



**MARITIME SKILLS
COMMISSION**

HUMAN SKILLS AND BEHAVIOURS REVIEW

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**MARITIME
UK**



Executive summary

This research is an initial piece of work undertaken for the Maritime Skills Commission to assist in the understanding of the application of non-technical, human skills and behaviours in different sectors of the maritime industry, and their impact on recruitment and retention. The findings presented in the report focus on human skills, transferable skills, including those needed to transition from sea to shore, leadership skills and how training and technology can assist in transferring these into widespread maritime education alongside promoting diversity and inclusion.

The research examines different sectors of the maritime industry, which broadly break down into shore- and seagoing operations, education/academic, support services and owner/charterers. This report is made up of two parts. Firstly, it contains the high-level collective findings from all the sectors, establishing a generic set of non-technical, human skills and behaviours, and recommendations for promoting them. Secondly, the report contains findings by sector which illustrate the differences in challenges and where these skills can impact recruitment and retention.

The research findings show that although each sector deals with unique challenges, across the industry, the human skills that are required for success in any sector are virtually identical. Effective communication and good listening skills are key throughout and need to be widely adopted, with other human skills representing fundamental building blocks within any maritime curriculum. New ways to develop human skills among individuals are needed to improve performance, retention and develop a strong talent pool.

Leadership skills identified for a modern and future maritime industry, on shore and at sea, involve less autocratic and more empathetic approaches. Building strong teams through effective communication, trust and understanding is not only more effective, motivational and productive but also sustainable within the changing landscape of the maritime industry.

The research identifies a whole range of specific transferable skills that seafaring experience brings, including responsibility gained at a young age, resilience, strong team working and a good work ethic. Additional skills and behaviours that are required to make a successful transition ashore are also identified and include time management, organisational agility, perspective and managing diversity.

Diversity and inclusion are considered vital in widening the talent pool needed for promoting recruitment and encouraging retention. The seafaring sector is considered to be inherently culturally diverse. However, in terms of gender, age, socio-economic background and neurodiversity, it is thought that greater promotion to attract people from these groups is needed.

To improve current recruitment and retention within the industry and 'future proof' it, action is needed immediately. New ideas should be welcomed, and managing change is considered essential and the norm. The human skills and behaviours identified by this research need to be well understood and considered as central to the recruitment and retention solution alongside the technical skills required in the industry; they should not be considered independently of each other.

Introduction

Karen Waltham, Project Chair and Maritime Skills Commissioner

I have spent the best part of my 30-year career as a HR professional and the last 20 years in maritime. It is a terrific industry, offering great opportunities, but sadly my experience leads me to conclude that in people terms maritime is decades behind other industries. I am sure that industry and government colleagues have got very tired of my saying so!

But with my passion, personal drive, and desire for the maritime sector to succeed, in support of enabling change across the sector, I was delighted the Maritime Skills Commission agreed that people skills were deserving of serious and thoughtful attention. We commissioned Dr Kate Pike and Karen Passman to conduct this research.

Competencies, soft skills, and behaviours are widely underdeveloped in maritime when compared to other industry sectors across all levels. Given the huge significance of skills shortages, and the opportunities that exist in maritime, there is a visible lack of coordination for the sea to shore transition. Earlier research conclusions have identified the importance of talent management for future skills requirements and for career development, lifelong learning, and leadership development. We cannot leave this to happenstance, these soft skills need the constant attention of any forward-thinking business.

People management desperately needs professional HR skills and expertise, with an HR focus on attracting, developing, maintaining, and retaining 'people' in and across the maritime sector. We can learn so much from other industries in such vital areas as workforce planning, change management, and performance management. These were unfamiliar concepts to some in the maritime industry even 5 years ago and may still be to others now!

The fact that HR teams have evolved in the last 15 years and are continuing to grow is hugely positive! We ARE making progress, and the wheels of change are in motion. This vital piece of research by Dr Kate Pike and Karen Passman for the Maritime Skills Commission provides a timely and much-needed impetus for the work that must follow. It provides a solid evidential basis to support the essential and necessary next phase of action by government, the maritime industry, and key stakeholders.

Based on evidence from the research, five linking recommendations are made.

1 Improve clarity and understanding of the importance of human skills (in the maritime industry)

The term human skills should be used over 'soft' skills to impart the fact that they are equally important in the workplace alongside technical skills. This term should be included in the current curriculum and all relevant maritime training and education on these subjects.

2 Embed human skills into the maritime curriculum

It is essential to ensure that human skills are included and taught within the maritime curriculum. Opportunities should be provided for students to practise and develop these skills, both in simulation and class. A good example of this is the inclusion of 'behaviours' within the trailblazer apprenticeships.¹ Alternative teaching and development mechanisms should be in place, such as the re-introduction of training ships, where students can work together and learn about leadership and teamwork, and other human skills in situ. It is important that these skills are taught well by people who have a thorough understanding of their value in the workplace. It is suggested that people with an understanding of how to achieve behavioural change are best placed to do this, for example, facilitators with leadership and management expertise.

3 Develop an industry skills passport

Although not a new idea, the research showed that the development and establishment of a maritime skills passport, as a mechanism to record human skills, technical qualifications and continual professional development (CPD) across all sectors of the maritime industry, was popular. This has the potential to be powerful if used as an industry-wide tool and would assist employers and people wanting to move between companies, organisations and from sea to shore. To be fully effective, such a scheme needs to be consistent and internationally recognised

¹

Institute for Apprenticeships and Technical Education, 2023. *Trailblazer groups* [online]. Available: <https://www.instituteforapprenticeships.org/developing-new-apprenticeships/trailblazer-group/> [Accessed: September 19th, 2023].

4 Further research

This research is intended as an initial piece of work to identify the human skills required in the maritime industry to promote recruitment and retention across different maritime sectors. Therefore, an increased scope and depth of research within each sector, with a larger sample size, is required to validate these initial findings.

- Additional research into how human skills are developed and applied within other industries, specifically in the aviation sector, is also recommended; this would enable the maritime industry to learn from the established incorporation of human factors into many other regulated and non-regulated programmes.
- A review of the current and future requirements of leadership skills and behaviours is recommended as these skills have a significant impact on recruitment and retention within the maritime industry.
- Further research into leadership skills (people management skills) and behaviours is required on board, and ashore. Evidence is given in this report about how important these skills and behaviours are and the significant impact culture (driven from the top down) has on recruitment and retention within the maritime industry.

5 Follow up action for the Maritime Skills Commission

On the basis of this reports' findings, a focus group should be convened with representatives from the MSC, MSA, MCA and other relevant specialists. The focus group's purpose would be to review the findings and recommendations made within this report and identify the actions to address these, both individually and collectively and assign these as priority work to the appropriate parties, for immediate action.

Key messages to take from this research

1

Rapid Developments

Rapid world-changing developments in technology and the climate are driving change throughout every industry and exacerbating the 'war' for engineering and technological skills globally. A wider awareness of the maritime industry is important as is work on making maritime sector jobs more attractive to people. A change in the industry's approach to addressing this is essential as the maritime industry is currently lagging behind. With the inevitable changes and demands for these skilled people, change will need to be firmly and expertly managed.

2

Human Skills

The term 'human skills' is not uniformly understood, yet this research indicates their immense value and commonality across all sectors of the maritime industry. Human skills, including those needed to transfer from sea to shore and in leadership roles, play a significant part in addressing the industry's skill gaps. Human skills must be treated with equal value as technical skills both in terms of their requirement within the industry and in terms of the regular development needed to embed them. There is strong evidence that the maritime industry is seriously lacking these skill sets, as indicated by the social dialogue of maritime trade unions at all levels, various seafarers' welfare organisations and helplines, The Happiness Index, as well as the lack of diversity throughout most maritime sectors.

3

Raising Awareness

Human skills' developers are needed with a deep understanding of the topic to help raise awareness of the importance of human skills and embed behavioural change across the maritime industry. This development of human skills needs to be regular and ongoing.

It is highly recommended that the general findings in this report (pp. 6 – 19) are read in their entirety, followed by the maritime sectors that are of most interest/relevance.

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1.0 Introduction and context

1.1 Context

The Department for Transport, and Maritime UK, established the Maritime Skills Commission (MSC) to lead the sector's work in ensuring there is a pipeline of talented people to serve all parts of the sector covering shipping, ports, leisure marine, engineering, science, and professional services.

In July 2020, the Minister wrote to the Chair of the Commission setting out these seven objectives:

1. To understand the skills needs of the sector, including the effects of technological change, and to make recommendations for action.
2. To ensure that no part of the sector suffers from serious skills shortages or skills gaps.
3. To ensure that the sector has the apprenticeships and qualifications it needs.
4. To ensure the sector has the training provision it needs (including the use of technology to engage learners and keep costs down).
5. To provide employers and individuals with clear information about career paths and re-training options.
6. To ensure that employers have good quality recruits for their vacancies through effective promotion of maritime careers.
7. To increase exports of maritime education and training.

This workstream falls within Objectives 1–7, focusing on the current and future human skills and behaviours required for the maritime industry to be inclusive and progressive, ensuring a pipeline of talent.

1.2 Research scope

This report examines five broad areas which have an impact on recruitment and retention across the various maritime sectors explored in this report:

- Key industry challenges
- Human skills and behaviours and those necessary to transition from sea to shore roles
- Training, education and technology considerations and impacts
- Leadership skills and behaviours
- Diversity and inclusion

The report makes four recommendations for immediate action which should directly impact recruitment and retention within the maritime industry.

Maritime sectors considered in this research:

1. Ports
2. Commercial seafarers
3. Cruise seafarers
4. Superyachts seafarers
5. Training and development of seafarers
6. Professional services
7. Training and development of shoreside personnel
8. Crew management and recruitment
9. Ship owner and charterers, ship operations and management
10. Research, academia, science, technology, and engineering

1.3 Methodology

It is important to consider that the recommendations made in this report relate to the context at the time of writing (September 2023). The topic under study is rapidly evolving, with new policies and strategies relating to the industry regularly being developed. Best efforts have been made to ensure this research is up to date, but it is likely that the context and policy will continue to evolve. This may be as a result of other relevant work, governmental policy and sector-specific developments.

1.4 Limitations

It is important to consider that the recommendations made in this report relate to the context at the time of writing (September 2023). The topic under study is rapidly evolving, with new policies and strategies relating to the industry regularly being developed. Best efforts have been made to ensure this research is up to date, but it is likely that the context and policy will continue to evolve. This may be as a result of other relevant work, governmental policy and sector-specific developments. The findings and recommendations presented in this report are dependent on the information that was provided and available during the research period. The recommendations made in this report should be considered in the context of the information provided within the full report. We have taken due care to ensure that all the sources are suitable for this purpose; however, no liability will be taken for errors in third-party information.

1.5 Definitions

Within this report, the following terms are used, as defined below: Human skills **2** encompasses a range of terms within the maritime context including soft, interpersonal and people skills. This report uses the term 'human skills' to emphasise their importance and power in the development of people in terms of building networks and for personal development. Human skills can be simply defined as: 'our ability to relate to one another.' People with strong human skills can form deeper connections with colleagues and customers which ultimately serve as a strong foundation for positive workplace performance in terms of innovation, adaptive thinking, collaboration, and more.

Skill **3** is a type of work or activity which requires specialist training and knowledge. A skill can provide the knowledge and ability that enables a person to do a specific task well.

Behaviour, **4** broadly speaking, is the way in which one behaves or conducts oneself; this may include personality and cultural elements.

² Definition adapted from: Harvard Business Publishing, 2021. Leading the way [online]. Available: [5 Centre for Economics and Business Research \(2022\). State of the Maritime Nation 2022, pp. 16, 27, 52](#) [Accessed: August 7th, 2023].

³ Collins dictionary, 2023a. Skill [online]. Available: www.collinsdictionary.com/dictionary/english/skill [Accessed: August 7th, 2023].

⁴ Collins dictionary, 2023b. Behaviour [online]. Available: www.collinsdictionary.com/dictionary/english/behaviour [Accessed: August 7th, 2023].

2.0 Main research findings

This report is presented in two parts. Firstly, it discusses the high-level collective findings for the maritime industry informed by all the sectors researched. Secondly, the findings for each individual sector are presented.

2.1 Identified industry challenges for recruitment and retention

There is recognition that, as a nation, we have a problem with the recruitment and retention of appropriate personnel to meet the maritime industry needs for the future. Action is required now to address this with a convening of minds and a solution-based approach. The industry must be in a position to deliver on the operational requirements of today, whilst also ensuring that it is attracting or upskilling people, with the skills necessary for the future workplace, ensuring that the essential human skills are incorporated.

Recruitment and skills shortages

- It is necessary to address the shortages of skilled personnel and seafarers, particularly in the areas of technology and engineering. The recruitment pool in engineering and technology is generally too small and this was identified as a particular, long-term problem for the maritime industry. Other businesses outside of the industry are also trying to recruit engineers with similar skill sets, and it is important that engineers are made fully aware of the opportunities that exist in the maritime industry for them.
- Growth areas in automation and cleaner energies and fuels, where these new and scarce skills are required, include autonomous vehicles, energy, and skills for green jobs, particularly with the move towards achieving carbon neutrality. All these industries have large skills shortages which are resulting in immense competition in recruiting skilled individuals. Unless the situation is addressed, it will deteriorate further.

Industry awareness

- Visibility of the maritime industry is not currently adequate, with people typically entering due to a family or friend connection, or often 'by accident'. It is important to change this and make entry into the industry as straight forward as possible, particularly for people who may be transitioning from other industries. The maritime industry needs work on its visibility and effective marketing of the many attractive career opportunities it can offer.

Demographics

- Many maritime sectors are experiencing an aging workforce; these gaps need to be filled by the younger generation who may have very different expectations and needs. As the older workforce retires, there is a lack of experienced people stepping into these roles.
- Loss of funding and investment in graduate programmes during the credit crunch in 2008 has additionally created a gap in terms of qualified younger people coming into the industry.

Training

- There is a difficulty in finding high quality and enthusiastic instructors to deliver training to the next generation of seafarers and maritime professionals. For shoreside roles, the issue generally relates to a lack of a central source for finding out about necessary and cost-effective training. There is also the challenge of delivering relevant training for jobs that don't yet exist.

Change management

- There is a reliance on how things have operated in the past, as opposed to looking at what is needed in the future. Rapid and constant industry developments mean that innovation and people with initiative and understanding of how to manage change are needed as the industry moves forward. Skills foresight is very important and increasingly indicates the need for human skills.

2.2 Human skills and behaviours

Whilst different maritime sectors identified some specific human skills and behaviours for their particular areas of work, there were many fundamental similarities throughout, which are detailed below. These can be viewed as the core human skills and behaviours that are considered necessary for working in any sector of the maritime industry. Additionally, 'behaviours' represents a very important strand that is highlighted and assessed within trailblazer apprenticeships ⁵ being implemented in England.

It is important to bear in mind that the skills identified must be considered in the context of a rapidly changing industry driven by technological advances and environmental pressures.

Communication skills

Communication skills were considered essential across all maritime sectors and are viewed as being more than simply the ability to talk effectively with people. Communicating well means being able to actively listen and being able to clearly express thoughts with respect and dignity, with an awareness of the impact communication has on others.

Adaptability and flexibility

An acceptance and expectation of change is important, as well as a willingness to be adaptable and flexible and ready to deal with change. Dealing effectively with varied and changing situations in the modern workplace is becoming the norm.

Team working

Good teamworking and communication, strong relationships with colleagues and being able to support each other are essential skills in building a strong and cohesive team. These skills are considered to include trust and sensitivity to the needs of others, and recognising when a team member needs support.

5. Ibid (1) Institute for Apprenticeships and Technical Education, 2023.

Relationship building

Relationship building is closely linked with teamworking. The need for tolerance and respect for others is seen as important, particularly in diverse teams. Other skills and behaviours identified here included politeness, loyalty, flexibility, empathy, cooperation, and collaboration. These skills are necessary in order to get the best out of a team including in terms of understanding people's strengths and weaknesses.

Time management and organisation

Organisational and time management skills and the ability to prioritise workloads, were all identified as important.

Emotional intelligence

Emotional resilience, self-control and an awareness of the impact your behaviour has on others, summed up as emotional intelligence, were identified as essential human skills within the maritime industry but it was also noted that these are sometimes lacking.

2.3 Training and technology considerations and impacts for the sector

The maritime industry, across all sectors, urgently needs to recognise and respond to the evolving jobs market and the new skills that are required. Anticipating further adaptation of the industry and future recruitment requirements, to keep up with the pace of change, is essential, along with responsive change management. This issue is echoed across other industries and particularly concerns the number of people required in growth areas such as engineering, technology, science and innovation, where recruitment competition is extreme. As stated already, the maritime industry must be able to compete for these skills to secure a sustainable future.

Ensuring human skills and interaction are foundational and embedding them into the maritime curriculum will offer a balance to the technical skills required. Seafarers work in a culturally diverse environment, and social intelligence needs to form an essential part of their formal education. Much of the current investment in training focuses on technical skills, and a similar level of investment is needed in the training of these essential human skills.

There is the potential, in particular, to improve communication and many solutions exist or are coming onto the market that should enable technology to be better used in real time. Training, whether in the form of training courses or more broadly in education, always needs to be geared towards the reality of working in the industry. There is currently a disconnect between the curriculum and a constantly evolving workplace.

It is useful to have mixed approaches to education because one style does not fit all. If we want to attract people into the shortage areas at different stages of their careers, we must take a flexible approach: "the technological changes and the current pace of change is such that lifelong learning is not something that we aspire to anymore – it is a requirement." This emphasises the need to ensure that human skills are included and taught within the maritime curriculum.

Human skills training

Training is needed to help address the gaps in understanding around human skills, particularly in the areas of leadership and management and in recognising and dealing with on-board culture. This training needs to be delivered innovatively and interactively, with the aim of achieving long-lasting behavioural change. For the development of human skills, training should be about practice, observation and modifying behaviour. Technical skills can be relatively easy to train; however, human skills are not as easy, and take longer to embed.

Supporting people through behavioural change is a specialist skill, and some would suggest that behaviourists⁶ are better suited to this role. Ensuring that the training is suitable and that 'facilitators' are well equipped to support behavioural change is essential.

2.4 Transferrable skills and behaviours (moving from sea to shore)

Neither seafarers, nor the shoreside industry, properly understand the transferable skills that seafarers bring to a role.

Modern seafarers tend to spend less of their careers at sea; they are coming ashore earlier than in the past. It is estimated that the average time spent at sea in total is now about seven years. An officer transitioning ashore is in a very different position to a master with 10 years' command experience and this is where human skills can vary widely. Experience shows that younger seafarers tend to make a more successful and rapid transition ashore, probably due in part, to having had a shorter period of time at sea.

Coming ashore from sea can be a culture shock for some, particularly when adapting to the world of 'business'. Including an element about adjusting to shore life in seafarers' training could be a major benefit. Currently, taking shore jobs following a few years at sea is a 'usual expectation'.

With well-structured training and proper use of technology, acquiring different sets of skills will become easier. Even the skill of using technology itself is something that is useful and applicable beyond the realms of seafaring. In the process of utilising technology and with training, it is possible to learn adaptability.

There should be a focus on developing well-rounded maritime professionals on shore and at sea and training should incorporate materials aimed at improving understanding of both roles and their responsibilities. Currently, there is often a lack of interconnecting perspective of these roles.

The Marine Society ⁷ offers a range of resources to help crew move into shore-based jobs following work at sea, whether in the commercial or leisure sectors. Their programme includes a mentoring scheme and podcasts and access to a wide range of literature. The Institute of Chartered Shipbrokers ⁸ also has a wide range of shoreside qualifications available, but the training for these 'dry' roles is considered too disjointed and seafarers may not necessarily be aware of them.

⁶ Tutor2u, 2023. Behaviourist approach [online]. Available: <https://www.tutor2u.net/psychology/topics/behaviourist-approach> [Accessed: August 9th, 2023].

⁷ Marine Society, 2023a. Develop [online]. Available: <https://www.marine-society.org/> [Accessed: August 17th, 2023].

⁸ Institute of Chartered Ship Brokers (ICS), 2023. Choosing your qualification [online]. Available: <https://www.ics.org.uk/learning/choosing-your-qualifications> [Accessed: September 10th, 2023].

Skills gained from working at sea are identified below:

Human interaction and management are very important skills learnt at sea. Mariners are good at interacting with different nationalities and a variety of people generally. Companies need to know what seafarers can offer them. Coming ashore training is required and those in the office should be assisted in recognising and translating the skills that seafarers have when coming ashore. The skills identified are given below:

Understanding of life at sea

The innate understanding of what it is like to be a seafarer was considered to be one of the most important transferrable skills that a seafarer can bring ashore. Sensitivities exist relating to this point and the proposal to reduce sea time in exchange for simulator training. Whilst the latter is an important aspect of future training, the industry needs to be sensitive to the value of actual sea time.

Attention to detail

A seafarer's work is often cross-checked or forms part of an official log so there is a continued circle of liability and historical patterns are made. Seafarers develop "A talent for spotting errors or anomalies."

Organisation

A ship has a routine and simply joining a ship means that one of your tasks is to follow that routine. It is in the nature of the role that procedures and processes are already outlined for you to follow. It is a skill to be able to adapt to this quickly.

Team working

Seafarers are often people who have been part of a close-knit team and this is a useful experience for working ashore. They also have the ability to collaborate well in a team and adapt to different situations, including working alone.

Responsibility

Responsibility is often gained at a young age working at sea.

Seafarers are usually good at problem solving and stepping forward when something needs to be done: "you are on a ship, you are in the middle of the ocean, you have got to find a solution". Being accomplished in these skills means that seafarers can turn their hand to many different tasks and tend to ensure that a job is completed regardless.

Resilience

Seafarers often possess resilience and crisis management skills. Being at sea can be challenging and involve many issues that need dealing with. Seafarers will often have had to face stressful situations and unique challenges at sea which can provide them with resilience.

Seafarers often bring a degree of tolerance that others ashore might not have, due to the nature of their working environment and as a result of their experience working with many different nationalities. Seafarers are often understanding of each other's roles and have an appreciation that everyone is experiencing different stresses as they fulfil their roles at sea. This skill is highly transferable. Additionally, seafarers are often able to compartmentalise, for example by being able to put shore stresses to one side.

Communication

Good communication skills are acquired at sea that expand across different cultures and between seafarers and also between the sea-going and the office personnel. This can often be enough to resolve issues that arise.

Work ethic

Seafarers often have a good work ethic, including ensuring a job is completed, being adaptable and committed.

Areas that seafarers may need to develop when coming ashore include:

Promotion of skills

It is felt that shoreside staff can have a lack of awareness of what it is like to be at sea and more needs to be done in this area. Seafarers need to know how to “promote their transferrable skills” when making a transition to shore.

Time management

Seafarers are used to working long hours and being away from home for a long time. Seafarers moving ashore can experience burn out quite quickly, “because they forget they don’t have the ‘off’ period that matches the on period and can work flat out and then have to quit or have time off to recover.” Time management skills are needed to deal with this.

Technical skills

Industries everywhere are embracing technology. Alongside the human skills, acquiring such skills is very critical for a transition, as are organisation, logistics and planning.

Empathy

There can be a challenge when transitioning from a command-and-control culture on board to a different culture on shore, and it may be necessary to help individuals to develop greater empathy.

Decision making

Other skills noted for seafarer development coming ashore included: developing others and yourself, dealing with ambiguity, organisational agility, perspective, managing diversity and decision making. On board, in times of stress, decisions are typically dealt with by the senior officer often without consultation with members of the team. By contrast, ashore, many decisions require a collaborative approach, and transitioning seafarers may need to develop the facilitation skills to contribute effectively to this kind of decision-making.

2.5 Leadership skills and behaviours

Leadership has a great influence over organisational culture at work and strong human skills are required to create an optimum working environment and productivity. Maritime leaders (both at sea and onshore) need an awareness of the influence they have on the working environment and need to be able to communicate effectively and listen and respond well to their workforce. Additionally, they need to be responsive and willing to adapt to changes impacting the workplace and work collaboratively with industry. It is important for the current and future requirements of leadership skills and behaviours to be continually reviewed as these skills have a significant impact on recruitment and retention in the maritime industry.

There was an understanding that leadership must be entirely consistent in its messaging across the organisation and at sea. Demonstrating that people are valued and will be supported by the leadership is vital to enable a motivated workforce that feels capable in their work and encouraged to learn and develop.

Leaders should have the ability to translate their knowledge into sharable information, drawing on human skills around communication and emotional intelligence.

The industry needs to look at their existing leaders as well as bringing in leaders from outside of the industry with fresh ideas. Neither the existing leaders nor those from outside have all the answers to the changing nature of the industry. Rather, collaborators and disruptors, with an openness to change, are necessary for success.

Leadership skills and behaviours at sea

A change of a master, head of department or senior officer can involve different leadership styles on board and impact the working environment. This can often lead to issues for the crew as they try to adapt to different expectations and procedures. Leaders need to be fair and act with consistency and tolerance, particularly in light of the fact that leadership at sea has been associated with a command- and-control style which has been viewed as too rigid and lacking in empathy. Additionally, this style of leadership does not work well in shore-based roles and needs to be addressed with suitable leadership training.

The industry has seen a generational change, with younger masters often having some excellent human skills and understanding of their crews. You want people to do what you ask them to because they respect and understand why you are asking them to do something. Good communication is the key to this. The industry needs to look carefully at leadership training to support senior officers at sea and place more emphasis on these communication skills.

One style of leadership does not work for all situations. Effective leadership requires the leader to be flexible in their approach, adapting according to the situation as well as the individual. Empowering staff and crew to be effective decision-makers is important, as is supporting their development and building their confidence and educating them through regular two-way feedback.

Communication

Effective leadership and management rely on good two-way communications. It is also important to understand and sense, or 'read', a situation. As well as listening, good communication also involves setting clear objectives and boundaries, and when necessary, enforcing these. Active listening skills and someone who understands the cultures of people of different nationalities and styles of management are essential. The ability to listen should be an integral part of leadership and communications.

Team building

The ability to motivate teams and individuals is central to building strong teams that work well together. Motivated people perform better than those who are managed via discipline alone. Unfortunately, at sea there are limited opportunities to reward crew, "no carrot in the sector" (for example with time off). As a leader, living and working on board in close quarters with the crew means that their behaviour is often visible and this makes it doubly important to provide strong and empathetic leadership.

"A good understanding of your people and their backgrounds, needs, strengths and weaknesses is essential to be able to get the best out of them and to be able to offer them support when needed." Good mentoring skills and taking an interest in junior staff is also important for team building.

Empathy and awareness

Empathic leadership that demonstrates awareness, empathy, compassion and understanding is an important leadership skill. Empathy in leadership helps the leader gain an understanding of their team's background, needs, strengths and weaknesses in order to get the best out of them and be able to offer them support when needed.

An awareness that the decisions being made in one place have a genuine impact on the lives of a whole group of people elsewhere, potentially worldwide, is important.

Responsibility

This is the ability to empower and inspire others.

Conflict resolution and strong negotiation skills (with surveyors etc.) are also essential.

2.6 Diversity and inclusion

Improving diversity throughout the industry presents a significant opportunity to address recruitment issues and find new ways of working. By raising awareness of the industry in schools, more young people will view shore-based commercial roles as a career option, encouraging wider diversity and a broader talent pool with increased human and technical skills available.

Everyone should be treated fairly with the same opportunities, according to individual merit and not anything else. It is important to have variety in the workforce and different voices in the room, from different backgrounds, offering different thoughts and importantly, different human and technical skills. Such variety strengthens a workplace, making it more sustainable and resilient.

There have been many organisations working in this space, including Nautilus International, The International Trade Federation (ITF) and European Transport workers Federation (ETF) together with the European Community Shipowners' Associations (ECSA) and the International Chamber of Shipping (ICS) etc. All of them have done much to encourage and to support LGBT seafarers. International guidelines now exist within the Maritime Labour Convention (MLC), 2006 on bullying and harassment, and pride in Maritime has a much higher profile.

However, globally, much more work is needed to promote diversity and inclusion, and Maritime UK's Diversity in Maritime launched in 2020 ⁹ and now includes a charter, along with other work by other organisations in this space. The maritime industry is a notoriously male-dominated environment, particularly in areas such as ship building, engineering and IT, although this picture is slowly changing. Currently, an effective gender balance in commercial shipping amongst ratings and officers does not exist. However, the cruise and superyacht sectors were seen as more inclusive due, in part, to the hospitality aspect of their operations. Life on board in the commercial sector was not viewed as the most welcoming of environments for LGBT+ individuals and The Seafarer's Charity developed ¹⁰ a 'Coming out' tool kit for seafarers to help address this issue. Among other organisations providing support for the LGBT+ community, Nautilus International ¹¹ alongside Maritime UK, established a 'Pride in maritime network', 2021.

The research highlighted an apparent demographic difference, identifying that young people, more than older generations, are thought to be broad-minded, accepting and tolerant of diversity in general and highly adaptable to new ways of working.

It was felt that bringing diversity into the workplace should be more intentional with initiatives required to make it happen. Identifying the gaps in the current work force, it was seen as important to challenge the cultural barriers to achieving this and to make a solid long-term action plan to address the issue. Having diversity on board helps to educate other crew members or colleagues, supporting acceptance and tolerance of difference. It was felt that diversity allows change to happen more freely.

"Modernity is often embodied in diversity, and we need this greatly as an industry."

It was noted that a better understanding of equality, diversity and inclusion is needed, alongside a strategy for integrating this into maritime organisations.

9 Maritime UK, 2023a. Diversity in Maritime [online]. Available: <https://www.maritimeuk.org/priorities/people/diversity-maritime/> [Accessed: August 9th, 2023].

10 Maritime UK, 2022. The Seafarers' Charity – Coming out tool kit [online]. Available: <https://www.maritimeuk.org/priorities/people/diversity-maritime/diversity-toolkits/toolkits/seafarers-charity-coming-out-toolkit/> [Accessed: August 9th, 2023].

11 Nautilus International, 2021. Pride in maritime network LGBT+ initiatives flagged [online]. <https://www.nautilusint.org/en/news-insight/telegraph/pride-in-maritime-network-lgbt-initiatives-flagged/> [Accessed: October 10th, 2023].

2.7 Recommendations

Based on evidence from the research, five linking recommendations are made.

1. Improve clarity and understanding of the importance of human skills (in the maritime industry)

The term human skills should be used over 'soft' skills to impart the fact that they are equally important in the workplace alongside technical skills. This term should be included in the current curriculum and all relevant maritime training and education on these subjects.

2. Embed human skills into the maritime curriculum

It is essential to ensure that human skills are included and taught within the maritime curriculum. Opportunities should be provided for students to practise and develop these skills, both in simulation and class. A good example of this is the inclusion of 'behaviours' within the trailblazer apprenticeships.¹² Alternative teaching and development mechanisms should be in place, such as the re-introduction of training ships, where students can work together and learn about leadership and teamwork, and other human skills in situ. It is important that these skills are taught well by people who have a thorough understanding of their value in the workplace. It is suggested that people with an understanding of how to achieve behavioural change are best placed to do this, for example, facilitators with leadership and management expertise.

3. Develop an industry skills passport

Although not a new idea, the research showed that the development and establishment of a maritime skills passport, as a mechanism to record human skills, technical qualifications and continual professional development (CPD) across all sectors of the maritime industry, was popular. This has the potential to be powerful if used as an industry-wide tool and would assist employers and people wanting to move between companies, organisations and from sea to shore. To be fully effective, such a scheme needs to be consistent and internationally recognised.

4. Further research

- This research is intended as an initial piece of work to identify the human skills required in the maritime industry to promote recruitment and retention across different maritime sectors. Therefore, an increased scope and depth of research within each sector, with a larger sample size, is required to validate these initial findings.
- Additional research into how human skills are developed and applied within other industries, specifically in the aviation sector, is also recommended; this would enable the maritime industry to learn from the established incorporation of human factors into many other regulated and non-regulated programmes.
- A review of the current and future requirements of leadership skills and behaviours is recommended as these skills have a significant impact on recruitment and retention within the maritime industry.
- Further research into leadership skills (people management skills) and behaviours is required on board, and ashore. Evidence is given in this report about how important these skills and behaviours are and the significant impact culture (driven from the top down) has on recruitment and retention within the maritime industry.

5. Follow up action for the Maritime Skills Commission

On the basis of this reports' findings, a focus group should be convened with representatives from the MSC, MSA, MCA and other relevant specialists. The focus group's purpose would be to review the findings and recommendations made within this report and identify the actions to address these, both individually and collectively and assign these as priority work to the appropriate parties, for immediate action.

3.0 Sector research findings

3.1 Maritime Sector: Ports

Introduction

Traditionally, and throughout maritime history, ports have been a steady employer within local communities, and their operations are continuous all year round. Ports are responsible for facilitating ships from all over the world in berthing and unloading their cargoes to keep trade flowing smoothly. This means that port personnel deal with a multitude of different issues daily. Ports, therefore, must be responsive, able to act quickly and constantly open to change.

There has been a recent focus on ports to re-develop and bring new business into the country to help drive growth.¹³ However, this is not without its challenges when it is also necessary to keep up with changes to legislation, fast-moving technological advances and the difficulty of attracting people into the sector.

The port sector,¹⁴ like many others in the maritime industry, provides a vast range of employment that offers opportunities for a variety of technical skill sets. However, UK-Ports ¹⁵ also identified the following skills and personal qualities needed to work in ports. These are given below:

- Safety-consciousness
- Teamworking and communication skills
- Good level of fitness and health
- Flexibility to work irregular hours in some jobs
- Language skills for some jobs

This research confirms some of these skills and highlights others, as discussed below.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

Identified Sector challenges

Currently, it is not a recruiter's market and job seekers can be more selective around which port roles they take on. Port operative positions tend to result in individuals having good transferrable skills allowing them to move into other port roles, particularly from manual to computer or office-based positions, where more hybrid or flexible working opportunities exist.

¹³ Department for Transport, 2019. Maritime 2050: Navigating the Future [online]. Available: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872194/Maritime_2050_Report.pdf [Accessed: August 10th, 2023].

¹⁴ Maritime Skills Commission, 2022. Future Ports Workforce Research Report [online]. Available: www.maritimeuk.org/priorities/people/skills-commission/reports/report/ [Accessed: August 10th, 2023].

¹⁵ UK-Ports, n.d. Working in ports – an overview to careers [online]. Available: <https://uk-ports.org/working-in-ports-an-overview-to-careers/> [Accessed: July 20th, 2023].

The port sector, like others, identified the current and long-term difficulty, which is likely to last into the foreseeable future, in recruiting engineers. Some employers are finding that they are even struggling with this issue at the apprenticeship level. The ports in remote locations, with smaller populations in the country, are particularly impacted. Project management roles, especially in engineering, construction and infrastructure, are difficult to recruit staff into and this results in the need to bring in more expensive contractors. The general port operative pool, however, seems to have a reasonably 'healthy' supply, but retention was identified as an issue.

There has been a focus on port redevelopment to help drive growth and bring new business into the country. Whilst this is happening, some feel that it is difficult to keep up with new legislation and the related challenges.

Raising awareness of the sector was seen as another challenge. This includes issues around:

- How to optimally showcase ports to attract the next generation into the sector.
- Lack of awareness amongst school leavers of the range of career opportunities that are available within the maritime industry generally, including ports. Knowledge of port work often comes from family connections to the port. More inclusion in the school curriculum, to raise awareness of the career opportunities that ports can offer, is needed.

Other challenges in the port sector were identified as:

- Loss of funding and investment in the graduate programmes during the credit crunch in 2008 which has created a gap in terms of younger people coming into the sector. As the older workforce retires, there is a lack of people with experience stepping into these roles.
- Addressing the problem that some of the manual roles necessary in ports are viewed as less attractive to school leavers, such as heaving lines, both day and night; likewise, for safety reasons, some ports have banned the use of mobile phones in certain roles and this makes the jobs less attractive.
- Delivering on the operational requirements of the business today, whilst ensuring the skills for future workplace needs are being put in place and upskilling existing employees.
- Creating a more diverse workforce to attract talent more broadly.
- Identifying and addressing the skill gaps, particularly in marine engineering
- Ensuring that the best people are in the right roles and that they have the support to develop within the industry for a long-term future.
- Modernisation of the ports and addressing the implications of working towards net zero
- The challenge and management of change.

Human skills and behaviours

Due to the varying nature of different ports, much of the skills training and learning needs to occur on the job. The world of ports and shipping is changing drastically and quickly and it is essential to have people in place who are resilient to this and come into the job anticipating it. Digital skills are important and require people to embrace change, learn, and take opportunities as they arise. In turn, the skills required will build naturally. There will most likely be fewer and less physical jobs in the future.

Additional human skills identified include:

Effective communication

- Face-to-face communication skills in management and leadership roles are fundamental. Good communication at all levels, can help avert grievances, investigations and disciplinary issues and many other potential problems.
- Apprentices prefer to e-mail or text rather than speak on the phone and need help with their human skills.
- The pandemic has impacted some school leavers, causing anxiety and poor ability to communicate verbally effectively.

Flexibility

- There should be an expectation of change as well as a willingness, readiness, and the ability to deal with change.
- People must be able to work flexible hours outside of 'normal' hours.
- The above points are seen as easier for younger people; older people are more likely to be used to doing things in a certain way and less likely to be open to change.

- Resilience, integrity, accountability, and honesty are essential.

Problem solving

- Being a problem solver and being able to think on your feet are vital skills.

People management skills

- People should only be promoted once they also have the people management skills needed for the position.
- People management training should cover mental health and wellbeing.

Teamwork and motivational skills

Training and technology considerations and impacts for the sector

There is a "need to invest and think more like a technology company and less like engineers. Think about data rather than cranes and mending things." Technology is an integral part of the future and ports are rapidly becoming automated. Uber was put forward as an example. "Uber wasn't started by taxi drivers getting together and saying how can we use technology to create a better experience. It was started by technical people saying that the taxi business is behind the curve and offers a poor experience, and they decided to resolve the issues with technology". The same is possible in ports.

More needs to be done to scope and identify apprenticeships for key roles. These roles are complex and when upskilling people internally, it is estimated to take 18–24 months to train someone to a level where they can work independently. This kind of skill development would therefore fit well into an apprenticeship.

Having a robust Learning Management System (LMS) in place in ports is important. It was felt that LMS, with career paths, job descriptions and identified training for development, was lacking in some ports compared to other sectors.

The speed at which technological changes are taking place means that the sector must be flexible and quick to adapt. The following training and technology considerations and impacts were identified:

- There is a need for improved links with local schools and colleges in terms of training and early careers considerations. More discussion is needed around work experience and placements.
- It was identified that it was hard to find trainers with sufficient port experience to deliver port operations level 2 apprenticeships. One potential solution put forward was to create a dedicated academy or training centre with courses delivered by port experts, although issues around capacity to do this were noted.
- It is important to ensure that new recruits and current staff can use technology and have the necessary digital skills for the work they need to do.
- Simulators and virtual reality can be used for various areas of maritime training. Technology already assists in safety training, in addition to training for pilotage and vessel handling.
- Technology has great significance in a port's development but some of the jobs in this sector are still very traditional and hands on. Recruitment must take this into consideration, alongside what it is that younger people are looking for from employment and how they gain the hands-on experience that they need to acquire work in a port.
- Behavioural skills such as a capacity to handle change, dealing with failure and finding solutions could be developed in schools and the workplace. Change occurs quickly in the work environment and quick responses are needed. Greater preparation and education to prepare people for these challenges is needed.

Transferrable skills (moving from sea to shore)

Historically, the use of a command-and-control style of leadership has predominated at sea, but it was noted that this leadership approach does not work well onshore. Therefore, senior officers coming ashore need to have developed flexibility within their leadership, engaging with staff and encouraging a more participatory approach. The following transferrable skills were identified:

- Adaptability
- Analysis and decision making
- Organisational skills, including workforce planning and resourcing

Leadership skills

In addition to putting in place training for leaders from within the maritime industry, it would be beneficial to bring in leaders from other sectors, with fresh ideas who are willing to both collaborate and disrupt and ensure that leadership approaches are relevant in these changing times.

Leadership has great influence over the organisational culture in a workplace. It was noted that different leadership styles are needed at different times and for different people, alongside a good understanding of equality, diversity and inclusion.

The leadership team are responsible for motivating their staff and ensuring that everyone "brings their brain to work". This involves encouraging staff to perform at their best and removing barriers to enable this.

Leadership needs to be consistent, presenting the same messages across the entire organisation. It is important for leaders not only to say, but also to demonstrate that they value and believe in the capability of their people. They must demonstrate support, encouraging people to learn, with no preconceived limiting judgement. Findings on other leadership skills identified are given below:

- The traditional leadership style, of command-and-control, was considered detrimental in helping the sector and industry to progress. Leaders need to be flexible and able to adapt to various situations. Not all situations on shore or on board are safety critical, thus requiring an authoritarian approach. If this approach is used predominantly, the younger generation are likely to find it unacceptable and the sector will continue to struggle with recruitment and retention.
- The use of Key Performance Indicators (KPIs) are beneficial to developing leadership skills, including 'emotional intelligence'.
- The use of psychometrics is useful for leaders to better understand and manage themselves and others.
- Psychological safety was identified as an issue. Individuals should feel that it is OK to make mistakes, and that it is part of a learning process. Leaders should be aware of this and tailor their responses accordingly.
- Drive and resilience are essential qualities.
- Accountability is important.
- Safety and wellbeing should be prioritised.
- Good decision making is central to leadership.
- A culture of continuous improvement should be implemented at all levels.
- Leaders must be educated in change and change management.
- Negotiation skills are beneficial.

Diversity and inclusion

- It was noted that it is important to have diversity in the workforce providing different voices and perspectives.
- It is essential to ensure that job advertisements attract the right candidates by removing unconscious biases from the language used and making them more inclusive and attractive to a diverse audience. For example, instead of 'Environment and sustainability engineer' use 'Environment and sustainability coordinator'. One organisation made this change to an advert and the response went from three unsuitable applicants to 20, five of whom were very suitable candidates for the role.
- It is important to ensure that the attraction and recruitment process does not rule out people from different backgrounds, including those with poor IT skills and no degree. There needs to be a fair assessment process for the individual without bias.
- Inclusivity is a priority; all staff should be treated fairly and given the same opportunities. This should be based on individual merit.
- A broader view should be taken, in terms of how employment is offered to people in the region, including those with learning difficulties.
- Socio-economic diversity needs to be addressed. Underprivileged people seeking work in ports can often be from a white demographic and poorer backgrounds. It is important to ensure that there is inclusivity for this group and their viewpoints are taken into consideration.
- Ports can also lack diversity in terms of ethnic minority workers, due to their geographical location.

- Bridging the confidence gap is important, especially for women who have not had the confidence and support to apply for senior jobs in the same way as men have.
- Inclusion must be viewed as being equally important as diversity.
- While there is a lot of emphasis on changes to policies, difference only occurs when action is taken.
- The physical requirements in some port jobs, can make it difficult to recruit people with certain disabilities. However, neurodiverse individuals are often particularly suited for jobs where intense focus is required.
- Apprenticeships can support the increase in social and economic diversity, enabling people to earn whilst learning.
- Male allies are important. Men need to be on board with equality, diversity and inclusion.
- A diversity focus is particularly needed within engineering.
- There is a need to provide work partners for individuals returning to employment after long periods away from work. Additionally, there should be a move away from a standard interview towards using a diverse panel of people to help make assessments. This method of assessment would allow people to display their skills in a different and less formal way.

Identified good sector practice

Innovation and development for the future

- Every port should create opportunities for innovation to take place among colleagues. Investment in a 'change strategist' who can help facilitate change across each port specialism or on a regional basis, would be helpful; someone who can be a catalyst for the changes that are needed heading towards a more automated future for ports and the maritime industry.
- There is a need to recruit young people for succession planning and to multi-skill the existing workforce. This would bring fresh people into the organisation whilst also helping existing staff in the sector to develop their skills.
- Ports should be showcased to the public, particularly schools and colleges, to help demonstrate what can be achieved and the opportunities that exist.
- Lessons can be learned from this example of best practice from a graduate programme: eight graduates were recruited and allocated to different areas of the port. They were not given any specific role other than to observe and learn. The line manager's key objective, and the programme's success factor, was to ask for positive and constructive feedback and to ensure that the graduates were engaged and enjoying themselves. The graduates were then able to determine what they thought would improve operations in the port and present their ideas to the board for approval. On the strength of this, many positive improvements were made that essentially meant that the graduates had paid for themselves within six months of starting.
- It is important to allow employees to be responsible for their own personal development, with a budget to do this and support from their line manager.
- Best practices and success stories should be identified that can help to make improvements. Looking at different industries can also be productive. "A willingness to experiment and make mistakes is also helpful and in a small organisation you can easily do this and experiment quickly and learn more as you go along. This is particularly the case if you have a loyal workforce that wants to experiment." Small and medium-sized enterprises (SMEs) can be more agile and try new things quickly, arguably making them more flexible, proactive as well as responsive to change.

Collaboration

There are a number of groups worldwide who work to share information. In the UK, some of these include, the Ports Skills and Safety Group,¹⁶ the British Ports Association **17** and UK Major Ports Group **18** and these all feed into Maritime UK **19** which is part of the Maritime 2050 strategy **20** that is driving the maritime industry overall within the UK. Collaboration between these groups is important and ideally, all relevant organisations should feed through Maritime UK.

- Sharing experiences and knowledge with other ports is also valuable. Connected ports (global) were mentioned for sharing non-rival and non-commercial information.
- Bringing the whole workforce together for half a day a year for a company chat, external speaker and a picnic lunch can generate collaboration and information sharing. Leaders can use the opportunity to listen and speak to their staff. Many issues can be identified this way by exchanging information and expanding knowledge of different areas of work.

Awareness raising

- Port open days
- Raising awareness of the opportunities for careers in ports could be achieved by making school visits to talk to the children and their careers advisors.
- 'Discovery weeks' for children could be held so that they can experience as many different port roles as possible.
- Open days could be hosted at the ports for all levels and ages, providing information on a good selection of careers and educational bodies on site so that they can talk through their provision and showcase the maritime industry and port sector.

Innovation

- The 'Change maker's programme' (Port of Tyne) was set up to deliberately disrupt how the port did things to enable them to work with a fresh approach. This programme is made up of a mix of graduates and people who have worked in the port for a while and who would like to see more change. "When things have been done the same way for a long time, that way is now inefficient and outmoded, it's about re-skilling and taking people on that journey". This group and the graduate group have action learning days together where they develop projects, visit other businesses and look at new ideas. Within this, they have quite a lot of autonomy and in working together they also learn about teamwork, time management, partnership, listening, project management etc. This was seen as a very productive development programme helping people become better at problem solving, communicating and team-working, which really helped in their day-to-day jobs.
- The Port of Tyne also operates the UK's first 2050 Maritime Innovation hub **21** which focuses on innovative development, external and internal collaborations and new ways of working.

Communication

- Verbal communication could be improved through greater engagement between ports and schools/colleges for mock interviews, industry days, work experience, T levels, etc., to help build confidence. This would assist in recruitment and attraction to the sector and the integration of ports into their local communities. The process of recruitment, assessment and induction should not be onerous or deter people from applying and needs to be inclusive. A buddy system for new recruits would also help to integrate new starters into the workplace in the early months.

¹⁶ Ports Skills and Safety, 2017. Ports skills and safety [online]. Available: <https://www.portskillsandsafety.co.uk/> [Accessed: July 20th, 2023].

¹⁷ British Ports Association, 2023. British Ports Association [online]. Available: <https://www.britishports.org.uk/> [Accessed: July 5th, 2023].

¹⁸ UK Major Ports Group, 2023. UK Major Ports Group [online]. Available: <https://ukmajorports.org.uk/> [Accessed: July 11th, 2023].

¹⁹ Maritime UK, 2023b. Maritime UK [online]. Available: <https://www.maritimeuk.org/> [Accessed: July 20th, 2023].

²⁰ Gov.uk, 2019. Maritime 2050: navigating the future [online]. Available: <https://www.gov.uk/government/publications/maritime-2050-navigating-the-future> [Accessed: July 18th, 2023].

²¹ Port of Tyne, 2023. Innovation hub [online]. Available: <https://www.portoftyne.co.uk/about-us/2050-innovation-hub> [Accessed: July 4th, 2023].

Recommendations

1. Raising awareness

Ports should showcase some of the many impressive technological advances to help increase awareness of the sector and demonstrate that it is an adaptive, modern, and changing industry that can appeal to young people as well as those with traditional skills.

2. Apprenticeship levy

It was suggested that the apprenticeship levy does not always serve the right people. Greater flexibility and a broader range of what apprenticeship levies can be used for was proposed. This included its use on shorter courses to help people to upskill and build qualifications. Human skills and behaviours are typically developed using shorter training courses which may be ideal for developing and broadening the use of these apprenticeships.

3. Skills passport

There was significant support for a skills passport in the port sector and it was suggested that this could be developed for the sector and the industry generally. For example, it was mentioned that ABP have developed their own courses, including managing safety in ports and cargo handling in ports which are rolled out to everyone in ABP ports and to other ports which have similar processes, standards and training. However, if this was implemented industry-wide, then a way to document experiences gained, for example, in health and safety, or managing people, or awareness of how to handle a rope, would allow skills development to be easily documented in whatever maritime sector staff work in. This would increase consistency across the port sector and the broader maritime industry, although it was acknowledged that the sharing of content may be challenging.

3.2 Maritime Sector: Commercial Seafarers

Introduction

Life as a commercial seafarer is significantly different in many ways to maritime shore-based roles, primarily due to the onboard environment in which crew live and work, sometimes for extended periods of time. For some, particularly those experiencing their first sea-time, being away from family and friends can prove an isolating experience, often coupled with limited access to communications.

Seafaring has changed significantly over the past 50 years and some research participants noted differences that included greater crew numbers in the past, much more time in port, providing many more opportunities to see the world in comparison with today.

A commonality noted across seafaring generations was the opportunity to take on the responsibility of running these ships from a relatively young age.

A range of skills and disciplines are usually required on board, and as a result, when meeting new crew, there is an assumed level of competency, often backed by their certification. However, this does not necessarily guarantee adequate experience to meet the levels of competence required, but instead sets inaccurate expectations.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

Identified Sector challenges

- Recruitment was identified as the biggest challenge, in order to ensure there are the right numbers of properly qualified seafarers in the years ahead.
- Shortened sea time **22** was considered a challenge as it is not possible to completely replace experience with technology: “would technology help if you are not sufficiently situationally aware?”.
- Issues with dignity and respect were raised; seafarers felt that in some cases, shore management can make what appear to be arbitrary decisions, perhaps unaware of the impact this can have, causing clashes with those on board who may feel overly controlled and a lack of understanding about on-board constraints. The importance of viewing seafarers as human beings and fellow workmates is vital, above all else, and this means it is essential for shore management to be aware of what life at sea is like.

22 Nautilus International, 2023. UK green lights simulator training for sea-time reductions [online]. Available: <https://www.nautilusint.org/en/news-insight/news/uk-green-lights-simulator-training-for-sea-time-reductions/> [Accessed: July 4th, 2023].

- Cadets will learn certain skills at college, which do not always correlate to those required when actually at sea. It was felt that colleges generally need to do a better job of preparing cadets for the reality of life at sea, “because it is not as simple as reading it in a book”.
- Cadets should not be treated like a “spare pair of hands”; they need to learn the fundamentals of their job, which would help reduce attrition rates.
- Seafarers today have a different mindset towards sea time and are less likely to sign up for long trips. An average of seven years spent as a seafarer, before returning ashore, was mentioned. This creates a challenge for the industry as seven years is not long enough to become a Master, which usually takes 10 years. The reason for this is that many seafarers wish to be closer to their families and spend more time at home.
- It was felt that there needs to be a ‘bridge’ for people who want to come ashore, to ensure a smooth transition and allow ex-crew in the maritime industry to be retained.

Human skills and behaviours

- The following were identified as important skills and behaviours for seafarers:
- Comradeship and being personable is important on board, as is working well in a team.
- Organisation and structure remain an important aspect of being a seafarer. Crew must be trusted to follow orders and officers have to follow the procedures on board, so that operations run smoothly. This balance can be easily upset, for example, by the introduction of new crew who have different experiences and working practices.
- Communication skills are vital and involve more than the ability to speak effectively with other people. Communicating well includes being able to clearly express your thoughts with respect and dignity, which means being able to understand yourself and the impact you have on others. Numerous skills that a good communicator possesses were identified as being important, including, empathy, conflict management, negotiation and reporting.
- Mental toughness and mental wellbeing are a key part of being able to deal with the stresses of life at sea. Resilience was also identified as a more general human skill that seafarers need and are likely to develop from life at sea.
- A capacity to be able to adapt to changing situations at sea is essential.

Training and technology considerations and their impact on the sector

It was felt that technological changes, whilst necessary, are being led by competing manufacturing companies with what seems to be little or no consultation with the main stakeholders. This is something that should be rectified.

“The rate of change and speed of technology advances in power plants and propulsion systems is so rapid it is leaving many marine engineers and operators behind. The current level of STCW training and certification for marine engineers is largely inadequate for the vessels currently being built and needs a major review and overhaul.”

Other training and technology considerations and their impact on the sector include:

Cadets

There are currently cadet retention issues which, in part, relate to how their training is set up at the moment. The MSC is looking into this issue.

Cadets need to understand what it is like to be at sea right at the beginning of the course, for example, in terms of what it is like being away from parents and creature comforts. "This would help with retention rates considerably." Currently quite a few cadets drop out for this reason alone. It's not because the course is difficult, "it's because it [life on board] is a completely foreign environment".

More focus should be placed on ratings and officer cadetships. They must be given the opportunities to advance following their apprenticeship with the company. Ship owners should be more motivated to 'do the right thing' and help people to advance.

It is very important to ensure that course materials and examination syllabuses remain current.

Bullying and harassment is still an issue at sea, despite the work going on in this space. 'Victim blaming' still happens and issues can be ignored with the victim often having to leave rather than the perpetrator. Work and training need to continue in this area.

Human element training

Training needs to be in place to help fill the gaps around the human element, to recognise and deal with the on-board culture. This training should be delivered innovatively and interactively. Technology can be used to support seafarers who are experiencing issues and challenges; for example, instead of an email, the use of a video call would provide a more personal touch, and there is the potential to increase the human side of communication, for example dealing with disciplinary and grievances on board rather than from shore; however, this would require training and support to be in place and consideration of the role of union representatives etc. However, technology can help this to happen and many solutions that exist or are coming onto the market; these should enable better real-time communications and at a lower cost than in the past.

Mental health training

It was felt that younger people are more aware of their mental health and less likely to tolerate what, in their view, are challenging situations. A culture change is needed with an emphasis on mental health. A good way forward would be to provide support, raise awareness and build resilience for seafarers. Mental health awareness training, including how to offer support when on board, is essential. Many weeks are spent learning about physical first aid and injuries, whereas mental health issues are far more common on board.

23 Maritime UK, 2023c. Seafarer cadet review [online]. Available: <https://www.maritimeuk.org/priorities/people/skills/commission/projects/seafarer-cadet-review-1/> [Accessed: July 10th, 2023].

24 International Seafarers Welfare Assistance Network (ISWAN), 2023. Seafarers' welfare organisations come together to address abuse, bullying and harassment at sea [online]. Available: <https://www.seafarerswelfare.org/news/2023/seafarers-welfare-organisations-come-together-to-address-abuse-bullying-and-harassment-at-sea> [Accessed: August 11th, 2023].

Communication technologies

Communication is not just about the working environment but also about the seafarer's leisure time which can be a grey area. Greater clarity between work and rest is required to ensure people get the rest and recuperation they need; additionally, greater attention should be paid to the actual hours they are required to work under MLC and SCTW. Technology for recreation time on board can also help to develop a sense of community, for example, by bringing people together to watch a movie or the latest episode of a box set etc. Technology can be used to find ways to engage the crew as it helps them to feel valued and can help them to build stronger relations with one and other. This would have positive knock-on implications for safety. The International Seafarers Welfare Assistance Network (ISWAN) Social Interaction Matters (SIM) Project is currently working in this area **25** and Nautilus International **26** has produced a white paper on the subject. Any technology that improves communication on vessels is important and also provides the crucial link for seafarers to be in touch with their families and friends at home.

Company training

The office should be able to supply a schedule of training that is available to seafarers and all their employees. Those eager to learn can see what is available and sign up.

There is a lot of knowledge that the company wants a seafarer to obtain before joining a vessel. Work is needed to make this interesting and engaging to seafarers. "It should be a story, not an instruction! Something that will stay in the mind." This is about delivering better-quality training and could be supported by new technologies such as virtual reality (VR), to provide some visual understanding for information that may not be very engaging, bearing in mind that everyone learns differently. VR is developing fast and offers the opportunity to undertake specific training ashore which would previously only have been possible on board.

Simulators and VR

Simulators can provide in-depth training for many different seafaring situations, among other applications. For example, people can be put into perceived dangerous situations without the risk of actual harm occurring.

Emerging technologies are continually evolving. Skills' reviews reflect what is needed in the present but by the time they are implemented they are already two or three years behind where they need to be and where the technology is now, so constant catch up is required. A training module on emerging technologies could be useful in terms of assisting the development of a training pathway to support this.

25 International Seafarers Welfare Assistance Network (ISWAN), 2022. Social Interaction Matters (SIM) [online]. Available: <https://www.seafarerswelfare.org/our-work/social-interaction-matters> [Accessed: September 6th, 2023].

26 Nautilus International, n.d. An investigation into connectivity at sea [online]. Available: https://www.nautilusint.org/globalassets/public-resources/pdfs/connectivity_at_sea_nautilus_whitepaper.pdf [Accessed: October 10th, 2023].

Transferrable skills and behaviours (moving from sea to shore)

Coming ashore from sea can be a culture shock, particularly when adapting to the world of 'business'. Including a module in seafarers' training about adjusting to shore life, could be very helpful. Currently, taking shore jobs following a few years at sea is the 'normal expectation' but the move is generally unsupported. However, there are a few notable schemes working in this area, including Nautilus International and Maritime London's initiative called Sea to City **27** as well as the Honourable Company of Master Mariners' mentoring scheme **28** which supports the transition ashore. With well-structured training and good use of technology to help acquire the necessary shoreside skills, this kind of move will become easier.

Focus should be on developing a rounded maritime professional. There should be a crossover in training in this area between sea and shore and a good understanding of both roles to provide an interconnected perspective. Coming ashore training is required and those in the office should be assisted to recognise and translate the valuable skills that seafarers have when transitioning ashore.

Skills gained from working at sea were identified as follow:

- The innate understanding of what it is like to be a seafarer. This was seen as one of the most important transferrable skills.
- The skill of "being able to take it as it comes" is a useful seafaring asset.
- Attention to detail; seafarer's work is often cross-checked or forms part of an official log so they are seen to have "A talent for spotting errors or anomalies".
- Organisation is important. A seafarer's life is run according to routine and by simply joining a vessel, they are tasked with following that routine. It is in the nature of the role that procedures and processes are already outlined for seafarers to follow and it is a skill to be able to adapt to this quickly.
- Seafarers develop the ability to collaborate in a team and adapt to different situations.
- They are often practical, good team workers but also have the ability to work alone.
- Seafarers take responsibility early in their careers, including responsibility for their working environment and the safety of colleagues.
- Resilience and crisis management are two skills possessed by many seafarers; seafaring can be a challenging job with many issues encountered.
- They generally have an understanding of one another's roles and the appreciation that everyone will be under different stresses within their roles at sea.
- They are able to compartmentalise, such as being able to put shore and home stresses to one side.
- Good communication skills are acquired that extend across different cultures, between the seafarers and between the vessel and the office personnel. "This can often be enough to resolve issues that come up."
- Seafarers are often able to get the best out of people and acknowledge that different styles of communication are needed.
- When working in a place which is physically isolated, problems should be expected to arise occasionally. Seafarers are often good problem solvers.
- Due to the proximity of living and working together, seafarers often bring a greater degree of tolerance that others ashore may not have.
- They commonly have good technical knowledge and problem-solving abilities.
- A strong work ethic is often characteristic of seafarers.

27 Nautilus International, 2023b. Sea to city initiative [online]. Available:

<https://www.nautilusint.org/en/assistance/sea-to-city-initiative/> [Accessed: October 10th, 2023].

28 The Honourable Company of Master Mariners (HCMM), 2023. Our mentoring scheme [online]. Available:

<https://www.hcmm.org.uk/about-us/what-we-do/mentoring-scheme.html> [Accessed: October 10th, 2023].

Areas that seafarers may need to develop when coming ashore are given below:

- Seafarers need to know how to “promote their transferrable skills” to make a successful move ashore.
- Seafarers are used to working long hours and being away from home for a long time, so when moving ashore they can experience burn out quite quickly, “because they forget they don’t have the ‘off’ period that matches the on period and can work flat out and then have to quit or have time off to recover.” Time management skills are needed to address this and potentially training to prepare for the adjustment needed for life ashore.
- On board you can be “in your own bubble” and must learn to rely on each other and fix problems together. Often this results in more simplistic approaches being taken, compared to office-based situations, with greater time and resources, to enable more in-depth problem solving.
- Organisation, logistics and planning are transferable skills that were identified as important when moving ashore.
- Technical skills are very critical when transitioning ashore.
- Empathy, particularly for senior ranks, may need to be improved.
- Communication skills may need work when coming ashore, due to the hierarchical nature of life at sea.

Leadership skills and behaviours

Seafarers can experience many pressures working at sea, including external pressure which can be broadly categorised into: commercial pressure from owners and charterers; work pressure from ship managers, superintendents, and shore-based management staff; social pressure from peers and loved ones; internal pressure from peer pressure from superiors and even subordinates; and finally, self-induced pressure. Seafarers must learn how to manage these stressors in the performance of their duties and responsibilities and this requires strong leadership skills. Leadership must always be at its best at sea because seafarers cannot go home when the working day is over. Psychometric profiling and other assessments could be conducted prior to crew being invited to enrol for officer training.

The industry has seen a generational change, with younger masters who often have some very good human skills and understanding of their crews. This is an effective and modern approach to leadership. “You want people to do what you ask them to because they respect and understand why you are asking them to do something”. Good communication is essential to this. The industry needs to look at leadership training carefully to support senior officers at sea.

It was felt that where, in some cases, on-board hierarchy has become a lot less formal than in the past, it has drastically helped to decrease some of the on-board divisions, such as the sharing of recreational spaces across the ranks.

Identified skills and behaviours that leaders at sea need, and often become proficient at include:

- Good listening skills and understanding of different nationalities, cultures and styles of leadership.
- Good communication skills at all levels and across different nationalities; additionally, sensitive communication around unpopular decisions, which would demonstrate an understanding of the potential impacts.
- Being able to inspire others.
- Conflict resolution and strong negotiation skills.
- A good understanding of people, their backgrounds, needs, strengths and weaknesses to be able to help them work at their best and to offer them support when needed.
- Good mentoring skills and taking an interest in junior crew.
- Awareness, empathy, compassion and understanding –treating people as human beings with feelings; being aware that the decisions that are being made in one place can have a genuine impact on the lives of a whole group of people elsewhere.
- Organising and prioritising time.
- Responsibility and decisiveness – taking responsibility in difficult times; companies (and the leadership within them) also need the ‘moral courage’ to take a stand against bullying and harassment; company culture has a significant impact on the workforce and the leadership should encourage people to speak up and demonstrate that they are trusted and believed in.
- Task delegation.
- Conducting oneself with professionalism and calm.
- Encouragement and motivational skills.
- Trust, mentoring, empowerment as a style of leadership.
- Being able to take risk, provided it is reasonable and needed.

Diversity and inclusion

Globally, more work is needed to promote diversity and inclusion (Maritime UK was mentioned here for their work). It was felt that there is not an effective gender balance among shipping ratings and officers. Ships have not always been the most welcoming environments for LGBT+ individuals and The Seafarer’s Charity ²⁹ has developed a ‘Coming out’ tool kit for seafarers to help address this.

It is vital to support mutual respect and dignity, acknowledging the strength of the character of an individual. A cultural change is needed, and it should be led at a prominent and international level. In the UK, there has been some good work in this area but there is always more to be done. Small steps will eventually add up and do reflect growing support, for example, Maersk’s Pride/rainbow containers. ³⁰

There is less diversity in terms of disabilities on board due to medical considerations in order to be able to work at sea. However, there are many seafarers from different countries with different experiences and ways of looking at life. All need to be aware of different cultures and be accepting of them. Neurodiverse seafarers could be better supported with their additional needs and work could be done to help them achieve their full potential.

²⁹ ibid (9) The Seafarers Charity, 2022.

³⁰ Maersk, 2021. The rainbow container world tour comes to an end [online]. Available: <https://www.maersk.com/news/articles/2021/09/09/the-rainbow-container-world-tour-comes-to-an-end> [Accessed: August 15th, 2021].

More awareness of this type of diversity is important and organisations, such as Nautilus International, and others are leading discussions in this area.

Gender **31** diversity **32** at sea was identified as an ongoing issue outside the passenger and leisure sector and much work is currently being undertaken in this space to redress the balance.

Identified good sector practice

- Relatively stable crews on board have an advantage in providing familiarity and strengthening relationships; however, stable crewing is not the norm with most seafarers being employed on voyage-based 'temporary' contracts. Stable crews **33** can help to combat loneliness and isolation which tends to occur more frequently on vessels with high crew turnover. An element of crew stability can promote a social aspect, which allows crew members to get to know each other better. Stable crewing helps to build stronger relationship and familiarisation and generally good support networks away from home, promoting seafarer retention.
- Shipping companies should strive to be the best employers they can be by taking lots of positive steps, such as providing great food on board, time off for family issues and striving to create a happy work environment. Nautilus International has conducted a 'Social conditions survey report' (2022) **34** which was first undertaken in the 1990s and re-run every decade. Additionally, an annual company survey for seafarers based on happiness levels was also suggested. The Happiness Index **35** measures seafarers' happiness four times a year and the resulting metrics are used to promote good practices on board.
- Some shipping companies have their cadets join a vessel for 10 days at the very beginning of their training, essentially as supernumeraries, which helps them to gain valuable insights into working at sea.

31 EU Maritime Women, 2022. Gender, Equality, Maritime (GEM) [online]. Available: <https://eumaritimewomen.org/> [Accessed: July 7th, 2023].

32 Maritime UK, 2023d. Diversity in maritime [online]. Available: <https://www.maritimeuk.org/priorities/people/diversity-maritime/> [Accessed: July 5th, 2023].

33 Pike, K., E. Broadhurst, N. Butt, R. Neale, C. Wincott and K. Passman, 2019. The Effective Crew Project Report for the Lloyds Register Foundation and the TK Foundation [online]. Available: <https://www.solent.ac.uk/research-innovation-enterprise/research-at-solent/projects-and-awards/effective-crew-project> [Accessed: July 7th, 2023].

34 Nautilus International, 2022. Social conditions report [online]. Available: <https://www.nautilusint.org/en/news-insight/resources/nautilus-reports/nautilus-social-conditions-report-2022/> [Accessed: September 30th, 2023].

35 The Seafarers happiness index, 2023. The seafarers happiness index [online]. Available: <https://www.seafarershappinessindex.org/> [Accessed: August 9th, 2023].

Recommendations

Mental health first aider

1. Companies should provide a dedicated mental health first aider on board who is trained to recognise the signs of poor mental health and how to provide a first response to this.

Research into cadet attrition rates

1. Research to thoroughly explore cadet attrition rates following their first sea phase is required to help develop appropriate recommendations to address this issue. Cadet training should start with an element of working at sea prior to embarking on their first sea phase, to help better manage their expectations. **36**

Training vessels

1. With the above point in mind, time on board training ships for a few weeks before pursuing a seafaring career would be beneficial. National training ships/facilities are used in other countries – allowing people to get a feel for being at sea before a company takes a person through a cadetship. Britannia Maritime Aid **37** have designed a multi-purpose vessel that can be used for a number of roles with a number of cadet cabins on board. Apart from its role as disaster relief for commonwealth countries, it is also promoting itself as a cadet placement facility and provides a helpful example of how this training provision could work.

³⁶ Maritime Skills Commission, 2021. Seafarer cadet training group report and recommendations [online].

Available: <https://www.maritimeuk.org/priorities/people/skills-commission/reports/maritime-skills-commission-seafarer-cadet-review-report-june-2021/> [Accessed: October 5th, 2023].

³⁷ Britannia maritime aid, 2019. Britannia maritime aid [online]. Available: <https://britanniamaritimeaid.com/> [Accessed: August 9th, 2023].

3.3 Maritime Sector: Cruise Seafarers

Introduction

The cruise sector makes up one of the major parts of the leisure travel and tourism industry **38** that operates worldwide. Employees have the opportunity to earn well, travel the world and work within a multicultural environment. However, crew often share living, working and social spaces in close quarters, sometimes making it difficult to strike a good work/life balance.

The COVID-19 pandemic **39** has had a disproportionate impact on the cruise sector with many job losses, and a resulting skills and talent drain across the industry. This is still having an impact today, despite the recent demand for, and rise in, the number of cruise bookings. By the end of 2023, it is estimated that passenger numbers will have exceeded 2019 figures, with further growth predicted going forward. In 2022, the global cruise market was valued at USD 7.67 billion and it is expected to grow at a compound annual rate of 11.5% from 2023 to 2030. This is attributed to the rising popularity of cruise holidays, some of which have become financially favourable when compared with land-based holidays. **40**

In 2020 the Cruise Line Industry Association (CLIA) stated that cruise ship crew are comprised of well-trained, highly satisfied employees with the average retention rate across the industry of upwards of 80%.

There are significant technological advances being made within the cruise sector, both to enhance the guest experience, as well as the vessels themselves. Some cruise line companies are striving to be carbon neutral by 2030. **41**

38 Statista, 2023. Cruise industry worldwide – statistics and facts [online]. Available: www.statista.com/topics/1004/cruise-industry/#topicOverview [Accessed: September 5th, 2023]

39 Cruise trade news, 2023. CTN Investigates: The cruise and travel recruitment challenge [online]. Available: www.cruisetradenews.com/ctn-investigates-the-cruise-travel-recruitment-challenge/ [Accessed: September 5th, 2023].

40 Grand view research, n.d. GVR Report cover Cruise Market Size, Share & Trends Report Cruise Market Size, Share & Trends Analysis Report By Type (Ocean Cruises, River Cruises), By Region, And Segment Forecasts, 2023 – 2030 [online]. <https://www.grandviewresearch.com/industry-analysis/cruise-market-report#:~:text=The%20global%20cruise%20market%20size,provided%20by%20the%20alternative%20vacations> [Accessed: September 5th, 2023].

41 Time, 2023. The Cruise Industry Is on a Course For Climate Disaster [online]. Available: <https://time.com/6285915/cruise-industry-climate-action-emissions-passengers/#:~:text=A%20medium%20sized%20cruise%20ship,a%20heavy%20coat%20of%20greenwash> [Accessed: September 5th, 2023].

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

Identified sector challenges

- It was felt that people's expectations of a job at sea are not always adequately informed. For example, recruits expect that they will have a chance to see the world, but the reality is that crew often only glimpse different ports from the bridge of the ship and may never go ashore. Approximately half of cadets who drop out, do so in the first year after their first sea phase and this can be attributed to the reality of being at sea being very different from their expectations. Long working hours and long periods spent away at sea also contribute to this attrition. Setting realistic expectations is not only better for cadets but helps in managing new talent in the industry.
- The phase of familiarisation with the vessel has been reduced from about a month to about two weeks (depending on rank). Understanding and feeling comfortable on a vessel is very important for good performance. Reducing the familiarisation period means that officers are having to learn the ship 'on the job'. In aviation, pilots have access to software that enables them to become familiar with their surroundings before boarding an aircraft. This is slightly different to the maritime industry, as specific qualifications are required to fly different types of planes. Pilots would not be asked to fly an aircraft that they were not trained and qualified for. In contrast there is a standard qualification for all ships over 3,000 GT, requiring an unlimited tonnage ticket. One suggestion was "to provide similar software to aviation that allows seafarers to undertake a virtual tour of the vessel, and the layout of the bridge/engine room, prior to joining". This second suggestion is already being implemented in some areas of the industry.
- In many ways, cruise ships are operated with the same rigidity and formality, as an aircraft. However, when being trained as a cadet onshore, the expectations and behaviours are different. In addition to the usual qualification requirements, such as The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), companies need to train their own crew separately in the behaviours that are expected on board their vessels (and some have their own training centres for this purpose).
- Moving further on in their careers (an area that is being looked at in the cadet training and modernisation programme) **42** many junior officers leave the sector completely before gaining their first level management certificate of competency and because they are unaware of options in the broader maritime industry. As a result, the skills they have acquired and training they have undertaken are lost to the sector altogether. There is a lack of awareness of the roles available for more junior seafarers wishing to transition ashore. Consequently, the industry is losing junior officers with practical knowledge of how the industry works. The Maritime Skills Commission, with the MCA, is creating a career pathway map to address this, to show that there are roles for junior officers, and that they don't necessarily have to stay at sea for 20 years before coming ashore. ECSA and ETF **43** conducted ground-breaking work on career mapping in the EU and the UK, which was updated in 2013. The average length of time spent at sea in total, is now about seven years and so there need to be options available for people to stay in the industry, rather than losing that expertise completely.
- Companies are having to widen the scope of countries that they recruit from in an attempt to generate the manpower that is needed.
- Over the past 15 years, the maritime industry has become more complex and regulated, leading to higher demands on all departments and greater workloads for crew.

42 Ibid (35) Maritime Skills Commission, 2021.

43 European Community of Ship Owners' Associations (ECSA), 2013. Career mapping update 2013 [online]. Available: <https://www.ecsa.eu/resources/career-mapping-update-2013> [Accessed: September 30th, 2023].

- Retention of existing experienced seafarers, aided by effective mentoring is needed, to enable the next generation to maintain competence.
- Lack of awareness for the industry in general is a problem. “People tend to fall into it rather than choose it [as a career]”, often entering the maritime industry because of family members who are or have worked in the industry. Joining the cruise sector is not often discussed as a career option at home or in schools.
- Situational awareness was identified as an important skill on board cruise ships, but also recognised as challenging to achieve. As well as needing to work effectively as a team, systems also provide significant information and there can be an over reliance on this.
- There is an even greater hierarchy in the cruise sector than there is on board commercial vessels, which can create leadership challenges.

Human skills and behaviours

Generally, seafarers tend to gain responsibility at a young age, and this a very useful skill which transfers ashore. Seafarers were identified as being good team workers who are used to working long hours and getting on with a job until it is completed. Sometimes, this work is carried out in very intense situations without the support that would be available in a shore-based environment. Other important human skills and behaviours identified within the cruise sector include:

- Good communication
- Personnel management
- Good cultural awareness
- Good human/machine interface
- Recognition of when people are not at their best – e.g. fatigued, stressed etc.
- Good planning skills (around busy schedules and when rest must be taken, for example)
- Agility and flexibility to adapt to new circumstances

Training and technology considerations and their impact on the sector

People can be trained in the technical aspect of a position on board; however, when living and working together for extended periods of time, a lack of human skills can have a significant and detrimental impact. “You all have to get [to] the same technical level roughly but if you haven’t got the human element skills, it is not an enjoyable place to be. People do leave jobs at sea if the human element is not right – it is a retention issue.” Additionally:

- It is very difficult to get to know all the systems and technologies on the bridge or engine due to the different scale and complexity of the operations on board a large cruise ship. This is different on ferries and cargo ships, for instance. The systems on board cruise ships are highly integrated.
- Cruise officers can be trained for an unlimited Certificate of Competency (COC) so that they can potentially work anywhere. There are some niche elements within each sector that then require specific training.
- The cruise sector requires passenger and crowd management training etc, which is best conducted by the companies concerned because the generic training only covers the aspects required by all seafaring sectors (e.g. commercial, cruise and superyachts).
- There are gaps within education for modern shipping, where, for example, the technology used in training is not always as up-to-date as the current systems being operated on board.
- Foundation navigation skills need to be relevant and reflect the new technologies being used on board, and regularly updated. Many traditional and theoretical methods are taught in colleges and these need to be updated. The MCA has recognised this and is in the process of addressing this issue. However, there is wider work to be done than simply focusing on the technology; it is also about contextualising the theory that is learnt at college and how this then leads to working on board in practice. E.g. “You can learn about how different weather patterns are formed, but unless you understand what that means when you are looking out from the bridge of a ship and what that means for your ship, it’s pointless.”
- Many cruise ships use Bridge Resource Management (BRM) to improve team situational awareness on the Bridge and maintain safe navigation. Communication forms an integral part of BRM, along with strategies and procedures to ensure efficient team working, cross-checking and the development of shared mental models. Training in BRM is designed to correlate directly with the real working environment and enables practical application whilst learning. Wider adoption of BRM (and related training) is needed across the maritime industry.
- Training related to ship maintenance is typically learnt during the first sea phase, rather than being covered in college. Being a qualified officer means that physical maintenance is not part of the role; however, checking that maintenance has been carried out correctly and the need to spot mistakes, are essential tasks. Therefore, training in how to spot maintenance issues would be helpful but potentially challenging to put into a syllabus. This is a skill gap within the cruise sector.
- Cruise ship captains have spent a long time working towards being appointed to their position and can find delegation challenging: “it is very difficult for [the masters] to take their hands off and not do the job”. Manoeuvring a ship is an important job; in the offshore industry this can account for 8–10 hours of the day, whilst “On a cruise ship this is seen almost like a reward, as it were, that you are getting to handle the ship.” There is a lot of risk involved in handling a ship with passengers on.
- More generally for the maritime industry, data science and interpretation should be included in the training syllabus, as ships now produce extensive data that seafarers must be able to know how to interpret and use effectively.

Transferrable skills and behaviours (moving from sea to shore)

Respondents thought that many of the skills learnt at sea were very applicable to working ashore. However, the skills learnt at sea need to be translated into the language of shoreside operations. Mentorship was viewed as a way of helping with this. The companies who employ seafarers don't always understand the unique skills that seafarers bring and how their skills can be developed further when they move ashore. Companies need to be made fully aware of the skills seafarers can offer them.

These were specifically identified as:

- Problem-solving skills; there are few options at sea – “you are on a ship, you are in the middle of the ocean, you have got to find a solution”. Being accomplished in these skills means that seafarers can turn their hand to many different things. Seafarers generally must fix things themselves at sea and make progress with whatever resources are available at the time.
- Seafarers often possess good problem-solving skills and effective communication.
- Responsibility is often given early to many people in this sector.
- Being able to make good decisions and effectively weigh up a situation before the decision is made was seen as a skill.
- Adaptability is a big asset in an office environment. When on board, seafarers need to be adaptable seven days a week.
- In the maritime industry, there isn't really a 9–5; it is more about getting the job done.

Leadership skills and behaviours

Leaders need very good human skills, particularly in their position of influence on board. They need to be able to take responsibility for what is in their control.

Effective leaders and managers rely on good communication skills and the ability to 'read' the environment.

Motivational skills are essential to get a team to work well together. There are ways to discipline people but there are few ways to reward people, i.e. “no carrot in the sector” (such as having some time off). Motivated people work better than those who are only managed via discipline.

Good people leadership is needed and understanding the team/people is important. It is vital for leaders to know the crew and ensure that the right job is allocated to the right person in relation to their competence levels and skill set. For example, junior officers will respond well to being given a little responsibility and a challenge.

Leaders on board live and work with their juniors in close quarters with little separation. Consequently, leaders always need to be self-aware and in control of their own behaviour.

Being able to compartmentalise things is helpful, for example, by making a distinction between performance management and then relaxation time on board.

Also essential are good communication and the ability to set clear objectives and boundaries, with the capacity to enforce the rules when necessary.

Diversity and inclusion

The cruise sector was identified as one of the most diverse maritime sectors, particularly in terms of gender.

It was felt that in the UK, there is not much racial diversity in the workforce within the maritime colleges, although naturally the shipping industry is multinational and very racially diverse.

Although there are a greater number of women crew on cruise ships, it was felt that, primarily, they still tend to occupy the lower ranks on board.

Cultural understanding is very important and training for this may be necessary.

Greater sensitivity and open mindedness towards people with minor disabilities was noted to be important.

Identified good sector practice

'The Coming Ashore' **45** programme's goal is to identify and address the additional skills and experience seafarers need when coming ashore and then provide a pathway to ensure they are suitably equipped. One interviewee spoke about the industry professionals who had signed up as mentors in their company, together with partner organisations who are providing a series of podcasts that explain the range of roles available shoreside. The programme is open to all ranks and nationalities.

In supporting diversity in the cruise sector, Saferwaves **46** was mentioned in relation to the good work that they do in supporting merchant seafarers who have experienced sexual assault, sexual harassment or gender discrimination.

45 Marine Society, 2023b. Coming Ashore [online]. Available: <https://www.marine-society.org/coming-ashore> [Accessed: July 26th, 2023].

46 Safer waves, 2022. Safer waves [online]. Available: <https://saferwaves.org/> [Accessed: August 3rd, 2023].

Recommendations

Funding

1. A revised funding system is needed for cadets which enables them to continue their education (even if after their first sea phase they decide that life at sea is not for them), and study for maritime shoreside positions. It was suggested that sponsoring companies could continue to fund their academic studies leading to a maritime qualification, and thereafter employ an individual who has had some experience of the shipping industry and life on board. This could be a more effective approach than the current situation which sees these cadets leave the industry altogether. These individuals are clearly interested in the maritime industry and would bring valuable understanding of the seafaring world into shoreside operations.

Alternative watchkeeping system

1. An alternative watchkeeping system was proposed. For example, as opposed to the four hours on, eight hours off traditional watchkeeping pattern, an 'arrivals and departures' system was proposed. The arrivals watch would begin at 0400-0800, be followed by four hours of rest and another shift from 1200-1600, followed by 12 hours of rest. The departures watch would begin at 1600-2000, be followed by four hours of rest and then another shift from 0000-0400, followed by 12 hours rest. The '1800-1200' watch would remain the same at four hours on/eight off, given that during a seafarer's time on board they would rotate through the watches to account for changes in working patterns and rest. Among other benefits, this would allow for a much greater time of rest following the early morning shift and would greatly reduce fatigue.

3.4 Maritime Sector: Superyacht Seafarers

Introduction

Work in the superyacht sector is often viewed as attractive and orientated to younger people, who are interested in the good salaries, interesting voyages, frequent port visits and the perceived glamour of the industry. Crew turnover is particularly high for more junior crew members who are not yet established in this workplace. By contrast, those seeking to remain in the industry long term have clear career pathways, with many senior crew remaining for five or more years on board the same vessel. A good captain and owner can make a significant difference to the crew's wellbeing.

The superyacht sector has a working culture that is often subject to the impacts of bullying, harassment and discrimination which leads to mental health issues. Various seafarers' welfare charities **47** and the Merchant Navy Training Board's (MNTB) **48** have sought to address these issues. The MNTB 'Human Element Leadership and Management' (2022) has included this topic for all seafarers, both at the operational and management levels, which raises awareness of the causes of mental health problems and mental wellbeing, including stress, fatigue, bullying and harassment. Nautilus International **49** and the Professional Yachting Association (PYA) **50** also support and represent crew who have experienced bullying and harassment and other contractual issues.

Recruitment methods in the superyacht sector vary widely, from agencies who typically charge one month's salary to place crew, to the use of personal contacts and free online platforms such as Facebook and Yotspot, where senior crew can scroll through various CVs themselves. New crew trying to gain their first position are often left with little option but to 'dock walk', unless they are fortunate enough to have a contact in the industry who can help them find their first job. There are superyacht cadetships, usually for those entering via the deck, and in these instances, the training schools will often provide support to individuals in finding their first placement.

Work in the superyacht sector is conducted in close quarters, often with cabin sharing, small crew messes and limited relaxation space. Additionally, owners and guests have high standards and can make many demands on the crew, leading to long working hours during the season, creating high levels of stress and tension amongst the crew.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

47 International Seafarers Welfare Assistance Network (ISWAN), 2023. Seafarers' welfare organisations come together to address abuse, bullying and harassment at sea [online].

Available: <https://www.seafarerswelfare.org/news/2023/seafarers-welfare-organisations-come-together-to-address-abuse-bullying-and-harassment-at-sea> [Accessed: August 11th, 2023].

48 Merchant Navy Training Board (MNTB), 2022. Human Element Leadership and Management, 3rd Edition, 2022

49 Nautilus International, 2023a. Nautilus attends inaugural yacht crew welfare round table [online]. Available: <https://www.nautilusint.org/en/news-insight/telegraph/inaugural-crew-welfare-roundtable/> [Accessed: October 12th, 2023].

50 Professional Yachting Association (PYA), 2023. Welfare group [online]. Available: <https://www.pya.org/services/welfare-group> [Accessed: October 5th, 2023].

Identified sector challenges

- Mental health issues and stress are prevalent and a serious issue on board superyachts. Contributing factors include the confined working and living spaces and long working hours.
- A lack of time off for junior crew contributes to high crew turnover. This is less of an issue for senior crew who are more often working in rotation, particularly on the larger yachts.
- Personalities matter in this work environment. The owners and guests join the yacht to be on holiday and want to relax; they do not tolerate crew personality clashes or demotivated 'unhappy' crew around them.
- Egos (male and female) were identified as a problem on board superyachts, particularly at the senior level.

Human skills and behaviours

- Emotional resilience and self-control are essential.
- Politeness, respect for others, loyalty, flexibility and attention to detail were identified as key skills needed on board.
- The ability to communicate effectively, including listening skills and being able to follow instructions were also considered highly important.

Training and technology considerations and their impact on the sector

- Artificial Intelligence and machine learning, incorporated into bridge and engineering systems for easy troubleshooting, could reduce operational costs and predict certain system breakdowns, making it easier to proactively maintain good working order on board the yacht.
- A drive is needed to further sustainable practices within the sector through increased awareness and education. This should include the implementation of technological advances in sustainable operations.
- Mental health and mindfulness training should be compulsory on board. Greater awareness of mental health should be emphasised and discussed to help manage and alleviate stress and anxiety. It is important that training and implementation in this area is conducted regularly so that it becomes a routine and habit on board.
- Training in and development of good teamwork skills are essential.
- An emphasis on personal development was identified, helping to support crew morale, improve skills and build a strong team on board.

Transferrable skills and behaviours (moving from sea to shore)

Continual training for personal improvement and development within this sector was identified as important, specifically in helping yacht crew to transfer to shoreside jobs. Some of these areas are discussed in personal podcasts on the Life after Yachting website, ⁵¹ a not-for-profit organisation that highlights the opportunities to transition from sea. Some of the necessary transferrable skills that were identified to make a successful transition, were as follow:

- Communication skills
- Good teamwork
- Resilience and adaptability

⁵¹ TUVYC, n.d. Life after yachting [online]. Available: <https://tuvyc.com/life-after-yachting/> [Accessed: July 3rd , 2023].

Leadership skills and behaviours

Insights

- Living and working in the same space on board can present leadership issues when having to discipline a crew member. Once the disciplinary action has taken place, the officer will still have to engage with the crew member and join them at mealtimes and socialise with them. This is exacerbated as separate crew messes are not the norm on board superyachts.
- A change of master, head of department or senior officer will introduce different leadership styles on board and impact the working environment. This can often create issues for the crew as they try and accommodate these changes and adapt to different expectations and procedures, particularly where senior crew are in rotation.
- There is a balance to strike between safely running the yacht and conveying an approachable manner.
- Striving for a successful two-way, upward and downward communication, that allows ideas and information to be shared easily, would increase performance and crew stability. Crew should be encouraged to speak to their senior officers about their concerns, whether personal or more general.
- Leaders should strive to understand each person as an individual in their team and be aware of their strengths and weaknesses. "What do your individual team members need? How will investing in their personal development help them and the team?"
- There is a need for more leadership development and refresher courses in this area, and not just reliance on the HELM courses which are often only as good as the trainers delivering them.

Skills and behaviours

- Leaders need strong communication skills.
- Leaders need emotional intelligence; additionally, self-awareness and self-management are crucial.
- There is a need to have the ability to create a caring 'family feel' on board assisted by empathic leadership and good listening skills, whilst still maintaining a safe vessel.
- Leaders need to be fair and act with consistency and tolerance.

Diversity and inclusion considerations

The superyacht sector was identified as quite homogenous, with diversity not always encouraged, although there was a feeling that this has improved over recent years. Diversity on board was thought to enable change to happen more freely, promoting crew inclusion and encouraging freedom of opinions.

It was suggested that skills and experience to help incorporate diversity on board are needed, as well as an open-minded outlook toward encouraging diversity. This responsibility was initially placed on the yacht owners who are often responsible for 'demanding' particular types of crew, which can, in turn, limit diversity. Leadership in this area would set a precedent for the rest of the crew and uphold a tolerant attitude on board.

Neurodiversity was discussed and people with this aspect of diversity are being minimally recruited into the superyacht sector. More understanding and research about diversity and in particular, neurodiversity was deemed necessary. The message drawn from this research was about the importance of treating people as individuals, accepting that not everyone will "fit the same mould".

Identified good sector practice

Career pathways

Onboard career pathways within the superyacht sector have been pragmatically mapped out by a thinktank working voluntarily, called 'Raising the Bar'; this organisation offers clear guidance on the qualifications, skills and character attributes that are required in each position. ⁵² This information is currently being developed for pathways onshore and to support the transition from sea to shore. Both are aimed at people already working as well as wishing to enter this sector. It is hoped that recruiters, maritime schools and senior crew will use the career maps as a consistent reference point with crew.

Team building

When building a strong team and bringing new people on board, it is important to secure the involvement of the existing core team members at interviews. This not only helps secure the right person for the job but also helps achieve acceptance for the new recruit from the rest of the crew, whilst also ensuring that they are more likely to fit in well. The goal should be to build a strong team, with longevity and continuity to help assist with the high crew turnover which is often associated with this industry sector.

Mental health

Practicing mindfulness on board every day, with crew who wish to join in, can help to alleviate some of the stresses of being in the middle of a charter. It would mean that crew become part of a group that help to look after each other, and they are not left to struggle with issues on their own.

Crew recruitment

A holistic approach to hiring for senior positions should include personality and aptitude tests, to establish a range of required skills and to retain crew for longer.

Crew care and safety

It is vital, in this sector, to promote rigorous safety practices over trying to please guests. Putting safety first in every aspect of yachting also promotes a caring environment on board, demonstrating that everyone matters.

Flattening the hierarchical structure on board to encourage open communication and a no-blame culture can encourage crew to speak up and promote high safety standards.

When crew are given the freedom to make decisions and are trusted and believed in, they in turn are given the 'freedom' to think for themselves and are likely to feel empowered, more valued, and happier.

Where possible, awareness of the upcoming schedule on board can be helpful, whilst also being aware that schedules often change. "Crew prefer a schedule. They like to know when they're going to be busy, when they're going to have down time, and how holidays are dealt with. [...] these are important things for the crew to know upfront."

⁵² Super yacht industry careers, 2023. Super yacht industry careers [online]. Available: www.superyachtindustry careers.com [Accessed: August 23rd, 2023].

Seniors should ask for upward feedback, especially when they are in rotation, to ensure consistency.

Rotating seniors should be encouraged to communicate with each other during 'off' time to remain more aware of the issues and challenges on board when they return. This links to a smoother handover when returning to the vessel and assists with the handover.

Salaries

"When it comes to bonuses and raises, set up a structure of bonus-ing, and allowing the crew to know when raises are coming so they can look forward to these things."

Increasing salaries over time was identified as assisting with recruitment and retention.

Sector awareness

Awareness and visibility of this industry sector should be increased and aimed particularly at younger people who are making career choices at schools and colleges. Finding innovative and realistic ways of spotlighting the industry is necessary.

Recommendations

1. Raise mental health awareness on board and throughout the sector through training, and discussion led by the Master or another appropriate senior crew member. This approach should also be incorporated into the management company's due diligence process. A mental health first aider on board every vessel (as a secondary role) would further assist in raising mental health awareness and in spotting and dealing with problems before they become a major issue on board.
2. Senior officers often work on time-for-time rotation on larger vessels over 70m but this is not usually the case for junior crew who need time off to rest and recuperate. Implementation of more regular leave for junior crew would assist in building crew retention and lowering crew turnover. Management companies and captains should encourage and negotiate this on behalf of the crew.

3.5 Maritime Sector: Training and Development of Seafarers

Introduction

UK Seafarer education and training is internationally well recognised and respected for its high standards and professionalism. Financially, seafarer education, training and development is a lucrative business with 12 MCA approved training facilities within the UK.

“The UK is known for providing excellent maritime training and qualifications and attracting students from around the world. With 24 maritime universities and colleges the UK is a world leader in the provision of such services. The UK’s training and research institutions attract students not only from the UK but also from abroad, with many overseas students seeing the benefits of the UK offer. These students are seeking the opportunity of receiving top class training from a world-leading maritime nation.” 53

Seafarers in the merchant navy are central to global shipping and trade. The IMO has various conventions around seafarer training, certification and watchkeeping. The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) Convention, 54 which set the minimum standards of training, certification and watchkeeping for seafarers, encouraging countries to meet or go beyond these standards.

The IMO is not responsible for approving any training courses or institutes. This falls to the Member Governments who are Parties to the STCW Convention. The 1978 STCW Convention, requires *“that training leading to the issue of a certificate is continuously monitored through a quality standards system, which is part of an independent evaluation arranged by the corresponding authority of an STCW Party in accordance with the Convention requirements.” 55*

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

53 South Tyneside College, 2017. Evidence on Maritime Growth Study [online]. <https://committees.parliament.uk/writtenevidence/77405/pdf/> [Accessed: September 17th, 2023].

54 International Maritime Organisation, n.d. Supporting Seafarers: resources and general information [online]. <https://www.imo.org/en/MediaCentre/HotTopics/Pages/Supporting-Seafarers.aspx> [Accessed: July 10th, 2023].

55 International Maritime Organisation, 2019. Maritime Training Institutes [online]. Available: <https://www.imo.org/en/OurWork/HumanElement/Pages/MaritimeTrainingInstitutes.aspx> [Accessed: August 18th, 2023].

Identified sector challenges

- Retention of cadets beyond their Officer of the Watch Qualification is an issue.
- Training should go beyond the mandatory requirements, to include flexible styles of delivery and the provision of education beyond borders.
- It is important to find high quality and enthusiastic instructors to deliver training to the next generation of seafarers.
- It is important to ensure that the skills and knowledge, which are taught and assessed, are aligned with current and future job requirements, for example, decarbonisation with human skills incorporated.
- Sector recognition is vital.
- The advancements in technologies, and the leadership and change management of this must be kept up with.
- Education and training systems are slow to change and not adapting sufficiently rapidly.
- There should be delivery of relevant training for jobs that don't yet exist.

Human skills and behaviours

The following areas need further consideration within the seafarer's mandatory education and training.

- Human skills for seafarers and the ability to develop professional relationships. These skills are not currently well covered or taught within the mandatory training. When young people enter into a seafaring career, they may often have the technical aptitude, but can lack the ability to develop relationships, particularly within a hierarchical structure at sea.
- The ability to work as part of a team within the context of the hierarchy on board a ship is vital.
- Social interaction with people both on board and ashore, for example, within ports, is important. These skills are not easy to teach, yet essential.
- Adaptability is vital as a seafarer as every day brings new challenges to respond to.
- Seafarers need cultural awareness to help overcome differences and to be able to operate well within a diverse team.
- A sense of tolerance and respect for others. This is essential when working with people from many different backgrounds within a confined space, and a skill that is often developed well by seafarers.

Training and technology considerations and impacts for the sector

Simulation for teaching navigation and team working is often used for seafarers; however, this could extend to shore-based staff who don't go to sea but wish to understand the interactions on a bridge. Simulation can also be invaluable in helping seafarers to recognise critical, versus routine situations. It was felt that simulation was better suited to learning practical skills rather than interpersonal development.

Some facilities and colleges use simulation to teach HELM courses, for example, spending a morning teaching communication theory, and in the afternoon moving into the simulator and applying and embedding the learning. Decision-making on board and ashore is critical. There are support systems which provide processes for staff and crew to follow which can aid decision-making whether in routine or emergency situations. This could be included within the seafarer's mandatory qualifications.

Observational assessment, using simulation, is essential to evaluate team and leadership performance, especially when progressing into more senior positions. The caveat for using simulation is that it is only as good as those observing, assessing and providing feedback to the seafarers. *"It's a great tool but only in the hands of great tutors."*

Better use of bite-size internet training, which seafarers can access whilst on board, would be helpful as there is limited time for seafarers to take time out for development.

Continuous learning and development are essential, as change is rapid and continuous. If a seafarer is away from a vessel for six months or longer, there will most likely be new systems and technologies on board the ship. This indicates that 'just in time' training at sea when required needs to take place.

Training needs to be 'embedded' by application. Any leadership competencies can be 'trained', but it is the application on board by the seafarer that makes the difference and improves the working environment.

"Anything is trainable or teachable – but not everyone is trainable or teachable." Successful acquisition of a skill depends on the individual's attitude, their openness to learning and what they take away from it.

There are clear career pathways and associated qualifications for seafarers; however, there is little general training regarding the wide range of opportunities the industry can offer.

There are also people who come into education with the right backgrounds and the knowledge but are poor teachers. The STCW requirements are technologically so far behind that crew need additional support and training on board, which can be delivered in bite-size chunks remotely. Knowledge retention can also be an issue, especially during extended periods of time at sea or ashore, and again refresher training whilst on board is useful, especially as it can be immediately applied. Workshops and roleplay scenarios work for areas such as challenge and response because they can help to tease out the best ways of dealing with situations.

"We focus on new engine or fuel types and we are quite happy to send a seafarer to attend a week's course on these types of things. But when it comes to the soft skills and cultural things, we are far less likely to make as big an investment to that over a long period of time. ... Many people talk about getting the right culture and having the right behaviours but there is less [investment] on how to actually implement and deliver them."

Transferrable skills and behaviours (moving from sea to shore)

Some offices will have a minimum two-year programme with traditional academic work and on-the-job training to bring an individual to an appropriate level. However, the human skills and often political office environment, which a person will learn over time, are very different from the environment when working on board. For example, when decision-making on board, the person with the right authority is likely to do this in isolation, whereas in an office environment, more often, there will need to be a process involving other people in order to gain approval for a decision.

Increasingly seafarers are transitioning ashore earlier in their careers, with the average time spent at sea now being about seven years. An officer transitioning ashore is in a very different position to a master with 10 years of command experience. This is where the human skills vary hugely. Experience shows that younger seafarers tend to make a successful and rapid transition ashore, probably because they haven't been away from shore for so long. Seafarers are considered to have good resilience, work ethics and flexibility.

Office-based culture is less hierarchical and involves less of a command-and-control approach compared with life on board, and seafarers are thought to need to adapt to this very different environment.

About 15% of seafarers who transition ashore via education and training routes are estimated to drop out. Reasons for this include: salary, the daily commute, and also the amount of effort needed to “re-learn what they had forgotten”. It is a struggle to attract ex-seafarers into training and development and much more needs to be done to retain them.

In the focus group it was estimated that the average successful transition ashore took about 18 months. Seafarers come ashore with current knowledge but the difficulty they face is how to transfer the knowledge to someone else, which is a different skill. Someone who has worked ashore all their life will typically take 18 months to two years to become effective when stepping up into a more senior position. Most organisations are poor at supporting these transitions. With a seafarer coming ashore there is the additional difficulty of ensuring that their human skills are adequately adapted to meet the needs of an office environment. The skills that they bring have a technical bias, but applying this knowledge in an office environment, projecting their ideas and simultaneously interacting with peers can be difficult. Eighteen months might be an underestimate when upskilling a seafarer to become a competent instructor/educationalist.

Leadership skills and behaviours

In order to move away from the typical on-board command-and-control style of management, additional leadership skills will need to be developed by the ex-seafarer. Projecting understanding and knowledge in an exemplary or collaborative way rather than ‘telling’ or demanding was recommended. Students are likely to respond well to a collaborative approach rather than a telling approach. For people transitioning into a training role, team skills need to be learnt. Seafarers are very adaptable, and providing they are supported to develop the skills to teach in this sector, then they can usually make a successful transition.

Diversity and inclusion

The Merchant Navy is a diverse industry in terms of nationality but not in terms of gender, which is apparent in the number of trainees. “If number of trainees are not increased, then we are not going to increase the number of women serving at sea.” Even today, many ships only have all-male spaces essentially. Most don’t carry appropriate sanitary products and they often don’t have appropriate laundry facilities, although some of these problems are being addressed. The industry is not where it should be. The ‘All aboard the alliance’ ⁵⁶ is trying to work on some of these issues with a number of major shipping companies.

Women will not be attracted into the industry if they don’t see other women working in it. “There is a long way to go and it is a big, slow industry to move.” Care needs to be taken when recruiting people such as trans or gay seafarers, as their presence could cause risks in certain countries and ports. Not every country is as progressive as the UK where it is legal and much safer to be who you are. This is a very real diversity challenge for the industry.

There are very few female cadets; those that do come through are typically on the deck side. With more female lecturers having worked on the deck, they are able to act as positive female role models.

“If more youngsters are aware of the industry, you will encourage more diversity into the industry and it will be open to all. The bigger the pipeline, the bigger the diversity and talent pool.”

⁵⁶ Global Maritime Forum, 2020. All Aboard Alliance [online]. Available: <https://www.globalmaritimeforum.org/all-aboard-alliance> [Accessed: June 26th, 2023].

Identified good sector practice

- Helping young people at primary school level become aware of the industry and giving them the education and knowledge that there are careers in the maritime industry that might suit them. There needs to be a larger pool of people that are aware of the industry and the right qualifications need to be in place for entry into the thousands of jobs available in the shoreside of the industry that we struggle to recruit for. Generally, the maritime industry needs a higher profile everywhere for people to start realising it could be for them, for example, in schools, “opening up the industry at this age, so that it is a career of choice, rather than just falling into it that most of us have done”.
- In education, sharing resources is essential and an overriding body should be established to oversee and centralise educational work and qualifications. There are many organisations that “are going off and doing their own thing. It all needs to be brought under one roof”. The current situation can waste time, money and resources.

Recommendations

Education around transitioning ashore

1. More focused education to teach new seafarers about the transition path ashore into the education sector is necessary. This is something to work on collectively as a sector. Additionally, support should be in place for seafarers to develop human skills whilst still on board through online, face-to-face courses, coaching and mentorship.

3.6 Maritime Sector: Training and Development of Shoreside Personnel

Introduction

Education and training within maritime shoreside operations are exceptionally vast, encompassing, but not limited to, technology, design, construction, sales, services, surveying, insurance, and including all the professional services (reported on separately). Ban Ki Moon's message on World Maritime Day 2015, included the following message, which has the same relevance today and highlights the importance and scale of education and training in maritime.

"Today, shipping is a modern, highly technical, professional discipline that requires a great deal of skill, knowledge and expertise from the maritime workforce. A safe, secure and clean shipping industry can only be built on effective standards of education and training ..." Ban Ki Moon, **57** UN Secretary General (2015).

Maritime UK has focused its efforts on many aspects of shoreside training and development for the industry. These include the following areas, among others:

- Digital learning **58**
- Exporting maritime training and education **59**
- Careers in shore side maritime roles. **60**
- Future ports workforce
- Skills for green jobs

Identifying the human skills that are required to further develop shoreside training and education for the industry were also seen as crucial for industry adaptation, modernisation and sustainability.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

57 International Maritime Organisation (IMO), 2015. Maritime education and training [online]. Available: <https://www.imo.org/en/MediaCentre/PressBriefings/Pages/39-WMD-2015-.aspx> [Accessed: August 23rd, 2023].

58 Maritime UK, 2021. Digital Learning Lessons Captured Report [online]. Available: <https://www.maritimeuk.org/priorities/people/skills-commission/reports/digital-learning-lessons-captured-report-march-2021/> [Accessed: July 23rd, 2023].

59 Maritime UK, 2023e. Exporting Maritime Education and Training [online]. Available: <https://www.maritimeuk.org/priorities/people/skills-commission/projects/promoting-exports/> [Accessed: July 28th, 2023].

60 Maritime UK, 2023f. Careers into maritime ashore [online]. Available: <https://www.maritimeuk.org/priorities/people/skills-commission/projects/careers-maritime-ashore/> [Accessed: July 28th, 2028].

Identified sector challenges

- The biggest challenge is a lack of general awareness about the maritime industry and the career opportunities it can offer. Awareness needs to be raised, beginning in schools and primary education.
- Different, and increasingly diverse systems for the funding of training, with no central organisation to govern and promote the courses, are causing issues. For example, there are four different apprenticeship models across the four UK nations.
- There is the challenge of having limited international networks which can lead to a lack of awareness of the issues affecting other countries within the shipping and logistics sectors.
- Understanding that behaviours and human skills take time to develop. Technical trainers are unlikely to naturally become behaviour specialists. Additionally, HR departments that address the human element of an organisation are invaluable.
- Preparation for decarbonisation is essential.
- There is a need to stop using quick, cost-driven fixes and to concentrate instead on what is known to work, which takes time and resources, but is invaluable in the long term.
- There is a lack of awareness ashore of the skills that highly qualified seafarers can bring with them.
- There exists a challenge around creating international networks for students around the world.
- Flexible global delivery to enable education beyond borders was considered essential because shipping and maritime operations are global and have no borders. There needs to be awareness that education works differently all over the world; for example, embedding a post-graduate diploma in the Hong Kong marine department wouldn't work as a comparative model in South Africa.
- Flexible training models are needed (see above).

Human skills and behaviours

Aviation has many similarities to the maritime industry, and it would be beneficial to identify the training requirements or guidelines that have been implemented globally in that sector. Aviation combines both technical and human skills within training requirements and unlike current maritime training, they are not separated out. Aviation has long recognised that human skills, in certain situations, can be more important than technical skills. When there are aviation incidents, in most cases these are attributed to the human factor, whether in the air or land based. In terms of ensuring that training is up to date, again within aviation, there is a lot more clarity about which certification people require and this is understood globally. With the rapid advancements in technology in the maritime industry, those people educating and training across all sectors will need to be equally agile and adaptable.

Other human skills and behaviours required for working in this sector were identified as follows:

- Digital literacy
- Cultural awareness
- Communication skills
- People skills
- Independent learning and knowing how to do this
- Team management skills
- Learning how to deliver training remotely, with the increased home working of staff
- Budget management skills

Training and technology considerations and their impact on the sector

There is currently a disconnect between the curriculum and the workplace. “We need to close the gaps between the results that the graduates [achieve] and employer’s requirements”. A lot of training currently falls to employers and they don’t necessarily want or know how to do it or necessarily have the budget either. Therefore, it is imperative that the curriculum meets the needs of employers, and that they receive people who are well prepared to start their new roles. It was additionally noted that commercial awareness should be provided as part of training.

Since the COVID-19 pandemic, the use of technology to deliver training and education has developed and created a larger platform for international training. With the range of new systems that are now readily available, such as Zoom, Teams and others, training delivery has opened up to a much wider audience. These platforms have also helped reduce costs and additionally provided opportunities for people wanting to learn whilst at sea and then transition ashore, rather than relying on developing their training skills after they have come ashore, as was previously the case. However, even these technologies are changing quickly, and there must be constant adaptation to make the most of these evolutions. There are now many bespoke training options on offer across all different platforms and this must be controlled in a recognised manner. When seafarers come ashore, what qualifications have they achieved and are they accredited and widely recognised? Technology provides both advantages and disadvantages in this respect.

In terms of technology, the target audience now learns differently and individuals are more comfortable with an audio-visual learning approach than the traditional ‘chalk and talk’ methods. There is a demand for video and animation, but also a need for in-person meetings because although technology via video conferencing has advantages, there are still important benefits to real human interaction within training, such as clearer communication gained from body language and the ability to connect on a more meaningful level with the trainer and the other students. This can be very difficult to service on a global scale.

Transferrable skills and behaviours (moving from sea to shore)

When transitioning from sea to shore, certain industry recognitions are helpful. For example, some top-up courses are being offered to engineers, with a view to helping them to attain a chartered engineering certificate which is more globally recognised. Other programmes lead, for example, to the International Chartered Shipbrokers (ICS) **61** qualification etc. When professional seafarers come ashore with their knowledge and understanding, there needs to be an holistic model for them which, through top-up training, aligns with a professional qualification. IMArest, **62** RINA, **63** the Nautical Institute **64** and others, provide this relevant professional recognition.

Skills gained from working at sea were identified as:

- Team working
- Adaptability
- Team building

61 Institute of chartered Ship Brokers (ICS), 2015. Institute of Chartered Ship Brokers [online]. Available: <https://www.ics.org.uk/> [Accessed: August 6th, 2023].

62 Institute of Marine Engineering, Science and Technology (IMAREST), 2023. Welcome to Institute of Marine Engineering, Science and Technology [online]. Available: <https://www.imarest.org/> [Accessed: August 24th, 2023].

63 RINA, n.d. Diversity, equity and inclusion, [online]. Available:

<https://www.ecosia.org/search?q=RINA&addon=opensearch> [Accessed: September 2nd, 2023].

64 The Nautical Institute, 2023. The nautical institute [online] Available: <https://www.nautinst.org/> [Accessed: October 8th, 2023].

Areas that seafarers may need to develop coming ashore include:

- Decision-making and planning
- Developing others and giving praise
- Communication – giving and receiving feedback
- Collaboration, conflict management and trust-building
- Building relationships
- Impact and influence
- Change management
- Situational awareness
- Time management

Leadership skills and behaviours

The recent COVID-19 pandemic has served to accelerate home working, and this and other hybrid working arrangements are becoming more mainstream and important to the industry in providing new ways of managing work. However, these new working arrangements have significant implications for leadership in the shoreside education sector. When the work force is employed from home, some or all of the time, different leadership attitudes and approaches are important. Open mindedness and being willing to take a few risks and try new arrangements is valuable. Rather than only being focused on tasks, there should be a greater focus on a more goal-orientated leadership style. It should not matter when in the week the work is completed; this is almost irrelevant. It can be in the evenings and weekends or during the week, to fit in with the employee's lifestyle and family as long as X is achieved by a certain time. This kind of flexibility can make the work more adaptable and can improve diversity by attracting a wider pool of people who can manage their work around their personal circumstances.

As a result of these new ways of working and being online much of the time, people's mental health needs to be protected more than ever.

Accountability at all levels is important, and the tendency for people to work in smaller teams, taking on greater tasks and working longer hours, is not helpful.

Ethics and sustainability should be fundamental to leadership and management both at sea and onshore and this needs to be ongoing even in the context of home working.

Shore-based companies in the maritime industry often do not have a structured approach to Continuing Professional Development (CPD) and progression. Seafarers have a very clear promotional route and a distinct hierarchical pathway. Education and training in shore-based organisations should include a structured induction for the new hires regardless of their seniority. For those who are not ex-seafarers, it is important that staff gain an understanding of the industry. New line managers need clear guidance regarding the role and their management duties. Leadership skills and competencies to manage others and run a project team are all very important and require people to be trained and supported to develop.

Diversity and inclusion

There is a tendency for people to “hire people in their own image”. But this is unlikely to support a diverse workforce. There is not enough diversity and inclusion in the education and training workplace ashore. There is a need to look at how people are selected for jobs and how job adverts are written.

The industry needs to think about diversity in terms of the merit it brings rather than just achieving a quota. “Metrics can really drive perverse behaviours.”

The current perception is that the maritime industry is significantly behind other industries in terms of diversity and inclusion. If it were to operate in a true meritocracy, diversity would not be an issue. The sector and industry need much greater diversity, whether in the area of gender diversity and increasing the number of women employed, or any other group. The maritime industry, including the shoreside training and development sector, needs to open up to a wider range of people to help broaden the pool of people working and contributing to it. People from diverse groups need to be attracted, and as the industry needs to look to how it can be inclusive of people with autism, of different cultures, with disability, neurodiversity, of varying ages and much more.

There may currently be more suitable opportunities for neurodiverse and physically diverse people, due to the trend to work from home, negating the need to commute to work.

It is important that job advertisements and descriptions appeal to a broad range of people, if progress is to be made.

Identified good sector practice

Short, one-day courses that provide an overview of and introduction to the industry aimed at job seekers or someone who is looking to change careers need to be available. A good example is a course run by the North East School of Shipping (NESS) called ‘Shipping World Explained’. ⁶⁵ This course provides a helpful starting point for those considering a career in the shipping industry. The course is one of the many Institute of Chartered Shipbrokers (ICS) courses that are provided at the NESS – currently the only shipping school in the UK that focuses on the many shore-based commercial roles available in the industry. This course benefits the company concerned as well as the student and could be replicated across the rest of the country.

Recommendations

Learning from maritime authorities in other countries

- There is a need for consultation with other maritime authorities, to enable learning and sharing of best practices, identifying what has been achieved, for example, the integration of human skills into maritime syllabuses (e.g. Hong Kong Marine Department ⁶⁶ and others), and how human skills are developed, and changes of behaviour are embedded.

⁶⁵ Stockton Riverside College, n.d. Shipping World Explained [online]. Available:

<https://www.stockton.ac.uk/shipping-explained/shipping-world-explained> [Accessed: September 12th, 2023].

⁶⁶ Hong Kong Marine Department, 2020. Hong Kong Marine Department [online].

<https://www.mardep.gov.hk/hk/home.html> [Accessed: August 19th, 2023].

3.7 Maritime Sector: Professional Services

Introduction

The professional services sector, like many others in the maritime industry, provides a vast range of employment that offers opportunities for a wide variety of expertise, from finance, law, and education (reported on separately), to insurance, brokerage, consulting, and more. Collectively, maritime professional services contribute significantly to the UK's economy and support the country as an internationally important shipping hub. ⁶⁷ In the main, the professional services industry is focused in London and this is where the International Maritime Organisation (IMO), Baltic Exchange and Lloyds of London, which are fundamental to shipping, are all located. ⁶⁸

Many of these industry-specific positions in the professional services require formal qualifications, such as accounting and law, which in turn means that there is likely to be a prevalence of non-seafarers in these sectors, particularly in the more senior roles. This can make it harder and potentially an isolating experience for the seafarer wishing to transition ashore, as they are likely to have very different perspectives of the workplace compared to their peers.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

Identified sector challenges

The following were seen as challenges for the various professional services represented in this group. In this research, these services included: insurance, consultancy, a livery company, law, a seafarers' welfare charity, education services, and ship registry and certification.

⁶⁷ https://www.sceguk.org.uk/wp-content/uploads/sites/24/2020/04/UK_Maritime_Services_Capability_Brochure_domestic_web_version-1.pdf

⁶⁸ Maritime UK, 2016. The UK's Global Maritime Professional Services: Contribution and Trends [online].

Available: <https://www.maritimeuk.org/media-centre/publications/uks-global-maritime-professional-services-contribution-and-trends/> [Accessed: July 14th, 2023].

- Training challenges around hybrid working from the office and home, whilst ensuring that new recruits become aware of the 24/7 nature of the business.
- Lack of face-to-face contact, as a result of new ways of working online and from home; new joiners missing out on learning from in face to face and in person contact and experiences.
- Keeping up with the advancements in the industry.
- Enthusing youngsters to join the industry.
- Recruiting people with practical experience of on-board operations.
- Imparting shoreside managerial and human skills to seafarers who have transitioned ashore and are now working in the office.
- The lack of senior seagoing engineers to recruit from.
- Encouraging junior lawyers into the maritime industry.
- Poor wellbeing at work, diversity, inclusion and mental health, demonstrating the need for new business models to address this.
- 'Sea blindness' from a lack of awareness of the maritime industry.
- Keeping up with new legislation that is changing or coming in.

Human skills and behaviours

- Team building skills and building strong relationships.
- Listening to people properly.
- Social and emotional intelligence, as well as effective communication skills which were identified as the bedrock and need to be formally included in education at all levels.
- Leadership competency through helping people to feel valued and recognised for what they do; these were attributed to having good motivational, social and communication skills.
- Adaptability, which is often inherent within the maritime industry, especially when working globally and with multi-national crews.

Training and technology considerations and impacts for the sector

- The use of simulators to develop human skills and behaviours was considered an effective method to improve these areas.
- There have been very rapid advances in technology which need to be embraced. Seafarers and shipping need to accommodate these changes, but experience is also needed to know when to step in if something is not right. It was felt that staff should "embrace the technology but still have control".
- Meta skills development is not currently an integrated part of education across many sectors including the maritime industry generally. These are the skills that help develop adaptive learners and in turn promote success. They can be identified broadly as self-management, social and emotional intelligence, and innovation skills. They are explained further in the Skills Development Scotland meta-skills progression framework. ⁶⁹ Their incorporation into all the mainstream maritime syllabuses (sea and shore) was seen as fundamental.

⁶⁹ Skills Development Scotland, n.d. Meta-skills toolkit [online]. Available:

<https://www.skillsdevelopmentscotland.co.uk/what-we-do/scotlands-careers-services/education-team/meta-skills-toolkit> [Accessed July 25th, 2023].

Transferrable skills and behaviours (moving from sea to shore)

On board a ship life is very structured, but this is less the case onshore. When an individual moves across into the professional services and comes ashore into business or insurance etc. they then switch to working in teams with people who haven't had the same experiences and who may also have very different priorities, for example, childcare, and other commitments, potentially working different hours. Moving ashore requires quite an adaptation for seafarers, along with an appreciation of the need for more flexible working and an understanding of these different priorities. In addition, the importance of interpersonal and social skills is key, especially when working collaboratively in teams.

Skills gained from working at sea were identified as:

- Strong team working.
- Responsibility and some degree of decisiveness: "they are used to taking weight on their shoulders", which is learnt on board and helpful ashore.
- The ability to problem-solve differently and creatively because of the unique situation seafarers operate in: thinking outside the box was considered a seafaring skill – "some solicitors who have not been at sea don't do this [think outside the box], others will stick to the rules of the law, whereas those who have been at sea will find a solution".
- A hardworking, get the job done, ethic from being on board whereby people are held to account and to high standards at sea more so than on shore.
- Good human interaction and management skills; mariners are good at interacting with different nationalities and a variety of people generally; this ability to understand different people with no pre-conceived ideas is a valuable skill to transfer to shore.

Areas that seafarers may need to develop when coming ashore include:

- Time management and organisation of priorities.
- Active listening.
- Decision-making skills.
- The need to value other people's priorities – different social skills are required onshore and sometimes ex-seafarer are not so immediately aware of outside influences, such as, for example, being a single parent.
- "We need structural leadership at sea. We then have to transit from being the BOSS at sea to being (just) a surveyor, arguably with greater authority but not structural authority, so this needs to be more persuasive. We need to train out autocratic authority and train in the persuasive capability" – along with influence, relationship-building and conflict resolution.

Important leadership skills and behaviours

- Relationship-building, mentoring, trust, and self-belief all contribute significantly on board and on the bridge and in the professional services ashore.
- Interpersonal skills and empathetic leadership, along with recognising other people's emotions and what they need from their leader are all essential skills.
- It is important to generate ideas with the team and ensure that everyone 'buys in' to the decisions being made. A leader whose dominant leadership style is autocratic is unlikely to get the best out of their people, particularly on shore, although it is acknowledged that in a crisis this leadership style is necessary, particularly at sea in safety-critical situations. Such leadership is not often required ashore.
- Being able to support, develop and get the best from people in the team/workplace are vital.
- Approachability and empathy are key skills alongside the ability to empower people to speak up and be receptive and non-judgmental to ensure people feel comfortable when speaking up.
- The industry needs good leaders who are willing to take risks, particularly in times of change. "We need thought leaders who are not shy of taking risks. Be more adventurous in taking on new ideas."
- The ability to listen should be an integral part of leadership and communications.
- Adaptability is very important in the professional services due to the multi-dimensional environment of the industry.
- Prioritisation and time management are important for professional services.

Diversity and inclusion considerations

- "Modernity is often embodied in diversity, and we need this greatly as an industry."
- Seafarers are mostly nationality blind, as they are usually working in a multi-cultural environment.
- It was thought that a perfect future would involve not needing to use the words diversity and inclusion.
- The subject needs to be taught at school very early on and aided by social media to spread messages internationally.
- Cultural awareness and general understanding and acceptance of everyone must be promoted.
- Gender diversity can be challenging because of the low number of women in the industry. In some parts of the world, women will have difficulty using their authority, because of cultural attitudes towards women and other minorities within certain countries.

Identified good sector practice

Regular in-person meetings and interactions are needed to encourage relationship-building and dynamic conversations. New recruits and graduates will benefit hugely from these often less formal interactions.

Recommendations

Thought leaders

- Thought leaders should be actively introduced to the industry to keep up with current and evolving practices and establish good practice in terms of supporting change management.

Incorporation of meta skills

- Meta skills, as described in the Skills Development Scotland progression framework 70 should be included in all maritime training at sea and ashore.

3.8 Maritime Sector: Crew Management and Recruitment

Introduction

The crew management and recruitment sectors are challenged in that they work with both seafarers and shoreside companies (internal and external to their own organisations). Typically, a crew management company is responsible for the manning of vessels under a crew management contract, although for larger shipping companies this may be managed in house. The role includes the sourcing, recruitment, selection, deployment, scheduling, training/upgrading programmes, and on-going management of seafarers engaged on vessels.

Crew management and recruitment translate into human resource (HR) management and personnel management, the difference being that personnel management tends to focus on hiring and managing employees, equipping them to perform specific tasks for the company effectively. In contrast, HR management has a wider focus, potentially developing business partnerships, and includes employee development and wellbeing. It also focuses on retention and monitoring progress or concerns.

Crew managers and recruiters will bring people from sea to shore and also transition them in the opposite trajectory. They also move people from overseas –and it was noted that this is much more difficult following Brexit. They will often manage payroll, taxes, visa requirements and deal with issues the seafarer may have, both at home and on board. The duration of the COVID-19 was a particularly challenging time for this sector, with many seafarers ‘stuck’ on board and organisations reluctant to switch crew out due to travel costs, restrictions and the need for quarantining.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

Identified sector challenges

- There is an over reliance on how management and recruitment operations have been conducted in the past, as opposed to looking at what is needed in the future. Greater innovation alongside people with initiative and a deeper understanding of how to achieve change and manage change are needed. Recruitment today should focus on the skills required for future jobs, which means investing resources in understanding this thoroughly.
- As with many other maritime sectors, it is important to raise awareness of this sector and the industry generally.
- It is essential to ensure that entry into the industry is as straight forward as possible, particularly for people who may be transitioning from other industries. New recruits should be trained with the appropriate human and technical skills for the job. Finding out about jobs in crew management and recruitment in the maritime industry is usually through a family or friend connection. Information needs to be disseminated more widely to ensure that the industry is more prominent in people's minds.
- The challenges of moving towards a more sustainable industry need to be addressed.
- People with the right attributes and commitment to stay in the industry need to be attracted.
- Legislation changes need to keep pace with industry developments.

Human skills and behaviours

- Seafarers bring cultural awareness as they work with multi-national crews and different cultures, which is an asset in crew management and recruitment.
- Resilience is needed in the crew management and recruitment sector. It can be a very up-and-down job and it needs people who can handle difficult situations and move forward positively despite any setbacks.
- Good teamworking and strong relationships with colleagues working together and supporting each other were identified as important and relating to trust and noticing when someone in the team needs support.
- Confidence is required and the ability to deal with people of many different cultures and communicate well with them. These skills were summed up as cross-cultural agility, resourcefulness and sensitivity, and humility. Simply put, these skills involve understanding others.
- Recruiters need to know what experiences people have had in their previous workplace, e.g. have they had to implement a new system? Or have they had to deal with a certain situation and how have they coped with that? These are important skills that are useful when moving into recruitment and crew management positions ashore.
- Good communication skills, both written and verbal, are essential, especially when dealing with clients for whom English may not be their first language.
- Relationships-building was seen as a key skill.
- Consistency and a good level of quality work were also identified as important.

Training and technology considerations and their impact on the sector

Training materials and delivery need to progress and embrace technology as a teaching aid. Technology should play a bigger part in training but should not replace the human element. Leadership training is a point in case where interactive discussion can work well for this kind of subject. Additional points in this section are given below:

- Apprenticeships are filling a gap in education and enabling some youngsters to start their career at 16, whilst gaining practical experience on the job. However, it should be recognised that this is not consistent across the whole of the UK, either in terms of funding or provision.
- Good quality delivery of training is important. Online learning is not always able to achieve its goal as we are social creatures and can often gain much more from face-to-face learning, especially for the development of human skills: “Our industry is brilliant at picking up technical skills ... but the leadership side, the soft skills, they are harder to deliver over a computer.”
- Businesses need to help to develop people by endeavouring to better understand what they want to get out of their career. This will promote greater retention and will also help to evolve a succession plan. Currently, finding new people, particularly skilled people, to recruit is difficult.
- It is important to nurture staff and provide opportunities to help them to succeed and achieve what they are looking for. This will create a more settled and stable workforce. Companies need firstly to understand what is driving people out of the industry, – for example, money is not a long-term motivator to increase performance or retain staff, a concept that Dan Pink **71** has examined extensively.
- The industry needs to future-proof itself and determine, as far as possible, what new skills are needed, both technical and non-technical, as well as the appropriate behaviours.
- The crew management and recruitment sector in particular need to focus on how to attract new talent to the industry. It was thought that existing talent should be ‘built’ and developed more, rather than relying on ‘buying in’ talent. There needs to be consideration of the skills already established and the skills that are required and how these can be developed.
- Investment in people and the development of human skills was deemed necessary. “Technical is easy to train. Soft skills are not easy, they take longer to embed”, and this issue needs addressing.
- Skills passports may be a good idea as a mechanism for recording the skills that someone has gained through their working experiences, but to be fully effective, such a scheme needs to be consistent and internationally recognised, possibly by IMO. This would need a lot of thought, particularly regarding which elements should be incorporated.

Transferrable skills and behaviours (moving from sea to shore)

Focus group participants agreed that people transitioning to shore from sea will often have a strong team-working ethic and the ability to build relationships. It was felt that they would probably struggle moving into an environment where “they felt that they were just a number” which, it was thought, could happen in shore-based roles, particularly within larger organisations.

71 Mind Tools, 2023. Pink's Autonomy, Mastery and Purpose Framework [online]. Available: <https://www.mindtools.com/asmdp60/pinks-autonomy-mastery-and-purpose-framework> [Accessed: October 3 rd, 2023].

Skills gained from working at sea are identified below:

- Seafarers are often people who have been part of a close-knit team and this is a useful experience for working ashore.
- Seafarers will often have had to face stressful situations and unique challenges at sea which can provide them with resilience.

Areas that seafarers may need to develop coming ashore include:

- Decision-making
- Team-building
- Developing themselves and others
- Dealing with ambiguity
- Managing diversity
- Planning
- Active listening
- Organisational agility
- Perspective

Leadership skills and behaviours

- Seafarers need help to learn a variety of leadership styles, particularly when working ashore, with less focus on the command-and-control style of leadership, that has been frequently practised at sea, and more focus on more engaging interactivity and support.
- People must be empowered to make decisions and to give and receive feedback.
- Time management should be prioritised.
- Problem-solving and planning are central skills.
- There is a need for people to be able to motivate themselves and others.
- Teaching of soft skills may need to be undertaken by behaviourists (people who specialise in people and leadership development); this is key. Participants need to go away understanding the importance of these 'soft' skills, as well as what they are and how to demonstrate them. These skills are not easily acquired from reading a book, and there is a benefit in having facilitators/teachers who are invested and expert at delivering this training. The CIPD **72** model, known as the 'professional map', can be a helpful tool.

Diversity and inclusion

- People need to understand the meaning of diversity and inclusion.
- At sea, it was felt that multi-cultural diversity was achieved most of the time.
- Mentoring schemes are often very helpful in supporting all kinds of diversity at sea and on shore.
- Raising levels of diversity awareness to as broad an audience as possible, within the maritime industry, is essential. This should be aimed particularly at young people. Recruiters “should be doing our bit from the first day”.
- Diversity seems to be actively encouraged or discouraged. Some companies don’t feel like seafaring is suitable for women and others will specifically be seeking female employees. “As a business, we actively do gender de-coding in adverts to try and attract more women. Just taking the gender biases out is highly effective.”
- Diversity should be celebrated when and where it occurs.

Identified good sector practice

The BT Personal Skills Journey (2001) **73** ‘Learning to earning course’ is a three-day training programme which helps young people learn and develop essential human skills such as communication, teamwork, influencing, self-motivation and personal impact etc. at an early stage in their careers. Providing young people with this kind of training early on helps them to embed these important skills so that they are present and established throughout their careers.

Recommendations

Promotion of the maritime industry

1. Further study on how to promote the maritime industry to support greater recruitment and retention of people is vital for the industry as well as to attract more people into the maritime recruitment and management sector.

3.9 Maritime Sector: Ship Owners and Charterers, Ship Operations and Management

Introduction

This sector brings together the skills, behaviours and insights identified by linking, ship owners, operators, charterers and management involved in this research, in relation to recruitment and retention within the maritime industry.

Within ship operations there is a shift towards digitalisation and automation which is bringing a requirement for a new set of skills, knowledge, behaviours and ways of working. Additionally, decarbonisation is a major issue for shipping, in particular for ship owners and charterers, with key discussions taking place around the immense associated costs and complexities. ⁷⁴ With these developments, which are not only shipping focused but impacting global business, adaptation and preparation for these rapid changes are necessary. This includes understanding the impact on recruitment issues, the upskilling and new skills required to adequately prepare the industry for these changes and the new methods of teaching required to ensure these skills exist.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

Identified sector challenges

- There is a need to improve the relationships between commercial, chartering and technical management teams.
- The ship operations sector tends to work with the same people, who move into different roles within it. It can be challenging for new people to enter.
- There are recruitment issues for ship operators at entry level, as well as a difficulty in finding the right calibre of people for management positions.
- It is hard to retain personnel to stay within the maritime industry and there is a lack of awareness of the vast range of industry opportunities that exist ashore. Visibility of the industry is needed to sustain the aging workforce.
- The chartering business is rapidly evolving, and it is becoming increasingly difficult to find highly qualified individuals. As a result, poaching from other companies occurs, particularly at the intermediate to the senior levels. This was considered to be an issue of concern for at least the next few years.
- Much investment is needed to develop entry-level staff so that they attain the basic skill sets required to perform.
- Education to become a maritime professional in the UK was viewed as being too basic; it was felt that it needed to be more challenging. It should be perceived as difficult to achieve, in order to motivate people to want it more; something to strive towards to instil a sense of competitiveness in the younger generation. "If I get that [qualification] I know I will get a job". This will instil a real sense of pride and achievement in gaining these high-level qualifications, which should provide the necessary foundation skills for individuals to be prepared for a career in the maritime industry.
- The UK does not have a clear 'route map' for people working in chartering and ship management/operations and this has been an issue for a long time. "There is no collective effort in the UK to do this in the right way." "There needs to be a high standard – mirroring what other countries have been doing, in terms of 'grading' the right building blocks in terms of the gold standard against which you can be measured for your skills".

74 Hill Dickinson, 2022. Decarbonisation and shipping: The UK's position on greenhouse gas emissions from shipping [online]. Available: <https://www.hilldickinson.com/insights/articles/decarbonisation>

Human skills and behaviours

In the tanker and the dry bulk and gas sector, the skill sets required are dependent on how the business is structured. Chartering is complex and both the charterer and owner have market-facing roles which can be highly stressful with multiple conflicting agendas. Resilience in general is needed and the flexibility to change viewpoint, for example as a particular market evolves. The role requires a person to think on their feet and to be able to quickly make calculations (mental maths) to adapt to these changing markets.

- There is a need for natural curiosity to learn every day.
- The ability to network and connect with people is also important. Chartering is a people industry with many different personalities, consequently approachability is important and will reduce conflict.
- It is vital for people to be able to keep an open mind instead of having the attitude “that’s how we’ve always done it”. Meeting this resistance can be challenging, especially for new people joining.
- Better communication is needed between each department as operations are linked and this should happen seamlessly.
- It is important to listen to people.
- In chartering, a great level of independence is needed, and simultaneously teamwork, and the ability to handle stress. “The ability to handle stress is supremely important and ‘softer roles’ play an increasing role in what we do”.
- Basic technical operational skills are needed from the start and are one of the building blocks for these roles. However, the human skills were considered to be overarching as they are used on a daily basis.

Training and technology considerations and their impact on the sector

- There are various routes available for entering chartering and ship operations; university graduates both master’s and bachelor’s graduates are well suited. For the more intermediate roles, ex-seafarers have the technical and operational skills needed. “We look for a much rounder skills set And how that individual will be able to impact in a commercial sphere”.
- Every shoreside employee needs to experience the pressures of life on board and therefore should spend time on board a ship to gain this perspective.
- Mental health training is important for all employees (shoreside and at sea) to help manage the stresses of the job.
- Technology can improve communications and speed up processes, for example sharing of documents and emails.
- Automation and digitalisation are changing the way ship operations are conducted. For example, historically, people had to go outside and work in PPE and climb ladders but with the introduction of automated and semi-automated equipment, now much of this work can be conducted inside, remotely. The equipment still needs to be outside, but the operation of the equipment is office-based which means that a completely different demographic with a different skill set will be attracted to the sector: “As we move the operations inside, we will see a complete shift in that regard. What was seen historically as unattractive can be attractive if it is not associated with 12-hour shifts where you have to be outside ...”.
- The Institute of Chartered Shipbrokers (ICS) **75** offers a range of internationally recognised diplomas from Foundation to Advanced level and with the Professional Qualifying Examinations (PQE), students are eligible to become members of the Institute of Chartered Shipbrokers.
- When entering the industry as part of a family business, people learn the ropes on the job. By contrast, companies such as BP and Shell will take on graduates and either put them through the ICS diplomas or train them in house.
- Cyber security is an escalating issue at sea, particularly with the significant advancement and innovation in autonomous vessels. Legally, vessels need to be ‘seaworthy’ and it was suggested that also making them ‘cyber worthy’ was important.

Transferrable skills and behaviours (moving from sea to shore)

- A captain or chief engineer will have many useful transferable skills, both from a knowledge and technical perspective, as well as from team and leadership experience. They are often considered to have good negotiation skills and the ability to deal with difficult people. At more junior levels, e.g. cadets and 2nd officers, training and development courses are needed to help them move into the ship management sector.
- The seafaring experience and understanding of life at sea are seafarers' most transferable skills.
- Although good at team working, typically ex-seafarers work in smaller, close-knit teams, so adapting to larger teams, needing to work cross-departmentally, and dealing with people who are not seafarers, can require a period of adjustment.

Leadership skills and behaviours

Ship owners need to establish the company ethos and culture, and in turn, this should be implemented on board. Boundaries need to be established and enforced; for example, there should be zero tolerance of bullying and individuals who are not pulling their weight should be picked up on immediately. Quick and decisive action is needed when someone oversteps the boundaries. "This also helps to show the crew that someone from the office cares about them, rather than whether they arrive in Singapore on time." This additionally encourages a good safety culture and working environment, which in turn helps to attract more diversity to the vessel.

The safety culture should encourage people to speak up and feel comfortable enough to do so without fear of repercussions. The promotion of a caring environment is important and one where people look out for each other. It was felt that this is usually easier for a smaller company to achieve and that it helps to motivate people to work well if they enjoy working there. The Maritime Professional Council of the UK (MPC) supports these findings and has published a recent report on 'Kind Leadership' 76 (2022).

Automation is creating a significant change programme and how to lead and manage this transition at scale is very new and still under consideration. Other leadership skills and behaviours identified included:

- Effective communication and listening to understand.
- The importance of empathy, as evidenced particularly during the COVID-19 pandemic and the need to support the wellbeing of all colleagues and staff; the human behind the title: charterer, manager, and so on, should not be ignored.
- The ability to delegate, give responsibility and empower people; trust must be demonstrated to support staff and enable them to progress and this helps retain employees.
- Praise and recognition should be given where it is due, and this is also essential for motivation.
- Supporting the team, looking out and noticing if someone needs assistance.

Diversity and inclusion considerations

Much work needs to be done regarding diversity and inclusion in this sector.

Increasing diversity in the employment of graduates and non-graduates is important as it offers the business different perspectives. Larger organisations, are able to be more selective, offering higher salaries to obtain certain people to work for them (this approach was thought to be cost-effective in the long run).

Movement of people between different maritime organisations was seen to create healthy competition and to be something that the industry benefits from.

Identified good sector practice

Generally, there is a lack of career structure for charterers, with a paucity of information on the education and building blocks to progress, unlike for seafarers who have very clear career pathways. For example, in the Copenhagen Business **77** School there is a dedicated package for students wishing to work in the commercial and operational maritime sector, and something similar in the UK would be helpful.

Recommendations

Gold standard education

1. A gold standard in education should be created similar to the Copenhagen Business School, to help promote the maritime industry as a progressive and sought-after industry of employment.

Unified and collective maritime strategy

1. From an ancillary perspective, the UK is viewed as the shipping capital of the world, providing insurance, brokering, and the shipping trade and being home to the IMO. Yet all of these elements currently operate independently of each other. Therefore, it is recommended that a collective and collaborative approach should be implemented to achieve the Maritime 2050 **78** vision and strategy, ensuring the involvement of all aspects of the maritime industry including education, training and universities.

⁷⁷ Copenhagen Business School (CBD), 2023. Copenhagen Business School [online]. Available: <https://www.cbs.dk/en> [Accessed: September 28th, 2023].

⁷⁸ Ibid (19). Gov.uk, 2029

3.10 Maritime Sector: Research, Academia, Science, Technology and Engineering

Introduction

Many groundbreaking and exciting developments are being made in science and engineering, geared around solutions for society and informed by world-class research. These successes need to be widely celebrated to help increase the awareness of careers in these sectors. The UK is leading on some interesting partnerships in the maritime industry, including but not exclusively, AUKUS ⁷⁹ a collaboration across three nations (UK, Australia, and US) to build and operate new nuclear submarines and additionally, the design of the MARS tankers, ⁸⁰ which are replenishment vessels for the Royal Navy designed by the International BMT Group, built in Korea and fitted out in the UK.

The security issues, surrounding nuclear submarine development of the AUKUS collaboration, raises challenges in terms of resourcing appropriately skilled personnel in the UK. As with other areas of engineering, technical and science-based jobs, individuals with these skills are in short supply, and yet in very high demand from all industries, creating massive competition.

For individuals following a career in academia, there is a well-trodden but somewhat insecure path due to funding uncertainties. This is particularly the case at the post-doctoral level where reliance on grant funding is usually necessary but highly tenuous, meaning that science and technology academics do not always have the security they need to remain within the maritime industry. Tenure can also be difficult to obtain.

The maritime industry is challenged because large companies in different industry sectors can offer very attractive salaries, and some organisations provide great graduate schemes, including the large financial and project management focused organisations. Young people should be made fully aware of the many career opportunities that the maritime industry can offer if they choose an engineering pathway.

Attracting people into science, engineering, academia and IT from other sectors, will bring fresh thinking and different perspectives.

The very best people across the board are needed to work in academia, engineering and science because ultimately the systems, innovations, developments and education will impact advancement including safety.

Research findings

The research findings refer jointly to the primary data collection from the focus groups and interviews conducted. Other data findings presented are drawn from the literature review. Some direct quotes from the research have been used to illustrate certain points and are indicated by text in italics and quotation marks.

⁷⁹ Gov.uk, 2023a. The AUKUS nuclear powered submarine pathway: a partnership for the future [online].

<https://www.gov.uk/government/publications/the-aukus-nuclear-powered-submarine-pathway-a-partnershipfor-the-future> [Accessed: July 15th, 2023].

⁸⁰ Naval Technology, 2023. Tide Class (MARS) Royal Fleet Auxiliary Tankers [online]. <https://www.navaltechnology.com/projects/tide-class-mars-royal-fleet-auxiliary-tankers/> [Accessed: July 15th, 2023].

Identified sector challenges

- The recruitment pool in engineering is generally too small and this is a particular problem for the maritime industry especially in the electrical technician fields. Other businesses outside of the maritime industry are also trying to recruit engineers with the same skill sets. Growth areas where these skills are required include autonomous vehicles, energy, and skills for green jobs and the focus on becoming carbon neutral. All these industries have large skills shortages which are driving immense competition in recruiting these skilled individuals; unless addressed the situation will be exacerbated.
- More broadly, it is also challenging to recruit, for example, Information Technology (IT) specialists across the board and particularly in cyber security. In universities, there is a struggle to recruit academic IT specialists and qualified financial accountants due to competition for individuals with these skills and because academic pay is less than the market rate for most equivalent industry roles. This contributes to attrition of academic staff who are being lost to industry. Strong market competition for these skills generally has driven up the market rate further making recruitment difficult, particularly for public sector maritime work.
- For some maritime engineering roles, there needs to be a willingness to work in hostile environments at sea (e.g., maintaining navigation points and instruments).
- Visibility of the sector is poor and marketing to make it appealing can be a challenge. There is so much choice for people with the skills that the maritime industry needs to attract that it is important that they are made aware of the maritime industry and see it as an attractive option as a workplace and career.
- New skills are required to operate newly designed ships with new, innovative technologies on board (e.g., new electronics and propulsion systems). Change in these areas is rapid and often hard to predict, making future investment decisions difficult in some cases.

Human skills and behaviours

It was felt that within universities, the incorporation of human skills focused on how students learn, has improved. Teaching techniques have evolved and become more interactive using many different approaches. The human skills and behaviours identified for this sector include:

- Communication skills, which are important and do not come naturally to everyone; this is possibly more the case for technical specialists in areas such as IT and engineering.
- Good listening skills.
- In a class situation, having the teaching skills to adapt to the different learning styles of the students.
- Empathy, cooperation and collaboration which are all needed to get the best out of a team as well as understanding people's strengths and weaknesses; universities could do more to impart these skills to their students as they are fundamental when working and leading within the maritime industry.
- Empathy, which is required, especially when dealing with different students from different backgrounds and at different stages in their career.
- Good organisational skills and the ability to prioritise workload.
- Effective time management.
- Enthusiastic and passionate academics in sciences, technology and engineering.

Training and technology considerations and their impact on the sector

It is felt that parents and teachers still don't understand the breadth of opportunity in the maritime industry. There is a need to raise awareness of the variety of interesting career options early, among young people from all backgrounds. Attention should also be drawn to the exciting developments happening in science and engineering, to help engage a variety of people.

Targeting all children at primary and secondary schools with STEM subjects is important, but there will be a time lag between these children growing up and starting their careers. "The question is, what can we do today to improve the recruitment gap, whilst recognising that this is still going to take us time?"

More governmental consistency in education was suggested. "First the government wants everyone to have a degree, next they want everyone to get into apprenticeships."

Apprenticeships

Apprenticeships **81 82** require a balance between the education provider and the employer, which is not always easy to establish and maintain. Industry, at times, views the education provider as inflexible or slow to respond. It is important for education providers to offer more apprenticeships and to build relationships with the employers. Both education providers and the employers need to collaborate to adequately support the apprentices. Universities are experiencing demand for degree apprenticeships from young people who are attracted to the 'earn while you learn' concept. However, arguably there is still a lack of opportunity provided through this route, and further work is needed to enable more young people to take up degree apprenticeships.

Some education providers, particularly universities, are wary of delivering degree apprenticeships because the regulations are complicated and involve many different bodies. They are not simply regulated through the Office for Students (OfS); **83** they are also regulated through OFSTED **84** and the Education and Skills Funding Agency (ESFA), **85** presenting a challenge due to their different perspectives and expectations which makes it difficult to meet the different demands of each governing body. Additionally, there is limited funding for apprenticeships, meaning that some programmes, depending on how overheads are calculated, are not making the institutions any margins, and it is therefore, not attractive to offer them. It is important to re-examine the organisation and structure of apprenticeships and the Institute for Apprenticeships and Technical Education (IFATE) **86** has started to undertake this work. This is specific to England as Degree or higher-level apprenticeships don't exist in Wales, Northern Ireland or Scotland.

81 Maritime Skills Alliance, 2017. Apprenticeships [online]. Available: <https://www.maritimeskills.org/Apprenticeships> [Accessed: July 15th, 2023].

82 Maritime Careers, n.d. Maritime Careers [online]. Available: <https://maritimecareers.uk/apprenticeships/> [Accessed: July 15th, 2023].

83 Office for Student, 2023. Welcome to the office for students [online]. Available: <https://www.officeforstudents.org.uk/> [Accessed: July 15th, 2023].

84 Gov.uk, n.d. OFSTED [online]. Available: <https://www.gov.uk/government/organisations/ofsted> [Accessed: July 17th, 2023].

85 Gov.uk, 2023b. Education and Skills Funding Agency [online]. Available: <https://www.gov.uk/government/organisations/education-and-skills-funding-agency> [Accessed: July 17th , 2023].

86 Institute for Apprentices and Technical Education, 2023. Institute for Apprentices and Technical Education [online]. Available: <https://www.instituteforapprenticeships.org/> [Accessed: July 17th, 2023]

Alternative training methods and blended learning

Some of the national engineering projects require people who have not been trained with 'off the shelf' degrees. Some of the training has to be delivered within the respective companies, with Suitably Qualified and Experienced Personnel (SQEP). These individuals need 5–10 years within the industry before they can work independently. The submarine industry invests in the right people but if it loses these same people at the end of the first five years, it is a real drain on investment. It is important for an individual's career development that companies allow people to move between companies; the crucial point is that they stay within the maritime industry, so the skills are not ultimately lost elsewhere. "So we need to keep [them] in the industry but moving around in a more coherent way." Making use of simulation and virtual learning can be helpful, offering blended solutions and allowing flexibility in the delivery of both technical and human skills. However, it was still considered important for seafaring knowledge to be instilled whilst on board.

Change management

There are many new vessels, autonomous ships, green ships with new fuels entering the market alongside other positive changes. It is necessary to be able to articulate which skills sets are required to accommodate these changes as well as an understanding of how to identify and attract people with these skills. Forward planning for these changes is necessary. If specialist skills are needed, they should be identified early, and a wider talent pool should be trained. Training programmes which are well thought through with the relevant materials and technologies to support these changes are also needed. Good change management is required, such as clearly articulating the purpose for change and how the change will benefit staff and individuals.

Human skills

Training is about embedding facts such as health and safety practices. Human skills, by contrast, are about modifying behaviour, by, for example, practising active listening, and this is developed through practice, observation and feedback. This requires a desire on the part of the learner to wish to change and form new 'habits'.

Transferrable skills and behaviours (moving from sea to shore)

The structure on board is generally hierarchical, rigid and authoritarian in leadership style. However, typically good organisation and management skills are developed as a result, which are useful and transferable skills when moving ashore.

Seafaring engineers also have a good understanding of how design and solutions work or don't work, whereas a new starter graduate may be able to bring new technological solutions to the fore. With a diverse workforce, it is important to ensure that everyone works to the same level. Everyone will bring different skills, regardless of position or experience. Additionally:

- Collaborative working and being able to work well in a team are key. Engineering is about finding solutions, making it important to have a broader perspective than just that of one individual. There is a need for recognition of when to bring in people with different knowledge, skills and experiences, for example, ex-seafarers, new graduates, apprentices, etc. to gain different perspectives and richer thinking. Collaboration and facilitation skills will be needed to achieve beneficial outcomes.
- Problem-solving skills as individuals and when working in a team are also needed.

Leadership skills and behaviours

Leaders need the ability to translate their knowledge into sharable information, which requires the use of human skills such as communication and emotional intelligence. Leaders and institutions in the academic sector need to have awareness and be responsive and willing to adapt to changes and work collaboratively with industry. Other key leadership skills identified in this sector were:

- Pragmatism and common sense.
- Political awareness and emotional intelligence.
- Good listening skills, with a willingness to change viewpoint, if necessary, because of what is being heard; “Good leaders listen to and understand the engineers on the ground. There can be gaps here. The guys on the ground (engineers) don’t always ‘hear’ the same message from the leader and don’t always feel that visible.”
- Respecting, recognising and listening to the full breadth of an organisation, all of which are important but also not easy to achieve within large organisations.
- The need for leaders to help create and support a ‘just culture’, where anyone should be able to challenge what they see or hear; this can develop mutual trust and respect.
- A willingness to lead by example and take decisive and speedy action when needed.
- Recognition that leaders are part of the bigger industry, therefore, collaboration and partnerships are vital for successful development; clarity and a clear agenda, which is articulated well with a consistent, constructive message.
- Provision of helpful feedback to staff, imparting some of their own knowledge and ways of working to help the workforce develop.

Diversity and inclusion

The maritime industry is a notoriously male-dominated environment, particularly in areas such as ship-building, engineering and IT, although this was seen as being a changing picture. In the past, women simply did not serve at sea and although this is also changing, according to the IMO (2023), statistics show only 2% of seafarers are female. It was felt that recruitment shortages, in and around engineering and technology-based areas, could be addressed if more women saw these career choices as a viable option. It is necessary to increase awareness among women of the range of opportunities that exist in engineering and technology within the maritime industry.

More people with physical disabilities need to be attracted and, additionally, neurodiversity is now better supported and should be encouraged.

The security issues around working in national defence mean that people of certain nationalities may need to be excluded, thereby reducing the talent pool. For the same reasons, within academia, there may be limitations in terms of which universities can collaborate with the industry. However, it would be beneficial to open defence up to a wider pool of talent to help develop ideas and ensure that the sector is not too ‘locked down’. For example, this could include collaboration between the gas and oil industry and submarine design courses, where there is a comparable application of skills. In this case there is the potential to employ people of different demographics but of the same nationality, creating diversity in other areas.

In support of diversity within the maritime industry, it should be recognised that people learn in different ways, although this can change throughout one’s lifetime. Offering a variety of educational methods to help people enter the industry is important, for example, through opportunities such as: apprenticeships, degree apprenticeships, university, and support for mid-career transitions. Additionally, support through access to courses and mentoring, particularly to enable career moves between maritime sectors and to support transitioning from sea to shore, is equally valuable for recruitment and retention.

Identified good sector practice

- The STEM **87** returners programme focuses on supporting people who are coming back from career breaks, assisting employers to “recruit, develop and retain the best available talent, enabling highly qualified and experienced STEM professionals to re-start their career or transfer their skills.” This programme started with an idea from UKNEST **88** (Naval Engineering, Science and Technology). The STEM returners programme is one solution but more like this are needed.
- Universities need to work with schools to promote a range of careers to young people. This is needed to show what is available for certain professions within universities.
- Promotion of science in general is needed, including the opportunities for science within the maritime industry. A joined-up marketing approach to raise awareness of the industry was suggested and comparisons were made with the promotion of the Royal Navy.
- Provision of mentoring to support the development of human skills is important.
- STEM outreach, involving companies ‘opening up’ their vessels for people to look around and learn more about the range of careers was suggested, with this kind of outreach aimed at mixed age ranges and people from all walks of life.
- Promoting people based on their skills and experience, rather than their time within the company, is important.
- The Maritime Roadshow for girls **89**, promotes STEM and the maritime industry to girls from ages 11–14. “The roadshow will aim to encourage Key Stage 3 girls to choose STEM subjects and to give the students greater awareness of career opportunities across the maritime industry.”

Recommendations

Awareness

1. A long-term, national approach to raising awareness of science, technology and engineering careers is needed in the maritime industry. This should include a positive approach taken in celebrating the achievements in these areas, including the UK’s world-leading universities and advances in science and technology. Negative rhetoric needs to be scrutinised and changed. Raising awareness and promoting industry opportunities in schools, starting at primary level, to show what is possible in the sciences, was suggested, with parents and teachers also needing to be targeted in these efforts. A joined-up system around marketing and awareness is required, alongside a funding plan for this work. The Royal Navy’s advertising, for example with slogans like ‘born in Carlisle, made in the Royal Navy **90**, provides a good example of what can be achieved with this approach.

Funding

1. Funding challenges, which exist at all levels, need to be addressed. For example, university funding for student fees have hardly increased over the last decade, making it difficult for institutions to maintain and sustain courses. In subjects like engineering, IT and the sciences, where there are shortages of skilled people, yet significant demand for them, education cannot be delivered without considerable investment, particularly in the latest equipment. Apprenticeships are barely covering the costs incurred in delivering them and so education providers are deterred from getting involved.

87 Stem Returners, 2023. A multi-award winning programme for diversity and inclusion [online]. A MULTIAvailable: www.stemreturners.com/ [Accessed: July 20th, 2023].

88 United Kingdom Naval Engineering, Science and Technology (UK NEST), 2023. The home of UK Naval Engineering, Science & Technology [online]. Available: uknest.org/ [Accessed July 21st, 2023].

89 Maritime UK 2023g. Maritime Roadshow for Girls [online]. <https://www.maritimeuk.org/careers/careersprofessionals/maritime-roadshow-girls/> [Accessed: July 28th, 2023].

90 Youtube, n.d. Royal Navy: Made in the Royal Navy - Born in Carlisle [online]. <https://www.ecosia.org/search?q=born%20in%20carlisle%20made%20in%20the%20royal%20navy&addon=opensearch> [Accessed: July 28th, 2023].

To encourage more people to take degree apprenticeships, more funding is required. This is necessary in order to engage and enthuse high-quality candidates in the exciting new developments in science and engineering. Additional funding is also needed for doctoral and post-doctoral studies to enable the UK to remain one of the most innovative and progressive countries in these fields.

Education

1. Educators need to be better prepared to teach some of the engineering, science and technology skills required in the future, including how to embed the more generic human skills within maritime programmes. Greater collaboration is needed to ensure that the industry operates collectively rather than competing for recruits for similar positions and skills. This would form part of a longer-term solution for the maritime industry, targeting schools and talking about the opportunities in the maritime industry.

Skills passport

1. The establishment of a skills passport of qualifications and experience to help people move from company A to company B is needed. This has the potential to be very powerful if used as an industry-wide tool. There is debate about who would manage a system such as this, with various professional bodies put forward, such as RINA, ⁹¹ IMarEST ⁹² and the Engineering council.⁹³

⁹¹ The Royal Institution of Naval Architects, n.d. The Royal Institution of Naval Architects [online]. Available: www.rina.org.uk/ [Accessed: July 28th, 2023].

⁹² Ibid (61). IMAREST, 2023.

⁹³ Engineering Council, 2023. Guide to Professional Registration [online]. Available: <https://www.engc.org.uk/> [Accessed: August 2nd, 2023].

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Ports Focus Group Participants (6)	
Participant demographics	Average/ or ranges
Years in the industry	Average 9.1, highest 43, lowest 1
Age	2 x 40–49, 3 x 50–59, 1 x 60+
Gender	5F, 1 M
Roles	Head of people, Head of academy, Pilot, Skill’s lead, Learning and development specialist
Ports Interviewees (5)	
Participant demographics	Average/ or ranges
Years in the industry	Average 20, highest 30, lowest 14
Age	1x 30–39, 2 x 40–49, 2x 50–59
Gender	4 F, 1 M
Roles	CEO, Head of compliance and Chief executive, Head of Learning and Development
Commercial Seafarers Focus Group Participants (3)	
Participant demographics	Average/ or ranges
Years in the industry	Average 19.3, highest 26, lowest 11
Age	1 x 20–29, 2 x 40–49
Gender	3 M
Roles	2nd officer, Ops manager, Crewing manager
Commercial Seafarers Interviewees (4)	
Participant demographics	Average/ or ranges
Years in the industry	Average 20.5, highest 43, lowest 5
Age	1 x 20–29 1 x 40–49, 2 x 60+
Gender	1 F, 3 M
Roles	Chief executive, 3rd officer, Chief Engineer, HR
Written (2)	
Years in industry	Average 6, highest 7, lowest 5
Age	29 & under

Gender	2 M
Roles	2nd officer x 2
Cruise Seafarers Focus Group Participants (0)	
Cruise Seafarers Interviewees (5)	
Participant demographics	Average/ or ranges
Years in the industry	Average 5.2, 18 highest, 8 lowest
Age	1 x 20–29, 3 x 30–39, 1 x 40–49
Gender	5 M
Roles	Captain, Officer deck & engineering, Executive officer
Superyacht Seafarers Focus Groups Participants (7)	
Participant demographics	Average/ or ranges
Years in the industry	Average 11, highest 23, lowest 5
Age	2 x 20–29, 2 x 30–39, 3 x 49–49
Gender	3 F, 4 M
Roles	Captain, Chief steward, 2 nd steward, Head chef, Chief engineer, Deck hand
Superyacht Seafarers Interviewees (3)	
Participant demographics	Average/ or ranges
Years in the industry	Average 33, highest 34, lowest 32
Age	1 x 50–59, 2 x 60+
Gender	3 M
Roles	Captain
Training and Development of Seafarers Focus Group Participants (6)	
Participant demographics	Average/ or ranges
Years in the industry	Average 25.3, highest 40+, lowest 4
Age	2 x 30–39, 2 x 40–49, 1 x 50–59, 3 x 60+
Gender	6 M
Roles	Manager, Director, Curriculum manager, HR Training Consultant
Training and Development of Seafarers Interviewees (3)	

Participant demographics	Average/ or ranges
Years in the industry	Average 19.3, highest 25, lowest 13
Age	3 x 50–59
Gender	2 F, 1 M
Roles	Director, Manager, Secretary
Sectors	Training and development
Training and Development of Shoreside Personnel Focus Group Participants (7)	
Participant demographics	Average/ or ranges
Years in the industry	Average 42, highest 48, lowest 18
Age	1 x 40–49, 3 x 50–59, 3 x 60+
Gender	2 F, 5 M
Roles	Director, Professor, MD, HR consultant, Customs manager, Course leader, Commissioner
Training and Development of Shoreside Personnel Interviewees (2)	
Participant demographics	Average/ or ranges
Years in the industry	Average 13.5, highest 29, lowest 26
Age	2 x 50–59
Gender	2 F
Roles	Director, MD
Sectors	Training and development
Professional Services Focus Group Participants (7)	
Participant demographics	Average/ or ranges
Years in the industry	Average 29, highest 49, lowest 7
Age	1 x 30–39, 3 x 40–49, 2 x 50–59, 1 x 60+
Gender	2 F, 5 M
Roles	Senior associate, Coach, Former master mariner, Head of shipping, Retired training manager, Head of maritime security & MLC operations, Surveyor, Associate dean

Professional Services Interviewed (1)	
Participant demographics	Average/ or ranges
Years in the industry	2
Age	1 x 30–39
Gender	1 F
Roles	Projects and relationship manager
Crew Management and Recruitment Focus Group Participants (4)	
Participant demographics	Average/ or ranges
Years in the industry	Average 15.5, highest 23, lowest 4
Age	2 x 20–29, 2 x 40–49
Gender	3 M, 1F
Roles	Lawyer, Charterer, Operation's manager
Crew Management and Recruitment Interviewees (4)	
Participant demographics	Average/ or ranges
Years in the industry	Average 23.4, highest 32, lowest 20
Age	5 x 50–59
Gender	1 F, 4M
Roles	HR director, General manager, Managing director
Ship Owners and Charterers, Ship Operations and Management Focus Group Participants (4)	
Participant demographics	Average/ or ranges
Years in the industry	Average 37.5, highest 40, lowest 35
Age	2 x 50–59
Gender	2 M
Roles	Yard manager, MD
Interviewees – Ship Owner (1), Management (2), Charterer (1), Operations (1)	
Participant demographics	Average/ or ranges

Years in the industry	Average 23.4, highest 32, lowest 20
Age	5 x 50–59
Gender	1 F, 4M
Roles	HR director, General manager, Managing director
Research, Academia, Science, Technology and Engineering Focus Group Participants (2)	
Participant demographics	Average/ or ranges
Years in the industry	Average 37.5, highest 40, lowest 35
Age	2 x 50–59
Gender	2 M
Roles	Yard manager, MD
Research, Academia, Science, Technology and Engineering Interviewees (9)	
Participant demographics	Average/ or ranges
Years in the industry	Average 17.8, highest 41, lowest 2
Age	1 x 20–29, 4 x 40–49, 3 x 50–59 1 x 60+
Gender	4 F, 5 M
Roles	Project engineer, MD, Researcher, Technical director, HR, Marine engineer, Manager