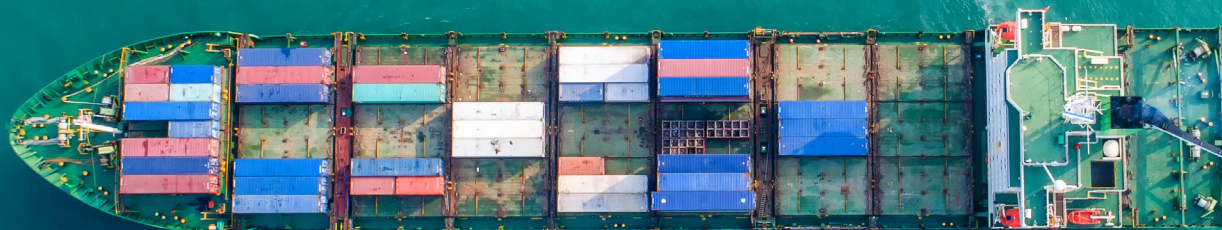




Maritime &
Coastguard
Agency



A review of the effectiveness of funding for UK seafarer training

Summary of findings and recommendations for reform

October 2025

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Biography of authors



Keir Gravil

Keir is a naval architect and former seafarer, having completed his cadetship in 2008 at Glasgow College, and a degree in naval architecture at Newcastle University. His seagoing experience laid the foundation for a career that has taken him across the globe, working on maritime projects in the UK, Australia, Singapore, and Japan. With a strong technical background and a passion for solving challenging engineering problems, Keir has contributed to projects ranging from ship design to surveying and maritime consultancy. Keir works in areas covering the transition to net zero, maritime safety, and technology development.



Lewis Baxter

Lewis is an economist and Consultant at Frazer-Nash Consultancy. He focuses on providing economic insight that enables organisations like the UK government to make well-informed investment decisions. Lewis has delivered economic insight to support a diverse array of sectors, both in the UK and abroad. He enjoys the challenge of quantifying the impact of innovative programmes, whether their focus is on technology, people, or strategy. He delivers work across the programme lifecycle, supporting business case development, programme evaluation, and value for money analysis.



Aleta Morgan

With many years of experience in learning and development, Aleta is a seasoned training consultant and CIPD Training Associate dedicated to empowering individuals and organisations through impactful training solutions. She specialises in designing and delivering bespoke training programs and coaching interventions that support professionals at every stage of their career, from entry-level talent to senior leadership. Currently working with Frazer-Nash Consultancy, Aleta partners with clients across both private and public sectors, including rail, energy, and defence, to drive capability development and performance improvement. Her passion for developing people, combined with her strategic approach to learning, ensures measurable results and lasting impact.

Introduction

The maritime industry has long been a cornerstone of the United Kingdom's economy, security, and cultural identity with its seafarers playing a vital role in global trade, national security, and technological development. It is a profession that demands resilience, adaptability, and technical expertise, as well as a deep commitment to safety, sustainability, and innovation. To be a seafarer in the UK today means to be part of a highly skilled workforce that operates in one of the most challenging and dynamic environments in the world: the sea.

This study was commissioned to provide a comprehensive review of the effectiveness of funding systems for UK seafarer training, with a particular focus on the Support for Maritime Training (SMarT) scheme. It builds upon the findings of the previous report [1], which concluded that while SMarT delivered strong value for money, its real-term effectiveness had diminished due to rising training costs and limited structural reform.

In recent years, the UK maritime sector has undergone significant transformation, driven by advances in automation, green technologies, evolving global trade patterns, and geopolitical influences. Seafarers are at the forefront of this change, navigating not only the physical challenges of the sea but also the digital and environmental shifts reshaping the industry.

As the UK continues to invest in maritime education, infrastructure, and policy, the role of its seafarers remains central not just to the economy, but to the nation's strategic ambitions and its legacy as a global maritime leader. Supporting and empowering this workforce is essential to ensuring the resilience and competitiveness of the UK's maritime future. It is to this end that the study has been conducted, culminating in a series of 15 recommendations for reform of funding for seafarer training based upon stakeholder responses, online surveys, extensive literature reviews, and a value for money (VfM) assessment.



Introduction

Since the previous study, the maritime sector has experienced disruption and change driven by geopolitical events such as Brexit, the COVID-19 pandemic, and the war in Ukraine, as well as policy shifts including the UK's maritime net zero commitments in response to the International Maritime Organisation's (IMO) greenhouse gas strategy. These developments have altered the landscape in which seafarer training operates, necessitating a refreshed evidence base to inform future government policy.

Areas of focus for this study include assessing the current state of UK seafarer training, evaluating the adequacy and efficiency of existing funding mechanisms, and identifying opportunities for reform. To achieve this, the project employed a mixed-methods approach, including:

- an online seafarer survey targeting cadets, officers, ratings, and former seafarers;
- structured stakeholder engagement with shipping companies, industry bodies, training providers, trades union, and government representatives;

- a literature review covering domestic and international training models and funding systems, and a wide variety of other related topics; and
- a VfM assessment using HM Treasury Green Book methodologies [3].

The overarching goal was to provide a robust, data-driven foundation for future decisions on funding for seafarer training, helping to support the sustainability and competitiveness of the UK maritime workforce.



Scope and objectives

This study was commissioned to provide a refreshed and comprehensive evaluation of the SMarT scheme. Its primary aim is to assess the effectiveness, efficiency, and value for money of current funding mechanisms for seafarer training, and to identify opportunities for reform. This summary report draws out the key findings of the study along with the recommendations for reform of SMarT.

To understand the options for the reform of SMarT, there is a need to understand the training environment in the UK maritime sector, particularly the methods of funding seafarer training. This summary report provides an overview of the study that has been performed to provide a refresh of the SMarT scheme; it identifies how the funding landscape has changed since the previous report. It also outlines the findings of the key mechanisms used to gather the data required for this study: the online survey, stakeholder surveys and interviews, and literature review.

This summary report also provides an overview of the assessments done to understand the current value for money of the SMarT scheme by conducting an economic review in line with HM Treasury Green Book methodologies. 15 recommendations are made as to the ways that UK seafarer funding could be reformed to allow it to maintain its ambitions to increase and sustain UK seafarer numbers. These 15 recommendations are presented at the end of the report.



Need for seafarers and SMarT summary

As an island nation, the UK relies heavily on its maritime sector for trade, security, and economic resilience. Seafarers play a vital role in operating ships across the globe, contributing not only at sea but also in shore-based roles such as ship management, education, and technical services. [2]

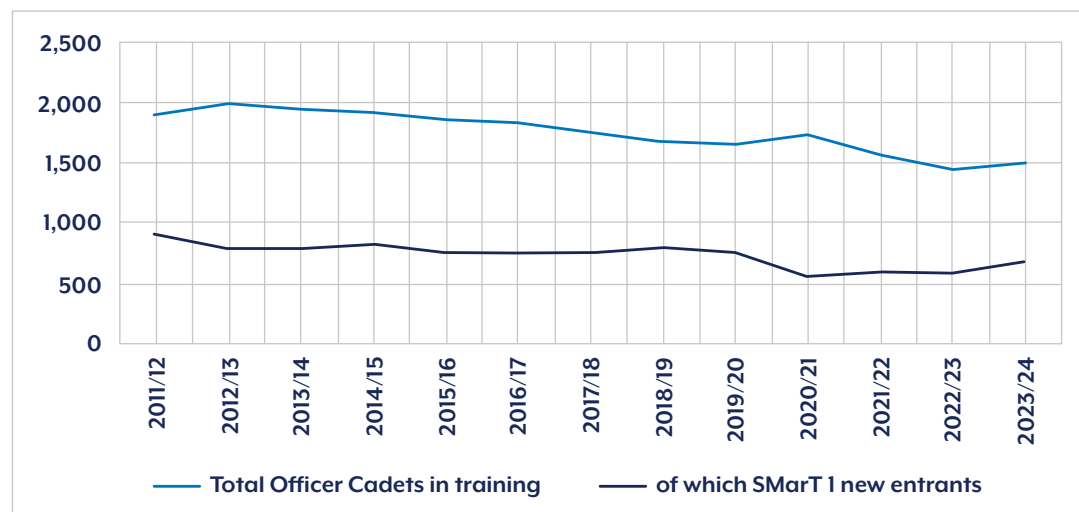
83% of respondents to the Online Seafarer Survey who are former seafarers (i.e. no longer working at sea) still consider themselves to be working in the maritime sector.

The experiences that seafarers gain during their education, training, and careers at sea are taken through into later careers after they have left their seagoing roles.

The SMarT scheme is a UK government funding mechanism for supporting the training and education of the domestic seafaring workforce. Established in 1998, it provides financial support to help cadets and ratings gain the qualifications needed to work at sea. SMarT is divided into several funding streams, with SMarT 1 supporting

initial officer training, SMarT 2 focusing on management-level officer training, and SMarT 3 and SMarT 5¹ supporting career development for ratings by funding training courses and rating-to-officer conversion training.

SMarT delivers strong economic returns; each £1 of public investment generates £4.78 of economic value back into the UK economy. However, it faces several challenges including rising training costs, lingering misconceptions and misunderstanding of how it can be used, and administrative inefficiencies. The scheme is widely seen as essential to sustaining UK seafarer numbers, but reforms are needed to improve its reach, responsiveness, and alignment with industry needs.



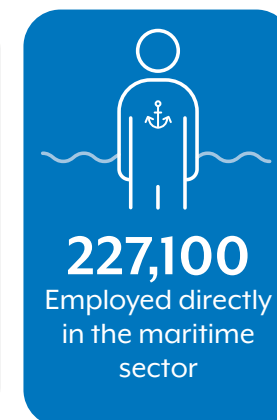
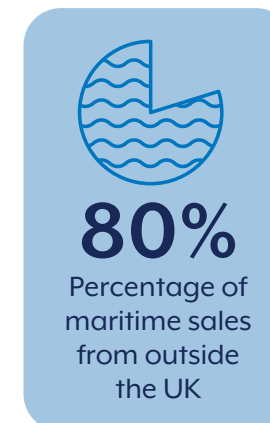
UK cadets in training under the SMarT 1 scheme 2011-2024 [4]

1. SMarT 4 is no longer available, but allowed seafarers who had qualified on the original STCW 78 convention requirements to update their training for the new requirements in the 1995 amendments.[12]

Need for seafarers and SMarT summary

The UK is facing a decline in the number of cadets, ratings, and qualified officers. The trend is driven by rising training costs, challenges in career progression, domestic and international competition. The number of UK nationals holding Certificates of Competency (COCs) has dropped significantly particularly in engineering disciplines. Recent initiatives, such as the Maritime Skills Commission's reviews [5][6] and the Cadet Training and Modernisation (CT&M) programme [7], aim to address these challenges by modernising training pathways and improving career development. These efforts are essential to maintaining the UK's reputation as a provider of high-quality maritime training and to ensuring a sustainable pipeline of skilled seafarers.

As the industry evolves, driven by autonomy, green technologies, and geopolitical shifts, UK seafarers must be equipped to meet new demands. Investing in their training and development is critical to securing the future of the UK maritime workforce and its strategic position in global shipping.



Headline figures for maritime value to the UK [13] [14] [15]

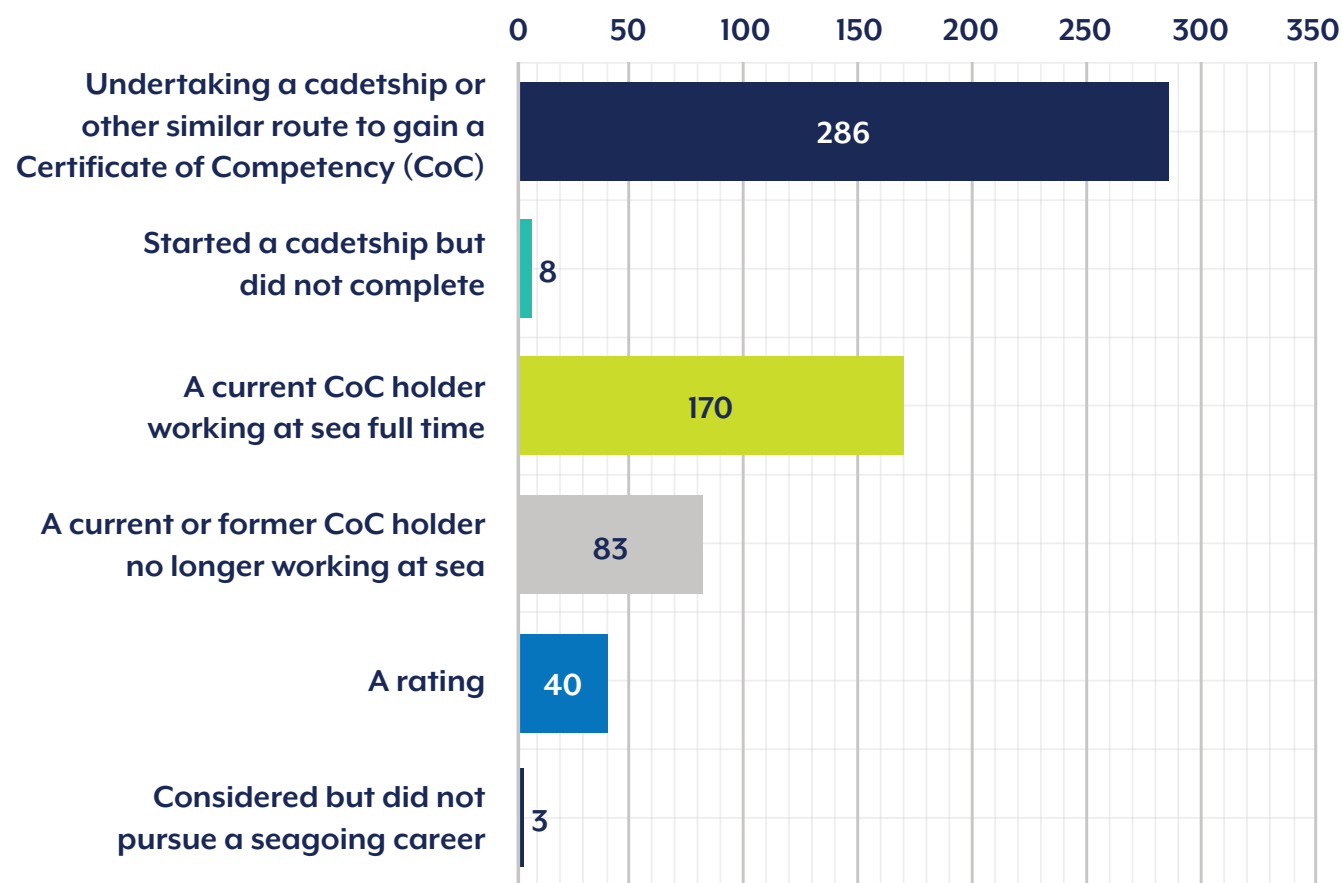
Methodology

The study adopted a mixed-methods, quasi-experimental design to evaluate the effectiveness and value for money of UK seafarer training funding systems, particularly the SMarT scheme. The approach combined quantitative and qualitative techniques to ensure analytical robustness and policy relevance. Key components included:

- Literature review: a comprehensive review of existing research and prior SMarT evaluations was conducted, alongside analysis of external factors such as Brexit, COVID-19, net-zero initiatives, and geopolitical events. This helped identify persistent and emerging barriers to seafarer recruitment and retention.
- Stakeholder engagement: structured interviews and surveys were carried out with a wide range of stakeholders including training providers, shipping companies, trades union, education institutions, and government bodies. Stakeholder insights informed both qualitative findings and economic modelling for the study.
- Online Seafarer Survey: a large-scale survey (590 responses) targeted cadets, ratings, current and former officers. It captured data on training experiences, funding awareness, career progression, and demographic trends. The survey adhered to strict privacy and data protection measures.
- Value for Money (VfM) analysis: a Green Book-compliant economic appraisal [3] assessed SMarT's costs and benefits over an extended horizon. Public and private costs were calculated using MCA data and stakeholder inputs, while benefits were estimated via productivity premiums. Sensitivity analyses explored scenarios such as varying time at sea, progression rates, and funding levels to provide a full assessment of SMarT's economic value.
- International benchmarking: a comparative analysis of funding models in various peer nations was undertaken to identify best practices and gaps in UK training provision.



Methodology



Summary of respondents to the Online Seafarer Survey

Tonnage tax, PILOT, CTC, and MTO

The tonnage tax scheme has successfully encouraged shipping companies to train UK seafarers, primarily officers, by offering an alternative to UK corporation tax in exchange for commitments to seafarer training. Training is part of a suite of commitments made by shipping companies within the scheme. In addition to training, there are also commitments for, *inter alia*, a minimum eight-year period for remaining within the tonnage tax scheme and locating the company's management offices within the UK. The UK tonnage tax scheme remains the only example of such a scheme that was identified through global comparison that embeds training obligations within a fiscal framework.

The UK's tonnage tax regime is designed to attract shipping companies by offering a tax structure based on a vessel's net tonnage, rather than standard corporation tax. In return, companies commit to training UK seafarers through two key obligations: the Core Training Commitment (CTC) and the Minimum Training Obligation (MTO). The MTO requires one cadet, two rating-to-officer conversions, or three ratings to be trained for every 15 officers listed on a ship's Safe Manning Document (SMD); the CTC

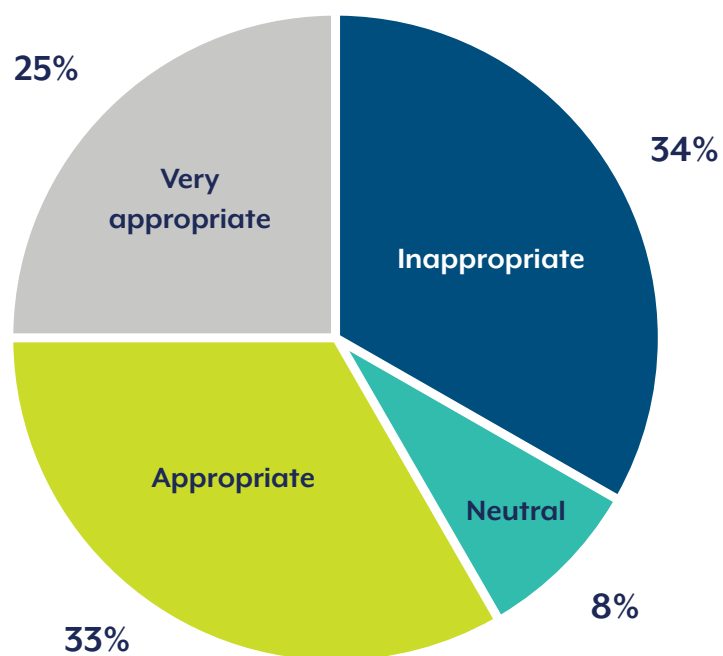
outlines how these obligations will be met across reporting periods. If companies are unable to fulfil these commitments, which is often due to limited berth availability or dropouts, they resort to Payment in Lieu of Training (PILOT). These payments are directed to the Maritime Educational Fund (MEF), which supports cadet training and bursaries for ratings.

Stakeholders broadly agree that tonnage tax (including its training obligations) and PILOT are important parts of the training system for seafarers in the UK. During stakeholder engagement the link between training requirements as part of entering ships under UK tonnage tax is obvious and it is evident that the number of cadets trained would be significantly lower if it were not for the training obligations of tonnage tax. PILOT is seen as a good alternative by shipowners and operators, allowing flexibility in an environment where cadet numbers are not guaranteed to remain constant. PILOT therefore allows companies a degree of compromise.

However, while the system has successfully incentivised officer training, its effectiveness is increasingly constrained. PILOT, originally intended as a fallback, is now frequently

perceived by stakeholders as being a default compliance mechanism, raising concerns that it no longer acts purely as a fallback mechanism. Stakeholders have also highlighted that some companies sponsor cadets without intending to employ them, leading to poor training experiences and uncertainty for trainees. Moreover, the current MTO ratios are seen by many as outdated and inflexible and should include a more flexible mechanism that recognises the proportion of a company's ships on the UK register and registered under tonnage tax. There is growing consensus that the system needs reform to better reflect operational realities, improve enforcement, and ensure that funding mechanisms genuinely support the development of a skilled and resilient UK maritime workforce.

Tonnage tax, PILOT, CTC, and MTO



*Stakeholder survey results regarding the suitability
of MTO cadet and rating training ratios*

Entering the industry

Most seafarers still discover maritime careers through informal networks, particularly family and friends. This remains the dominant route into the industry for both cadets and ratings revealed through the online seafarer survey. While schools and colleges play a role, their influence is not as high as personal connections such as friends or family. Social media is emerging as a more significant factor among younger entrants, with the cadets surveyed showing higher exposure through online platforms compared to previous generations. However, structured career advice services and public campaigns remain under utilised, and the sector is widely perceived as a “hidden profession.” Stakeholders agree that marketing of maritime careers is ineffective, with 63% rating it as poor or very poor. This lack of visibility, combined with reliance on existing peer networks, restricts diversity and recruitment from outside traditional circles.

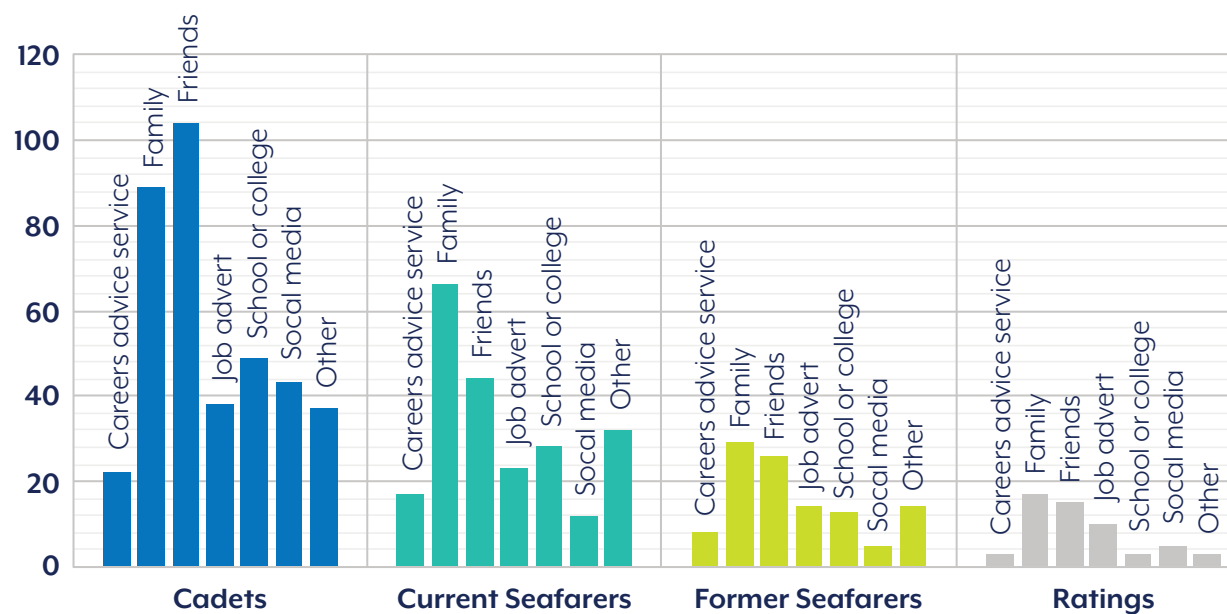
Entry into cadetships typically requires formal academic qualifications. Most cadets begin with A-levels (or Scottish Highers) in core subjects such as maths, English, and science. Depending on the chosen route (i.e. HNC, HND, SPD, foundation degree, or bachelor’s degree)² requirements range from four GCSEs at grade 9–4 to 104 UCAS points for degree-level entry. Some cadets enter with prior STEM degrees, which can exempt them from certain modules. The most popular academic route today is the HND, followed by degree-level courses, reflecting a shift away from HNCs over the last few years.

This relatively recent change in focus from HNCs to HNDs, SPDs, and bachelor’s degrees has likely not filtered through to seafarers at their later-stage careers yet, contributing to the lingering perception held by many stakeholders that gaining a second management-level CoC can be time-consuming and difficult to manage.

With an increase in those obtaining their first CoCs via HNDs and bachelor’s degrees (both including management-level modules from the outset, unlike the HNC), the industry might see an increase in the number of UK seafarers with second management-level CoCs in the near future.

2. HNC: Higher National Certificate. HND: Higher National Diploma. SPD: Scottish Professional Diploma.

Entering the industry



Response to the survey question
“How did you find out about seafaring careers?”

Seafarer training experiences

Training experiences for UK seafarers reveal a mixed picture of strong practical learning opportunities alongside persistent structural challenges. At college, cadets generally rate their education positively, citing well-delivered theoretical and practical modules. However, issues such as outdated course content and disorganisation (particularly around scheduling and communication) were frequently reported. Over 12% of cadets surveyed highlighted irrelevant course material, while 17% noted poor coordination between college and sea phases. These gaps often lead to frustration and uncertainty about progression, which in turn influences the numbers who drop out.

Additionally, whilst sea training is considered essential for developing practical skills, its quality reportedly varies across cadet respondents to the survey. While most cadets value the hands-on experience and exposure to real-world operations, the absence of a Designated Shipboard Training Officer (DSTO) on some vessels undermines learning outcomes. Survey data show that nearly 14% of cadets lacked a DSTO during sea phases, with engineering and Electro-technical Officer (ETO) cadets most

affected. This lack of structured mentorship correlates with lower satisfaction scores and, in some cases, contributes to dropout rates. Ratings report similar variability in their training experiences. Apprenticeships provide an accessible entry route for many seafarers to maritime careers, but the quality of onboard training and supervision is inconsistent; 32% of ratings surveyed were not assigned a dedicated supervisor during sea training, which influences wider perceptions about the industry and the likelihood of sustaining a long-term career within it.

Both cadets and ratings emphasise the importance of practical, job-specific learning and have suggested in their survey responses that a better focus on college syllabi and modern shipboard technologies would be of benefit. Overall, while seafarers value the opportunities for skills development and career progression, improvements in training oversight, curriculum relevance, and support during sea phases are critical to enhancing retention and long-term workforce sustainability.

To address these issues, the MCA is introducing a revised cadet training syllabus from September 2025 as part of the CT&M programme. [7] The new syllabus aims to modernise course content, integrate digital and simulation-based learning, and embed management-level modules earlier in training to ease progression to second CoC. It also includes updates to reflect emerging technologies, alternative fuels, and sustainability requirements linked to the IMO's net-zero targets. These changes are expected to reduce mid-career barriers, improve training relevance, and better prepare seafarers for both sea-going and shore-based roles in an evolving maritime sector.

Seafarer training experiences

Group	Mean score at sea	Mean score at college
All cadets including Phase 1 with no sea time	3.60	4.00
All cadets with at least one phase of sea time	3.60	3.42
Of which had a DSTO	3.74	3.47
Of which had no DSTO	2.76	3.09
All ratings	3.63	3.40*
Of which had an on-board supervisor	3.79	3.32
Of which had no on-board supervisor	3.38	3.23

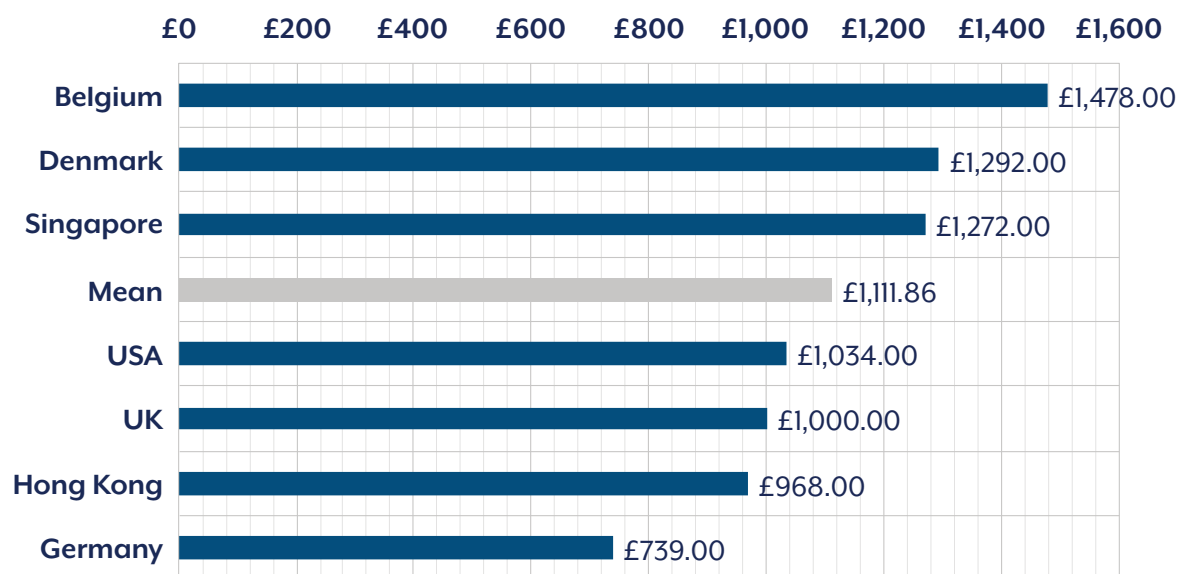
* Includes responses where requirement for a supervisor was stated as 'not applicable' by the respondent, hence why the value is higher. If 'not applicable' is excluded, this value is 3.28.

Cadet survey responses to "how would you rate the training you received on a scale of 1 (very poor) to 5 (excellent)?" at sea and at college

Career development

Career development for UK seafarers (cadets, officers, and ratings) includes distinct opportunities and barriers for each group. [5] For cadets, training pathways supported by SMarT provide a clear route to gaining a first CoC, offering strong long-term value as many transition into shore-based roles later in their careers. However, challenges still persist; financial pressures and the perception that training allowances are inadequate are some of the key areas that were revealed in the study. When compared with international peers, the UK is below average in terms of the payments made to cadets via the training allowance with a median value of £1,000 per month; the highest is Belgium at £1,478.00, and the mean value across selected nations is £1,111.86.

Furthermore, experiences whilst at sea and uncertainty around post-qualification employment often lead to high dropout rates, particularly during initial sea phases. Most dropouts occur during the initial sea-time phases as cadets gain a greater understanding of life at sea and react accordingly. Other areas where there are notably higher rates of drop-out include the time surrounding oral exams to gain a CoC at the end of cadetships; this is often due to cadets not passing their exams. However, over COVID this has also been due to cadets having to wait for substantial periods to sit their exams and deciding on other career paths as a result.



Training allowance equivalents paid in select countries (blue) including the mean average for comparison (grey) in GBP 2025 values

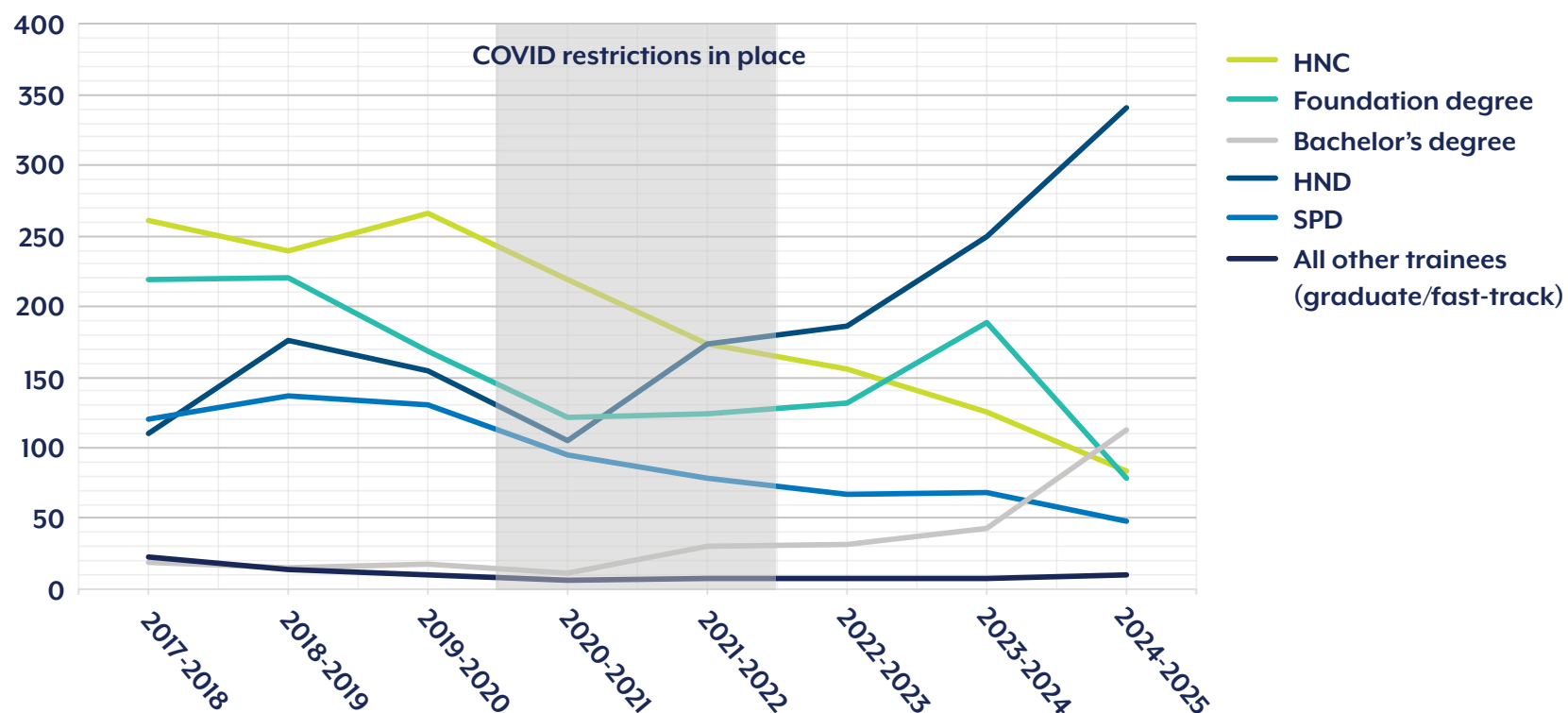
Career development

For qualified officers, progression to management-level CoCs is a key career milestone that enhances earning potential and opens leadership roles. The benefits include career longevity and strong employability both at sea and ashore. Yet, barriers such as lack of employer support for study leave, financial constraints, and structural disadvantages for those who trained via HNC routes hinder advancement. HNC holders, who don't cover management-level topics during their cadetships, often have to attend college for significant amounts of time to cover these modules and thus are disadvantaged when training for a second CoC. There is also a lingering perception within industry that substantial periods of mid-career college time are required to gain a management-level CoC. This has changed recently, with a shift away from HNCs towards HNDs, SPDs, and degrees that include management-level education as part of cadetship training. However, as this shift is relatively recent, perceptions within industry might be yet to catch up.

Ratings typically enter the maritime industry through company-sponsored apprenticeship schemes, which provide an accessible route into seafaring careers. However, these apprenticeships are not eligible for direct SMarT funding, creating a perception that funding options for ratings are less transparent than those available to officers. [6][10] While apprenticeships cover entry-level training, opportunities for further development often rely on charitable support. SMarT 3 and SMarT 5 funding is available for advanced courses and officer conversion, but awareness and uptake remain limited. Career progression for ratings is further constrained by sector-specific certification requirements and limited flexibility to move between roles or sectors. Despite these challenges, recent initiatives have introduced new pathways, including apprenticeships that enable ratings to qualify as ship's masters on vessels under 500GT for near-coastal voyages, alongside proposals for dedicated electro-technical rating routes.



Career development



Numbers enrolled for various CoC educational routes from 2017 to 2025

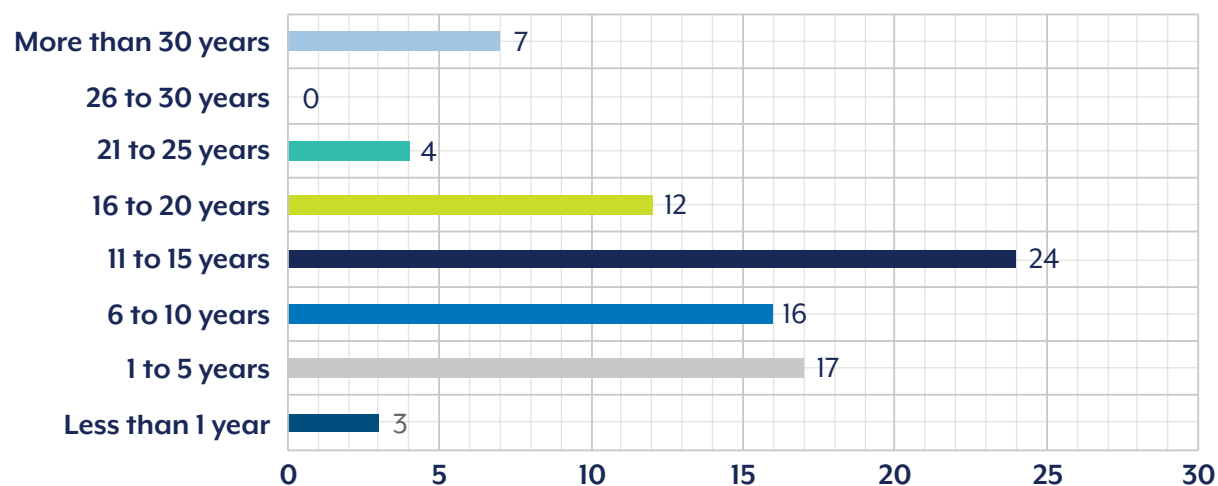
Career transitions and exits

The seafarer survey results for those who have left their seagoing careers suggest that the mean value for career length is around nine to ten years after completing a CoC.

However anecdotally it has been suggested that this could be much shorter. Some stakeholders have provided figures whereby UK officers average around three to four years working at sea after completing their cadetships. This might not mean they leave their seagoing careers entirely and could move to different companies for personal, family, or other reasons. Several stakeholders have highlighted higher-than-average attrition rates of UK seafarers, especially when compared to other nationalities. Research for this study, however, has revealed that this might not necessarily be because of a lack of desire to work at sea but also because of some of the barriers UK seafarers face, such as support for gaining their second CoC.

83% of respondents who are former seafarers remain within the maritime sector after leaving seagoing service. This continuation of service within the industry is strategically important, as it suggests that the investment in education,

training, and career development at sea continues to benefit the industry ashore, which is a key part of the economic justification for the SMarT scheme in the value for money assessment. Furthermore, the seafarer survey shows that of those who come ashore, over a fifth (22%) remain with the same company or organisation, with the majority (65%) working for a different organisation ashore compared to their time at sea.



Former seafarers – length of time spent working a career at sea (incl. cadetship)

Career transitions and exits

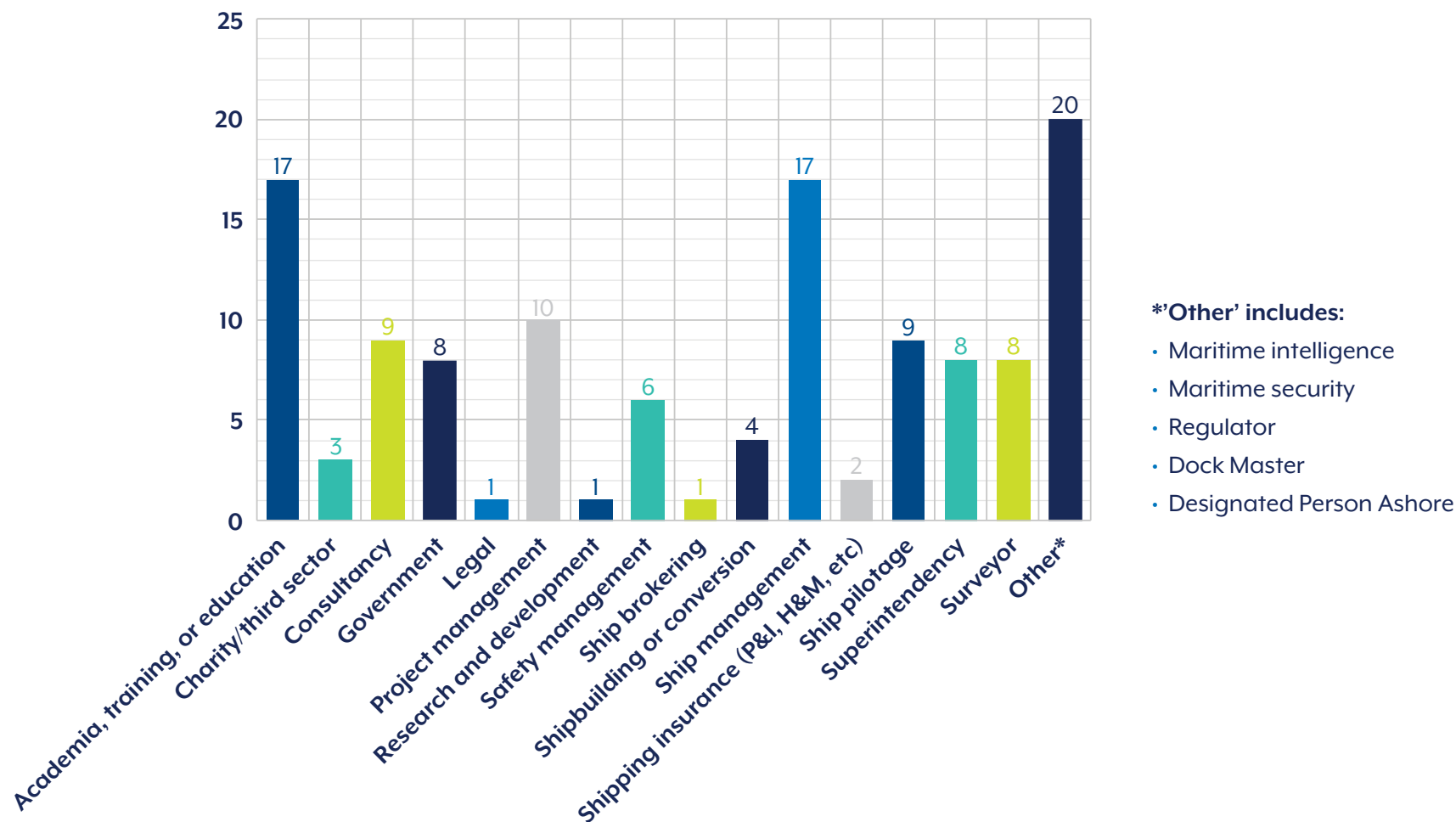
Many UK ratings transition into maritime-adjacent industries or roles when they leave the maritime sector. [6] Some of the primary drivers for career changes in recent years include redundancy, better working conditions in other industries, and a lack of career progression. The COVID-19 pandemic accelerated this trend, with older ratings frequently being the first offered voluntary redundancy, thus widening the age gap that is being seen in ratings, and meaning that experienced seafarers are decreasingly being involved in the development of newer ratings. Ratings typically move into adjacent sectors such as heavy goods vehicle (HGV) driving, port operations, or Border Force roles, where wages and job security were perceived to be better. Others shifted within the maritime sector itself, particularly into the offshore wind industry or small craft operations like crew transfer vessels (CTVs) and guard vessels.

From a stakeholder perspective, several challenges are becoming more common in the transition of seafarers from seagoing to shore-based roles. The declining number of UK officers holding second CoCs is becoming a problem, as shore-based roles (particularly those involve in safety, superintendency, or ship management) require certain levels of experience or competence. This experience is often gained by those in management-level positions, and several stakeholders have reported that they are having to put people through their own internal training and adjustment programmes to ensure staff have the level of competence required.

From an academic perspective, colleges are finding it increasingly difficult to hire UK lecturers and trainers with the level of experience necessary to teach apprentices or cadets. This is particularly acute for training those who are studying for their second CoC, as this training ideally requires the experiences of a Master or Chief Engineer.



Career transitions and exits

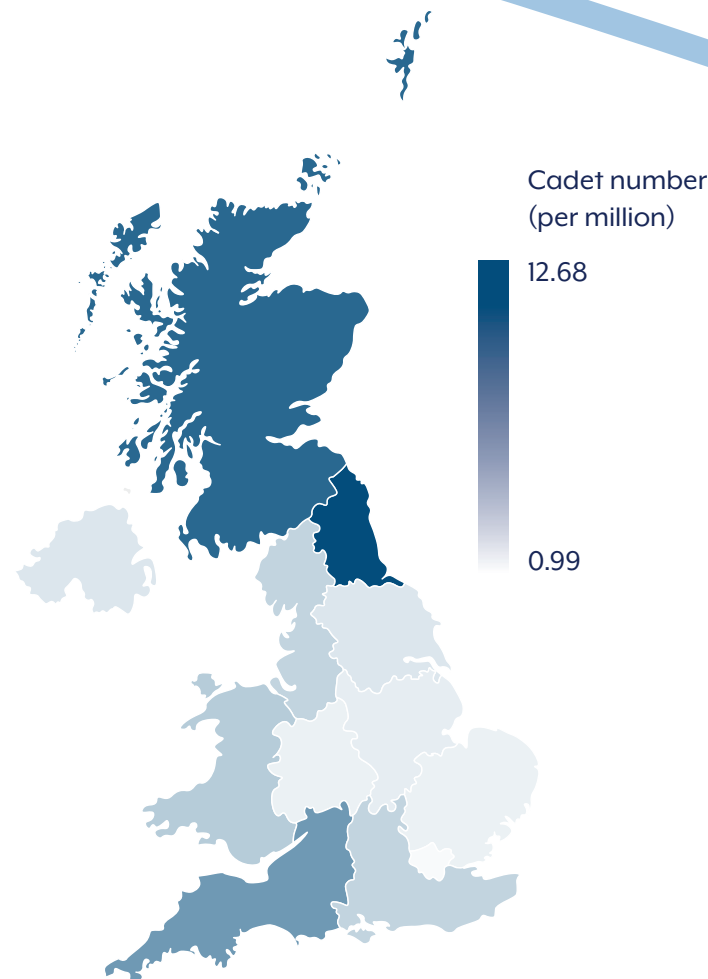


Seafarer survey results, career directions of those who still work in maritime

Seafarer demographics

Uncovering the demographics of the UK maritime workforce is important to provide a better understanding of those who are most likely to pursue a career in the maritime industry and thus receive government support through schemes such as SMarT. It also enables policymakers and industry stakeholders to identify gaps in diversity, regional representation, and socio-economic accessibility, ensuring that funding strategies are equitable and targeted. By analysing demographic trends, such as gender, ethnicity, educational background, and geographic distribution, the sector can create policies that attract underrepresented groups, strengthen workforce resilience, and focus the training and development of seafarers with the needs of the UK's regions and industry sectors.

The seafarer survey revealed that the UK seafaring workforce remains predominantly male and white, with around 90% of respondents identifying as white, a figure above the national average. Women represent less than 20% of current cadets who responded to the seafarer survey, and an even smaller proportion among ratings and qualified officers. However, current cadet cohorts show signs of this proportion increasing.



Location of cadets within the UK before they started their seafarer training (per million people)

Powered by Bing. © Microsoft, Open Places, OpenStreetMap. UK regions are based on International Territorial Level (ITL) 1 used by the Office for National Statistics (ONS). Population data are based on 2024 values from the ONS for Wales and English regions, 2022 census values for Scotland, and 2021 census values for Northern Ireland.

Seafarer demographics

Ethnic diversity is similarly limited; this points to potential barriers to entry for minority groups and underscores the need for continuation and expansion of inclusive outreach and recruitment strategies. However incremental progress is evident among cadets who responded to the survey. Socio-economic patterns reveal that most cadets come from state school backgrounds often with parents holding degree-level qualifications. Ratings display greater diversity, with many from households with no formal qualifications however the ratings workforce is ageing. It has been stated in the study that only 17% of UK ratings are under 30, and there are very few dual-purpose ratings under 39, indicating a lack of younger entrants and the potential for skills gaps in the future.

Regionally, seafarers are concentrated in coastal areas such as Scotland, the Northeast and Northwest of England, and the Southwest, reflecting strong ties between maritime colleges and local communities. The data gathered from the online seafarer survey also suggests that most seafarers remain in, or return to, their region of origin after moving ashore, reinforcing geographic continuity throughout their careers.

Finally, one of the major barriers for a more diverse industry is the way seafarers find out and initially pursue a career at sea, with family and peer groups being one of the biggest factors attracting new people into the industry. If knowledge of the opportunities within the maritime industry are only communicated within existing demographic groups, it is unlikely that the industry's appeal will spread beyond them. Addressing these disparities will be important in ensuring the UK maritime sector reflects the wider population and remains competitive and resilient in the decades ahead.



Seafarer demographics

Measure	Group		
	Cadets	Ratings	Current/former officers
Gender identity			
Prefer not to say	1.06%	0.00%	0.79%
Man	78.72%	92.50%	87.30%
Woman	18.44%	7.50%	11.90%
Non-binary	1.77%	0.00%	0.00%
Education			
Prefer not to say	3%	5%	2%
Don't know	3%	5%	0%
State-run or state-funded school - selective on academic, faith or other grounds	23%	18%	20%
State-run or state-funded school - non-selective	54%	63%	63%
Independent or fee-paying school - bursary	3%	0%	3%
Independent or fee-paying school - no bursary	7%	3%	7%
Attended school outside the UK	5%	5%	4%
Other	1%	3%	1%
Parental Education			
Prefer not to say	5%	5%	1%
Don't know	16%	35%	8%
At least one has a degree level qualification	43%	23%	35%
Qualifications below degree level	29%	23%	40%
No formal qualifications	5%	15%	15%
Other	2%	0%	1%
Ethnicity			
Prefer not to say	1.43%	2.56%	2.82%
Asian	4.29%	2.56%	0.81%
Black	1.43%	0.00%	1.21%
Mixed	2.14%	0.00%	1.21%
Other	0.36%	0.00%	0.00%
White	90.36%	94.87%	93.95%

Summary of demographic data for three main survey groups who responded to the online seafarer survey.

Comparative assessment

There has been discussion with stakeholders about international comparisons of funding models for seafarer training, and how these models differ or align with the UK funding model. The UK's current model delivers high training quality and stakeholders regard it as a model that produces excellent seafarers. Nevertheless, it is comparatively expensive and the monitoring of long-term careers in the industry is not as effective or comprehensive as other nations. The UK's system faces challenges in competitiveness and accessibility particularly in attracting and retaining cadets and encouraging officers to

gain management-level CoCs. Lessons from international peers suggest that reforms to better support cadets and ratings financially during training, reduce costs on industry, and improve seafarers' understanding of career progression could enhance the UK's maritime training landscape and ensure it remains a top destination for seafarer training globally, as well as being more competitive.

It is difficult to compare each country directly; however the table below provides a high-level overview of each country's seafarer funding model.

Country	Funding Model	Training Structure	Career Tracking	Comparison
United Kingdom	Partial funding via SMarT (up to 50% of training costs).	Cadetships & mid-career CoC progression (officers). Apprenticeships (ratings).	No centralised tracking of career progression outside of CoC/CEC issuance.	High training quality, but less flexible. Funding covers all training, not just college fees.
Australia	State-level funding & industry partnerships. Limited federal-level funding.	Varies by state; strong vocational focus.	Fragmented tracking dependent upon state.	Lower funding levels overall, and less nationally coordinated, but strong vocational links.
Denmark	College education is fully state funded with a state education allowance.	Structured cadet-to-senior officer pathway.	Tripartite collaboration between state, unions, shipowners.	More integrated and better funded in line with other vocations.
Norway	College education is fully state-funded, sea time is company funded (employee). Second half of cadet training period is salaried.	Managed by a Maritime Forum that consists of the Norwegian Maritime Authority, shipping companies, colleges, and unions.	Centralised system for seafarer tracking on the national cadet database.	Better alignment with national strategy. Includes an industry-agreed target for training berth numbers.

Comparative assessment

Country	Funding Model	Training Structure	Career Tracking	Comparison
Germany	Lump-sum subsidies for cadets & ratings given to colleges from federal government departments.	Modular training, financial support given by federal government departments.	Industry-led tracking of career progression of seafarers.	More direct support for ratings and officer/rating balance.
Ireland	Financial support from Irish government with grants covering course fees, plus training allowances.	Payments provided to training providers directly upon completion of courses. Subsistence costs given to some trainees.	No career tracking.	Grant-based system is used.
Isle of Man	Mirrors the UK's SMarT funding scheme, with slightly more stringent requirements for berths and welfare support.	Cadetships & mid-career CoC progression (officers). Apprenticeships (ratings) under Manx Seafarer Training Network.	Isle of Man equivalent of SMarT funding is ringfenced upon qualification and linked directly to the cadet.	Supports retention by using the Tall Ships programme to introduce sea life to prospective seafarers.
Netherlands	College education is fully state-funded, sea time is shipping company funded.	Management-level CoC integrated in cadetship. Four-year BSc degree.	No career tracking; academic training is performed during degree. Only sea time and exam required to gain management CoC.	Efficient degree-based progression model for officers.
Singapore	Incentivised model with milestone rewards to retain officers after National Service (NS) training.	Encourages progression to senior ranks via a staged incentive programme. Training allowance available.	Performance-based funding managed by the Singapore Tripartite Maritime Training Award (TMTA).	More retention-focused for longer-term careers using career milestone payments.
United States of America	Federal academy-based funded model (e.g. USMMA) and state-level self-funded colleges.	Structured maritime academy route similar to military training for USMMA.	Military style tracking in the USMMA.	High-quality, but limited civilian flexibility and varying training models (state/federal).

The influences of COVID, Brexit, Ukraine, and Net Zero

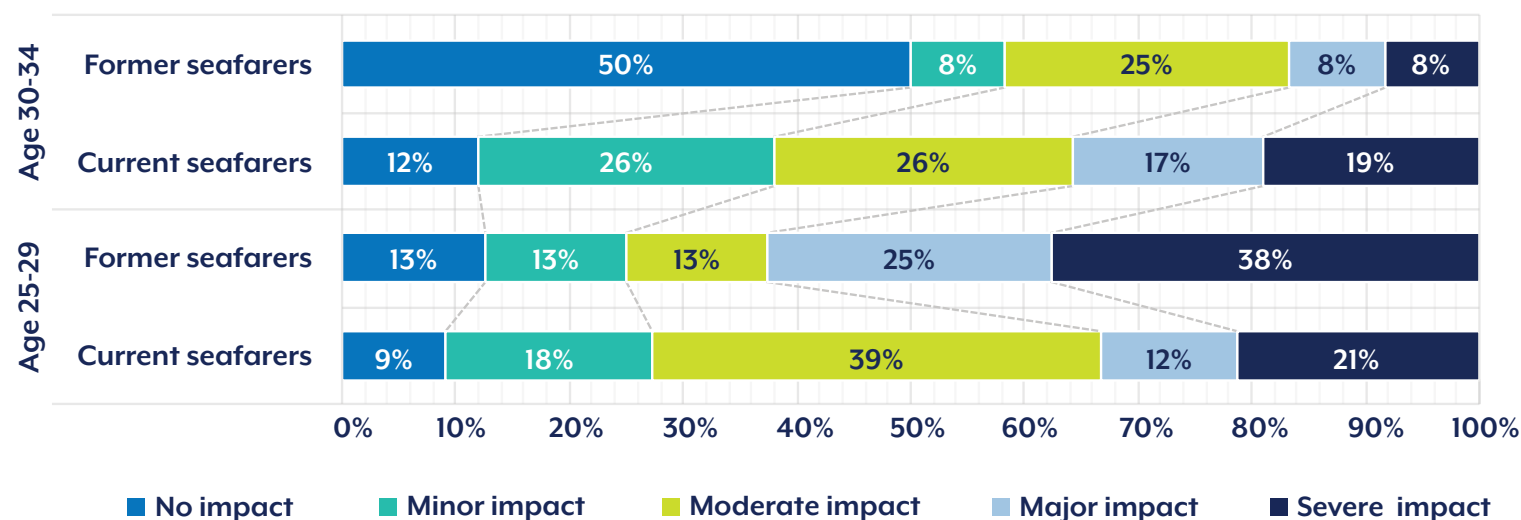
The study explored how recent geopolitical and policy developments have shaped the landscape of UK seafarer training. Among these, the COVID-19 pandemic had the most immediate and disruptive impact. Cadet training schedules were delayed, access to sea time and berths was restricted, and examinations were postponed or moved online. These disruptions led to elevated dropout rates and extended training durations, with long-term effects still influencing recruitment and public perception of the industry. Mental health challenges and isolation requirements further affected seafarer welfare and career progression.

Of those who were most impacted by COVID, the most common reasons for being severely or majorly impacted were:

- Training being moved online. Stakeholder surveys with education providers have stated that this has caused disruption to the patterns of seafarer training too, with Phase 1 and 3 (college phases) being merged in some cases.
- Sea-time and practical opportunities for learning were curtailed or unavailable altogether, with an impact on being able to find berths at sea. Stakeholders have stated that cadets were often not permitted to be aboard during the COVID-19 pandemic owing to cadets being classed as supernumerary, with companies only allowing necessary crew on board.
- Anxiety caused by the pandemic, and increased stress levels. Stakeholder engagement has also highlighted that this has persisted since the pandemic, and that there are higher levels of pastoral care needed after the pandemic than before, for both cadets and crew.
- Isolation requirements caused by the COVID-19 pandemic, whereby international travel was limited and the isolation requirements for seafarers – up to two weeks in some cases – creating particularly difficult situations for those joining or leaving ships.

The classification of seafarers as 'key workers' provided some relief, enabling limited movement and access to training facilities including simulators. However, cadets were disproportionately affected, experiencing severe setbacks in both training and recruitment. Many companies, facing severe operational constraints (especially the cruise industry), opted not to allow non-mandatory personnel such as cadets onboard, further limiting training opportunities. Furthermore, companies also opted to pause recruitment of cadets altogether.

The influences of COVID, Brexit, Ukraine, and Net Zero



Impact of COVID on surveyed seafarers (both officers and ratings)

The age groups 25-29, and 30-34 were selected based upon the most likely groups that completed their cadetships during the COVID period of 2020 to 2022. Figures might not sum to 100% due to rounding.

The influences of COVID, Brexit, Ukraine, and Net Zero

The impact of Brexit on shipowners and operators has varied widely, ranging from no noticeable effect to significant operational changes. While many shipping companies have reported little to no disruption, others have faced challenges, particularly in their shore-side operations. For example, some have encountered difficulties due to visa restrictions causing barriers to staff moving from seagoing to shore-based roles. In response, certain owners and management firms have relocated some or all their shore-side activities outside the UK.

Whilst Brexit is not the sole cause, these developments have likely contributed to a notable decline in the number of UK-flagged ships, which fell by 39% in gross tonnage between 2017 and 2024. Ships have been reflagged to EU member states, influencing the number of training berths available to UK seafarers. Changes to visa and immigration rules have complicated the recruitment of overseas lecturers and shore-based staff, while temporary issues with certificate recognition created additional barriers for UK seafarers working in EU waters. The loss

of access to EU funding for training infrastructure and equipment has further constrained educational providers.

The war in Ukraine, while less directly impactful on UK training, disrupted global crewing patterns and created logistical challenges for companies employing Ukrainian and Russian seafarers. However, these disruptions did not result in increased demand for UK seafarers, as gaps were largely filled through the global labour market. Data from the stakeholder survey have shown that shipowners who responded have had few additional difficulties in their operations, but some companies have had to adjust the operations to take into account the availability of Russian and Ukrainian crew.

The transition to net zero presents both a challenge and an opportunity. Current training systems are not yet aligned with the technological demands of decarbonisation, such as alternative fuels, new propulsion systems, and digital competencies. Most seafarers are also unaware of the current progress towards maritime decarbonisation, with many survey respondents

stating that it wasn't an important consideration for them (when considering net zero as a driver for a career at sea, 54% of respondents said net zero was not important at all). There is a growing need to upskill seafarers, particularly engineers and ratings, to meet the requirements of the International Maritime Organisation's greenhouse gas strategy. [11] Initiatives like the proposed Green SMarT funding stream and overall syllabus reform are seen as essential to ensuring the UK maritime workforce remains competitive and future-ready, and aware of the importance of net zero and its influences on the future of the maritime industry.

Value for money

The review confirms that the SMarT scheme delivers excellent economic value. Over the eight-year period from 2016 to 2024, the scheme achieved a Benefit-to-Cost Ratio (BCR) of 4.78, placing it firmly in the “Very High” value-for-money category under Department for Transport guidance. In practical terms, this means that for every £1 of public investment, approximately £4.78 is returned to the UK economy, primarily through the enhanced lifetime productivity of trained seafarers. These benefits extend beyond their time at sea, as most former seafarers transition into shore-based roles within the maritime sector, continuing to contribute to national economic growth. This strong multiplier effect is driven by enhanced lifetime productivity of seafarers, both at sea and in shore-based roles, and underscores the strategic importance of maintaining a skilled domestic maritime workforce.

The analysis, conducted using HM Treasury Green Book methodologies [3] show that public costs have remained broadly stable in real terms, averaging £117 million over the review period. Private costs per cadet have risen modestly, largely due to tuition fee increases, while training allowances have tracked inflation. COVID-19

temporarily inflated the spend per qualified officer due to higher dropout rates, but these effects have since moderated.

Scenario and sensitivity analyses confirm the robustness of these findings across a range of assumptions, including time spent at sea, progression rates, and counterfactual career paths. However, the analysis also highlights that the scheme's effectiveness depends upon maintaining low dropout rates and ensuring cadets transition successfully into employment.

While SMarT 1 is deemed to be a sound investment, there is limited data available for SMarT 2, 3, and 5. Overall, the VfM assessment provides strong evidence for continued and potentially expanded support for maritime training, provided reforms are aligned with training berth capacity constraints and seafarer workforce requirements.

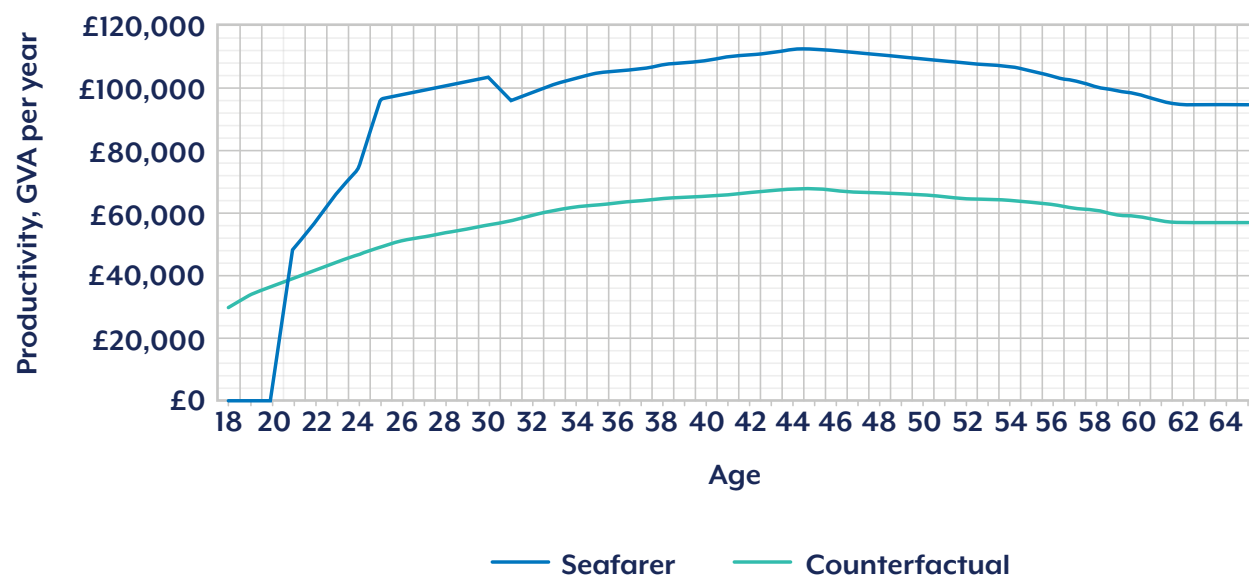
Since the previous review, opposing forces have broadly offset each other. Downward pressure on the BCR was seen from a reduced productivity premium relative to median UK earnings however upward pressure from improved additionality evidence and faster career progression

assumptions was also observed. The net effect is a BCR consistent with earlier evaluations, reinforcing the scheme's resilience to economic and labour market shifts.

SMarT 1 remains a highly effective investment for UK taxpayers, supporting maritime workforce development and delivering measurable economic returns. Whilst SMarT 2, SMarT 3, and SMarT 5 represent smaller funding streams where data is insufficient to measure quantifiable benefits, their role in enabling career progression suggests they merit continuation for strategic, non-economic reasons. In addition, SMarT 1 does not operate in isolation, and the other SMarT funding streams (especially SMarT 2) contribute to the overall initial take-up of cadetships that SMarT 1 funding supports.

Value for money

SMarT funding is economically justified and strategically essential. Without sustained investment the UK risks further decline in seafarer numbers, reduced competitiveness against international peers, and diminished resilience in meeting national security and net-zero objectives. Targeted reforms, such as inflation-linked adjustments, improved rating support, and a Green SMarT stream, can ensure the scheme remains fit for purpose and aligned with future industry needs.



Profile for a seafarer's productivity by age in Gross Value Added (GVA) per year. This figure is compared to the productivity of an average UK worker, the counterfactual. It is assumed that the GVA of a cadet during their training is zero.

Recommendations

1. Keep SMarT funding at 50% but include an inflationary increase mechanism.

- SMarT notionally funds up to 50% of seafarer training costs, but in reality, this can be lower because of inflation and other linked causes. A mutually agreed mechanism should be included into SMarT payment calculations to account for cost rises and prevent slippage.

2. Introduce a more responsive PILOT system.

- A more flexible PILOT scheme should increase fees for companies that repeatedly fail to train cadets despite having the capacity and capability to do so. This would restore PILOT's deterrent effect and encourage sponsorship of cadets rather than defaulting to PILOT payments. Rising deferments since 2019 and stakeholder feedback indicate PILOT is perceived as being used as a routine compliance tool, potentially undermining its purpose. While PILOT remains valuable for cases like cadet dropout, higher charges for persistent non-compliance could incentivise active training. Reforms must balance deterrence with fairness to avoid being seen as punitive, a change broadly supported by stakeholders.

3. Set a minimum value for the training allowance.

- There is significant variability in the amount of training allowance paid to cadets, and the allowance is considered as being insufficient to meet the living costs of cadets and uncompetitive with apprenticeship pay. Setting a minimum training allowance value would allow consistency, and benchmarking against other training routes and industry training schemes.

4. Create a Green SMarT funding stream. [11]

- A refocussed and re-established SMarT 4, or a new SMarT funding mechanism, should be developed as an enabler for upskilling cadets, ratings, and officers for the requirements of new technologies, fuels, and systems being developed as the industry adapts to the IMO's net zero targets for the maritime industry.

5. Explore the possibilities of funding merchant seafarer training wholly or in part using funds allocated to the proposed UK national security budget.

- The increase in spending on national security to 1.5% of GDP by 2035 (out of a total defence budget of 5% of GDP) should include funding for merchant navy training and its associated infrastructure as part of the budget. Merchant navy ratings and officers are key enablers to the country's maritime national security effectiveness, and as such could be a beneficiary of any national security budget increases.

Recommendations

6. Develop incentives for shipping companies to provide a minimum period of employment after gaining a CoC.

- Introducing an incentivisation scheme to provide a minimum period of post-qualification employment for cadets sponsored by tonnage tax companies could improve retention, employability, and training outcomes. Ensuring at least one trip as a qualified officer would help bridge the gap between training and career entry, reducing dropout rates and enhancing cadet experiences. While berth availability and company flexibility must be considered carefully, stakeholder engagement suggests this policy is achievable with proper oversight and potential adjustments to the SMarT funding period.

7. Improve the focus on support for the training and career development of ratings with support from the SMarT scheme.

- Improving the SMarT scheme so that there is better awareness of funding for SMarT-funded courses and officer conversion training to better support ratings is essential for building a resilient maritime workforce.

With only small amounts of SMarT funding currently taken up by ratings in this way, a ringfenced investment in SMarT 3 and SMarT 5, and the promotion thereof, could improve retention, mobility, and sector flexibility. Enabling clearer communication and better awareness of rating-to-officer career pathways could improve numbers within industry overall and further establish ratings as a key source of experienced seafarers for officer roles.

8. Amend the CTC ratio and separate the requirements for officers and ratings.

- For officers, the CTC ratios are often seen as difficult to achieve as the fleet size of a shipping company increases. This could be seen as a disincentive to increase the number of ships under tonnage tax in the UK given the restrictions on the number of available berths. A mechanism could be derived whereby as a fleet registered under tonnage tax grows to a certain size, the cadet-to-officer ratios (and rating equivalent) could be altered for every ship above this threshold. However, it is important that companies with smaller fleet sizes are

not penalised, therefore a percentage-based mechanism could work better, where the CTC ratio is based on a given percentage of the company's fleet entered under tonnage tax, rather than discrete vessel numbers.

- Amending the CTC ratio to reflect fleet size and decouple ratings from officer training commitments could improve flexibility and encourage more ships to enter tonnage tax. A tapered cadet ratio and a separate, mandatory ratings training requirement would better align with workforce needs and training durations. While reform could ease burdens on larger companies and support broader seafarer development, careful oversight is needed to avoid unintended consequences, such as imbalances in employment or training quality. Stakeholder consultation will be essential to ensure changes are effective and equitable.
- A working group should be established to investigate the details of such a mechanism for altering the ratios in the CTC as part of tonnage tax to get buy-in from industry, trades union, government, and education providers.

Recommendations

9. Increase the allowable scope of use for PILOT funds and improve oversight of its use.

- With PILOT payments at record levels, there is an opportunity to expand their use beyond cadet training to support broader maritime workforce development. There should also be a move to improve oversight by HM Government of how the funds are spent to improve and maintain confidence of the shipping companies as to how PILOT funds are spent.
- Increased funding scope could include further long-term funding for career promotion campaigns, upgrading training infrastructure (e.g. simulators and other equipment), and improving administrative systems like the SMarT portal. While seafarer training must remain the priority, a more flexible, transparent, and well-governed approach similar to models used by other Flag States could deliver wider industry benefits without compromising PILOT's core objectives.

10. Improve communication, and stakeholder understanding, of management-level (2nd CoC) training and how it works as part of standard cadetships.

- Stakeholder engagement revealed a perception that management-level CoCs require significant amounts of college time during officer's careers, which is true only of those taking the HNC route. However, the increase in HND cadets (and subsequent decrease in HNC cadets) is a relatively recent event that has likely not filtered through to later-career officers as yet. Therefore, this lingering perception of the training burden of management level CoC training requirements persists in industry.
- With HND, foundation degree, Scottish Professional Diploma (SPD), and bachelor's degree routes, management-level CoC college modules are placed within the initial cadetship to ease mid-career progression for UK officers (this is not the case for HNC holders however). This approach reduces barriers such as time off work, financial strain, and extended mid-career study periods. While it may increase early-stage training costs it likely improves retention and

career progression, and aligns UK training with international best practice. Funding and equitable access to this training, especially for HNC holders, must be carefully managed.

11. Investigate the feasibility of separating the funding schemes used to support cadet training and ratings training entirely. [6][10]

- Separating cadet (officer) and rating training would allow for more targeted support that reflects the distinct roles, career paths, and industry needs of each group. Officer training, typically aligned with deep-sea operations, could continue under schemes like SMarT, while a dedicated funding stream for ratings (especially those working in coastal and regional sectors) would better support apprenticeship routes and local workforce development. This approach could improve training uptake, align funding with actual demand, and enhance the efficiency and impact of public investment in maritime skills. It could also improve the understanding of funding streams by seafarers, and by shipping companies and other industry stakeholders allowing better take up of those dedicated funding options.

Recommendations

12. Include representatives from the MoD in industry discussions on seafarer training to allow better understanding and exchange of best practice between commercial and defence training.

- Including the MoD in merchant seafarer training discussions could strengthen strategic alignment between defence and commercial maritime sectors. It would help promote cross-sector best practice, improve workforce planning, and support joint training initiatives, especially given the national security context.

13. Consider the availability of data that further reveals the effects of COVID on seafarer training when making policy decisions.

- Given the lingering effects of the COVID-19 pandemic on the maritime sector, it would be prudent to take consideration of major policy changes in light of the latest available data that do not include cadets from the COVID era (i.e. including only post-2022 cohorts). While signs of recovery are emerging, trends such as increased PILOT payments, need to be fully understood.

Considering the latest available data, their potential trends, and ongoing stakeholder input will help mitigate the risk of ineffective policy decisions and ensure any changes are well-informed, proportionate, and aligned with industry recovery and growth.

14. Expand the range of data gathered on seafarer career progression.

- Career progression for seafarers is inadequately tracked, making it hard to support cadets, officers, and ratings through key transitions like gaining qualifications or moving ashore. A centralised system that is accessible by the relevant stakeholders and managed by the MCA/DfT could improve retention, guide career development, and ensure training investments lead to longer-term careers. It would also strengthen workforce planning and policy decisions by allowing a better understanding of the socio-economic backgrounds (and other related characteristics) through career progression to help with targeted interventions if needed.

15. Improve the SMarT portal.

- Stakeholders report that the current SMarT Portal is inefficient and lacks key features, such as forecasting and bulk data entry, making reporting labour intensive and potentially prone to errors. Compared to the previous MaTSU system, usability has declined, especially for larger training providers. Improving the portal would reduce administrative burden, improve data accuracy, and restore trust in the system.



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- Evergreen.
- Faversham Ships.
- Gardline.
- Isle of Man Maritime.
- Just Be Maritime.
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- Ministry of Defence (MoD).
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- Nautilus International.
- Northern Marine Group.
- Norwegian Union of Marine Engineers.
- Seapeak.
- Ship Safe Training Group (SSTG).
- Stream Marine Training (SMT).
- The UK Chamber of Shipping.
- Tyne Coast College.
- UK Shipping Concierge.
- United States Coast Guard (USCG).
- Watermark.
- Zodiac Maritime.



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