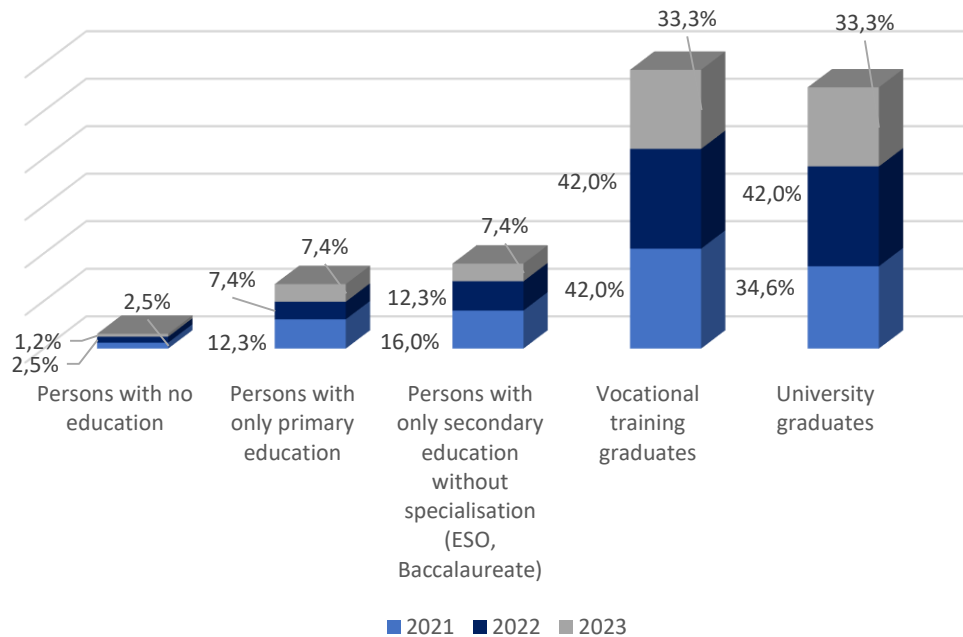


Source: On-line survey addressed to companies in the port community of Valencia.

Recruitment in the period **2021 - 2023** will prioritize workers with a university or vocational education and training, which will contribute to **reshaping the skills map of companies**, through more complex and advanced qualifications.

It is relevant that the profiles most in demand over the next three years are linked to vocational training or university studies, as shown in Graph 37. We are therefore talking about **qualified workers**. This will make it possible to provide companies with **new workers with skills** that can be aligned with plans for innovation, expansion or improvement; bearing in mind, moreover, that - as has been said before - the presence of unskilled workers is still quite important in the port community. Exactly, in 2021, 42.0% of the companies plan to hire workers with completed vocational training studies and 34.6% with completed university studies. These figures would rise to 42.0% in 2022 for both profiles. In 2023 the figures would fall to 33.3%.

Graph 37. Indicate whether your company plans to hire new workers in the next few years (%)  
(according to level of curricular training) (multiple answer)



Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

When companies were asked what their **recruitment channels** are, first of all, it should be noted that they tend to be diverse. On a scale of 1 to 5, with 1 being the least important and 5 the most important, the most common are contacts and recommendations (3.57 arithmetic average), the company's own job bank (2.89) and job portals (infojobs, etc.) (2.72) (Table 11).

**Recruitment and selection**  
mechanisms are diverse, but  
the most common are  
**contacts and recommendations.**

Table 11. Indicate your company's selection channels (arithmetic mean)

Response	Arithmetic mean	Response rate
Contacts and recommendations	3,57	92,6
Company's own job opportunities	2,89	80,2
Job portals (infojobs, etc.)	2,72	85,2
Company website	2,63	84,0
Social media	2,26	85,2

Response	Arithmetic mean	Response rate
Sector associations and foundations	2,24	88,9
Temporary employment agencies	1,81	88,9
Headhunters or recruitment companies	1,78	88,9
Labora	1,31	71,6

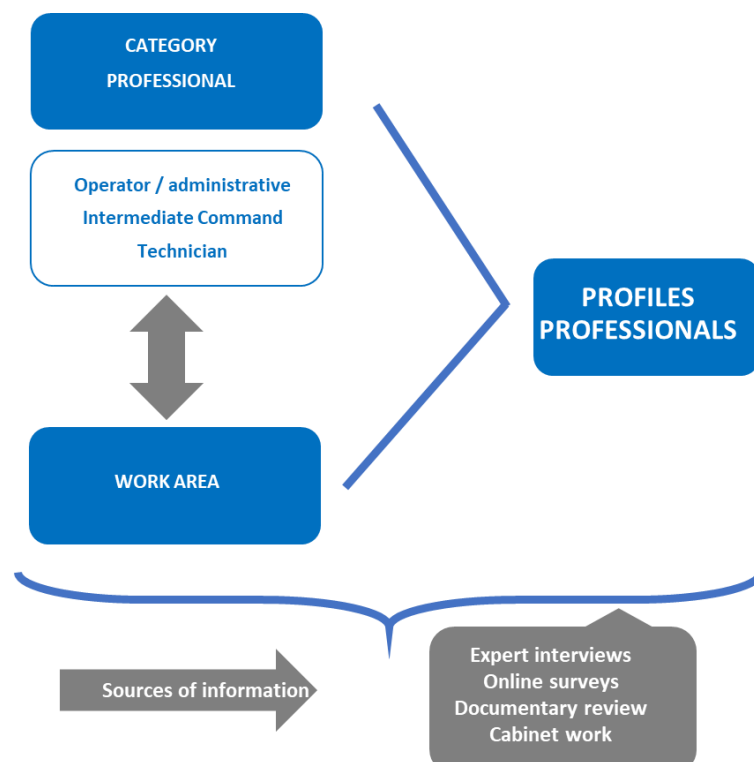
Rating is from 1 to 5, with 1 being less important and 5 being more important.

Source: On-line survey addressed to companies in the port community of Valencia.

### 2.3.1. PROFILE DEMAND AND COVERAGE

The following pages will present, based on the data from the online survey, **what type of worker profiles** are demanded by the companies in the port community, according to the different areas of work and professional categories (managerial, technical and operative/administrative) (Table 12). The **work areas identified were** selected in Phase 2 of the project by means of interviews, documentary review and desk research. Then, following the information obtained in the survey, it will be specified how **the labour market can provide both qualified workers** linked to these areas (Table 14) and the main skills they require (Table 15).

*Scheme 2. Procedure for the identification of professional profiles*



On the other hand, a **list of professional profiles** has been presented to the companies in order to find out if they are interested in hiring them over the next three years.

On the basis of this list, Table 12 shows the level of demand expressed by the companies, according to **professional category**:

Table 12. What type of professional profile does your company plan to recruit over the next three years? (%) (multiple answer)

Profile	Operator / Administrative	Technician / Middle management	Manager / Responsible
Receptionist	9,9	0,0	0,0
Messaging	1,9	0,0	0,0
Administration and accounting	22,2	13,6	0,0
Documentation	22,2	2,5	0,0
Export	29,6	13,6	0,0
Import	29,6	12,3	0,0
Special cargo (ref. general cargo, etc. )	7,4	7,4	0,0
Aerial	11,1	3,7	0,0
Customs	19,8	8,6	1,2
Commercial	19,8	21,0	2,5
Communication / Marketing / Advertising	4,9	7,4	2,5
Business development / innovation project manager	2,5	12,3	1,2
Pricing	8,6	9,9	1,2
Human Resources	7,4	2,5	1,2
Legal	1,2	2,5	0,0
Quality	2,5	3,7	1,2
Logistics and distribution	17,3	8,6	0,0
Storage and supply	11,1	1,2	0,0
Traffic	22,2	14,8	0,0
Intermodal	7,4	0,0	0,0
Vehicle mechanics	2,5	1,2	0,0
Driver	14,8	1,2	0,0
Operations	13,6	6,2	0,0
Planning	2,5	1,2	0,0
Maintenance	6,2	6,2	0,0

Profile	Operator / Administrative	Technician / Middle management	Manager / Responsible
Process engineering	1,2	1,2	2,5
Environment	1,2	2,5	1,2
Chemistry	0,0	1,2	1,2
Telecommunications	1,2	1,2	1,2
Data analysis	3,7	4,9	0,0
Robotics	1,2	0,0	0,0
Help desk	3,7	1,2	0,0
Pricing policy	1,2	1,2	1,2
Driving of vehicles	7,4	2,5	0,0

Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

A synthesis of the main results obtained can be seen below Table 12:

*Scheme 3. Professional profiles demanded by companies*



**OPERATOR /  
ADMINISTRATIVE:**

**IMPORTS:** 29.6%.  
**EXPORTS:** 29.6%.  
**ADMINISTRATION AND  
ACCOUNTING:** 22.2%.  
**DOCUMENTATION:** 22.2%.  
**TRAFFIC:** 22.2%.  
**CUSTOMS:** 19.8%.  
**COMMERCIAL:** 19.8%.



**TECHNICIAN / MIDDLE  
MANAGEMENT:**

**COMMERCIAL:** 21%.  
**TRAFFIC:** 14.8%.  
**ADMINISTRATION AND  
ACCOUNTING:** 13.6%.  
**EXPORT:** 13.6%.  
**IMPORTS:** 12.3%.  
**BUSINESS DEVELOPMENT /  
INNOVATION PROJECT  
MANAGER:** 12.3%.



**MANAGER /  
RESPONSIBLE:**

**PROCESS ENGINEERING:**  
2.5%.  
**COMMERCIAL:** 2.5%.  
**COMMUNICATION /  
MARKETING /  
ADVERTISING:** 2.5%.



If we make a distinction by economic activity, we can observe some important differences in the profiles most in demand, which are highlighted in Table 13.

Table 13. What type of professional profile, in terms of the following areas of work, does your company plan to recruit over the next three years? (%) (multiple answer) (according to economic activity)

Activity	Work area	Professional category
<b>INLAND HAULIERS</b>	Traffic (38.7%)	<b>OPERATOR / ADMINISTRATIVE</b>
	Imports (35.5%)	
	Imports (32.3%)	
	Logistics and distribution (32.3%)	
<b>LOGISTICS OPERATORS / FREIGHT FORWARDERS</b>	Exports and Imports (37.2%).	
<b>CONSIGNEES</b>	Exports and imports (55.6%).	
<b>REPRESENTATIVES / CUSTOMS AGENTS</b>	Imports (50%) Export, customs and administration/accounting (40%)	
<b>TERMINALISTS</b>	Export and trade (57.1%) Import, customs, logistics/distribution and traffic (42.9%)	
<b>NAVIERS</b>	Operations (50%)	

Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.



As can be seen, the **profiles most in demand** individually, by the different economic activities, are almost always of a **specific nature** and are always **focused on worker/administrative occupations**.



Profiles linked to **new technologies** are not among the most in-demand. However, the most in-demand profiles may require the assimilation and deployment of **digital skills**.



**Annex 2** includes a table with detailed information on the demand for all professional profiles, by economic activity, according to the results of the online survey.

Another point to note is that, in the case of most of the professional profiles considered, **a minority of companies state that the labour market provides sufficiently qualified workers**, as shown in Table 14.

In the light of the survey results, **transversal jobs tend to be the most available**. However, these types of jobs are those for which all enterprises have more information to be able to answer the question in the affirmative. This is because it is more common for them to be present in different economic activities. On the other hand, in the case of jobs that are rather specific, or almost exclusive to each segment, it is the companies belonging to the corresponding segments that have more extensive information about them (Table 14).

However, it is a positive fact that a significant proportion of the most sought-after jobs are among the most available. Specifically, they are the following: administration and accounting -60.5%-, export -54.3%-, import -53.1%-, human resources -51.9%-, commercial -50.6%- or documentation (49.4%) (Table 14).

A significant proportion of the **jobs available** are among those **most in demand by companies**.



Table 14. Specify whether the labour market has skilled workers linked to these areas (%)  
(multiple answer)

Work area	Yes
Administration and accounting	60,5
Export	54,3
Import	53,1
Human Resources	51,9
Commercial	50,6
Documentation	49,4
Quality	46,9
Logistics and distribution	46,9
Receptionist	45,7
Communication / Marketing / Advertising	45,7
Storage and supply	45,7
Operations	43,2
Customs	42,0
Driver	40,7
Legal	39,5
Traffic	39,5
Vehicle mechanics	35,8
Aerial	34,6
Maintenance	34,6
Pricing	33,3
Driving of vehicles	33,3
Telecommunications	32,1
Environment	30,9
Help desk	30,9
Business development / innovation project manager	29,6
Planning	29,6
Data analysis	29,6
Process engineering	27,2
Chemistry	27,2
Intermodal	25,9

**COVERAGE OF  
PROFESSIONAL  
PROFILES**



Work area	Yes
Special cargo (ref. general cargo, etc. )	24,7
Robotics	22,2
Pricing policy	22,2

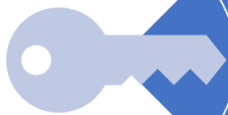
Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

On the other hand, the **availability of workers in the different skill areas and sub-areas** differs significantly from one skill area to another (Table 15).

Table 15 shows the results of the most in-demand skill sub-areas, in particular those with a score of less than 50%. Information on all the sub-areas can be found in **Annex 2**.

Companies find it more **difficult to acquire the most specific and innovative skills.**



Thus, in the area of **administration, regulations and taxation** in international trade, only a minority of companies say that there is a labour market availability of workers. The sub-areas in which there is less supply are the following: New state / European regulations related to the logistics / port sector -27.2%- and Legal / fiscal framework of foreign countries (24.7%) (Table 15).

In the area of **Logistics and warehousing**, Table 15 indicates that the sub-area of Management systems (ERP, CRM) linked to international trade obtains a score of 45.7%.



In the area of **New technologies**, the least available sub-areas are Management of predictive models and data analysis (Big Data, for example) -39.5- and Management of sensory technology (4.0, for example) (24.7) Table 15. Sub-areas, on the other hand, linked to **more innovative technologies and skills**.



In the area of **Languages** associated with international trade, foreign languages other than English scored 43.2% (Table 15).

In short, these results once again corroborate that companies in the sector, as is also common in most economic activities, generally find it more difficult to provide themselves with more specific and innovative profiles and skills.

Table 15. Please specify if there is availability of workers in the labour market in the different skill areas (%) (multiple answer)

**COMPETENCE  
COVERAGE**

Administration, regulation and taxation in international trade	
Customs, administrative and documentation management in international trade flows and cargoes.	49,4
Financing operations and management of payments/collections in international trade.	45,7
New state / European regulations linked to the logistics / port sector.	27,2
Legal / fiscal framework of foreign countries.	24,7
Logistics and warehousing	
Management systems (ERP, CRM) linked to international trade.	45,7
New technologies	
Maintenance of networks, sensors and technological equipment.	45,7
Management of global digital platforms.	44,4
Management of predictive models and data analysis (e.g. Big Data).	39,5
Sensory technology management (e.g. 4.0).	24,7
Languages associated with international trade	
Languages other than English	43,2

Companies had the option to select more than one response. Responses below 50% are included.

Source: On-line survey addressed to companies in the port community of Valencia.

In Graph 38, by means of a multiple correspondence analysis, the **degree of associativity of the answers to some of the key questions** set out above will be specified. Thus, the closer the answers are to each other, the more companies have answered them simultaneously.

In particular, the analysis will be based on the following questions:

- Employment outlook for the next three years
- Economic growth prospects
- Positioning of the company in the market

- Impact of the COVID pandemic - 19
- Company size

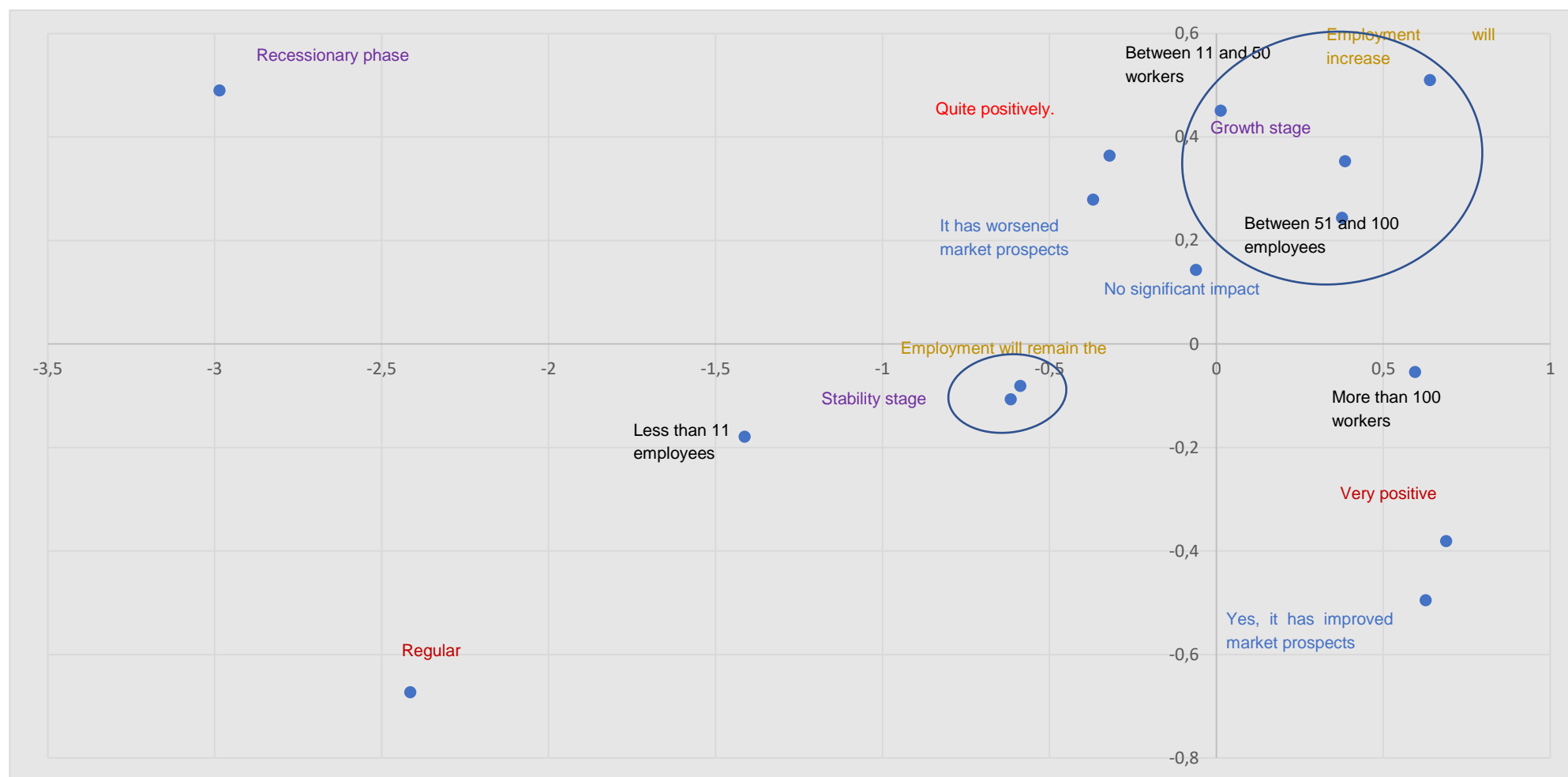
Thus, an analysis of the responses shows that **the companies in which employment is expected to increase** have two main characteristics (Graph 38):

- They expect to go through a period of growth.
- These are companies with mainly between 11 and 100 employees.

On the other hand, **firms that say that employment will not change significantly** are characterised mainly by the fact that they expect a period of stability (Graph 38).



Graphic 38. Relationship between economic growth, employment prospects, impact of the pandemic and firm size (multiple correspondence analysis)



Source: On-line survey addressed to companies in the port community of Valencia.





## WORKER PROFILES AND EMPLOYMENT



### CURRENT PROFILES.

In 54.3% of companies, more than half of the workforce has **vocational training or university education**. This can make it difficult to implement innovation plans.



### CURRENT PROFILES.

The **recruitments foreseen** by the companies are mainly linked to vocational training and university studies.

The **professional profiles most in demand** by companies belong to the area of operatives / administrative staff; among which the specific areas linked to import, export, documentation or traffic and the transversal areas related to administration and accounting stand out. In the case of technicians / middle management, the most sought-after profile is that of a salesperson.

However, the profiles **most in demand individually**, by the different economic activities, are almost always of a specific nature and always refer to operator/administrative occupations.



### NEW TECHNOLOGIES

Very few companies plan to hire workers with professional profiles specialised in **new technologies or oriented towards leading, in particular, the digital transformation**. This does not mean that other more traditional profiles will not have to deploy, from now on, digital skills that have not been considered until now.

However, **technological professional profiles**, among others, are (according to the companies surveyed) among the **least available on the labour market**.



### JOB CREATION

Around **2 out of 5 companies plan to increase employment** over the next three years. Moreover, in global terms, **7 out of 10 companies plan to hire workers** in 2021, 2022 or 2023. The companies, where **employment** is expected to **increase**, have mainly two elements in common:

They expect to go through a growth phase.

These are companies with mainly between 11 and 100 employees.

Likewise, **land transport companies** -48.4%- and **logistics operators / freight forwarders** -46.5%- are the most optimistic about job creation. Companies with **headquarters in Valencia** -42.5%- or in the **province of Valencia** -53.3%- are the ones that plan to increase employment to a greater extent.



## 2.4/ FURTHER TRAINING

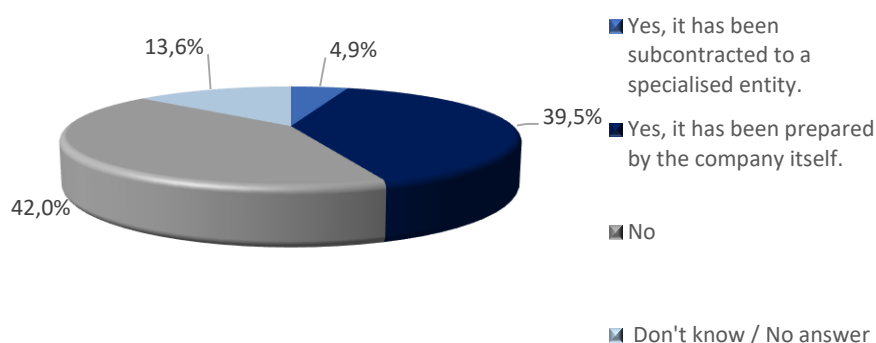
The aim of this section is to analyse the **instruments and experiences** of the companies of the Valencia port community in terms of **continuous training**.

Continuous training is a tool for improving, extending or updating skills. The skills map of the logistics - port sector is evolving as a result of new trends and technological, regulatory, environmental, etc. requirements. This requires companies in all segments to invest in training plans and courses.

Within this framework, it is positive that **44.4% of companies have carried out a training needs diagnosis** in the last three years, either through their own resources and methodologies or by subcontracting a specialised company (Graph 39). This type of diagnosis, especially insofar as it uses techniques for collecting and analysing information with scientific rigour, is the starting point for establishing training itineraries tailored to companies' needs.

About half of the companies have experience in carrying out **qualification needs studies**.

Graph 39. Has your company carried out a skills needs assessment in the last three years? (%)

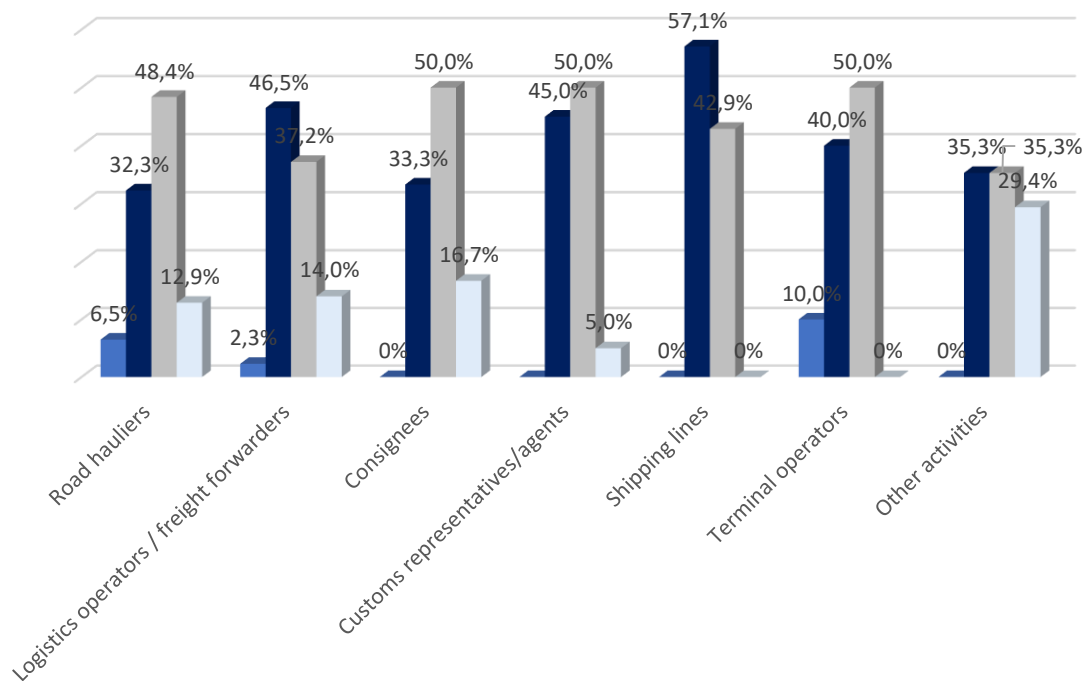


Source: On-line survey addressed to companies in the port community of Valencia.

Comparing some economic activities with others, it should be noted that the most familiar with training needs studies are terminal operators -57.1%- , shipping companies -50%- and logistics operators / freight forwarders (48.8%) (Graph 40).

Despite the fact that a significant number of enterprises carry out training needs studies, the negative responses nevertheless indicate that a significant number of enterprises are asking for support in carrying out this type of analysis (Graph 40).

Graph 40. Has your company, in the last three years, carried out a skills needs assessment? (%)  
(according to economic activity)



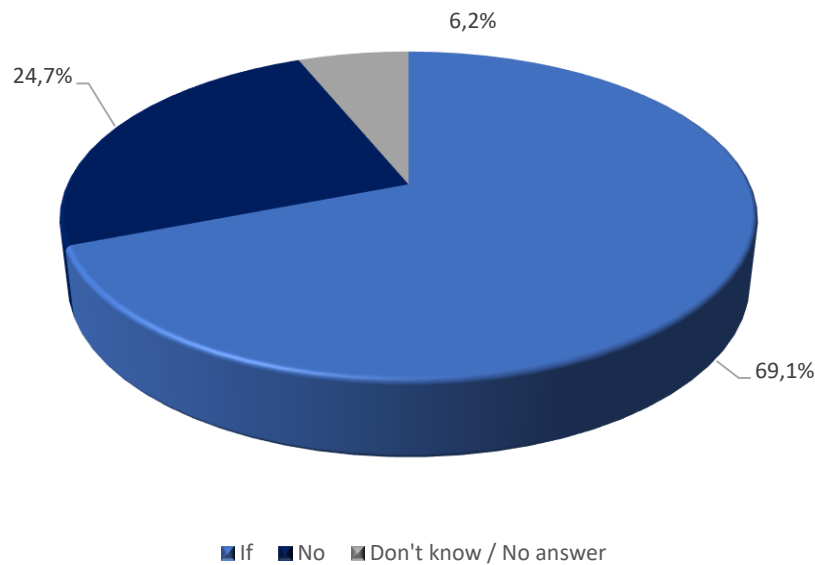
Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.



Around **7 out of 10 enterprises have had a formalised training plan** in the last two years (Graph 41). Having a plan makes it possible to group and systematise the delivery of courses appropriate to the challenges faced by enterprises and the skills needs of workers.

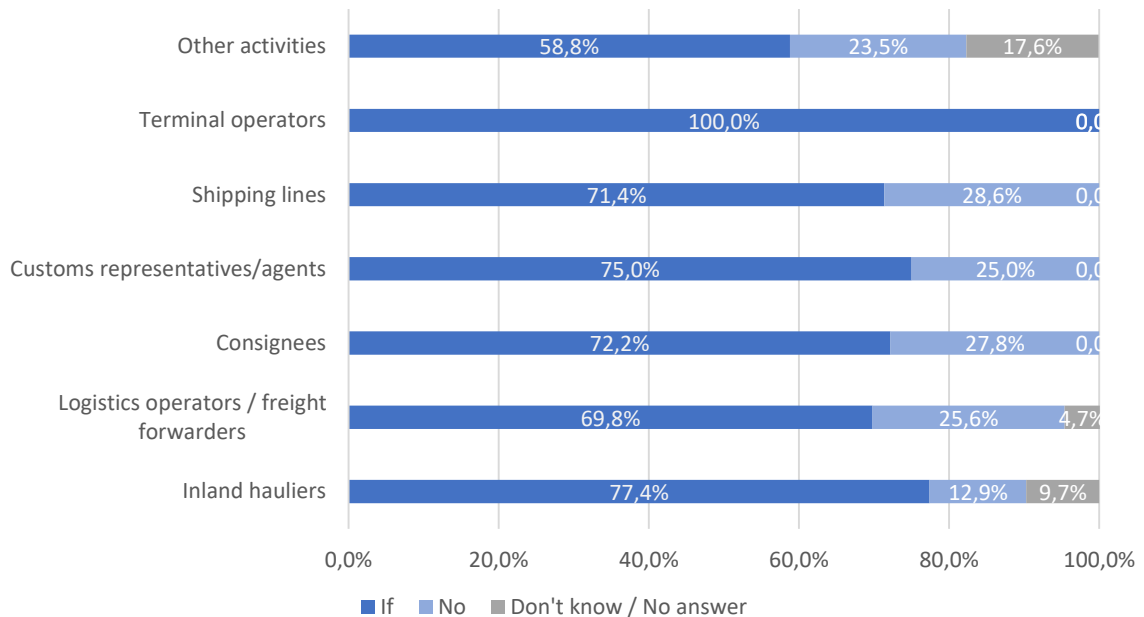
Graph 41. Has your company had a formalised training plan in the last two years? (%)



As can be seen in Graph 42, most companies, irrespective of the segment to which they belong, have had a training plan. In fact, in the case of terminal companies, all companies have developed a training plan.



Graph 42. Has your company had a formalised training plan in the last two years? (%)?



Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

However, **the size of the companies is the variable that determines the greatest differences between the responses**. Thus, in companies with between 51 and 100 workers, 83.3% have a plan, a figure that drops to 53.3% in the case of companies with fewer than 11 workers (Graph 43).

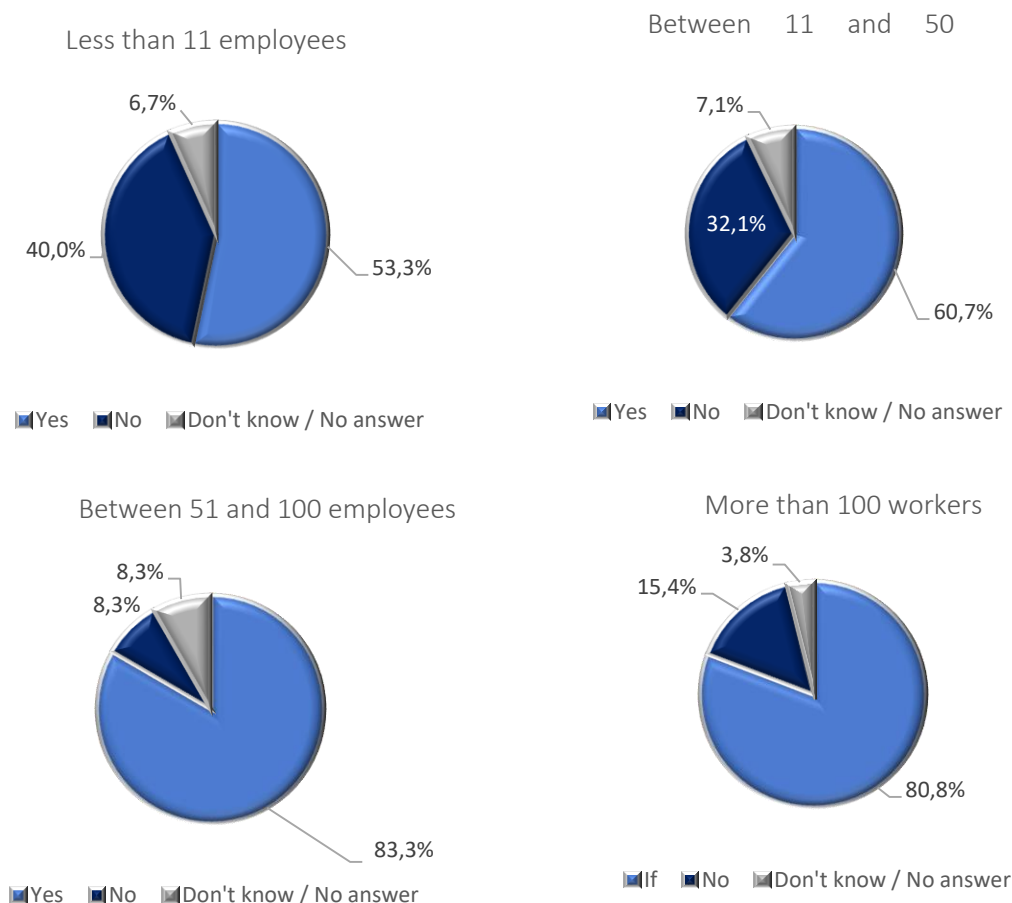
Companies **with less than 11 employees** are the least likely to have a **plan for the**

Larger companies, as is well known, are more likely to have separate human resources administration units that specialise in training management; they are also more likely to require formalised plans that bring together a significant number of cross-cutting and specific courses.



On the other hand, according to the online survey, the **main areas of training** were linked to **cross-cutting** issues, such as English -24.7%- and office automation -24.7%-, and to other specific areas such as customs -19.8%-, incoterms -16%- and safe driving (14.8%). Other areas have also achieved a participation to be taken into account in training activities, such as the cross-cutting areas of stress management -8.6%- and costs (7.4%) (Graph 44).

Graph 43. Has your enterprise had a formalised training plan in the last two years? (%) (by company size)

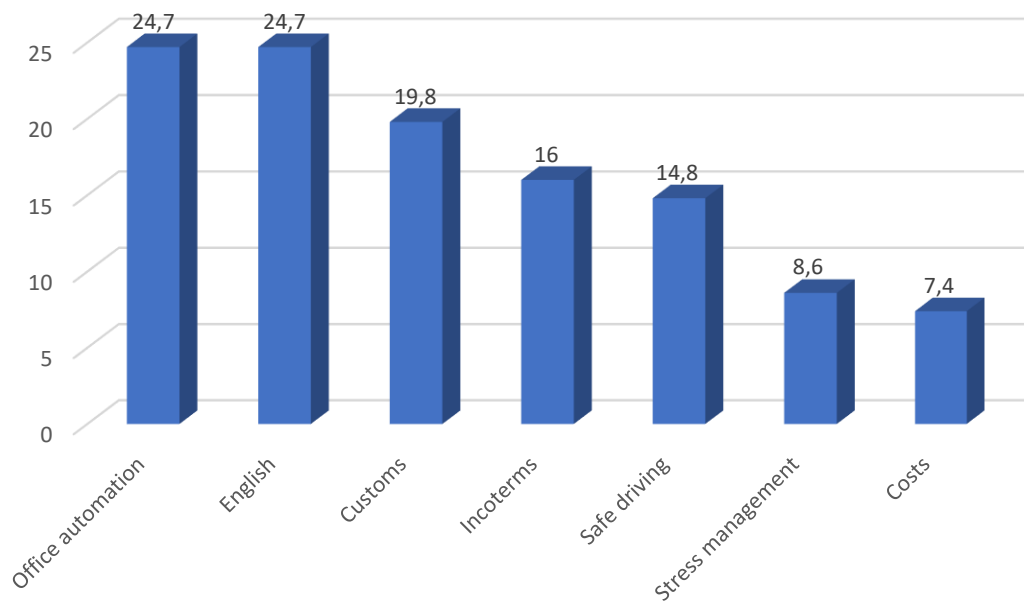


Source: On-line survey addressed to companies in the port community of Valencia.

As can be seen in Graph 44, in general terms, whether or not a training plan has been drawn up is not linked to the company's positioning or to its prospects for employment development. In particular, however, it can be seen that firms with a training plan are more likely to perceive their firm's positioning as very positive.



Graph 44. Please specify what training / courses you have given to your employees in the last two years (%) (multiple answer)



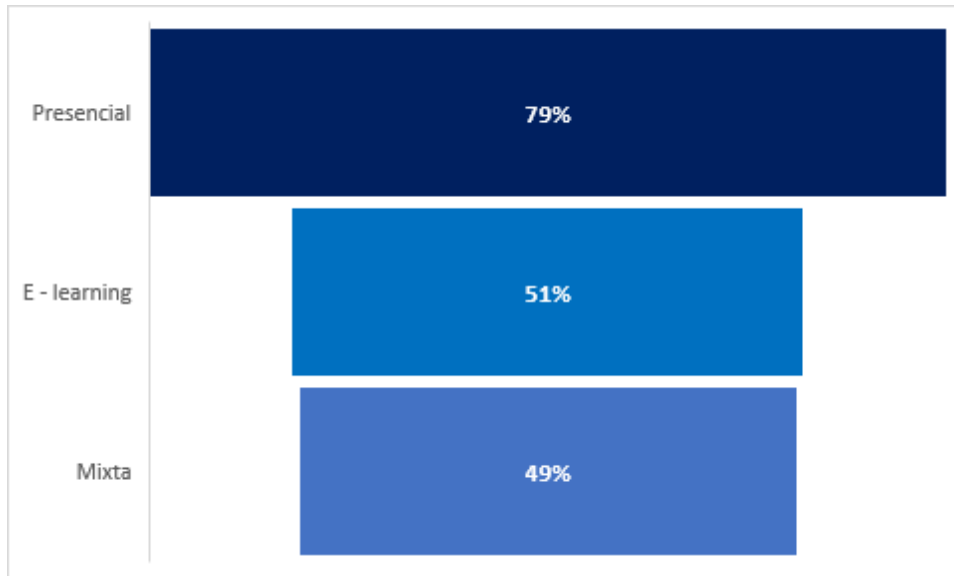
Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

With regard to the type of continuing training delivery methodology, it should be noted that although **face-to-face** -79%- continues to be the most frequent, **e-learning** -51%- and **blended learning** -49%- have been gradually gaining **greater participation**. The 2020 / 2021 pandemic has also had to encourage **non-face-to-face training**. Over the last few years, the possibilities of accessing e-learning, particularly via mobile devices, have grown significantly, while the number of courses adapted to this type of format has multiplied (Figure 45).

Companies **combine**  
**different** training **modalities**

Graph 45. Please specify by which methodology training has been provided during the last two years (%) (multiple answer)



Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

Finally, it should be noted that the companies' commitment to lifelong learning is also shown by the fact that 59.3% say that training activities **have been organised both inside and outside the working day**, and above all by the fact that 27.2% say that they have been planned only within the working day (Graph 46). On many occasions, one of the main points of friction between company management and workers in all types of economic sectors, when it comes to managing continuous training, lies precisely in the question of when the courses are given.

**3 out of 5 companies**  
indicate that they have  
**organised training both**  
**inside and outside working**  
**hours.**

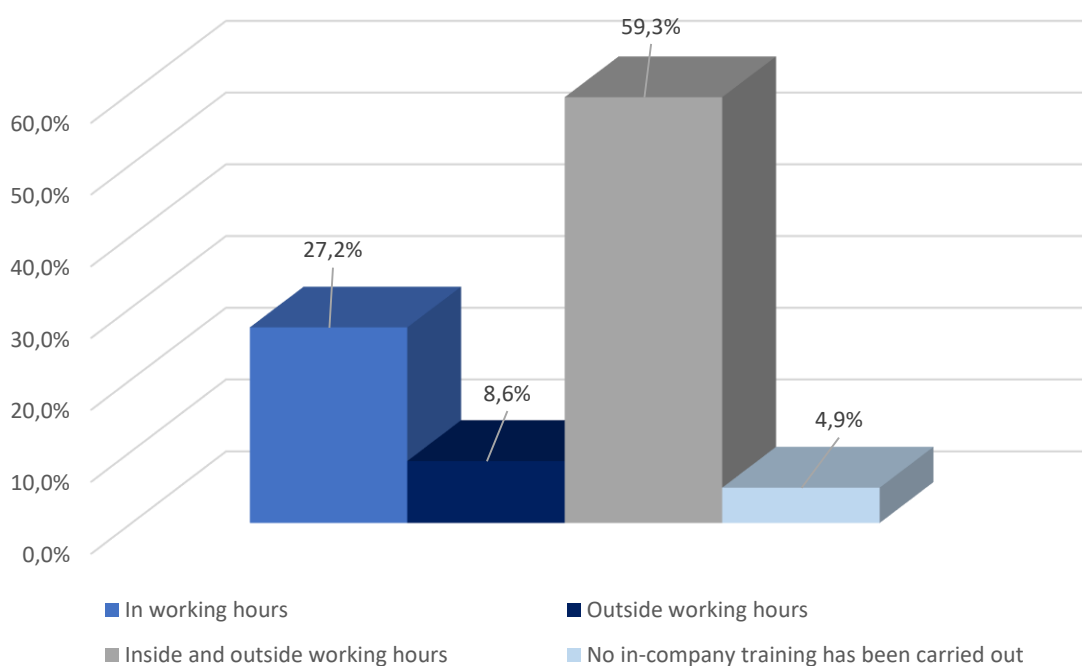




**1 in 20  
companies  
have not  
organised  
training**

Moreover, the number of companies that have not carried out training has been limited to 4.9%. This favourable figure suggests that companies in the logistics/port sector have made progress in consolidating the culture of continuous training (Graph 46).

Graph 46. Has the training been carried out during or outside working hours? (%) (multiple answer)

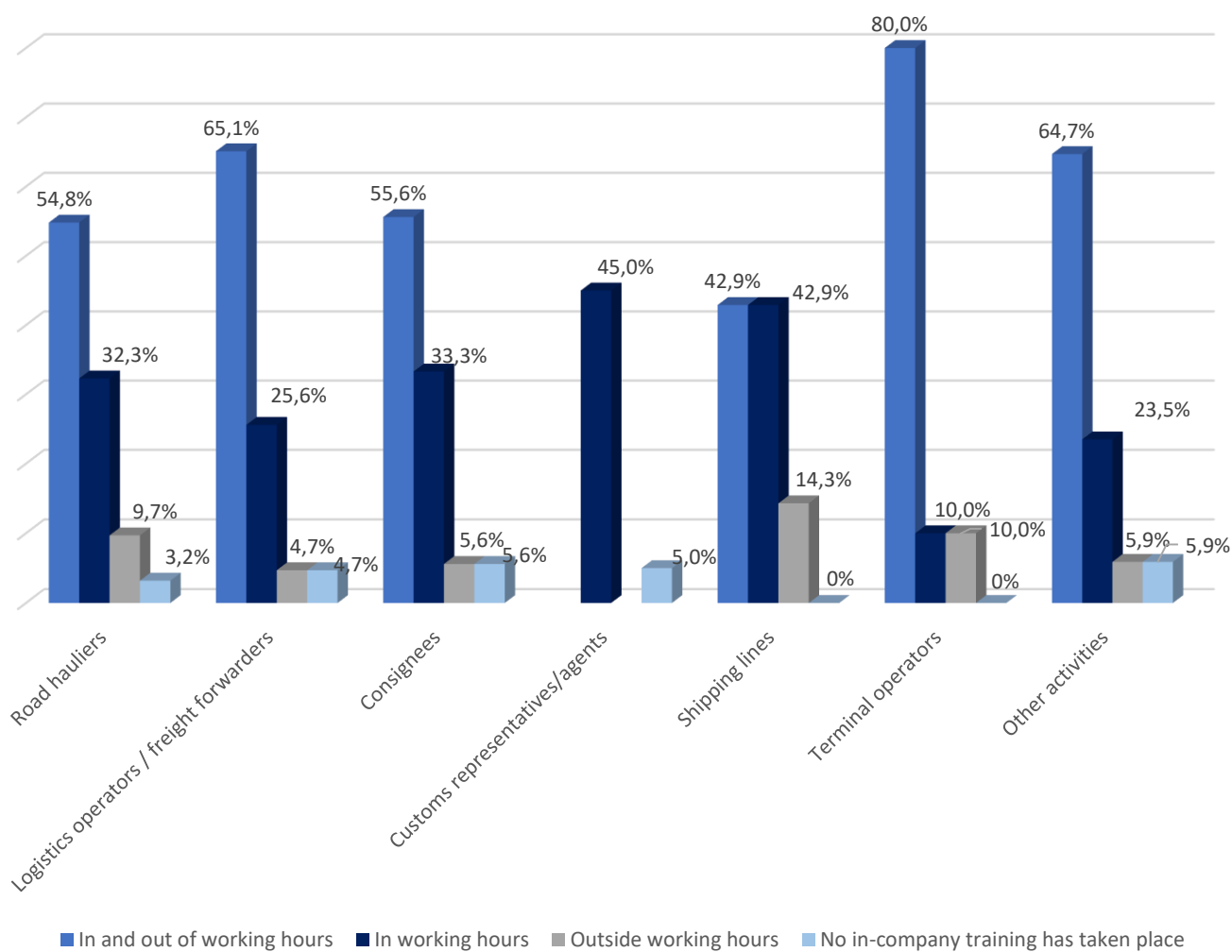


Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

According to economic segments, representatives/customs agents -45%- and terminal operators -42.9%- are the segments where it is most common to organise courses within the working day. These figures are limited to 10% in the case of shipping companies and 25.6% in the case of logistics operators / freight forwarders (Graph 47).

Graph 47. Has the training been carried out during or outside working hours? (%) (according to economic activity) (multiple answer)



Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.



Figure 48 concretises the linkage of responses related to the following variables:

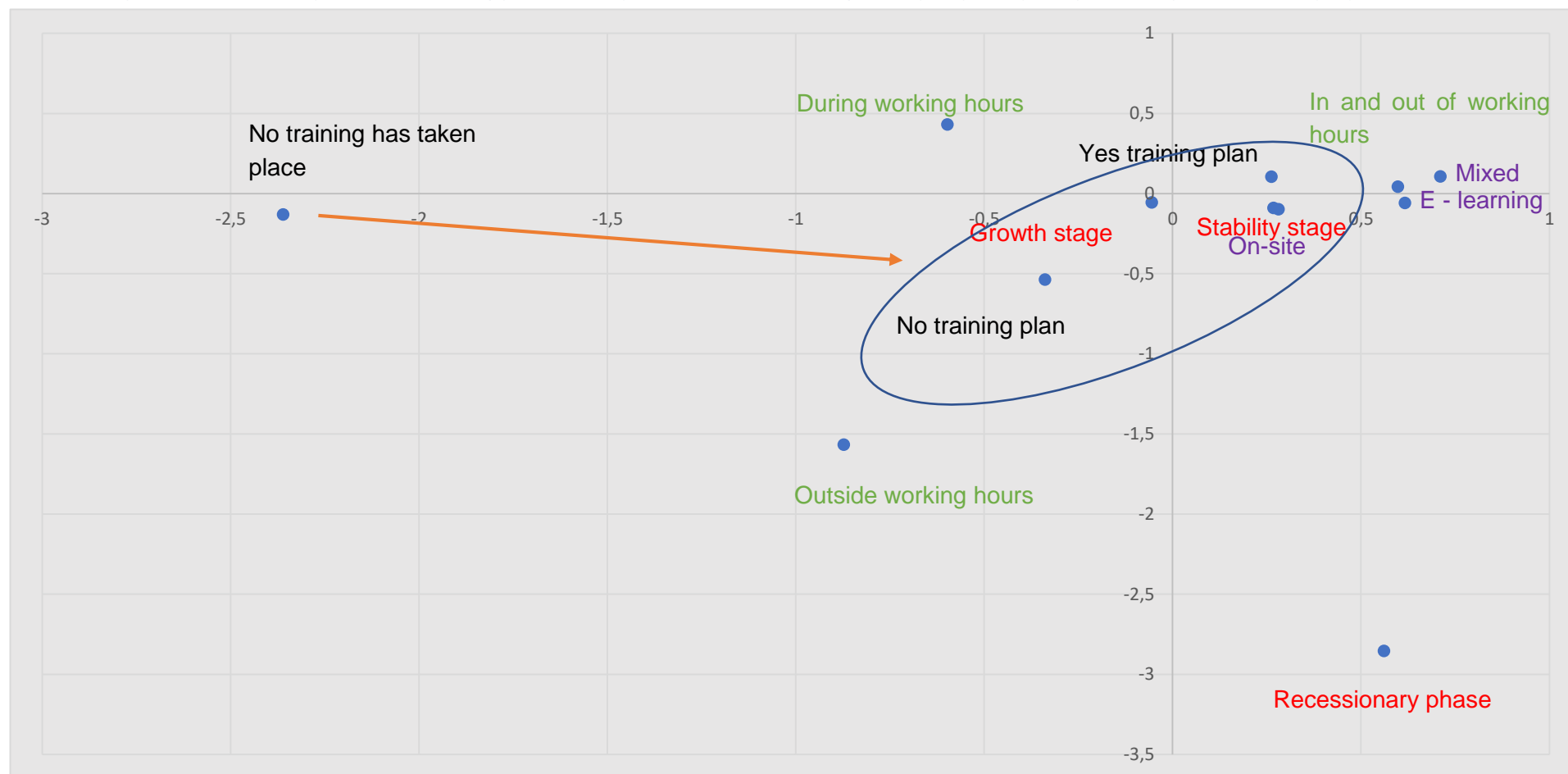
- ✓ Elaboration of a training plan
- ✓ Organisation of training activities
- ✓ Type of training delivery methodology
- ✓ Type of timetable for participation in courses
- ✓ Economic growth prospects

The following conclusions can be drawn:

- **Companies organise training regardless of whether or not they have a plan.** In other words, they do not need to plan training actions, in the medium or long term, to encourage workers' participation in courses.
- The **economic prospects** of companies are not particularly related to whether or not they have promoted the design of a training plan.
- Having promoted a **training plan** is an aspect that does not have a very significant impact on either the type of delivery methodology or the type of timetable. Moreover, it is more common for companies, without a training plan, to carry out training activities outside working hours.



Graphic 48. Relationship between training plan, delivery mode, timetable and growth prospects (multiple correspondence analysis)





## Continuous training

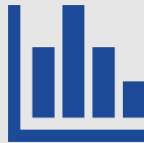
### Main conclusions



Companies in the port community promote continuous training (95.1%), although those with training plans are reduced to 69.1%. Terminal companies are the ones with the highest percentage of training plans, as are companies with more than 50 workers.



A significant number of companies (44.4%) have carried out qualification needs studies. The activities where this type of analysis is most common are terminal operators, shipping companies and logistics/forwarding companies.



According to the online survey data, the promotion of lifelong learning is not particularly aligned with the macroeconomic situation.



The promotion of continuous training combines different methodologies and timetables, as well as a variety of courses, both transversal and specific to the port-logistics sector.

The most common areas of training are English, office automation, customs, incoterms and safe driving.

Around 1 in 20 companies have not undertaken training.

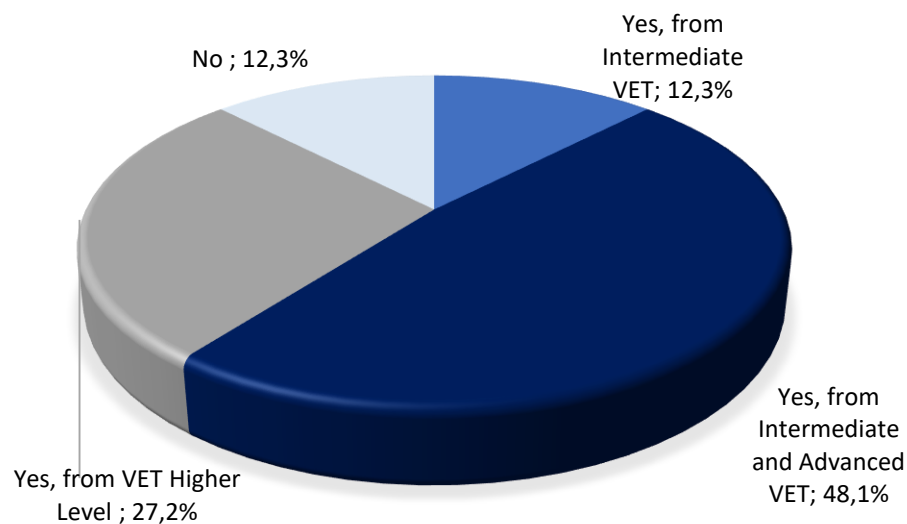
## 2.5/ VOCATIONAL TRAINING

The **aim of** this section is to analyse the **presence of Vocational Training graduates** in companies in the Region of Valencia, to **identify the professional families** to which they belong and to determine the **degree of knowledge and assessment of the offer**.

The data from the online survey show the great importance of Vocational Training for many companies in the Valencian Community. Nearly half of the companies, **48.1%** to be exact, have **graduates from Intermediate and Higher Levels**. In addition, **12.3% have intermediate vocational training graduates and 27.2% have higher vocational training graduates** (Graph 49).

**Nearly half** of the companies have **graduates of higher and intermediate vocational training**.

Graph 49. Does your company have or has your company had Vocational Training graduates?  
(%)

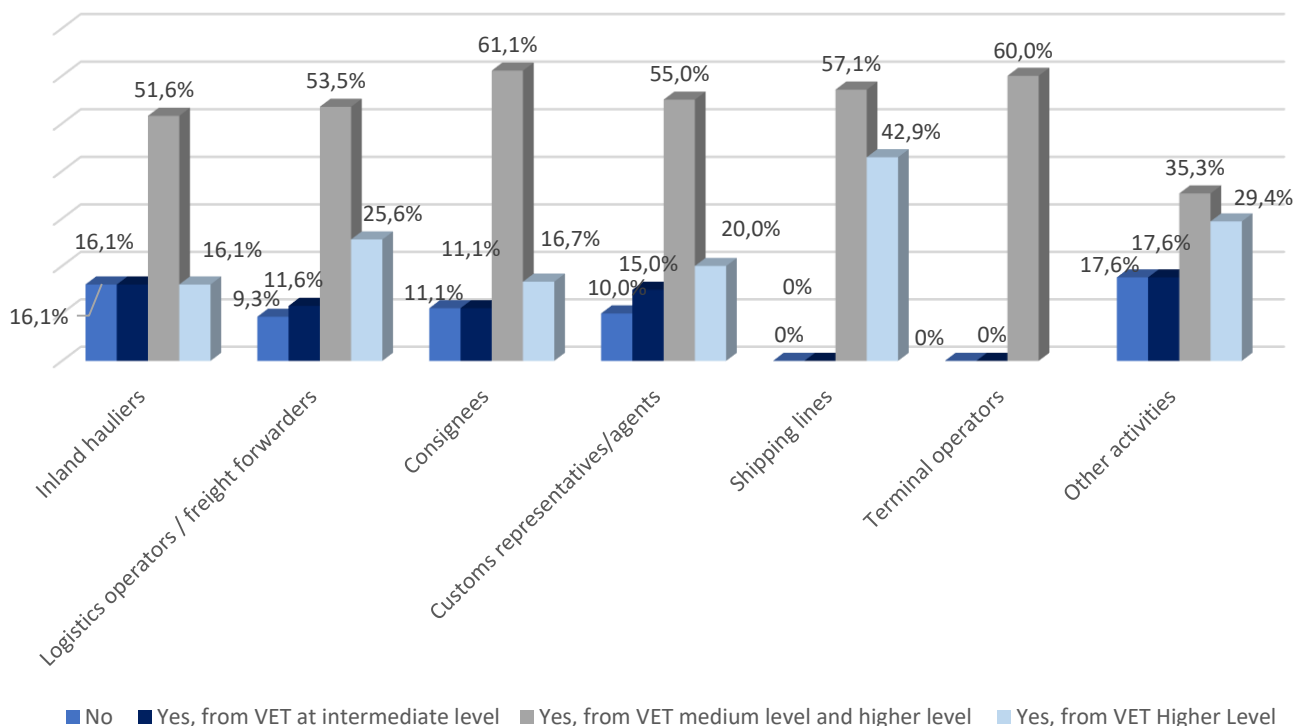


Source: On-line survey addressed to companies in the port community of Valencia.

According to the online survey data, all economic activities have vocational training graduates. However, in some segments, **there are companies that do not have vocational training graduates**. These are: inland hauliers -16.1% of companies-, consignees -11.1%-, representatives/customs agents -10.0%-, logistics operators/forwarding agents - 9.3%- and activities classified as "other" (17.6%) (Graph 50). However, in overall terms, companies lacking vocational training graduates are limited to 12.3% (Graph 49).

Nearly **9 out of 10 companies employ VET graduates**

Graph 50. Does your company have or has your company had Vocational Training graduates?  
(%) (according to economic activity)



Source: On-line survey addressed to companies in the port community of Valencia.

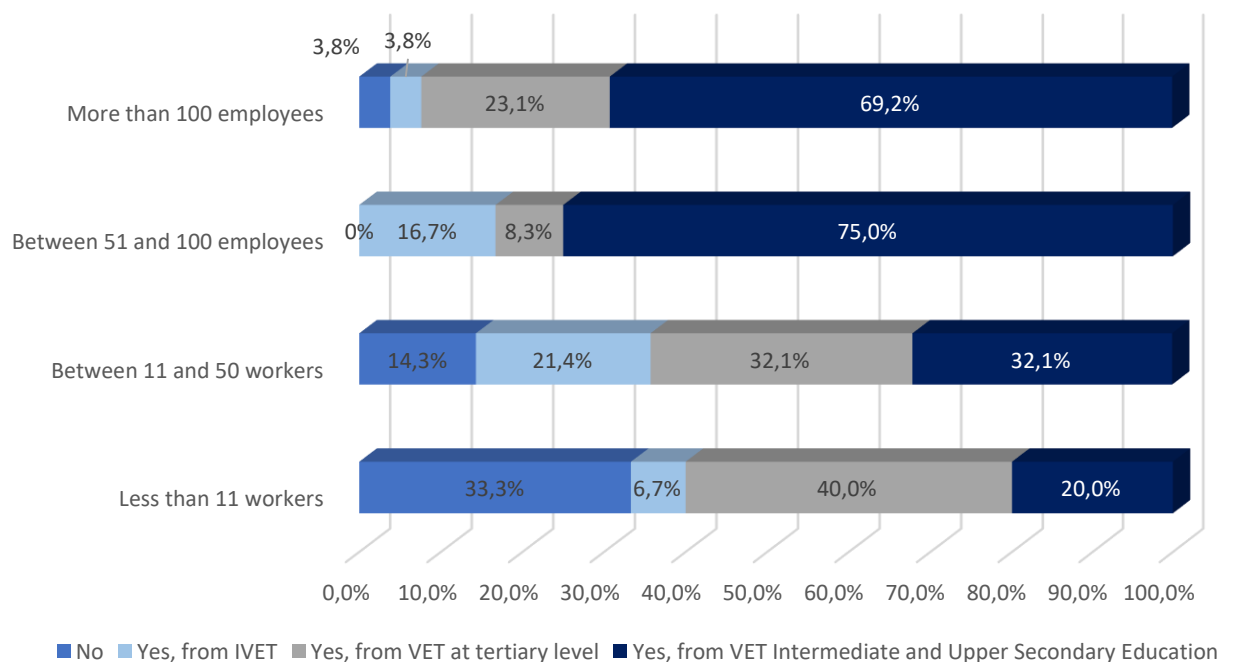
On the other hand, **all of the shipping companies and terminal operators surveyed have Vocational Training graduates**. Another noteworthy fact is that **the majority of the companies, of the six economic segments identified, have, at the same time, Higher and Intermediate Degree graduates**: Consignees -61.1%, terminal operators -

60%-, shipping companies -57.1%-, customs representatives / agents -55%-, logistics operators / freight forwarders -53.5%- and inland hauliers (51.6%) (Graph 50) (Graph 50).

The presence of Vocational Training graduates is lower in smaller companies, because they have more limited resources and infrastructures or because they are those with a smaller activity. Thus, **among companies with fewer than 11 workers**, 33.3% have no Vocational Training graduates. Conversely, in companies with between 51 and 100 workers, 75% of companies have both Higher and Intermediate Vocational Training graduates (Graph 51).

**Smaller companies lack VET graduates**

Graph 51. Does your company have or has your company had Vocational Training graduates? (%) (according to company size)



Source: On-line survey addressed to companies in the port community of Valencia.

The companies, which do not have vocational training graduates, were asked about the **reasons** for this. 30% responded that these qualifications were not suited to their activities and 20% that they required staff with higher levels of training (Table 16).



Table 16. What are the reasons why your company does not have Vocational Training graduates? (%) (multiple answer)

Response	
VET qualifications are not adapted to company activities	30
The company's activity requires staff with higher levels of training.	
Because of the administrative burden	
The company does not have sufficient knowledge of the VET offer and/or its possibilities.	
There has been no such need	

Only those companies that do not have or have not had vocational training graduates respond.

Companies had the option to select more than one response.

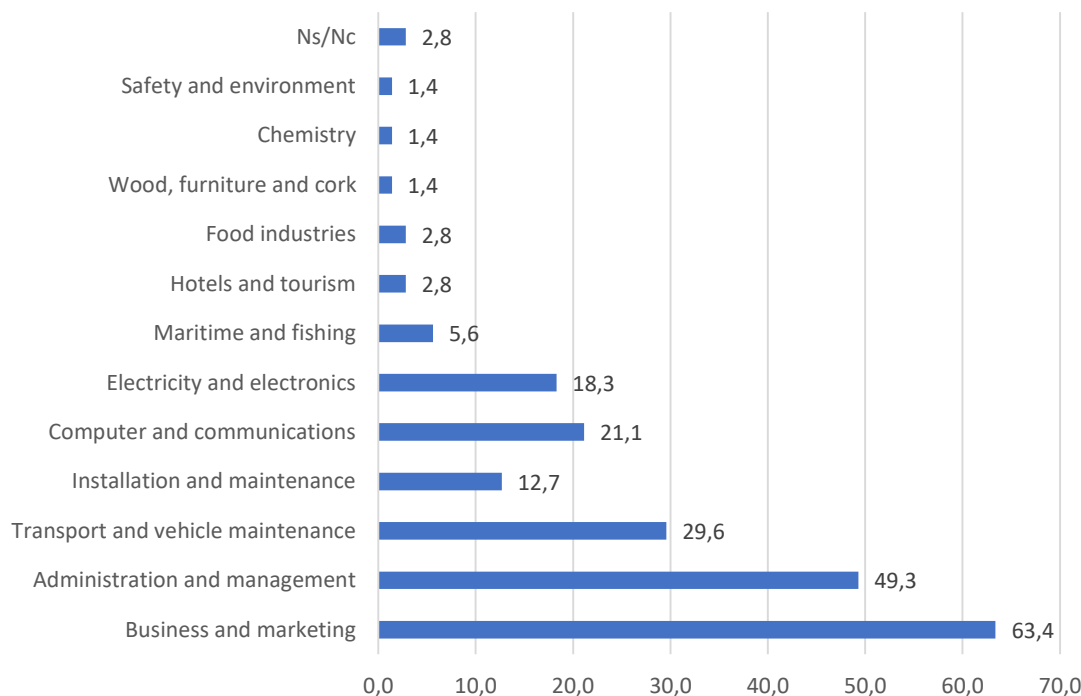
Source: On-line survey addressed to companies in the port community of Valencia.

As Graph 45 shows, the Vocational Training graduates who work in the companies of the port community of Valencia belong to quite diverse professional families.

In total, there **are 12 professional families that group together the workers with vocational training qualifications**. The most numerous is **Commerce and marketing** -63.4%-, specific to the logistics - port sector. In second place, the most frequent is a family of a transversal nature: Administration and management (49.3%). It groups together jobs linked to accounting, documentation, customer service, etc. Then, in third place, the most common is Transport and maintenance of vehicles (29.6%). In fourth and fifth place, Computers and communications (21.1%) and Electricity and electronics (18.3%) respectively (Graph 52).

**Commerce and marketing**  
is the professional family  
with the highest number of  
workers.

Graph 52. Indicate to which professional families the Vocational Training graduates belong or have belonged (%) (multiple answer)



Respond only to companies that have or have had VET graduates.

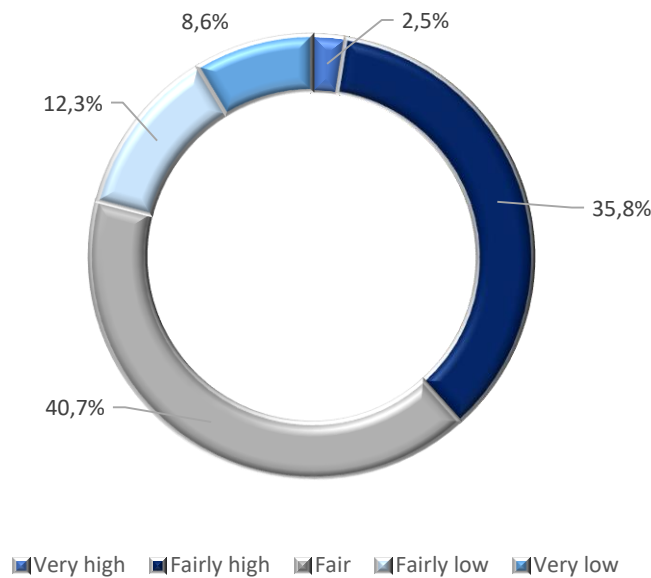
Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

**Companies tend to have a rather high level of awareness of vocational training provision.** Specifically, 38.3% have a high or very high level of knowledge. In any case, the fact that 20.9% of the companies say that they have a low or very low level of knowledge shows the need for a greater effort to be made to disseminate the offer within the framework of the Valencia port community (Graph 53).

It is necessary to **promote the dissemination of the VET offer** so that knowledge is generalised

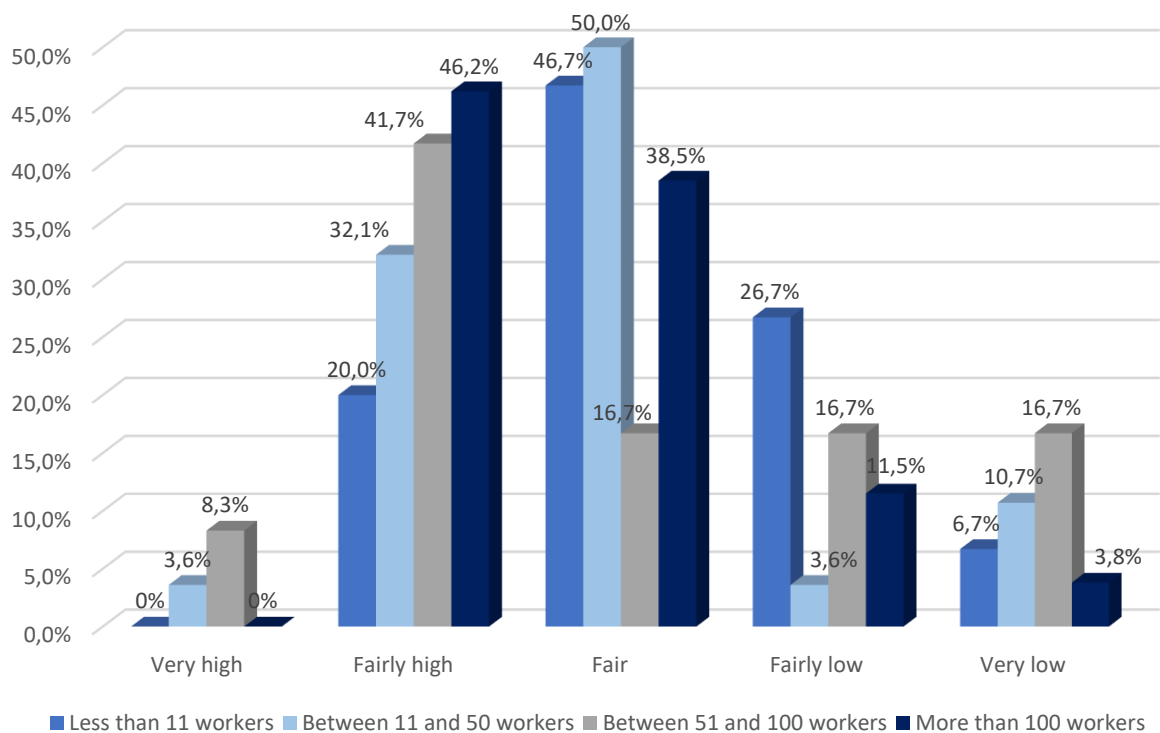
Graph 53. What is your degree of knowledge of the Vocational Training offer, located in the Valencian Community, linked to the professional profiles related to your company? (%)



Source: On-line survey addressed to companies in the port community of Valencia.

Broadly speaking, it can be said that it is the **larger companies, in particular those with between 51 and 100 employees, that have the highest level of awareness of Vocational Training provision**. On the other hand, 33.4% of the companies with less than 11 employees confess to have a very or fairly low awareness of the offer. Companies of this size that have a fairly high level of knowledge are reduced to 20% and none of them stated that they have a very high level of knowledge (Graph 54).

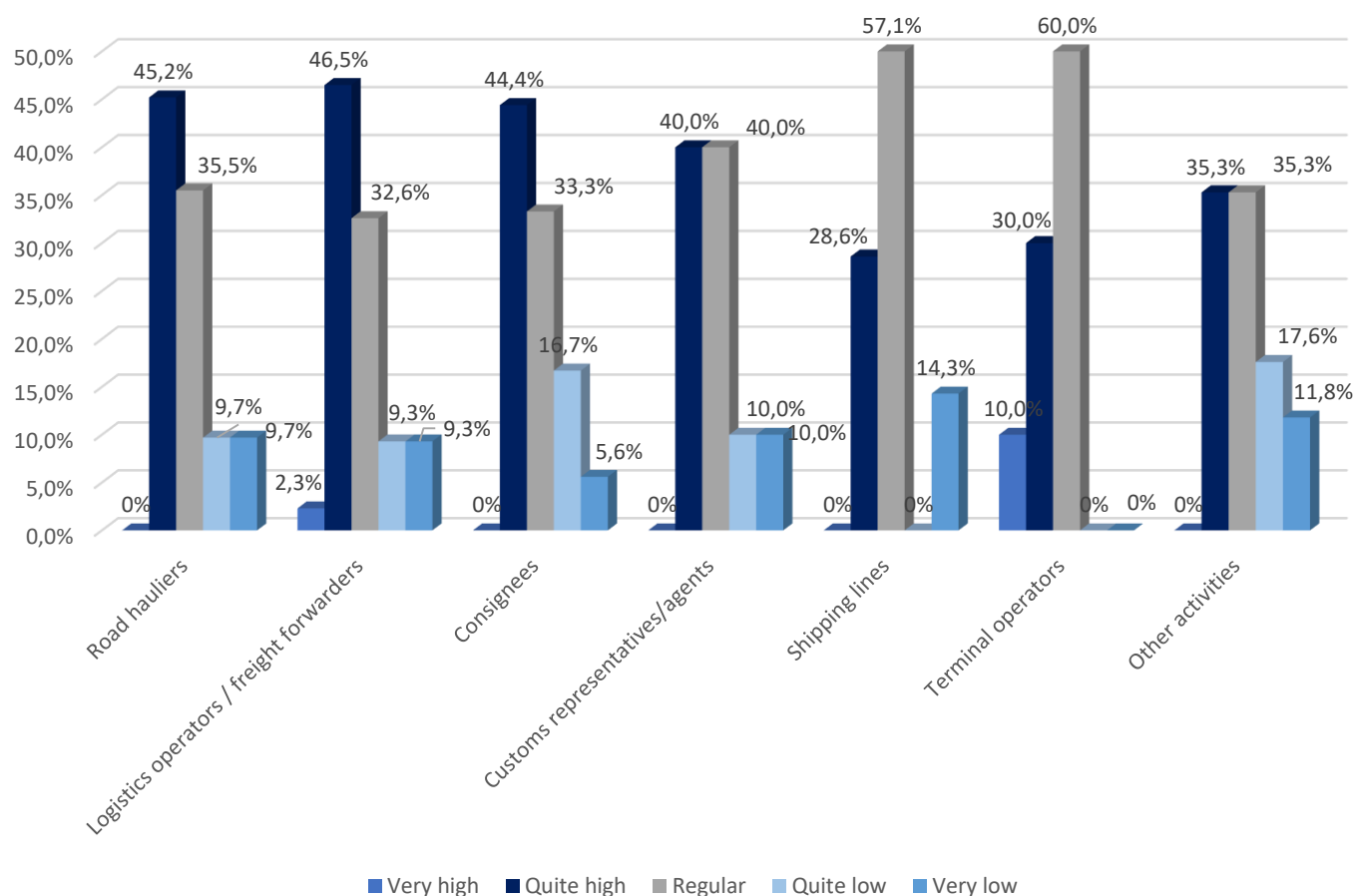
Graph 54. What is your degree of knowledge of the Vocational Training offer, located in the Region of Valencia, linked to the professional profiles related to your company? (%) (according to company size)



Source: On-line survey addressed to companies in the port community of Valencia.

If we carry out the analysis according to economic activity, it should be noted that the companies with the **least knowledge of the Vocational Training offer** are the following: Consignees -22.3% with rather low or very low knowledge-, representatives/customs agents -20%- and inland hauliers (19.4%). Apart from this, it should be noted that 29.4% of the companies classified as "other activities" have a low or very low level of knowledge (Graph 55).

Graph 55. What is your degree of knowledge of the Vocational Training offer, located in the Region of Valencia, linked to the professional profiles related to your company? (%) (according to economic activity)

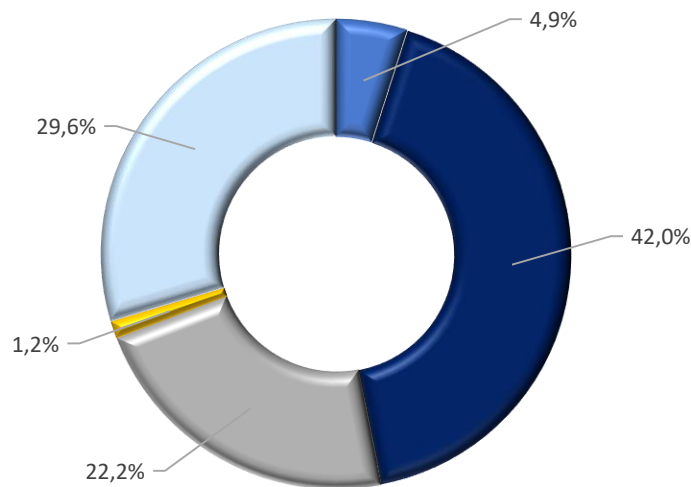


Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

On the other hand, **the opinion regarding the Vocational Training offer also tends to be positive, with** 46.9% being in full or fair agreement that it meets the needs of their company, while 23.4% say they agree or disagree slightly or not at all. It should also be borne in mind that, largely due to the lack of knowledge about vocational training in the port community, those who do not answer this question amount to 29.6% (Graph 56).

Graph 56. Do you think that the Vocational Training offer in the Valencian Community is adapted to the needs of your company? (%)



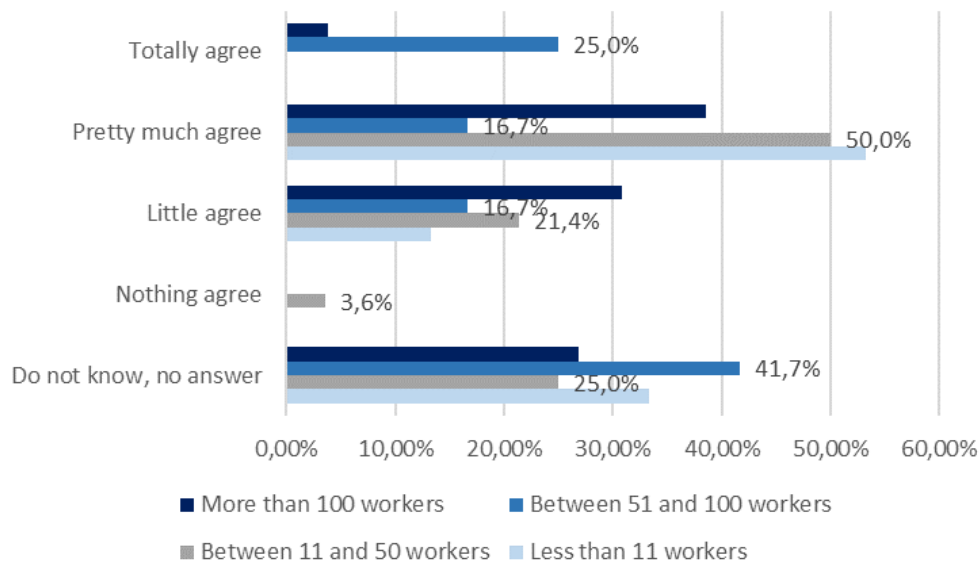
■ Strongly agree ■ Strongly agree ■ Slightly agree ■ Do not agree at all ■ Don't know/no answer

Source: On-line survey addressed to companies in the port community of Valencia.

In all **strata of company size** in the port community, positive evaluations of Vocational Training are more frequent than negative ones. However, as mentioned above, the percentage of companies that do not answer this question is significant in all of them. For example, among companies with between 51 and 100 workers, 41.7% do not answer this question (Graph 57).

This can also be extended to all the **economic activities** that make up the port community of Valencia. In all segments, the evaluations certainly tend to be positive in overall terms, but those who do not respond reach a significant percentage. Thus, among the companies grouped under "other activities", 41.2% do not answer this question (Graph 58).

Graph 57. Do you think that the Vocational Training offer in the Valencian Region meets the needs of your company? (%) (according to company size)



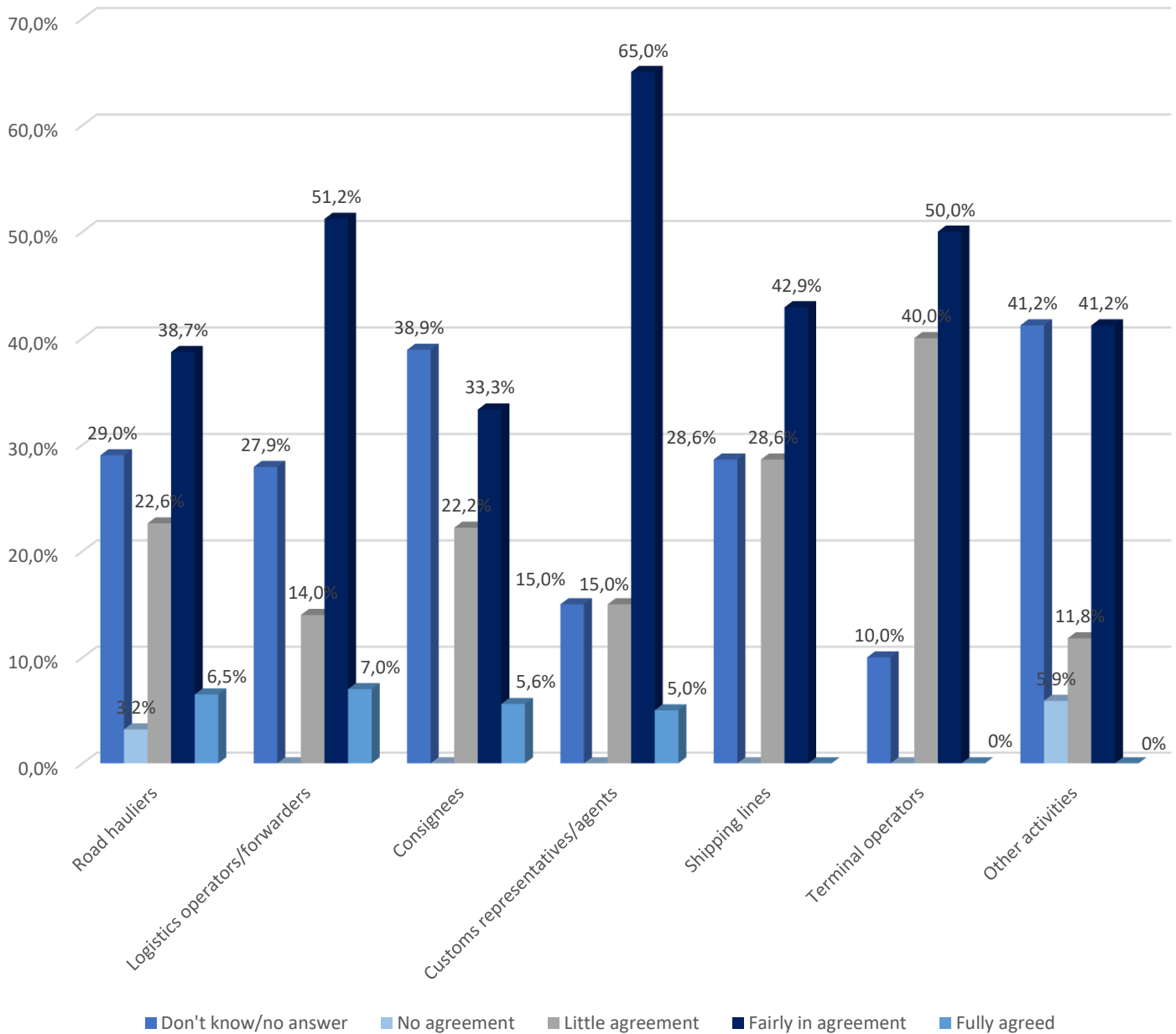
Source: On-line survey addressed to companies in the port community of Valencia.

The **most favourable ratings** were given by customs representatives/agents, 70% of whom said that they fully or somewhat agreed that the vocational training on offer in the Valencian Community met their needs. Inland haulage companies are among the most dissatisfied, with 25.8% not at all or not very much in agreement, while 28.6% of shipping companies are not very much in agreement (Graph 58).

**Customs representatives/agents** are the ones who **best value FP's offer**.



Graph 58. Do you think that the Vocational Training offer in the Region of Valencia meets the needs of your company? (%) (according to economic activity)



Source: On-line survey addressed to companies in the port community of Valencia.





The companies were asked a series of **questions on Vocational Training** in order to give their opinion on a scale of 1 to 5, with 1 being not at all in agreement and 5 being totally in agreement. None of these issues received a clearly positive rating. The most highly rated questions received a medium level of satisfaction (Table 17):

- ✓ The training cycles are in line with the specific competences required by the logistics - port sector (3.2 arithmetic average).
- ✓ The training cycles have made progress in the incorporation of curricular content linked to the challenges of digital transformation (3.2).
- ✓ VET cycles incorporate sufficient content linked to environmental sustainability (3.0).
- ✓ Companies in the logistics - port sector are aware of the benefits that Dual Vocational Training can bring them (3.0).
- ✓ VET students leave VET sufficiently prepared to start practical training in the logistics - port sector (3.0)

All these aspects have had to be corroborated, to a large extent, on the basis of the experience gained by the companies, from the Vocational Training graduates they have recruited over the last few years.

In any case, there are less positive evaluations on fundamental issues, related to foreign language training, collaboration between the centres and the port community or the dissemination of the offer. More specifically, these are the following issues (Table 17):

- ✓ Recent VET graduates working in the port have sufficient knowledge of foreign languages (2.3).
- ✓ VET institutions turn to companies in the port-logistics sector when designing and adjusting their offer (2.4).
- ✓ VET institutions adequately disseminate their offer and, in particular, the dual mode (2.7).

Table 17. Specify your opinion about the functioning of VET in the Valencian Community

Response	Arithmetic mean	Response rate
The training cycles are adapted to the specific competences required by the logistics - port sector.	3,2	56,8
The training cycles have made progress in the incorporation of curricular content linked to the challenges of digital transformation.	3,2	42,0
VET cycles incorporate sufficient content linked to environmental sustainability.	3,0	30,9
Companies in the logistics - port sector are aware of the benefits that Dual Vocational Training can bring them.	3,0	48,1
VET students are sufficiently prepared to start a practical training in the logistics - port sector.	3,0	53,1
VET graduates, recently incorporated into the logistics - port sector, know how to work adapting to the requirements of the new regulations.	2,8	45,7
Young VET graduates know how to participate in innovation projects in the port-logistics area.	2,8	40,7
VET institutions adequately disseminate their offer and, in particular, the dual mode.	2,7	50,6
VET institutions turn to companies in the port-logistics sector when designing and adjusting their offer.	2,4	44,4
Recent VET graduates working in the port have sufficient knowledge of foreign languages.	2,3	46,9

The rating is from 1 to 5, with 1 not agreeing at all and 5 strongly agreeing.

Source: On-line survey addressed to companies in the port community of Valencia.

Both these latter issues and the fact that almost 1 out of 4 companies have a rather negative perception of the adequacy of the offer, calls for **a redoubling of efforts in terms of joint work between companies and Vocational Training centres**. At the same time, however, it is true that companies have made progress in terms of collaboration with the centres, as shown in Table 18. In particular, it should be noted that 51.9% of companies have frequently recruited vocational training graduates through the intermediation of the centres and that 50.6% regularly have vocational training students on their staff.

Table 18. What type of relationship does your company maintain with the VET centres in the Region of Valencia? (%) (multiple answer)

Response	
It has often recruited vocational training graduates through the intermediary of the schools.	51,9
It is regularly staffed by VET students	50,6
Your company's employees usually take part in 100% subsidised training courses for employment, organised by Vocational Training Centres.	22,2
Other answers	4,9

Companies had the option to select more than one response.

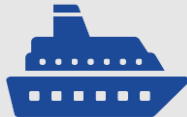
Source: On-line survey addressed to companies in the port community of Valencia.



## Main conclusions



The vast majority of companies in the port community have vocational training graduates - 87.7% - although to a lesser extent in smaller companies.



12.3% of the companies lack vocational training graduates. These companies belong to the following segments: inland hauliers, consignees, representatives/customs agents, logistics operators/forwarders and other activities.

The reasons why companies do not have vocational training graduates are that the offer is not adapted to their activities - 30% - or that their activity requires personnel with higher levels of training (20%).



46.9% of the enterprises totally or fairly agree that the VET offer is adapted to their needs.

Ratings of VET provision tend to be more positive than negative across all company strata and activities.



Companies tend to rate training provision positively, especially representatives/customs agents. However, it should also be noted that a quarter of them have a rather negative opinion.



Among the companies with VET graduates, the most frequent professional families are the following: Commerce and marketing -63.4%- , administration and management -49.3%- and transport and vehicle maintenance (29.6%).



48.1% of the companies have Vocational Training graduates of Intermediate and Higher Level. The majority of the companies, of the six economic segments identified, have both Higher and Intermediate Vocational Training graduates.



Given that around one fifth of the companies have limited knowledge of the training offer, it is pertinent to promote dissemination and collaborative work with vocational training centres. Smaller companies have less knowledge, as well as companies linked to the segments of consignees, representatives/customs agents and inland hauliers.

However, on the positive side, it should be noted that half of the companies have often recruited VET graduates through the intermediation of the centres.

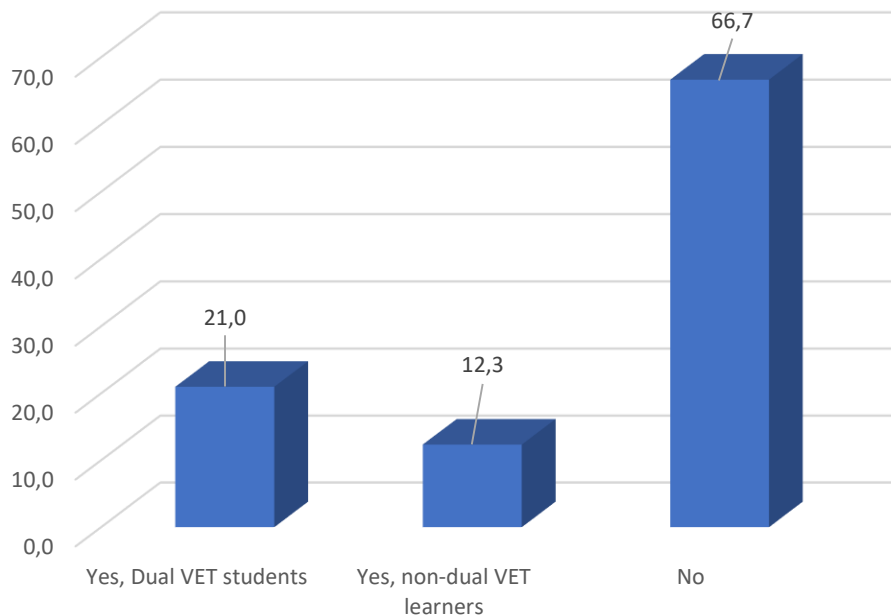
## 2.6/ PRESENCE OF VOCATIONAL TRAINING STUDENTS IN COMPANIES

The aim of this section is to **find out about the presence of Vocational Training students** (Dual and Non-Dual) in companies, their satisfaction in this respect and the levels of recruitment.

In recent years, **21% of companies have had Dual VET students and 12.3% have had non-Dual VET students** (Graph 59).

A **minority of companies** have VET learners in their workforce

Graph 59. Have vocational training students been trained in your company during the last few years? (%) (multiple answer)



Companies had the option to select more than one response.

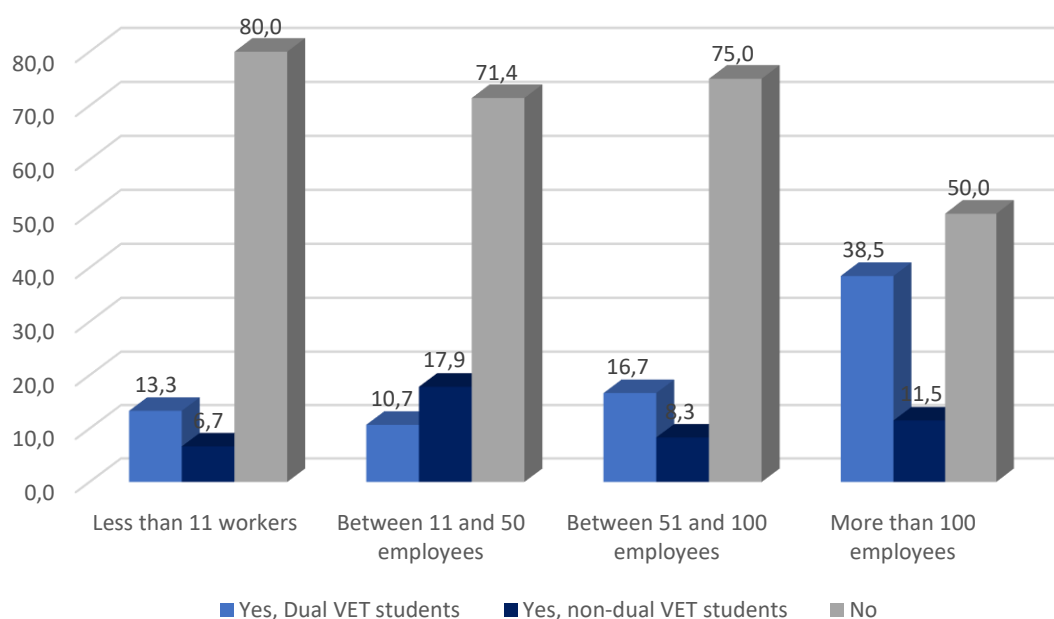
Source: On-line survey addressed to companies in the port community of Valencia.

**Dual VET students were most frequently present in companies with more than 100 employees.** This is what 38.5% of them specifically indicated. In this type of company,

it is more common for there to be different departments or management areas with the capacity to accommodate VET students. However, in the case of non-dual VET, companies with between 11 and 50 employees reported the highest percentage of affirmative answers (17.9%) (Graph 60).

It is the **larger companies**, with larger infrastructures, that have the most Dual VET students.

Graph 60. Have vocational training students been trained in your company during the last few years? (%) (according to company size) (multiple answer)



Companies had the option to select more than one response.

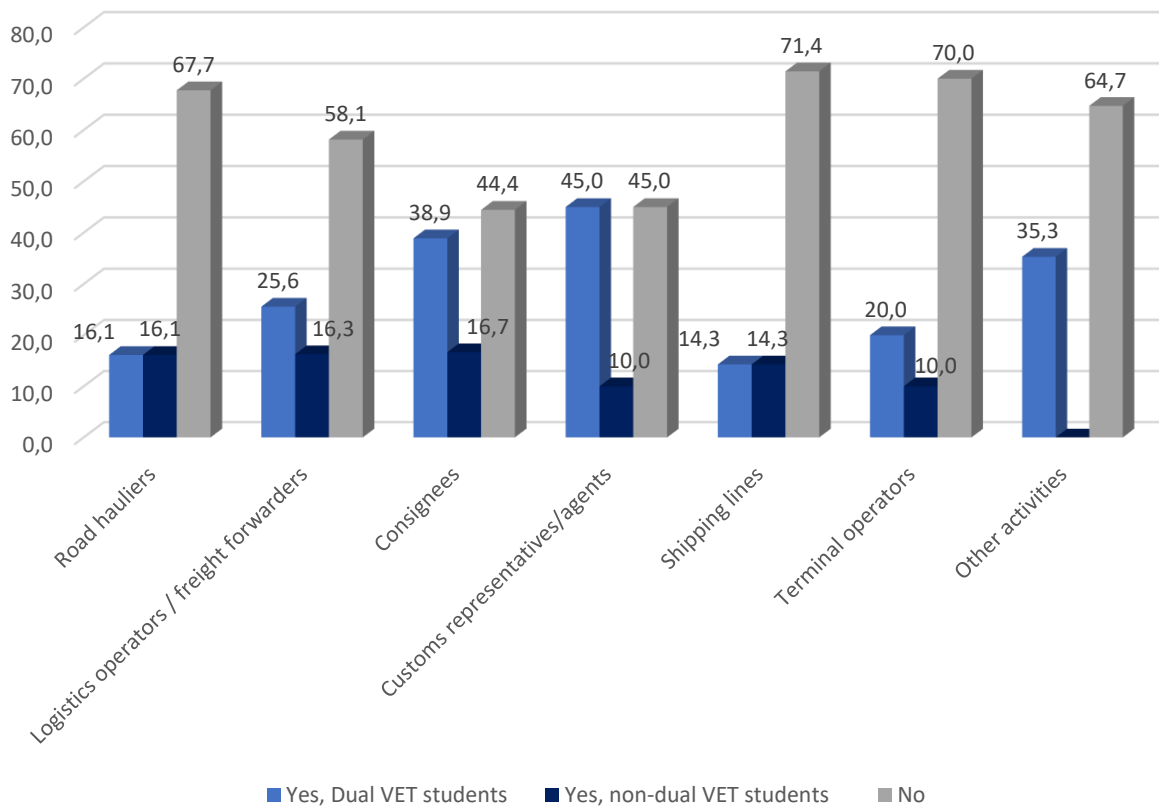
Source: On-line survey addressed to companies in the port community of Valencia.

**The presence of Dual VET students was greater than that of non-Dual VET students in all economic activities**, except in two where it was equal: land transport companies -16.1%- and shipping companies (14.3%). On the other hand, the participation of Dual VET students was quite significant among representatives/customs agents -45%- and shipping agents (38.9%). Consignee companies, in 16.7% of cases, were

In almost all economic activities, the presence of Dual VET learners has been higher

also the segment with the highest presence of non-Dual VET students. In the case of the presence of non-Dual VET students, the differences between economic activities are smaller (Graph 61).

Graph 61. Have vocational training students been trained in your company in recent years? (%)  
(according to economic activity) (multiple answer)



Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.

## 2.6.1/ SATISFACTION WITH STUDENTS AND PROMOTION OF DUAL VOCATIONAL TRAINING

The following questions that we are going to present refer to VET students. Specifically, we present data referring to the satisfaction of companies with the students, the levels of recruitment that have taken place and how Dual VET can be promoted.

Certainly, **companies clearly show their satisfaction with regard to VET students**. On a scale of 1 to 5, with 1 being not at all satisfied and 5 being totally satisfied, the answers to the questions asked about VET students are as follows (Table 19):

Companies **are satisfied** with the trainees and they are frequently recruited.

- ✓ Interest in joining the company: 4.32 (arithmetical average).
- ✓ Interest in learning: 4.32.
- ✓ Ability to work in a team: 4.28.
- ✓ Knowledge transferred to the company: 3.61.

Table 19. Referring to the following questions, are you satisfied with the VET students trained in your company? (%)

Response	Arithmetic mean	Response rate
Interest in joining the company	4,32	92,6
Interest in learning	4,32	92,6
Ability to work as part of a team	4,28	92,6
Knowledge transferred to the company	3,61	85,2

Only companies where VET students have been trained respond.

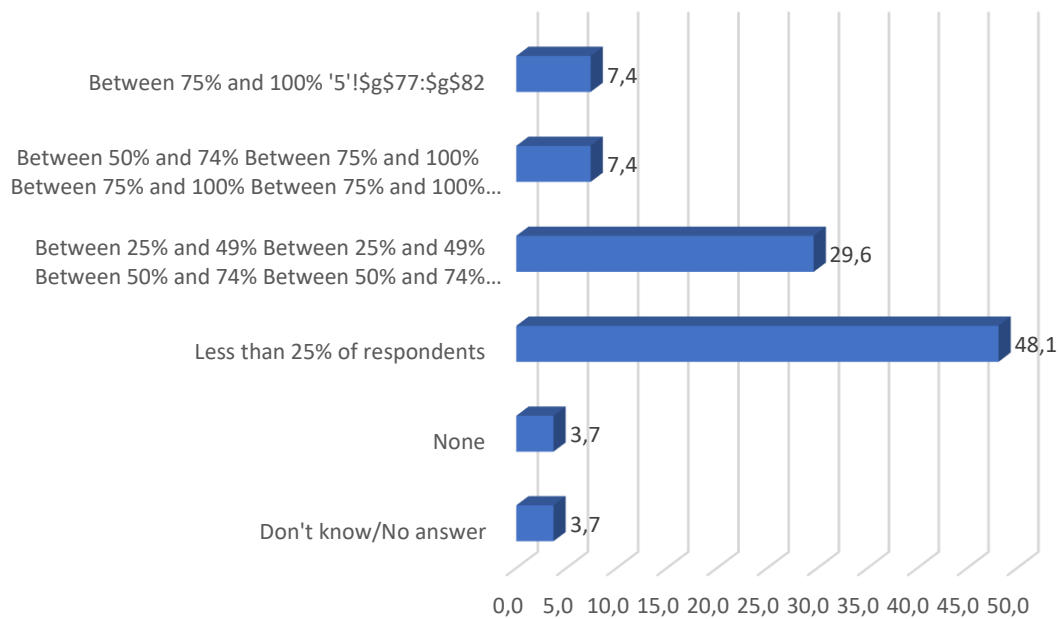
The rating is from 1 to 5, with 1 being fully satisfied and 5 not at all satisfied.

Source: On-line survey addressed to companies in the port community of Valencia.

**92.6% of companies have recruited trained VET learners in them.** Moreover, 14.8% have hired at least 50% of their trained students. These data corroborate that in-company training of VET students is also a relevant means of employability (Graph 62).



Graph 62. Approximately how many VET students trained in your company have subsequently been recruited in your company? (%)



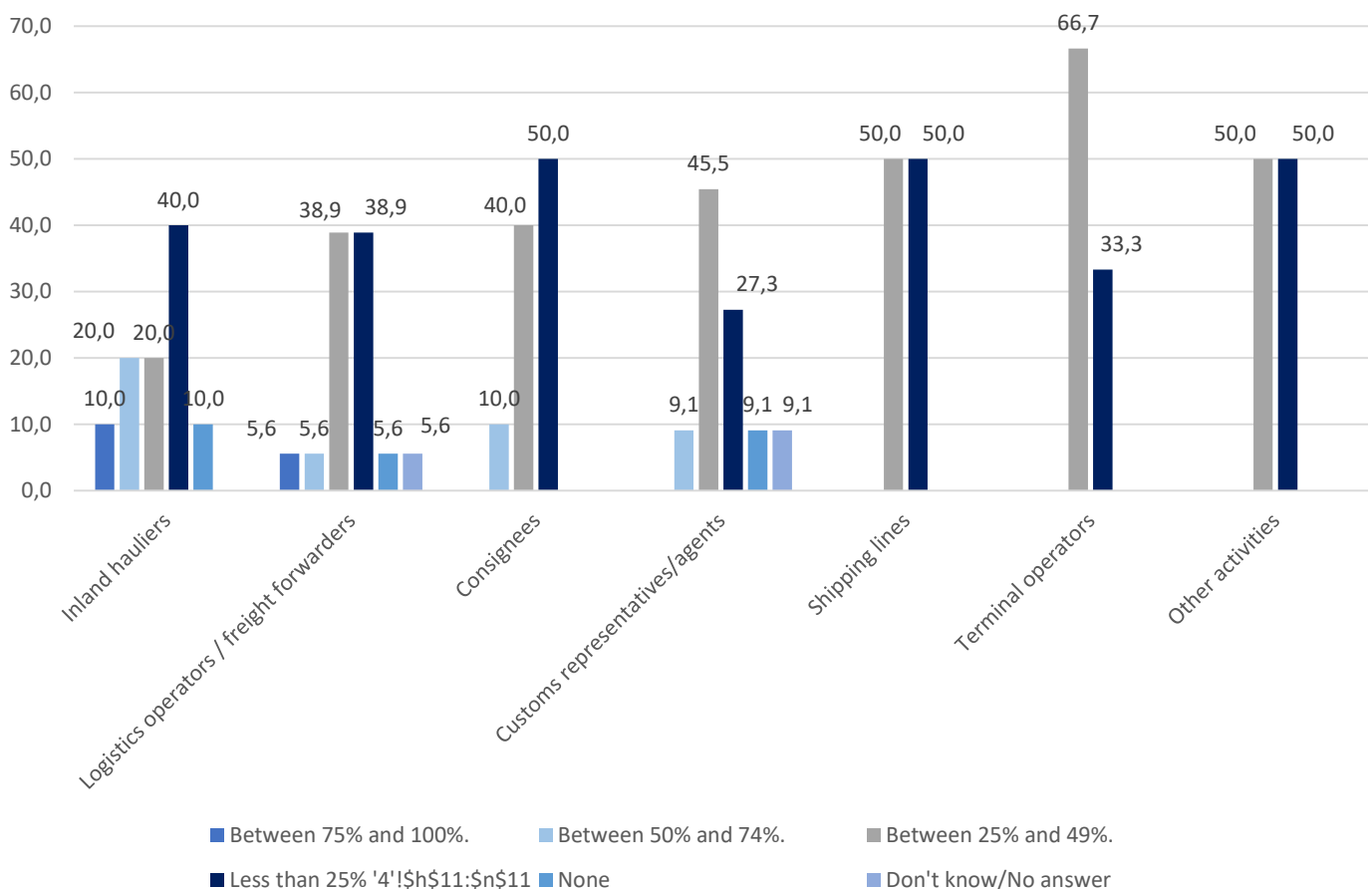
Only companies where VET students have been trained respond.

Source: On-line survey addressed to companies in the port community of Valencia.

**The percentage of recruitment carried out by companies varies significantly from one company to another.** The most characteristic aspects of each activity are shown below (Graph 63):

- ✓ Among the road hauliers, the highest percentage -10%- did not recruit any vocational training students. However, in 30% of them, at least 50% of the students trained have been recruited.
- ✓ In all shipping companies and terminal operators there have been recruitments of VET students, although in no case have they reached 50% of the total.
- ✓ In all of the consignee companies there have been recruitments and those that have reached 50% are 10% of the total. As far as representatives/customs agents are concerned, where 90.9% have been recruited, 9.1% have recruited at least 50%.

Graph 63. Approximately how many VET students, trained in your company, have subsequently been hired in your company? (%) (according to economic activity)



Only companies where VET students have been trained respond.

Source: On-line survey addressed to companies in the port community of Valencia.

The companies in the port community, which have had VET students, have made a series of proposals with the aim of promoting this modality. Among them, the following should be highlighted (Table 10):

- ✓ Disseminate employment exchanges with Dual VET graduates among companies: 63.0%.
- ✓ Better adjust the curricular designs of the Dual VET offer to the demands of port-logistics companies: 51.9%.
- ✓ Work towards a closer relationship between dual vocational training centres and port-logistics companies: 51.9%.

Table 20. How could Dual Vocational Training be promoted in the port community? (multiple answer)

Response	
Disseminate job vacancies with Dual VET graduates among companies.	63,0
Better adjust the curricular designs of the Dual VET offer to the demands of port-logistics companies.	51,9
Work towards a closer relationship between dual vocational training centres and port-logistics companies.	51,9
Spreading the advantages of Dual VET and the positive experiences it has achieved in the logistics - port sector.	48,1
Train company tutors to effectively accompany Dual VET students.	18,5

Only companies where VET students have been trained respond.

Source: On-line survey addressed to companies in the port community of Valencia.

Finally, Figure 64 shows the relationship between the answers to some of the key questions in the online questionnaire:

- Presence of VET students
- Employment outlook for the next three years
- Company size

As can be seen, three main conclusions can be drawn:

- **There is no significant relationship between having Dual VET students, on the one hand, and the future employment prospects of companies, on the other.** Therefore, over the next three years, the recruitment of Dual VET students, who are trained in companies, will not be favoured by the employment growth expectations of these same companies, as revealed in the online survey.
- **On the other hand, among companies with non-Dual VET students, the prospects for employment growth are somewhat higher** and may therefore favour the employability of students.
- **Having Dual VET learners is more related to whether or not companies have more than 100 employees** than to any job creation forecast.

Graph 64. Relationship between participation of VET learners in companies, employment prospects and company size (multiple correspondence analysis)





## Dual and non-dual training

### Main conclusions



Companies with VET learners are in the minority. Among companies with more than 100 employees, on the one hand, and among representatives/customs agents and consignees, on the other hand, the presence of Dual VET learners is higher.



Companies have also expressed their satisfaction with VET students in the survey, and have made proposals for improvement related to dissemination, adjustment of curricular designs or promotion of collaboration with the centres.

The elements in which they are most satisfied are the following: interest in integrating into the company, interest in learning, ability to work in a team and knowledge transferred to the company.



Employability prospects for the coming years are higher among companies with non-Dual VET students than among companies with Dual VET students.

However, around 9 out of 10 companies that have trained VET learners have made some recruitments.



## CHAPTER 3/ OCCUPATIONAL PROFILES

In this chapter, a series of **professional profiles will be** specified which, over the next three years, will be in demand by companies in the Valencia port community.

These professional profiles have been selected from these sources of information:

Sources of information



- **On-line survey** of companies in the port community.
- **Interviews** with representatives of companies in the port community.
- **Contrast table and Delphi group** with representatives of companies in the port community.
- **II Collective Agreement for State Ports and Port Authorities.**
- **Royal Decrees regulating training cycles.**
- **ESCO (European Classification of Skills / Competences, Qualifications and Occupations).**

The professional profiles established were as follows:

1. **Commercial agents.**
2. **Representatives / Customs agents.**
3. **Consignees.**
4. **Freight forwarders.**
5. **Transport logistics agents.**
6. **Administrative employees of transport services.**
7. **Foreign trade technicians.**
8. **Technicians in stock management and/or warehousing.**
9. **Maritime Operations Coordinator.**
10. **Terminal maintenance technician.**

Table 21. Professional profiles by economic activity and area of knowledge

PROFESSIONAL PROFILES		
ACTIVITIES	AREA OF KNOWLEDGE	PROFESSIONAL PROFILES
<b>INLAND HAULIERS</b>	Traffic (38.7%)	Transport logistics agent.
	Logistics and distribution (32.3%)	Technician in stock management and / or warehouse.
	Imports (35.5%) Exports (32.3%)	Foreign trade technician
<b>LOGISTICS OPERATORS / FREIGHT FORWARDERS</b>	Exports and Imports (37.2%).	Foreign trade technician Freight forwarder
<b>CONSIGNEES</b>	Exports and imports (55.6%).	Foreign trade technician Consignee
<b>CUSTOMS</b>	Imports (50%) Exports (40%)	Foreign trade technician
	Customs (40%)	Representative / Customs agent
	Administration / accounting (40%)	Administrative employee in transport services
<b>TERMINALISTS</b>	Exports (57.1%) Imports (42.9%)	Foreign trade technician
	Commercial (57.1%)	Commercial agent
	Customs (42.9%)	Representatives / Customs Agent
	Logistics / distribution (42.9%)	Technician in stock management and / or warehouse. Maritime Operations Coordinator Terminal maintenance technician
	Traffic (42.9%)	Transport logistics agent.
<b>NAVIERS</b>	Operations (50%)	Consignee Freight forwarder

Source: On-line survey, contrast table and interviews with companies in the port community of Valencia.

A series of sheets will be presented below which, in a synthetic way, describe each of the professional profiles, based on the following contents:

1. Name.
2. Area of knowledge (determined in the online survey).
3. Economic activity.
4. Priority.
5. Type of curricular training required.
6. General description of the profile. It basically indicates what the functions that characterise it consist of.
7. Professional category.
8. Type of profile, i.e. cross-cutting, specific and related.
9. Essential skills and competences.
10. Knowledge.
11. New aspects of competence.
12. Aspects for improvement in the coordination of supply and demand of profiles.
13. Training specialities. These specialities are the training actions, formal and non-formal, developed within the framework of the Vocational Training System for employment in the labour field.<sup>21</sup>the actions most closely related to the qualifications of the professional profiles will be included.
14. Remarks.

<sup>21</sup> <https://sepe.es/HomeSepe/Personas/formacion/catalogo-especialidades-formativas.html>



### 3.1/ COMMERCIAL AGENTS

**Commercial agents** constitute a professional profile of a transversal nature but which is present in different companies in the port community and which is in demand in the coming years, especially in terminal companies. These agents are in charge of leading, under the supervision of the management, the planning and implementation of the commercial activities of the company. It is a profile that can be carried out by professionals with different types and levels of curricular training. They also tend to be required to have work experience in commercial activities and a broad knowledge of the actors, components and functioning of the logistics-port value chain.

Professional profile		
1. NAME	Main	<b>COMMERCIAL AGENTS</b>
	Other	Commercial International Trade Agent International Marketing Technician International digital marketing technician.
2. AREA OF KNOWLEDGE	Commercial	
3. ECONOMIC ACTIVITY	Terminal operators and applicable to the entire port community.	
4. PRIORITY	Medium - High	
5. TYPE OF CURRICULAR TRAINING REQUIRED	Access to these jobs can be mainly by means of the following qualifications: Senior technician in international trade. Senior technician in transport and logistics. Senior technician in administration and finance. University degree (e.g. in business administration and management). University postgraduate degree specialised in marketing or logistics / port activity (Master in Port Management and Intermodal Transport - MGPT, for example). There is a tendency to ask for previous work experience in commercial activities.	
6. GENERAL DESCRIPTION.	The activities of the commercial agent consist mainly of: - Develop and participate in campaigns and other commercial activities. - Analysing markets. - Establish and implement business strategies. The ultimate goal is to increase the customer base and build customer loyalty, in collaboration with other departments in the company.	
7. PROFESSIONAL CATEGORY.	Technician / Middle management	
8. TYPE OF PROFILE	Transversal	

## Professional profile

### 9. ESSENTIAL SKILLS AND COMPETENCES

A number of skills and competences that tend to be common to this profile are set out below:

Planning and management.

Identify the overall business goals of the company (customers, scope of expansion, etc.).

Collect data about customers, products, markets and other components of the marketing mix.

Develop short/medium-term commercial contact bases.

Apply marketing tools in customer acquisition and loyalty processes.

Define the company's business plan, with the support of the management function, including budgeting, contracting of necessary external services, etc.

Propose advertising media (corporate image, etc.).

Implementing the marketing plan effectively, monitoring and evaluating it.

Support the generation of new markets, products or services attractive to the company.

Creating new marketing mix models.

2. Research.

Conduct market research on a new service, analyse the results and propose recommendations for its launch.

Understand the information gathered in a market survey.

Making interpretations of a market study or a survey.

3. Campaigns.

To develop publicity campaigns and actively participate in their implementation.

Analysing the impact of campaigns.

4. Commercial activities.

Execute basic tasks related to marketing (mailings, corporate website design, commercial visits, participation in social networks, etc.).

Manage attendance and participation in national and international trade fairs.

### 10. KNOWLEDGE

The most relevant knowledge includes:

Characteristics and understanding of the product.

Sales strategies.

Marketing - Mix.

Customer relationship management.

Social media and digital marketing.

Use of specialised software (CRM).

Sales promotion techniques.

English (level C1).

French (B2 level).

### 11. NEW ASPECTS OF COMPETENCE

New digital channels with customers.

Digital marketing and social media

Use of specialised commercial management software (e.g. CRM).

New online market information systems (MIS)

### 12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES

The specific higher vocational qualifications linked to the logistics-transport sector have modules specifically linked to marketing and commercialisation:

Advanced degree in International Trade: International Marketing and Market Information System.

Advanced degree in transport and logistics: Transport and logistics marketing.

In global terms, both for the modules mentioned above and for others, the training cycle of international trade has broader and more specific contents linked to the commercial activity of the logistics-port business.



Professional profile	
	<p>In relation to university postgraduate courses specialised in logistics / port activity, for example in the Master in Port Management and Intermodal Transport - MGPT, there are training modules focused on the area of marketing and commercialisation, while in others this area also occupies a relevant place.</p> <p>With regard to areas for improvement, it would be worth noting above all the relevance of increasing the hours of work experience or in-company training for vocational training and university students, in commercial areas of work that are linked to innovative tools (digital marketing, Big Data, etc.).</p>
<b>13. TRAINING SPECIALITIES</b>	<p>COML0211 COMMERCIAL AND FINANCIAL MANAGEMENT OF ROAD TRANSPORT (certificate of professionalism)</p> <p>COMM0110 MARKETING AND INTERNATIONAL SALES AND MARKETING (certificate of professionalism)</p> <p>COMM0111 MARKET RESEARCH ASSISTANCE (certificate of professionalism)</p> <p>COMM0112 MARKETING AND COMMUNICATION MANAGEMENT (certificate of professionalism)</p> <p>COMM04 INTRODUCTION TO ARTIFICIAL INTELLIGENCE APPLIED TO MARKETING</p> <p>COMM06 STRATEGIC DIGITAL MARKETING</p> <p>COMM07 BUSINESS-TO-BUSINESS(B2B)COMMERCIAL TRANSACTIONS</p> <p>COMM09 MARKETING COMMUNICATION STRATEGY IN TIMES OF THE CORONAVIRUS</p> <p>COMM17 LOGISTICS AND E-COMMERCE MANAGEMENT FOR MARKETPLACES</p> <p>COMM18 ARTIFICIAL INTELLIGENCE (AI) APPLIED TO DIGITAL MARKETING</p>
<b>14. REMARKS</b>	<p>The more specific contents of the essential skills and competences, as well as knowledge, may vary from one economic activity to another, depending on the more specific characteristics of the services offered and of the enterprises' current or potential clients.</p> <p>The professional profile is undergoing a process of transformation, mainly as a result of the new digital skills requirements it is already experiencing.</p>

## 3.2/ REPRESENTATIVES/CUSTOMS AGENTS

**Customs agents** are unique in that they are a professional profile that is accredited by the State Agency for Tax Administration (Agencia Estatal de Administración Tributaria). Their mission is to represent, before the customs services, companies that wish to carry out the appropriate export and import procedures.

Professional profile		
1. NAME	Main	<b>REPRESENTATIVES / CUSTOMS AGENTS</b>
	Other	Customs Surveillance Agent
2. AREA OF KNOWLEDGE	Customs	
3. ECONOMIC ACTIVITY	Representatives / Customs agents.	
4. PRIORITY	Media	
5. TYPE OF CURRICULAR TRAINING REQUIRED	It is necessary to achieve an accreditation managed by the Tax Agency. Then, depending on the levels of responsibility or complexity that this profile acquires, the curricular training required may be more specialised.	
6. GENERAL DESCRIPTION.	The activities of the customs broker consist primarily of: <ul style="list-style-type: none"> <li>- He represents his clients before the tax agency through the management of customs clearance.</li> <li>- It advises and carries out document management for its clients.</li> <li>- It is responsible for the payment of taxes and other customs services.</li> </ul>	
7. PROFESSIONAL CATEGORY.	Technician / Middle management	
8. TYPE OF PROFILE	Specific	
9. ESSENTIAL SKILLS AND COMPETENCES	A number of skills and competences that tend to be common to this profile are set out below. <ol style="list-style-type: none"> <li>1.Representation of the importer/exporter.               <ul style="list-style-type: none"> <li>- Represent the client before customs.</li> <li>- Present, on behalf of the client, the customs clearance of the goods (imported - exported).</li> <li>- Accompany, as representative of the importer or exporter, in the physical inspections that customs may require.</li> </ul> </li> <li>2. Carrying out payments and formalities.               <ul style="list-style-type: none"> <li>- Guarantee and make payment of taxes (VAT and duties) on behalf of the importer.</li> <li>- Manage specific customs services that certain goods require when passing through customs: sanitary control, phytosanitary control, quality control, etc.</li> <li>- Issuance of the corresponding certificates.</li> <li>- Where appropriate, appeal to customs in defence of clients' interests.</li> </ul> </li> </ol>	
10. KNOWLEDGE	A number of skills and competences that tend to be common to this profile are set out below. <ol style="list-style-type: none"> <li>1.Representation of the importer/exporter.               <ul style="list-style-type: none"> <li>- Represent the client before customs.</li> <li>- Present, on behalf of the client, the customs clearance of the goods (imported - exported).</li> </ul> </li> </ol>	



Professional profile	
	<ul style="list-style-type: none"> <li>- Accompany, as representative of the importer or exporter, in the physical inspections that customs may require.</li> </ul> <p>2. Carrying out payments and formalities.</p> <ul style="list-style-type: none"> <li>- Guarantee and make payment of taxes (VAT and duties) on behalf of the importer.</li> <li>- Manage specific customs services that certain goods require when passing through customs: sanitary control, phytosanitary control, quality control, etc.</li> <li>- Issuance of the corresponding certificates.</li> <li>- Where appropriate, appeal to customs in defence of clients' interests.</li> </ul> <p>3. In the circumstance that the company is an Authorised Economic Operator (AEO) certified company, the representative/customs agent would be responsible for customs, tax, AEO and quality audits according to ISO standard and AEO certified third party clients.</p>
<b>11. NEW ASPECTS OF COMPETENCE</b>	<p>The most relevant knowledge includes:</p> <p>Customs law.</p> <ul style="list-style-type: none"> <li>- Tributes</li> </ul> <p>Licensing rules.</p> <p>English (level C1).</p> <p>French (level B2) (in particular to facilitate relations with African countries, especially in the Mediterranean).</p>
<b>12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES</b>	<p>Companies perceive that workers joining the company tend to lack specific training linked specifically to customs issues (taxes, customs regulations, etc.). This training needs to be provided through training activities, based on the new workers' knowledge of foreign trade.</p>
<b>13. TRAINING SPECIALITIES</b>	<p>COMT0210 ADMINISTRATIVE AND FINANCIAL MANAGEMENT OF INTERNATIONAL TRADE (certificate of professionalism)</p>
<b>14. REMARKS</b>	<p>Customs agents must meet the following requirements, according to the legislation in force:</p> <ul style="list-style-type: none"> <li>- Physical residence in Spain or within the European Union.</li> <li>- They must pass the Tax Agency's aptitude certification.</li> </ul> <p>They must be registered as a Customs Representative in the register of Customs and Special Taxes of the Tax Agency.</p>

### 3.3/ CONSIGNEES

**Consignees** distinguish themselves by representing the interests of shipowners at the port, advising them, carrying out the appropriate formalities (documentation or otherwise), intermediating with other actors and expediting processes, always on the basis of the stipulated rules and procedures.

Professional profile		
1. NAME	Main	<b>CONSIGNEES</b>
	Other	Vessel Consignee
2. AREA OF KNOWLEDGE	Export and import Operations	
3. ECONOMIC ACTIVITY	These are mainly the following activities: -Signatories -Navieras	
4. PRIORITY	Medium - High	
5. TYPE OF CURRICULAR TRAINING.	Access to these jobs can be mainly by means of the following qualifications: Senior technician in international trade. Senior technician in transport and logistics. University degree (e.g. in business administration and management). University postgraduate degree specialising in international trade or logistics / port activity. The higher level of complexity of the profile may require a higher degree of curricular specialisation and more work experience. It also tends to be common for new workers to participate in training activities in order to broaden and complete their skills.	
6. GENERAL DESCRIPTION.	The activities of the shipping agent are mainly based on representing shipowners in ports, in order to deal with all those administrative aspects related to cargo that regulations and procedures require.	
7. PROFESSIONAL CATEGORY.	Technician - Middle Management	
8. TYPE OF PROFILE	Specific	
9. ESSENTIAL SKILLS AND COMPETENCES	A number of skills and competences that tend to be common to this profile are set out below: 1. Rules and licences: Managing import and export licences. Advise clients on export/import regulatory restrictions. Apply procedures and controls to ensure that goods comply with customs regulations. 2. Coordination: Review and interpret documentation relating to commercial transactions. Establish precise relations with all the actors of the port community. :	



Professional profile	
<b>10. KNOWLEDGE</b>	<p>The most relevant knowledge includes:</p> <p>International import and export regulations</p> <p>Port regulations.</p> <p>- Use of specialised software.</p> <p>English (level C1).</p> <p>French (level B2) (in particular to facilitate relations with African countries, especially in the Mediterranean).</p>
<b>11. NEW ASPECTS</b>	<p>New digital channels with customers.</p> <p>Drastic reduction of errors.</p> <p>-Handling of specialised commercial management software (e.g. CRM).</p> <p>Specialisation in differential areas of consignment activity.</p> <p>Streamlining of commercial transactions.</p>
<b>12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES</b>	<p>It can be seen that the structure of the cycle deals in the first year with more operational aspects linked to the activity of shipping companies, and in the second year with more generic aspects linked to commercial management and marketing. Perhaps an inverse approach to the subjects of the courses would allow for a better integration of the students in the internships in the shipping companies with a knowledge of the main day-to-day operations, and the labour insertion of the recent graduate for the same reason, a knowledge of the more operational issues and those linked to the day-to-day of the position of shipping agent in the company.</p> <p>One of the areas for improvement in VET student placements in companies is the compatibility of placements with the company's timetable and working day (normally they have training in the morning and placements in the afternoon, but companies can finish their working day between 17h and 18h).</p> <p>Dual VET in companies will increase in the coming years, although it requires an internal effort in the company to train the students, which will benefit from a greater specialisation of the profile, more operational knowledge and a better adaptation to the position.</p> <p>Irrespective of training and profile, the key aspect is the suitability for the specific position within the company. This process depends on the activity and structure of the company. Normally, companies deal with it through internal training, either face-to-face or through e-learning.</p>
<b>13. TRAINING SPECIALITIES</b>	COML0209 ORGANISATION OF TRANSPORT AND DISTRIBUTION (certificate of professionalism)
<b>14. REMARKS</b>	There are some consignment workers who carry out administrative tasks related to the crew; they manage taxis, airline tickets, hotel reservations, etc.

### 3.4/ FREIGHT FORWARDERS

**Freight forwarders** are a professional profile that has a close relationship with consignees. They coordinate, supervise and act as intermediaries between the different clients and the actors in the port, logistics or transport ecosystem, based on established protocols and rules.

Professional profile		
1. NAME	Main	<b>TRANSITORS</b>
	Other	They are not considered
2. AREA OF KNOWLEDGE	Export and import Operations	
3. ECONOMIC ACTIVITY	Mainly the following activities: Logistics operators / freight forwarders and Shipping companies.	
4. PRIORITY	High	
5. TYPE OF CURRICULAR TRAINING.	<p>Access to these jobs can be mainly by means of the following qualifications:</p> <ul style="list-style-type: none"> <li>- Operational <ul style="list-style-type: none"> <li>- Senior technician in international trade (mainly).</li> <li>- Senior technician in transport and logistics.</li> </ul> </li> <li>- Commercial or senior technician: <ul style="list-style-type: none"> <li>- University graduate (e.g. in business administration and management).</li> <li>- University postgraduate degree specialising in international trade or logistics / port activity.</li> </ul> </li> </ul> <p>The higher level of complexity of the profile may require a higher degree of curricular specialisation and more work experience. It also tends to be common for new workers to participate in training activities in order to broaden and complete their skills.</p>	
6. DESCRIPTION.	The activities of the freight forwarder are mainly based on acting as an intermediary between the different actors involved in the logistics and transport chain, centralising communications and procedures and thus achieving greater agility in the processes.	
7. PROFESSIONAL CATEGORY.	Technician / Middle management	
8. TYPE OF PROFILE	Specific	
9. ESSENTIAL SKILLS AND COMPETENCES	<p>A number of skills and competences that tend to be common to this profile are set out below:</p> <ol style="list-style-type: none"> <li>1. Strategy Advise clients in establishing import and export strategies.</li> <li>2. Regulations and licensing Implement the appropriate procedures to ensure that the goods comply with customs regulations. Ensuring compliance with transport regulations.</li> </ol>	



### Professional profile

Managing import and export licences.  
Manage the documentation to make shipments effective.  
3. Coordination of loading and transport  
Planning activities to ensure adequate transport for export and import.  
Supervise how the goods are weighed.  
Booking of consignments of goods.  
Prepare cargo shipment reports.  
Control of import and export deadlines in order to coordinate with other modes of transport (sea - land).  
4. Monitoring.  
Overseeing the documentation of commercial transactions.  
-Supervise that the requirements for the storage of goods are complied with.  
5. Fees and payments.  
Access to shipping rates.  
Advise customers on the different methods and methods of payment for goods.  
- Calculation of overall shipping costs (transport, warehousing and shipping costs).

#### 10. KNOWLEDGE

The most relevant knowledge includes:

- Sea routes.
- International tariffs and customs regulations.
- Cartography.
- Principles of cargo stowage.
- Types of packing, crating and packaging for industrial shipments.
- Use of specialised software.
- Minimum transport legislation (delivery times, transport stoppages, loading/unloading times)
- Minimum training in insurance, incidents, claims for damage to goods.
- Calculation of loading units (palletisation, cubic capacity, assessable weights) and their possible limitations in transport.
- Languages. This is an international profile in which languages are very important. A minimum level of B2 in English with a good oral proficiency is required. Optionally, other languages, such as French, may be considered. French (B2) is a language especially required to work in countries on the African continent, especially in the Mediterranean area.
- Technological tools.

#### 11. NEW ASPECTS

New digital channels with customers.  
Use of specialised commercial management software (e.g. CRM).  
Specialisation in differential areas of the freight forwarding business.  
Drastic reduction of errors.  
TaricTrans programme.  
Streamlining of commercial transactions.  
Waste management

#### 12. ASPECTS FOR IMPROVEMENT IN THE CO- ORDINATION OF SUPPLY AND DEMAND OF PROFILES

The main profile is linked to the training of an advanced technician in international trade, to which the double profile (together with an advanced technician in transport and logistics) can be added with an additional year of training.  
It can be seen that the structure of the cycle deals in the first year with more operational aspects linked to the activity of freight forwarding companies, and in the second year with more generic aspects linked to commercial management and marketing. Perhaps an inverse approach to the subjects of the courses would allow for a better integration of the students in the work placements in the freight forwarding companies with knowledge of the main day-to-day operations, and the labour insertion of the new graduate for the same reason, a knowledge of the more operational issues and those linked to the day-to-day of the freight forwarder's position in the company.



Professional profile	
	<p>One of the areas for improvement in VET student placements in companies is the compatibility of placements with the company's timetable and working day (normally they have training in the morning and placements in the afternoon, but companies can finish their working day between 17h and 18h).</p> <p>Dual VET in companies will increase in the coming years, although it requires an internal effort in the company to train the students, which will benefit from a greater specialisation of the profile, more operational knowledge and a better adaptation to the position.</p> <p>Irrespective of training and profile, the key aspect is the suitability for the specific position within the company. This process depends on the activity and structure of the company. Normally, companies deal with it through internal training, either face-to-face or through e-learning.</p>
<b>13. TRAINING SPECIALITIES</b>	COML0209 ORGANISATION OF TRANSPORT AND DISTRIBUTION (certificate of professionalism)
<b>14. REMARKS</b>	<p>The consignee/forwarder profiles can be synthesized into one. Although there are differences between them, the freight forwarder profile deals with the intermediation of the goods between the shipping company and the final client, while the consignee has the shipping company as client. To a certain extent, the more complex process of the freight forwarding activity requires a more specific approach to the whole process, while the consignee profile is more oriented towards providing service to the client (shipping company).</p> <p>In the search for profiles, a freight forwarding company is more flexible in recruiting freight forwarder profiles than a forwarding company is in recruiting consignee profiles.</p>

### 3.5/ TRANSPORT LOGISTICS AGENTS

**Transport logistics agents** have the task of coordinating the actors in the transport chain, in order to meet the needs of mobility of goods, storage and supply; based on the regulations and procedures determined and making use of and optimising new technologies.

Professional profile		
1. NAME	Main	<b>TRANSPORT LOGISTICS AGENTS.</b>
	Other	Traffic manager in transport activities. Traffic manager in combined transport activities. Reverse logistics technician. Transport logistics technician. Logistics operator Logistics Coordinator
2. AREA OF KNOWLEDGE		Traffic
3. ECONOMIC ACTIVITY		Mainly terminal operators and road hauliers.
4. PRIORITY		Medium - high
5. TYPE OF CURRICULAR TRAINING.		Access to these jobs can be mainly by means of the following qualifications: Senior technician in transport and logistics. Senior technician in international trade. University graduate with a postgraduate degree in logistics / port activity. Depending on the levels of responsibility or complexity that this profile acquires, the curricular training required may be more specialised. It also tends to be common for new workers to participate in training activities in order to broaden and complete their skills.
6. GENERAL DESCRIPTION.		The activities of the transport logistics agent consist mainly of managing services and infrastructures that optimise and generate added value, both for the intermodal movement of goods and for storage and supply activities.
7. PROFESSIONAL CATEGORY.		Technician / Middle management
8. TYPE OF PROFILE		Specific
9. ESSENTIAL SKILLS AND COMPETENCES		A number of skills and competences that tend to be common to this profile are then identified. 1. Port logistics. To design a portfolio of economically profitable logistics services, which guarantee quality and traceability throughout the chain and are in line with customer requirements. Coordinate and monitor planned logistics and intermodal activities. Estimating the costs linked to the company's logistical chain. Managing operations linked to reverse logistics.



Professional profile	
	<p>Effective response to unforeseen events, contingencies, incidents or complaints in the context of the logistics chain.</p> <p>Analysing areas of the port where the most value-added logistics functions can be organised.</p> <p>Analyse the logistics chains with a presence in the port.</p> <p>Designing, studying and assessing the feasibility of the Logistics Activities Zones (ZAL).</p> <p>2. Organisation and management of transport.</p> <p>Identify, propose and select the best possible routes (fastest, safest, least costly, etc.) of different means or modes of transport.</p> <p>Establish the mechanisms that guarantee the security and integrity of the goods, in accordance with the regulations in force.</p> <p>-To make the necessary arrangements to ensure the transit of goods, between different countries and modes of transport, in accordance with national and international regulations and as agreed with customers.</p> <p>To carry out timely tracking of goods, aided by 4.0 technology, in order to have them located in the expected terms of quality and safety.</p>
<b>10. KNOWLEDGE</b>	<p>The most relevant knowledge includes:</p> <p>Supply chain management.</p> <p>Project management.</p> <p>Logistics - port regulations.</p> <p>Use of specialised in-house software.</p> <p>English (level C1).</p> <p>French (B2 level).</p>
<b>11. NEW ASPECTS</b>	<p>Management systems (ERP, CRM) linked to international trade.</p> <p>GPS tracker technologies.</p> <p>Technologies 4.0 (sensory).</p> <p>Use of specialised in-house software.</p> <p>Predictive models and data analysis (Big Data).</p> <p>Blockchain technology.</p>
<b>12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES</b>	<p>In particular, the higher technician cycle in transport and logistics is the one with specialised modules in logistics. The advanced technician cycle in international trade has, in turn, two modules linked to this area of specialisation: international transport of goods and storage logistics.</p> <p>On the other hand, it should be emphasised that university postgraduate courses specialising in logistics/port activity include, in their curricula, broad and innovative subjects at the level of specialisation in areas of competence linked to this profile.</p>
<b>13. TRAINING SPECIALITIES</b>	<p>COML0109 TRÁFICO DE MERCANCÍAS POR CARRETERA (certificate of professionalism)</p> <p>COML02 LOGISTICS TRANSFORMATION IN AN INDUSTRY 4.0 ENVIRONMENT</p> <p>COML0209 ORGANISATION OF TRANSPORT AND DISTRIBUTION (certificate of professionalism)</p> <p>COML0210 MANAGEMENT AND CONTROL OF THE PROVISIONING (certificate of professionalism)</p> <p>COML03 INTEGRATED LOGISTICS</p> <p>COML04 DESIGN OF PROCUREMENT SYSTEMS IN A LEAN ENVIRONMENT</p> <p>COML05 INTEGRATED LOGISTICS AND REVERSE LOGISTICS IN A COMPANY'S SUPPLY CHAIN</p> <p>COML06 LATEST TECHNOLOGIES FOR PRODUCT AND SERVICE TRACEABILITY</p> <p>COML07 ROUTE PLANNING SYSTEMS IN THE DIFFERENT TRANSPORT SECTORS</p> <p>COML08 OUTSOURCING PROCESSES OF THE SUPPLY CHAIN OF PRODUCTS AND SERVICES</p>
<b>14. REMARKS</b>	<p>The professional profile is undergoing a process of transformation, mainly as a result of the new digital skills requirements it is already experiencing.</p>

## 3.6/ ADMINISTRATIVE EMPLOYEES OF TRANSPORT SERVICES

**Administrative staff in transport services are** primarily responsible for managing bureaucratic and financial activities, supporting management, intermediating and accompanying carriers and serving customers. They are therefore called upon to manage coordination with the various stakeholders and target audiences of their companies.

Professional profile		
1. NAME	Main	<b>ADMINISTRATIVE EMPLOYEES OF TRANSPORT SERVICES</b>
	Other	Administrative accountant. Administrative support to management. Logistics administrator. Assistant to the international business operations department. International trade assistant or deputy. Technician in international trade administration.
2. AREA OF KNOWLEDGE	Administration / accounting	
3. ECONOMIC ACTIVITY	Mainly representatives/customs agents	
4. PRIORITY	Medium - High	
5. TYPE OF CURRICULAR TRAINING.	Access to these jobs can be mainly by means of the following qualifications: Senior technician in administration and finance. Senior technician in international trade.	
6. DESCRIPTION.	The activities of the administrative employee in transport services consist mainly of: Plan and develop administrative and financial operations, applying quality regulations and procedures. Supporting the management function in administrative, human resources and financial matters. Intermediating with workers and clients.	
7. PROFESSIONAL CATEGORY.	Technician / Middle management	
8. TYPE OF PROFILE	Related	
9. ESSENTIAL SKILLS AND COMPETENCES	A number of skills and competences that tend to be common to this profile are then identified. 1. Administrative management. To carry out the management and administrative control of human resources, both transporters and others. Collaborate in the functions of selection, training and development of human resources. Managing information systems and archiving in both conventional and digital media. Use office applications for information and documentation management.	



Professional profile	
	<p>Collaborate with other departments and workers in the design, implementation and monitoring of transport routes.</p> <p>Informing, supporting and resolving doubts to transporters.</p> <p>-Drafting documentation and designing professional presentations in different formats.</p> <p>Preparing and submitting files and legal or business documentation to public and private bodies.</p> <p>Financial management.</p> <p>Determine the financial needs of the company.</p> <p>Managing the information and contracting of financial resources.</p> <p>Managing and controlling the treasury and its budget.</p> <p>To administer and manage management communications with autonomy.</p> <p>Carrying out administrative cash management tasks.</p>
<b>10. KNOWLEDGE</b>	<p>The most relevant knowledge includes:</p> <p>Managing financial operations.</p> <p>Managing administrative systems.</p> <p>Keeping records of financial transactions.</p> <p>Banking activities.</p> <p>Electronic communications.</p> <p>Use of specialised software.</p> <p>Customer service.</p> <p>English (B2 level).</p>
<b>11. NEW ASPECTS</b>	<p>English.</p> <p>Use of specialised in-house software.</p>
<b>12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES</b>	<p>The qualifications of higher technician in administration and finance and higher technician in international trade are the most appropriate. However, Vocational Training centres in the Valencian Community that teach the higher training cycle in administration and finance plan to incorporate content in their modules specifically linked to the international trade cycle. The aim is to train, on a theoretical and practical level, new employable young people in administrative areas in the logistics-port sector.</p>
<b>13. TRAINING SPECIALITIES</b>	<p>COMT0210 ADMINISTRATIVE AND FINANCIAL MANAGEMENT OF INTERNATIONAL TRADE (certificate of professionalism)</p>
<b>14. REMARKS</b>	<p>This profile could, in a substantive way, be transversal to other administrative/accounting profiles.</p>



## 3.7/ FOREIGN TRADE TECHNICIANS

**Foreign trade technicians** are those who manage and implement import and export actions, including at the same time the management of administrative and financial activities.

Professional profile		
1. NAME	Main	<b>FOREIGN TRADE TECHNICIANS</b>
	Other	International trade agent. International trade assistant or deputy. Assistant to the International Business Operations Department
2. AREA OF KNOWLEDGE	Import Export	
3. ECONOMIC ACTIVITY	Mainly the following activities: Inland hauliers. Logistics operators / freight forwarders. -Consignatories. Customs representatives / agents. -Terminalists.	
4. PRIORITY	Medium - High	
5. TYPE OF CURRICULAR TRAINING.	Access to these jobs can be mainly by means of the following qualifications: Senior technician in international trade. University graduate (law, business administration and management, etc.) with a postgraduate degree in logistics / port activity. The higher level of complexity of the profile may require a higher degree of curricular specialisation and more work experience. It also tends to be common for new workers to participate in training activities in order to broaden and complete their skills.	
6. DESCRIPTION.	The activities of the foreign trade technician are based on the following: - Administrative and financial management of activities related to the international market. - Implementation of export/import strategies, in cooperation with other workers and other actors shaping the value chain of the logistics/port sector.	
7. PROFESSIONAL CATEGORY.	Technician / Middle management	
8. TYPE OF PROFILE	Specific	
9. ESSENTIAL SKILLS AND COMPETENCES	A number of skills and competences that tend to be common to this profile are then identified. 1.Administrative/financial management. Drafting/preparation of the necessary documentation, in accordance with the regulations, to initiate import/export operations or the introduction/shipment of goods. Archiving and management of documentation related to the company's foreign trade activities.	



	<p>Management of financing operations for international product transactions.</p> <p>Management of collection and payment operations in transactions.</p> <p>Making claims and requesting refunds.</p> <p>2. Collaboration in the implementation of export / import strategies.</p> <p>Coordination with other actors in import/export operations (carriers, freight forwarders, etc.).</p> <p>Coordination and management, where appropriate, of existing conflicts.</p> <p>Development of negotiation activities with customers and suppliers.</p> <p>Tracking of the shipment of goods.</p> <p>Support to marketing activities and marketing actions.</p> <p>Obtaining and drawing up reports related to market research.</p> <p>Ensure compliance with customs regulations.</p> <p>Support to multimodal logistics activities.</p>
<b>10. KNOWLEDGE</b>	<p>The most relevant knowledge includes:</p> <p>Logistics - port regulations.</p> <p>International standards relating to commercial transactions.</p> <p>International import and export regulations,</p> <p>-Regulations on seizures.</p> <p>English (level C1).</p> <p>French (B2 level).</p>
<b>11. NEW ASPECTS</b>	<p>Foreign trade operations management systems.</p> <p>New online market information systems (SIM).</p> <p>Use of specialised in-house software.</p>
<b>12. AREAS FOR IMPROVEMENT IN THE COORDINATION OF SUPPLY AND DEMAND.</b>	<p>It can be seen that the structure of the cycle deals in the first year with more operational aspects linked to the activity of foreign trade companies, and in the second year with more generic aspects linked to commercial management and marketing. Perhaps an inverse approach to the subjects of the courses would allow for a better integration of the students in the internships in companies specialised in foreign trade, with knowledge of the main day-to-day operations, and the labour insertion of the new graduate for the same reason, a knowledge of the more operational issues and linked to the day-to-day of the freight forwarder's position in the company.</p>
<b>13. TRAINING SPECIALITIES</b>	<p>COML0209 ORGANISATION OF TRANSPORT AND DISTRIBUTION (certificate of professionalism)</p> <p>COML07 ROUTE PLANNING SYSTEMS IN THE DIFFERENT TRANSPORT SECTORS</p> <p>COMT0210 ADMINISTRATIVE AND FINANCIAL MANAGEMENT OF INTERNATIONAL TRADE (certificate of professionalism)</p>
<b>14. REMARKS</b>	<p>It is not considered</p>

Source: Own elaboration based on ESCO, II collective agreement of state ports and port authorities, interviews, contrast table, Delphi group and Royal Decree 1572/2011, of 4 November, which establishes the degree in International Trade and sets its minimum teaching.



## 3.8/ TECHNICIANS IN STOCK AND/OR WAREHOUSE MANAGEMENT

**Stock management and warehouse technicians** are in charge of the storage, conservation and distribution processes, in accordance with the established safety regulations.

Professional profile		
1. NAME	Main	<b>TECHNICIANS IN STOCK AND/OR WAREHOUSE MANAGEMENT.</b>
	Other	Warehouse Manager Ground operations (Yard planning) Staff gates (Gates).
2. AREA OF KNOWLEDGE		Logistics / distribution
3. ECONOMIC ACTIVITY		Mainly terminal operators and road hauliers.
4. PRIORITY		Medium - High
5. TYPE OF CURRICULAR TRAINING.		Access to these jobs can be mainly by means of the following qualifications: Senior technician in transport and logistics. University graduate with a postgraduate degree in logistics. The higher level of complexity of the profile may require a higher degree of curricular specialisation and more work experience. It also tends to be common for new workers to participate in training activities in order to broaden and complete their skills.
6. DESCRIPTION.		The activities of the stock management and/or warehouse technician aim to optimise storage, conservation and distribution processes, in accordance with established safety regulations.
7. PROFESSIONAL CATEGORY.		Technician / Middle management
8. TYPE OF PROFILE		Specific
9. ESSENTIAL SKILLS AND COMPETENCES		A number of skills and competences that tend to be common to this profile are then identified. 1. Warehouse management. Managing the warehouse inventory. Manage shipments. Manage stock control systems and keep stocks safely. Assess consumption and product demand levels. Support logistical tasks. Support the selection of new or better suppliers. Assist in setting up the structure of warehouses. Contribute to generating new innovative logistics solutions that optimise the flow of purchases, sales and storage. Organising the reception of orders and placing them appropriately in the warehouse. -Manage warehouse equipment, particularly in relation to the mobility of loads.



Professional profile	
	<p>2. Maintenance of warehouses.</p> <p>To maintain the physical state of the warehouse, in accordance with safety, health and environmental regulations.</p> <p>Contribute to the establishment of the warehouse structure.</p> <p>3. Comply with customs security and traceability requirements.</p>
<b>10. KNOWLEDGE</b>	<p>The most relevant knowledge includes:</p> <p>Rules on inventory management.</p> <p>Product coding system.</p> <ul style="list-style-type: none"> <li>- Training in bonded warehouses / customs warehouses</li> <li>- Capacity calculation, stock rotations</li> </ul>
<b>11. NEW ASPECTS</b>	<p>Handling of 4.0 technology that, by means of specialised devices, allows the tracking and tracing of goods in the warehouse.</p> <p>Operation of machinery / robotics for the distribution and storage of products.</p> <p>Handling of hardware/software linked to Big Data and Artificial Intelligence to enable two challenges:</p> <ol style="list-style-type: none"> <li>1/ Preventive maintenance of automotive machinery and systems.</li> <li>2/ The efficient distribution of products or material in the warehouse.</li> </ol> <p>Use of specialised in-house software...</p>
<b>12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES</b>	<p>The degree of Higher Technician in Logistics and Distribution is, in particular, the one that offers training that is most in line with the profile. In particular, it is worth highlighting the module of Warehouse Logistics.</p> <p>One of the main challenges is to broaden and specialise students in this cycle, particularly in skills and technology management linked to digital transformation.</p>
<b>13. TRAINING SPECIALITIES</b>	<p>COML0110 AUXILIARY WAREHOUSE ACTIVITIES (certificate of professionalism)</p> <p>COML0210 MANAGEMENT AND CONTROL OF THE PROCESSING (certificate of professionalism)</p> <p>COML0309 WAREHOUSE ORGANISATION AND MANAGEMENT (certificate of professionalism)</p> <p>COMT07 BASIC WAREHOUSE MANAGEMENT</p>
<b>14. REMARKS</b>	<p>The professional profile is undergoing a process of transformation, mainly as a result of the new digital skills requirements it is already experiencing.</p>

### 3.9/ MARITIME OPERATIONS COORDINATOR

The **maritime operations coordinator** is a position specific to the terminal segment and is held by engineers. He or she is involved in the management of the terminal's activities, in collaboration with other actors, in particular the ships.

Professional profile		
1. NAME	Main	<b>MARITIME OPERATIONS COORDINATOR</b>
	Other	Logistics / distribution
2. AREA OF KNOWLEDGE	Operations Centre Planner Head of Operations	
3. ECONOMIC ACTIVITY	Terminalists.	
4. PRIORITY	Medium - High	
5. TYPE OF CURRICULAR TRAINING REQUIRED	Access to these jobs tends to be through engineering graduates, in particular through the nautical speciality. The higher level of complexity of the profile may require a higher degree of curricular specialisation and more work experience. It also tends to be common for new workers to participate in training activities in order to broaden and complete their skills.	
6. GENERAL DESCRIPTION.	The activities of the Maritime Operations Coordinator consist primarily of: <ul style="list-style-type: none"> <li>- Coordinate the variety of operations taking place at the terminal.</li> <li>- Coordinate with vessels in loading and unloading operations.</li> <li>- Coordinate with other actors in the port community.</li> <li>- Organising and supervising workers.</li> </ul>	
7. PROFESSIONAL CATEGORY.	Technician / Middle management	
8. TYPE OF PROFILE	Specific.	
9. ESSENTIAL SKILLS AND COMPETENCES	1. Automated management of terminals. Manage and supervise ship loading and unloading activities. Ensuring the security of the cargo. Coordinate activities within the terminal. Ensuring the safety of cargo movements. Manage material resources for stevedoring. Implement procedures to improve port operations. Managing human resources. 2. Coordination with port stakeholders, in particular ships. Plan joint activities at the terminal, in particular with regard to loading and unloading. Ensuring compliance with port regulations.	
10. KNOWLEDGE	The most relevant knowledge includes: Port operations. Container management (in particular the more complex ones, such as refrigerated containers).	



Professional profile	
	Terminal management through new technologies. English (B2 level).
<b>11. NEW ASPECTS OF COMPETENCE</b>	Use of specialised in-house software Digital transformation of port operations: Sensorisation / 4.0 technologies and Blockchain technology. Total quality in terminal operations.
<b>12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES</b>	Engineering studies offer an initial training that necessarily has to be completed through work experience and specific training actions. The operation of terminals varies significantly from port to port. In addition, the current digitisation processes call for a greater effort in terms of re-skilling.
<b>13. TRAINING SPECIALITIES</b>	MAPN0712 PORT OPERATIONS OF LOADING, STUFFING, UNLOADING, UNLOADING, UNLOADING AND TRANSBOUNDING (certificate of professionalism).
<b>14. REMARKS</b>	The professional profile is undergoing a process of transformation, mainly as a result of the new digital skills requirements it is already experiencing.

### 3.10/ *TERMINAL MAINTENANCE TECHNICIAN*

The **terminal maintenance technician** is in charge of supervising and monitoring the operation of machinery. This job is generally performed by engineers with mechanical and electrical specialisations.

Professional profile		
1. NAME	Main	<b>TERMINAL MAINTENANCE TECHNICIAN</b>
	Other	Maintenance Manager
2. AREA OF KNOWLEDGE	Logistics / distribution	
3. ECONOMIC ACTIVITY	Terminalistas	
4. PRIORITY	Medium - High	
5. TYPE OF CURRICULAR TRAINING REQUIRED	<p>Access to these jobs can be gained through engineering studies, in particular in mechanical and electrical engineering.</p> <p>Those who have completed the higher cycle of Industrial Mechatronics Technician can also apply for this job.</p> <p>The higher level of complexity of the profile may require a higher degree of curricular specialisation and more work experience. It also tends to be common for new workers to participate in training activities in order to broaden and complete their competences. Some of the relevant training activities are provided by machinery suppliers.</p>	
6. GENERAL DESCRIPTION.	<p>The activities of the terminal maintenance technician consist mainly of:</p> <ul style="list-style-type: none"> <li>- Preventive maintenance linked to the machinery installed in the terminal.</li> <li>- Planning and supervision of repairs.</li> <li>- Support for innovation and renewal of terminal machinery.</li> <li>- Coordinate with other actors in the port community.</li> <li>- Organising and supervising workers.</li> </ul>	
7. PROFESSIONAL CATEGORY.	Technician / middle management	
8. TYPE OF PROFILE	Related.	
9. ESSENTIAL SKILLS AND COMPETENCES	<p>1. Management of preventive activities.</p> <p>Plan the monitoring of the operation of the machinery.</p> <p>Directing maintenance activities.</p> <p>Implement controls.</p> <p>Evaluate the operation of machinery and detect errors.</p> <p>Propose the renewal and innovation of machinery.</p> <p>2. Repair management.</p> <p>Loading of material refills.</p> <p>-Supervise repair work.</p> <p>3. Plan regular regulatory inspections.</p> <p>Management of supplies and materials.</p>	
10. KNOWLEDGE	The most relevant knowledge includes:	



Professional profile	
	<p>-Electronics / Mechanics.</p> <p>Digital / sensory technology.</p>
<b>11. NEW ASPECTS OF COMPETENCE</b>	<p>Digitisation of terminal machinery.</p> <p>Acceleration of automation processes.</p> <p>Total quality in terminal operations.</p>
<b>12. ASPECTS FOR IMPROVEMENT IN THE CO-ORDINATION OF SUPPLY AND DEMAND OF PROFILES</b>	<p>Engineering studies, in the mechanical and electrical specialisations, provide basic training, which, through work experience and training activities, needs to be extended and adjusted to the characteristics of the terminal's own machinery. Digitalisation processes have increased this need.</p>
<b>13. TRAINING SPECIALITIES</b>	<p>COML0209 ORGANISATION OF TRANSPORT AND DISTRIBUTION (certificate of professionalism)</p> <p>TMVG0309 MAINTENANCE OF POWER TRANSMISSION SYSTEMS AND MOTOR VEHICLE ROLLING TRAINS (certificate of professionalism)</p>
<b>14. REMARKS</b>	<p>The professional profile is undergoing a process of transformation, mainly as a result of the new digital skills requirements it is already experiencing.</p>



## CHAPTER 4/ ANALYSIS OF THE SUPPLY OF VPC QUALIFICATIONS

The offer of Vocational Training in the Valencian Community is wide and varied. It includes intermediate and higher training cycles, belonging to all professional families.

Following on from the previous pages, there are **two higher level training cycles** that are particularly suited to the **specific occupations** of the **logistics / port sector**: **International trade**, on the one hand, and **transport and logistics**, on the other. These cycles are part of the professional family of **commerce and marketing**.

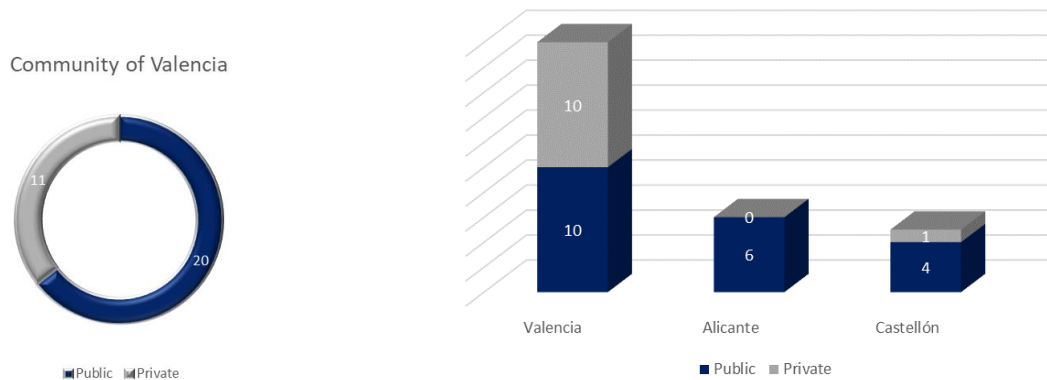
In the Community of Valencia the **number of centres** offering the higher cycle of **international trade** is **31** and that of **transport and logistics** is **13**.

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### 4.1/ ADVANCED VOCATIONAL TRAINING CYCLE IN INTERNATIONAL TRADE

The **higher degree in international commerce** is taught in 31 training centres in the Valencian Community. In the province of Valencia, the number of centres offering this cycle is very important, as it amounts to 20 (10 public and 10 private). The presence of a port on the scale of the one located in the Valencian capital is one of the main reasons for such a large offer. Eleven of them are located in the city of Valencia. On the other hand, in the province of Alicante, the number of centres offering training is six. All of them are public. Finally, in the province of Castellón, there are the remaining five training centres, one of which is privately owned (see Annex 3) (Graph 65).

Graph 65. Number of centres offering the Higher Level Training Cycle in International Trade by province and type of centre.



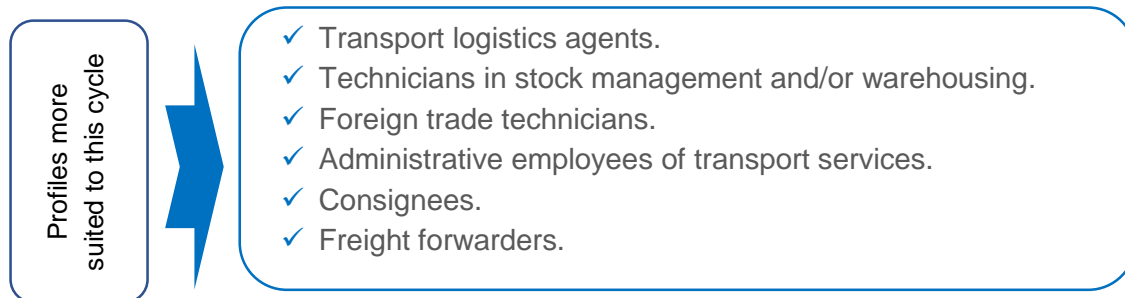
Source: Prepared by the authors based on information on the supply of vocational training courses. Department of Education, Culture and Sport. Generalitat Valenciana.

The "**general competence**" of this training cycle consists of *"organising, managing and controlling the operations of goods and passenger transport at national and international level, and planning and managing the logistics activities of a company, in accordance with the regulations in force and the objectives set by the company's management, within the framework of quality, safety and respect for the environment"*. The training cycle consists of 2000 hours and 13 training modules, mainly linked to these areas: *administrative, economic and financial management; logistics, organisation of transport and marketing; English, work orientation and workplace training*.<sup>22</sup>

As can be seen, a significant number of professional profiles and areas of knowledge most in demand are aligned with this training cycle, according to Graph 66:

<sup>22</sup> <https://www.boe.es/boe/dias/2011/12/13/pdfs/BOE-A-2011-19437.pdf>





Graph 66. Professional profiles and areas of knowledge most in demand by the port community of Valencia and aligned with the Higher Technician in International Trade cycle.

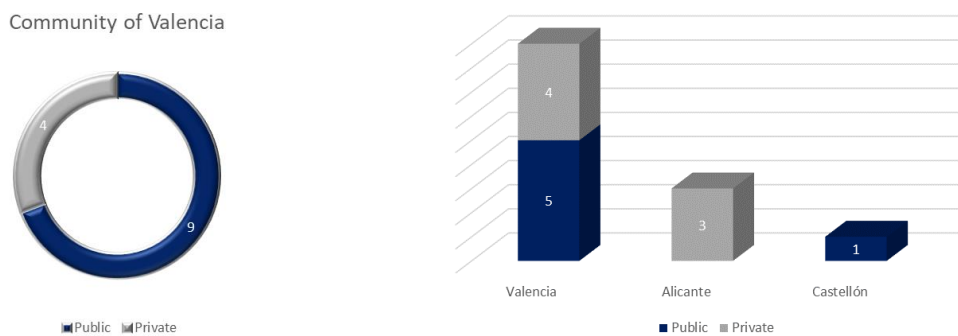
<u>Areas of knowledge</u>	<u>Royal Decree</u>	<u>National Classification of Occupations (CNO)</u>	<u>Segment</u>
✓ Traffic	✓ Logistics operator ✓ Transport logistics technician ✓ Reverse logistics technician	41231023 Transport logistics agents	Traffic Terminal Operator
✓ Logistics and distribution	✓ Warehouse Manager	35221032 Inventory management and/or warehouse technicians	Traffic Terminal Operator
✓ Import ✓ Export ✓ Operations	✓ International Trade Agent ✓ International trade assistant or deputy ✓ Assistant to the International Business Operations Department	35221023 Foreign trade technicians	Land transport Logistics operators/forwarders Customs agents Consignees Terminal Operator
	✓ International trade management technician ✓ International trade assistant or deputy ✓ Assistant to the International Business Operations Department	41231041 Administrative clerks in transport services	Customs agents
	✓ Vessel Consignee	3523 Consignees	Consignees
	✓ Freight forwarder	41231094 Freight forwarders	Logistics operators / Freight forwarders

Source: Own elaboration based on the online survey addressed to companies in the port community of Valencia, SEPE and the Royal Decree 1574/2011, of 4 November, which establishes the Degree of Higher Technician in International Trade and sets its minimum teaching requirements.

## 4.2/ ADVANCED VOCATIONAL TRAINING CYCLE IN TRANSPORT AND LOGISTICS

With regard to the **higher degree in transport and logistics**, it should be noted that, in total, there are 13 training centres that offer it. Of these centres, nine are in the province of Valencia, four of which are private. There are three in the province of Alicante and one in the province of Castellón, all of which are public (see Annex 3) (Graph 67).

Graph 67. Number of centres offering the Higher Level Training Cycle in Transport and Logistics by province and type of centre.

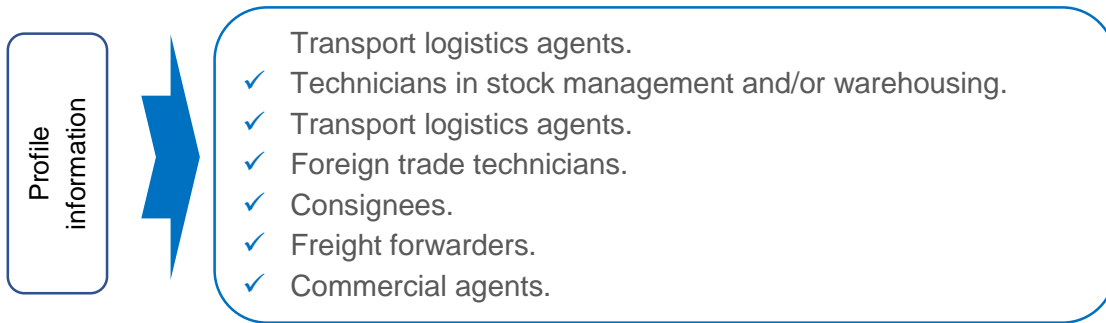


Source: Prepared by the authors based on information on the supply of vocational training courses. Department of Education, Culture and Sport. Generalitat Valenciana.

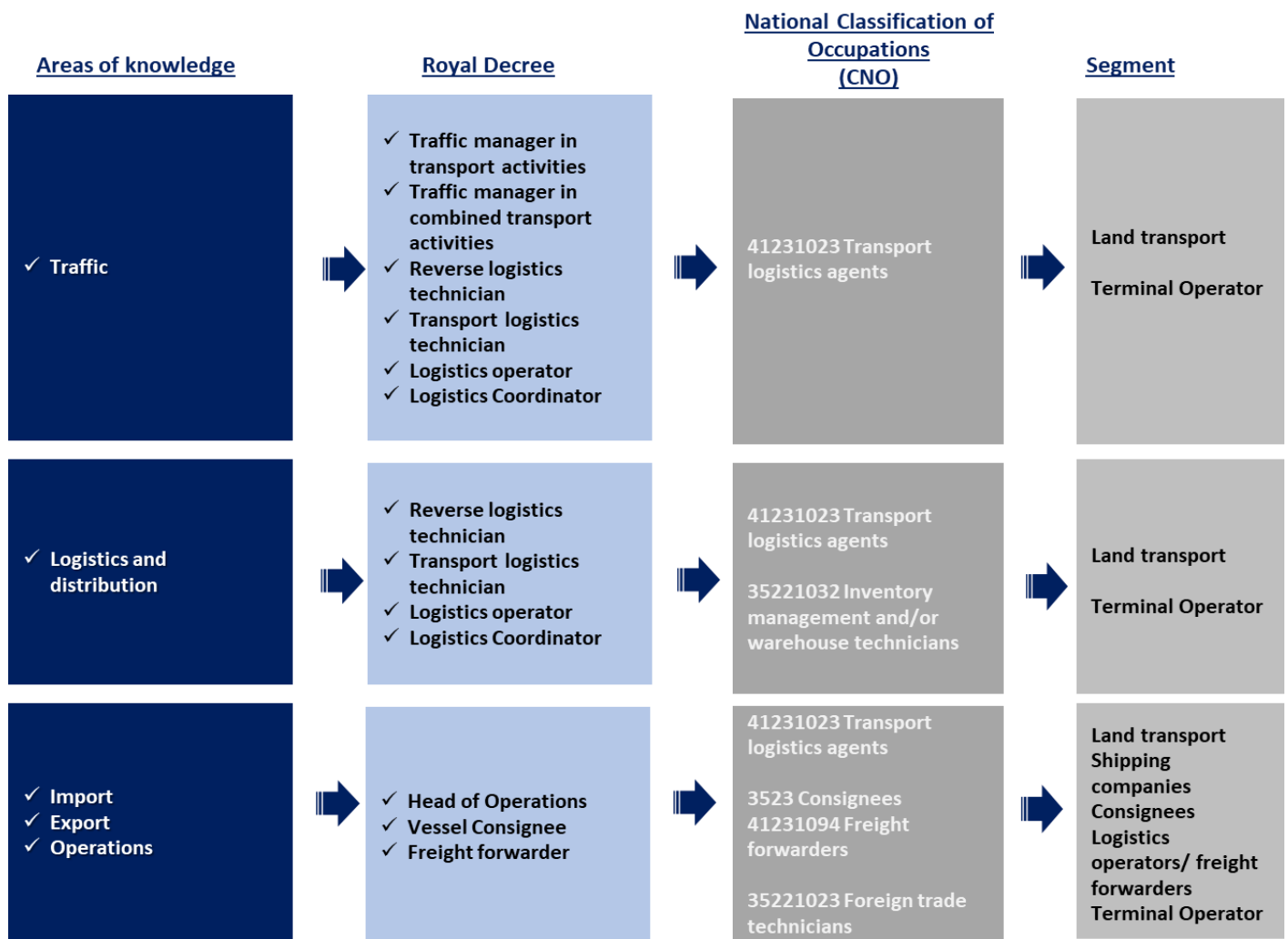
In this cycle, the **"general competence"** is based on *"organising, managing and controlling goods and passenger transport operations at national and international level, and planning and managing the logistics activities of a company, in accordance with the regulations in force and the objectives set by the company's management, within the framework of quality, safety and respect for the environment"*.

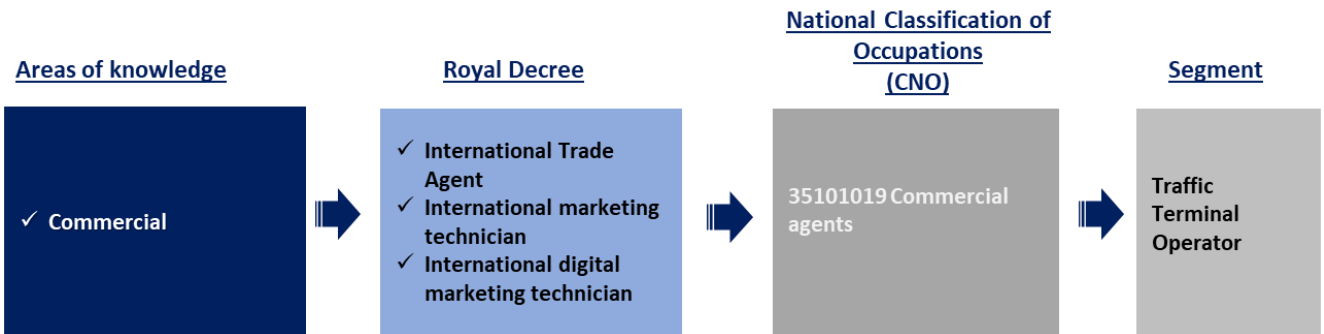
The training cycle also includes, like the previous one, 2000 hours and 13 training modules. **The training modules cover areas that are, in part, similar to those of the international trade cycle:** *administrative management; logistics, transport organisation and marketing; English, career guidance and workplace training.*<sup>23</sup> These common elements lead to the fact that, as can be seen in Graph 68, this training cycle is linked to professional profiles and areas of knowledge with which the international trade cycle is aligned. Specifically, the following profiles could be mentioned:

<sup>23</sup> <https://www.boe.es/boe/dias/2011/12/13/pdfs/BOE-A-2011-19437.pdf>



Graph 68. Professional profiles and areas of knowledge most in demand by the port community of Valencia and aligned with the Higher Technician in Transport and Logistics cycle.





Source: Own elaboration based on the online survey addressed to companies in the port community of Valencia, SEPE and the Royal Decree 1572/2011, of 4 November, which establishes the Higher Technical Degree in Transport and Logistics and sets its minimum teaching requirements.

## 4.3/OTHER TRAINING MODULES: ADMINISTRATION AND FINANCE

One of the most sought-after profiles (administrative employees in transport services) is linked to the area of **administration and accounting**, particularly among representatives/customs agents (40%). In addition to the **international trade** cycle, there are other training cycles, especially **administration and finance**, which can provide the required qualification. This is because their *"general competence"* aims, in short, at *"organising and executing management and administrative operations in the commercial, labour, accounting, fiscal and financial processes of a company"* (Graph 69).<sup>24</sup>

Graph 69. Professional profiles and areas of knowledge most in demand by the Valencia port community and aligned with the higher technical cycle in administration and finance



Source: Own elaboration based on the online survey addressed to companies in the port community of Valencia, SEPE and the Royal Decree 1574/2011, of 4 November, which establishes the Higher Technical Degree in Administration and Finance and sets its minimum teaching requirements.

<sup>24</sup> <https://www.boe.es/boe/dias/2011/12/15/pdfs/BOE-A-2011-19533.pdf>

## 4.4/ ASSESSMENT OF THE LEVEL OF COVERAGE

Taking as a reference what has been pointed out in previous pages, in relation to the level of adjustment of the training offer with respect to the business demands for professional profiles, the following should be noted above all:

### Tighter training cycles

1. The curricular contents of the training cycle in **transport and logistics** and, above all, of the **international trade** cycle offer an **offer that tends to adjust to a very significant part of the professional profiles most in demand** by the port community of Valencia. However, many companies also consider the training on offer to be **generalist**. This requires them to promote **internal training actions**, aimed at broadening the qualifications of recently recruited Vocational Training graduates who do not have **sufficient work experience**.

### Digital transformation

2. However, in jobs where a **university degree** is required (maritime operations coordinator and terminal maintenance technician), new workers usually also have to follow **training pathways** to broaden and update their skills.
3. Beyond the fact that the offer is valued as generalist, it should be noted that the main **deficits of the Vocational Training offer**, linked to the international trade and transport and logistics cycles, lie in the qualification areas related to **digital transformation**: Big Data, Artificial Intelligence, Technology 4.0, networks, blockchain technology, specific software for the port community, etc.

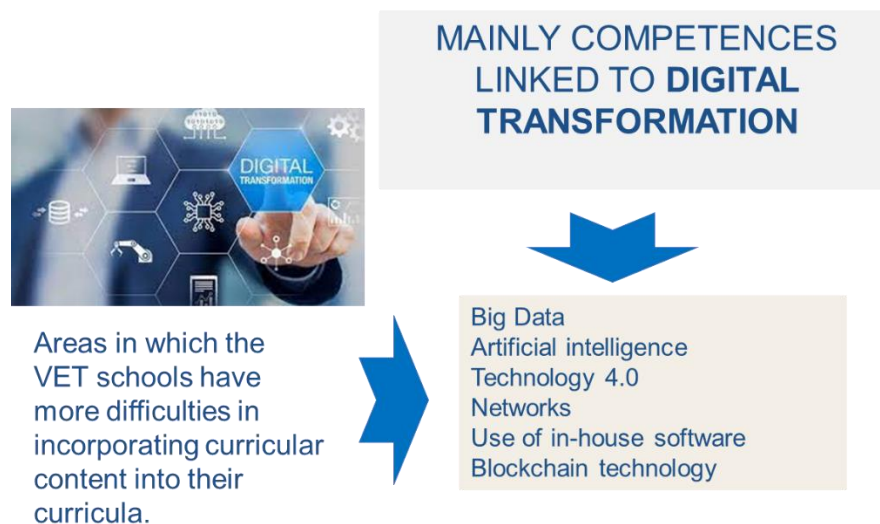
### Complementary training

4. In addition to vocational training graduates, university graduates also tend to require **more extensive and complementary training, with the aim of becoming properly integrated into the port community**. To this end, they have at their disposal specialised master's degrees in transport and logistics that facilitate, to a large extent, this purpose.
5. Vocational training centres offering international trade and transport and logistics cycles tend to indicate that the **main difficulties** in incorporating innovations in the curricular offer related to the **digital transformation** (Graph 70) are the following:

Difficulties to  
innovate in the  
curricular  
offering

- a. Rigidity on the part of Public Administrations in agreeing to the inclusion of training content not considered in the curricula proposed by them. In addition, they tend to add that some training content is not in line with current needs.
- b. Lack of training plans, at the level of the Valencian Community, aimed especially at teachers and with the goal of broadening their knowledge in the field of new technologies.
- c. Disinterest or lack of motivation on the part of some teachers to participate in refresher or recycling courses, especially those related to new technologies.
- d. Lack of qualified teaching staff to provide state-of-the-art training in new technologies (e.g. port community specific software).
- e. Lack of contact and work experience of teachers in companies in the port community.

Graph 70. Which new skills required are least covered by VET provision?



Source: On-line survey, contrast table and interviews with companies in the port community of Valencia.

Administration  
and finance

6. With regard to the provision of the training cycle in administration and finance, it must be stressed that the vocational training centres encounter major difficulties in providing specific knowledge to those who then seek to work as administrative employees of the transport services in the port community, as this cycle is conceived as being of a transversal or multisectoral nature.



**English  
language  
training**

7. In recent years, it is worth highlighting the increase in the number of **modules offered in English** in the international trade cycle. These have been important steps, but still limited, due firstly to the existing deficit of teachers with a sufficient level of English to teach modules in this language, and secondly, to the importance of English in the activity of the port's companies, which requires personnel with skills in this area.

**Spaces for  
meeting and  
dialogue**

8. Although there are **some spaces for meeting and dialogue** between the Vocational Training centres and companies, in the desire to improve and update the curricular designs linked to the port community, they are sometimes limited to the monitoring of trainees. This is why they are judged to be of little use. They are not insufficient when it comes to exchanging impressions, knowledge and proposals on changes that are taking place in the competence maps or on innovations that need to be introduced in the Vocational Training offer.

**Dual offer**

9. Over the last few years, significant progress has been made by vocational training centres to promote the **dual offer linked to the port community**. Over the next few years, and driven by the agreements signed with companies, the number of dual vocational training cycles will continue to increase, despite the difficulties that the centres have to face, especially when it comes to achieving a sufficient number of students enrolled. This is primarily due to the great effort that many students have to make to combine classroom and in-company training in a higher number of hours than in the non-dual mode.

**Specialised  
and tailor-made  
training**

10. The dual mode is helping to provide students with **more specialised training that is more in line** with the requirements of companies in the port community, thanks to the higher number of hours of in-company training. In this way, it allows the training of the training cycles to stop being so generalist, offering more opportunities to adapt to the reality of the companies and jobs.
11. **Lack of training content**, provided in vocational training centres, aimed at training in the mastery of specific software for logistics/port activity. Students and graduates tend to acquire these skills within companies.





# CHAPTER 5/ CONCLUSIONS AND RECOMMENDATIONS

## 5.1/ CONCLUSIONS

The port of Valencia is an **engine generating wealth and employment for the region**. Specifically, the port creates **2% of employment, 2.5% of gross wages, 2.2% of GVA pm and 2.2% of gross profit**. The port of Valencia serves a **port hinterland which represents more than 50% of the GDP of the Spanish economy**. The Valencian port is in **the top 27 of the world ranking and in fifth position in the European ranking**.

The port of Valencia is in the **top 27 of the world ranking and in fifth position in the European ranking**.

Around **2 out of 5 companies** expect to **increase employment over the next three years**

39.5% of companies in the port community plan to increase their **workforce over** the next three years. Employment will grow mainly among inland hauliers, logistics operators/forwarders and customs agents/representatives. In addition, around **7 out of 10 companies expect to make new hires**.

It is important to bear in mind that the **skill levels** that will be required by the companies in the port community from new workers will often be more complex than those that currently characterise their skills map.

Thus, for example, in 2021, **42.0% of companies plan to hire workers with completed vocational training studies** and **34.6% with completed university studies**.



The **professional profiles most in demand** are the following:



**Digital challenges**  
are **transforming**  
the most in-demand  
professional profiles

During the round **table**, and in particular by **completing the Delphi questionnaire**<sup>25</sup>, these **professional profiles** were validated, along with the **competency challenges** (especially in the **digital area**) that are challenging and **transforming** them, and which had been detected through the online survey and the interviews. The sheets included in the previous pages give an account of the priority of these profiles, their qualifications and emerging competences.

Although the **bulk of these professional profiles** do have a very long history among companies in the port community, it should also be noted that most of them are undergoing a **major transformation process** that will accelerate over the coming years as a result of **digital and technological challenges**. The objectives of these jobs may indeed be similar to those of one or two decades ago. However, the content and the way of working are changing significantly as a result of the digital transformation. This new scenario is replicated in many other economic activities in addition to the port community.

However, alongside the **technological** field (**hard**), the **language** area (**especially English**) and **soft skills** are gaining ground, while at the same time contributing to reshaping and transforming the classic professional profiles of the port community.

<sup>25</sup> Details of the results can be found in Annex 4.

Job creation in the port community of Valencia will be supported by a boom period, as the companies have pointed out. In fact, 63% of the companies foresee a **period of growth over** the next three years. In addition, 42% of the companies surveyed rate their market **position** very positively and 53.1% quite positively. On a positive note, 56.8% of the companies report that the **COVID-19 pandemic** has not worsened their market prospects.

Companies tend to rate both their **positioning** and **market prospects** positively.

Companies with **more than 10 employees are the ones that** best assess their **market position** and, at the same time, are the most optimistic about their **growth prospects**.

The growth of companies requires, however, that they engage in **new challenges and innovation projects (technological and non-technological)**. Broadly speaking, companies can be classified into two groups, according to the types of challenges to which they are committed. Thus, a first group of companies aligned with challenges related to human resources, business models and regulations can be highlighted. On the other hand, there is another group of companies linked to technological challenges and those related to the environment (port-city integration and collaboration or road connectivity).

Businesses are **engaged in both technological and non-technological challenges**.

On another note, it should be emphasised that the **Vocational Training offer** is playing a **fundamental role** in **covering the demand for jobs** in the port community of Valencia.

Specifically, it is the **international trade** and **transport and logistics** cycles that provide the **basic training linked to a very important part of the most demanded professional profiles**.

The **international trade** and **transport and logistics** cycles are the **tightest**.

The vast majority of companies in the port community have **vocational training graduates - 87.7%** - although to a lesser extent in smaller companies. Almost half of the companies totally or fairly agree that the VET offer adapts to their needs. The evaluations with regard to the VET offer tend to be more positive than negative in all the strata and activities of the companies in the port community.

Around one **fifth of the companies have limited knowledge of the Vocational Training offer**. It is therefore appropriate to promote **dissemination and collaborative**

**work** with vocational training centres. Smaller companies have less knowledge, as well as companies linked to the activities of consignees, representatives/customs agents and inland transport.

**Companies with VET learners** are **in the minority**. Among companies with more than 100 employees, on the one hand, and among customs agents and shipping agents, on the other hand, the presence of Dual VET learners is higher.

**The relationship between companies with students and the VET centres to which they belong is limited.** Little use is made of the opportunities for collaboration to detect new needs that help to update and improve the VET offer.

The companies have shown in the survey, in parallel, their **satisfaction with the VET students**. The aspects in which the companies are most satisfied are the following: interest in integrating into the company, interest in learning, ability to work in a team and knowledge transferred to the company.

**Collaboration spaces** between companies and VET institutions are not exploited.

Companies show their **satisfaction regarding VET students**

On the positive side, around **9 out of 10 companies, which have trained VET learners, have made some recruitments**.

However, the training provided by vocational training tends to be perceived by companies as too **generalist**, so that workers often take part in training activities (formal and non-formal) in order to broaden or complete their skills.

**However**, in jobs where a **university degree** is required (maritime operations coordinator and terminal maintenance technician), new workers generally **also** have to **follow training pathways to broaden and update their skills**.

This shows that university graduates have to face the same challenge as vocational training graduates in terms of updating and broadening their skills in order to integrate into the company and the port community.

VET and university provision tends to be **quite generalist**.

Although the learning process of workers (VET graduates or university graduates) is expected to extend throughout their working life, it is also true that the first years will be particularly intense.

This is one of the reasons why, in fact, around **7 out of 10 companies have had a formalised training plan** in the last two years.

To this must be added that the curricular designs of the Vocational Training offer have not incorporated training content linked to some of the main challenges that the port community of Valencia has to face, in particular with regard to **digital transformation**: Big Data, artificial intelligence, 4.0 technology, networks, internal software, blockchain technology, etc.

Therefore, it may be relevant to incorporate **new changes and improvements** that allow updating and adapting the offer to the demand of professional profiles.

## 5.2/ RECOMMENDATIONS

Professional profiles are in continuous evolution and therefore require a **permanent effort and monitoring, with the aim of** gradually adjusting the training offer to the demand of companies.

These changes and improvements should be linked to the following issues:

### a. INTERACTION AND DIALOGUE BETWEEN PVC SCHOOLS AND THE PORT COMMUNITY IN DUAL AND NON-DUAL MODALITIES.

**1**

It is necessary to take advantage of the areas of relationship and communication, within the framework of the organisation, implementation and monitoring of the training period within companies. In particular, the aim is to create and consolidate **spaces for dialogue** between VET centres and companies that will make it possible to identify which **new competences are emerging** and which are becoming more and more of a priority. This will help each individual centre to both update and adjust its training offer, within the existing margins and communicate to the public institutions responsible for carrying out the necessary activities in the curricular offer, as well as providing the Vocational Training centres with students with more suitable profiles.

**2**

It is appropriate to organise and establish a **permanent body** (forum, for example) as an observatory, bringing together representatives of vocational training centres, representatives of employers' groups or clusters and public administrations. This body would have to share and collect information on a continuous basis, both with regard to the training offer and the demand for professionals in companies.

3

These types of instances are also relevant in terms of **university studies**, both undergraduate and postgraduate. It is also a challenge for universities and companies to strengthen links and spaces for collaboration and communication, with the aim of adjusting the undergraduate and postgraduate offer to professional demands. At the same time, it would be appropriate to generate synergies between the collaborative platforms focused on VET and those specialised in the university area.

## b. CURRICULUM DESIGNS

1

It is urgent to facilitate and promote the incorporation, especially in international trade and transport and logistics cycles, of **curricular content linked to new technologies**, so that new graduates are proactive subjects in the implementation of the new challenges of the port community in terms of digital **transformation**: specific software for companies, Big Data, 4.0 technologies, blockchain technology, etc.

Although this is an effort that should particularly challenge VET institutions, it is also replicated at university level, in particular in areas of knowledge such as engineering, business administration and management, economics, etc.

2

In relation to the technological field, it would also be worth stressing the need for classroom teaching methods to generalise and optimise the **use of new technologies as transversal teaching-learning resources**.

3

It is also important, in view of the **environmental sustainability** challenges of the Valencia port community, that VET centres and universities make the relevant efforts to incorporate and even prioritise curricular content **related to or focused on raising awareness and providing new competences in energy transition and ecological sustainability**, in line for example with the Millennium Development Goals.

4

It is appropriate to incorporate new **units of competence and training modules**, linked to the international trade and transport and logistics cycles, in training cycles of a transversal nature (**administration and finance**, in particular). The aim is to respond to the needs of companies, creating **more versatile graduates** and **orienting them** towards their **labour insertion in the port community of Valencia**. Some of the vocational training centres are already planning advances in this direction.

5

It is relevant to reinforce teaching in **English in vocational schools and in university education**. For example, there are already some training modules, linked for example to international trade, which are already taught entirely in English. Some vocational training centres have also strengthened the teaching of English through specific modules. However, English is an essential language in the port community, so it is necessary for students to become more proficient in this language. To this end, it will be necessary to prioritise the recruitment of teachers with a higher accredited level of English.

6

It is necessary to incorporate and give more value, in the curricular designs of vocational training centres and universities, to training content linked to **soft skills**. This would be in line with the **most advanced paradigms** of business management, facilitating students' incorporation and development in the workplace. These are skills linked, for example, to teamwork, communication, emotional intelligence, time management, change management, leadership, etc.

7

It is appropriate to promote **new specialisation programmes** for higher degree graduates, especially in international trade and transport and logistics, who work or aspire to work in the port community of Valencia. These programmes would emphasise curricular content not sufficiently



	covered by higher cycles and linked to the new challenges of the port community (digital transformation, adaptation to new regulations, new business models, etc.). This type of programme is analogous to Master's programmes aimed at specialising university graduates.
8	It is advisable to <b>review the curricular designs</b> with the aim of incorporating, in the first year of international trade and transport and logistics training cycles, contents <b>of a more generalist nature</b> , and in the second year contents should be more operational and practical to facilitate the integration and use of the students in the internship or training period in companies during that second year. In this sense, it would be appropriate, for example, to promote learning methodologies that are less theoretical and more dynamic and collaborative, such as case studies, business simulations, etc.
9	<b>More flexible timetables</b> could be provided for learners, especially when planning learning periods in companies. This will facilitate students' access to in-company training activities and would probably help to increase enrolment and perseverance of students in the Dual VET modality.

#### c- TEACHERS AND TUTORS.

1	It is appropriate to promote the incorporation of professionals with <b>work experience</b> in the port community and, in particular, in key areas, as teachers in vocational training centres. These could be teachers who <b>combine their teaching work with their professional work in companies</b> . It would be a matter of promoting groups of "specialist" teachers, along similar lines to the profile of "associate professors" in universities.
2	It is necessary to prioritise the selection of <b>student tutors</b> , within vocational training centres and universities, with <b>knowledge and experience of working</b> in the business world, especially linked to the port community or the logistics/port sector. This could help to provide more effective accompaniment and career guidance for students, especially in international trade and transport and logistics courses.
3	It is appropriate to increase <b>international mobility and exchange programmes for teachers</b> , with the aim of bringing them into contact with <b>new realities of vocational training</b> (especially in the Dual mode), in the field of international trade, logistics and transport. It is particularly worth considering actions with European regions with significant port activity. To this end, it will be necessary both to create mechanisms that articulate stable collaborative spaces with vocational training centres abroad and to formulate some incentives that motivate teachers to participate in them.



## ANNEX 1. ONLINE QUESTIONNAIRE.

### Study on professional profiles required by companies in the port community of Valencia

The **Valenciaport Foundation** is actively working to adapt the **Vocational Training (VET)** training offer to the specific needs of companies in the port of Valencia, a strategic infrastructure for the Valencian economy and with a high potential for generating jobs for young people in the city.

To this end, together with partners from 7 other Mediterranean countries, we have launched the **European YEP-MED project**, funded by the ENI Programme, which will boost the employability of young people in the port logistics sector in Mediterranean countries.

The aim of this questionnaire is to **obtain information on the situation of companies in the port community, their business prospects, the professional profiles they require, the training activities they demand and their knowledge and assessment of Vocational Training (VET)**. The information you provide will be treated **confidentially and anonymously in accordance with** current legislation. If you have any questions, please contact us. We estimate that the questionnaire can be answered in **about 10 - 15 minutes**. Thank you very much for your availability and cooperation.

Specifically, the questionnaire consists of the following sections:

1. IDENTIFICATION OF THE COMPANY AND CHALLENGES.
2. PROFILE OF WORKERS AND EMPLOYMENT.
3. CONTINUOUS TRAINING.
4. KNOWLEDGE AND ASSESSMENT OF VOCATIONAL TRAINING PROVISION.
5. CONTRIBUTIONS AND COMMENTS.

#### 1/ IDENTIFICATION OF THE COMPANY AND CHALLENGES.

1.1/ Name of the company:

1.2/ Person completing the questionnaire: First and last name

1.2.2/ Position:

- Manager
- HR and/or Training Manager
- Other:



1.2.3/ E-mail:

1.2.4/ City where the company is located:

1.3/ Number of workers in the company:

- a. Less than 10 workers
- b. Between 11 and 50 employees
- c. Between 51 and 100 employees
- d. More than 100 workers

1.4/ GENDER DISTRIBUTION OF THE STAFF (please indicate approximately in percentage terms the number of women)

1.5/ ACTIVITIES CARRIED OUT BY THE COMPANY/AGENT (more than one option can be chosen)

- Consignee.
- Customs agent.
- Shipping company.
- Logistics operator / freight forwarder.
- Terminalista.
- Land transport.
- Other activity (please specify)

1.6/ PLACE WHERE THE COMPANY HEADQUARTERS ARE LOCATED (place where decisions are taken)

1.7/ AT PRESENT, HOW DO YOU ASSESS THE POSITIONING OF YOUR COMPANY IN THE MARKET?

- a. Very positive
- b. Fairly positively
- c. Regular
- d. Quite negatively
- e. Very negatively

1.8/ HAS THE COVID-19 PANDEMIC AFFECTED YOUR COMPANY'S BUSINESS?

- a. Yes, the economic outlook has improved.
- b. Yes, it has worsened market prospects.
- c. It has not had a significant impact.
- d. Don't know / No answer.



1.9/ WHAT KIND OF STAGE DOES YOUR COMPANY EXPECT TO GO THROUGH IN THE NEXT THREE YEARS?

- a. Growth Stage
- b. Stability stage
- c. Recession stage
- d. Don't know / No answer

1.10/ PLEASE INDICATE WHETHER YOUR COMPANY IS COMMITTED TO THE FOLLOWING CHALLENGES AND TRENDS, 5 BEING TOTALLY AND 1 BEING NOT AT ALL.

- SENSORISATION OF THE PHYSICAL ENVIRONMENT OF THE PORT  
(Technology 4.0, Internet of Things, etc.).
- PREDICTIVE MODELLING AND DATA ANALYSIS  
(predictive maintenance, Big Data, mass device management, etc.).
- OPTIMISATION AND INTEGRATION OF OPERATIONS  
(automation of terminals and vehicles, synchronisation of maritime traffic in the port, etc.).
- INFORMATION SECURITY AND VISIBILITY  
(blockchain for logistics traceability, drones, etc.).
- ENERGY & ENVIRONMENT (energy efficiency and self-sufficiency, decarbonisation, circular economy, low emissions, etc.)
- SAFETY AND SECURITY  
(physical protection, ergonomics, cybersecurity models, etc.).
- ADAPTATION TO THE NEW REGULATIONS.  
(European, state guidelines, etc.).
- NEW BUSINESS MODELS  
(global digital platforms for customer relations, full traceability, incorporation of start-ups, etc).
- PORT / CITY INTEGRATION AND COLLABORATION  
(social sustainability, coordination forums, etc.)
- ROAD CONNECTIVITY AND INTERMODALITY REALIGNMENT OF PROFESSIONAL PROFILES TO MEET INNOVATION CHALLENGES AND PROJECTS  
Other challenges and trends (please specify and assess)

Other challenges and trends (please specify and assess)

1.11/ IN WHICH ACTIONS WOULD A BOOST BE IMPORTANT TO ACHIEVE THE REALIGNMENT OF PROFESSIONAL PROFILES TO MEET THE INNOVATION CHALLENGES AND PROJECTS? (more than one option can be chosen)

- a. Set up a multi-stakeholder round table for dialogue on the challenges of training and employment.
- b. Create an observatory of trends in the port logistics labour market.
- c. To have tools that allow us to regularly analyse the evolution of the sector in terms of training and employment.
- d. Implement a joint training plan for companies in the port-logistics sector.
- e. Create an agile portal with job offers and demands in the sector for recruitment.
- f. Promote policies of the Generalitat that facilitate contracting in the sector.
- g. Elaborate diagnoses of training needs within the port-logistics sector (e.g. through annual surveys in companies).
- h. Propose and promote collaboration with other leading Autonomous Communities in this area.
- i. Working together on attracting and retaining talent

## 2/ PROFILE OF WORKERS AND EMPLOYMENT.

2.1/ WHAT IS THE APPROXIMATE DISTRIBUTION OF EMPLOYEES IN YOUR COMPANY BY LEVEL OF EDUCATION?

	<u>None</u>	<u>Less than 25</u>	<u>Between 25% and 49%.</u>	<u>Between 50% and 74%.</u>	<u>Between 75% and 100%.</u>	<u>NS/NC</u>
a. University studies.						
b. Baccalaureate studies or equivalent.						
c. Vocational training studies.						
d. Primary education.						
e. Uneducated.						
Total						

2.2. WHAT IS THE APPROXIMATE AGE DISTRIBUTION OF YOUR COMPANY'S WORKFORCE?

	<u>None</u>	<u>Less than 25</u>	<u>Between 25% and 49%.</u>	<u>Between 50% and 74%.</u>	<u>Between 75% and 100%.</u>	<u>NS/NC</u>
a. Under 25 years of age						
b. Between 25 and 34 years old						

c. Between 35 and 44 years old						
d. Between 45 and 54 years old						
a. Over 55 years old						
a. Under 25 years of age						

2.3/ HOW IS EMPLOYMENT IN YOUR COMPANY EXPECTED TO DEVELOP OVER THE NEXT THREE YEARS?

- a. It will increase
- b. It will remain more or less the same
- c. Decrease
- d. Don't know / No answer.

2.4/ PLEASE INDICATE WHETHER YOUR COMPANY PLANS TO RECRUIT NEW EMPLOYEES IN THE COMING YEARS. (you can choose more than one option)

Response	2021	2022	2023
a. Uneducated persons.			
b. Persons with only primary education.			
c. Persons with only secondary education without specialisation (ESO, Baccalaureate)			
c. Graduates in Vocational Training.			
d. University graduates.			

2.5/ PLEASE INDICATE THE RECRUITMENT CHANNELS OF YOUR COMPANY, FROM 1 TO 5 WITH 1 BEING THE LEAST IMPORTANT AND 5 BEING THE MOST IMPORTANT.

Response	1				5
a. Headhunters or recruitment companies					
b. Temporary employment agencies.					
c. Labora					
d. Associations and foundations in the sector.					
c. Contacts and recommendations					
d. Social networking					
e. Job portals (infojobs, etc.)					
f. The company's own employment exchange.					
g. Company website.					

2.6.1/ WHAT TYPE OF PROFESSIONAL PROFILE DOES YOUR COMPANY PLAN TO RECRUIT OVER THE NEXT THREE YEARS? (YOU CAN CHOOSE MORE THAN ONE OPTION)

	Operator / Administrative	Technician / Middle management	Manager / Responsible
Receptionist			
Messaging			
Administration / accounting			
Documentation			
Export			
Import			
Special cargoes (reefer, general cargo, etc.)			
Aerial			
Customs			
Commercial			
Communication / Marketing / Advertising			
Business Developer / Innovation Project Manager			
Pricing			
Human Resources			
Legal.			
Quality			
Logistics and distribution.			
Storage/supply			
Traffic			
Intermodal			
Vehicle mechanics			
Driver			
Operations			
Planning			
Maintenance			
Process engineering			

Environment			
Chemistry			
Telecommunications			
Data analysis			
Robotics			
Help Desk			
Pricing policy			
Driving of vehicles			

2.7/ PLEASE SPECIFY WHETHER THE LABOUR MARKET HAS QUALIFIED WORKERS LINKED TO THESE PROFILES

	YES	NO	NS/NC
Receptionist			
Administration / accounting			
Documentation			
Export			
Import			
Special cargoes (reefer, general cargo, etc.)			
Aerial			
Customs			
Commercial			
Communication / Marketing / Advertising			
Business Developer / Innovation Project Manager			
Pricing			
Human Resources			
Legal			
Quality			
Logistics and distribution.			
Storage/supply			
Traffic			
Intermodal			
Vehicle mechanics			
Driver			

Operations			
Planning			
Maintenance			
Process engineering			
Environment			
Chemistry			
Telecommunications			
Data analysis			
Robotics			
Help Desk			
Pricing policy			
Driving of vehicles			

2.7.1/ PLEASE SPECIFY WHETHER THERE IS A SUPPLY ON THE LABOUR MARKET OF WORKERS WITH SKILLS IN THE FIELDS OF ADMINISTRATION, REGULATIONS, TAXATION AND INTERNATIONAL TRADE.

	YES	NO	NS/NC
a. New state / European regulations related to the logistics / port sector.			
b. Legal / fiscal framework of foreign countries.			
c. Customs, administrative and documentation management in international trade flows and cargoes.			
d. Financing operations and management of payments/collections in international trade.			

2.7.2/ PLEASE SPECIFY WHETHER THERE IS A SUPPLY OF WORKERS WITH SKILLS IN THE AREA OF LOGISTICS AND WAREHOUSING ON THE LABOUR MARKET.

	YES	NO	NS/NC
a. Knowledge of the logistics chain.			
b. Management of operations to ensure logistical traceability.			
c. Management of warehousing and supply activities.			
d. Management Systems (ERP, CRM) linked to International trade.			

2.7.3/ PLEASE SPECIFY WHETHER THERE ARE WORKERS WITH SKILLS IN THE AREA OF NEW TECHNOLOGIES AVAILABLE ON THE JOB MARKET

	YES	NO	NS/NC
a. Predictive modelling and data analytics management (e.g. Big Data)			
b. Sensory Technology Management (e.g. 4.0)			
c. Management of global digital platforms			
d. Maintenance of networks, sensors and technological equipment			
e. Digital marketing and social media			

2.7.4/ PLEASE SPECIFY WHETHER THERE IS AN AVAILABILITY ON THE LABOUR MARKET OF WORKERS WITH SKILLS IN THE AREA OF LANGUAGES ASSOCIATED WITH INTERNATIONAL TRADE AT THE LEVEL REQUIRED BY YOUR COMPANY.

	YES	NO	NS/NC
a. English			
b. Others			

OTHER SKILLS (please specify)

2.7.5/

PLEASE SPECIFY WHETHER THERE ARE WORKERS WITH THE FOLLOWING COMPETENCES AND SKILLS AVAILABLE ON THE LABOUR MARKET AT THE LEVEL REQUIRED BY YOUR COMPANY

	YES	NO	NS/NC
a. Office skills (Excel, Word, etc.)			
b. Business skills.			
c. Communication			
d. Teamwork			
e. Results orientation			
f. Management capacity			
g. Planning and customer orientation			

OTHER SKILLS AND ABILITIES (please specify)

--

### 3/ CONTINUOUS TRAINING

3.1/ HAS YOUR COMPANY, IN THE LAST THREE YEARS, CARRIED OUT A SKILLS NEEDS ASSESSMENT?

a. Yes, it has been subcontracted to a specialised entity.	
b. Yes, it has been developed by the company itself	
c. No	
d. Don't know / no answer	

3.2/ HAS YOUR COMPANY HAD A FORMALISED TRAINING PLAN IN THE LAST TWO YEARS?

a. If	
b. No	
c. Don't know / no answer	

3.3/ PLEASE specify which training/courses you have given to your employees in the last two years (more than one option can be chosen)

a. English	
b. Office automation	
c. Incoterms	
d. Customs	
e. Stress management	
f. Costs	
g. Safe driving	

OTHER COURSES (please specify)

--



3.4/ PLEASE SPECIFY BY WHAT MODALITY TRAINING HAS BEEN PROVIDED DURING THE LAST TWO YEARS

	YES	NO
a. Face-to-face		
b. E-learning		
c. Mixed		

3.5. HAS THE TRAINING BEEN CARRIED OUT DURING OR OUTSIDE WORKING HOURS?

a. During working hours.	
b. Outside working hours	
c. In and out of working hours	
d. No in-company training has taken place	

#### 4/ KNOWLEDGE AND ASSESSMENT OF THE VOCATIONAL TRAINING OFFER (VP)

4.1/ DOES YOUR COMPANY HAVE VOCATIONAL TRAINING (PVT) GRADUATES?

a. Yes, from intermediate vocational training (Go to 4.3)	
b. Yes, from VET (Go to 4.3)	
c. Yes, from Intermediate and Advanced Vocational Training (Go to 4.3)	
d. No (Go to 4.2)	

4.2. WHAT ARE THE REASONS WHY YOUR COMPANY DOES NOT EMPLOY ANY PVT GRADUATES?  
(more than one option can be chosen)

a. VET qualifications are not adapted to the company's activities (go to question 4.4).	
b. The company's activity requires staff with higher levels of training (go to question 4.4).	
c. The company does not have sufficient knowledge of the VET offer and/or its possibilities (go to question 4.4).	
d. Administrative burden (go to question 4.4)	
e. The company devotes a lot of time to the training of the trainee (go to question 4.4).	

4.3/ PLEASE INDICATE TO WHICH PROFESSIONAL FAMILIES THE VET QUALIFICATES IN YOUR COMPANY HAVE BELONGED OR BELONG TO (you can choose more than one option)

Physical and sporting activities	
Administration and management	
Agraria	
Graphic arts	
Arts and crafts	
Trade and marketing	
Electricity and electronics	
Energy and water	
Building and civil works	
Mechanical manufacturing	
Hotel and Tourism	
Extractive industries	
IT and communications	
Installation and maintenance	
Personal image	
Image and sound	
Food industries	
Wood, furniture and cork	
Maritime fisheries	
Chemistry	
Health	
Security and environment	
Socio-cultural services to the community	
Textile, clothing and leather	
Transport and maintenance of vehicles	
Glass and ceramics	

4.4/ WHAT IS YOUR DEGREE OF KNOWLEDGE OF THE VOCATIONAL TRAINING OFFER, LOCATED IN THE VALENCIAN COMMUNITY, LINKED TO THE PROFESSIONAL PROFILES RELATED TO YOUR COMPANY?

a. Very high	
b. Quite high	
c. Regular	
d. Fairly low	
e. Very low	

4.5/ DO YOU THINK THAT THE OFFER OF VOCATIONAL TRAINING IN THE REGION OF VALENCIA MEETS THE NEEDS OF YOUR COMPANY?

a. Strongly agree	
b. I quite agree	
c. Neither agree nor disagree	
d. Little agreement	
e. No agreement	
f. Don't know / No answer	

4.6/ SPECIFY YOUR OPINION ABOUT THE FUNCTIONING OF THE PVF IN THE COMUNITAT VALENCIANA, WITH 1 NOT AGREEING AT ALL AND 5 TOTALLY AGREEING.

Response	1				5	Don't know / No answer
a. The training cycles are adapted to the <u>specific competences</u> required by the logistic - port sector.						
b. The training cycles have made progress in the incorporation of curricular content linked to the challenges of <u>digital transformation</u> .						
c. VET cycles incorporate sufficient content linked to <u>environmental sustainability</u> .						
d. VET institutions <u>turn to companies</u> in the port-logistics sector when designing and adjusting their offer.						
e. Companies in the logistics - port sector <u>are aware of</u> the benefits that Dual Vocational Training can bring them.						
f. VET institutions <u>adequately disseminate their offer</u> and, in particular, the <u>dual</u> mode.						
g. VET students are sufficiently prepared to start practical training in the port-logistics sector.						

h. Recent VET graduates working in the port <u>have sufficient knowledge of foreign languages</u> .						
i. VET graduates, recently incorporated into the port-logistics sector, <u>know how to work</u> adapting to the <u>requirements</u> of the <u>new regulations</u> .						
j. Young VET graduates know how to participate in <u>innovation projects</u> in the port-logistics area.						

4.7. WHAT TYPE OF RELATIONSHIP DOES YOUR COMPANY HAVE WITH THE VOCATIONAL TRAINING CENTRES IN THE REGION OF VALENCIA?

a. It regularly has Dual VET students on its staff.	YES	NO
b. It has often recruited VET graduates through the intermediation of the centres.		
c. Your company's employees usually take part in 100% subsidised training courses for employment organised by Vocational Training Centres.		

OTHER TYPE OF RELATIONSHIP (indicate which)

4.8/ HAVE DUAL VOCATIONAL TRAINING STUDENTS BEEN TRAINED IN YOUR COMPANY DURING THE LAST FEW YEARS?

a. Yes, Dual VET learners (go to question 4.9)	
c. Yes, non-dual VET learners (go to question 4.9)	
a. No (go to question 5.1)	

4.9/ REFERRING TO THE FOLLOWING QUESTIONS, ARE YOU SATISFIED WITH THE DUAL VOCATIONAL TRAINING STUDENTS TRAINED IN YOUR COMPANY?

Response	Fully satisfied	Quite satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Not satisfied	Ns/Nc
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a. <u>Knowledge transferred to the company.</u>						
b. <u>Interest in joining the company.</u>						
c. <u>Interest in learning.</u>						
d. <u>Ability to work in a team.</u>						

4.10.1/ WHAT OTHER ASPECTS WOULD YOU HIGHLIGHT ABOUT THE DUAL VOCATIONAL TRAINING STUDENTS TRAINED IN YOUR COMPANY?

Positive aspects:

4.10.2/ WHAT OTHER ASPECTS WOULD YOU HIGHLIGHT ABOUT THE DUAL VOCATIONAL TRAINING STUDENTS TRAINED IN YOUR COMPANY?

Negative aspects:

4.11/ APPROXIMATELY HOW MANY VOCATIONAL TRAINING/DUAL VOCATIONAL TRAINING STUDENTS, TRAINED IN YOUR COMPANY, HAVE SUBSEQUENTLY BEEN HIRED IN YOUR COMPANY?

None	
Less than 25	
Between 25 and 49%.	
Between 50% and 74%.	
Between 75% and 100%.	
Don't know / No answer	

4.12/ FINALLY, HOW COULD DUAL VOCATIONAL TRAINING BE PROMOTED IN THE PORT COMMUNITY? (more than one option can be chosen)

a. Spreading the <u>advantages of Dual VET</u> and the positive experiences it has achieved in the logistics - port sector.	
b. <u>Better adjusting the curricular designs of the Dual VET offer</u> to the demands of the port-logistic companies.	
c. <u>Working towards a closer relationship</u> between dual vocational training centres and port-logistics companies.	
d. <u>Disseminating employment exchanges with Dual VET graduates among companies.</u>	
e. <u>Training company tutors</u> to effectively accompany Dual VET learners.	
f. Providing practical training for high school teachers in companies.	

Other:

## 5/ CONTRIBUTIONS AND COMMENTS.

5.1/ OTHER INFORMATION GATHERING TOOLS ARE PLANNED IN THE FRAMEWORK OF THE PROJECT. WOULD YOU BE INTERESTED IN PARTICIPATING IN THEM?

a. Working group defining profiles for its activity.	
b. Contrast table to discuss their activity profiles.	

COMMENTS AND/OR SUGGESTIONS

**END OF SURVEY**  
**THANK YOU VERY MUCH FOR YOUR COOPERATION**



## ANNEX 2. SUPPLEMENTARY TABLES

What type of professional profile does your company plan to recruit over the next three years? (%) (multiple answer) (according to economic activity)

Profile		Inland hauliers	Logistics operators / freight forwarders	Consignees	Customs agents	Terminalistas	Shipping companies	Other activities
Receptionist	Operator/Administrative	12,9	9,3	11,1	5,0	28,6	10,0	11,8
Messaging	Operator/Administrative	3,2	0,0	0,0	0,0	0,0	0,0	0,0
Administration and accounting	Operator/Administrative	19,4	30,2	22,2	40,0	14,3	10,0	35,3
	Technician/Middle Management	19,4	14,0	11,1	25,0	0,0	20,0	23,5
Documentation	Operator/Administrative	22,6	30,2	11,1	25,0	28,6	30,0	11,8
	Technician/Middle Management	0,0	2,3	11,1	0,0	14,3	0,0	0,0
Export	Operator/Administrative	32,3	37,2	55,6	40,0	57,1	10,0	29,4
	Technician/Middle Management	3,2	11,6	5,6	15,0	14,3	0,0	23,5
Import	Operator/Administrative	35,5	37,2	55,6	50,0	42,9	10,0	29,4
	Technician/Middle Management	0,0	11,6	11,1	10,0	28,6	0,0	17,6
	Operator/Administrative	19,4	9,3	11,1	5,0	14,3	10,0	5,9

Profile		Inland hauliers	Logistics operators / freight forwarders	Consignees	Customs agents	Terminalistas	Shipping companies	Other activities
Special cargo (ref. general cargo, etc. )	Technician/Middle Management	3,2	9,3	5,6	20,0	0,0	20,0	5,9
Aerial	Operator/Administrative	19,4	16,3	22,2	25,0	28,6	10,0	17,6
	Technician/Middle Management	3,2	4,7	0,0	15,0	0,0	0,0	0,0
Customs	Manager/ Responsible	3,2	0,0	0,0	5,0	0,0	0,0	0,0
	Operator/Administrative	25,8	25,6	33,3	40,0	42,9	20,0	23,5
	Technician/Middle Management	0,0	11,6	5,6	25,0	0,0	0,0	5,9
Commercial	Manager/ Responsible	3,2	2,3	0,0	10,0	0,0	0,0	0,0
	Operator/Administrative	25,8	23,3	27,8	25,0	57,1	10,0	5,9
	Technician/Middle Management	16,1	27,9	33,3	25,0	28,6	10,0	29,4
Communication / Marketing / Advertising	Manager/ Responsible	0,0	4,7	0,0	5,0	0,0	0,0	0,0
	Operator/Administrative	3,2	9,3	0,0	0,0	14,3	10,0	0,0
	Technician/Middle Management	6,5	4,7	16,7	10,0	14,3	0,0	23,5
Business development / Innovation project manager	Manager/ Responsible	0,0	2,3	0,0	5,0	0,0	0,0	0,0
	Operator/Administrative	3,2	2,3	0,0	0,0	14,3	10,0	0,0
	Technician/Middle Management	12,9	7,0	16,7	5,0	0,0	0,0	23,5



Profile		Inland hauliers	Logistics operators / freight forwarders	Consignees	Customs agents	Terminalistas	Shipping companies	Other activities
Pricing	Manager/ Responsible	0,0	2,3	0,0	5,0	0,0	0,0	0,0
	Operator/Administrative	12,9	11,6	5,6	10,0	14,3	0,0	0,0
	Technician/Middle Management	9,7	11,6	5,6	15,0	14,3	10,0	17,6
Human Resources	Manager/ Responsible	3,2	0,0	0,0	0,0	0,0	0,0	0,0
	Operator/Administrative	12,9	7,0	11,1	15,0	0,0	10,0	5,9
	Technician/Middle Management	3,2	2,3	11,1	5,0	0,0	0,0	5,9
Legal	Operator/Administrative	3,2	2,3	5,6	0,0	0,0	0,0	0,0
	Technician/Middle Management	3,2	2,3	0,0	5,0	0,0	0,0	0,0
Quality	Manager/ Responsible	3,2	0,0	0,0	0,0	0,0	0,0	0,0
	Operator/Administrative	6,5	2,3	5,6	5,0	0,0	0,0	5,9
	Technician/Middle Management	3,2	4,7	0,0	5,0	0,0	0,0	5,9
Logistics and distribution	Operator/Administrative	32,3	30,2	27,8	30,0	42,9	20,0	5,9
	Technician/Middle Management	9,7	9,3	5,6	10,0	0,0	10,0	17,6
Storage and supply	Operator/Administrative	22,6	11,6	11,1	15,0	0,0	10,0	17,6

Profile		Inland hauliers	Logistics operators / freight forwarders	Consignees	Customs agents	Terminalistas	Shipping companies	Other activities
	Technician/Middle Management	0,0	0,0	5,6	0,0	0,0	0,0	0,0
Traffic	Operator/Administrative	38,7	30,2	38,9	35,0	42,9	10,0	17,6
	Technician/Middle Management	16,1	20,9	5,6	15,0	0,0	0,0	23,5
Intermodal	Operator/Administrative	16,1	7,0	11,1	5,0	14,3	0,0	0,0
Vehicle mechanics	Operator/Administrative	6,5	2,3	0,0	5,0	0,0	0,0	0,0
	Technician/Middle Management	3,2	0,0	0,0	0,0	0,0	0,0	5,9
Driver	Operator/Administrative	29,0	9,3	11,1	5,0	0,0	0,0	11,8
	Technician/Middle Management	3,2	0,0	0,0	0,0	0,0	0,0	0,00
Operations	Operator/Administrative	22,6	14,0	22,2	15,0	14,3	50,0	0,0
	Technician/Middle Management	6,5	7,0	5,6	5,0	0,0	20,0	11,8
Planning	Operator/Administrative	0,0	0,0	0,0	0,0	0,0	20,0	0,0
	Technician/Middle Management	3,2	0,0	0,0	0,0	0,0	0,0	0,0
Maintenance	Operator/Administrative	6,5	0,0	0,0	0,0	0,0	20,0	5,9
	Technician/Middle Management	6,5	7,0	0,0	0,0	0,0	10,0	5,9
Process engineering	Manager/ Responsible	3,2	0,0	0,0	0,0	0,0	10,0	0,0

Profile		Inland hauliers	Logistics operators / freight forwarders	Consignees	Customs agents	Terminalistas	Shipping companies	Other activities
	Operator/Administrative	3,2	2,3	5,6	0,0	0,0	0,0	0,0
	Technician/Middle Management	0,0	0,0	0,0	0,0	0,0	0,0	5,9
Environment	Manager/ Responsible	3,2	0,0	0,0	0,0	0,0	0,0	0,0
	Operator/Administrative	0,0	0,0	0,0	0,0	0,0	10,0	0,0
	Technician/Middle Management	0,0	2,3	0,0	0,0	0,0	0,0	5,9
Chemistry	Manager/ Responsible	3,2	0,0	0,0	0,0	0,0	0,0	0,0
	Technician/Middle Management	0,0	0,0	0,0	0,0	0,0	10,0	5,9
Telecommunications	Manager/ Responsible	3,2	0,0	0,0	0,0	0,0	0,0	0,0
	Operator/Administrative	0,0	0,0	0,0	0,0	0,0	10,0	0,0
	Technician/Middle Management	0,0	0,0	0,0	0,0	0,0	0,0	5,9
Data analysis	Operator/Administrative	6,5	4,7	5,6	0,0	14,3	10,0	0,0
	Technician/Middle Management	9,7	7,0	11,1	10,0	0,0	10,0	5,9
Robotics	Operator/Administrative	3,2	0,0	0,0	0,0	0,0	0,0	0,0
Help desk	Operator/Administrative	6,5	2,3	5,6	5,0	0,0	10,0	0,0
	Technician/Middle Management	0,0	0,0	0,0	0,0	14,3	0,0	0,0

Profile		Inland hauliers	Logistics operators / freight forwarders	Consignees	Customs agents	Terminalistas	Shipping companies	Other activities
Pricing policy	Operator/Administrative	3,2	0,0	0,0	0,0	0,0	0,0	0,0
	Technician/Middle Management	3,2	0,0	0,0	0,0	0,0	0,0	0,0
Driving of vehicles	Operator / Administrative	16,1	7,0	5,6	5,0	14,3	0,0	11,8
	Technician / Middle management	6,5	2,3	5,6	0,0	0,0	0,0	0,0

Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.



Please specify if there is a labour market availability of workers in the different skill areas (%)  
(multiple answer)

Administration, regulation and taxation in international trade	
Customs, administrative and documentation management in international trade flows and cargoes.	49,4
Financing operations and management of payments/collections in international trade.	45,7
New state / European regulations linked to the logistics / port sector.	27,2
Legal / fiscal framework of foreign countries.	24,7
Logistics and warehousing	
Management of warehousing and supply activities.	64,2
Knowledge of the logistics chain.	60,5
Management of operations that guarantee logistical traceability.	54,3
Management systems (ERP, CRM) linked to international trade.	45,7
New technologies	
Digital marketing and social networks.	56,8
Maintenance of networks, sensors and technological equipment.	45,7
Management of global digital platforms.	44,4
Management of predictive models and data analysis (e.g. Big Data).	39,5
Sensory technology management (e.g. 4.0).	24,7
Languages associated with international trade	
English	76,5
Other	43,2
Other areas	
Office skills (Excel, Word, etc. )	85,2
Communication	81,5
Teamwork	80,2
Business skills	72,8
Management capacity	70,4
Planning and customer orientation	69,1
Results orientation	61,7
Customs, administrative and documentation management in international trade flows and cargoes.	49,4

Companies had the option to select more than one response.

Source: On-line survey addressed to companies in the port community of Valencia.



## ANNEX 3. TRAINING OFFER

Vocational Training Centres in the Valencian Community where the higher degree in international trade is taught.

Code	Centre	Regime	Location	Province
46000754	CIPFP LUIS SUÑER SANCHIS	Public	Alzira	Valencia
46015587	TIRANT LO BLANC SECONDARY SCHOOL	Public	Gandia	Valencia
46004966	CENTRE PRIVAT LA MALVESIA	Private.	Llombai	Valencia
46017535	PERE BOÏL SECONDARY SCHOOL	Public	Manises	Valencia
46019660	CIPFP MISLATA	Public	Mislata	Valencia
46006100	IES L'ESTACIÓ SECONDARY SCHOOL	Public.	Ontinyent	Valencia
46037066	CENTRE PRIVAT FP CAMPUS CÁMARA FP	Private	Paterna	Valencia
46025878	CENTRE PRIVAT FP INFORLINGUA CENTER, SL.	Private	Picassent	Valencia
46008649	CENTRE PRIVAT MADRE SACRAMENTO	Private	Torrent	Valencia
46025799	CENTRE ESPECÍFIC D'EDUCACIÓ A DISTÀNCIA CEED	Public.	Valencia	Valencia
46032883	CENTRE PRIVAT FP CAPITOL	Private	Valencia	Valencia
46012896	CENTRE PRIVAT FP ESCUELA PROFESIONAL XAVIER	Private	Valencia	Valencia
46034740	CENTRE PRIVAT FP EUROPEO DE VALENCIA	Private	Valencia	Valencia
46034651	CENTRE PRIVAT FP IBE	Private	Valencia	Valencia
46012884	CENTRE PRIVAT FP PAX	Private	Valencia	Valencia
46012070	CENTRE PRIVAT SAN ROQUE	Private	Valencia	Valencia
46021711	CIPFP AUSIÀS MARCH	Public	Valencia	Valencia
46025040	ABASTOS HIGH SCHOOL	Public	Valencia	Valencia
46022257	CONSELLERIA SECONDARY SCHOOL	Public	Valencia	Valencia
46015290	EL GRAO SECONDARY SCHOOL	Public	Valencia	Valencia
03013819	IES DOCTOR BALMIS	Public	Alicante	Alicante
03000400	IES COTES BAIXES	Public	Alcoy	Alicante
03014812	CIPFP VALLE DE ELDA	Public	Elda	Alicante

Code	Centre	Regime	Location	Province
03013881	VICTORIA KENT HIGH SCHOOL	Public	Elche	Alicante
03011070	IES LAS ESPENETAS	Public	Orihuela	Alicante
03014599	IES LAS FUENTES	Public	Villena	Alicante
12004394	IES SERRA D'IRTA	Public	Alcalà de xivert	Castellón
12000704	IES JAUME I	Public	Borriana	Castellón
12001101	CENTRE PRIVAT IZQUIERDO-SOROLLA	Private	Castellón de la plana	Castellón
12004217	EL CAMINÀS SECONDARY SCHOOL	Public	Castellón de la plana	Castellón
12005593	IES SERRA D'ESPADÀ	Public	Wave	Castellón

Source: <http://ceice.gva.es/es/web/centros-docentes/listados-fp?ciclo=09020449064>

### Vocational Training Centres in the Valencian Community where the higher degree in transport and logistics is taught.

Code	Centre	Regime	Location	Province
46023225	CLARA CAMPOAMOR SECONDARY SCHOOL	Public	Alaquàs	Valencia
46000754	CIPFP LUIS SUÑER SANCHIS	Public	Alzira	Valencia
46017535	PERE BOÏL SECONDARY SCHOOL	Public	Manises	Valencia
46037066	CENTRE PRIVAT FP CAMPUS CÁMARA FP	Private	Paterna	Valencia
46007554	IES JORGE JUAN	Public	The Port of Sagunto	Valencia
46008649	CENTRE PRIVAT MADRE SACRAMENTO	Private	Torrent	Valencia
46032883	CENTRE PRIVAT FP CAPITOL	Private	Valencia	Valencia
46034651	CENTRE PRIVAT FP IBE	Private	Valencia	Valencia
46025040	ABASTOS HIGH SCHOOL	Public	Valencia	Valencia
03014812	CIPFP VALLE DE ELDA	Public	Elda	Alicante
03013881	VICTORIA KENT HIGH SCHOOL	Public	Elche	Alicante
03014599	IES LAS FUENTES	Public	Villena	Alicante
12004217	EL CAMINÀS SECONDARY SCHOOL	Public	Castellón de la Plana	Castellón

Source: <http://ceice.gva.es/es/web/centros-docentes/listados-fp?ciclo=09020898104>

# ANNEX 4. DELPHI QUESTIONNAIRE AND RESULTS

## DELPHI QUESTIONNAIRE.

The purpose of this questionnaire is to **compare the results of the company survey and to prioritise the most in-demand profiles and the new skills required** as a result of the study of the Valencia port community. Please specify with an **X** the answer with which you are most satisfied. The information you provide will be treated confidentially and anonymously in accordance with current legislation.

We estimate that the questionnaire can be completed in **about 15 minutes**.

Thank you very much for your availability and cooperation.

### a. Commercial agents.

#### a.1. Level of demand.

Level of demand				
1				5
		X (3,4)		

1 being a low priority and 5 a high priority.

#### a.2. New skills required.

New skills required					
		1			5
1	New digital channels with customers.				X (4)
	Digital marketing and social media				X (4)
	Use of specialised commercial management software (e.g. CRM).				X (4)
	New online market information systems (MIS)				X (3,43)



5 Other areas (please specify)

## b. Consignees.

### b.1. Level of demand.

Level of demand				
1				5
		X (3,29)		

1 being a low priority and 5 a high priority.

### b.2. New skills required.

New skills required						
		1				5
1	Streamlining of commercial transactions.			X (3,29)		
	Drastic reduction of errors.			X (3,43)		
	New digital channels with customers.			X (3,86)		
	Use of specialised commercial management software (e.g. CRM).			X (3,43)		
5	Specialisation in differential areas of the shipping activity.			X (3,43)		
	Other areas (please specify)					

## c. Freight forwarders.

### c.1. Level of demand.

Level of demand				
1				5
		X (3)		

1 being a low priority and 5 a high priority.

### c.2. New skills required.

New skills required

		1				5
1	Streamlining of commercial transactions.			X (3,29)		
	Drastic reduction of errors.			X (3,43)		
	New digital channels with customers.			X (3,86)		
	Use of specialised commercial management software (e.g. CRM).			X (3,71)		
5	Specialisation in differential areas of the freight forwarding business.			X (3,57)		
	TaricTrans programme.			X (3,4)		
	Other areas (please specify)					

## d. Transport logistics agents.

### d.1. Level of demand.

Level of demand				
1				5
		X (3,86)		

1 being a low priority and 5 a high priority.

### d.2. New skills required.

New skills required					
		1			5
1	Management systems (ERP, CRM) linked to international trade.			X (3,71)	
	Use of specialised in-house software.			X (3,43)	
	GPS tracker technologies.			X (3,71)	
	Technologies 4.0 (sensory).			X (3,57)	
5	Predictive models and data analysis (Big Data).			X (3,14)	
	Blockchain technology.			X (3,14)	
	Other areas (please specify)				

## e. Administrative employees of transport services.

### e.1. Level of demand.

Level of demand				
1				5
		X (3,57)		

1 being a low priority and 5 a high priority.

### e.2. New skills required.

New skills required					
		1			5
1	Use of specialised in-house software.			X (4,14)	
	Foreign languages			X (4,43)	
	Other areas (please specify)				

## f. Foreign trade technicians.

### f.1. Level of demand.

Level of demand				
1				5
		X (3,86)		

1 being a low priority and 5 a high priority.

### f.2. New skills required.

New skills required					
		1			5
1	Foreign trade operations management systems.			X (4,14)	
	New online market information systems (MIS)			X (4,0)	
	Use of specialised in-house software.			X (4,0)	
	Other areas (please specify)				

## g. Technicians in stock management and/or warehousing.

### g.1. Level of demand.

Level of demand				
1				5
		X (3,86)		

1 being a low priority and 5 a high priority.

### g.2. New skills required.

New skills required					
		1			5
1	Operation of machinery / robotics for the distribution and storage of products.			X (3,43)	
	Handling of 4.0 technology that, by means of specialised devices, allows the tracking and tracing of goods in the warehouse.			X (4,14)	
	Handling of hardware/software linked to Big Data and Artificial Intelligence to enable two challenges: 1/ Preventive maintenance of automotive machinery and systems. 2/ The efficient distribution of products or material in the warehouse.			X (3,86)	
	Use of specialised in-house software.			X (3,86)	
5	Other areas (please specify)				

**THANK YOU VERY MUCH FOR YOUR COOPERATION**

## ANNEX 5. CHRONOGRAM OF PHASES AND FIELD WORK CARRIED OUT

	Months															
	JANUARY		FEBRUARY				MARCH				APRIL		MAY			
	Weeks															
			1				1				1				1	
Phase 1. Start-up of the study.																
Elaboration of a work plan																
Interview script																
Phase 2. Characterisation of Valenciaport's port activity and analysis of trends.																
Documentary analysis																
Conducting interviews																
Cabinet work																
Phase 3. Analysis of demand, analysis of the professional profile needs of the companies that make up the cluster.																
Documentary analysis																
Questionnaire design																
Online survey																
Exploitation of results																
Cabinet work																
Phase 4. Characterisation of the professional profiles demanded by companies.																
Documentary analysis																
Conducting interviews																
Cabinet work																
Phase 5. Analysis of the offer of linked VET degrees.																
Documentary analysis																
Conducting interviews																
Cabinet work																
Infographics																
Phase 6. Drawing up conclusions and recommendations																
Contrast table																
Cabinet work																

The participants in the interviews are listed below.

**Expert interviews (Phase 2)**

Jesús Sagredo. MCC. 26/01

Pedro Coca Castaño. Propeller Club Valencia. 28/01

Juan Manuel Díez Oreja. Port Authority of Valencia. 29/1

Oscar Blasco. Romeugroup. 2/02

Carlos Prades. Transportes Torre. 3/02

**Interviews linked to Phases 5 and 6.**

**- Vocational Training Centres:**

IES Pere Boil 15/4

IES Abastos 15/4

IES Almusafes 13/4

IES Ausias 15/4

IES Alzira. 16/4

**- Companies:**

ROMEUGROUP. 6/4

RAVELLO 14/4

MSC. 15/4

CHEMA BALLESTER 19/4

SVEN. 19/4



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