

SEAFARING SKILLS CENSUS REPORT



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FOREWORD



I am pleased to present the Maritime Industry Australia Ltd. (MIAL) 2018 Seafaring Skills Census.

I commend MIAL's initiative in undertaking this census, and thank the many individuals and organisations across Australia's maritime industries that supported and participated in this census. It has been around five years since my Department undertook a similar census, so this one provides an important update for businesses and governments to consider as part of future planning.

Maritime trade is a vital part of Australia's economy. International shipping carries 99 per cent of our imports and exports by weight. Few businesses offer a more important set of services to the Australian economy or touch as many people's livelihoods. Australia's future growth will be influenced by our capacity to access safe, secure, efficient and competitively priced transport services and to respond to maritime priorities and the rapid pace of technological change.

Maintaining an effective maritime trade will rely on our access to maritime skills. Australia needs to preserve and grow the number of qualified mariners to meet the needs of a wide range of sectors, including off-shore, dredging, dive support, bunkering, towage, pilotage, passenger and tourism, fishing and aquaculture, research and government. Australia's shore-based roles will also continue to rely on these skills including for harbour masters, surveyors and regulators.

There are several challenges to ensure enough people with the right training and experience are available, including maintaining appropriate standards, coordinated forward planning and analysis of training needs and being ready to adapt to technological change.

Australia is renowned for upholding maritime standards to the highest levels. We fulfil our international obligations to ensure seafarers working in Australia meet the requirements of the International Convention on Standards of Training Certification and Watchkeeping for Seafarers 1978, as well as our domestic standards, just as we ensure the safe operation of ships in our waters and protect our marine environment.

Perhaps our clearest example of the need to maintain high standards for maritime training, safety and the environment is all the maritime activity around our Great Barrier Reef. The Reef is World Heritage Listed and was the world's first internationally designated Particularly Sensitive Sea Area, recognising the potential risks of ships transiting its waters. Yet the Reef continues to successfully support tourism, fishing, international exports and other critical maritime trade and activities because we maintain exemplary standards for ships and the seafarers who operate them.

To ensure a supply of seafarers who continue to meet these vitally important standards, significant planning is required. New entrants require years of training to gain the required sea-time, competencies and experience across different types of operations, especially for the most highly skilled roles.

This census tells us our maritime workforce is aging and future demand for maritime skills in Australia appears likely to increase. We also know the continuing, gradual reduction in our domestic blue water fleet limits the capacity of the sector to undertake training and development of both new and current seafarers.

This census identifies the cost of training and our previous consultation with industry has identified the cost competitiveness of Australian shipping as key impediments to industry growth. This will be a difficult challenge to overcome, as it has been in other industries, which will require industry and governments to work together.

Looking to the future, we must also anticipate that advances in technology across the global shipping industry will impact the future requirements for skills and expertise for seafarers, both in a seagoing capacity and to meet the requirements of land based roles.

These challenges are substantial, but must be overcome to secure the skilled maritime capabilities needed for Australia's future.

The first step to meeting our future maritime skill needs is to understand the current situation for the industry, so I commend MIAL again for undertaking this census.

Providing this data to the maritime sector is critical to the future planning needed to identify opportunities for industry sectors and governments to collaborate, foster innovation, encourage investment and develop the systems we need to ensure a steady supply of new mariners to fill critical roles at sea and on land.

By working together, we can ensure shipping in Australia continues to be safe, secure, reliable, efficient and does not harm our marine environment so that all industries can share in the benefits of a strong shipping sector.

I look forward to ongoing engagement across all maritime and maritime-dependent industries towards achieving that goal.



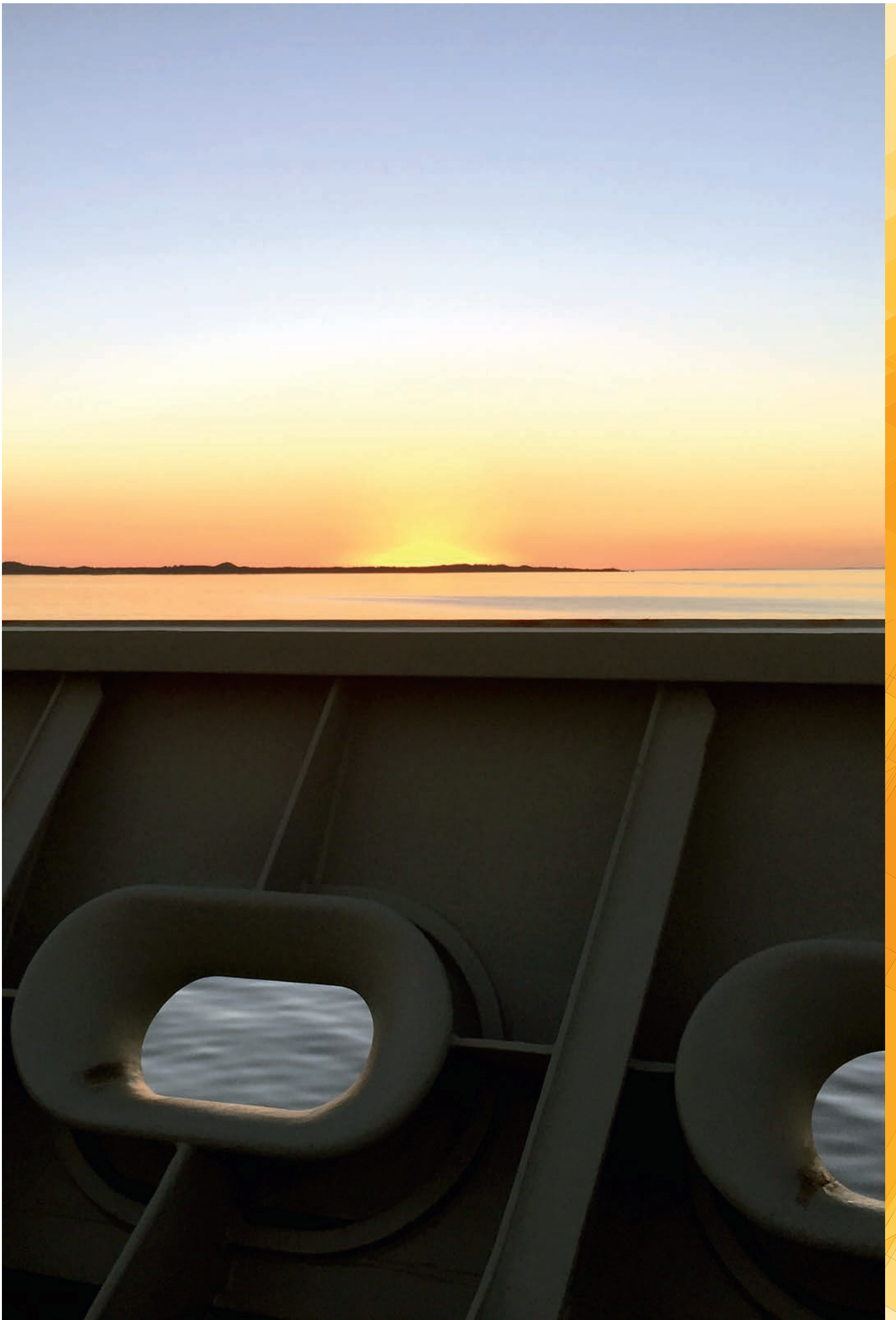
The Hon Michael McCormack MP

Deputy Prime Minister

Minister for Infrastructure, Transport and Regional Development

Leader of The Nationals

Federal Member for Riverina



KEY INSIGHTS

ANNUAL SEAFARING SKILLS CENSUS

2018

TOTAL SEAFARERS AT SEA & ASHORE

5,646 4,669 Seafarers At sea
977 Ashore

OLD AND GETTING OLDER

52% are over 46 years **↑** from 2013

8% are under 30 years **↓** from 2013

1% are over 70 years **↑** from 2013

WORKFORCE

5% are female **↑** from 2013

3% are foreign **↓** from 2013

1% are Aboriginal & Torres Strait Islander **↓** from 2013

IN TRAINING

127 50 Integrated Rating
42 Engineer Officer
33 Master & Deck Officer
2 Trainee Electro Technical

54 Training berths

60 Additional Training berths available

No 1
BARRIER TO TRAINING = **COST**

83%
of employers require specialist skills

2023

DEMAND FOR SEAFARERS SET TO INCREASE

Seafarers At sea **↑ 11.6%**

Ashore **↑ 17.7%**

In Training **↑ 11.0%**

Forecast Shortage
560+

WHO RESPONDED TO THE CENSUS

THE CONTRIBUTORS

169
Responses

31%
Ship owner

29%
Port/Harbour

17%
Service provider

11%
Govt./regulator

9%
Marine pilot

7%
Education provider

7%
Crewing/labour hire

6%
Other

6%
Oil & Gas operator

6%
Ship building/repair

5%
Marine surveyor

3%
Defence

GLOSSARY OF TERMS

Term	Meaning attributed for the 2018 Census
2013 Census	The Australian Maritime Industry Census Report January 2013, conducted by Orima Research on behalf of the Department of Infrastructure and Transport.
2018 Census	The Seafaring Skills Census conducted by Maritime Industry Australia Ltd. This was conducted from August to October 2018, the results of which are contained within this report.
Ashore	The location where a Shore-based Ex-seafarer works.
At sea	The location where a Seafarer works.
ATSI	Aboriginal or Torres Strait Islander or person who identifies as such.
Cadet	A person who is undertaking Training as a Deck Officer or Engineer Officer and is usually (but not always) someone without relevant experience.
Deck Officer	A person who is qualified to perform the roles described in STCW Code Part A Chapter II —Master and Deck Department and the tables contained therein (and as described in Marine Order 71) and has performed or is performing roles on board ships in the capacities described but not as a Rating.
Engineer Officer	A person who is qualified to perform the roles described in STCW Code Part A Chapter III —Engine Department and the tables contained therein (and as described in Marine Order 72) and has performed or is performing roles on board ships in the capacities described but not as a Rating.
Ex-seafarer	A person who holds or has held an STCW qualification and has worked as a Seafarer. In the 2018 Census Organisations were asked to include persons where the role the Ex-seafarer was performing required that person to have in their work history experience as a Seafarer.
Ex-seafarer working Ashore	An Ex-seafarer who is employed in a role on land which due to the nature of that role is required (either by regulation or because deemed critical by their employer) to have had experience as a Seafarer.
Internationally recognised	Means a qualification that may be issued by a country other than Australia but complies with the requirements of STCW.

New entrant	A person who is entering the industry that does not hold an STCW qualification. Where the term “New entrant” is coupled with the term “Training” it refers to training a person who does not have an STCW qualification but that they will obtain a qualification at the conclusion of such training.
Organisations or Respondent Organisations	Organisations who provided responses to the 2018 Census questionnaire and, based on the responses provided by them, employed either Seafarers, Ex-seafarers or both within their businesses.
Other	A position that is relevant to the maritime industry, but which is not a position which requires current or prior STCW certification, other than a basic certificate of safety training, to perform that role.
Rating	A person who is qualified to perform the roles described in STCW Code Part A, Chapters II/III at a support level, not at an operational level (and as described in Marine Order 73) and has performed roles on board ships in the capacities described.
Shore-based	A role which is performed wholly or predominantly on land and does not require the individual to be permanently assigned to perform work on board a vessel or hold current AMSA certification. For the purposes of the 2018 Census a marine pilot is considered Shore-based.
Seafarer	A person who is employed on board a vessel that operates in a role that requires that person to hold a current qualification that is internationally recognised by the STCW and Marine Orders 71, 72 and 73.
STCW	The Standards of Training, Certification and Watchkeeping Convention, as amended.
Trainee	A person who is undertaking training. A Trainee Deck Officer or Engineer Officer will usually possess a skill which will assist them in their role as on board (for example, a Trainee Engineer Officer may have mechanic experience). A Trainee for a Rating position need not have any pre-existing experience.
Training	Unless otherwise specified, training means training a person who does not already have an STCW qualification for the purposes of such a qualification being obtained.



Photo courtesy: Jacob Bradbury

EXECUTIVE SUMMARY

BACKGROUND

Seafaring skills are not just critical for working on ships but are also fundamental to shore-based activities and to the broader economy. The functioning and success of Australia's ports, major offshore energy projects and critical shore-side infrastructure all depend on the availability of qualified and experienced Seafarers. Seafarers also facilitate domestic and international trade which directly impacts on consumers and businesses around Australia and the world. Without these skills, Australia's maritime industry suffers, and parts of the economy become seriously compromised.

Many industry participants have long foreshadowed that the decrease in Australia's large vessel trading fleet may compromise the capacity for the nation to train Seafarers for working At sea who can then transition into critical Shore-based roles. In 2012-13, the Department of Infrastructure and Transport conducted the Australian Maritime Industry Census (2013 Census). This provided an industry data set which previously had not existed. Since that piece of work was concluded there has been limited follow up to ascertain and monitor the state of the industry workforce.

In 2018, the anecdotal evidence about the reduction in training is compelling and the traditional industry training ground (the large vessel trading fleet) continues to contract. Further to this, emerging areas of the industry at the time of the 2013 Census (i.e. offshore oil and gas sector) have since wound back dramatically and with it, their contribution to New entrant Training.

MIAL launched the 2018 Seafaring Skills Census (2018 Census) to provide:

- an insight into what is now happening in the sector;
- what industries' current needs appear to be;
- what is being done to satisfy these needs; and
- what industry thinks it needs in the near future.

Responses to the 2018 Census came from many different industries operating At sea and Ashore, thereby highlighting that there were any shortage of Seafarers to eventuate, it is not just a problem for ships operating in Australia, but also for critical shore-side infrastructure, projects and services. This was reinforced in the employment breakdown of Respondent Organisations given that over 90 per cent of Organisations who responded employed Ex-seafarers.

Demand for qualified Seafarers is set to rise

Respondent Organisations employed a total of 5,646 employees with seafaring skills and estimate that by 2023 they will need 11.6 per cent more Seafarers and 17.7 per cent additional Ex-Seafarers to occupy Shore-based roles. Employer expectations of Seafarers are also increasing with over 80 per cent of Organisations requiring Seafarers and Ex-seafarers to possess specific expertise beyond the standard Internationally recognised qualification. Despite the predicted increased in demand for the seafaring skill set to be engaged both At sea and Ashore, there is not expected to be a proportionate increase in New entrant Training.

Acting now to accommodate future need

At the end of 2018 MIAL is not aware of industry encountering widespread shortages generally for Seafarers and Ex-seafarers, however, there are known shortages in specific skill sets. An aging workforce is likely to result in an increase in demand and the almost halving of those being introduced at the New entrant level when compared against the 2013 Census¹, suggests a shortage is likely to occur at some point in the future. Despite a higher number of Cadets and Trainees entering the system in 2013 (all of which should now have completed their training and be fully qualified), the workforce is collectively an older workforce and the Training undertaken since 2013 has not materially affected the current age profile, which shows a generally older workforce in 2018 than existed in 2013.

What this means

This 2018 Census report does not seek to conduct a comprehensive analysis of the data or draw conclusions as to the state of the industry workforce. Some analysis has taken place on appropriate data and also where comparisons could be made with the 2013 Census. The 2018 Census intends to provide a dataset to assist those with an interest in ensuring that the industry has an appropriately skilled workforce to sustain it and an understanding of some of the issues that it may face based on the trends in employment and Training that this report reveals.

¹2013 Census showed 234 cadets and trainees in training compared to 127 from the 2018 Census.

METHODOLOGY

The 2018 Census applied specifically to employees with International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) certification. Information was sought from a diverse range of Organisations operating across Australia's maritime industry. The 2018 Census aimed to gather quantitative and qualitative data on:

- Individuals directly employed on board vessels in Australia (STCW qualifications) (Seafarers); and
- Individuals that had been to sea (current or lapsed STCW qualifications) and are now working in roles where that seagoing experience is critical (Ex-seafarers).

A core set of questions was composed based on the 2013 Census and with some specific input from industry stakeholders. The aim was to utilise the 2013 Census to enable stakeholders to detect any new trends and changes in the availability and employment of Seafarers and people with these skills in Australia. Feedback was taken on:

- the aim and scope of the 2018 Census;
- the type of information and data to be captured;
- the suitability and wording of the questions; and
- the need to clarify any aspects of the survey for respondents.

The 2018 Census was launched on 17 August 2018 via an online platform. It closed officially on 26 September 2018 however, the last response included in the data was received on 11 October 2018.²

RESPONSE RATE

In total, there were 169 responses from a cross-section of Australia's maritime industry. 103 of these responses met the 2018 Census parameters and were included in final dataset. The remaining 66 responses did not fall within the scope of the 2018 Census because:

- they were not provided on behalf of Organisations;
- they did not report directly employing staff in Australia;
- they answered no to the following core 2018 Census questions:

**Does your organisation directly employ Seafarers on board vessels in Australia (i.e. STCW qualifications)?*

**Does your organisation employ Shore-based staff with Seafaring experience in Australia?*

While not able to be included within the dataset generated from the 2018 Census, these responses were still useful in gaining an understanding of the industry stakeholders' perceptions of its current situation.

² Additional information regarding the Census methodology and administration is available upon request.

INTERPRETING RESULTS

The following non-sampling errors must be considered when interpreting the 2018 Census results.³

Coverage error

Coverage error relates to the incorrect inclusion, exclusion or duplication of a 2018 Census participant.⁴ This risk is mitigated to some extent by the careful review of all potential respondents that were sourced from the MIAL contact database and from extensive research into relevant maritime industry stakeholder Organisations.

Non-response error

Non-response error is applicable to the 2018 Census given that the response rate was less than 100 per cent.⁵ However, this has been countered to some extent given the extensive distribution list, the diversity of respondents and the higher number of responses compared to 2013 Census. As a result, the 2018 Census is considered to have achieved representative coverage of the sector.

Non-response error also applies to voluntary questions especially those requiring a high degree of detail. Making these types of questions mandatory can produce a high abandonment rate and a smaller data set thereby compromising the data. On that basis, some questions were made voluntary to maximise time efficiency and therefore participation.

Response error

Voluntary questions are also prone to response error where Organisations have incorrectly restated or broken-down totals from previous questions.⁶

Consequently, totals for voluntary questions may differ to corresponding totals for previous questions. However, a high percentage of respondents provided detailed answers for voluntary questions and therefore overall percentage breakdowns or growth rates reflect broad trends within the overall dataset and are a direct reflection of respondent knowledge and insight into workforce numbers.

To provide clarity, the report has marked

- each question as voluntary or required, and
- the number of respondents for every survey question with "n=".

³The statistical errors from the 2013 Census apply to the 2018 Census. Sampling error is not relevant because the 2018 Census was conducted as a census, however non-sampling errors apply.

⁴The Australia Bureau of Statistics: Statistical Language – Types of Error: <http://www.abs.gov.au/websitedbs/a3121120.nsf/home/statistical+language+--+types+of+error>

⁵Ibid

⁶Ibid

1 CENSUS RESPONDENTS

Organisations were asked to select the most appropriate from a predefined list relating to Organisation type, however some nominated multiple areas to describe their Organisations.

Figure 1: What type of Organisation are you?

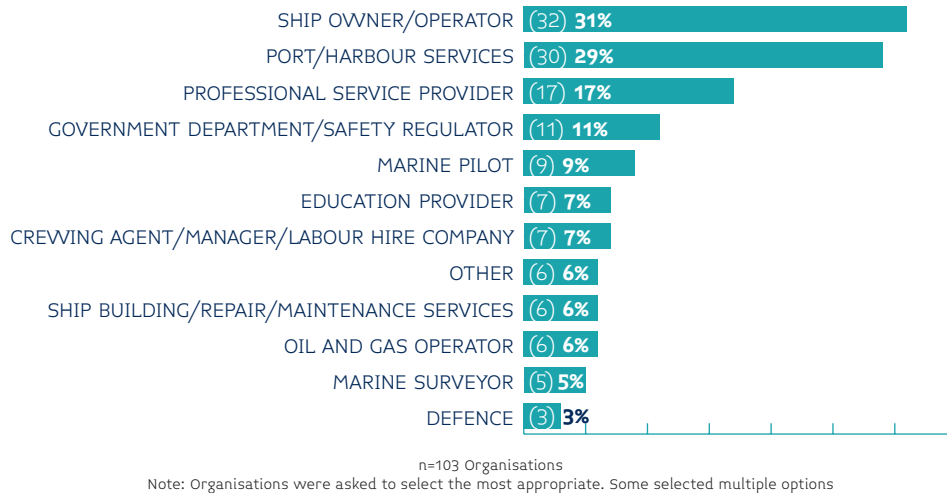
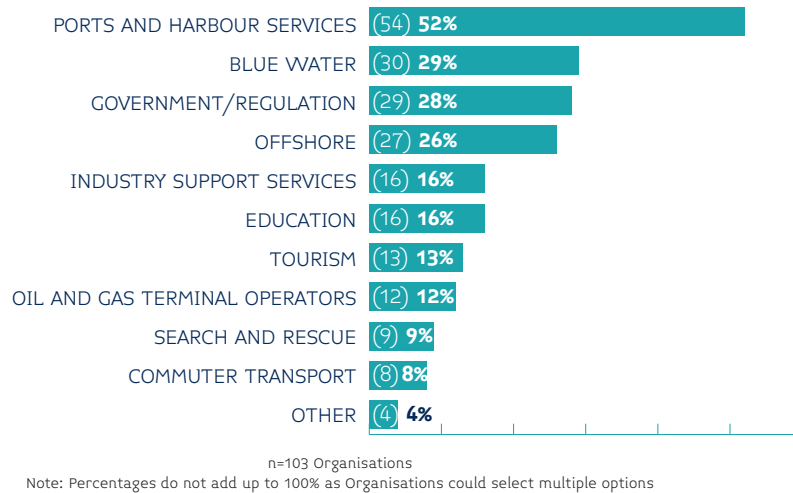


Figure 2: In which areas do you operate?



The mix of Respondent Organisation sizes and types reflects the depth and diversity of maritime industry businesses.

Ship owner/operators was the largest category representing over 30 per cent of all Respondent Organisations.

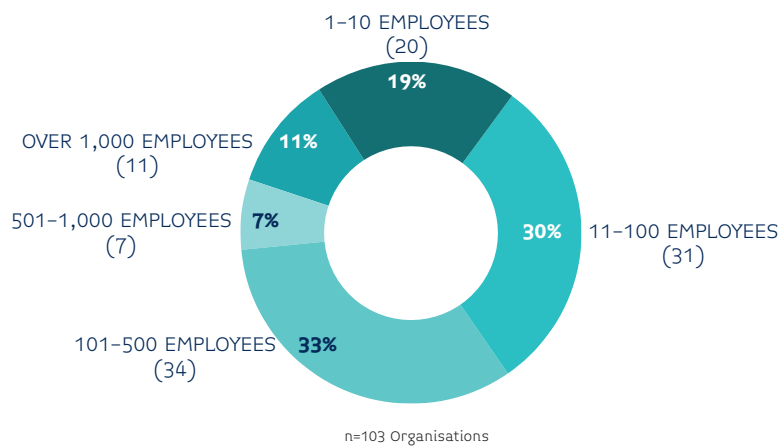
The second largest category included Organisations involved in port and harbour services which generally require both Seafarers and Ex-seafarers.

Professional service providers also formed a large category and spanned a range of industry-related services including quality assurance, risk management, consulting, communication, training, compliance, auditing, project management, energy and power supply.

The “Other” category included a diverse range of service providers including refiners, professional associations, aquaculture, mining services, advisory services and other marine operators.

Marine pilots represented 9 per cent of Respondent Organisations. The 2018 Census received 27 responses from individual pilots which could be taken to demonstrate a heightened awareness of the link between seafaring skills and marine pilots. Individual responses were outside the scope of the 2018 Census however they still provided valuable additional information.⁷

Figure 3: Organisations by employee numbers



“Not enough ships, not enough companies are training people, and as a result there are not enough people...”

~ 2018 Census response expressing concerns about the future of the workforce.

⁷The 2018 Census required that responses be provided on behalf of Organisations directly employing Seafarers and/or Ex-seafarers in Australia. As a result, responses from individuals were not included in the final data set.

2 ORGANISATIONS EMPLOYING SEAFARERS AT SEA AND ASHORE

The intention of the 2018 Census was to gather information about the current state of Australia's maritime workforce, specifically the workforce that is competent to Internationally recognised standards.

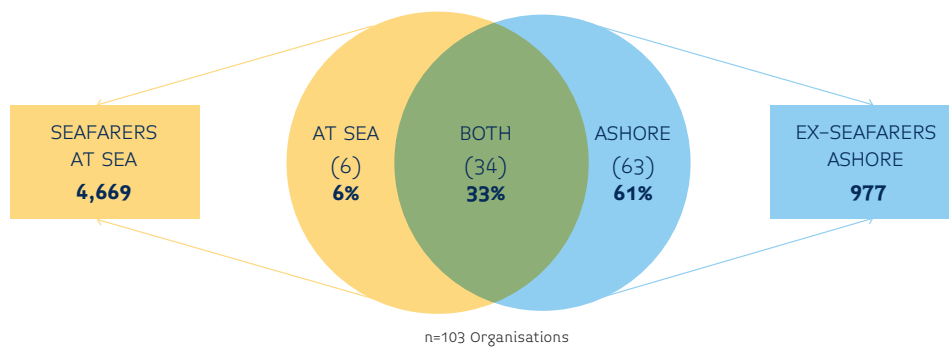
In doing so, data was sought from Organisations for both Seafarers working At sea and Ex-seafarers working Ashore.

For data relating to Seafarers, the questions were aimed at those with current STCW qualifications working on ships, as is required by Marine Orders 71, 72 and 73.

For data relating to Ex-seafarers, the questions were aimed at those Shore-based roles where seafaring skills were essential.

While the intent was to acquire data for these particular roles, Organisations did provide information about "Other" occupations, which is reflected in this report where appropriate.

Figure 4: Where Organisations employ Seafarers



In total, 103 Organisations directly employ 5,646 Seafarers and Ex-seafarers. This includes 40 Organisations (39 per cent) directly employing 4,669 Seafarers At sea and 97 Organisations (94 per cent) directly employing 977 Ex-seafarers Ashore.

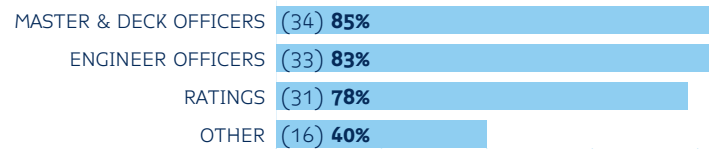
Nearly one third of the 103 Organisations employ a mixture of **both** Seafarers working At sea **and** Ex-seafarers working Ashore.

3 ORGANISATIONS EMPLOYING SEAFARERS BY CLASSIFICATION

AT SEA

40 Organisations employing 4,669 Seafarers

Figure 5: Number of Organisations employing Seafarers

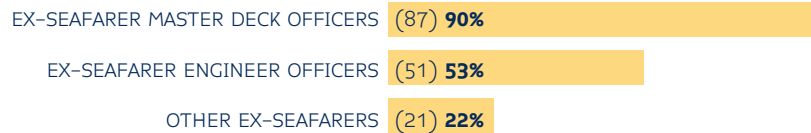


Note: Organisations tend to employ more than one classification therefore percentages will not add up to 100%

Most Organisations indicated that they employed more than one classification of Seafarer within their business.

The "Other" category was noted by Organisations to include maintenance staff, safety officers, radio operators, stewards, ETO's, coxswain, GPH, deckhands, harbour masters, hospitality workers, marine pilots, non-ratings deck personnel, shipwrights, medics, security officers and Trainees. Despite being employed on board vessels, many of these personnel types do not possess STCW qualifications other than a certificate of safety training.

Further, several of these personnel types would be considered Shore-based roles according to the glossary definition and would therefore be more appropriately captured within the Shore-based data.

ASHORE**97 Organisations employing 977 Ex-seafarers****Figure 6: Number of Organisations employing Ex-seafarers**

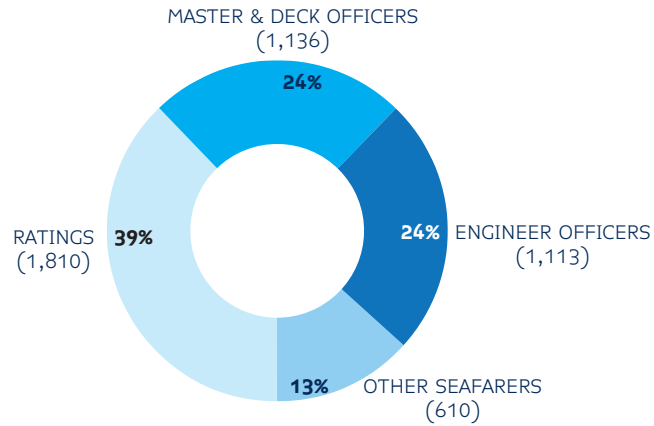
Note: Organisations tend to employ more than one classification therefore percentages will not add up to 100%

22 per cent of Organisations employ "Other" Ex-seafarers many of whom do not have an STCW qualification (other than potentially a certificate of safety training). These included crane operators, coxswains, defence personnel, logistics personnel, radio officers, hydrographic surveyors, electrical marine, fishermen, naval architects, vessel traffic service officers, former cooks and other hospitality workers. Many of these require training entirely independent of Seafarer Training.

4 CLASSIFICATION OF SEAFARERS

AT SEA

Figure 7: Seafarers by classification (4,669 in total)

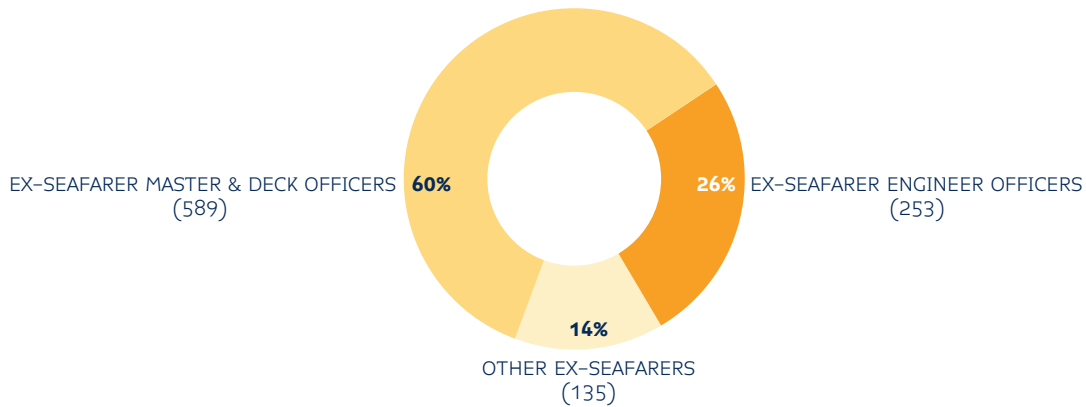


n=40 Organisations employing Seafarers

Out of the 4,699 Seafarers employed in Australia, Ratings accounted for the largest portion of employees (39 per cent) followed by Master & Deck Officers (24 per cent) and Engineer Officers (24 per cent). This is consistent with relative departmental sizes on most seagoing vessels.

ASHORE

Figure 8: Ex-seafarers by classification (977 in total)



n=97 Organisations employing Ex-seafarers

Out of the 977 Ex-seafaring employees working Ashore, 60 per cent had Master & Deck Officer experience and 26 per cent had Engineer Officer experience. This is consistent with the type of work and level of expertise required in shore-based roles filled by Ex-seafarers.

"In many ports around Australia they insist on pilot applicants having a valid Master Class 1 qualification. In most States/Territories the legislation allows for 'Equivalent' qualifications to meet the criteria. 58% of our pilots (including our two Senior Pilots) have never held a Master Class 1 qualification but have met the '...or equivalent' requirements."

~ 2018 Census Response

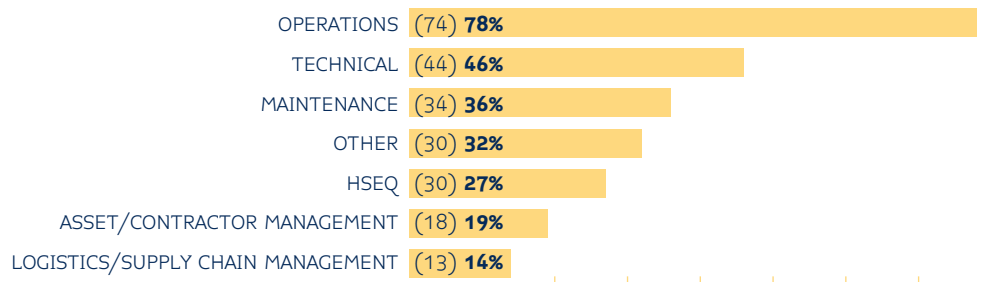


Pictured: Stuart Scott, Superintendent — MER Solutions

5 EX-SEAFARERS WORKING ASHORE

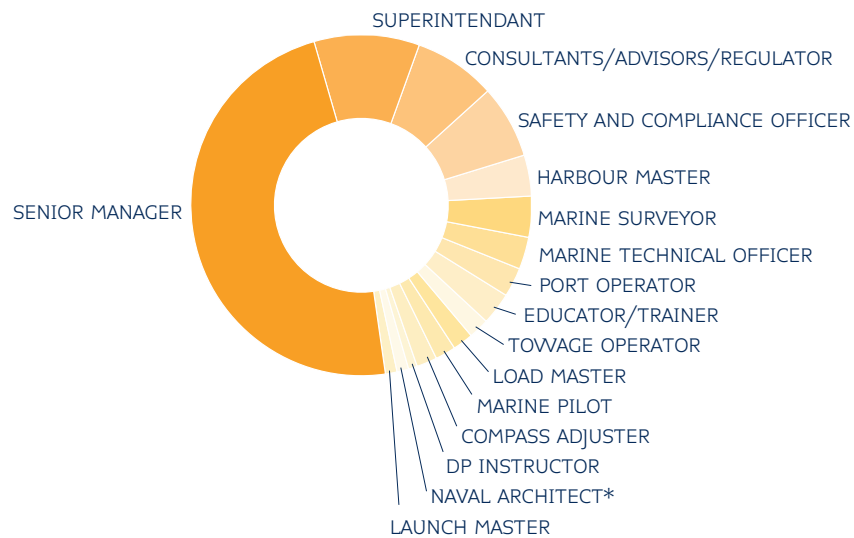
Organisations were asked to provide qualitative information about the types of roles which were required to be filled by Ex-seafarers. This was a voluntary question meaning not all Organisations provided this detail.

Figure 9: Ex-seafarer roles Ashore



Response rate: 98%, n=95 Organisations provided data for 25% of their workforce
Percentages do not add up to 100% as Organisations could select multiple options

Figure 10: Ex-seafarer position titles



Response rate: 93%, n=90 Organisations employing Ex- seafarers Ashore
*Naval Architecture requires a qualification distinct from any Seafarer experience

Respondent Organisations were able to provide further insight by describing position titles for Shore-based roles. For the purposes of presenting the results in this report (i.e. Figure 9 and 10) those positions have been grouped using broad descriptions.

A text analysis of the responses revealed consistent trends across all Shore-based categories with Organisations indicating that most Ex-seafarers occupy highly qualified and often specialist Shore-based roles in senior management capacity.

6 GROWTH ESTIMATES FOR SEAFARERS

Organisations were asked about their employment projections in five years' time. This intrinsically requires a level of estimation of business retention and growth. The question asked Respondent Organisations to recollect the size of their current seafaring workforce (Seafarers and Ex-seafarers as applicable) and estimate the likely size of their workforce in 2023.⁸

AT SEA

Figure 11: Estimated growth in Seafarers in five years

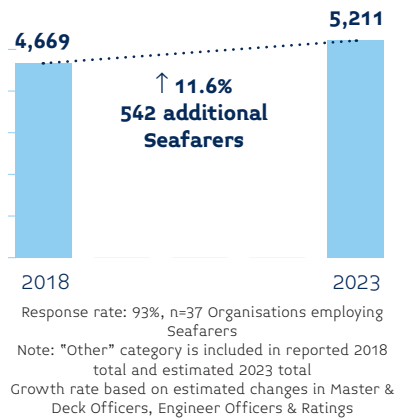


Figure 12: Estimated growth in Master & Deck Officers in five years

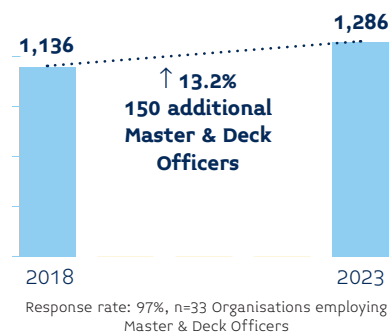


Figure 13: Estimated growth in Engineer Officers in five years

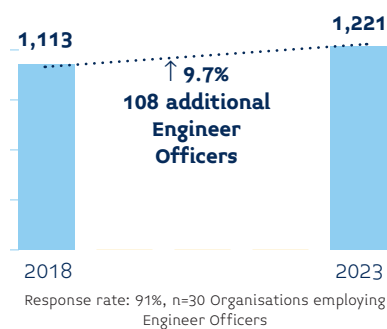
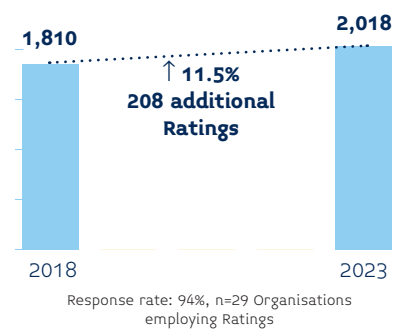


Figure 14: Estimated growth in Rating in five years



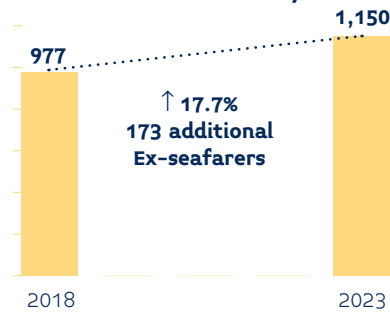
⁸Several assumptions have been made to calculate growth rates for both Seafarers and Ex-seafarers:

- Respondents who answered "0" to this question do not expect an increase in their workforce and therefore their employment levels are likely to remain constant over the next five years.
- It is assumed that Organisations with a large workforce who include a single digit number in their projected workforce intend this to be read as an increase in existing numbers.

A random sample of these responses verified this was the intention of Respondent Organisations.

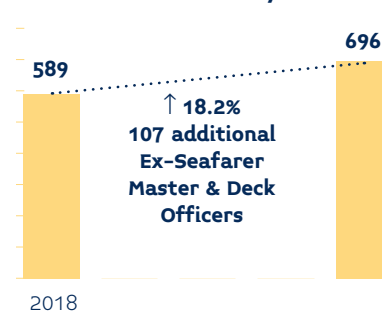
ASHORE

Figure 15: Estimated growth in Ex-seafarers in five years



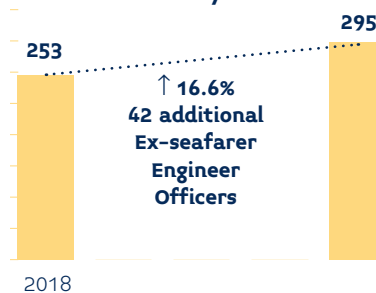
n=97 Organisations employing Ex-seafarers
"Other" category is included in reported 2018 total and estimated 2023 total
Growth rate based on estimated changes in Ex-seafarer Master & Deck Officers & Ex-seafarer Engineer Officers

Figure 16: Estimated growth in Ex-seafarer Master & Deck Officers in five years



n=87 Organisations employing Ex-seafarer Master & Deck Officers

Figure 17: Estimated growth in Ex-seafarer Engineer Officers in five years



n=51 Organisations employing Ex-seafarer Engineer Officers

An increase in employees is expected across all seafaring classifications both At sea and Ashore totalling 715. The 2018 Census results show Organisations expect that more Seafarers and Ex seafarers than are currently in the workforce will be required in 2023.

Given the length of time taken to achieve STCW qualifications (minimum 12 months and up to 3+ years) and for a person to gain experience to be able to convert skills into Shore-based roles (many more years).

7 AGE PROFILE OF SEAFARERS

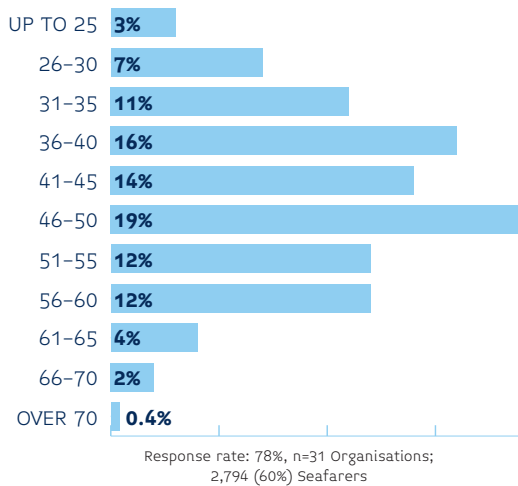
Organisations were asked to provide data on the age of their workforce of Seafarers and Ex-seafarers. Organisations provided information on a lower number of employees compared their workforce totals reported in earlier questions. Accordingly, these results should be viewed as an observational trend of the age profiles of these workforces.

AT SEA

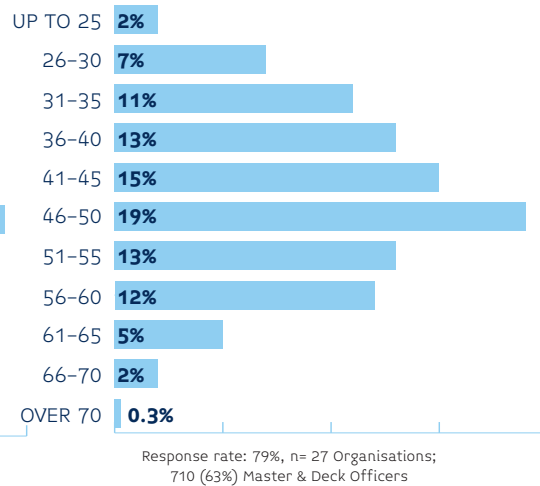
31 out of 40 Organisations answered this question, reflecting a 78 per cent response rate.

Of the 4,669 Seafarers, data was provided for 2,794 Seafarers. This represents 60 per cent of the total number originally reported.

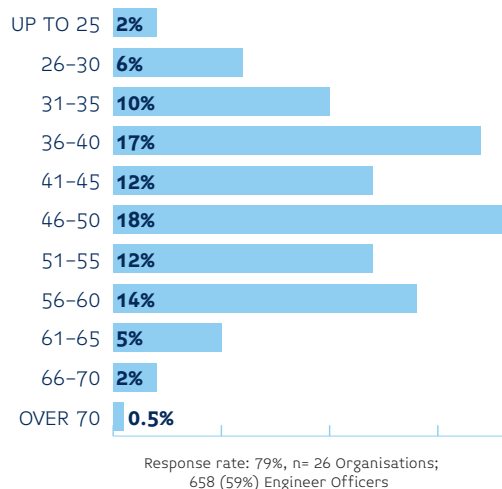
**Figure 18: Age profile of Seafarers
— all classifications**



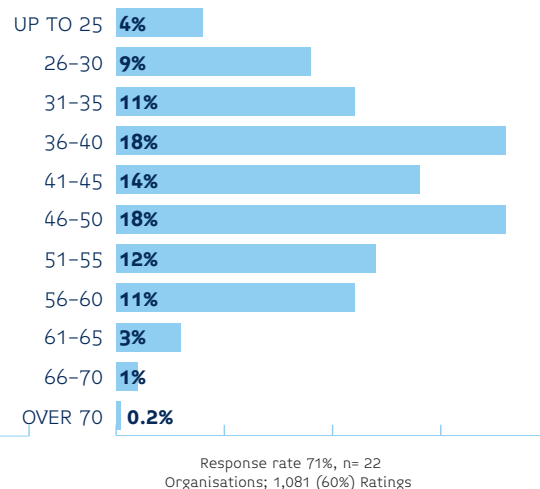
**Figure 19: Age profile of
Master & Deck Officers**



**Figure 20: Age profile of
Engineer Officers**



**Figure 21: Age profile
of Ratings**

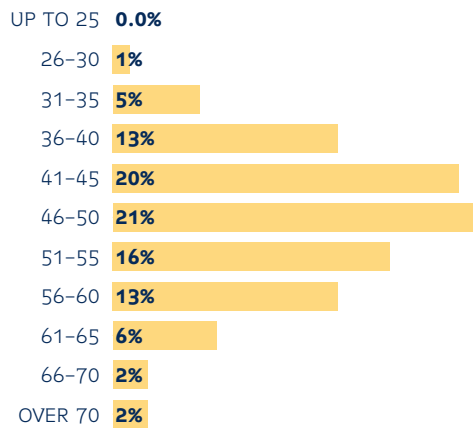


ASHORE

91 out of 97 Organisations answered this question, reflecting a 94 per cent response rate.

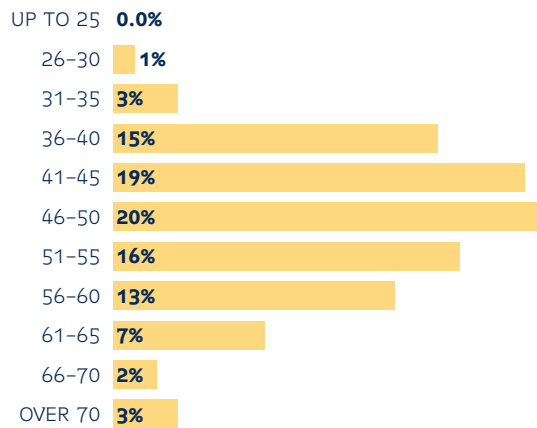
Of the 977 Ex-seafarers, data was reported for 842 Ex-seafarers working Ashore. This represents 86 per cent of the total number originally reported.

**Figure 22: Ages profile of Ex-seafarers
— all classifications**



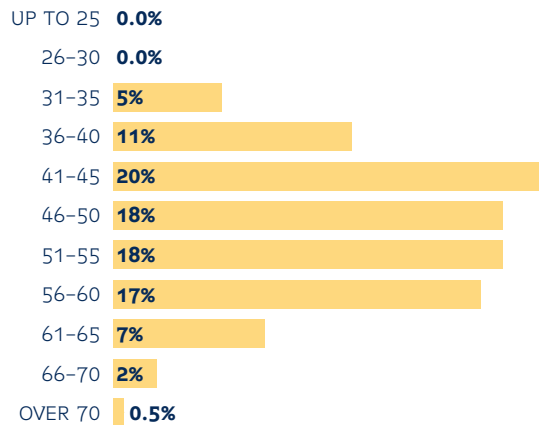
Response rate: 94%, n= 91 Organisations;
841 (86%) Ex-seafarers

**Figure 23: Age profile of Ex-seafarer
Master & Deck Officers**



Response rate: 95%, n= 83 Organisations;
506 (86%) Ex-seafarer Master & Deck Officers

**Figure 24: Age profile of
Ex-seafarer Engineer Officers**



Response rate: 88%, n=45 Organisations;
222 (88%) Ex-seafarer Engineer Officers

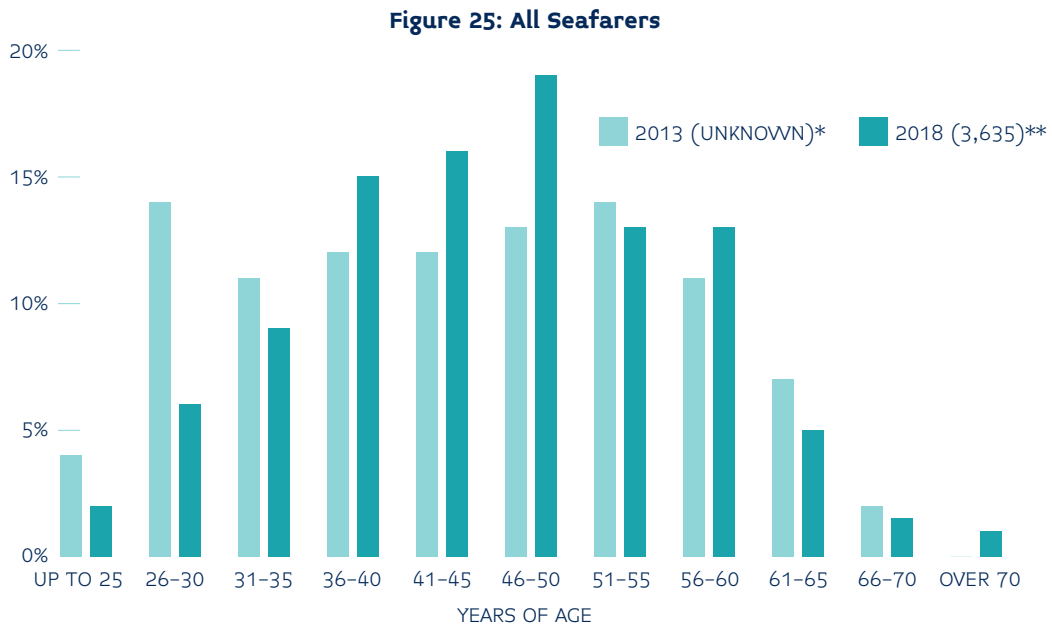
The highest number of Seafarers and Ex-seafarers in the 2018 Census fell into the 46-to-50-year age bracket. Nearly half of all Seafarers are aged 46 years or older.

The major difference in age profiles for Ex-seafarers working Ashore is that Organisations did not report any employees under the age of 25. This is not surprising given the length of time to obtain qualifications and experience At sea.

Ratings had the “youngest” age profile of the three generic classifications.

Just over 60 per cent of the Shore-based Ex-seafarer workforce are aged 46 years or older. This is not surprising given that Shore-based roles do not include a Ratings component, Ratings being the youngest demographic of the Seafarer workforce.

AGE PROFILE COMPARISON OF THE 2013 CENSUS AND 2018 CENSUS COMBINED AT SEA AND ASHORE

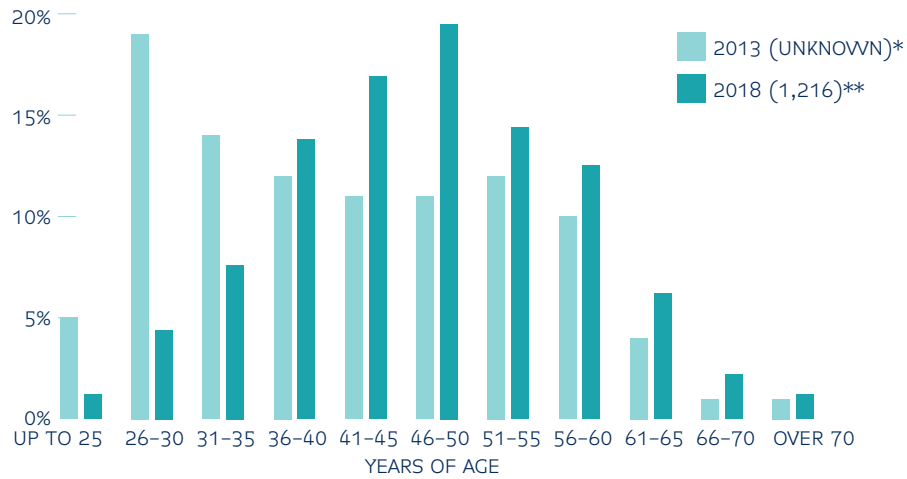
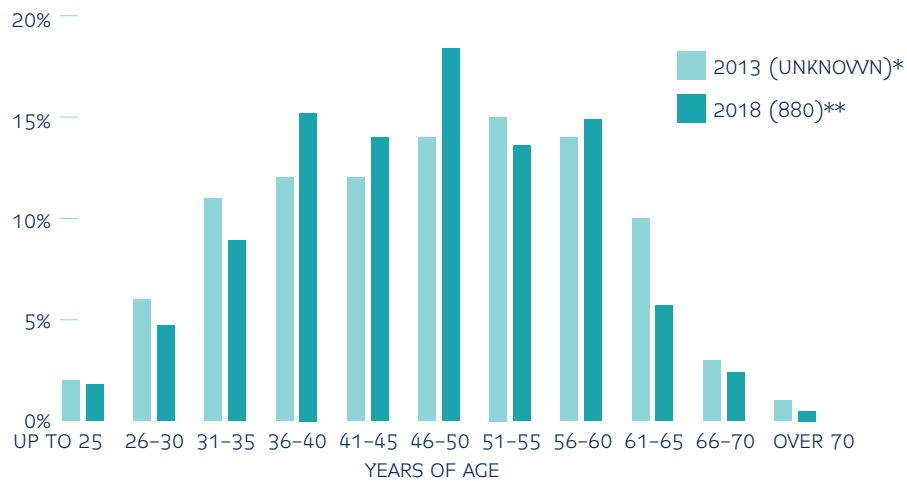
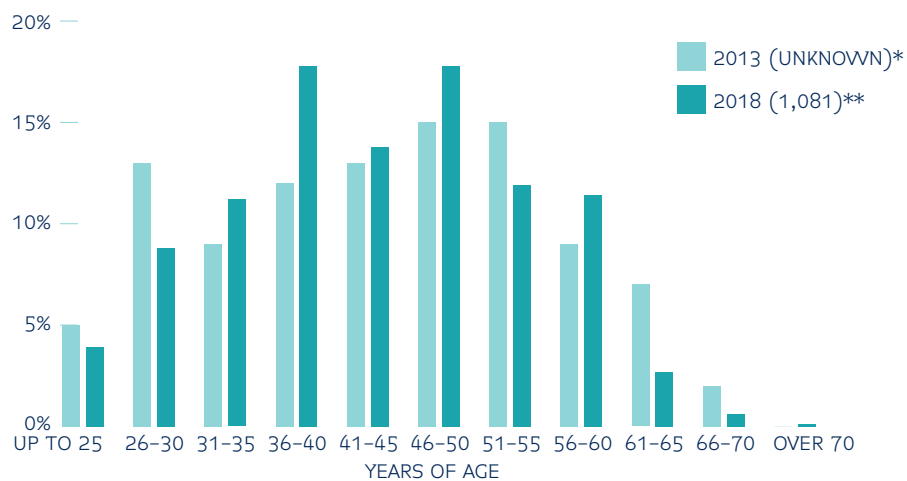


The Organisations responding to the 2013 Census and 2018 Census were not always the same. However, the datasets derived from both can be considered to provide a general reflection of Seafarer age breakdowns at those points in time.

On that basis, the Seafarer age distribution appears to have shifted towards older age brackets indicating that the workforce is ageing.

This is also supported by comparative data across multiple age brackets such as:

- more Seafarers over 46 years in 2018 (52 per cent) compared to 2013 (47 per cent)
- more Seafarers over 70 years in 2018 (1 per cent) compared to none in 2013
- less Seafarers under 30 years in 2018 (8 per cent) compared to 2013 (18 per cent)

Figure 26: Master & Deck Officers**Figure 27: Engineer Officers****Figure 28: Ratings**

*It is unknown whether the 2013 figures are less than the following totals provided in the 2013 Census report:
1,341 Master & Deck Officers, 1,098 Engineer Officers and 1,502 Ratings.

** This figure represents combined Seafarer and Ex-seafarer numbers reported.

8 FOREIGN SEAFARERS

Organisations were asked to provide information about whether they utilised foreign migration as a means of filling their workforce needs. Consistent with what was asked in the 2013 Census, Organisations were asked about New Zealand residents, most of whom have mutually recognised work rights in Australia.

AT SEA

Figure 29: Do you employ foreign Seafarers At sea?

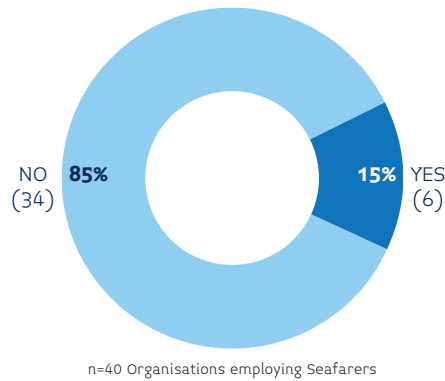


Figure 30: Number of foreign Seafarers

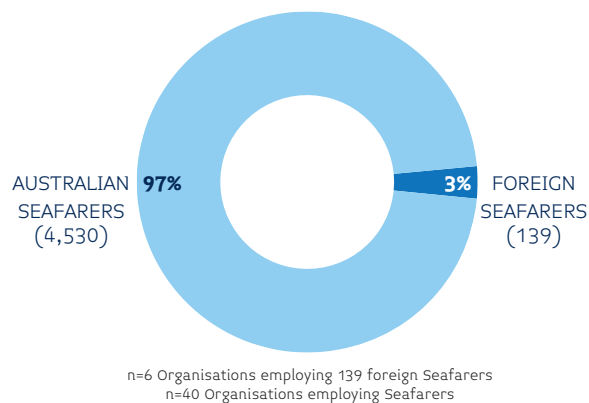
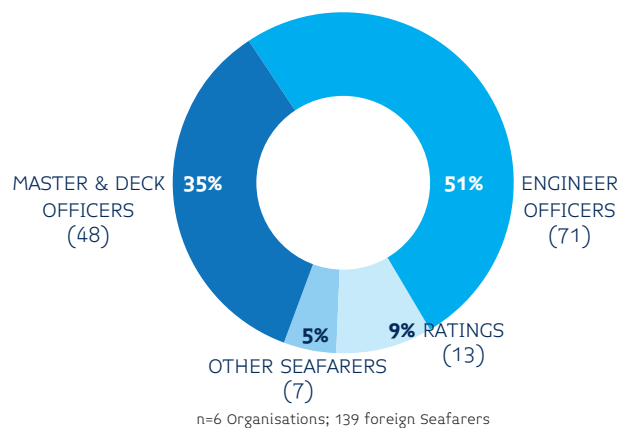


Figure 31: Number of foreign Seafarers by classification



ASHORE

Figure 32: Do you employ foreign Ex-seafarers Ashore?

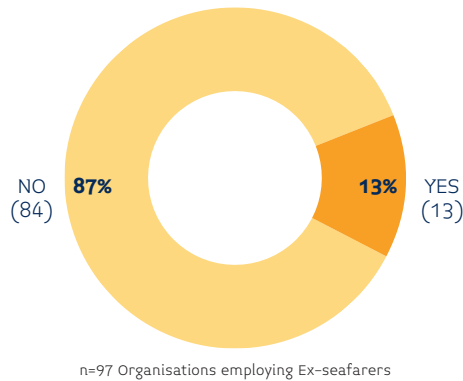


Figure 33: Number of foreign Ex-seafarers

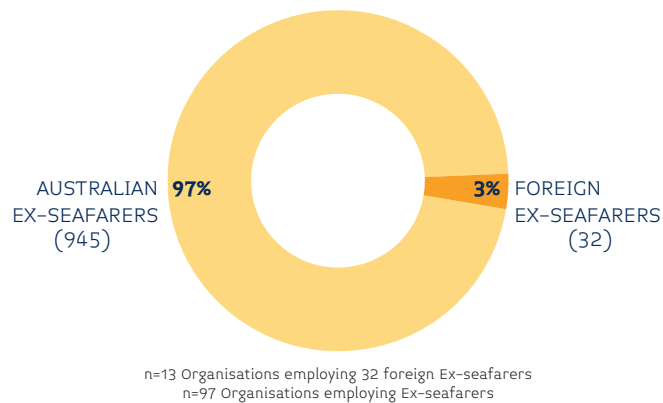
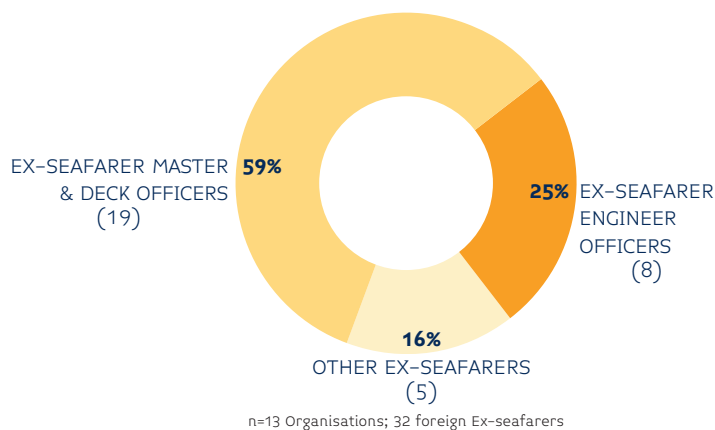


Figure 34: Number of foreign Ex-seafarers by classification



These results indicate that skilled migration currently plays a very limited role in meeting Respondent Organisations' workforce need both At sea and Ashore.

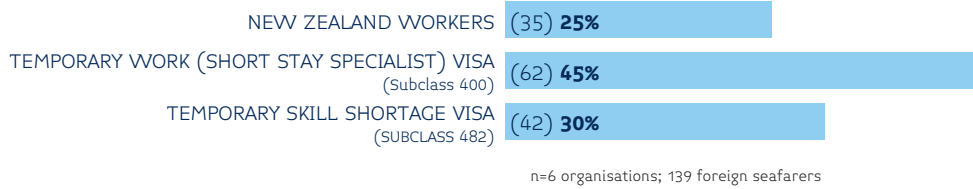
The 2013 Census reported the rate of foreign Seafarers as 11% of the workforce. The change to 3% (combined At sea and Ashore) in the 2018 Census is notable. There could be any number of reasons for this, including reduced overall need, sufficient numbers in the Australian labour market or changes in government policy about skilled migration.

The overwhelming majority of foreign Seafarers working both At sea and Ashore are Master & Deck Officers and Engineer Officers.

WORK ARRANGEMENTS FOR FOREIGN SEAFARERS

AT SEA

Figure 35: Foreign Seafarers – all classifications



BY CLASSIFICATION

AT SEA

Figure 36: Master & Deck Officers

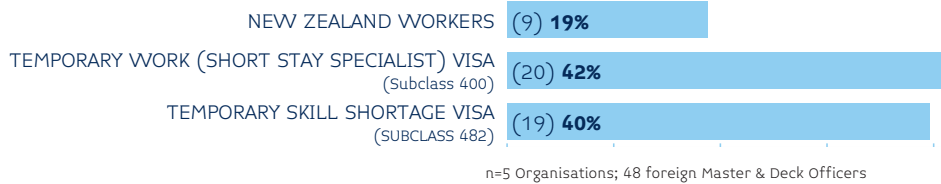


Figure 37: Engineer Officers

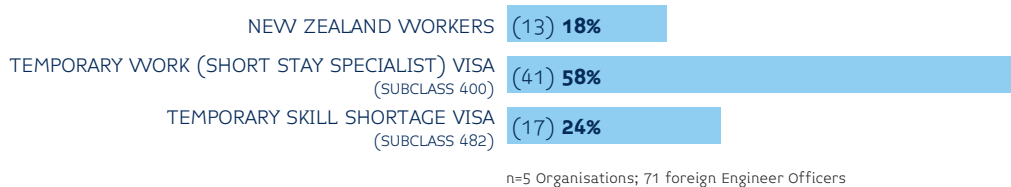
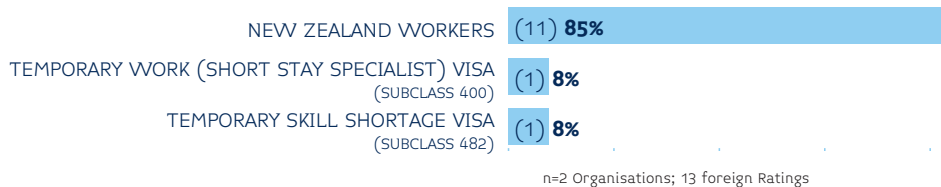


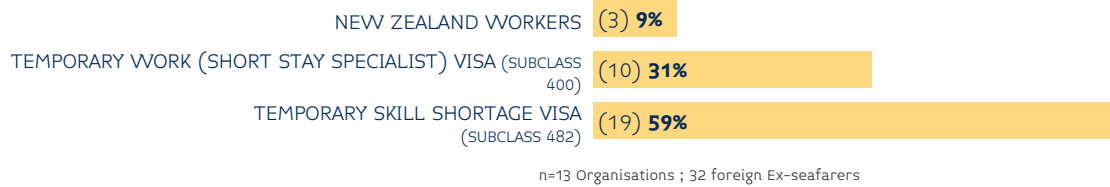
Figure 38: Ratings



WORK ARRANGEMENTS FOR FOREIGN EX-SEAFARERS

ASHORE

Figure 39: Foreign Ex-Seafarers – all classifications



BY CLASSIFICATION

ASHORE

Figure 40: Ex-seafarer Master & Deck Officers

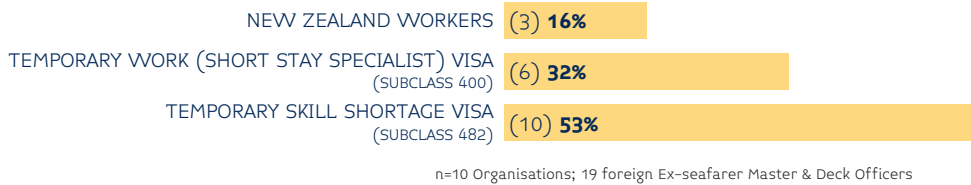
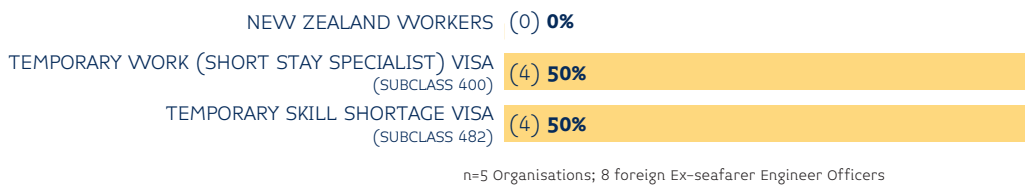


Figure 41: Ex-seafarer Engineer Officers



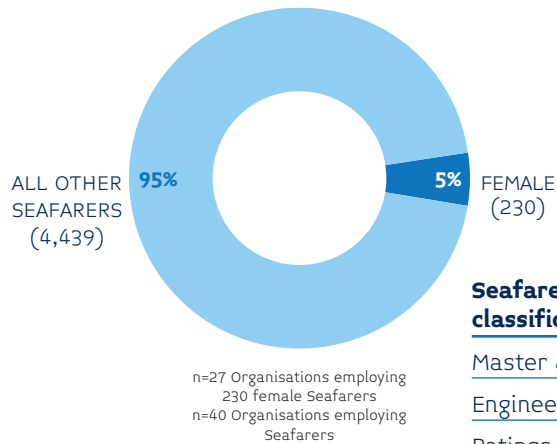


Pictured: Katie Marshall - Deck Officer Cadet

9 FEMALE REPRESENTATION

AT SEA

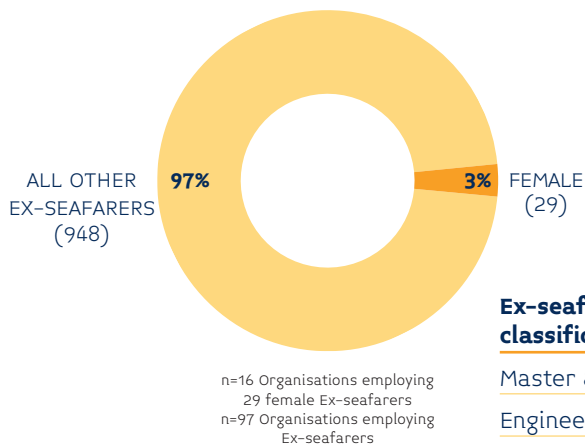
Figure 42: Number of female seafarers



Seafarer classification	Percentage of female workforce	Percentage of total workforce
Master & Deck Officers	17%	3%
Engineer Officers	2%	0.4%
Ratings	21%	3%
Other	60%	23%

ASHORE

Figure 43: Number of female Ex-seafarers

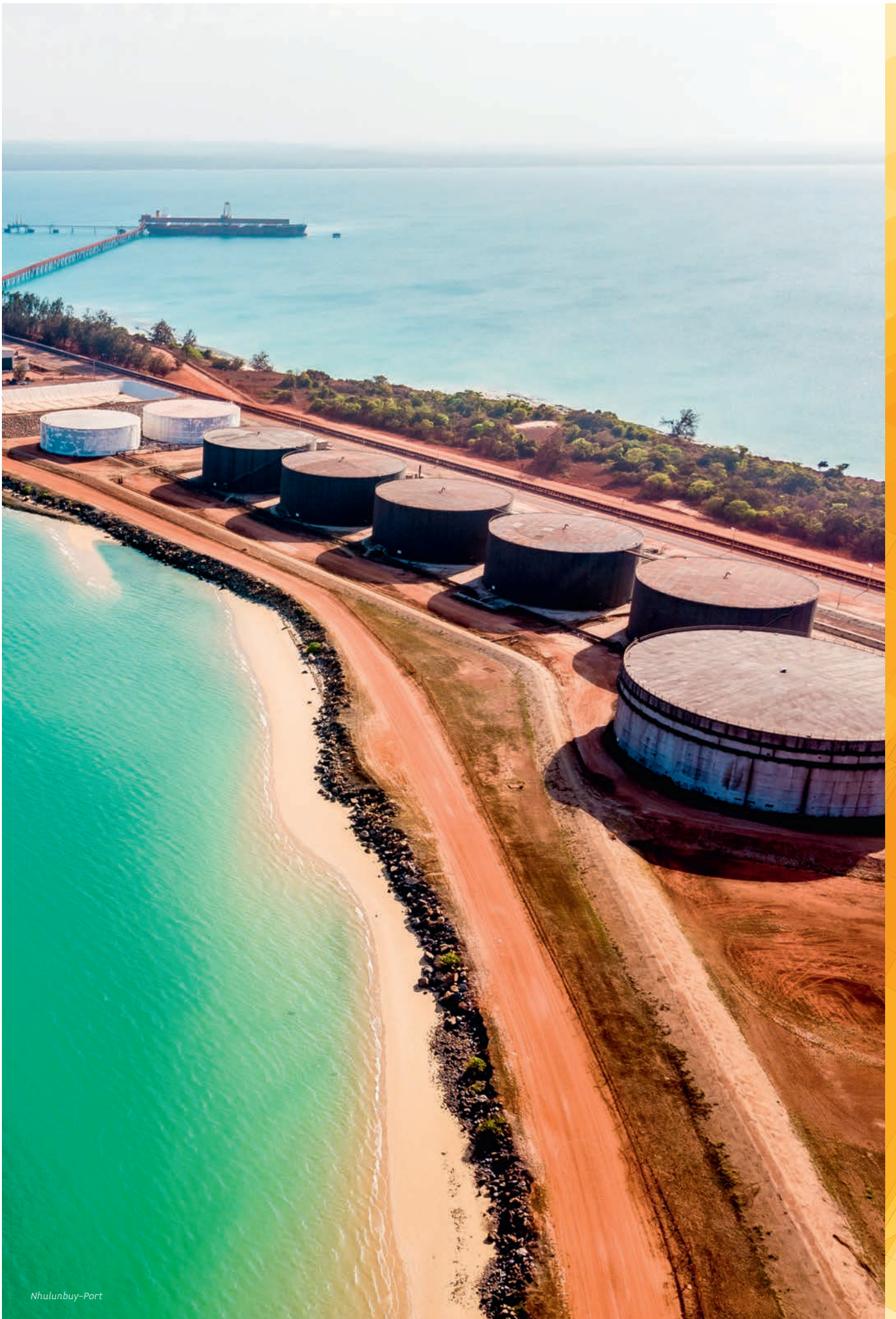


Ex-seafarer classification	Percentage of female workforce	Percentage of total workforce
Master & Deck Officers	66%	3%
Engineer Officers	10%	1%
Other	24%	5%

Of the 40 Organisations employing Seafarers At sea, 27 employ 230 female Seafarers. This represents 5 per cent of total Seafarers At sea and it is slightly higher than the 3 per cent of female Seafarers recorded in the 2013 Census. This figure is consistent with the global maritime industry where women are estimated to account for just 2 per cent of Seafarers.⁹

Of the 97 Organisations employing Ex-seafarers Ashore, 16 employ 29 female Ex-seafarers. This represents 3 per cent of total Ex-seafarers working Ashore.

⁹ITF Seafarers: Women Seafarers: <https://www.itfseafarers.org/ITI-women-seafarers.cfm>

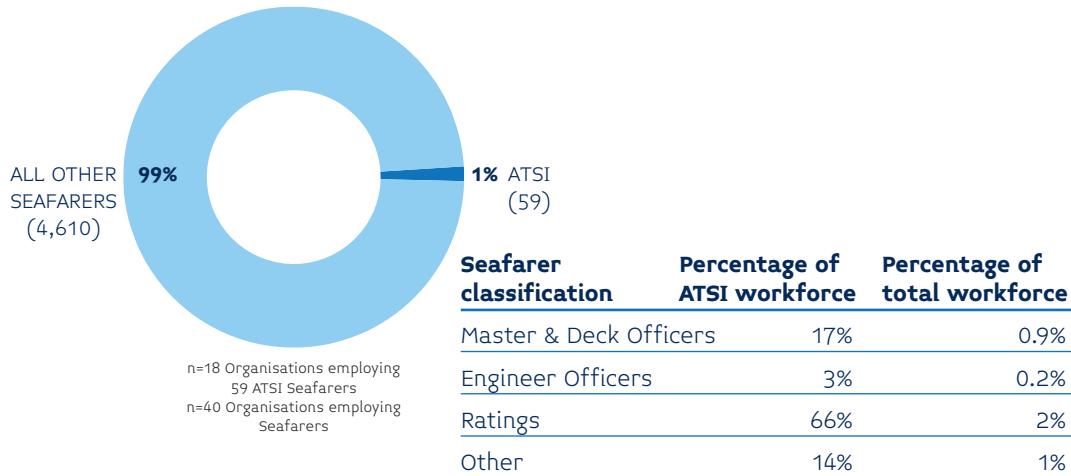


Nhulunbuy-Port

10 ABORIGINAL AND TORRES STRAIT ISLANDER (ATSI) REPRESENTATION

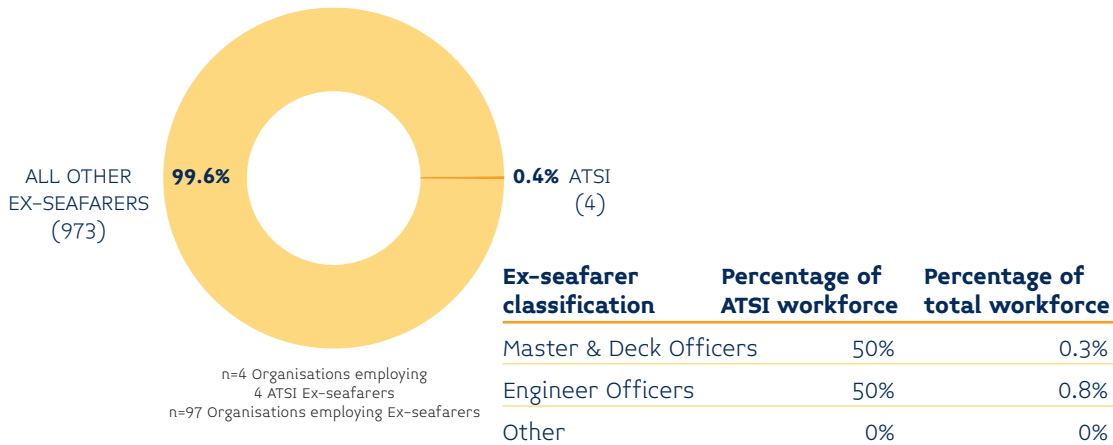
AT SEA

Figure 44: Number of ATSI Seafarers



ASHORE

Figure 45: Number of ATSI Ex-seafarers



Of 40 Organisations employing Seafarers At sea, 18 employ 59 ATSI Seafarers. This accounts for 1 per cent of all Seafarers At sea.

Of 97 Organisations employing Ex-seafarers Ashore, 4 employ 4 ATSI Ex-seafarer in Shore-based roles. This accounts for 0.4 per cent of all Ex-seafarers working Ashore. ATSI representation is lower for Ex-seafarers compared to Seafarers. This is not surprising given that the majority of Shore-based roles are filled by Deck and Engineer Officers whereas most ATSI Seafarers are employed as Ratings At sea.

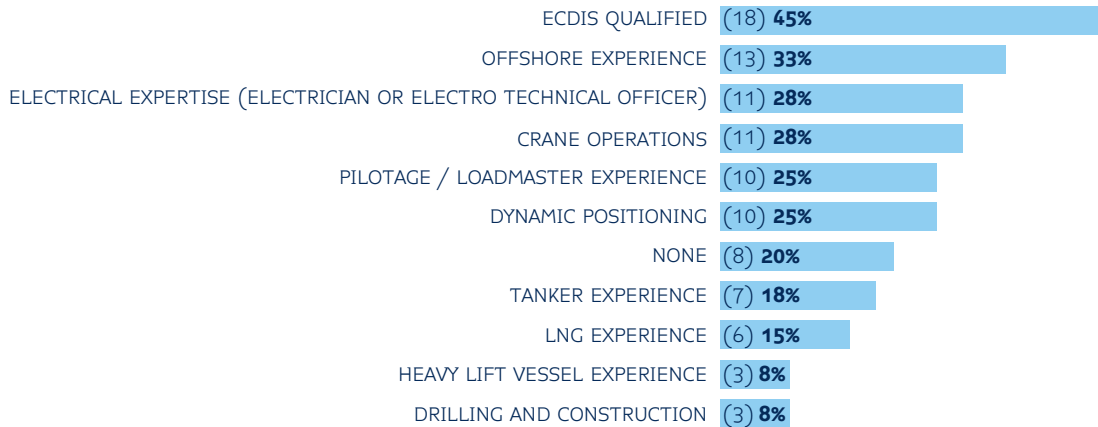
ATSI representation was low across all Seafarer classifications especially for Engineer Officers and Master & Deck Officers.

11 SPECIALIST SKILLS

Organisations were provided a pre-defined list of specialised experience to assist in gaining a broader understanding of what additional skills are required by industry in 2018.

AT SEA

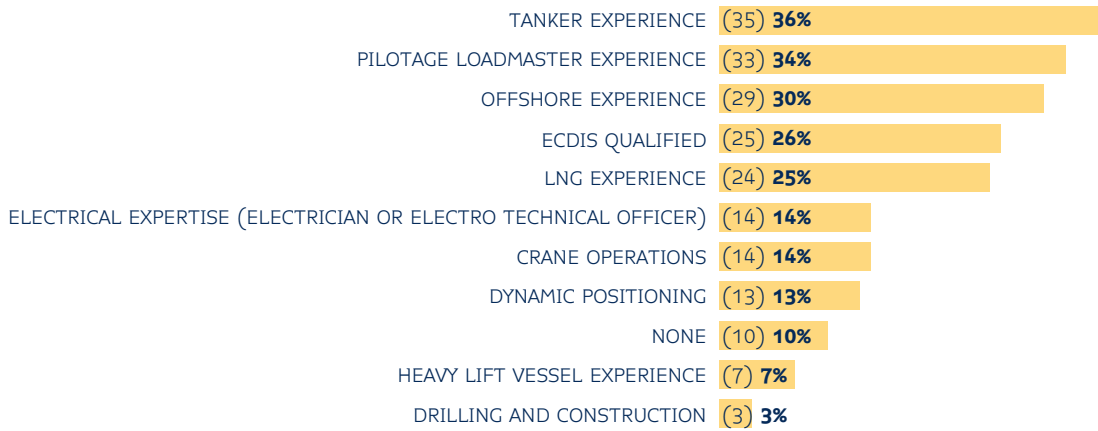
Figure 46: Specialist skills for Seafarers



n=40 Organisations that employ Seafarers
Note: Percentages do not add up to 100% as Organisations could select multiple options

ASHORE

Figure 47: Specialist skills for Ex-seafarers



n=97 Organisations employing Ex-seafarers
 Note: Percentages do not add up to 100% as Organisations could select multiple options

The overwhelming majority of Organisations (83 per cent) require staff to have specific skills and qualifications beyond the “basic” Internationally recognised qualifications, underpinned by STCW.

While not exhaustive, these skills are considered necessary for both qualification purposes (i.e. ECDIS certified, Tanker endorsement) and also to give employers confidence that an individual is competent as well as qualified. Organisations also listed a range of “Other” skills and experience that they look for in candidates, including: associate visual ship manoeuvring, steam, aquaculture, tug operations, running lines, piloting, Azimuth Stern Drive (ASD) tug experience, seismic support underway & alongside experience, dredging, as well as project specific experience.

Some of the skills and experience listed in the “Other” category are not obtainable via seagoing experience but are relevant to the maritime industry.

The most highly sought-after expertise At sea, especially qualifications such as ECDIS, would effectively be a pre-requisite for employment in most contemporary businesses. Interestingly, Tanker experience is the most highly sought-after expertise Ashore at 36 per cent, whereas the demand is far more modest At sea at 18 per cent, which would reflect the current state of Australian industry.

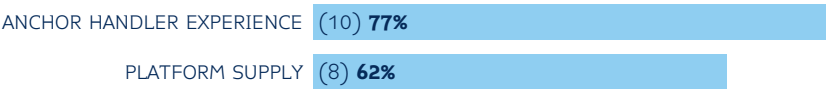
Electrical expertise is important both At sea and Ashore and this is likely to increase with greater reliance on technology.

OFFSHORE EXPERTISE REQUIRED AT SEA AND ASHORE

Organisations were asked to provide greater levels of specificity for specialist expertise. Therefore, these graphs relate to a small portion of Respondent Organisations which require the skill set.

AT SEA

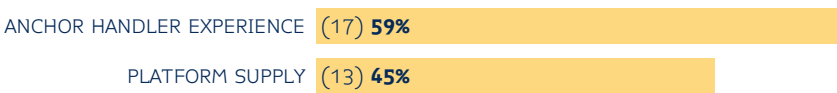
Figure 48: Organisations requiring offshore expertise for Seafarers



n=13 Organisations employing Seafarers
Note: Percentages do not add up to 100% as Organisations could select multiple options

ASHORE

Figure 49: Organisations requiring offshore expertise for Ex-seafarers

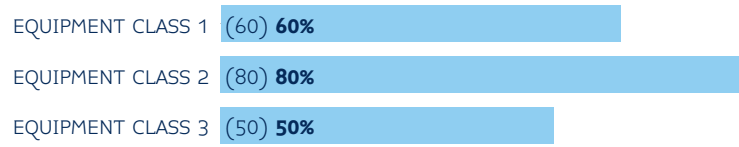


n=29 Organisations employing Ex-seafarers
Note: Percentages do not add up to 100% as Organisations could select multiple options

In addition to the division of required offshore expertise reflected above, Respondent Organisations also reported that it was critical to have “Other” offshore experience in fields such as visual ship manoeuvring, seismic support vessels, azimuth propulsion, FPSO, dredging, installation vessels, construction, DP operations and specific projects (DP, ASV, Seismic, Dive Support).

SPECIFIC DYNAMIC POSITIONING EXPERTISE REQUIRED AT SEA AND ASHORE

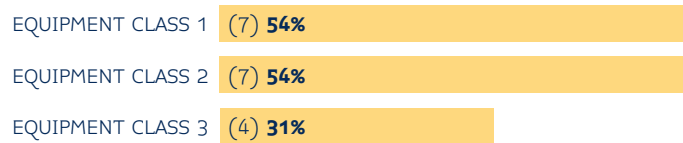
AT SEA

Figure 50: Organisations requiring dynamic positioning expertise for Seafarers

n=10 Organisations employing Seafarers

Note: Percentages do not add up to 100% as Organisations could select multiple options

ASHORE

Figure 51: Organisations requiring dynamic positioning expertise for Ex-seafarers

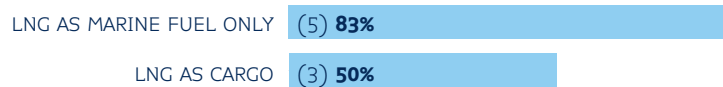
n=13 Organisations employing Ex-seafarers

Note: Percentages do not add up to 100% as Organisations could select multiple options

In addition to the division of the level of DP experience required, Shore-based employers also required employees to have experience in dredge guidance systems and in various project specific areas.

LNG EXPERTISE REQUIRED AT SEA AND ASHORE

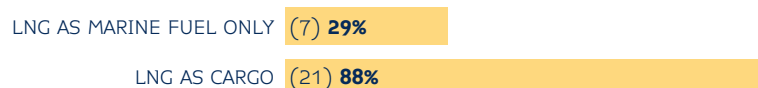
AT SEA

Figure 52: Organisations requiring LNG experience for Seafarers

n=6 Organisations employing Seafarers

Note: Percentages do not add up to 100% as Organisations could select multiple options

ASHORE

Figure 53: Organisations requiring LNG expertise for Ex-seafarers

n=24 Organisations employing Ex-seafarers

Note: Percentages do not add up to 100% as Organisations could select multiple options

Respondent Organisations employing both Seafarers and Ex-seafarers also sought LNG experience with bunkering, support tankers and manoeuvring specialisation and steam propulsion.



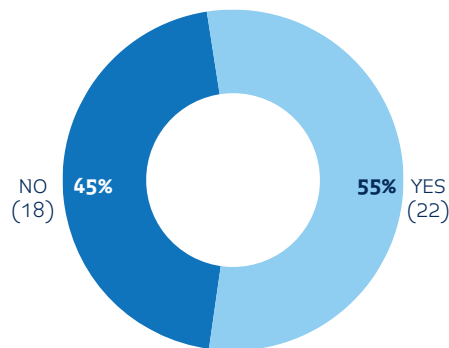
Pictured: AMC Search Refresher trainees in Launceston Survival Centre

12 ORGANISATIONS THAT CONTRIBUTE TO TRAINING

Respondent Organisations were asked to identify contributions they made to training Seafarers to STCW qualification level. The question was intended to garner responses relating to New entrant Training. Shore-based employers were asked to provide responses for people that they employed directly. Accordingly, those who supported Training via another organisation, such as a contractor who directly employed the Cadet/ Trainee, were asked to ensure that the response was received from the direct employer.

AT SEA

Figure 54: Do you contribute to New entrant Training?

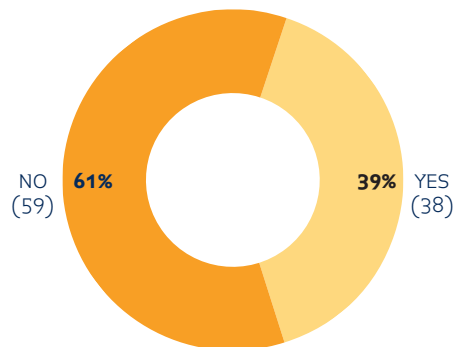


n=40 Organisations employing Seafarers

Over half of the Respondent Organisations employing Seafarers currently train, sponsor or anticipate that they will contribute to Training in the future. However, a large portion of Organisations (45 per cent) indicated that they are not engaged in New entrant Training.

ASHORE

Figure 55: Do you contribute to New entrant Training?



n=97 Organisations employing Ex-seafarers

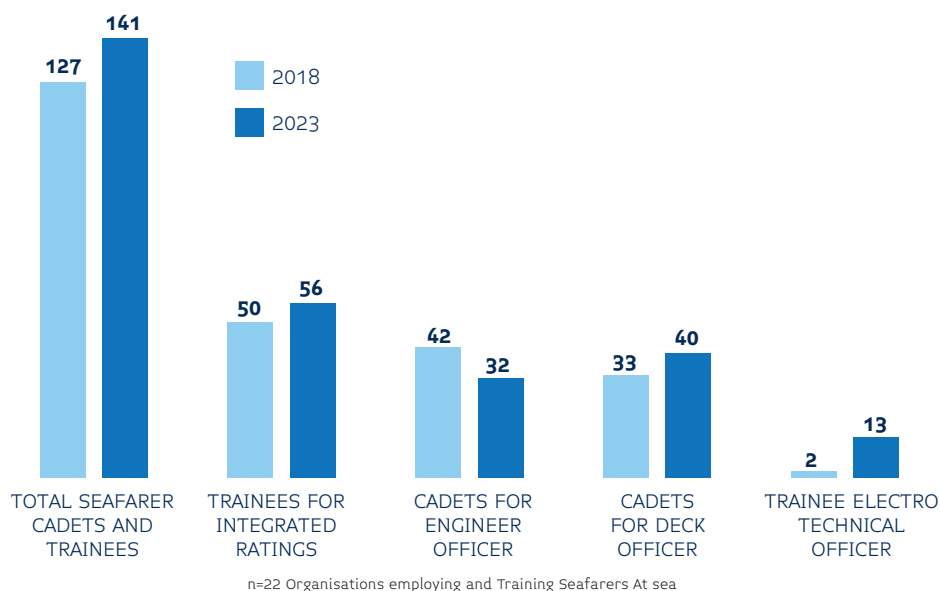
Under 40 per cent of Shore-based employers contribute to Seafarer Training. A closer analysis of a sample of the responses showed that in some cases, Organisations who responded yes to this question contributed to training that was other than New entrant Training.



Pictured: Ixor Joel Cabanban, 2nd Engineer - Sea Swift

13 PROJECTIONS FOR NEW ENTRANT TRAINING

Figure 56: Estimated number of Trainees or Cadets in 2018 and 2023



The 22 Organisations contributing to Training, currently support 127 Seafarer Cadets and Trainees which consist of:

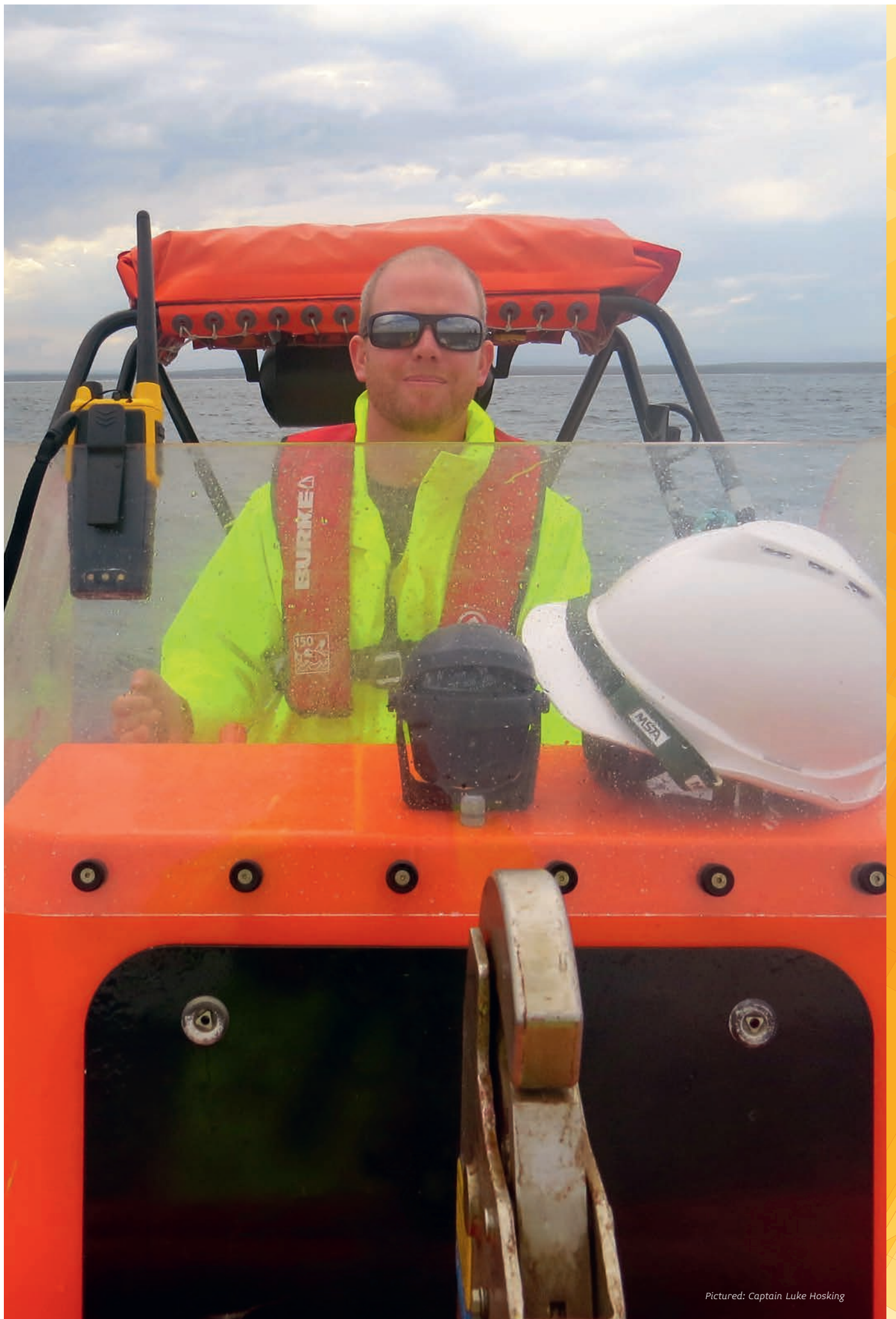
- 50 Ratings Trainees
- 42 Engineer Officer Cadets
- 33 Deck Officer Cadets
- 2 Electro Technical Officer Trainees¹⁰

It is noted that the 2018 Census did not ask at which point of the Training the Cadets were at, with New entrant Deck and Engineer Officers taking up to three years to obtain qualifications. The overall number of New entrants being trained each year by the industry is likely to be significantly less than the 127 Cadet/Trainee number given that Organisations reported only 54 berths are currently in use for Training. Organisations involved in Seafarer Training forecast training 141 Seafarers in total in 2023 which is below the 542 additional Seafarers that industry expects it will need in 2023.¹¹

In reality, due to the time it takes for New entrant Training to result in competent Seafarers, Training for the need identified in 2023 should commence as soon as possible and within the next 12 months. As it stands, industry projects it will need 715 additional Seafarers and Ex-seafarers in 2023. Currently, the industry is training 127 New entrants. Consequently, based on current training numbers, a shortfall of 588 Seafarers and Ex-seafarers would eventuate.

¹⁰Data from the 2018 Census shows that 127 cadets and trainees are currently being trained. This figure was established through declarations from Respondent Organisations as well as information provided by maritime training institutions. The figures provided by maritime training institutions where Cadets were sponsored by companies was cross checked against figures declared by Respondent Organisations to ensure that double counting of numbers did not occur. Where training institution numbers revealed additional Cadets or Trainees undertaking Training but not included in responding employer data, these figures have been added. Where there was a discrepancy in trainee/cadet numbers between training institutions and employers, the figure reported by responding employer was included.

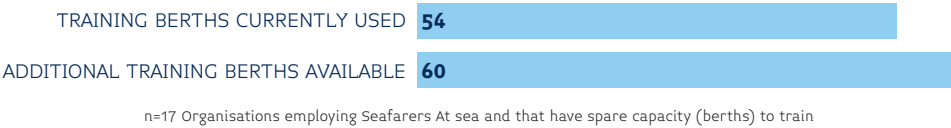
¹¹Organisations employing Seafarers estimated that they will need 11.6 per cent more Seafarers in five years' time compared to the size of their current workforce. This equates to 542 additional Seafarers when the 11.6 per cent growth rate is applied to the 4,669 Seafarers currently employed by Respondent Organisations.



Pictured: Captain Luke Hosking

14 TRAINING CAPACITY

Figure 57: Number of Organisations with capacity to train New entrants



17 Organisations currently provide 54 berths that are used for Training.

23 Organisations identified as contributing to New entrant Training which implies that six do not have or do not use any berths for Training.

11 of the 17 Organisation that provide berths reported that they have additional capacity totalling 60 berths that could be used.

This suggests that provision of training berths of itself should not prevent more Training being undertaken. Less than half the current capacity is being utilised.



15 BARRIERS TO CONDUCTING MORE TRAINING

AT SEA

Figure 58: Barriers to conducting more Seafarer Training



n=22 Organisations employing and Training Seafarers

ASHORE

Figure 59: Barriers to conducting more Seafarer Training



n=38 Organisations employing Ex- seafarers that also contribute to Training

Cost of Training was universally identified as the largest barrier.

Access to berths was also a barrier however given more than double the number of berths currently being used are available, a deeper analysis of this response may be worthwhile. It could be that better industry-wide co-ordination of sea-time would be advantageous.

For Seafarer employers, additional comments did not reveal a consistent view on specific industry-wide barriers therefore, it is more likely that "other" barriers are organisational specific.

For Shore-based employers, other barriers included:

- availability of training courses;
- business constraints;
- lack of the future employment opportunity within the Australian industry once training completed;
- wage expectations for training being internationally uncompetitive; and
- reducing margins for contracted rates making it uncompetitive to tender with Trainee costs incorporated (this is likely to be the case for employers of Seafarers).

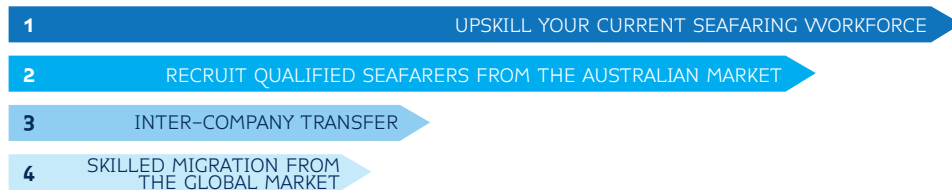


Pictured: Rick Daly splicing mooring lines – Lankhorst Euronete Australia

16 INVESTING IN TRAINING AND RECRUITMENT

AT SEA

Figure 60: Ways to invest in training or recruit qualified Seafarers



n=22 Organisations employing and Training Seafarers

Overall, Organisations indicated that their preferred approach would be to upskill their own workforce to fill the need for additional Seafarers.

Turning to the global market to source skilled migrant Seafarers would be the least preferred approach, based on responses received.

The significant reduction in the use of skilled migration for seafaring roles from 2013 to now would tend to support this, although government policy can also impact this.

Alternative pathways and better use of existing capacity were among suggestions for "other" ways to invest in Training and recruitment.

ASHORE

Unfortunately, analysis of the 2018 Census responses reveals a critical gap in the data regarding how Shore-based employers intend to source their future workforce needs.

An understanding of how Shore-based employers intend to meet their workforce needs in circumstances where it appears that New entrant Training currently being conducted will not sustain the projected increased need for seafaring skills both At sea and Ashore may benefit from further investigation.

It is becoming increasingly difficult to retain qualified and experienced pilots due to regional location.

~ 2018 Census Response

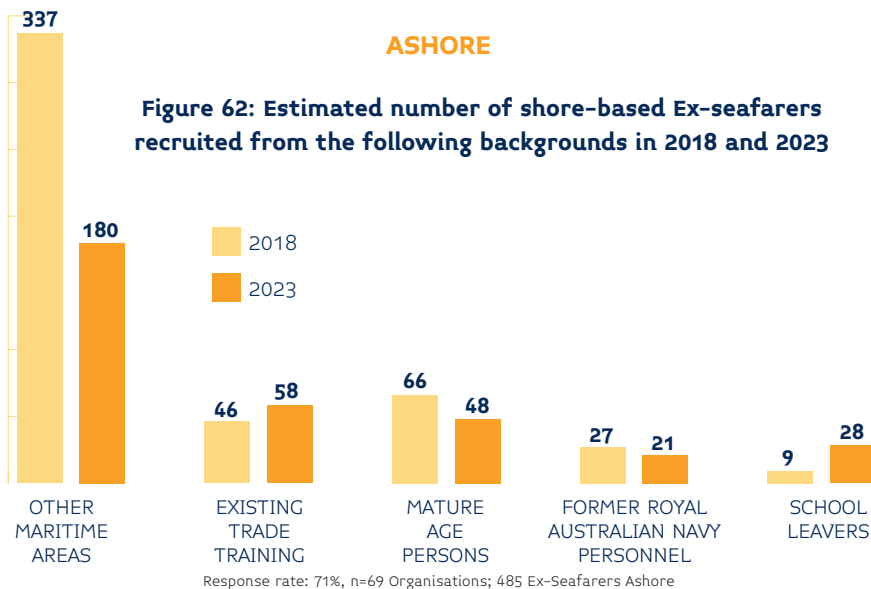
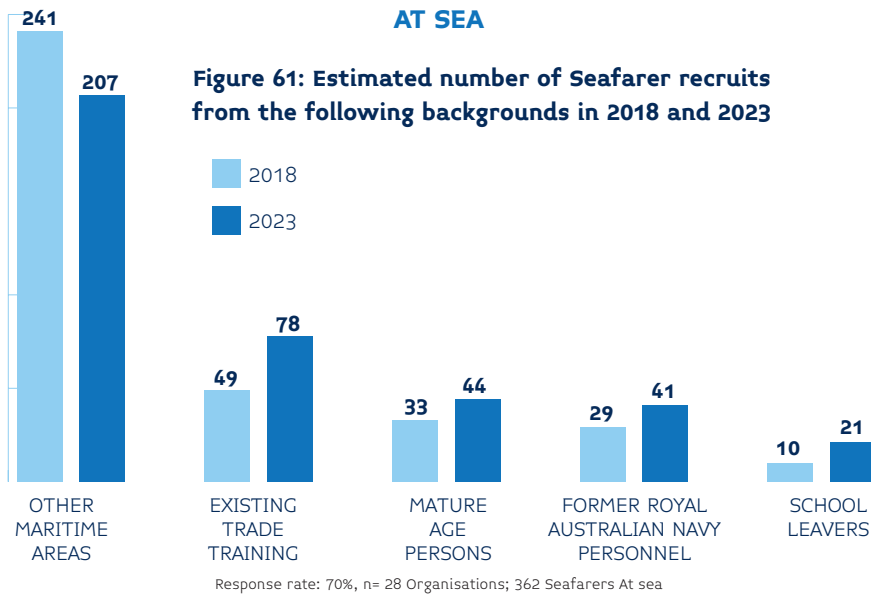


Photo courtesy: Brian Cutler

17 RECRUITMENT

The intention of this question was to identify where New entrants (not yet holding STCW qualifications) have been recruited from within a single year snapshot. It is not clear that the data reflects this intent.

Of the 40 Seafarer employers, 30 provided data for 362 Seafarers. Of the 97 Shore-based Ex-seafarer employers, 69 provided data for 485 Ex-seafarers.



An observation that can be drawn is that the largest source of recruitment is from other maritime areas and the smallest source is from school leavers. This is consistent with the 2013 Census results.

The projected shift away from recruiting from other maritime areas for shore-based employees would be a significant change to previous recruitment structures given that it is an employees' sea service experience that is attractive to Shore-based employers. The projected increase in direct entry Training of school leavers could be taken as a commitment to the overall Training burden for the maritime sector.



18 **ACKNOWLEDGEMENT**

MIAL wishes to thank all those Organisations and individuals who provided data, feedback and reflections that have contributed to the compilation of the 2018 Census. Whether responses came within the target audience of the 2018 Census or not, the fact that interest was so high and the responses provided so thoroughly considered is testament to the great importance placed on understanding the current state of the maritime workforce by Organisations and those involved in the industry.

MIAL also recognises that the conduct of the 2018 Census is a building block to helping understand the state of the industry as a whole. While gaps remain in our complete understanding of the current workforce, our future need and how industry stakeholders are planning to meet that need, the data provided is invaluable to at least gaining a clearer understanding of where we currently are and what the future may hold. There remains the opportunity for a deeper analysis including targeted investigation to be undertaken.

MIAL acknowledges the contributions made by all those who responded and those who provided feedback and insights in the preparation of census questions, particularly MIAL members.

MIAL looks forward to equally enthusiastic support for future efforts designed to illicit invaluable information, insights and clarity for the benefit of all those with an interest in our industry workforce.

APPENDIX: 2018 SEAFARING SKILLS CENSUS QUESTIONNAIRE

Thank you for taking the time to participate in Maritime Industry Australia Limited's (MIAL) Seafaring Skills Census. This is the start of a comprehensive analysis of the skills and experience that are critical to Australia's broader maritime industry. Our first look will be at the skills and experience synonymous with our industry: seafaring. It is a skill set not just critical for working on ships, but also for ensuring the significant projects and infrastructure, so critical to Australia's prosperity, can run efficiently and effectively. As early as 2008, Industry identified that the nurturing and development of seafaring skills in this country was on the decline, with the training task for the industry being left up to too few. If you have been involved in the Australian industry for a while, you may remember that in 2012, the Department of Infrastructure and Transport conducted the Australian Maritime Industry Census.

This survey was part of a broader shipping reform process and it produced data which underpinned the subsequent Maritime Workforce Strategy released in 2013. The six years since then have seen a further decline in the number of cadets and trainees coming through. This can be attributed to any number of reasons: the significant decline in the oil and gas sector, the further decline in the Australian coastal fleet and the costs of training. Furthermore, the current workforce is aging and the incentive to train does not exist for companies, and the attraction of the Australian industry to the next generation of Australian seafarers is dwindling – due to the lack of ongoing work, not the lack of interest in the sector. We are hearing that ports, pilots and regulators are now having trouble finding the skilled candidates they need to fill the strategic roles they have ashore. It is time to see where we are at, and what we will need as a nation.

MIAL champions the Australian maritime cluster and we are revisiting the state of the workforce in addition to training projections that were made back in 2012. We believe that, as an island nation, it is critical for Australia to maintain a core maritime skill set at least to ensure the efficient functioning of over 70 ports around the country, critical infrastructure and safety roles as well as supporting major projects, such as in offshore oil and gas, which are critical to the nation's economy.

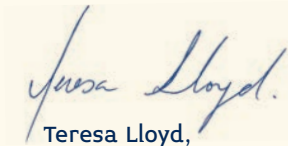
The census will take five to ten minutes to complete. You can save your spot in the survey, exit at any time and return to it later. Your information will remain confidential and data from the research will be reported in aggregate. Any information collected from participating organisations will only be used to ensure data integrity to gain an accurate industry snapshot. For data integrity purposes, we ask if each organisation could please delegate only one person to complete the survey. Please also ensure that the delegated person has information regarding your current workforce with a traditional seafaring background and your organisation's projected requirements in 5 years. If you would like to consult with others before filling out the census, please download a copy of the Seafaring Skills Census Questions (pdf).

We strongly encourage participants to provide sufficiently accurate and robust data to give the industry an idea of its immediate capability as well as its projected need. Please be sure to answer all questions even if the answer is no or 0. The survey will close at

5pm AEST Friday, 21 September 2018. We will present preliminary findings at MIAL's SEA18 Conference: Skilling Our Maritime Nation in Canberra on 15 & 16 October, 2018. MIAL will also contact all survey participants with the full report on our findings when it is released.

Thank you once again, we greatly appreciate your time and valuable insight to help MIAL gain a clearer picture of our current and future workforce capacity and need.

Kind Regards,



Teresa Lloyd,
Chief Executive Officer, Maritime Industry Australia Limited.

Please start with the survey now by clicking on the "Next" button below.

Please ensure that your organisation completes the survey only once and all responses refer to seafarers and/or onshore staff with seafaring experience employed in your Australian operations.

ABOUT YOUR ORGANISATION

Please provide your contact details. Please note that your information will remain strictly confidential and will only be used for the purposes of this survey.

*Name

*Position title

*Email

*Phone

ABOUT YOUR ORGANISATION

*What is the name of your organisation?

*What is the size of your organisation (total number of employees)?

- ☐ 1. 1-10 employees
- ☐ 11-100 employees
- ☐ 101- 500 employees
- ☐ 501-1,000 employees
- ☐ More than 1,000 employees

ABOUT YOUR ORGANISATION

***How would you describe your business or organisation? (Choose the most appropriate)**

- ☐ 1. Ship owner/operator
- ☐ 2. Crewing agent/manager/labour hire company
- ☐ 3. Government department
- ☐ 4. Defence
- ☐ 5. Safety regulator
- ☐ 6. Education provider
- ☐ 7. Port/harbour services
- ☐ 8. Marine surveyor
- ☐ 9. Marine pilot
- ☐ 10. Ship building/repair/maintenance services
- ☐ 11. Professional service provider
- ☐ 12. Oil and Gas Operator
- ☐ 13. Other, please specify _____

ABOUT YOUR ORGANISATION

***In which sectors of the maritime industry is your organisation involved?
(You can select more than one)**

- ☐ 1. Search and Rescue
- ☐ 2. Offshore (i.e. oil & gas exploration & extraction, offshore support services, construction & production ancillary services)
- ☐ 3. Ports and harbour services (Harbour Masters, towage, pilotage, dredging, etc.)
- ☐ 4. Education (Maritime college, TAFE, certified training provider, etc.)
- ☐ 5. Regulation (AMSA, ATSB, classification society, marine surveyors, etc.)
- ☐ 6. Blue water (cargo, dry bulk, tanker)
- ☐ 7. Commuter transport (mass transit ferries, etc.)
- ☐ 8. Government (Government departments, Defence)
- ☐ 9. Tourism (cruise sector, etc.)
- ☐ 10. Industry support services (professional services, suppliers)
- ☐ 11. Oil and Gas Terminal Operators (Inshore and Offshore)
- ☐ 12. Other, please specify _____

SEAFARERS EMPLOYED IN AUSTRALIA

*Does your organisation **directly** employ seafarers on board vessels in Australia (i.e. current or lapsed Australian Maritime Safety Authority certification)?

The following questions relate to staff you employ directly in your Australian seafaring workforce. If you engage a contractor to provide seafaring staff, please ask them to complete the Seafaring Skills Census in relation to their employees.

For the purposes of this census, we are asking about people with Standards of Training, Certification & Watchkeeping for Seafarers (STCW) or Internationally recognised qualifications. There will be the opportunity to provide information about other maritime industry skills including domestic seafarer qualifications in a future census.

☐ 1. Yes

☐ 2. No

SEAFARERS EMPLOYED IN AUSTRALIA

*In which classification(s) do you employ seafarers in Australia?
(You can select more than one)

☐ 1. Ratings

☐ 2. Engineer Officers

☐ 3. Master & Deck Officers

☐ 4. Other seafarers

SEAFARERS EMPLOYED IN AUSTRALIA

In total, how many seafarers do you employ in Australia?

SEAFARERS EMPLOYED IN AUSTRALIA

*How many of these seafarers work under the following classifications?

*Must add up to the total number of employed seafarers stated in the previous question

• Ratings

• Engineer Officers

• Master & Deck Officers

• Other

SEAFARERS EMPLOYED IN AUSTRALIA

*Are any of these employees foreign nationals or employed on temporary work visas?

☐ 1. Yes

☐ 2. No

How many are employed under the following categories?

	482 visas	400 visas	New Zealand workers
Ratings			
Engineer Officers			
Master & Deck Officers			
Other seafarers			

SEAFARERS EMPLOYED IN AUSTRALIA

What is the age profile of the seafarers that you employ?

	Up to 25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	Over 70
Ratings											
Engineer Officers											
Master & Deck Officers											
Other seafarers											

SEAFARERS EMPLOYED IN AUSTRALIA

How many seafarers identify as female?

Ratings

Engineer Officers

Master & Deck Officers

Other seafarers

SEAFARERS EMPLOYED IN AUSTRALIA

How many seafarers identify as Aboriginal and Torres Strait Islander?

Ratings

Engineer Officers

Master & Deck Officers

Other

SEAFARERS EMPLOYED IN AUSTRALIA

How many seafarers within the **Ratings** classification do you currently employ (2018) and how many do you project to employ in five years (2023)?

	2018 (Current)	2023 (Projected)
Total Ratings employed in Australia		
Chief Integrated Ratings		
AB/Bosun		
Integrated Ratings		
Deck Ratings		
Engine Room Ratings		

SEAFARERS EMPLOYED IN AUSTRALIA

How many **Engineer Officers** do you currently employ in each capacity (2018) and how many do you project to employ in five years (2023)?

	2018 (Current)	2023 (Projected)
Total Engineer Officers		
Engineer Class 1		
Engineer Class 2		
Engineer Class 3		
Electrician		
Electro Technical Officer		
Engineer Watchkeeper		

SEAFARERS EMPLOYED IN AUSTRALIA

How many **Master and Deck Officers** do you currently employ in each capacity (2018) and how many do you project to employ in five years (2023)?

	2018 (Current)	2023 (Projected)
Total Master and Deck Officers		
Master		
Chief Mate		
Deck Watchkeeper		
Other Deck Officer		

SEAFARERS EMPLOYED IN AUSTRALIA

***What kind of specific expertise do you require such employees to possess?**
(You can select more than one)

- ☐ 1. None
- ☐ 2. Tanker experience
- ☐ 3. Offshore experience
- ☐ 4. LNG experience
- ☐ 5. Heavy lift vessel experience
- ☐ 6. Crane operations
- ☐ 7. Electrical Expertise (Electrician or Electro Technical Officer)
- ☐ 8. Dynamic positioning
- ☐ 9. Drilling and construction
- ☐ 10. ECDIS qualified
- ☐ 11. Pilotage / loadmaster experience
- ☐ 12. Other, please specify _____

***What kind of offshore experience do you require employees to possess?**
(You can select more than one)

- ☐ 1. Platform supply
- ☐ 2. Anchor handler experience
- ☐ 3. Other, please specify _____

***What kind of LNG experience do you require these employees to possess?**
(You can select more than one)

- ☐ 1. LNG as Cargo
- ☐ 2. LNG as marine fuel only
- ☐ 3. Other, please specify _____

***What kind of Dynamic Positioning experience do you require these employees to possess?** (You can select more than one)

- ☐ 1. Equipment class 1
- ☐ 2. Equipment class 2
- ☐ 3. Equipment class 3
- ☐ 4. Other, please specify _____

SEAFARERS EMPLOYED IN AUSTRALIA

*Does your organisation currently train, sponsor or engage cadets and/or trainees or anticipate that it will in the future?

If your organisation engages trainees/cadets via a third party, please ask the third party to fill out the Seafaring Skills Census about these cadets/trainees. This helps ensure data integrity and to avoid double counting.

☐ 1. Yes

☐ 2. No

SEAFARERS EMPLOYED IN AUSTRALIA

How many trainees or cadets does your organisation currently train (2018) and how many do you project to take on in five years (2023)?

	2018 (Current)	2023 (Projected)
Trainees for Integrated Ratings positions		
Cadets for Engineer Officer		
Cadets for Deck Officer		
Trainee Electro Technical Officer		

SEAFARERS EMPLOYED IN AUSTRALIA

How much capacity (berths) does your organisation have to train additional trainees or cadets in Australia?

Please note this refers to vessels which would be able to provide trainees with sea-time as required by the relevant marine orders (vessel of a certain /power and voyages of a certain length)

Training berths currently used

Additional training berths available

SEAFARERS EMPLOYED IN AUSTRALIA

*What are the biggest barriers to conducting more training? (Please rank these in order from the largest barrier to the smallest with **1 being largest**)

• Cost

• Access to berths

• Quality candidates

• Capacity of on board workforce to mentor

Can you list any other barriers to conducting more training?

SEAFARERS EMPLOYED IN AUSTRALIA

***How will your organisation invest in training or otherwise recruit qualified personnel to meet your organisation's need? (Please rank these in order of likelihood with 1 being most likely)**

• Upskill your current seafaring workforce

• Skilled migration from the global market

• Inter-company transfer

• Recruit qualified seafarers from the Australian market

Are there any other ways you will invest in training or recruitment to meet your organisation's needs? (Optional)

SEAFARERS EMPLOYED IN AUSTRALIA

How many seafarers do you currently take from the following backgrounds (2018) and how many do you project to take on in the next five years (2023)?

	2018 (Projected)	2023 (Projected)
School leavers joining the maritime sector		
Mature age persons joining the maritime sector		
Persons shifting from other maritime sector areas (for example, domestic commercial vessels)		
Existing Trade training (electrician, fitter, mechanic etc.)		
Former Royal Australian Navy personnel		

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

***Does your organisation employ shore-based staff with seafaring experience in Australia?**

Please note that when a question relates to shore based staff, we are seeking information about shore based staff with maritime experience and qualifications, and not the entirety of the shore based workforce.

For the purposes of this census, we are asking about people with Standards of Training, Certification & Watchkeeping for Seafarers (STCW) or Internationally recognised qualifications. There will be the opportunity to provide information about other maritime industry skills including domestic seafarer qualifications in a future census.

☐ 1. Yes

☐ 2. No

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

***Your shore-based staff have which type of seafaring experience? (You can select more than one)**

- ☐ 1. Former Engineer Officers
- ☐ 2. Former Master & Deck Officers
- ☐ 3. Other former seafarers, please specify _____

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

***In total, how many shore-based staff with seafaring experience do you employ in Australia?**

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

***How many shore-based staff have seafaring experience in the following classifications? (Must add up to the total number of shore-based staff with seafaring experience stated in the previous question)**

• Engineer Officer experience _____

• Master & Deck Officer experience _____

• Other former seafarers _____

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

***Are any of these employees foreign nationals or employed on temporary work visas?**

☐ 1. Yes

☐ 2. No

How many are employed under the following categories?

	482 visas	400 visas	New Zealand workers
Former Engineer Officers			
Former Master & Deck Officers			
Other former seafarers			

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

What is the age profile of your shore-based staff with seafaring experience?

	Up to 25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	Over 70
Former Engineer Officers											
Former Masters & Deck Officers											
Other former seafarers											

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

How many staff identify as female?

Former Engineer Officers

Former Masters & Deck Officers

Other former seafarers

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

How many staff identify as Aboriginal or Torres Strait Islander?

Former Engineer Officers

Former Masters & Deck Officers

Other former seafarers

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

Within your Australian shore-based workforce, how many former Engineer Officers, former Masters and former Deck Officers do you project that you will need to employ in five years (2023)? (If you do not have any projections please type "0")

*Former Engineer Officers in 2023 (projected)

*Former Master and Deck Officers in 2023 (projected)

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

***What kind of specific expertise do you require such employees to possess? (You can select more than one)**

- ☐ 1. None
- ☐ 2. Tanker experience
- ☐ 3. Offshore experience
- ☐ 4. LNG experience
- ☐ 5. Heavy lift vessel experience
- ☐ 6. Crane operations
- ☐ 7. Electrical Expertise (Electrician or Electro Technical Officer)
- ☐ 8. Dynamic positioning
- ☐ 9. Drilling and construction
- ☐ 10. ECDIS qualified
- ☐ 11. Pilotage / loadmaster experience
- ☐ 12. Other, please specify _____

***What kind of offshore experience do you require employees to possess? (You can select more than one)**

- ☐ 1. Platform supply
- ☐ 2. Anchor handler experience
- ☐ 3. Other, please specify _____

***What kind of LNG experience do you require these employees to possess? (You can select more than one)**

- ☐ 1. LNG as Cargo
- ☐ 2. LNG as marine fuel only
- ☐ 3. Other, please specify _____

*What kind of **Dynamic Positioning** experience do you require these employees to possess? (You can select more than one)

☐ 1. Equipment class 1

☐ 2. Equipment class 2

☐ 3. Equipment class 3

☐ 4. Other, please specify _____

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

In which areas do you employ staff with seafaring experience?

☐ 1. Operations

☐ 2. Maintenance

☐ 3. Logistics/supply change management

☐ 4. Technical

☐ 5. HSEQ

☐ 6. Asset/contractor management

☐ 7. Other, please specify _____

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

Within the areas you have identified, which specific roles in your business are occupied by employees with seagoing experience and why?

	Job Title/Description of role	Is seagoing experience necessary or desirable and why?
Operations		
Maintenance		
Logistics/supply change management		
Technical		
HSEQ		
Asset/contractor management		
Other, please specify		

**SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED
IN AUSTRALIA**

***Does your organisation contribute to seafarer training either through your own vessels or in partnership with other vessel operators?**

If your organisation engages trainees/cadets via a third party, please ask the third party to fill out the Seafaring Skills Census about these cadets/trainees. This helps ensure data integrity and to avoid double counting.

☐ 1. Yes

☐ 2. No

**SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED
IN AUSTRALIA**

***Can you estimate how many individuals your organisation trains per year for positions which require seafaring experience?**

**SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED
IN AUSTRALIA**

***What are the biggest barriers to conducting more training? (You can choose several most appropriate)**

☐ 1. Cost

☐ 2. Training berths

☐ 3. Quality candidates

☐ 4. Ship board time to train

☐ 5. Other, please specify

SHORE-BASED STAFF WITH SEAFARING EXPERIENCE EMPLOYED IN AUSTRALIA

For your on-shore staff, how many employees with seafaring experience do you take from the following backgrounds (2018) and how many do you project to take on in the next five years (2023)?

	2018(Current)	2023(Projected)
School leavers joining the maritime sector		
Mature age persons joining the maritime sector		
Persons shifting from other maritime sector areas		
Existing Trade training (Electrician, Fitter, mechanic etc.)		
Former Royal Australian Navy personnel		
Other		

FINAL REMARKS

Are there any other comments or information that you would like to share regarding maritime skilled workers in Australia?

