



COLECCIÓN CONOCIMIENTO CONTEMPORÁNEO

# El papel de la economía, la empresa y el derecho ante los nuevos entornos globales

Coords.

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EL PAPEL DE LA ECONOMÍA, LA EMPRESA Y EL DERECHO  
ANTE LOS NUEVOS ENTORNOS GLOBALES



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## BUILDING A FUTURE READY MARITIME WORKFORCE: CHALLENGES AND SOLUTIONS IN EUROPEAN TALENT RETENTION

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### 1. INTRODUCCIÓN

This chapter presents the findings of research conducted as part of the LeaderSHIP project, an initiative within the Erasmus+ Program (Alliances for Sectoral Cooperation on Skills). The project aims to upskill and reskill 200,000 workers while attracting 230,000 new talents to strengthen the competitiveness of the European shipbuilding and maritime technology sectors.

The LeaderSHIP project addresses the critical needs of these industries, which are pivotal to the EU's Smart and Sustainable Mobility Strategy, with maritime transport accounting for 80% of freight movement within and around the EU. Its objectives include the development of a sectoral skills strategy spanning 16 EU countries, updating and creating curricula for traditional and emerging roles with an emphasis on digitalization and green skills. The project also integrates innovative learning tools, work-based learning, and pilot training pro-grams while fostering knowledge transfer and formal recognition of qualifications to meet urgent skill demands. Participating countries include Finland, Norway, Belgium, Denmark, Italy, Romania, and Spain.

In striving to maintain Europe's leadership in smart, autonomous, and environmentally friendly shipping technologies, the project supports over 1 million jobs across 300 shipyards, alongside 22,000 suppliers who contribute to the sector's technological and operational advancements. By connecting educational institutions with industry leaders, the LeaderSHIP project is shaping the future of maritime transport, ensuring the workforce is prepared to meet the demands of a rapidly evolving, sustainable, and innovative industry.

### 1.1. THE STRATEGIC IMPORTANCE OF THE EUROPEAN MARITIME INDUSTRY

The European maritime industry plays an important role in the continent's economy, contributing significantly to trade, employment, and technological innovation. As globalization continues to shape economic landscapes, the maritime sector's strategic importance becomes increasingly evident, necessitating a comprehensive understanding of its dynamics and challenges.

One of the primary factors underscoring the significance of the European maritime industry is its contribution to international trade. The maritime sector facilitates approximately 90% of the EU's external trade by volume, making it an essential component of the European economy (Lizarazo-Orozco, 2023). The strategic location of European ports enhances their role as key nodes in global supply chains, allowing for efficient transportation of goods across continents. This connectivity not only supports economic growth but also strengthens the EU's position in the global market.

Moreover, the maritime industry is a significant source of employment within Europe. It encompasses a wide range of activities, including shipping, shipbuilding, and maritime services, which collectively provide millions of jobs. The sector's ability to generate employment opportunities is particularly vital in coastal regions, where economic diversification is often limited. As noted by Lizarazo-Orozco, the shipbuilding industry, for instance, is under pressure to innovate and remain competitive in a fluctuating global market, highlighting the need for strategic investments in research and development (Lizarazo-Orozco, 2023).

In addition to its economic contributions, the maritime industry is also at the forefront of technological innovation. The integration of advanced technologies, such as automation and digitalization, is transforming maritime operations, enhancing efficiency and sustainability. Gaibor emphasizes the importance of innovation management in driving economic transformation within emerging industries, including maritime sectors (Gaibor, 2023). The adoption of green technologies and practices is crucial for reducing the environmental impact of maritime activities, aligning with the EU's broader sustainability goals.

Furthermore, the maritime industry plays a pivotal role in fostering international collaboration and partnerships. The EU has established various initiatives aimed at enhancing cooperation among member states and promoting the sharing of best practices in maritime governance. Such collaborations are essential for addressing common challenges, such as maritime security, environmental protection, and the management of marine resources. The strategic importance of these partnerships is underscored by the need for a unified approach to tackle issues that transcend national boundaries.

The European maritime industry also faces several challenges that must be addressed to maintain its strategic relevance. These include regulatory pressures, competition from non-European markets, and the need for workforce development to meet the demands of a rapidly changing industry. As highlighted by Ortiz-Echagüe and Rodríguez, the evolution of industries requires a focus on innovation and adaptability to navigate the complexities of the global economy (Ortiz-Echagüe & Rodríguez, 2022).

In conclusion, the European maritime industry is of strategic importance due to its contributions to trade, employment, technological innovation, and international collaboration. As industry continues to evolve, it is imperative for stakeholders to invest in research, foster innovation, and strengthen partnerships to ensure its sustainability and competitiveness in the global market. By addressing the challenges it faces, the maritime sector can continue to play a vital role in shaping the economic landscape of Europe.

## 1.2. THE ECONOMIC ROLE OF THE MARITIME SECTOR IN EUROPE

The maritime sector is a cornerstone of the European economy, encompassing a wide range of activities, including shipbuilding, port operations, and logistics. This sector not only facilitates international trade but also plays a significant role in employment generation and technological innovation. Understanding the economic contributions of the maritime industry is essential for recognizing its strategic importance within the European context.

### Contribution to the European Economy

1. **Shipbuilding:** The shipbuilding industry in Europe is one of the largest in the world, with significant contributions to both the economy and employment. According to the European Commission, the shipbuilding sector generates approximately €30 billion annually and employs around 300,000 people directly across the EU Aguilar (2023). The industry is characterized by high-value production, focusing on advanced technologies and specialized vessels, which enhances its competitiveness on a global scale.
2. **Port Operations:** European ports are vital hubs for trade, handling over 3 billion tons of cargo annually. They serve as gateways for imports and exports, facilitating approximately 90% of the EU's external trade by volume (Fageda & Teixidó, 2022). The efficiency of port operations directly impacts the competitiveness of European goods in global markets. Ports also contribute to local economies by generating jobs and supporting related industries, such as logistics and transportation.
3. **Logistics:** The logistics sector, which encompasses the planning, implementation, and control of the movement of goods, is heavily reliant on maritime transport. The integration of logistics and maritime operations enhances supply chain efficiency and reduces costs. The European logistics market is estimated to be worth over €1 trillion, with maritime transport accounting for a significant share of this value (Sangucho-Barros, 2023). The sector's growth is driven by increasing demand for efficient and sustainable transport solutions.

## Direct and Indirect Impact on Employment

The maritime sector has a substantial direct and indirect impact on employment in Europe. Directly, it provides hundreds of thousands of jobs in shipbuilding, port operations, and logistics. For instance, the European Maritime Safety Agency (EMSA) reports that the sector supports around 2 million jobs across various maritime-related activities (Cabrer-Borrás & Belda, 2021).

Indirectly, the maritime industry stimulates employment in related sectors, including manufacturing, tourism, and services. The multiplier effect of maritime activities means that for every job created in the maritime sector, additional jobs are generated in the wider economy. Research indicates that the maritime industry can create up to three additional jobs in the economy for every direct job it provides (Suárez, 2024). This highlights the sector's role as a significant driver of economic growth and employment across Europe.

In conclusion, the maritime sector is a vital component of the European economy, contributing significantly to trade, employment, and technological advancement. The shipbuilding industry, port operations, and logistics are interconnected elements that enhance the competitiveness of the EU in the global market. As Europe continues to navigate economic challenges, the maritime sector's strategic importance will remain paramount, necessitating ongoing investment and innovation to sustain its growth and impact.

### 1.3. EMERGING CHALLENGES: TECHNOLOGICAL TRANSFORMATION IN THE MARITIME SECTOR

The maritime sector is undergoing significant transformation driven by automation, digitalization, and the adoption of green technologies. These changes are reshaping operational practices, enhancing efficiency, and addressing environmental concerns, but they also necessitate new skills and redefine traditional careers within the industry.

#### Impact of Automation and Digitalization

1. **Automation:** The integration of automation technologies in the maritime sector is revolutionizing operations. Automated systems, such as autonomous ships and robotic processes in ports, are enhancing efficiency and safety while reducing operational costs. For instance, the deployment of maritime autonomous surface ships (MASS) is expected to streamline shipping processes, allowing for more precise navigation and reduced human error Alop (2024). However, this shift towards automation raises concerns about job displacement, particularly for roles that involve routine tasks, which are more susceptible to automation (Kim et al., 2019).
2. **Digitalization:** The maritime industry is increasingly leveraging digital technologies to improve operational efficiency and transparency. Technologies such as blockchain are being explored to enhance supply chain management and inter-port communication, providing real-time data and reducing paperwork (Serra et al., 2022). Digital platforms are also transforming customer interactions, necessitating a shift in business models and customer service strategies (Loh, 2024). The COVID-19 pandemic has accelerated the adoption of digital solutions, highlighting the need for maritime companies to embrace digital transformation to remain competitive (Gavalas et al., 2022).
3. **Green Technologies:** The maritime sector is under pressure to adopt environmentally friendly practices in response to climate change. The implementation of green technologies, such as low-emission propulsion systems and energy-efficient power supply systems, is essential for reducing the industry's carbon footprint (Wagner & Wiśnicki, 2022). Digital transformation plays a crucial role in this transition, enabling companies to monitor and optimize their environmental performance (Lerman et al., 2022). The emphasis on sustainability aligns with global initiatives, such as the United Nations Agenda 2030, which aims to promote sustainable development across industries (Wagner & Wiśnicki, 2022).

New Skills and Redefined Careers

The technological advancements in the maritime sector require a workforce equipped with new skills and competencies. As traditional roles evolve, there is a growing demand for professionals who can navigate the complexities of automation and digital technologies. Key areas of focus include:

1. **Technical Skills:** Workers in the maritime industry must develop technical skills related to operating and maintaining automated systems, as well as proficiency in digital tools and data analytics. Training programs that emphasize these skills are essential to prepare the workforce for the future (Popoola, 2024).
2. **Adaptability and Continuous Learning:** The rapid pace of technological change necessitates a culture of adaptability and continuous learning. Professionals must be willing to upskill and reskill to keep pace with emerging technologies and industry trends (Sima et al., 2020). This shift may lead to the emergence of new job roles that focus on managing and optimizing automated systems and digital platforms.
3. **Interdisciplinary Knowledge:** The integration of various technologies in the maritime sector requires professionals to possess interdisciplinary knowledge that spans engineering, information technology, and environmental science. This holistic understanding will enable workers to contribute effectively to the industry's transformation (Wang et al., 2020).

The maritime sector is at a pivotal moment, facing emerging challenges and opportunities driven by automation, digitalization, and green technologies. While these advancements promise to enhance operational efficiency and sustainability, they also require a workforce equipped with new skills and a willingness to adapt to changing job roles. As industry continues to evolve, stakeholders must prioritize training and development initiatives to ensure that the maritime workforce is prepared for the future.

#### 1.4. EMERGING CHALLENGES: DEMOGRAPHIC CHALLENGES AND SECTOR PERCEPTION IN THE MARITIME INDUSTRY

The maritime industry is currently facing significant demographic challenges, particularly an aging workforce and a shortage of young talent. These issues are compounded by the sector's perception as outdated and physically demanding, which affects its attractiveness to younger generations. Understanding these dynamics is crucial for developing strategies to attract and retain talent in this vital industry.

##### Aging Workforce and Shortage of Young Talent

1. **Aging Workforce:** The maritime sector is experiencing a demographic shift, with a significant portion of its workforce nearing retirement age. According to a report by the International Maritime Organization (IMO), approximately 40% of the global maritime workforce is over the age of 50 Tham & Holland (2018). This trend poses a risk of a skills gap as experienced professionals exit the industry without sufficient younger replacements. The aging workforce not only threatens operational continuity but also impacts the transfer of knowledge and skills essential for maintaining industry standards.
2. **Shortage of Young Talent:** Concurrently, there is a notable shortage of young talent entering the maritime sector. Factors contributing to this trend include the perception of the industry as outdated and physically demanding, which discourages younger individuals from pursuing careers in maritime fields. Research indicates that many young people are unaware of the diverse career opportunities available within the maritime industry, leading to a lack of interest in maritime education and training programs (Lau et al., 2021). The demand for skilled maritime professionals is increasing, particularly in logistics and supply chain management, yet the industry struggles to attract new entrants (Caesar, 2023).

## Perception of the Sector

The maritime sector's image as an outdated and physically demanding field significantly impacts its ability to attract younger generations. This perception is shaped by several factors:

1. **Outdated Image:** Many young individuals view the maritime industry as traditional and lacking innovation. This perception is exacerbated by the slow adoption of new technologies and practices in some areas of the sector. As noted by Lau et al., the maritime industry is often seen as resistant to change, which can deter potential recruits who are looking for dynamic and forward-thinking career paths (Lau et al., 2021).
2. **Physical Demands:** The physical demands associated with many maritime jobs, particularly those at sea, can be off-putting for younger generations who may prioritize work-life balance and job flexibility. The perception that maritime careers require long hours in challenging environments can lead to reluctance among young people to consider these roles (Febrian, 2023).
3. **Lack of Awareness:** There is a general lack of awareness about the diverse career opportunities within the maritime sector, including roles in management, technology, and environmental sustainability. As highlighted by Bartusevičienė, educational institutions need to adapt their curricula to better align with the interests and values of Generation Z students, emphasizing the innovative and sustainable aspects of maritime careers (Bartusevičienė, 2023).

The maritime industry faces significant demographic challenges, including an aging workforce and a shortage of young talent, exacerbated by its perception as outdated and physically demanding. To address these challenges, stakeholders must work collaboratively to improve the industry's image, promote the diverse career opportunities available, and invest in educational initiatives that align with the interests of younger generations. By fostering a more attractive and modern image of the maritime sector, it is possible to engage and retain the talent necessary for its continued growth and sustainability.

## 2. OBJECTIVE

This study aims to identify the main factors hindering talent attraction and retention in the European maritime sector and to propose solutions that align with the evolving needs of the industry. Our approach is based on the analysis of workforce trends and the impact of technological, demographic, and educational shifts on the labor market.

## 3. METHODOLOGY

### 3.1. PROCEDURE

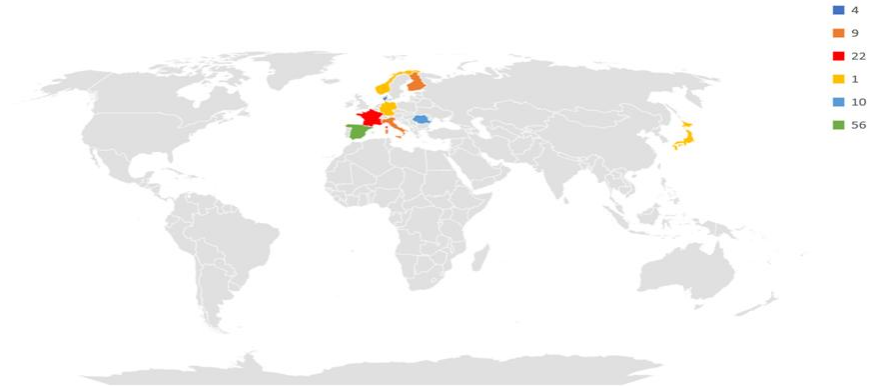
To address these challenges, we conducted a comprehensive survey across key European maritime regions, using the Qualtrics research survey platform, which comprised the following distribution:

- General information (11 questions)
- Issues with in-house expertise (12 questions)
- Education (2 questions)
- Training and recruiting (17 questions)
- Urgent skills (17 questions)
- Emergent skills (5 questions)

The questionnaire was distributed simultaneously across all countries between March and April 2024. The project participants shared a link for participation with shipping companies, maritime forums, or directly with relevant companies in the sector. The design of the questionnaire was carried out by a mixed group of companies and universities and was subsequently validated through various tests.

The questionnaire analysis initially produced 163 valid responses, which were filtered to retain 112 responses with over 60% completeness. This refined dataset provides a solid foundation for analyzing current and future skill requirements in the European shipbuilding industry. This data set provides a robust foundation for analyzing current and future skill requirements in the European shipbuilding sector, including challenges and solutions in talent attraction.

**FIGURE 1.** *Geographical distribution of respondents*



The geographical distribution of respondents, as shown in Figure 1, demonstrates broad participation across Europe, enabling the identification of regional trends and variations in skill needs. This diversity enhances the relevance of the findings by reflecting the industry's requirements across multiple regions. The geographical mapping also underscores the collaborative nature of the project, involving stakeholders from various European countries, which enriches the dataset's comprehensiveness and applicability.

While key shipbuilding nations are represented, the absence of German partners in the project led to an underrepresentation of this country. Conversely, northern Europe is well represented by participants from Finland, Denmark, and Norway, ensuring insights into this strategically important region. This regional analysis is vital for tailoring training programs to address specific local needs, enhancing their effectiveness and impact across the European shipbuilding industry.

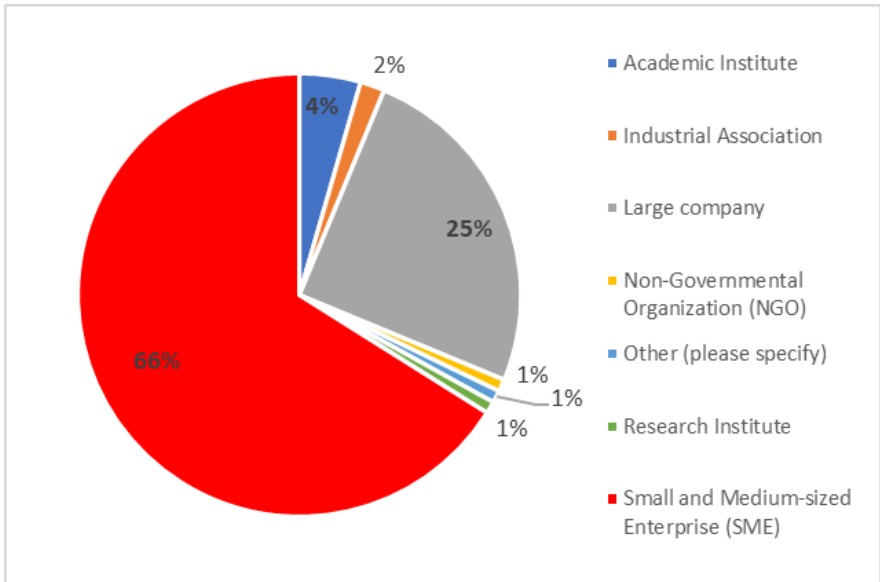
### 3.2. PARTICIPANTS

The participants consist of one person from each company, holding a position that allows them to have an overall perspective. This enables them to answer all the questions posed in the questionnaire. The HR department of the companies is well-positioned to address all the

questions. In any case, and to preserve the confidentiality of the respondents, questions that could lead to their identification have been avoided.

The data shows that a significant portion of the responses, approximately 66%, comes from small and medium-sized enterprises (SMEs). When contributions from large companies are included, the combined sample accounts for nearly 90% of all responses.

**FIGURE 2.** *Company base distribution*

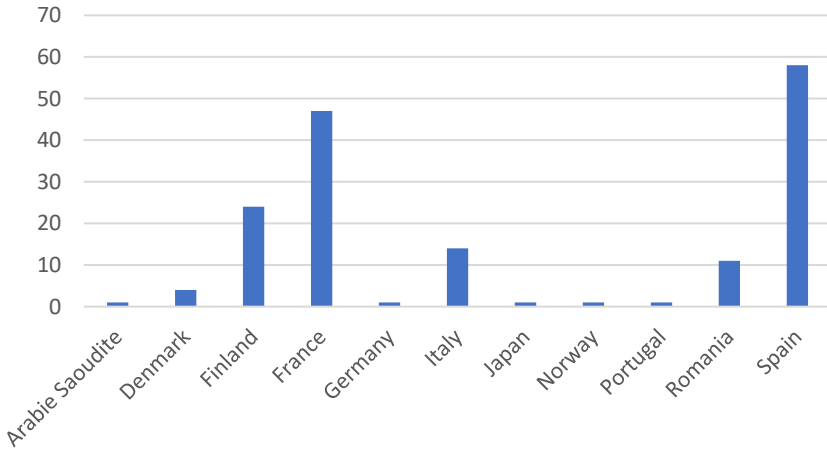


The companies participating in the study (see Figure 2) belong to Academic Institutes, Industrial Associations, Large companies, Non-Governmental Organizations, Research Institutes, or Small and Medium-sized Enterprises (SME), among others.

A total of 163 professionals responded to the questionnaire (see Figure 3), constituting the study sample. Although there was no equitable participation among the participating countries, the number of responses obtained has allowed us to conduct research and provide scientific

evidence for decision-making and policies related to the maritime industry, successfully achieving this part of the project milestone.

**FIGURE 3.** *Number of responses by participating countries*



#### 4. RESULTS

Our findings reveal several than the 81% of the participants acknowledge having difficulties finding the talented candidates they need. In general terms, the results highlight the following reasons:

- Competition for Talent (50.97%): The increasing demand for skilled professionals intensifies competition among employers. Companies face significant challenges in attracting and retaining top talent without offering competitive compensation, attractive benefits, and a positive work environment.
- Mismatch Between Educational System and Labor Market (18.71%): There is often a gap between the skills taught in educational institutions and those demanded by industries. Current curricula may not adequately prepare candidates for essential 21st-century skills, such as critical thinking, problem-solving, and communication, exacerbating the skills gap.

- Rapid Technological Advancements (12.90%): The swift pace of technological change creates a mismatch between available and required skills. Emerging technologies, such as artificial intelligence, cloud computing, and cybersecurity, require specialized skills that may be in short supply.
- Geographical Distribution of Talent (12.26%): Regional imbalances in talent availability create further challenges. While certain areas excel in STEM fields, others face a shortage of such specialized skills, making complicating efforts to acquire and relocate talent where needed.
- Lack of Awareness or Understanding (5.16%): A small percentage of participants were unsure about the specific barriers to talent acquisition.

Regarding the difficulties in finding talent with the profiles and skills they need, the results indicate the key obstacles organizations face in acquiring suitable candidates, as detailed below: The analysis identifies

- Lack of Specific Technical Expertise (23.33%): Finding candidates with the precise technical expertise required for specialized roles remains a major challenge for organizations.
- Difficulty in Finding Industry-Specific Knowledge (26.67%): Recruitment efforts are hindered by the scarcity of individuals with deep, industry-specific knowledge, particularly in nuanced areas critical to operational success.
- Difficulty in Finding Profiles with the Desired Experience Level (17.78%): Securing candidates who meet the required experience level is a persistent obstacle, further complicating the recruitment process.
- Difficulty in Finding Profiles with the Desired Technical-Specific and Soft Skills Blend (15.56%): Organizations often struggle to identify candidates who combine technical acumen with essential soft skills, both of which are integral to meeting organizational needs.

- Difficulty in Finding Profiles with the Desired Certifications or Qualifications (11.11%): A lack of candidates possessing the necessary certifications or qualifications creates significant gaps in the available talent pool.
- Lack of Awareness or Uncertainty (5.56%): A small proportion of respondents were unsure of the exact barriers affecting recruitment efforts.

In terms of difficulties in retaining talent, 53.97% consider that they do not have any, while 46.03% do have difficulties in retaining talent.

The analysis highlights key factors contributing to employee attrition, as outlined below:

- External Opportunities (33.08%): Employees often leave due to more attractive external opportunities that provide better benefits, career growth, or work conditions.
- Lack of Career Development (18.46%): Limited growth opportunities and insufficient career advancement paths within organizations drive talent to seek better prospects elsewhere.
- Compensation and Benefits (14.62%): Inadequate salary, benefits, or rewards compared to industry standards or competitors remain significant reasons for talent attrition.
- Poor Work-Life Balance (7.69%). Organizations demanding excessive work hours or fostering toxic environments struggle to retain employees seeking a healthier work-life balance.
- Limited Engagement and Development (7.69%): Employees feeling disconnected or lacking meaningful engagement in their roles often look for opportunities elsewhere.
- Workload and Stress (6.92%): High workloads, stress, or unrealistic expectations lead to burnout, prompting employees to leave the organization.
- Lack of Recognition or Appreciation (3.85%): Employees feeling undervalued due to a lack of acknowledgment for their

efforts may seek workplaces where their contributions are appreciated.

- Leadership and Management Issues (3.85%): Poor leadership, ineffective management, or lack of supervisor support contributes to employee dissatisfaction.
- Inadequate Communication (0.77%): Lack of transparency and clear communication channels can lead to uncertainty and frustration among employees.
- Lack of Awareness (3.08%): A small percentage of respondents were unsure of the specific reasons for talent attrition.

## 5. DISCUSSION

The results of this study highlight systemic challenges in attracting and retaining talent within the maritime industry. The difficulties in talent acquisition can be interpreted as the result of structural and contextual factors that affect the alignment between workforce supply and demand. The high levels of competition for skilled candidates reflect the broader reality of a globalized labor market, where multiple sectors compete for the same talent pool. This pressure is particularly pronounced in emerging areas requiring specialized skills, such as digitalization and green technologies, which are not yet widely available across all regions or adequately addressed by current educational systems.

The mismatch between educational curricula and industry requirements further exacerbates these challenges. While educational institutions focus on foundational knowledge, the industry demands candidates equipped with critical 21st-century skills, such as problem-solving, technical proficiency, and adaptability. This gap may be particularly significant in regions where academic systems have been slower to modernize or collaborate with industries to anticipate skill demands. Moreover, the rapid pace of technological change creates a moving target for workforce preparation, with roles requiring new capabilities—such as artificial intelligence or cybersecurity expertise—that education and training programs are struggling to deliver effectively.

Geographical imbalances in talent availability add another layer of complexity. Regions with robust STEM pipelines are better positioned to meet industry needs, whereas others experience shortages, forcing companies to seek relocation strategies or international recruitment efforts. However, mobility constraints, coupled with varying levels of economic development and training infrastructure, make this solution less accessible, especially for small and medium-sized enterprises (SMEs). This imbalance underscores the need for region-specific interventions and targeted workforce strategies to bridge the disparities.

The findings also shed light on recruitment obstacles at a more granular level, particularly the difficulty in identifying candidates with industry specific knowledge, desired levels of experience, or the right combination of technical and soft skills. This highlights a broader challenge: the maritime sector not only requires deep technical expertise but also professionals capable of navigating complex, multidisciplinary environments. SMEs, which form the backbone of the industry, may struggle more in this regard, as they often lack the resources or visibility to compete with larger companies for top talent.

In terms of talent retention, while 46% of respondents reported challenges, the underlying reasons point to broader organizational and cultural issues. External opportunities emerge as the primary driver of attrition, indicating that employees are drawn to sectors offering better compensation, career growth, and work conditions. This trend reflects the maritime industry's struggle to position itself as an attractive and competitive career choice, particularly among younger generations who prioritize flexibility, recognition, and work-life balance. Limited opportunities for career development within organizations further compound this challenge, as employees seek professional growth elsewhere when internal pathways are unclear or unavailable.

Work-life balance, stress, and workload pressures are also significant contributors to employee dissatisfaction, reflecting the demanding nature of the maritime industry. These conditions may stem from longstanding operational cultures and business models that have not yet adapted to changing employee expectations and global trends. Similarly, issues such as lack of recognition, ineffective leadership, and

inadequate communication signal organizational shortcomings that erode employee engagement and morale.

In summary, the challenges identified in this study highlight both systemic and internal factors affecting talent attraction and retention. The maritime industry's success in addressing these issues will depend on a coordinated approach involving educational reforms, skills development initiatives, and organizational changes. Enhancing collaboration between industry, academia, and policymakers is essential to align training with emerging needs, particularly in digital and green technologies. Companies must also prioritize career development, employee well-being, and leadership practices to foster an environment where talent is nurtured and retained. By addressing these challenges, the sector can position itself as an innovative, resilient, and attractive industry capable of meeting future demands.

## 6. CONCLUSIONS

The European maritime industry must tackle the challenges of workforce attraction and retention head-on by promoting the sector's technological advancements, enhancing educational alignment, and supporting SMEs in training efforts. A cohesive strategy focused on modernizing perceptions and offering tangible career development opportunities will be essential for securing the industry's future competitiveness.

This study provides a comprehensive understanding of the challenges the maritime industry faces in attracting and retaining talent, revealing both structural and organizational factors that require immediate attention.

The difficulties in talent acquisition are primarily driven by competition for skilled professionals, mismatches between education and industry needs, and the rapid pace of technological advancements. The findings underscore the need for greater collaboration between industry and educational institutions to align training programs with emerging skill requirements, particularly in digitalization, green technologies, and other specialized fields. Additionally, geographical imbalances in talent availability highlight the importance of region specific interventions to address disparities and improve access to skilled professionals across all areas.

At a more granular level, organizations struggle to identify candidates with industry-specific knowledge, the desired levels of experience, and the right combination of technical and soft skills. Small and medium-sized enterprises (SMEs) face additional challenges, often lacking the visibility and resources to compete with larger companies for top talent. Addressing these recruitment barriers will require targeted workforce strategies and investments in upskilling and reskilling programs.

In terms of retention, external opportunities and limited career development emerged as the primary drivers of talent attrition. The maritime sector must focus on offering clearer pathways for professional growth, competitive compensation, and improved working conditions to remain attractive in a competitive labor market. Furthermore, addressing work-life balance, stress, and employee recognition will be critical in fostering a positive work environment that promotes long term engagement and satisfaction.

In conclusion, overcoming these challenges requires a multi-faceted approach. The maritime industry must invest in developing ready-made skills, foster closer partnerships with educational institutions, and implement organizational changes that prioritize employee wellbeing and career growth. By doing so, the industry can bridge existing skill gaps, attract new talent, and retain experienced professionals, ensuring its competitiveness and resilience in an evolving global landscape.

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