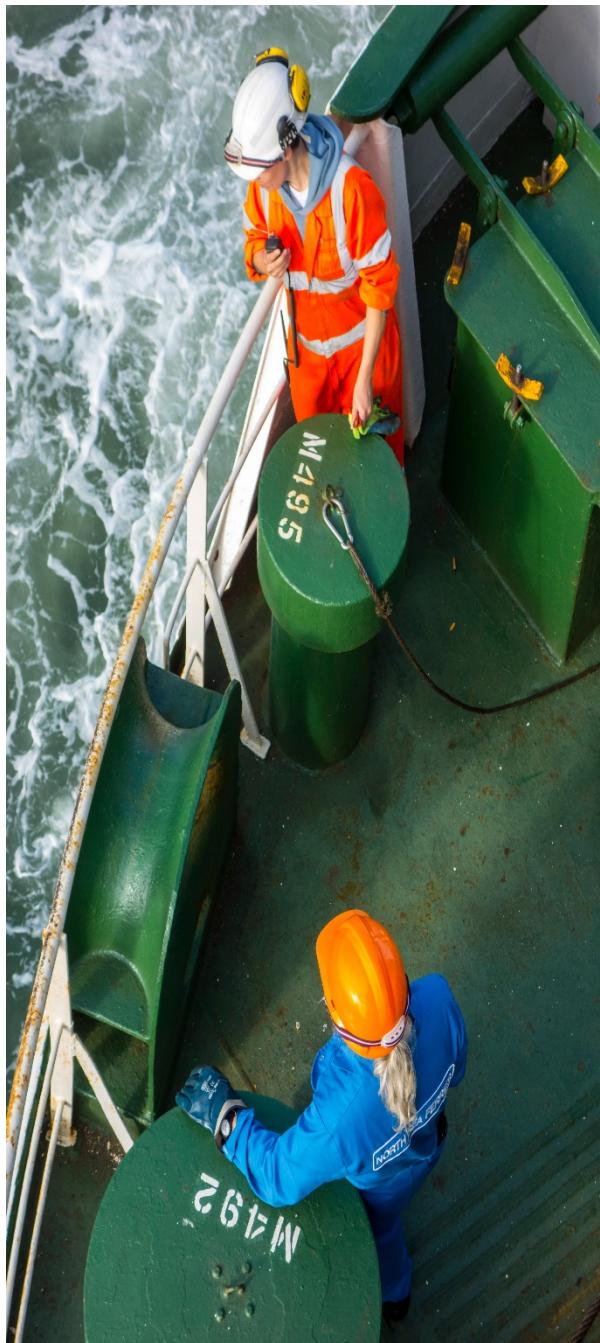




Department
for Transport

maritime
2050
NAVIGATING THE FUTURE



Maritime 2050 People Route Map

Moving Britain Ahead



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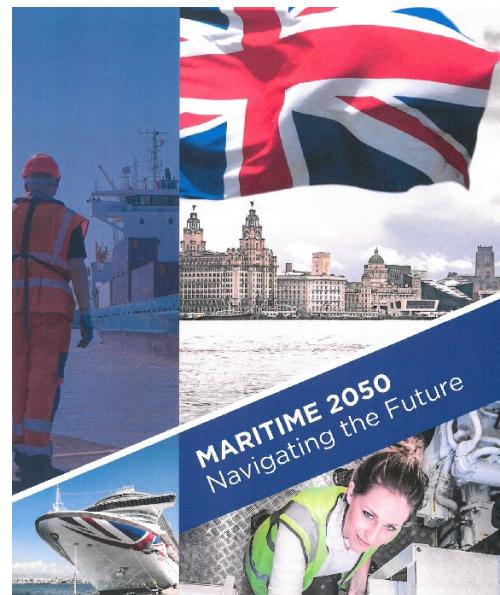
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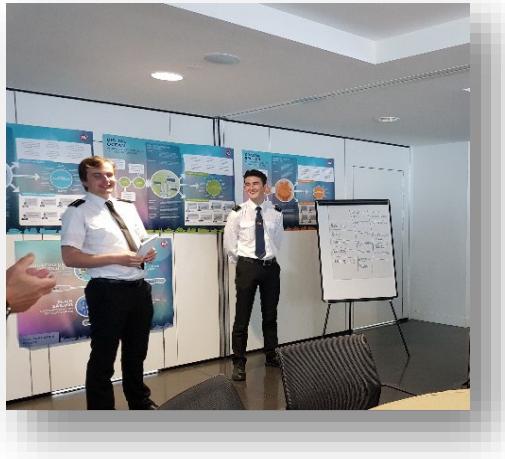
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1. Introduction

- 1.1 Maritime 2050 is a long-term strategy for the UK maritime sector and sets out a high-level vision for its future. People are an integral part of the sector and form an important part of this strategy.
- 1.2 The breadth of careers within the sector is vast. Careers range from working on a super yacht, a cruise liner or on our inland waterways on the wet side, to supporting the critical role of our ports, business services sector, naval architecture or designing the maritime technology of the future on the dry side. With such a wide scope, there comes a number of areas to consider such as how we entice people into these careers, how we address diversity, what qualifications and skills are needed now and in the future and how do we enable the transferability from one part of the sector to another, ensuring people have varied and fulfilling careers. Likewise, people need to be supported in the roles they do, particularly in light of changing technology and the need for continuous professional development but also in terms of employment rights and welfare, ensuring they have the right working conditions in which to thrive.
- 1.3 With so many aspects to the People theme, feedback from multiple sources of evidence was carefully considered to inform the People chapter and subsequently used to develop recommendations for both government and the maritime industry.
- 1.4 Further engagement took place to inform the development of this route map. Presentations were given at the Maritime UK People and Skills Forum (PSF), the Maritime Skills Alliance (MSA) board and the Merchant Navy Training Board (MNTB) where views and suggestions were invited. Conversations were also had with a range of other stakeholders. The feedback that was received has been incorporated into this route map.
- 1.5 This document expands on the key recommendations from the People chapter and aims to serve as an action plan, outlining the steps to be taken



by both government and industry to ensure that the recommendations drawn from the 2050 Strategy are actively managed and delivered. This route map will be maintained as a live document with updates in five-year iterations



The Maritime 2050 Future Leaders Workshop, Solent University, July 2018.

2. Maritime 2050 People chapter

- 2.1 This chapter provides a summary of the Maritime 2050 Strategy's People chapter and its recommendations. Our work falls into 5 areas:
- **Inspiring people** – in particular, young people to consider roles in the sector.
 - **Expanding the talent pool** – addressing diversity to ensure we are drawing from the biggest pool of talent.
 - **Skills and training** – ensuring we have the right training in place, the right qualifications, the right apprenticeships, we are maximising the use of new technologies and ensuring our maritime workforce is prepared for the future with the right skills as we head towards 2050.
 - **Career progression** – ensuring those considering embarking on a maritime career or those already in the sector, have knowledge and pathways to move to where they want to be and reach their potential. Likewise, this will enable employers to fill gaps more easily by having clearly defined pathways into various parts of the sector so valuable skills are not lost to other sectors.
 - **Social framework** – ensuring people are supported in their roles whether on land or at sea and are informed. Working conditions and employment and social rights will be comprehensive and protected. The UK will work internationally to support the effective implementation and raising of global standards.
- 2.2 People are a key element of the Maritime 2050 Strategy, weaving through a number of chapters as well as having a chapter of its own. People are the lifeblood of the maritime industry and it is essential that we recruit from the widest talent pool, train both those new to the sector and those already in the sector to the highest standards with the latest technological advancements and create an environment in which people want to work and progress.
- 2.3 The Maritime 2050 People chapter explored the current and future issues and opportunities for people. The People theme incorporates employment as well as skills given the close linkages between the two. The People chapter predominantly focused on seafarers, given the evidence submitted for the strategy, the historic interest in the need for seafarers and the concentration on their training. It also expressed a need for a variety of skills given the wide range of roles that will be needed in the future maritime sector.

- 2.4 The sector comprises the individual shipping, ports, marine and maritime business services industries. The term seafarers should be considered in this chapter as applying to all those who work at sea, whether they are involved in the navigation or engineering departments or the catch or elsewhere on the vessel. The focus going forward though is not limited to those training for or working in roles at sea. We recognise the breadth of opportunity within the sector and the need to understand more fully how different roles interact.
- 2.5 The People chapter also engages with the vital maritime related roles found ashore, in ports, marine, engineering, naval design and architecture, professional business services and so on. The sea ports sector for example, handles around 95% of all goods that enter and leave the UK. It directly contributes £7.6bn to the economy and employs over 100,000 people. It provides an opportunity for inspiring people into maritime, expanding the talent pool and providing both skills and career progression.
- 2.6 The Maritime 2050 Strategy recognised that people should remain at the heart of the maritime sector, especially in the context of new technologies, including autonomy. Technological change will offer opportunities for the sector to attract and develop new talent through exciting STEM-based careers, with the potential for high pay. However, these benefits will only be realised if people are allowed to develop the right skills, and given access to specialised training.
- 2.7 The [Technology and Innovation in UK Maritime Route Map](#) stressed the need to place people at the centre of technology and innovation policy, setting out four key themes for a people-centred smart maritime policy:
- the need to attract new talent into the maritime sector
 - to ensure that the existing maritime workforce is adequately prepared for an increasingly technological and automated future
 - to understand the skills a future maritime workforce will need: and
 - to introduce new technology in a way that is sensitive to societal concerns and attitudes.

Inspiring people

- 2.8 The People chapter and its recommendations rightly start from the need to engage and entice young people into maritime careers. While acknowledging a more recent increase in efforts through the Maritime Careers Promotion Forum (CPF), it recognised more could be done in coordinating the vast array of careers promotion, in-school awareness and ambassador programme initiatives. This is not about replacing what is already out there but coordinating, professionalising and ensuring a ‘no wrong door’ approach for those seeking to engage. It also recognised that as a sector, there is a need to be more strategic and joined up in its targeting of schools, careers advisors, groups and organisations to get messaging out about maritime roles. It was therefore recommended that a Single Industry Body (SIB) be tasked to bring greater coherence and coordination to the

promotion of maritime careers sector wide, ensuring the sector presents itself as one voice, maximising the use of limited resources and making the biggest impact as a collective when the opportunities arrive.

Expanding the talent pool

- 2.9 As a maritime nation, it is essential to our future success to draw from the full talent pool when promoting the sector and recruiting. With such poor gender diversity statistics, it was recognised that addressing diversity needs to start at a young age. That is why the Department for Transport (DfT) is funding a ‘Maritime and Me’ industry led initiative to address the image and perception of the sector and demonstrate how it can effectively showcase its value to a wider diversity of people. This will help the SIB when speaking to school age children, to promote the message that this is a sector for all.
- 2.10 The Women in Maritime Taskforce has hit the ground running in the 18 months it has been in existence. With the Women in Maritime Pledge attracting 110 companies and launching resources such as the ‘Speaker Bank’ and ‘Interview Pool’ which provide a database of women speakers for panels and conferences, and loan maritime women to companies that may lack diversity on interview panels. In conjunction with the Scottish Maritime Cluster they are running public speaking workshops for women in the sector. The Charter is well under way with four pilot companies formally agreeing their action plans and gaining Charter status. A call has been made on other companies to come forward and join the Charter. This is an area where the People chapter recommended that momentum is maintained and their work continued. However, looking to the future it would be naive to not broaden the focus and so, it has been recommended that in time, the Women in Maritime Taskforce expands its work to look at diversity as a whole. The programme for widening the scope of this work is under development.

Skills and training

- 2.11 Attracting more people to the sector and improving the sectors’ diversity are just two parts of the jigsaw in securing the UK’s maritime workforce of the future. Another significantly important area is ensuring companies get the talent they need and those embarking on maritime training and careers have the skills needed to do the job and to progress. Likewise, companies need to ensure that they maintain, develop and support those already working in the industry and be certain that they have the necessary skills and access to training to work in an increasingly technology driven working environment.
- 2.12 The UK prides itself on having quality training which attracts not just UK students but international students too. Seafarer training is an important part of this offer and it is imperative that the UK stays on the front foot. It is therefore recommended that government introduce appropriate regulatory changes to realise the benefits of new technologies to seafarer training. It is also recommended government increase UK global influence on seafarer training by providing the policy and regulatory direction needed to support further roll out of UK maritime training institutions’ programmes overseas.

Finally, the UK tonnage tax regime remains highly competitive but we continue to consider the opportunities to further improve our current offer. The training link is and will remain integral to the UK scheme and it is recommended that the training link in the UK's tonnage tax regime continues to support UK maritime workforce ambitions, while also supporting growth.

- 2.13 To look at the skills picture across the entire sector, a key recommendation of the People chapter is for government to establish a Maritime Skills Commission (MSC) which will bring together leading maritime skills experts to report on the existing and future skills needs of the industry on a 5-yearly cycle, to inform the maritime training curriculum and keep it up to date with the evolving needs of the sector. The MSC will cover the entire sector ensuring that voices are heard from all parts - the wet sector including seafaring, inland waterways, yachts, workboats, boat building, and on the dry side, ports, marine, engineering, naval design and architecture, professional business services and so on. However, it is not just those parts of the wet and dry sector with a training need that will make up the MSC. It is imperative that experts from academia and representatives from industry bodies such as MarRI-UK are also represented. Options for resourcing the MSC are being explored.
- 2.14 To reap the rewards from technological change, government, industry and academia will form partnerships to better understand skills gaps and needs as technologies advance, to ensure that they keep up to date with the evolving needs of the industry. The MSC will assess current training requirements and the future skills need of the sector, in the context of major technological developments, such as maritime autonomy.



Career progression

- 2.15 Career progression is an important part of the attractiveness of a maritime career. Whether a trainee starts at sea or ashore, there are a wealth of opportunities available for those looking to transfer between different parts of the sector. Likewise, it is not just those moving within the Merchant Navy or in existing shore based maritime careers, but there is a wealth of talent and expertise in the Royal Navy that can be galvanised. It is therefore recommended that government supports Royal Navy efforts to enhance training facilities and delivery, developing assured and accredited maritime training centres which will use their capacity to support the training of all maritime enterprise skills.
- 2.16 It is important to put in place a clear and universally supported careers promotion plan that enables career transition to take place. That is why the MSC will, working with maritime training bodies, consider how to ensure

professional development plans are built into training programmes across all roles so trainees know from the outset the routes available to them and the qualifications needed.

Social framework

- 2.17 Getting young people inspired to enter maritime careers, ensuring we are drawing from a diverse talent pool, getting the right skills and training in place and then ensuring career paths are mapped out are all critical. However, the final part of the people jigsaw is appeal of the sector as a place to work and this is where the social framework comes into play.
- 2.18 The existing workforce needs to be supported and equipped to adapt to the changing industry, making use of their experience and expertise to influence and make best use of technological developments. More automation could reduce the need for workers to carry out hazardous tasks but may lead to more isolated roles, with the risk of reduced social support and interaction with colleagues. Training, operating patterns and patterns of working may need to take this into account and alternative means of providing social interaction for isolated workers may need to be considered.
- 2.19 There is also a growing expectation and need to ensure internet connectivity and communications channels are better available for those at sea, both for continual professional development and to improve seafarer mental welfare and access to support. Realistically, for the majority of those at sea the provision of internet access will have to be provided by satellite. Several recent studies on access to internet have looked specifically on its impact on seafarer mental wellbeing and operational efficiency. The studies have shown an improvement in access to emails and internet over the last couple of years although cost remains a significant factor in it not being provided. The studies also show positive impacts on the wellbeing of the seafarers concerned although this can potentially be negated if access is limited or restricted. Even for those close to shore, it is possible that the line of sight for mobile phone antennae will principally be directed inland and not to sea and coverage could be patchy and unreliable. We already know that the radio spectrum will be under increasing pressure as the ‘Internet of Things’, social media, internet streaming, other modes of transport, security, finance etc. all need increasing amounts of fast and reliable data connections and novel solutions will be required to satisfy future demand.
- 2.20 We also know that in terms of navigation, satellite coverage of the polar regions is limited and technically it is more difficult and expensive to position a satellite in a polar orbit. If the Northwest Passage or other polar routes become commercially viable these are potential issues that will need to be addressed. Maritime will need to ensure that its requirements are coordinated across country borders and the industry should consider the potential need for automation alongside the requirements for individuals. Government, industry, and academia should establish an internet connectivity working group to identify action needed to drive internet connectivity at sea in support of social care and continuous education. It is

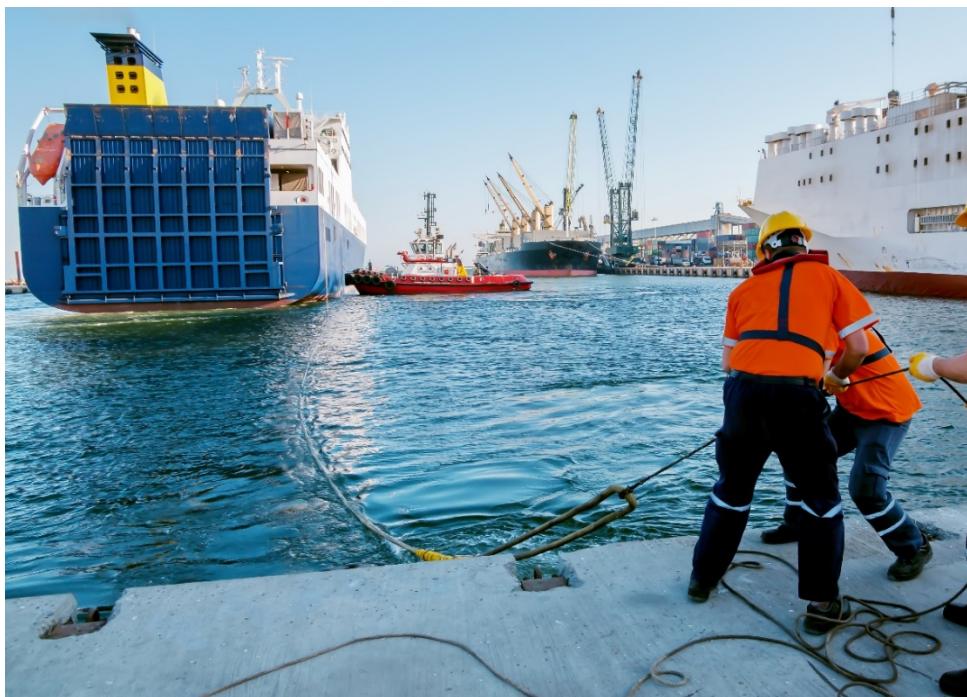
suggested that this group also feeds into the wider international debate on the future needs and allocation of the radio spectrum to ensure that the maritime requirements are considered.

- 2.21 Other recommendations under the social framework apply to the National Minimum Wage, harmonisation of certification standards, harmonisation of employment standards for those at sea, mental health support, better representation at the international level via the International Maritime Organization (IMO) and International Labour Organization (ILO), addressing issues such as seafarer fatigue, seafarer welfare and modern day slavery.
- 2.22 If we are to attract more people to the sector we need to ensure that the working, pay and social conditions are comparable with other sectors. For all those working at sea there are unique circumstances which need to be considered and addressed in guidelines or through legislative measures. It is probable that there is also a lack of quality employment or progression opportunities for some groups at risk of discrimination. The workforce on board a vessel may be composed of several nationalities but may divide into representation of some groups only at officer or rating level. It is recognised that more needs to be done to promote greater diversity throughout the sector but perhaps the biggest challenge is the working culture of the individuals, which may support an environment that is biased against gender, nationality or other protected characteristics.
- 2.23 The tripartite nature of the ILO gives government, employer and employee equal voice. The government has an excellent relationship with the UK social partners and this has allowed the UK to demonstrate a unified approach in the work of the ILO. With this strength and our knowledge and expertise, the UK has become a highly respected and authoritative partner in all international people fora.
- 2.24 Nationally, consideration will be given to the legislative protection for those working on UK vessels or in UK waters in addition to minimum international requirements. The government policy is to promote a better working environment and to bring greater clarity to the law and transparency of entitlement regarding working conditions. It is also intended that those working at sea should enjoy similar employment rights to those working on land. The ILO's Maritime Labour Convention and Work in Fishing Conventions have brought in a level of consistency in regard to a number of employment rights, both domestically and internationally for seafarers and fishermen. However, neither covers all protections and rights such as pensions, maternity leave etc., which are subject to domestic legislation only. In that regard there is a lack of consistency with the application of domestic employment legislation to those working at sea. It is proposed that a more cohesive approach to where the protection applies will simplify understanding for both employer and employee and provide a more comprehensive level of protection.
- 2.25 Shore-based work does not generally raise all the same concerns (internet connectivity, communication channels, minimum wage or harmonisation of

certification and employment standards) as for seafarers. However, there are real challenges around outdoor and 24 hour/shift working alongside an out of date perception of port work as manual and dirty. These factors make it harder to change the perceptions of a young and diverse potential workforce. Skills are a vital component in evolving a high quality organisational culture (health and safety, customer service, innovation, resilience, agility etc.) that promotes business success, career opportunity and healthy working.

Summary

2.26 To conclude, building the maritime workforce of 2050 is very much a journey, starting with inspiring young people and expanding the pool of talent from which the sector draws. It is imperative that businesses have employees with the skills and qualifications they need and that for those embarking on or already in a maritime career, they have clearly defined career progression pathways and the opportunities to progress. However, what underpins all of this is ensuring that those working in the sector have the right social framework in place, particularly for those working at sea. The map on the following page sets out how the Maritime 2050 People recommendations support the creation of the maritime workforce of 2050 through each part of their journey.



Creating the maritime workforce of 2050 – People recommendations

INSPIRING PEOPLE	EXPANDING THE TALENT POOL	SKILLS AND TRAINING	CAREER PROGRESSION
<p>Task a single industry body for bringing greater coherence and coordination to the promotion of maritime careers sector wide.</p> <p>Raise awareness of the maritime sector in schools by having a single industry body overseeing a more coordinated cross-sector in-school awareness and ambassador programme.</p> <p>Government will fund the production of the 'people like me' maritime industry project to help address the image and perception of the industry and demonstrate how we can effectively showcase its value to a wider diversity of people.</p>	<p>Widening the scope of the Women in Maritime Taskforce to consider diversity as a whole, including undertaking a short study assessing the diversity data of trainees across the UK maritime sector.</p> <p>Joint delivery between Government and industry of the Women in Maritime Charter.</p>	<p>Ensure the UK tonnage tax regime has a training element which continues to support UK maritime workforce ambitions while also supporting growth of the UK tonnage tax</p> <p>Government aims to establish a Maritime Skills Commission bringing existing leading maritime skills experts together, to report on the existing and future skills needs of the industry on a 5-yearly cycle, to inform the maritime training curriculum and keep it up to date with the evolving needs of the sector.</p> <p>UK will develop cutting edge seafarer training maximising the use of future technologies such as virtual reality and augmented reality.</p> <p>Government to increase UK global influence on seafarer training by providing the policy and regulatory direction needed to support further roll out of UK maritime training institutions/programmes overseas.</p> <p>Government will introduce appropriate regulatory changes to realise the benefits of new technologies to seafarer training.</p> <p>Government will support Royal Navy efforts to enhance training facilities and delivery, developing assured and accredited maritime training centres which will use their capacity to support the training of all maritime enterprise skills.</p> <p>The Maritime Skills Commission will, working with maritime training bodies, consider how to ensure professional development plans are built into training programmes across all roles so trainees know from the outset the routes available to them and the qualifications needed.</p>	<p>The Maritime Skills Commission will be tasked with overseeing the identification of opportunities for the UK maritime sector to access reskilling programmes, ensuring the workforce can take advantage of a wide range of initiatives.</p> <p>Put in place a clear and universally supported careers promotion plan that achieves an outcome of UK employees being listed in the top five maritime nations' listings.</p>
SOCIAL FRAMEWORK			
<p>Producing mental healthcare guidelines and developing mental resilience testing for seafarers.</p> <p>Push for worldwide recognition and standardisation of seafarer ID cards through the ILO and IMO</p>	<p>Ensure there is greater harmonisation of certification standards within the UK for different maritime sectors.</p> <p>Lead the way in addressing Modern Day Slavery concerns within the industry with the aim of eradicating it.</p>	<p>The UK will lead on exploring opportunities to encourage greater cooperation between the ILO and IMO on seafarer welfare issues.</p> <p>Develop a social framework that lays out UK expectations for the UK maritime workforce.</p>	<p>Working to introduce a National Minimum Wage for all seafarers working in the UK territorial waters, affording them the same protection as land-based careers.</p> <p>Push for a limit on hours per shift through IMO and ILO to combat seafarer fatigue.</p> <p>Through to 2050, the UK to play a leading role at IMO and ILO, in setting the global framework for maritime training and skills, and positioning the UK as the world leader.</p>
<p>Key: Short term recommendation  Medium term recommendation  Long term recommendation </p>			

3. Where we are now

Introduction

- 3.1 This chapter sets out where we are today in relation to the areas covered in the Maritime 2050 Strategy's People chapter.
- 3.2 The UK's maritime sector is a vibrant sector on which the UK's economy depends, yet there is a lack of awareness in the UK of the importance of the maritime sector to everyday living. People have little idea of how reliant the UK and its population are on the sector, with up to 95% of the UK's imports and exports moving through sea ports. It is therefore unsurprising that the breadth of career opportunities that exist across the maritime sector are not easily recognised. This general lack of awareness makes it difficult to get messaging across about the importance of the sector and the opportunities within it.
- 3.3 Following the publication of the Maritime Growth Study in 2015, industry and government have worked together on a number of complex issues. Maritime UK set up the PSF to have an overview of the skills needs of the sector and take forward the delivery of the skills recommendations, one of which was to develop a skills strategy. This strategy was published in December 2018. From the PSF a number of subgroups were created, one of which was the CPF which reports into the PSF. The remit of the CPF was to look at what career promotional activity was taking place within the maritime sector.

Inspiring people

- 3.4 The government ran the Year of Engineering Campaign in 2018 to promote STEM careers. Industry has developed numerous initiatives to promote different parts of the maritime sector in schools i.e. ambassadorial programmes, STEM competitions, school visits to ports and shipping companies, work experience programmes, maritime syllabus, engineering workshops, college open days, water based activities with an underlying safety message, career fairs etc.
- 

- 3.5 In addition to this, industry is developing programmes that are directly linked to the national curriculum and making them freely available to schools. To support this approach of inspiring young people, the DfT awarded £40,000 to the Institute of Chartered Shipbrokers Trust. The DfT also awarded £100,000 to the educational charity 1851 Trust to encourage young girls to study STEM subjects and consider maritime careers. The British Ports Association (BPA) are developing a ‘People in Ports’ campaign which aims to raise awareness of the ports sector and its importance to local communities and the broader economy. This campaign also aims to attract the next generation to think about a career in ports and the broader maritime sector. Such a campaign will be the first of its kind for the ports sector and they will be creating a short publication that will showcase the range of employment opportunities available at ports, from the chief executive to the apprentice, as well as promoting engagement with secondary school students.



The River Thames is the busiest inland waterway in the UK. It is also the fastest growing port, currently the second biggest port in the UK. The tidal Thames offers 95 miles of opportunities for careers – covering the breadth of crew on freight and passenger boats; engineering and other specialists such as hydrography; and providing excellent hospitality, back of office support (in sales, finance, marketing, HR or IT) and customer service.

Starting in 2018, Thames Skills Academy host a free event for teachers, careers advisors, youth leaders and young people – inviting them to meet employers based on the river; talk to the people doing the jobs to learn more first hand; and find out from apprentices about the apprenticeships on offer.

- 3.6 The CPF has been successful in bringing most of the relevant industry representatives around the table to consider a number of high level issues. However, the complexity of this industry and the spread of interested parties makes effective communication difficult. It is reported by some that dissemination of outcomes has been patchy and useful discussions have often failed to materialise into tangible actions due to limited resources and

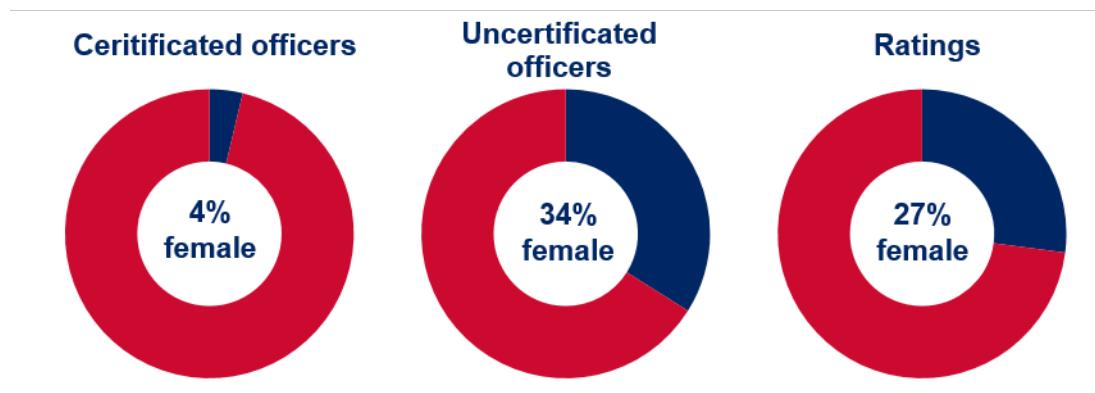
an over reliance on good will. There is an opportunity for industry actors to contribute resource and bolster current efforts. Maritime UK has supported a number of regional careers events (through attendance and materials), with for the first time, participation at the pan-sector Prospects careers events held in Scotland, Wales and England. The online Maritime Careers website has also been rebranded. However, lack of coordination of existing school and careers promotion activities still exists which limits the sector's potential to make an impact when trying to market itself in this area.

Expanding the talent pool

- 3.7 An important part of the industry's image is its diversity. The aged stereotypical picture of male seafarers and port workers from history books is an image that has traditionally branded the sector and continues to limit the number of people considering pursuing a maritime career. This, coupled with poor take-up of STEM subjects amongst girls, makes it a difficult matter to address.
- 3.8 The legislation requiring organisations with 250 or more employees to publish and report specific figures about their gender pay gap has evidenced this issue as one that needs addressing. As a result, during London International Shipping Week 2017, government challenged the maritime industry to increase the number of women in the industry. At this point only 3% of UK certificated officers in the Merchant Navy were women.
- 3.9 Industry took on this challenge and Maritime UK set up the Women in Maritime Taskforce, which met for the first time in January 2018. Its remit which was set out at the initial meeting, was to identify practical steps to increase the number of women in maritime, and crucially within senior roles across its shipping, ports, marine and business services industries. This was to be carried out through drawing on best practice from other sectors that have undertaken similar work and result in a set of recommendations being produced.



- 3.10 Since that initial meeting the Taskforce has set up subgroups, each focussing on areas where improvements could be made to improve the gender balance within an organisation, namely recruitment, total package and retention and progression. This was followed by the Charter subgroup, established to create a framework to challenge companies to make progress on diversity.
- 3.11 These subgroups have delivered the Women in Maritime Pledge, which currently has 110 signatories, and the Women in Maritime Charter, which recently completed its pilot phase with the first four organisations gaining Charter Company certification. They have also delivered the Interview Pool and the Speaker Bank, both of which have been designed as practical tools to address specific issues, namely a lack of gender diversity on interview panels and too few women speakers at industry conferences that have been raised with the Taskforce by industry.
- 3.12 The number of UK certificated female officers is now at 4% (see figure below). Whether this is down to those initiatives or coincidence is yet to be established, but real progress is being made in giving industry the knowledge and tools it requires to address the gender imbalance in earnest.



Source: DfT seafarer statistics

Figure - Gender distribution of UK seafarers active at sea, 2017

- 3.13 In addition, specific campaigns are being developed, aimed at girls of all backgrounds and ages. Government is funding the ICS to roll out the 'Why Shipping Matters' programme - currently only available in primary schools - to secondary schools, and the 1851 Trust roadshows to encourage girls to learn about STEM subjects and maritime careers. The "Maritime and Me" project, developed in response to a Maritime 2050 recommendation to fund a people like me maritime specific initiative is progressing at pace. It will consist of two key elements: the first is engaging the next generation to raise awareness of the breadth of maritime career options available, and the second is improving gender balance in maritime recruitment for those already working in the sector under the guidance of Professor Averil

Macdonald. With this additional support from government, we expect progress to continue.

- 3.14 One of the questions that has been continually raised within the Taskforce itself and by people outside the Taskforce when speaking about it is, why is it focused just on women and not looking at diversity as a whole? When the Taskforce was set up it was to meet the challenge that had been laid down in terms of gender balance. It made sense to focus on a single aspect of diversity so that the messaging stayed clear and was not watered down through covering a wider scope. Throughout the work of the Taskforce it has been identified that many of the measures and changes that can be made to encourage more women into the sector can also be applied to benefit the entire workforce and encourage wider diversity.

Skills and training

- 3.15 A skilled workforce is essential to achieve the full growth potential of the maritime sector. Industry however reports a shortfall of seafarers and engineers and more generally a difficulty to fill vacancies with the right skills set particularly in shore based positions. The factors that have contributed to this situation include; ageing workforce, increasingly high-tech industry, specialised roles, competition from other sectors that offer more lucrative and better work conditions, and a lack of diversity in those considering a career in the maritime sector. These are issues the PSF have grappled with but like the CPF, they too have identified a lack of resources and an over reliance on good will as key factors in limiting their ambition and deliverables.

Pendennis Shipyard Apprenticeships



Pendennis is the largest privately-owned yacht building yard in the British Isles with apprentices making up a third of the company's workforce. The first group of apprentices were recruited in

1998 and every year they received over 100 applicants for 12/14 places. Pendennis have recruited 250 apprentices since the scheme started. Pendennis invest in their future workforce through apprenticeships and have stated that apprenticeships allow them to have customised training, develop the specialised skills required for the industry and to develop their future management.

- 3.16 Recognising the need to grow the UK's maritime seafaring population, in 2018 the Department announced a doubling of the SMarT budget from £15m to £30m in the period up to 2024/25. This funding is to support a proportion of the cost of seafarer training, in particular officer trainees (cadets) to progress them either to their first Certificate of Competency or to their second Certificate of Competency if they end up on the SMarT Plus route.
- 3.17 Alongside this there are apprenticeship routes available at ratings level in the Merchant Navy (including catering for the first time), ports, workboats sector, inland waterways, sea fishing and marinas and boatyards, as well as more senior opportunities for boat builders, marine engineers, coastguards, port marine operations officers and marine pilots. The sector now has its first graduate apprenticeships, for marine technical superintendents and marine surveyors, with another in the pipeline for harbourmasters. Other apprenticeships are being developed for small vessel engineers and Officers Of the Watch. Consideration is also being given to the creation of a shipbroking apprenticeship. Government figures reveal that the number of starts on maritime apprenticeships more than doubled between 2014-15 and 2017-18, rising from 89 to 202, and there are good indications that numbers will continue to rise as awareness and understanding increase.
- 3.18 People and skills are part of the national agenda for many of the maritime industries, with each looking at their specific needs and how to attract the best people. British Marine for example, are working to develop higher level Apprenticeship Standards to complement their current Level 3 offering. This will enable career progression and ensure the sector has the skills required by marine employers and they can attract the right people. Their National Agenda will also include a 'Careers Strategy' to facilitate this work, to look at how best these skills can be delivered and how best to engage with the diverse population within the UK.

Bristol Port and Weston College Maritime Leadership and Development



Weston College and the Bristol Port Company worked together to develop an apprenticeship designed for port supervisors and first line managers. The programme can be delivered flexibly around the UK and typically takes 18-24 months to complete. Because it was built to Trailblazer Apprenticeship standards it is eligible for levy funding.

- 3.19 Not all training is delivered through apprenticeships and cadetships. Many companies create their own training programmes and many utilise the

excellent training available in the UK's maritime colleges and universities, particularly for roles in areas such as professional business services. Many of these land based roles have traditionally required a previous knowledge of working at sea and anecdotally it is often reported that it is difficult to find the right talent for these jobs in the UK. For the UK to compete and to preserve its global position in professional business services, the through put of talent will be needed and it is essential all part of the training landscape are understood.

Port Training Services - learning in safe, real world environments



As the training division of the Port of Blyth, Port Training Services (PTS) were originally conceived to ensure the Port's own staff were trained with the necessary skills, qualifications and competency to deliver the Port's services both safely and effectively.

Today, PTS deliver high quality practical and vocational training across the port industry. Delivering fully accredited, industry recognised qualifications for companies and individuals serving the Port & Marine, Warehousing & Logistics, Heavy Industry, Subsea and Offshore Energy sectors.

- 3.20 It is becoming more apparent that many roles will change with technological developments and automation. The BPA's Port Futures programme looks to examine global emerging trends and key issues in the ports and shipping industries including technology, infrastructure and skills. This programme has identified 'smart ports' as a topical theme in the maritime industry as ports, terminals, shipping and the logistics chain seek to understand and take advantage of technology to improve the productivity of all aspects of their business. Some embrace these changes and see it as an opportunity for the UK to get ahead whilst others fear what it means for current and future jobs and the upskilling of the existing workforce. It is not just in terms of jobs that technology will have an impact. The way training is delivered will also evolve, for example making use of virtual reality in the classroom.

Port of Tilbury Innovative Training Suite



A state of the art training and technology suite at the Port of Tilbury includes two training simulators provide a full, 360-degree experience, of major crane and straddle operational equipment. This provides operators with an enhanced learning environment featuring industrial controls and realistic working terminal scenarios.

- 3.21 Skills and training is an area of importance to many so it is unsurprising that a number of groups exist in addition to the PSF, who are looking at skills issues. Many of these groups focus on their own area and rightly so given the complexities around some areas of maritime training. The Maritime Skills Alliance looks at training needs for the wet and dry sector and the Merchant Navy Training Board looks at seafarer training. However, some find it difficult to navigate the landscape. The MSC will want to take this feedback on board when considering its membership, how to make best use of communication and have representation from all parts of the sector and how it interacts with existing fora, particularly those on the fringes of maritime training organisations.

Career progression

- 3.22 The sector suffers from issues such as job security, life long career opportunities, support for transition from sea to shore (or vice versa), pay (particularly at the lower ranks), cost of training, lack of role models, invisibility – some of these may be more perceived although still based on fact. These need to be addressed if we are to attract more people to the sector and to retain those already working in the sector. The industry needs to acknowledge more fully that the individuals working for them are their most important assets.
- 3.23 It is often cited that traditionally seagoing skills are critical to certain shore based positions, including those in the business services side. It is becoming increasingly apparent that sea going experience is not always required for those who wish to pursue a career in the ports sector. Some ports are now amending their job descriptions and recruitment methods to focus on the key skills and attributes required for a position, such as ability to work under pressure and attention to detail, employers then train them up and further develop their skill set. Many organisations are also now starting to pay particular attention to the language and images used in job descriptions, their website and collateral materials to ensure they are able to appeal to a wide audience. It is hoped this in turn, will start to address the increasing

skills shortage and attract those who may not have otherwise have thought about a career in the industry.

- 3.24 It is not always clear how the transition should be made or at what point studying for additional qualification should begin. At conferences that have looked at these issues, it becomes apparent that sometimes the softer managerial skills outside of the command and control environment are less well developed. It frequently comes up as a recommendation that more needs to be done in having clear career pathways or career development plans, which allow people to make informed decisions about moving from sea based to shore based positions as well as moving more widely within the sector. Having these pathways may also enable more people from outside the sector but with the prerequisite skills set e.g. in engineering, to move into the maritime sector. Likewise, it might help attract those leaving the Royal Navy too. This is clearly an area of high importance but needs resourcing if it is to be properly addressed.

Social framework

- 3.25 The UK was a key player in the drafting of the ILO conventions (Maritime Labour Convention and Work in Fishing Convention) and subsequent amendments. These have provided comprehensive international minimum standards regarding, employment, health and safety and working conditions for seafarers and fishermen. The UK is also working to extend the provisions of its national minimum wage legislation to all seafarers working domestically within the UK territorial waters.
- 3.26 Ensuring employment, welfare and social protection is aligned with other industries and is clearly defined in legislation will also make the sector more attractive. This will need communicating to potential employees who may still view the sector as outdated, dangerous etc. While the UK can raise standards on vessels registered in the UK or working within the UK territorial waters, this will potentially have limited impact for a new generation who may be working elsewhere in the world.
- 3.27 We continue to work with the IMO and ILO and our social partners to ensure the continuous improvement of standards of protection worldwide, as evoked by the Maritime Labour Convention. Both organizations are also working to address issues of diversity and the UK will work with the international organizations and like-minded states to help address the issue globally. The global women in maritime agenda has given women seafarers a greater voice and sexual harassment is a major concern. It will require a cultural change in the working environment to be more inclusive and this may be more difficult to tackle onboard ships than in workplaces ashore where the workforce is more easily accessible. Employers have a primary role to ensure that reports of any form of harassment are addressed quickly and robustly and not dismissed, backed up by robust enforcement of the legislation.

- 3.28 The UK already has world-leading legislation on prevention of modern day slavery and labour exploitation, and takes a leading role at international fora promoting human rights and specifically at the IMO and ILO in the development of new standards of safety and living and working conditions. The opportunity is to develop a comprehensive framework for the protection of seafarers at work which provides a model to the world.
- 3.29 Internationally, the UK has ratified the ILO's Maritime Labour Convention and continues to have influence at the ILO in discussions on its future development. Within the UK, the UK's social partners continue to engage actively in keeping the UK's implementation of the Convention under review. The first 5-yearly post-implementation review has identified some areas for improvement.
- 3.30 The UK's implementation of the legal requirements of the Work in Fishing Convention, which the UK ratified in January 2019, is recognised as providing a model for others to follow. Industry representatives are working with the Maritime and Coastguard Agency (MCA) to bed in these requirements and ensure that fishermen have the necessary information and guidance to comply.
- 3.31 The UK is now considering ratification of the Seafarers' Identity Documents Convention (revised) 2003, with work underway to identify the practical and technical infrastructure required to deliver seafarer identity documents compliant with the Convention. There have been a number of strands of work developed in cooperation between ILO/IMO and the UK is actively participating.
- 3.32 The national minimum wage/living wage legislation will be amended to ensure that all seafarers working domestically in the UK territorial waters, regardless of the flag of the vessel, will be paid at least in accordance with the rates set out in legislation.
- 3.33 Government is working more closely with the maritime charities to understand more fully the welfare issues that those in the sector are facing and to provide a different perspective on current and potential future policy. We have provided grants to the Sailors Society (£80,000) and to the Apostleship of the Sea (£60,000) towards seafarer welfare centres.
- 3.34 The MCA publishes the Code of Safe Working Practices for Merchant Seafarers, which is a handbook for health and safety on board ships. Mandatory on UK ships, it is also carried on ships of many other flags. It is regularly updated to reflect new developments in the industry. The MCA is also a thought leader on application of human element principles to the maritime sector. Two significant publications, "The Human Element: A Guide for the Shipping Industry" (April 2010) and "Being Human in Safety Critical Organisations" (September 2017 – supported by a pocket book "Behaving Safely – A practical guide for risky work") provide guidance on how to improve safety by better understanding of how people work.

- 3.35 The Ship Captain's Medical Guide provides guidance to mariners providing medical care on board ships which do not carry a doctor.
- 3.36 The MCA will also be publishing guidance later this year to support seafarer wellbeing – both at the individual level, and at company and management level.
- 3.37 DfT and the MCA continue to work with other government departments and agencies so that seafarers and fishermen are considered and provided for in areas such as employment, work permits and visas, welfare and health and safety. We continue to explore other areas where greater cooperation may benefit the individual and the sector more widely.

4. Where we want to be

Introduction

- 4.1 This chapter sets out where we would like to be as the recommendations of the Maritime 2050 Strategy's People chapter are implemented.
- 4.2 Throughout the evidence gathering stage, stakeholders highlighted that the UK needs to keep pace with technological change and ensure the standards for working in shore based roles is available to those at sea. The UK needs to be ready to embrace the changing shape of the future maritime workforce – new roles, new opportunities to attract a wider pool of people into the sector but ensuring those in changing roles are fully supported both in career transition and also in areas such as mental health and reducing isolation.
- 4.3 While we recognise the importance of traditional parts of the sector, there are exciting new roles coming through as a result of new technologies. Looking ahead, there are excellent opportunities to capitalise on the new roles that will be created and the appeal this may have to our next generation maritime workforce. Autonomous systems could radically reshape the future maritime workforce, potentially leading to a new range of highly skilled and well-paid roles as well as enabling the upskilling of the existing workforce where needed. The increasing use of technology within the sector could lead to more flexible working and shore-based operations as well as having the potential to help people do their jobs more safely and efficiently. Smart shipping technology could also offer opportunities for improved training of the maritime workforce, increasing the potential for adapting to new careers. It will be essential that this is built into any maritime marketing and promotion activity.

Inspiring young people

- 4.4 It is acknowledged that other industries with an engineering focus such as automotive, aerospace and civil engineering are better at advertising their brand to the public at large, and especially to secondary and higher education students. It will be essential that the SIB ensures that all parts of the industry are talking with 'one voice' on areas of common ground. The SIB must also address concerns by some sitting around the table who may fear losing control of their respective organisations initiatives by not seeing the benefits of greater coordination. However, the onus is on existing careers actors to see the value, align and integrate activity into a more effective sector-wide plan. Often, separate bodies have been working on similar initiatives, targeting the same groups and this has diluted the sector's

messaging. There is a need for greater collaboration and less of a ‘silo’ or ‘defending of territory’ mentality if maritime is going to compete more successfully with other sectors.

- 4.5 Through the work of the SIB, the UK’s maritime sector will present itself in a coherent joined up way that allows the UK to retain its competitive advantage as a leading maritime nation. The SIB is fit for purpose, represents the whole industry and provides them with a renewed focus. The SIB members are aware and adhere to the cross-sector agreed direction of travel which enables them to make smart use of resources.

Cornwall Skills Show

As well as national trade associations, Maritime UK now brings together regional maritime cluster organisations from across the UK; aiming to share best practice, align activity, support all parts of the country, and strengthen the sector. One area where clusters are aligning and collaborating is in careers promotion.



The Cornwall Marine Network is exhibiting at the Cornwall Skills Show in October 2019. Using the new Maritime Careers brand, and disseminating cross-sector materials, they will promote maritime careers in the region. Careers leads from the national trade associations will also be

there providing on the ground support. The event will feature in the national careers roadshow calendar, with aligned branding and promotion. This, repeated across all clusters, will accelerate the sector’s ability to reach more people in a strategic and focused way. The presence in Cornwall will allow the combination of local live job opportunities to be promoted along with information on the breadth of careers found across the sector, UK-wide.

- 4.6 Maritime features more prominently in primary and secondary school teaching and the promotion of maritime careers at schools and universities. Best practice is shared and we capitalise on the potential to reach out widely and address diversity issues.
- 4.7 Young people, job seekers and influencers are not simply aware of the sector but enthused about the prospects of working in it. They have easy access to quality information about jobs and career paths that are suitable to their age and they know that a career starting at sea does not have to end at sea.

- 4.8 A key risk in delivering a significant step change in the way the sector manages careers promotion and delivers the related recommendations of Maritime 2050, is that the SIB becomes a discussion body with no tangible outcomes. In considering the creation of the SIB, industry comments have been limited to two things: do not duplicate what is already there and to deliver a meaningful programme requires resources.

Single Industry Body

The Maritime 2050 People Chapter set out a recommendation for an enhanced Single Industry Body (SIB) to take forward the critical activity around careers promotion. This recommendation recognised that there was a vast amount of good work across the maritime sector on a variety of promotional activities (career fairs, school competitions, ambassador programmes etc.) but that there was potentially real benefit in being more strategic, joining up activity and people more, bringing more coherence to future activity as well as boosting resourcing.

In parallel with the development of thinking around a SIB, Maritime UK have been looking to put additional resource into the activities of the CPF. This will include an enhanced Maritime UK secretariat with a dedicated Careers Promotion and Outreach Manager, serving as the coordinating and delivery vehicle for the CPF. Given the feedback from industry about not creating new bodies and building on what is already in existence it would therefore make sense that this enhanced CPF evolves into the SIB.

The CPF will seek to have an expanded role in engaging with all maritime actors working on careers promotion, both Maritime UK partners but also more widely with anyone wanting to join together. The Promotion and Outreach Manager will particularly look to develop activity through support for regional clusters. Each Maritime UK regional cluster will deliver a series of careers events, to be added to the single sector-wide calendar. Members of the CPF will support activity in the regions where possible. Each regional cluster will also develop a local engagement plan for schools, colleges and youth groups.

In addition to this, through the expanded role of the CPF a new #MaritimeCareers campaign has been developed to use the positive lessons from the “Year of Engineering” campaign and will work closely with government on its delivery. Over the coming months CPF members will be invited to feed into the further development of branded material to further enhance the campaign and support its roll out in future activity. Members of the CPF who undertake “outreach” functions to schools and other groups with ambassador programmes will also be better coordinated. CPF members will be encouraged to tell the ‘whole sector-wide’ story during these outreach missions, and supported to do so, helping promote the idea of ‘no wrong door’ within the sector.

DfT will work closely with Maritime UK to ensure that the ambitious plans for the CPF match the aspirations of the SIB set out in Maritime 2050. With a relatively

new Chair in place taking forward its work programme, this is a perfect opportunity to take stock and ensure that membership, plans and objectives, and future targets are well aligned and coherent.

The SIB will receive £250k in pump prime funding for the 2019/20 financial year to support SIB related activity and start-up costs.

Expanding the talent pool

- 4.9 The maritime workforce of the future will be diverse. New roles, new technologies and a changing image of the sector will draw in people from all backgrounds across the entire UK. There will be greater opportunities for people to both work and train flexibly, carving out a career path and knowing the options available at each stage.
- 4.10 The gender balance will improve with girls wanting to join the sector, as a result of the career promotion work of the SIB and the initiatives of the Women in Maritime Taskforce.
- 4.11 As employers start to re-evaluate what skills and experience are required for particular roles and challenge existing traditions such as a requirement for seagoing experience, they will find it easier to recruit the talent they need, especially for STEM related roles as the talent pool will be greater.

Skills and training

- 4.12 The MSC will look ahead to where the UK needs to be, making recommendations to future proof training programmes ensuring the UK's maritime workforce has the talent it needs for today and in the future. Training opportunities and gaps are identified for each individual part of the maritime sector with career paths showing easily how to move between one part of the sector to another. This will include the qualifications and skills needed for this and if available what funding streams, mentoring programmes and/or training courses are available.
- 4.13 There will be strong synergies between the deliverables of the MSC and the ambitions of the Technology route map. Maritime technology, particularly autonomous systems, could radically reshape the future maritime workforce, potentially leading to upskilling and better paid jobs. Increasing use of technology within the sector could lead to more flexible working, and an increase in shore-based operations.



- 4.14 Technology also has the potential to help people do their jobs more safely and efficiently, for example, by removing the need for people to enter confined spaces on board vessels. However, the maritime sector of the future will require different skills sets. These benefits will only be realised through a culture of continuous learning, to ensure that the existing maritime workforce is adequately prepared for an increasingly technological and automated future and to introduce new technology in a way that is sensitive to societal concerns and attitudes.
- 4.15 To help unlock the potential of technological change, through the MSC, government, industry and academia should form partnerships to better understand technology specific skills gaps and needs as technologies advance. Government will play an active role in ensuring that the sector is linked with technologists, developing mentoring schemes between the maritime sector, technology experts from beyond the sector and other professionals in industries facing similar challenges, encouraging the transfer of skills and people.
- 4.16 The sector is vast in the roles it offers and it is easy for pockets of the sector to focus inwardly on their own current people issues and opportunities. However, in order to maximise the use of skills, enhance career transition and properly future proof our workforce, it will be imperative that the MSC and the SIB engage the full sector, bringing to the fore those voices that are sometimes unheard.

Maritime Skills Commission

The MSC will report to the Maritime Minister and Maritime UK on an annual basis providing an update on the progress against the People chapter recommendations and a stocktake of the skills needs of the sector, highlighting any parts of the sector with significant constraints in its ability to recruit and retain the talent it needs. These interim reports will identify actions and owners and the factors that might impact their delivery. In addition to this, and on a 5-yearly basis, the MSC will provide a state of the nation style report highlighting the opportunities and risks looking ahead to 2050 and what forward planning in the people landscape is needed in order to ensure the UK is able to capitalise on opportunities and mitigate against potential risks.

The MSC will seek to keep abreast of future industry changes, and consequently ensure that all parts of the sector are up to date and training offers match and exceed industry expectations. The creation of the MSC will take, as one of its core elements, reporting on potential technological development across the sector and the implications resulting from it for our maritime workforce.

The People chapter contains three specific recommendations relating to the MSC. They are as follows:

1. Government aims to establish a Maritime Skills Commission bringing existing leading maritime skills experts together, to report on the existing and future skills needs of the industry on a 5-yearly cycle, to inform the maritime training curriculum and keep it up to date with the evolving needs of the sector.
2. The Maritime Skills Commission will be tasked with overseeing the identification of opportunities for the UK maritime sector to access reskilling programmes, ensuring the workforce can take advantage of a wide range of initiatives.
3. The Maritime Skills Commission will, working with maritime training bodies, consider how to ensure professional development plans are built into training programmes across all roles so trainees know from the outset the routes available to them and the qualifications needed.

The MSC will also want to monitor progress of the other People chapter recommendations, particularly those that will impact future training, in both delivery and design. The MSC will also want to establish with the SIB the best course of action for delivery of the following recommendation:

Put in place a clear and universally supported careers promotion plan that achieves an outcome of UK employees being listed in the top five maritime nations' listings.

The MSC will cover the entire UK maritime sector but must be kept at a manageable size so that meetings are meaningful and outcomes achievable. As requested by industry, the MSC will build on the foundations made by the PSF. We will not be prescriptive in setting out how the MSC should operate or how frequently it should meet. Instead, we invite the MSC Chair to provide the Maritime Minister with a proposal covering the following areas:

- **Structure:** The MSC Chair will want to convene a meeting with the SIB Chair and the existing Chairs of the PSF, CPF, MSA and the Women in Maritime Taskforce to set out how they propose to operate in light of the creation of the MSC and the SIB, how they will structure themselves and how they will report to the Maritime Minister and the Maritime UK National Council
- **Membership:** The MSC will want to consider its membership and ensure it has representation from all parts of the sector including DfT, MCA, academia, specialists, employers, the unions and those organisations on the fringes of maritime training discussions.
- **Operation:** How frequently it will meet, how it proposes to interact with existing boards and bodies.
- **Communication:** The MSC will want to set out the communication channels it proposes to use, how it will report on meetings and what it will report on.

- **Resourcing:** The MSC will want to consider what resourcing it needs and what avenues are available to it.

This proposal should be made available to the Maritime Minister and the Maritime UK National Council by the end of December 2019. Success criteria for the MSC will include:

1. The sector will have a comprehensive understanding of its skills needs, including the areas of recruiting and retention. This understanding will draw on the intelligence from the Women in Maritime Taskforce and the SIB.
2. The sector will understand the impacts of technological developments and its implications for our maritime workforce.
3. Training offers that match and exceed industry expectations, including the use of the latest technological developments in training.
4. All parts of the sector are up to date in terms of the skills needed.
5. The sector has access to the appropriate range of high quality apprenticeships and qualifications.
6. A workforce that understands the career paths available to it and employers able to fill vacancies.
7. A maritime training offer, recognised world-wide for its quality.

The MSC will receive £300K in pump prime funding, provided for the 2019/20 financial year, to enable them to commence work in identifying the sector's skills needs and priority areas.

Career progression

- 4.17 Continuous education and training will be built into career development. For those starting out in their maritime career be it at sea or ashore, they will have a clearer idea from the outset about the options available to them in the wider sector and the pathways to reach those careers. For those already in the sector they will be able to access the information setting out the qualifications and skills needed to transfer from one part of the sector to another. Career Development Plans will become the norm and training and development will continue throughout a person's career. Companies will see the value of ensuring their workforce have the skills needed to keep pace with technological changes, equipping them with the right skills for their job.
- 4.18 With a greater need for STEM skills and the maritime sector appealing to a wider talent pool, opportunities to transfer into the maritime sector from non-maritime careers will be set out and easily understood.
- 4.19 Likewise, ex Royal Navy personnel will be better aware of the opportunities available to them in civilian maritime careers. In order to monitor the flow of ex Royal Navy personnel into these roles, information will be collated from

the Ministry of Defence and Career Transition Partnership statistics, with a broad interpretation of maritime category based on modern Maritime UK direct and related field definition added to the destination statistics. This information will then be used by the MSC in its assessments and reports.

Social framework

- 4.20 The introduction of new technologies, such as autonomous systems could bring disruptive change in any sector presenting both risks and opportunities. Members of today's maritime workforce are understandably concerned about the impact of autonomous vessels. Many remain unconvinced that increased automation on-board ships will create a safer industry. Understanding and addressing these concerns is an important responsibility for government and industry. It will be important to ensure that as new technologies, such as maritime autonomous systems are tested, we gain a better understanding of the broader societal concerns around their adoption.
- 4.21 Connectivity at sea – being able to stay in contact with friends and family and access to the internet – is not just important for a new generation of seafarers, it is also extremely important for their welfare. This has improved considerably over the last couple of years with access to at least emails now being offered on many vessels. Access to internet has also improved although cost remains an issue for operators and access may be limited either in terms of data provision or times available. It will also support business objectives. However, there is also potentially a risk that improved connectivity could lead to increased demands/priorities being placed on the vessel by shore based staff which ultimately could be at the detriment to the safety of the vessel or the individual(s) and could undermine the authority of the Master and/or First Mate and place them under unreasonable pressures.
- 4.22 Connectivity away from the coast has always been considered expensive but with technological advances the costs are rapidly reducing. More vessels are offering some form of connectivity although in certain cases the cost of access can be prohibitive. It is probable that provision with reasonable data limits and speed for personal use may be required to attract the very best seafarers and that where a charge is raised, this is at a reasonable price that is commensurate with the salary scale for the individual.
- 4.23 The maritime industry has embraced significant technological change before. Many tasks which used to be carried out manually, such as fire control and navigation, have been automated to some degree for decades. Rather than always leading to job losses, this technology can often change the nature of work, creating new, skilled opportunities on the development, operation and maintenance of this technology. However, these benefits will only be realised if people are allowed develop the right skills and given access to specialised training. A human-centred approach to technology and innovation may augment and improve the capabilities of human operators, whilst limiting exposure to a range of dull or dangerous roles.

- 4.24 The UK will work to ensure that those working at sea have equivalent rights and protection as those who work ashore in the UK. We will ensure that wherever possible skills and qualifications are transferable from the sea to the land and between the different sectors and promote a lifelong career model that is both flexible and rewarding for the individual.
- 4.25 The UK will continue to develop a comprehensive framework of legislation and guidance to ensure that the working environment for seafarers is attractive, safe and supportive, and leading international debate. In particular, it will modernise its seafarer and related documentation, including Seafarer Identity Documents, with a view to facilitating transit and improving access ashore in ports of call. Digitalising crew lists and official log books will reduce administrative burdens on board and in port.
- 4.26 The UK will maintain its position as a world leader in protecting the seafarers working on its ships, through legislation, guidance and effective enforcement. This is in line with the Government commitment to bring greater clarity and transparency to employment working practices. Working within the requirements of international legislation we will also look at domestic legislation applicable to seafarers to ensure there is consistency in application and that the protections afforded are comparable to those on land

5. Maritime People recommendations, actions, owner and timeframe

Recommendation	How?	Owner	Timeframe
Maritime Workforce			
Short term (1-5 years) Ensure the UK tonnage tax regime has a training element which continues to support UK maritime workforce ambitions while also supporting growth of the UK tonnage tax regime.	A review of tonnage tax is underway that is considering the current UK tonnage tax offer and will look at possible amendments to the scheme to increase its attractiveness to new and existing companies.	HMG, Maritime UK and UK Chamber of Shipping	1-5 years
Short term (1-5 years) Raise awareness of the maritime sector in schools by having a single industry body overseeing a more	The Maritime Minister will task the SIB with getting young people inspired to enter maritime careers and to coordinate this activity across the sector. The SIB will have a balanced sector wide representation. It will develop a strategic, long term and nationwide programme that promotes the maritime sector in schools and	SIB and DfT	6-12 months

coordinated cross-sector in-school awareness and ambassador programme.	beyond. Any work on this programme will start with existing initiatives. Effective communication channels will be introduced that ensure all parts of the sector keep abreast of developments and allow them to participate in the discussions where appropriate.		
Short term (1-5 years) Task a single industry body for bringing greater coherence and coordination to the promotion of maritime careers sector wide.	The SIB will feed into the analysis carried out by the MSC on the careers development plans as well as the reports to the Maritime Minister and the MUK National Council.		
Medium term (5-15 years) Ensure there is greater harmonisation of certification standards within the UK for different maritime sectors.	MCA and DfT will conduct an internal review and look at the certificates that seafarers need for the various parts of the sector and what ease there is to move from one part of the sector to another with existing certificates. On completion of the review, MCA and DfT will consult with industry to look at harmonisation of certification standards, recognising the requirements of the STCW and STCW-F standards.	MCA, DfT, Industry	Internal review 2021.
Medium term (5-15 years) Put in place a clear and universally supported careers promotion plan that achieves an outcome of UK employees being listed in the top five maritime nations' listings.	The MSC will be tasked with looking at the UK's skills gaps and where the UK falls behind its international competitors. The focus will be on all areas of skills including the professional business services sector. The MSC will set out the UK's position against international competitors and what proposed actions should be taken. Utilising this information, the MSC will establish with the SIB the best course of action for setting out the career promotion plan.	MSC/SIB	To be determined once MSC is established.

Diversity in the Maritime Workforce			
Short term (1-5 years) Government will fund the production of the ‘people like me’ maritime industry project to help address the image and perception of the industry and demonstrate how we can effectively showcase its value to a wider diversity of people.	DfT awarded a £40,000 grant to the Women in Maritime Taskforce to support this work. An agreement has been established between the DfT and the Taskforce setting out key milestones and deliverables. The main activities are the creation of a public campaign tailored for the maritime industry raising awareness of the breadth of maritime career options available to a wider diversity of people, and an information pack that will help maritime businesses with the development of talent pipelines. The new initiative is called ‘Maritime and Me’.	Maritime UK and DfT	2019
Short term (1-5 years) Joint delivery between government and industry of the Women in Maritime Charter.	The Women in Maritime Taskforce is leading the way internationally at addressing gender diversity in the sector. Since its creation, 110 companies have signed a Pledge to do more to address the maritime gender imbalance and a Charter was introduced in September 2018 to turn the pledges into positive action. The Charter commits companies to setting targets to improve gender balance in their organisations and a series of toolkits have been made available to participating companies to help them achieve their targets. Following successful completion of its pilot phase and the first set of companies gaining Charter status, a call to action is being made to industry to join the Charter. Membership of the subgroups is being refreshed and future work plans established. A strategy for how the work of the Taskforce will continue progressing, promoting and expanding the gender work will be in place towards the end of the year.	Maritime UK and DfT	2020

Short term (1-5 years)	Consideration of how to expand the work of the Women in Maritime Taskforce into broader diversity issues is underway. Throughout the work of the Taskforce it has been identified that the measures developed for women could also be applied to encourage wider diversity. A strategy for expanding the remit of the group will be in place by the end of the year. DfT are investigating the scope of a study on diversity in maritime trainees, identifying current gaps and exploring with industry contacts, potential additional sources of data.	Maritime UK and DfT	2020
Maritime Skills and Promotion			
Short term (1-5 years)	The MCA are engaged in this area. They have produced a series of MOU's to allow transition of Royal Navy personnel to Merchant Navy officers. There are existing policies allowing for Royal Navy ratings to transfer to Merchant Navy officers and Able Seafarers. The MCA will continue to work with the Royal Navy to develop further routes for transfer of Royal Navy personnel to convert to Merchant Navy qualifications taking into account international regulatory requirements (STCW).	Royal Navy/MCA/DfT	2020
Short term (1-5 years)	The MCA will work with industry, including the MNTB, in looking at how this should be progressed, bringing in expertise from groups such as MarRI-UK and IMarEST's Special Interest Group.	MCA/industry	2021

technologies to seafarer training.	The MCA is keen to engage with industry experts from groups such as MarRI-UK, IMarEST, Nautical institute, IAMI and with shipping companies		
Short term (1-5 years) Government aims to establish a Maritime Skills Commission bringing existing leading maritime skills experts together, to report on the existing and future skills needs of the industry on a 5-yearly cycle, to inform the maritime training curriculum and keep it up to date with the evolving needs of the sector.	<p>The MSC will cover the entire UK maritime sector. As requested by industry, the MSC will build on the foundations made by the Maritime UK People and Skills Forum.</p> <p>The MSC will report to the Maritime Minister and Maritime UK on an annual basis providing an update on the progress against the People chapter recommendations and a stocktake of the skills needs of the sector, highlighting any parts of the sector with significant constraints in its ability to recruit and retain the talent it needs. These interim reports will identify actions and owners and the factors that might impact their delivery. In addition to this, and on a 5-yearly basis, the MSC will provide a state of the nation style report highlighting the opportunities and risks looking ahead to 2050 and what forward planning in the people landscape is needed in order to ensure the UK is able to capitalise on opportunities and mitigate against potential risks.</p>	MSC/DfT/MCA	MSC established 2019-2020
Medium term (5-15 years) Government to increase UK global influence on seafarer training by providing the policy and regulatory direction needed to support further roll out of UK maritime training	MCA will support quality training initiatives that will raise standing of seafarers across the globe and will be beneficial to UK PLC.	MCA	5-15 years

institutions/programmes overseas			
Medium term (5-15 years) UK will develop cutting edge seafarer training maximising the use of future technologies such as virtual reality and augmented reality.	<p>The MSC to use the findings from its skills reports to make recommendations on what future technologies should be used in training, utilising industry knowledge from the MNTB and the expertise from MSC members such as academia, MarRI-UK and IMarEST's Special Interest Group.</p> <p>The MSC will submit proposals for the MCA to take to IMO with a view of modernising and improving seafarer training</p>	MSC/MCA /Industry	5-15 years
Long term (15 years and beyond) Through to 2050, the UK to play a leading role at IMO and ILO, in setting the global framework for maritime training and skills, and positioning the UK as the world leader.	<p>This recommendation will be delivered through DfT and MCA engagement in IMO and possibly through amendments to STCW and STCW-F. Where relevant, DfT and MCA will make use of the findings from the MSC and feedback from social partners to propose amendments to the labour conventions whilst also ensuring greater ratification of relevant inventions.</p>	DfT/MCA/MSC	Continuous – once MSC is operational
Need for continuous education and training			
Short term (1-5 years) The Maritime Skills Commission will be tasked with overseeing the identification of opportunities for the UK maritime sector to access reskilling programmes,	<p>The MSC will, working with government, be alive to training programmes and reskilling initiatives in other sectors, allowing opportunities to be taken to attract new workers from a wider section of society, and ensuring existing maritime workers are never barred from suitable training programmes.</p>	MSC	To be determined by the MSC once established

ensuring the workforce can take advantage of a wide range of initiatives.			
Short term (1-5 years) Government, industry, and academia to jointly establish an internet connectivity working group to identify action needed to drive internet connectivity at sea in support of social care and continuous education.	DfT and MCA will work with government partners to understand the issue and will look at both the technological and business barriers to progressing this. Once this groundwork has been completed a Working Group will be set up with industry partners to consider and take forward options.	DfT/MCA	2020
Medium term (5-15 years) The Maritime Skills Commission will, working with maritime training bodies, consider how to ensure professional development plans are built into training programmes across all roles so trainees know from the outset the routes available to them and the qualifications needed.	Given this recommendation is medium term, it will be for the MSC, working with the DfT and MCA, to determine how it will be achieved and over what timeframe.	MSC/DfT/MCA	5-15 years Exact timing to be determined by the MSC
Considering the human in the face of changing technology			
Short term (1-5 years)	DfT and MCA to develop a coherent programme to ensure the delivery of decent work and training opportunities for British seafarers. Consider and promote employment	DfT/ MCA	On-going

<p>Develop a social framework that lays out UK expectations for the welfare of the UK maritime workforce.</p>	<p>opportunities – possibly in regard coastal/cabotage and domestic voyages.</p> <p>Promote government inter-agency working to provide greater protection for all mariners in domestic waters and look to harmonise employment protection to provide greatest level of possible protection for seafarers working in UK domestic waters and on UK vessels outside our waters.</p> <p>Work with social partners to position UK as champions of seafarer rights and to work to increase levels of protection internationally through concerted effort to ensure effective and widespread global ratification of international instruments.</p>		
<p>Short term (1-5 years)</p> <p>Push for worldwide recognition and standardisation of seafarer ID cards through the ILO and IMO.</p>	<p>Work towards ratification of ILO 185. Work with ILO to share knowledge/ experience with other non-ratifying or non-compliant States to help promote greater global ratification.</p> <p>Work particularly with US State Department/Canada/ Australian Government and the ILO to consider potential equivalent measures (in lieu of ratification) that will allow those States to recognise the international rights of seafarers to access shore leave and transit and transfer in another State.</p>	DfT/MCA	On-going
<p>Short term (1-5 years)</p> <p>Working to introduce a National Minimum Wage for all seafarers working in the UK territorial waters,</p>	<p>DfT will introduce legislative changes that will extend NMW protection to the territorial waters for all seafarers working on all vessels engaged in domestic trade.</p>	DfT/MCA	2020

affording them the same protection as land-based workers.			
Short term (1-5 years) Producing mental healthcare guidelines and developing mental resilience testing for seafarers.	<p>Develop a framework for accreditation of mental health awareness training for seafarers.</p> <p>Issue wellbeing guidance to support seafarers in looking after their own mental health and to support shipowners in providing a supportive environment.</p> <p>Work with other transport sectors to learn from their experience of developing mental resilience testing.</p>	DfT/MCA	2019 – 2021
Medium term (5-15 years) Push for a limit on hours per shift through IMO and ILO to combat seafarer fatigue.	<p>Develop a strategy to look at mental health and fatigue including research analysis and engagement with maritime social partners, charities and welfare organisations, to consider potential enhancement to current regime. This may include revised or new guidance, developing training programmes and raising and promoting awareness.</p> <p>Push for review of STCW VIII/1 to take account of research findings. Continue to educate industry on the risk of fatigue and how to manage it.</p>	DfT	September 2020
Long term (15 years and beyond) The UK will lead on exploring opportunities to encourage greater cooperation between the	ILO leads on all international labour measures (not just seafarers/fishermen) and expertise at both ILO and government level is in those fields. It makes sense therefore for the ILO to continue with that work. Both organisations are represented at meetings of the other, and there is a mechanism for joint working groups on issues of common interest. The UK should work with IMO/ILO/other parties to	DfT/MCA	Ongoing

ILO and IMO on seafarer welfare issues.	eradicate unintended consequences in the international instruments to ensure greater protection and clarity.		
Long term (15 years and beyond) Lead the way in addressing Modern Day Slavery concerns within the industry with the aim of eradicating it.	<p>Working with Border Force and NMOC to establish greater inter-agency understanding of responsibilities and boundaries to ensure more targeted and cohesive use of resource and greater cooperation/ data sharing.</p> <p>Long term – Working with industry, relevant government departments, academia and others to champion deep understanding and compliance by the maritime sector with the legislative requirements. Consider greater protection for all workers throughout the supply chain and look to UK operators, processors and retailers to actively promote this to customers/consumers.</p>	DfT/MCA	Ongoing

6. Monitoring progress of recommendations

- 6.1 This route map has shown that the delivery of the recommendations stemming from the Maritime 2050 People chapter requires close collaboration with industry. Therefore, we will continue to work closely with all respective parties.
- 6.2 The Maritime Skills Commission will report to the Maritime Minister and the Maritime UK National Council. A DfT and MCA official will represent government on the commission and the SIB.
- 6.3 The SIB will report to the Maritime Skills Commission.
- 6.4 As the short-term recommendations will be delivered in the near future DfT officials will ensure significant updates are shared with DfT Ministers and other relevant departments, as and when required, and through the published Maritime Annual Report. We also aim to provide annual updates on the progress of all the Maritime 2050 People recommendations to the Maritime Minister, DfT and MCA senior officials.
- 6.5 We aim to publish this route map every five years; providing further details for the medium and long-term recommendations as they develop.

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Page	Picture description	Photo credit
Front cover	Female workers on deck	Alamy
4	Front cover of Maritime 2050 Strategy	Department for Transport
9	Control centre	Rolls Royce
12	Dockside workers	Shutterstock
14	STEM girls	1851 Trust, Phil Williams
15	Thames workers	Thames Skills Academy
16	STEM girls	1851 Trust, Phil Williams
18	Yachts in Pendennis basin	Pendennis
19	Maritime leadership and development course	The Bristol Port Company and Weston College
20	Port industry trainee	Port Training Services (PTS)
21	Innovative training suite	Port of Tilbury Logistics Training Academy and Tilbury on the Thames Trust (TTT)
28	Virtual reality technology	Shutterstock