



## USWE Project

# Recommendations for Stakeholders and Policymakers Report



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## Executive Summary

The USWE project (Upskilling the Shipbuilding Workforce for Europe) aimed to **detect the skills gaps and future needs in the shipbuilding and maritime technology sector** and was undertaken at the request of the **European Sectoral Social Dialogue Committee for the Shipbuilding Sector**.

By conducting research, undertaking surveys, holding workshops and validating results with expert groups, the project was able to produce an updated **list of occupations and their corresponding skills**.

Skills are crucial in ensuring the future competitiveness of the European maritime technology sector. As such, the project outlines concrete recommendations for several types of stakeholders: **policy makers at regional, national and European level, employers and workers in the sector, regional associations and VET providers**.

### Key recommendations:

1. The European sectoral social partners should lead an **EU Pact for Skills** to continue this critical work and follow up on the project recommendations.
2. All stakeholders must identify skills as a critical issue and should **increase cooperation** on this issue at regional, national and European level.
3. Regional stakeholders should be supported in developing and/or reinforcing their **regional skills management systems**.
4. **Workers** should be supported via up/re-skilling and should be given the tools to enable them to manage their career development.
5. A **Skills Analytics Framework** should be established at European level to link strategies, actions and results through regular monitoring.
6. An **observatory** should be established at European level, with the involvement of European social partners, to have clear oversight in order to manage the skills analytics framework.
7. **Digital tools** should be utilised in order to enable skills management, aid the design of training and increase the provision of training.
8. All **curricula must be regularly updated** in order to ensure that training is up to speed with the technical transformations in the industry.
9. **Training providers** should be supported in increasing their coordination at regional, national and European level in order to collaborate on skills transfer and curricula updates.
10. A **positive image campaign** is needed in order to improve the image and attractiveness of the sector.
11. The **mobility of workers** should be supported via the establishment of mutual recognition of certificates at EU level.

**The European shipbuilding and maritime technology sector must lead in high-tech and high-value vessels and equipment to stay competitive on the global market. Workers must have the right skills, whether green, digital, or transversal, and all relevant stakeholders are encouraged to come together and act on the recommendations identified in the USWE project.**

## 1. Introduction

This document deals with a number of recommendations elaborated by USWE Project partners as a support for the work previously done in the project. We first mention the **target stakeholders** to whom these recommendations will be sent.

Later on, we briefly describe the **USWE project** main characteristics for those who are not familiar with the project yet. There is also a **summary of the conclusions** presented in D1.5 Report on the State of Art and a reflexion on the main challenges on sectoral skills management as presented in D2.4 Forecast for Shipbuilding 4.0 Report.

Then, we clarify some aspects of interest related to the **technologies and the skills** required by the European shipyards. The concept of the skill. The different types of skills which have been taken into consideration by USWE project partners.

There is a section to make a reference to the **general sectoral profiles**, on one side, and to the **specific VET profiles** on the other.

**“Main challenges”** is the name of the section on which we want to introduce the most relevant factors impacting on the sectoral skills management in future years, taking into consideration the lessons learnt through the project implementation and the latest proposals made stakeholders along the latest months of 2020.

Finally we present **recommendations** for stakeholders and policy makers. Firstly on a table, a kind of summary, and then, a description of each recommendation, more in detail, aiming at inducing a better understanding of the proposals.

The document finishes with a section on the **final conclusions** which deserve being highlighted as a last reflection by USWE Project partner.

## 2. Target stakeholders

These recommendations are meant to reach several types of stakeholders:

- EU Institutions and Policy Makers
- National and Regional Institutions and Policy Makers
- The Maritime Technology Industry: Shipyards, equipment and technology manufacturers
- National and regional industry associations (of Shipyards and MT Companies)
- Other maritime clusters and fora
- Individual workers and their representatives.
- VET Providers and Higher Education providers

The aim is to support USWE Exploitation and Sustainability plan for maintaining and developing the lessons learnt and the proposals and recommendations of the project.

## 3. USWE Description

USWE project aimed at detecting the skills gaps and future needs in the Shipbuilding Industry, including in the scope the several subsectors that make it up. The project started analysing existing data previously collected by diverse agents of the sector. It also reviewed trends and the challenges

originated by Industry 4.0, the increasing digitalisation of the manufacturing processes and the new KETs regarding their potential impact on growth and employment in the sector.

Based on the acquired knowledge and analysis, the partnership elaborated an updated list of occupations and their corresponding skills. Technical, transversal, digital and green skills have been the focus of this project.

These profiles and skills were validated by sectoral experts, focus groups and professionals. Once there is consensus on the final list of occupations and skills, they are supported with the following recommendations for the above-mentioned stakeholders and policymakers.

## 4. State of Art and Forecasting Trends and Challenges

### 4.1. The State of Art

In the desk research USWE analysed three different dimensions. What we call the Elements, the Skills Management Process and some Key factors relevant for the successful development of such a process.

- **The Elements** are made up of Strategies, Institutions, the Shipbuilding and Maritime Technology Industry and the Workforce and its representatives, the Social Partners. We revised the existing strategies and policies in force, at European and national level. We also identified the actors and got familiar with their role and activities regarding the sectoral skills management.
- In the sphere of the **Skills Management Process** we learnt how and who works on the detection and anticipation of the skills need and how and who does the analysis of the detected needs to prioritise and turn the knowledge into new curricula and training offer.

We think that there are a lot of good policies and proposals but that there is a lack of leadership and a lack of methodology for detecting and analysing skills need.

- Regarding the **Key Factors**, we can say that there are a number of EU projects and schemes, the Sectoral Skills Alliances, the European Social Funds, etc. supporting the research on the skills anticipation and matching. There are also a wide number of regulations focused on health and safety matters and on environmental issues which, in turn, impact on the need of renewing the skills set in the sector. The image, and identity, of the sector and the career management are also factors impacting the renewal of the skills and deserve special dedication due to their relevance at the time of attracting and recruiting highly skilful workforce.

#### Conclusions:

Some of the more interesting conclusions that we draw from the research on the State of the Art on analysing the sectoral skill need were included in the Final Report and this is a summary of those conclusions:

- Fragmented policies: Not specific policies on skills management for the sector.
- Lack of a body, an Observatory, maybe, in charge of managing the renewal of the skills needed in the sector.
- Need for a clear taxonomy of sectoral profiles active at the European Shipyards.

- Need for analysing the real impact of the new technologies and the technological transformation on the occupational profiles and on the skills required.
- Need to update the info on ESCO and EU Skill Panorama referring to the Maritime Technology Sector.
- Need for development of the Skills Ecosystem concept.
- Regarding the curricula, we envision the need for an urgent updating of the curricula linked to match the needs of the shipbuilding and ship repair activities.
- Not a clear and shared knowledge of the vocational and educational training offer in European countries regarding the maritime technology matters.
- Need of supporting shipyards and equipment manufacturers that are providing sector specific training in many regions due to the inexistence or inadequacy of existing training offer. These companies are not only training their own workforce but also many workers who will be moving all around Europe providing services to other companies.
- Need to support dual systems and apprenticeship and introducing new learning methodologies and tools, basically simulators to improve the knowledge and skills transference.
- Need to involve training providers as a relevant interlocuter when deciding and acting on initiatives aiming at improving the sectoral skills.
- Need to adopt and implement existing European standards in various areas: detection, analysis of skills.
- Need for initiatives and campaigns aiming at improving the image and reinforcing the attractiveness of the sector.
- Need to gather and spread existing sectoral good practices as a way of learning for stakeholders.

#### 4.2. Forecasting Trends and Challenges

On forecasting trends and challenges affecting the sector in coming years, most of the reviewed aspects deal with the social, economic, financial and commercial aspect of the business. And also with the energetic and technological issues. The health, safety and environmental matters had a great relevance in the forecasting too. Most of these aspects impact finally on the human factor, the skills and the training needs of the workforce.

- We saw that 4.0 technologies are already causing a need for new profiles up to now unknown in the sector: AM Mechanics, Mechatronic Technicians. Cybersecurity Experts, Internet of Things Specialist, Cloud Computing Expert, etc.
- Digital skills will be the most demanded, but the transversal skills gain a strong prominence due to the new nature of relationship induced by the implementation of new technologies and digitalisation. Green skills will also be in high demand.
- Online training, new learning environments and equipment, the simulators, will be very real aspects of the educative offer presented by the training providers in the future.
- There will be a need for new tools and technologies for managing the increasing complexity surrounding the skills management in order to develop the skills analytics proposal.
- New mentality and attitudes are emerging, linked to the use of renewable energies and the implementation of the Circular Economy concept.
- Need to attract new talent from inside and outside Europe and facilitate the participation of foreign workers to our productive process.

- Need for dealing with low qualified workers in risk of exclusion from this demanding sector, maybe through upskilling and reskilling schemes.

#### Conclusions:

Considering the trends that are going to affect the sector, we pointed out, in the Final Forecast Report, the most important challenges, in terms of skills need, that the sector will have to face. This is a summary:

- There is an obvious need for cooperation between all the players involved in the successful development of this sector: European and national institutes, large, medium and small companies, training centres and workers and their representatives.
- Due to the increasing complexity of technologies and requirements more and more highly qualified people will be needed. Digital skills for all type of tasks will be very much in demand.
- New curricula and contents need to be elaborated and updated in a faster and more effective way. The process can't be so slow as it has been so far. New training schemes, specialisation courses, a shorter and specialised offer, dual system, and new tools need to be adopted.
- Subcontracts: The high level of subcontracting in the industry represents an additional challenge for the sectoral skills management,.
- Career Guidance gain increasing relevance, and career management skills will be necessary acquired by workers too.
- To transfer a good image and become attractive to new generations, shipyards need to become more technologically advanced.

## 5. General Sectoral Skills

An initial impression is that there is a general confusion with terminology, as we can read and hear about skills mismatch, skills detecting, skills anticipating, skills matching, skills balancing, skills analysis, skills analytics, etc., which focusing on skills management, however, have different meaning.

For our project, the steps we have adopted follow a **process**, starting with the **detection** of trends and challenges impacting on the skills and the **analysis** of the acquired knowledge as a base for the decision taking, following by the elaboration of the **curricula**, the offer of **training** possibilities plus the needed **career guidance**, ending in the real **implementation** of the skills in the business environment.

On the second step of the process, the analysis, there is an initial need for clarifying the concept before going further.

- Skill: Learned capacity to perform a task to a specified expectation (ISO 30401:2018 Knowledge Management Systems)
- Skills, in the context of EQF, are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).

For USWE's purposes, we follow the definition of skills made by CEDEFOP: Skills are usually used to refer to: **A level of performance, in terms of accuracy and speed of performing particular tasks.**



**Skills can be defined as a goal-directed, well-organised behaviour that is acquired through practice and performed with economy of effort.** *“Typology of knowledge, skills and competences: Clarification of the concept and prototype” and DG Grow “Curriculum Guidelines for KEY Enabling Technologies and Advanced Manufacturing”*

We contemplate several types of skills:

- Technical skills
- Transversal skills
- Digital skills
- Green Skills
- Other skills: Skills linked to comply with regulations, with safety and health standard. Skills for testing, inspecting and supervision. Career Management skills. Other basic skills.

The method to define new skills starts with the definition of the **phases** in the production process, with the description of the **activities** involved in each phase. And, therefore, with the description of the **skills** needed to perform such activities. The following step take us to group the skills, according to its technical nature, in more general **competences** which will give way to the title and **qualifications** for different **profiles**.

Due to the introduction of new technologies and their potentialities, the fact is that some phases are merging, design and production, for instance, and so, we have to consider a new complexity as people working on production up to know is being required to demonstrate skills for the design too.

One aspect to be taken into consideration is that new technologies don't give way to new skills directly. It is the **use** of such technologies, the specific **solutions** implemented in the workplace the ones which will require new skills and competences. We have to remember also that there is a scale in the acquisition of new skills. You start as a **beginner** needing the support and being monitored by a professional. then you can act **autonomously** for later on, become an **expert** able to support and teach others.

## Conclusions

- Act at different levels: EU Institutions. National and Regional institutions. Sectoral industries.
- Bodies, schemes and models for detecting skill needs.
  - Forecasting key bodies
  - Information sources for detection
  - Reporting stakeholders
  - Other schemes for detecting needs.
- Bodies for analysis and decision making.
  - New set of most relevant skills
  - Promotion of new projects and new curricula elaboration. New training offer
- Link curricula, training and implementation to detection and analysis.
- Skills Analysis Framework – Skills Analytics
  - Select descriptors and indicators panel
  - Trace annual results
  - Elaborate strategies accordingly
  - Launch initiatives

- Apply EU Standards: ECVET. EQF. ESCO. EU Skills Panorama

## 6. General Sectoral Profiles and VET Profiles

There seems to be a confusion between profiles and occupations and jobs.

- Profiles come from qualifications and titles. Accredited set of knowledge, skills and competences. They enable you for various occupations.
- Occupations, jobs: Development of a set of activities at a specific place and time. They come from local working practices, from own experience and interests (tester, inspector, supervisor)
- Some relevant aspects to be considered:
  - The European Qualification Framework
  - The ISCO Code - The International Standard Classification of Occupations
  - There is a List of EU Regulated Profession.

There is an issue with the names of profiles and occupations too, due to the variety of national languages in Europe. Same names for different duties or different names for the same duties.

Different National Qualification Systems.

- An obstacle for the recognitions of workers' qualifications
- An obstacle for worker mobility in Europe.

The description of sectoral profiles is a field for reflection. There are some standard techniques for profiles description, but many profiles, occupations and job offer don't follow the rule and are, frequently, incomplete. The fact is that profile descriptions are useful for different purposes and we need to make distinctions.

- Profiles for the data bases (ESCO Database)
- Urgent need for recruitment at a shipyard
- A base for further curricula elaboration
- Descriptions for improving the image of the sector and attract talent and skills.

### Conclusions

- As, due to the technological transformation, there is a constant evolution in the need for new profiles. The List of Sectoral and VET Profiles need to be monitored and updated when needed.
- The Nomenclature of Sectoral Profiles could be a good tool for avoiding misunderstanding caused by the use of different European languages.
- Career Opportunities for professionals in order to have access to positions more dependent on the experience and commitment than on qualifications.
- Implementation of Validation of Prior Learning system can be a benefit for the workforce and an advantage for the shipyards, as time and money can be saved on unnecessary training.
- Standardize the way to describe profiles in the sector. More complete references can be found beyond Europe countries. Australia. USA.

- Research and implement new tools – data bases, artificial intelligence – for profile description and career management.
- Reinforce the use of ESCO as the European reference.
- Consider the EU levels of the European Qualification Framework as the scale of reference.
- Keeping updated the List of Regulated Sectoral Professions will support recognition, validation of qualification and worker mobility.

## 7. Latest proposals by Stakeholders

**Position Paper** by Sea Europe on sectoral skills:

- Collective action lead by industry and social partners, involving education providers and other stakeholders, and calls for a new **'Pact for Skills'** for the sector as a strategic industry for Europe's smart, digitalised and green mobility
  - Contribute to addressing the upskilling and reskilling needs of the sector
  - Facilitate relevant public and private investments in workforce.
  - Policy Makers to address these issues at *sectoral* level.
- Difficulty to **attract youngsters** to maritime-related and STEM-Careers
- Need for **Higher Education and VET systems** in order to provide for more engineers and technicians
- Scarcity of dedicated education and training programmes.
- Need to update existing education and training programmes urgently
- **Gender Strategy:** attract highly skilled women to the maritime technology sector.
- Organise EU and national-wide **promotional and awareness campaigns** to attract talent
- Invest in Lifelong Learning: **Upskilling and Reskilling**
- Enhance their **career prospects** and/or **mobility** within companies
- Attract the necessary skills and **talent from inside and outside the EU**

*From: "A New Industrial Strategy for Europe", A "SME Strategy for Sustainable and Digital Europe" SEA Europe's Position Paper. Section d. Skilling and Reskilling.*

## Recommendations

### 8. Summary. Table of Recommendations

Strategies and Policies	EU and Regional Institutions	EU Shipyards and Associations	Workers & Social Agents	
Diverse Policies about the need for detection of sectoral skills: Agreements on this type of policies. Agreement on the type of structure to manage them	Do the monitoring of previous Recommendations (for instance: Skills Council creation proposal)	Collaboration on issues impacting the sectoral skills: Position papers, projects, etc...	Right to enjoy Upskilling and Reskilling	
Need for delivering actions to match industry needs and skills supply. For monitoring sectoral skills:	Favour the Social Dialogue Committee: specific EU projects		Manage own Career: Skills needed	
Include <b>Training providers</b> as stakeholders	Regional Sectoral Skills Management Systems.	<b>Pact for Skills:</b> Collective actions by social partners in cooperation with other stakeholders on Lifelong Learning. Upskilling and Reskilling.	Implement and/or reinforce Mobility of Workers	
Declare the Maritime Technology Sector as a Specific Policy Area: Adopt <b>tailored-made sectoral policies and financial measures:</b> Pact for Skills	To recognise the <b>strategic role of Europe's Maritime Technology Sector</b>			
Detection	Analysis	Curricula	Training	Apply
Proactively use of Anticipation of Change Instrument: Forecasting Schemes: Identify gaps: <ul style="list-style-type: none"> <li>• Most relevant sources of information</li> <li>• Type of reporting for stakeholders</li> </ul>	Better analyse the real impact of new technologies on occupational profiles: Uses and solutions of those technologies in shipbuilding.	Renew, Update curricula at the VET Centres to include new technologies in advance: Cybersecurity, Drones Technology, 3D Printing, Virtual Reality, Robotics, etc., to reduce the gap between curricula and business needs.	STEAM Methodologies: Start training new generations on new technologies on early stages of education.  New Learning Cyberspaces Extend the use of Simulators	Working & Learning environments.  Benefits, salaries.
	Taxonomy of Profiles. Keep updated. ESCO. Update and link to the sector. EU Skills Panorama: Analyse and include MT Sector		Acknowledgement of Qualifications: Being implemented???	

	<b>A Body for Managing Skills</b> <b>Analytics:</b> Link Policies to results: Indicators, Activities, Frameworks, etc.		Validation of Prior Learning: Implement initiatives and actions	
	Update the list of Regulated Sectoral Professions		Prepared highly skilled technical people.	
	New set of skills needed for the development of technologies and vessels: 4.0 Skills. Green and Regulations. Digital. Transversal (insert in the curricula: ESCO Model). Career Management Skills		<b>Invest on Lifelong Learning.</b> Programmes for the less coalified: <b>Upskilling and Reskilling</b>	
<b>Regulations</b>	<b>Tools</b>	<b>Identity and Image</b>	<b>Career Management</b>	
	Embrace, implement and communicate EU Standards: EQF, ECVET, ESCO	Improve image and attractiveness of the sector: Joint Programmes and Initiatives	Adapt profiles to new technologies	
	New tools: Artificial Intelligence for skills management	Become more technology advanced and embrace 4.0 Technologies	Complexity Management Schemes	
	Simplify use of EU Tools: Avoid bureaucracy in EU projects management.	Attract Youngsters.  Attract <b>highly skilled women</b> to the sector.  Attract the necessary <b>skills and talent from outside the EU</b>	Improve the description of Profiles and their dissemination for Recruitment purposes: EU Centralised Recruitment Platform? Market Place Platform for MT Sector (Recruitment, Training, Guidance, ...)	
		National-wide <b>promotional and awareness campaigns</b> to attract (young) talent to the strategic maritime technology sector	Career Management Models: <ul style="list-style-type: none"> <li>• Recruitment</li> <li>• Performance assessment</li> <li>• Career prospects for workers</li> <li>• Retaining</li> </ul>	

## 9. Detailed Description of Recommendations

<p><b>Issues addressed:</b></p> <ul style="list-style-type: none"> <li>• Need for an initial overall agreement among all sectoral stakeholders.</li> </ul>
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<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• <b>Build a Pact for Skills by the Social Partners, education and other stakeholders:</b> <ol style="list-style-type: none"> <li>1. Elaborate guidelines and agree on the objectives</li> <li>2. Launch initiatives</li> </ol> </li> </ul>
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<p><b>Receptors:</b> European Commission and Sectoral stakeholders</p>
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<p><b>Issues addressed:</b></p> <ul style="list-style-type: none"> <li>• Training Providers not being participating or collaborating in skills management with institutions or shipyards.</li> </ul>
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<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• <b>To include Training and education Providers and Authorities, as relevant stakeholders for sectoral skills management:</b> <ol style="list-style-type: none"> <li>1. University</li> <li>2. VET Providers</li> <li>3. Private Providers</li> </ol> </li> </ul>
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<p><b>Receptors:</b> EU Institutions and bodies</p>
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<p><b>Issues addressed:</b></p> <ul style="list-style-type: none"> <li>• General Industrial policies no reflecting the specific needs of the Maritime Technology Sector</li> </ul>
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<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• <b>Elaborate tailor-made sectoral policies:</b> <ol style="list-style-type: none"> <li>1. Strategic Plans 2020 -2030</li> <li>2. Annual Plans</li> <li>3. EU Projects for the Sector</li> </ol> </li> </ul>
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<p><b>Receptors:</b> EU Commission</p>
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<p><b>Issues addressed:</b></p> <ul style="list-style-type: none"> <li>• There is a set of proposals, policies and previously made recommendations whose degree of implementation is not being done by anybody. So the efficiency and the results remain unknown</li> </ul>
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<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>• <b>Monitor previous policies and recommendations:</b> <ol style="list-style-type: none"> <li>1. Updated list of current initiatives available</li> </ol> </li> </ul>
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<p><b>Receptors:</b> Sectoral stakeholders</p>
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**Issues addressed:**

- The skill management must be run at regional level and many regions lack policies on this respect.

**Recommendations**

- **Develop or reinforce the Regional Skills Management System:**
  1. Elaborate models and implement instruments at regional level
  2. Regional skills Platform. <https://www.cedefop.europa.eu/en/tools/matching-skills/all-instruments/regional-skills-platforms>

**Receptors:** EU Regional Authorities

**Issues addressed:**

- The collaboration on skills issues is not as strong as it is on regulations, on commercial matters on financial issues, etc.

**Recommendations**

- **Collaborate on issues impacting the sectoral skills:**
  1. Assuming roles and fulfilling commitments
  2. Getting to agreement and presenting new proposals

**Receptors:** EU Shipyards and Shipyards Associations. EU Institutions. Social Partners

**Issues addressed:**

- Lack of opportunities for recycling on new technologies and acquiring new skills.

**Recommendations**

- **Reinforce Upskilling and Reskilling mechanisms:**
  1. Short term training activities for improving own career and salary
  2. Long term scheme to change jobs and position due to technological transformations.

**Receptors:** National and Regional Training Authorities. National Associations

**Issues addressed:**

- Due to temporary employment offers, to the rapid changes in the skills requirements and the increasing complexity of the sector, workers must learn to manage their on careers and for that they need training and guidance too.

**Recommendations**

- **Develop the Career Management Skills for the workers:**
  1. Set of Career Management Skills
  2. Access to training and guidance of Career Management

**Receptors:** industriAll Europe and Social Partners

**Issues addressed:**

- Mobility of workers in the sector is of utmost importance, mutual recognition of certificates at EU level is needed

**Recommendations**

- **Implement measures for fostering worker mobility:**
  1. EU, national regional guidelines.
  2. Existing regulations and EU tools available
- **Accelerate the acknowledgment of Qualifications and the Validation of Prior Learnings**
- **Accelerate the mutual recognition of certificates**

**Receptors:** EU Institutions. National and Regional Institutions.

**Issues addressed:**

- There is no body or structure in charge of doing the forecasting of the skills need.

**Recommendations**

- **Develop Anticipation of Change Instruments – Forecasting Schemes:**
  1. Approaches to Forecasting.
  2. Sources of reliable information available
  3. Reporting and feedback for stakeholders.

**Receptors:** EU Institutions. Shipyards Associations and Social Agents

**Issues addressed:**

- Lack of a Sectoral Skills Analysis Framework to tackle a holistic management of skills anticipating and balancing.

**Recommendations**

- **Activate a Skills Analytics Framework:**
  1. Fix descriptors and indicators. Trace results.
  2. Support new policies elaboration.
  3. Use of new digital tools
  4. Manage the skills management process
  5. Taxonomy and Nomenclature of sectoral profiles
  6. List of regulated professions
  7. List of Shipyards and Training Providers

**Receptors:** EU Institutions. Shipyards Associations and Social Agents

**Issues addressed:**



- Lack of an organism in charge of managing sectoral skills

**Recommendations**

- **Create a Body or Observatory for managing the skills analytics framework. This observatory must involve the industry and social partners:**
  1. Skills types
  2. Relevance of transversal skills
  3. Guidelines on sectoral skills management
  4. Skills variations

**Receptors:** EU Institutions and Social Partners

**Issues addressed:**

- Curricula at the Training providers institutions is not being renewed at the speed requested by the transformations in the sector.

**Recommendations**

- **Renew the curricula:**
  1. Promote SEATM methodology
  2. Support the New learning Environments
  3. Support Challenge-based Learning

**Receptors:** Training Providers and Training Authorities

**Issues addressed:**

- As complexity in technological equipment and skills demand increases, an initial learning period for acquiring skills for earning a living in European shipyards is not enough anymore and, so, Lifelong Learning schemes and funding must be reinforce to better cope with challenges in the future.

**Recommendations**

- **Invest of Lifelong Learning:**
  1. Upskilling and reskilling policies

**Receptors:** Training Authorities, industry and workers representatives

**Issues addressed:**

- The attractiveness of the working environment at the shipyards is key for making this sector an employment option for younger generations.

**Recommendations**

- **Improve the working environment turning them into working-learning spaces:**
  1. Become more technologically advanced. For this the EU and Member States should encourage and support the investment on new technologies and processes

**Receptors:** EU Shipyards and policy makers

**Issues addressed:**

- European tools are not fully implemented in this sector which ignore other sectoral initiatives and the EU tools available.

**Recommendations**

- **Adopt EU Tools as the standard reference:**
  1. Simplify EU tools and instruments management
  2. EQF. ECVET. ESCO.

**Receptors:** EU Shipyards and Associations

**Issues addressed:**

- The lack of skills is conditioned as well to a difficulty of attracting young people to the shipbuilding and ship repair sector. There is a consensus about the need for improving the sectoral image.

**Recommendations**

- **Launch campaigns for image and attractiveness improvement:**
  1. Attract youngsters
  2. Attract highly skilled women
  3. Bring skills and talent from the EU and abroad

**Receptors:**

**Issues addressed:**

- Career Management, usually implemented at large shipyards, not fully developed at medium and small shipyards.

**Recommendations**

- **Design and pilot Career management Models:**
  1. For Recruitment campaigns
  2. Profiles descriptions techniques
  3. Performance assessment
  4. Career prospect for professionals
  5. Upskilling and Reskilling schemes
  6. Retaining of skills and talent.

**Receptors:** sectoral stakeholders and policy makers

**Issues addressed:**

- Career Management, usually implemented at large shipyards, not fully developed at medium and small shipyards.

**Recommendations**

- **Favour a Sectoral Marketplace for collaboration among stakeholders:**

1. For Job offers
2. For info on onsite and online training
3. For Career Guidance
4. For Shipyards' need of skills and talent.

**Receptors:** Shipyards Associations. Training Providers. Social Partners