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FINAL REPORT FOR SUBCONTRACT PROJECT VP/2013/010

Creating a European Skills Council for the Shipbuilding and Marine Technology Sector

Prepared by Foundation WEGEMT

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WEGEMT

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Executive Summary

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1 Section 1:

Section Status: Section 1 - straightforward, largely done

1.1 Project Introduction

On behalf of the European Shipbuilding Social Dialogue Committee, SEAEurope has been awarded a grant for the setting up of a European Skills Council for the Maritime Technology Sector. The project is supported by the European Commission and executed jointly by SEAEurope and IndustriALL Europe in the framework of the Shipbuilding European Social Dialogue.

One aspect of this project is the undertaking of a study which involves three key elements:

1. A research study which investigates the employment and skills situation of the maritime technology sector.
2. Participation in three workshops to exchange information and good practices in order to facilitate data collation and information sharing.
3. The results of the research and workshop findings will be collated into an interim and final report. The final report will be presented at the final project conference.

This work was subcontracted to WEGEMT through a competitive tender process (VP/2013/010) and work commenced in January 2015. The three workshop were held on 24 April 2014,
....

This report is sub-divided into 3 sections. The first section is focused on outlining the project and to give an overview of the current status of the sector. The second section addresses the mechanisms and methodology used to undertake the research. The final section reports on the findings of the research and future recommendations.

1.2 Project Background

In order to ascertain the current status of the employment situation in the maritime sector, a review was undertaken. A variety of sources were reviewed including at European, national and local level.

The key outcomes of this desk top review were as follows:

The maritime sector was severely affected by the global economic crisis of 2008. There was a substantial fall in freight rates, trade volumes and new-build order books. Whilst there is now a growing orderbook, which was first seen in 2013, the situation continues to be highly challenging for the industry because of a number of factors including the expansion of Asian yards.

Two crucial facts which succinctly describe the current situation for the sector are:

'By September 2014, CGTs contracted in Europe were higher than the tonnage contracted for the whole of 2013. 80% of new orders are for passenger vessels, offshore and other non-cargo high value vessels. Value of European Q3 2014 orders is US$14bn equivalent to approximately 19% of worldwide orders. China has now overtaken South Korea and leads the market for both number of contracts and value.'[1]

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[1] SEAEurope Shipbuilding Market Monitoring 2014 Q3 Report Nr 37 February 2015

'The maritime technology sector is an important industrial sector for Europe particularly in the field of high level manufacturing. It employs over 500,000 individuals through shipyards, equipment manufacturers and suppliers and design and research organisations. In order to ensure the long term future of the sector is crucial that the sector utilises and maximises the strengths. These have been identified as strong market position, technological leadership, strong infrastructure, co-operative partners, skills of employees, able to identify opportunities in new emerging markets and close relationship with their customer base.' [2]

Therefore maintaining global technological leadership in building high technology vessels and developing world leading maritime equipment, is critical to maintaining and growing the European maritime technology sector. This can only be achieved with high quality, innovative personnel. However the structure and nature of the sector including cyclical workload and a significant proportion of SMEs can make it difficult to address the training and skill development needed to ensure long term competitiveness.

A report entitled 'COMPETITIVE POSITION AND FUTURE OPPORTUNITIES OF THE EUROPEAN MARINE SUPPLIES INDUSTRY" was published in January 2014. The report and study was funded by the European Commission DG Enterprise and Industry (Contract No. SI2.630862) and the key objective was 'to give a detailed overview of the marine supplies industry in all Member States of the EU covering basic economic and company characteristics, including available products and services. It evaluates the competitive market position of the European marine supplies industry and identifies opportunities for strengthening its sustainable competitiveness.' In this study the importance of maintaining the knowledge base was highlighted including a need for Europe marine technology organisations to enhance education and training, develop adequate curricula and the establishment of lifelong training measures.

In 2002, a LeaderSHIP2015 strategy was developed and adopted by the European Commission in collaboration with the industry. The initiative focused on five key strategic elements: improving leadership, drive and protect innovation, customer focus, improving industry structure and production optimisation. Significant progress was made on all five elements. As previously discussed, during the last 7 years, the sector has experienced both challenging conditions and the presentation of new opportunities. LeaderSHIP2020[3] aims to reflect the changing conditions and 'provide a series of recommendations for the short and medium term to support sustainable growth, high value jobs and address the societal challenges Europe Is currently facing.' Within LeaderSHIP2020 four pillars of action were identified:

- Employment and skills
- Improving market access and fair market conditions
- Access to finance
- Research, development and innovation

The conditions during the the last 7 years have resulted in two key challenges for the industry, in terms of employment. Firstly many European maritime employers have modified their portfolio as a result of technology developments or to take advantage of new opportunities. However to maximise these opportunities, organisation require highly skilled staff of which there is now a scarcity. At the same time, significant consolidation and restricting has already taken place in Europe with more expected in the future. In light of the current situation, four areas of focus have been identified within the Employment and Skills Pillar of Action. These are:

- Restructuring
- Image and Career Path
- New Skills and Lifelong Learning
- Harmonisation Certificates and Mobility

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[2] COMPETITIVE POSITION AND FUTURE OPPORTUNITIES OF THE EUROPEAN MARINE SUPPLIES INDUSTRY
Funded by the European Commission DG Enterprise and Industry Contract No. SI2.630862
[3] LeaderSHIP2020: The Sea, New Opportunities for the Future, Brussels, 20 February 2013

A European Skills Council for the Shipbuilding and Marine Technology Sector has the potential to make a positive impact on these key challenges in order to improve the skills and competencies of the sector's workforce thereby positively impacting on the sector's long term success.

Previous Studies

A previous study relating to employment and skills in the maritime technology sector was conducted and the results are included in this report in order to provide a historical and comprehensive record.

In 2014, IndustriALL and AGS conducted a survey of the sector entitled 'Survey on Employment in European Shipbuilding Countries'. This was presented at the SSDC meeting on 4.3.15 by Thorsten Ludwig. This presentation identified some key changes in the sector during the period 2004-2014 including a significant reduction in staff numbers, several yard closures, changing ownership and a reduction in order books. Employers were asked about the most challenging problems facing the industry with the following categories proposed:

- Entering new markets
- Political strategy for shipbuilding/maritime industry
- Training young persons
- Acquisition of new orders
- Working conditions of sub-contractors
- Supply of skilled employees
- Financing of newbuilding ships

Data was analysed for 8 countries: Spain, Portugal, Poland, Norway, Germany, Finland, France and Denmark.

The summary of this review was as follows:

- Supply of skilled workers received a mean score of 6.4 with results between 5.5-8.4 (0= no concern, 10=most challenging problem)
- The issue of supply of skilled workers was of particular concern in Portugal, Poland and Norway, with a score of 8 in each of these locations. This score was the highest of all the seven categories for these countries indicating that this was the most pressing problem facing the sector in those locations.
- The supply of skilled workers was of least concern in Finland (3) and Spain (5).
- Training of young persons was, again, of most concern in Portugal (8), Poland (7) and Norway (7).
- Finland (3) and Germany (4) ranked training of young persons lowest of the countries surveyed.
- In all the countries surveyed the 'supply of skilled personnel' always achieved a score greater than or equal to 'training of young persons'.
- Supply of skilled personnel is clearly an important issue for a number of European countries.

2 Section 2:

2.1 Survey Development and Deployment

Section Status: Section 2.1 straightforward, largely done

A key part of the project is to 'investigate in the EU Members States the employment situations of the maritime technology industry'. In consultation with the Steering Committee, it was agreed that this activity would be best achieved through a detailed questionnaire which would be developed and deployed through SEAEurope.

The methodology associated the development of the questionnaire structure and content is as follows:

2.1.1 Phase 1: Determination of Key Issues and Actors

At the Project Kick off meeting on 26/1/15, the key issues to be addressed by the questionnaire were discussed and agreed upon. The countries involved and types of organisations were selected by the overall project Steering Committee as it was felt these were the locations and actors for which it was crucial to obtain data from.

2.1.2 Phase 2: Development of the Questionnaire

The questionnaire was developed by WEGEMT and approved in consultation with the project Steering Committee and is attached as Appendix A. The key considerations during the questionnaire development included:

- General information about the organisation size (turnover, number of staff, number of technical staff, distribution of technical staff) was requested in order to support latter data analysis
- It was decided to consider two different timescales for employment: short term (0-12 months) and medium term (2-5 years) as the skills needs and recruitment challenges may vary across this timescale.
- For the short term recruitment the key issues was to identify if organisations were actively recruitment, if ongoing recruitment was proving difficult and what skills or expertise were needed in this timeframe. This information gave us a 'baseline' of what the current status is within the sector.
- Moving onto medium term recruitment, similar questions were asked as those for short term recruitment but in addition questions drilled down further to ascertain the type of employee to be recruited (experience and/or expertise), why the recruitment was planned, and the anticipated proportion of different roles to be recruited.
- Respondents were also asked about suggested recruitment and training strategies to address potential skills gaps.
- Finally respondents were given a free text opportunity to comment on the key issues for the sector. Survey/questionnaires with only 'button' responses often do not give respondents the opportunity to comment freely and can miss some key issues as a result. Therefore this free text section ensured any relevant comments could be included and considered.

2.1.3 Phase 3: Deployment of the Online Survey

The questionnaire was converted into an online survey using the website: https://www.checkmarket.com/.

An online link was generated for direct access to the survey and was circulated as part of the covering letter. WEGEMT prepared a covering letter and approved by SEAEurope and is attached as Appendix B.

Following approval of the questionnaire content, the survey was formally launched by SEAEurope on 1 April 2015.

2.1.4 Phase 4: Analysis and Interim Report

The first phase of analysis was undertaken prior to the first project workshop so that the findings could be presented. At of 20/4/15, 25 respondents had commenced the online survey with 18 having fully completed the questionnaire.

A second phase of analysis was undertaken on 16/6/15 prior to the second workshop. At this time, 34 respondents has commenced the survey with 25 having completed full survey.

A third phase of analysis was undertaken on 19/10/15 in preparation for a project meeting on 27/10/15. The results were updated to include additional responses since the first round of analysis. As at 19/10/15, 41 respondents had started the online survey with 39 respondents having completed the entire survey. Therefore the analysis was undertaken based on the 39 responses.

The results, analysis and interim report were presented at a project meeting on 27/10/15. Detailed analysis can be found in Section 3.1.

2.1.5 Phase 5: Analysis and Final Report

2.2 Workshop Reports

Section Status: Section 2.2 - The workshop reports will be very scant. As there was no minutes of meetings held we can simply mention the different presentations that were organised during the different workshops and if necessary include the in annexes

2.2.1 Report April workshop

24 April 2015 Workshop

A workshop was held to discuss the evolution of skills in the sector and the anticipated skills needs in the future. Best practices to address the challenge of skills gap/needs were also shared.

Two industrial organisations in the marine sector - Royal IHC (Netherlands) and Factorias Vulcano (Spain) gave presentations about their experiences with the issue of skills needs and their anticipated skill demand in the future.

A presentation was given by Sophie Normand (GICAN) regarding the employment characteristics and skills needs for the French naval sector. Initiatives to address this skill demand was also presented.

The European Defence Agency gave a presentation about the key skills issue in the European defence industry.

An information note for this workshop was produced by SEAEurope and is attached as Appendix C.

2.2.2 Report June workshop

3 Section 3:

3.1 Qualitative Evolution of Skills and Occupations

Section 3: Section 3.1 Qualitative evolution of skills and occupations - we assume this is going to largely be the analysis of the survey results.

Qualitative evolution of the skills and occupations

Including challenges of technological tendencies. (emerging jobs, drivers of change, ..)

b.   The employment situation, forecasts and trends

Analysis of demand and supply of skills

Mismatches between educational offer and output and the labour market demands

c.   Innovative tools and national/regional/local strategies to monitor skills needs and address the skills mismatch and gaps in the sector

d.   Policy recommendations at national and European level

The workshops are used to support the analysis and collecting information. We don't need to report about each workshop in the Study, the aim is more to use the results/outcomes from the workshop. But you can do it as you may find it more suitable and complete.

A qualitative analysis of skills and occupations was carried out using survey results and the following findings were identified.

Summary of the questionnaire:

41 respondents in total

39 full completions

82% of respondents provided personal details (name)

88% of respondents provided an email address

93% of respondents provided their position with their organisation

The positions most frequently referenced included: HR Manager, HR Director, Commercial Director, Director and Managing Director.

Respondents were initially asked to provide details on the type of organisation they worked for. This was to ensure the sample data offered a representative mix of organisations within the sector.

Graph 1: Type of Organisation
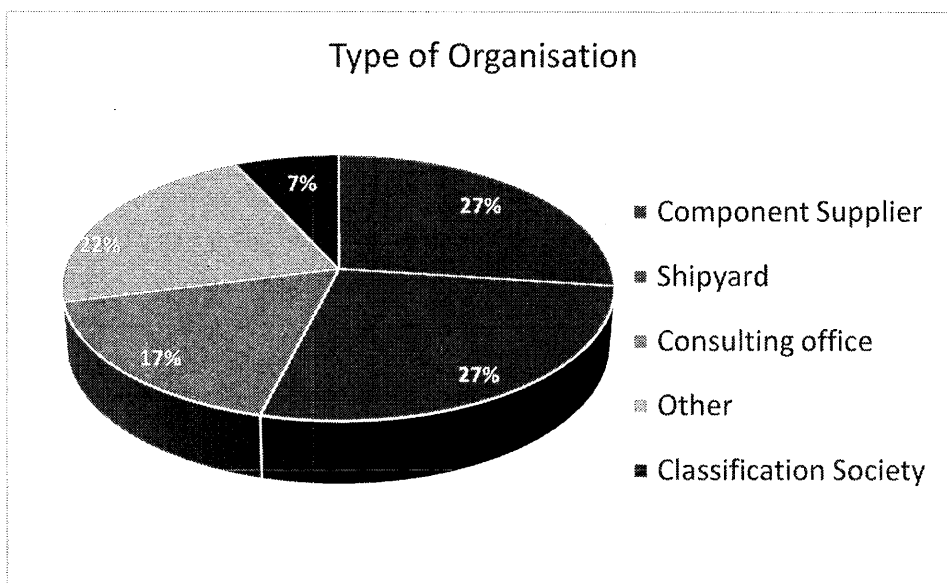
Graph 1 shows the split of responses across organisation types. The clear mix of organisational types shown demonstrates that the results offered by the survey are suitable for further analysis as a wide array of types of organisations in the commercial marine sector are represented..

Graph 2: Organisation's Country
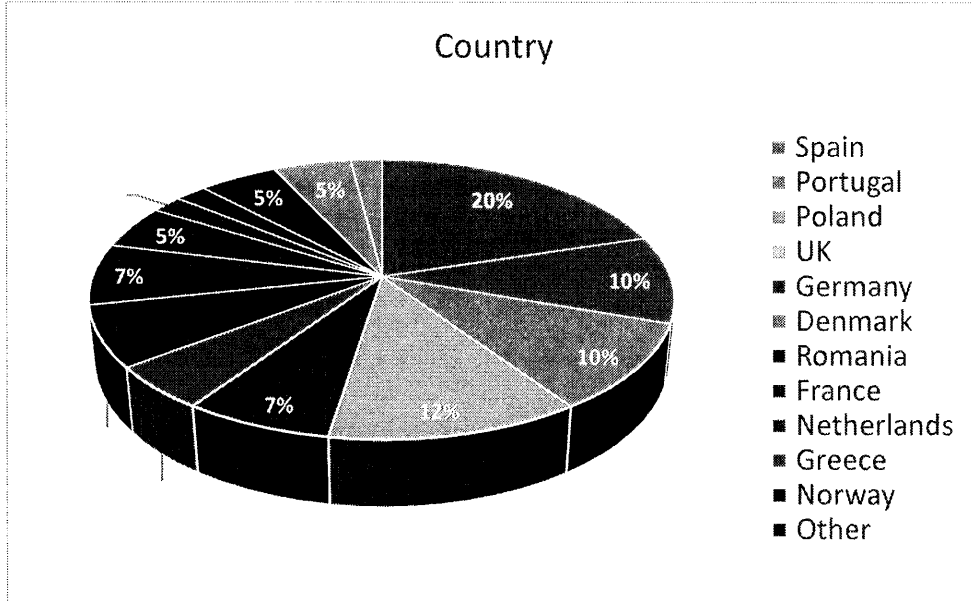
Respondents were asked to select their organisation's country. As many commercial European marine section organisations operate in a number of countries, respondents were advised: 'If your organisation operates in more than one country, please select the one which represents the largest proportion of staff employment.' Respondents were asked to provide this information so that the project team could ensure that responses to this survey were representative of the European market. As the results above demonstrate, 12 different locations were selected. The highest response rate was from Spain (20%) followed by the UK (12%), Poland (10%) and Portugal (10%). A number of other countries submitted between 5 – 7% of the responses received. These responses demonstrate that, as well as a range of organisational types, a range of geographic locations have also supplied data and this supports the validation of the results.

Graph 3: Distribution of Technical Personnel – Type of Personnel Employed
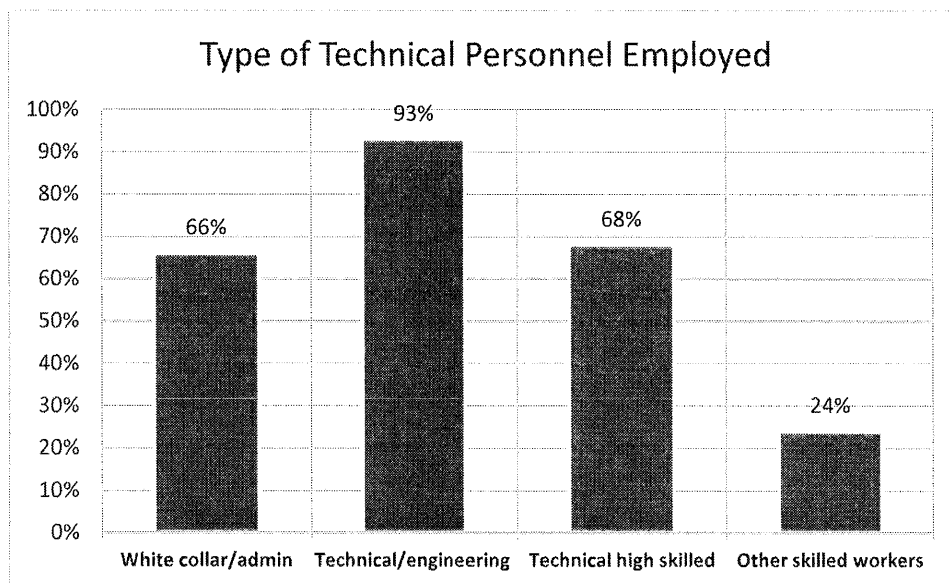
This graph demonstrates the categories of technical personnel that respondents employ. A fuller explanation of each category is as follows:

66% of respondents employ: White collar/administration (management, administration, finance, legal)

93% of respondents employ: Technical/engineering with academic technical background (bachelor or master university degree, i.e. engineers, naval architects, drafting personnel and various engineering technicians)

68% of respondents employ: Technical high skilled workers with a vocational training background or similar (welders, cutters, plumbers, painters, carpenters, etc mainly at production)

24% of respondents employ: Other skilled workers with non-formal education background (not included in the other categories)

The companies which responded to this survey employ all categories of staff and again this supports the results received as being a fair representation of the industry.

Graph 4: Distribution of Technical Personnel – % of Technical Personnel Employed

% of Technical Personnel Employed

- White collar/admin
- Technical academic
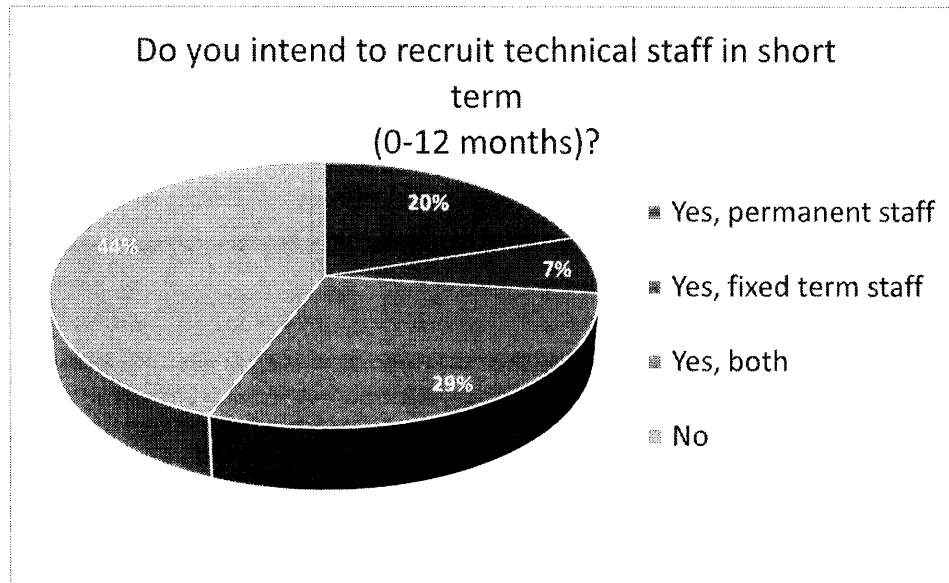- Technical high skill
- Other skilled
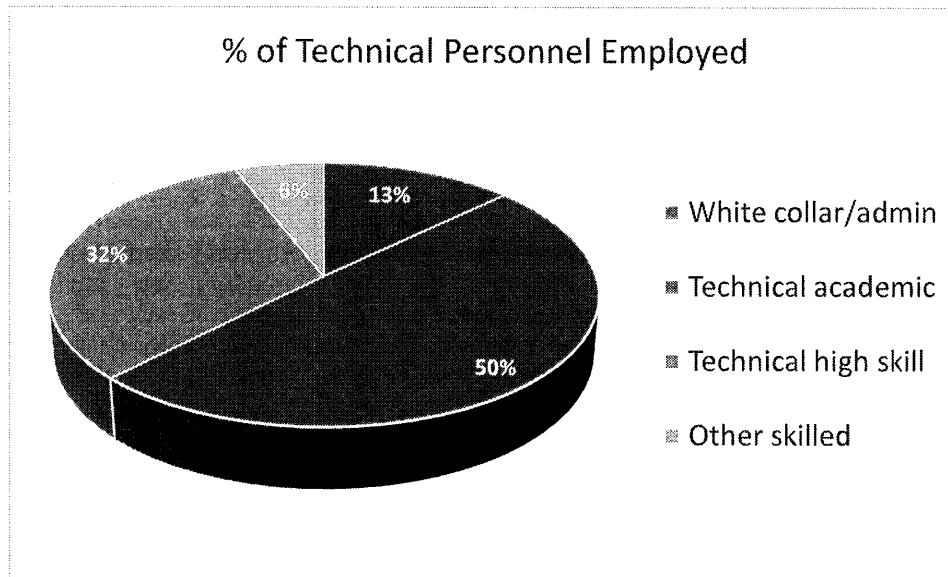
The response to this question demonstrates that 'technical academic' followed by 'technical white collar/admin' are the highest categories of technical staff employed in the organisations who responded. This level of employment of highly qualified and highly skilled personnel supports the view of the report 'COMPETITIVE POSITION AND FUTURE OPPORTUNITIES OF THE EUROPEAN MARINE SUPPLIES INDUSTRY (Funded by the European Commission DG Enterprise and Industry Contract No. SI2.630862) that:

"In order to ensure the long term future of the sector is crucial that the sector utilises and maximises the strengths. These have been identified as strong market position, technological leadership, strong infrastructure, co-operative partners, skills of employees, able to identify opportunities in new emerging markets and close relationship with their customer base."
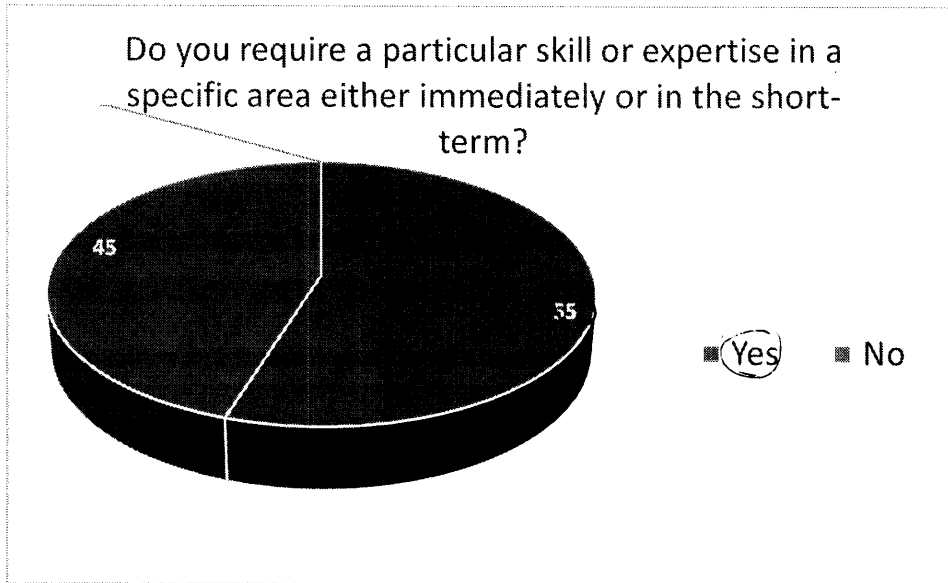
Respondents then moved onto Section 2 of the survey which focused on staffing forecasting and skill analysis.

Graph 5: Short Term Recruitment of Technical Staff

Do you intend to recruit technical staff in short term (0-12 months)?

- Yes, permanent staff
- Yes, fixed term staff
- Yes, both
- No

20%

7%

29%

44%

Respondents were asked if they intend to recruit technical staff in the short term for their European operations. 56% of respondents intend to recruit staff during this period.

Graph 6: Short Term Skill Demand

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Do you require a particular skill or expertise in a specific area either immediately or in the short-term?

45   55

■ Yes   ■ No

Respondents were asked if they required any particular skill or expertise in the immediate/short-term and 55% responded to indicate that they did require a particular skill during this period. Respondents who replied positively were then asked the type of skill and/or position that was required. A variety of responses were received but the most frequent responses included:

Engineer

Naval Architect

Designer

Project Manager

Welders

Fitters

Electrical Engineers

3D Designers

Graph 7: Current Recruitment Issues

Are you experiencing any problems with your current/recent recruitment process?

44

56

■ Yes

■ No
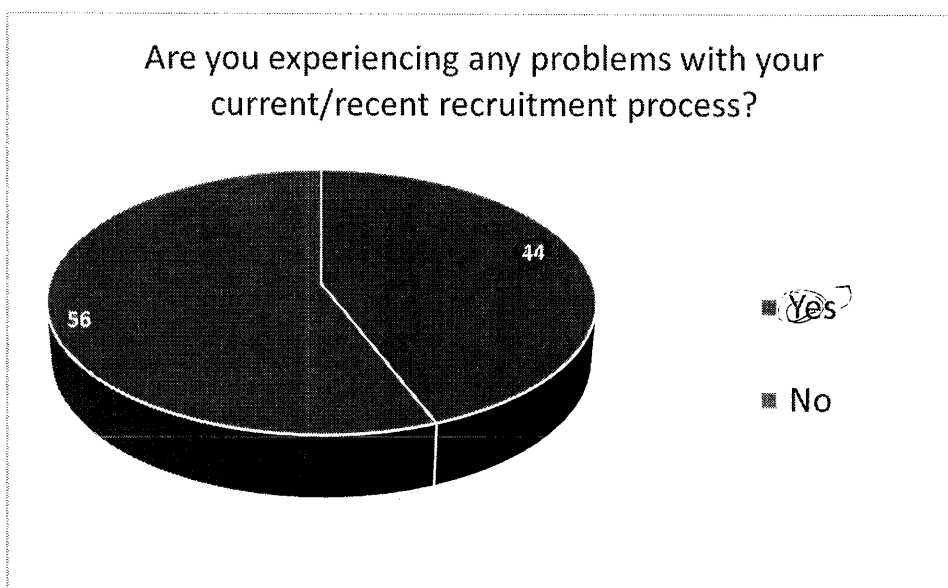
Respondents were asked if they were experiencing any problems with their current or recent recruitment process. 56% of respondents indicate that they were not experiencing problems, but

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44% of respondents were experiencing problems. The 44% of respondents who were experiencing problems were then asked to provide further details on why they were experiencing problems and this information is shown on the next graph.

Graph 8: Current Recruitment Issues
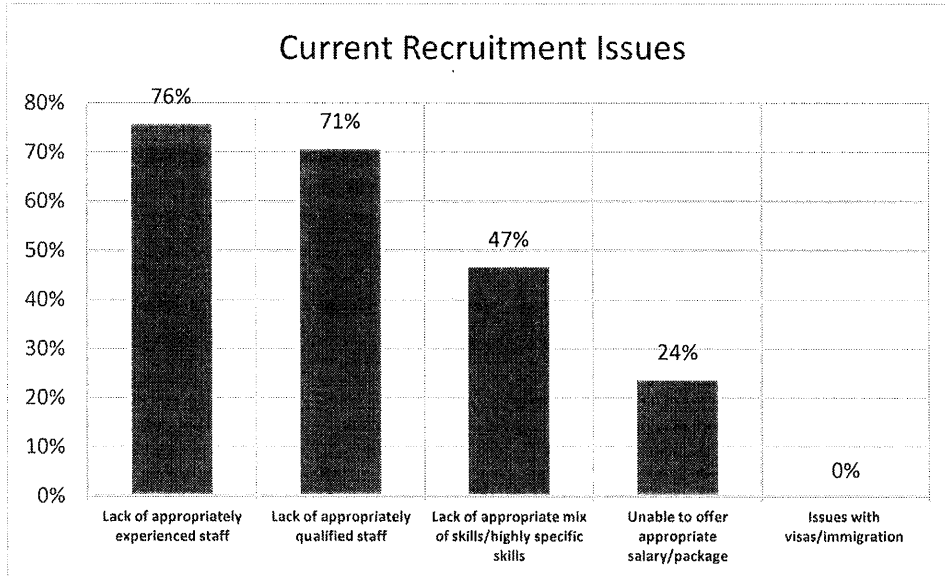
This graph demonstrates that a lack of appropriately experienced or appropriately qualified staff is causing the most difficulty for organisations wishing to recruit. This data demonstrates that there is an existing skills/experience gap that needs to be filled in order for organisations to be able to recruit appropriate staff to meet their business needs and supports anecdotal evidence from companies and other industry actors who have expressed a concern about the lack of suitable technical staff available.

Graph 9: Medium Term Staff Forecast
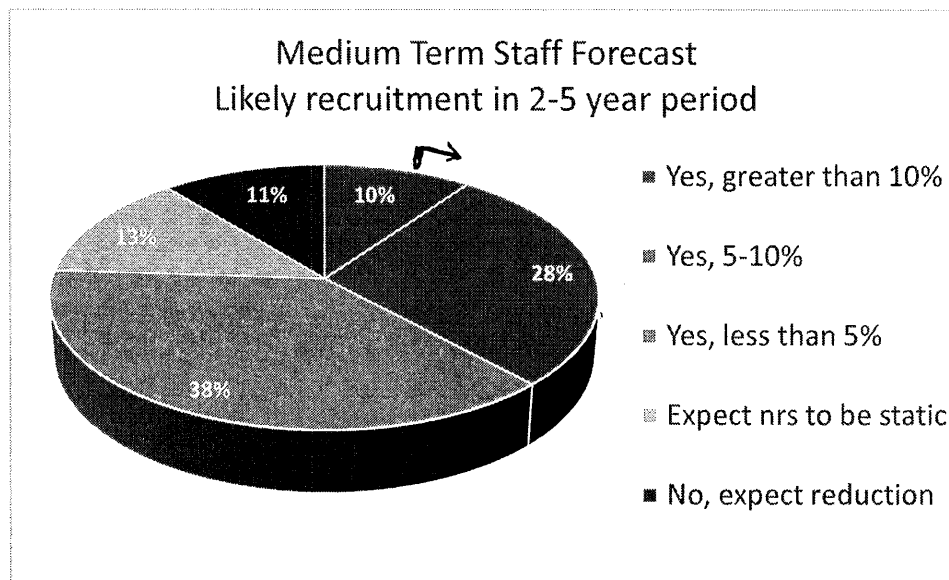
Respondents were asked to indicate the likely change in their staffing levels over the next 2-5 years. This is in addition to recruitment discussed in Graph 5. As can be seen from above, 76% of respondents expected to see an increase in their staff numbers. This is very encouraging news for the sector which was badly affected by the economic crisis of 2008.

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Graph 10: Reasons for Planned Recruitment in the Medium Term

### Reasons for Planned Recruitment (2-5 Years)
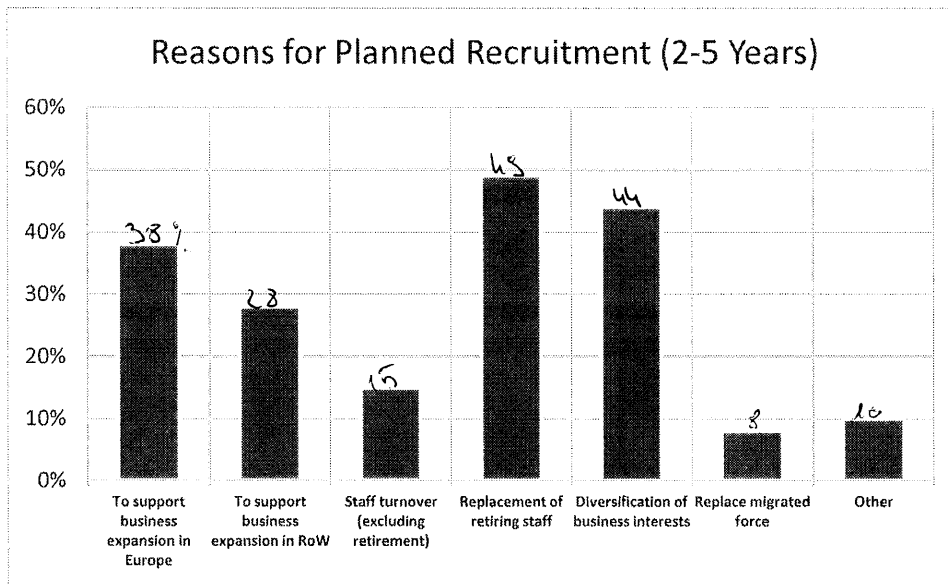
Respondents who indicated that they would likely increase personnel numbers in the medium term (Graph 9) were asked to indicate the reasons for this. Respondents could choose more than one response). Results were as follows :

48% indicated 'Replacement of retiring staff'

45% indicated 'Diversification of business interests'

38% indicated 'To support business expansion in Europe'

30% indicated 'To support business expansion in RoW'

15% indicated 'Staff turnover (excluding retirement)'

10% indicated 'Other'

8% indicated 'Replace migrated force'

This data strongly supports anecdotal evidence about the marine sectors aging workforce and the potential problems in the future when trying to replace retired staff. Very nearly half of the respondents who intend to recruit in the medium term (76% of all respondents) will need to replace retiring staff. The statistics related to diversification of business interests and supporting business expansion in both Europe and RoW are very promising and demonstrate the sector has carefully considered how it can remain competitive in the global market. It now needs appropriately trained and skilled personnel in order to deliver this potential in new and diversified markets.

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Graph 11: Medium Term Recruitment Types of Personnel to be Employed

**Medium Term Recruitment Split of Roles**
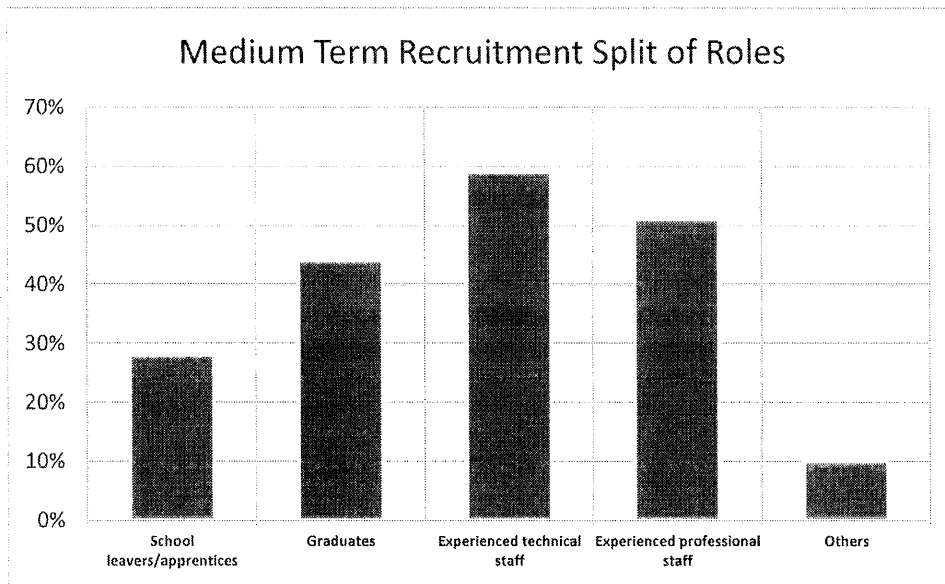
Respondents were asked to indicate the type of technical roles they would need to recruit in the medium term. Respondents were permitted to select more than one answer. The following responses were received:

57% of respondents intend to recruit experienced technical staff e.g. welders, technicians

52% of respondents intend to recruit experienced professional staff e.g. chartered engineers

45% of respondents intend to recruit graduates

30% of respondents intend to recruit school leavers/apprentices

10% of respondents intend to recruit 'others' (but did not provide details in the text section)

This data demonstrates that employers intend to recruit all personnel types but a substantial proportion of the industry actors will need experienced technical and experienced professional staff.

Graph 12: Medium Term Recruitment Split of Roles

Split of roles for medium term recruitment
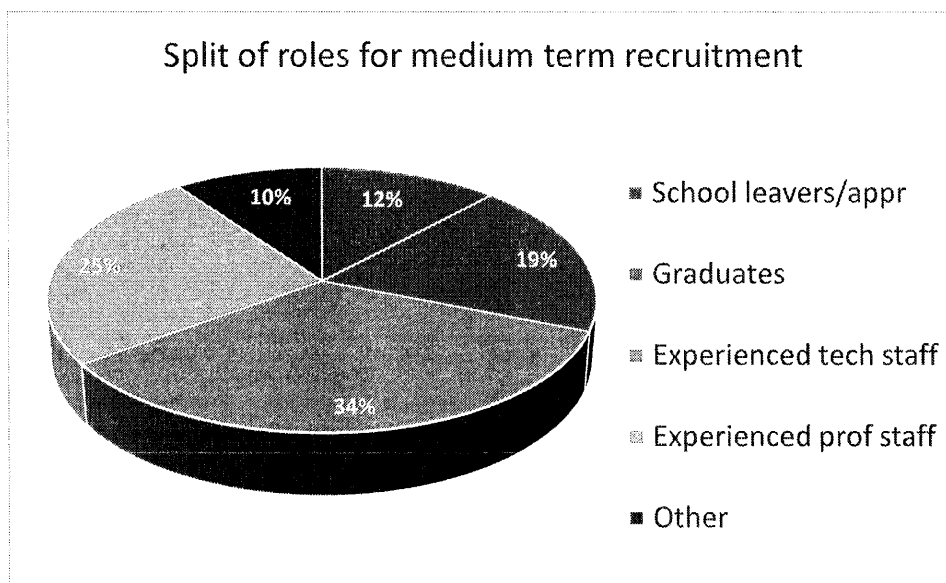
Respondents were asked to split their recruitment across the roles by %. 34% of planned role recruitment will be for experienced technical staff with another 25% for experienced technical staff. This data demonstrates that industry organisations envisage medium term recruitment will be

required across all personnel types with experienced technical and experienced professional staff particularly desirable.

Graph 13: Confidence in Medium Term Recruitment

Confidence in ability to recruit staff needed in medium term

- Yes
- No
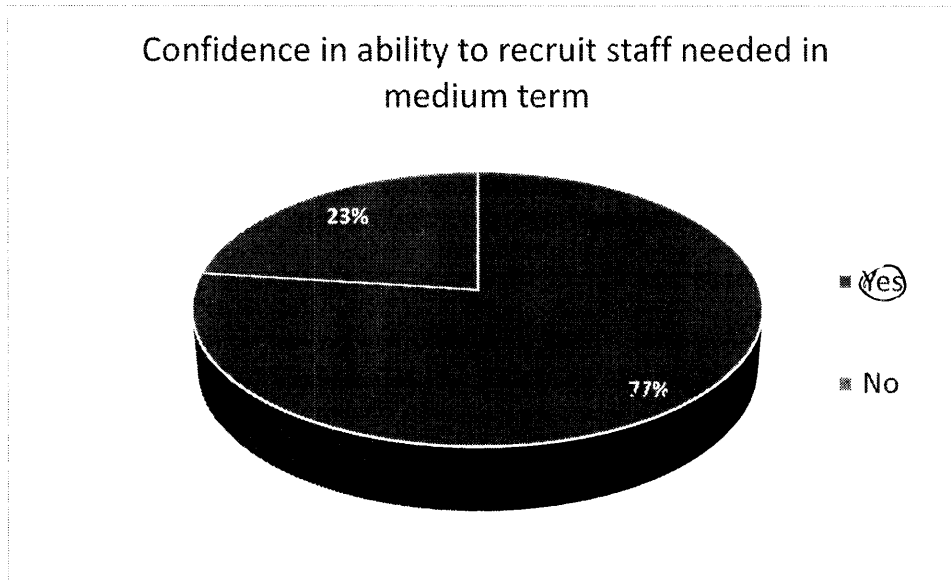
77% of respondents felt confident about medium term recruitment. This result is unusual because 44% of respondents were currently experiencing recruitment problems in the short term (Graph 7). It is not clear why an increased number of respondents have confidence in medium term recruitment when they are experiencing problems with their current recruitment.

Graph 14: Confidence in Medium Term Recruitment – Reasons for Lack of Confidence

Confidence in ability to recruit staff needed in medium term
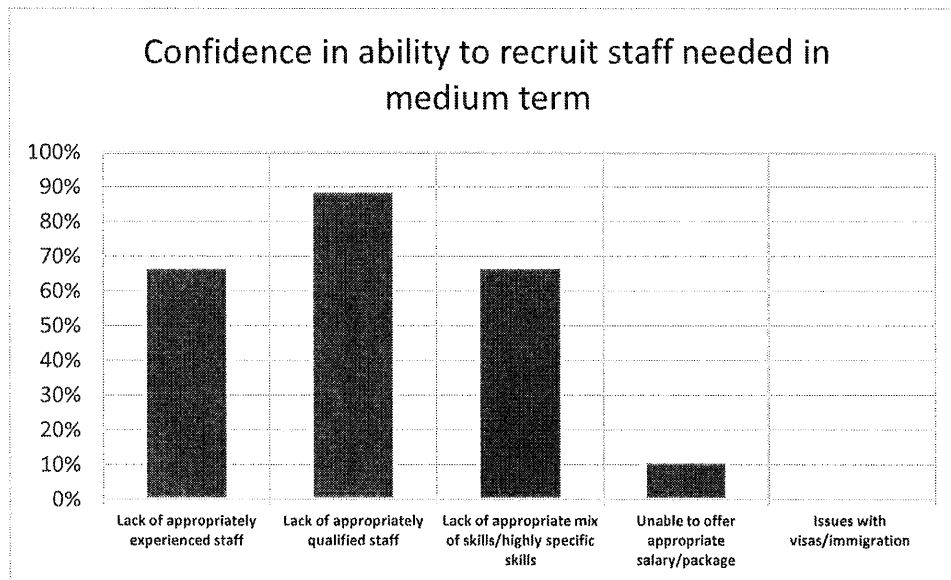
Respondents who indicated that they were not confident about medium term recruitment were asked to give reasons for this lack of confidence. Respondents could choose more than one response. Reasons given were as follows:

89% indicated a 'Lack of appropriately qualified staff'

67% indicated a 'Lack of appropriately experienced staff'

67% indicated a 'Lack of appropriate mix of skills/highly specific skills'

11% indicated 'Unable to offer appropriate salary/package'

No respondents indicated that issues with visas/immigration were a factor.

Although this was a small sample size (23% of respondents) it again reinforces previous themes regarding a concern about a lack of appropriately qualified, experienced or skilled personnel.

Respondents were asked to identify specific skills shortages envisaged in the medium term. Responses included:

Personnel with policalification (sic)

People with engineering skills and practical experience

Technical Staff with a good experience and knowledge

Difficulty to attract people in the industry

Lack of adequation (sic) between profiles provided by educational system and employers requirements

Technical staff good experience and knowledge. The academic formation is not enough and not enough good. That is a loose of competiveness for the company.

Knowledgeable sales personnel

Apprenticeship: Lack of basic skills (languages mathematical understanding) and motivation

Experienced staff: difficulties to find specific combination of knowledge and difficulties to integrate international staff

Level of competence in different areas – welding, electricity, boiler making

Design of cruisers requires relatively long experience and that type of people are not among job seekers. Vocational schools do not produce ready-to-work employees for shipyards.

Graph 15: Benefit of Centralised European-wide online recruitment tool
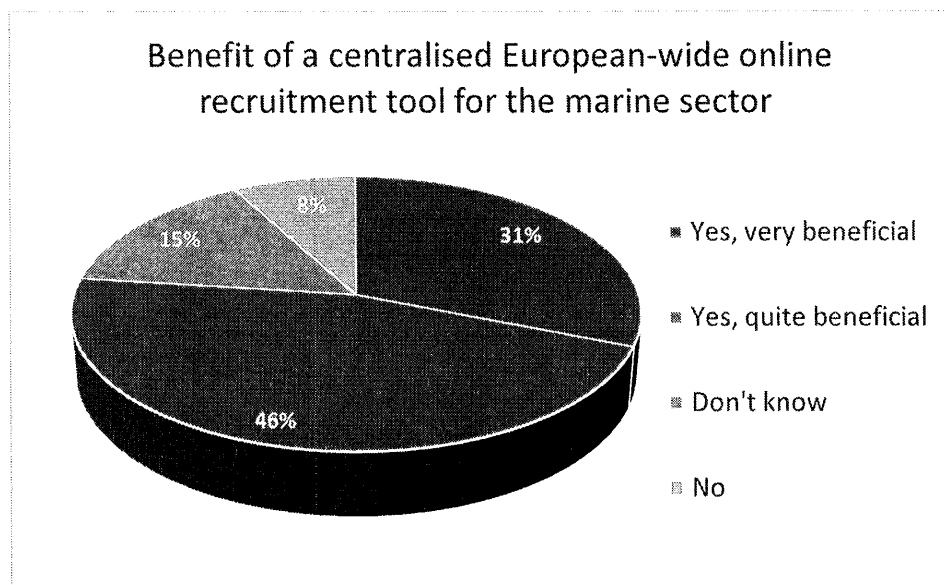
Respondents were asked if they considered a centralised European-wide online recruitment tool for the marine sector would be beneficial for recruiting staff. 77% of respondents considered this tool to be either very or quite beneficial. 15% were unsure and 8% of respondents did not think it would be beneficial.

Graph 16: Use of a Centralised European-wide Online Recruitment Tool

Should a centralised European-wide online recruitment tool for the marine sector include job vacancies and individuals looking for work

- Both
- Available jobs only
- Individuals looking for work only
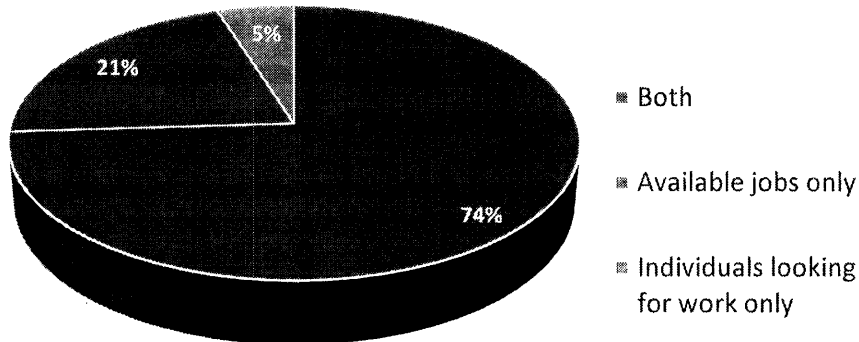
By far the majority of respondents (74%) felt that any online tool would be most beneficial if it included details of both available jobs and individuals looking for employment.
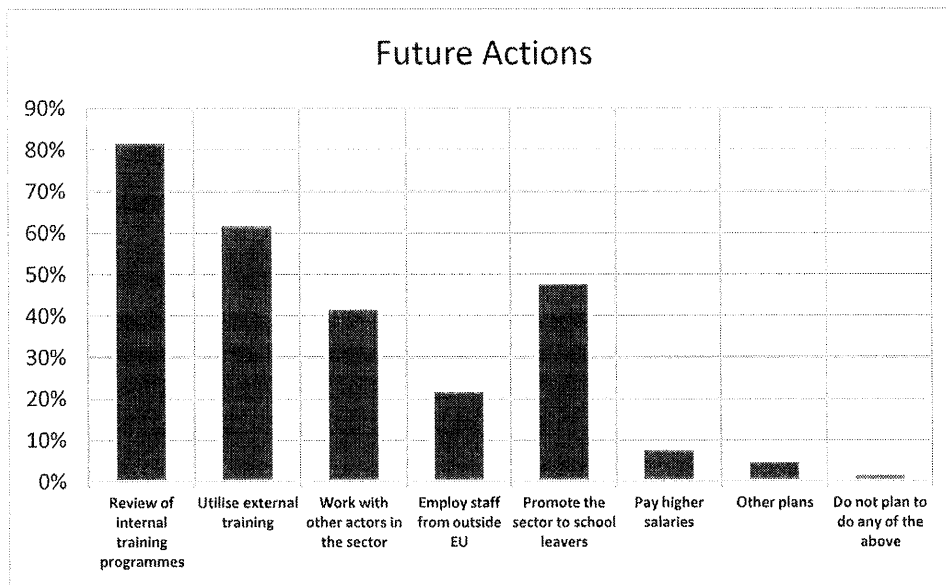
Graph 17: Skills Gaps in New Recruits

Is there a skills gap for new recruits?

- Yes
- No
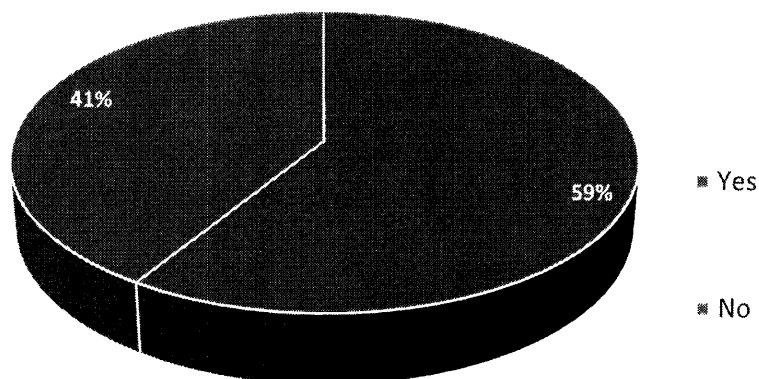
59% of respondents felt there was a skills gap for new recruits. This is a substantial response rate for a crucial issue and demonstrates there is a need for sectoral action in order to address this.

Graph 18: Future Actions to Address Shortfall in Skills

Future Actions

Respondents were asked to comment on what actions their organisations would take to address the skills gap. Respondents could select more than one response. Responses were as follows:

82% intend to review of internal training programmes

62% intend to utilise external training

42% intend to work with other actors in the sector

22% intend to employ staff from outside EU

48% intend to promote the sector to school leavers

8% intend to pay higher salaries

5% indicated 'other' plans

2% did not plan to do any of the above

The majority of respondents intend to take some action, which demonstrates that there is a sectoral view that a skills gap exists. A significant proportion of respondents intend to use training programmes, both internal and external. Promotion of the sector to school leavers and working with other actors in the sector are also popular strategies for the sector.

Finally, respondents were offered a free text space to give their views on the three most important issues for the sector in the next five years. These responses can be divided into the following categories – personnel, training/skills and commercial/financial and are shown below in their entirety:

Personnel:

Fastly developing technicial innovations leading to a demand for personnel able to adapt to those changes

Shortage of technical staff

Postponed retirement resulting in different skills required to be fit for the job till the age of 70+ or a joint effort to provide timely for a different career path

Lack of skills, lack of experience, shortage of personnel with proper qualifications

Image and attractivity of the european marine industry (shipyard-deaths; shipping crisis)

Unstable market conditions not allowing for systematic investment in the employees

Employee turnover due to moving into another EU country

Succession planning

Ageing workforce who will be retiring and have a niche skillset which will need to be replaced

Staff engagement

Too much political Regulation in employment related issues. Too much bureaucracy.

Training/Skills:

University education improvement (selection of candidates, specialization, cancelation of the paid scolarship)

Reinvention of the technical schools for qualified workers, technicians, foremans and underengineers (valid for Romania where this kind of scholarships have disappeared)

Training programs after employment based on the needed skils , qualification schemes and payment based on qualification performances

1-Define the 3 to 5 critical skills to focus on to ensure the future of the Europe Naval/Maritime industry 2-Build together specific on-the-job training programmes (co-engineering with training actors national educational systems) 3- Promote the sector in the schools soon enough including among teachers, parents and media (prescriptors)

Increase the cooperation between companies Universities and R&D centers in Europe

Conservation and development of internal human resources

Qualification of people in new technologies

Lifelong Learning and internal Training facilities

Gap between competencies ensured on faculty graduation and what companies are requesting

Development of knowledge

Commercial/Financial:

Specialization -Environmental Regulation –Service

New technologies in the naval sector. New production processes.

Increase market share

Working in a sustained manner

Sector's ability to process automation

Financial capacity to invest in R & D global approach to the market

Joint venture for development of multidisciplinary projects

Commercial Shipping, Naval protection vessels, Offshore Power Creation and Capture

LNG Systems, Offshore Wind Farm

Environment friendly technology in the marine industry

Reduction of the workload due to the current slow down in worldwide growth affecting the marine industry

To tackle the Asian threat. To manage the orderbook time and moneywise. To handle the investments in production and people.

Needed Education Automatisation en robotisation Worldwide concurrency

To be able to build ships and equipment in Europe at competitive prices

3.2 Employment Situation, Forecasts and Trends

Section Status: Section 3.2 - These were the proposed summary of contents of this section: The employment situation, forecasts and trends, Analysis of demand and supply of skills, Mismatches between educational offer and output and the labour market demands

Employment situation, forecasts and trends:

Europe has the world's largest shipping fleet, providing employment for some 300,000 seafarers on merchant vessels and another three million in related jobs.[4] Countries which represent the largest employers in this sector include UK, Netherlands, France, Greece, Germany, Italy, Spain and Norway. In 2010 it was estimated there were over 51000 enterprises active in the marine sector.[5]

Research by a variety of bodies including TRIP, Ecotec (on behalf of the European Commission), Balance Technology Consulting (on behalf of the European Commission) and SEAEurope identifies consistent key trends affecting the industry. The results of our survey also support previous research in this area. In relation to employment and skills these forecasts and trends relate to:

Changing demographics - an ageing working population and increasing life expectancy bring challenges to the maritime sector. Firstly the sector has a significant proportion of older workers who will plan to retire in the next 10 years resulting in a shortage of competence and skilled staff. Another challenge is to consider how these personnel can be retained, beyond traditional retirement dates, possibly through more flexible working opportunities and policy changes.

Ability to attract young people - the marine sector has often struggled to attract young people. Whilst projects have attempted to address this gap, the industry has often struggled with an 'image' problem including a perception of mainly manual labour, long working hours, absences from home, inflexible working arrangements, lower pay than comparable sectors. These factors are also highly influential in the low employment rates for women in the sector.

Need for highly skilled workforce - for the European marine sector to thrive it must focus on providing its customers with innovative, world leading technological solutions. To achieve this it must employed a highly skilled workforce - technical, graduate and management. This requires a combination of maintaining and training in the current workforce whilst also attracting, through employment conditions, and investing in the future workforce.

The combination of all these factors will result in a 'perfect storm' scenario for the marine industry as older, experienced personnel retire whilst companies struggle to recruit new, highly skilled individuals (including females) who are essential if the European industry is to develop its innovative solution driven market. Therefore the trends identified through this study, and previous research, is as follows:

- Attract new, highly skilled individuals to the sector
- Improve female participation in the sector
- Retain existing expertise

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[4] Transport Employment in the EU transport sector, Transport and Research Innovation Portal
[5] Economic ebb and flow in maritime sectors, Eurostat

3.3 Innovative Tools and Strategies to Monitor Skill Needs and Address Skills Mismatch in Sector

Section Status: Section 3.3 - **Innovative Tools and Strategies to Monitor Skill Needs and Address Skills Mismatch in Sector.** Clearly the answer to this is a 'skills council But it is going to need more than a two word answer. At the kick off meeting, strategies at national/regional/local level were mentioned. This is simply too detailed, there are language issues, are we using 'case studies' and it would be too big for the project. Input from Thorsten would be useful but it is not available

3.4 Policy recommendations

Section Status: Section 3.4 - Policy recommendations. If the rest of Section 3 is completed then this should be straightforward.

4 Conclusion