



AUSTRALIAN
INDUSTRY
STANDARDS

MARITIME IRC WORKPLAN



**SECTOR
OVERVIEW**



EMPLOYMENT



**SECTORAL
INSIGHTS**



**SKILLS
OUTLOOK**



**TRAINING
PRODUCT
REVIEW PLAN
2016-17 – 2019-20**



**IRC
SIGNOFF**



MARITIME IRC WORKPLAN

This Four-Year Workplan has been submitted by the Maritime Industry Reference Committee (IRC) to Australian Industry and Skills Committee (AISC) for approval.

The Workplan identifies the priority skill needs of the Maritime industry following a research and stakeholder consultation process conducted by Australian Industry Standards on behalf of the IRC.

Once approved by the AISC the Workplan informs the development of a four year rolling National Schedule for development and review work of the Maritime Training Package. More information on the National Schedule can be found at: www.aisc.net.au/content/national-schedule

This Workplan was agreed to by the Maritime IRC Chair on Tuesday, 27 September 2016:

A handwritten signature in black ink, appearing to read 'Brad Roberts'.

Brad Roberts
MARITIME IRC CHAIR

HOW TO USE THIS DOCUMENT



This document contains links to assist the reader to navigate efficiently through the content of the Workplan. The tiles on the cover page, and the divider pages will link to the relevant content when clicked with a mouse, or touched on a tablet device.

The tiles at the bottom of pages can be clicked to return to the beginning of each section, or the front page of the Workplan as required.



MARITIME INDUSTRY REFERENCE COMMITTEE

The Maritime Industry Reference Committee has been assigned responsibility for the Maritime Training Package.

The MAR Maritime Training Package provides the only nationally recognised Vocational Education and Training (VET) qualifications for occupations involved in: General Purpose Hands, Coxswains, Marine Engine Drivers, Marine Engineers, Marine Surveyors, Cooks, Integrated Ratings, Deck Officers, Ship's Masters and Marina Operations.

More information about the Maritime IRC and its work can be found here:

<http://www.australianindustrystandards.org.au/committee/maritime-industry-reference-committee/>

Name	Organisation
Adam Manders	Toll Shipping
Alan Wallish	Passions of Paradise
Andrew Dally	Inco Ships
Brad Roberts	Farstad Shipping (Indian Pacific)
Dan Pearson	Australian Maritime Officers Union
Fiona Love	Transport for New South Wales
Isabelle Guaran	Maritime Industry Australia Ltd (MIAL)
Jim Mallows	Australian Institute of Marine and Power Engineers
Malcom Merrey	Spirit of Tasmania
Mark Eldon-Roberts	Australian Maritime Safety Authority
Martin Silk	Yachting Australia
Ian Bray	Maritime Union of Australia
Neale Waller	MMA Offshore Ltd
Simon Earle	Maritime Employees Training Limited

MARITIME SECTOR OVERVIEW

**MARITIME
INDUSTRY
OVERVIEW**

**TRAINING
PACKAGE
OVERVIEW**

**BUSINESS
ANALYSIS**

**KEY
STAKEHOLDERS**

**INDUSTRY
CHALLENGES AND
OPPORTUNITIES**

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MARITIME INDUSTRY OVERVIEW

The Maritime industry had an estimated annual revenue of \$9.3 billion, adding \$3.7 billion to the Australian economy in 2015-16. 10 per cent of the world's sea trade passes through Australian ports and 99 per cent of Australian exports are transported by sea. Our coastline is over 60,000 kilometres in length and our search and rescue region covers more than 10 per cent of the Earth's surface. Per capita, Australia has more cruise passengers than any other nation, making it the fourth-largest cruise market in the world.

The MAR Maritime Training Package provides the only nationally recognised Vocational Education and Training (VET) qualifications for occupations involved in: General Purpose Hands, Coxswains, Marine Engine Drivers, Marine Engineers, Marine Surveyors, Cooks, Integrated Ratings, Deck Officers, Ship's Masters and Marina Operations.

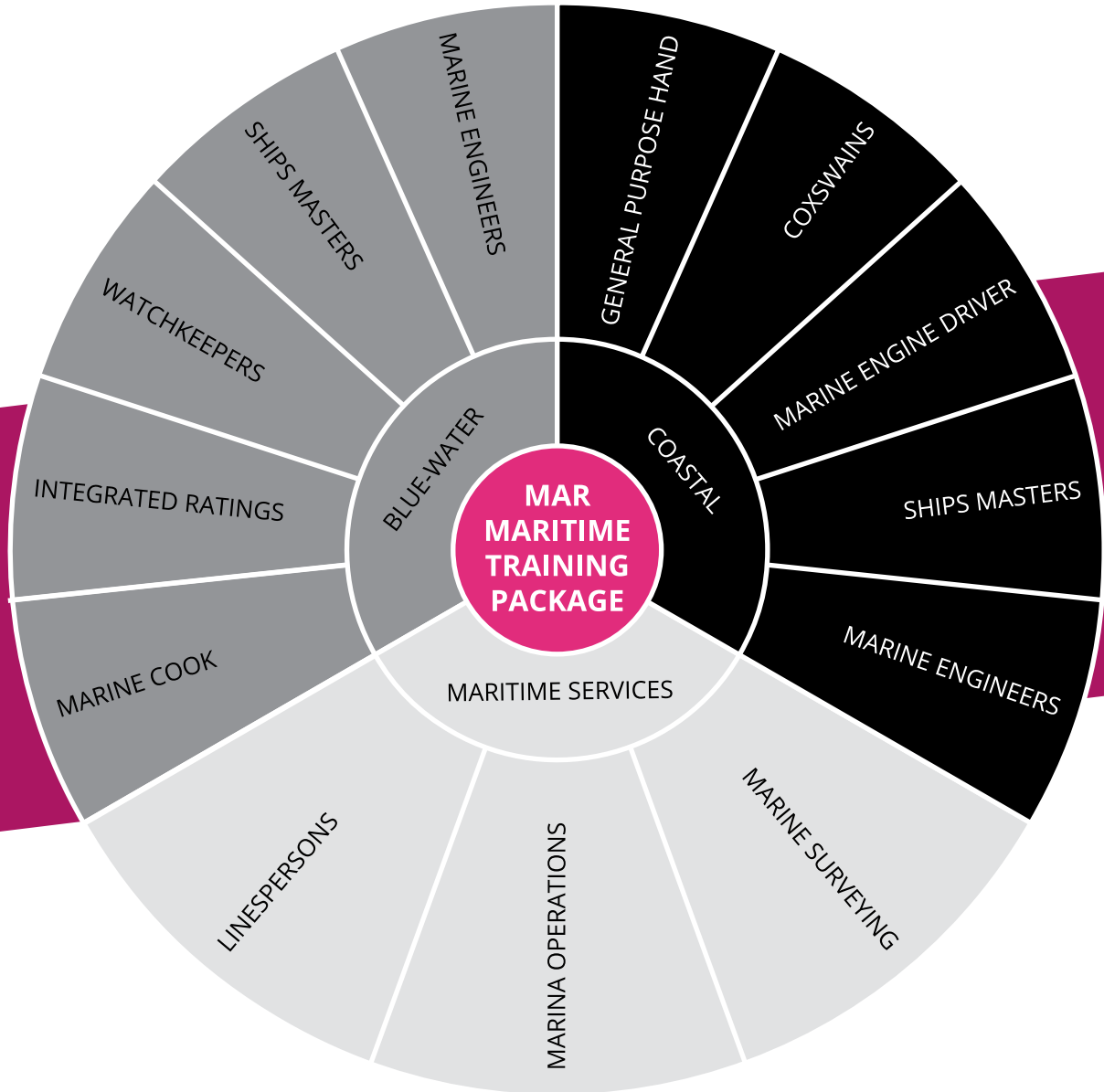
The Maritime Training Package comprises 26 qualifications, 16 skill sets 199 units of competency and associated assessment requirements and covers: near coastal and ocean going maritime operations.

The Maritime Training Package contains the following qualifications:

- Certificate I in Maritime Operations (General Purpose Hand Near Coastal)
- Certificate I in Maritime Operations (Coxswain Grade 2 Near Coastal)
- Certificate II in Maritime Operations (Marine Engine Driver Grade 3 Near Coastal)
- Certificate II in Maritime Operations (Coxswain Grade 1 Near Coastal)
- Certificate II in Maritime Operations (Linesperson)
- Certificate III in Maritime Operations (Master up to 24 metres Near Coastal)
- Certificate III in Maritime Operations (Master Inland Waters)
- Certificate III in Maritime Operations (Marine Engine Driver Grade 2 Near Coastal)
- Certificate III in Maritime Operations (Marine Surveying)
- Certificate III in Maritime Operations (Marine Engine Driver Steam)
- Certificate III in Marina Operations
- Certificate III in Maritime Operations (Marine Cookery)
- Certificate III in Maritime Operations (Integrated Rating)
- Certificate IV in Maritime Operations (Marine Engine Driver Grade 1 Near Coastal)
- Certificate IV in Maritime Operations (Master up to 35 metres Near Coastal)
- Certificate IV in Maritime Operations (Marine Surveying)
- Certificate IV in Maritime Operations (Chief Integrated Rating)
- Diploma of Maritime Operations (Master up to 80 metres Near Coastal)
- Diploma of Maritime Operations (Marine Engineering Class 3 Near Coastal)
- Diploma of Maritime Operations (Marine Surveying)
- Diploma of Maritime Operations (Engineer Watchkeeper)
- Diploma of Maritime Operations (Master up to 500 GT)
- Diploma of Maritime Operations (Watchkeeper Deck)
- Advanced Diploma of Maritime Operations (Marine Engineering Class 2)
- Advanced Diploma of Maritime Operations (Marine Engineering Class 1)
- Advanced Diploma of Maritime Operations (Master Unlimited)



MARITIME TRAINING PACKAGE ARCHITECTURE



SECTOR OVERVIEW

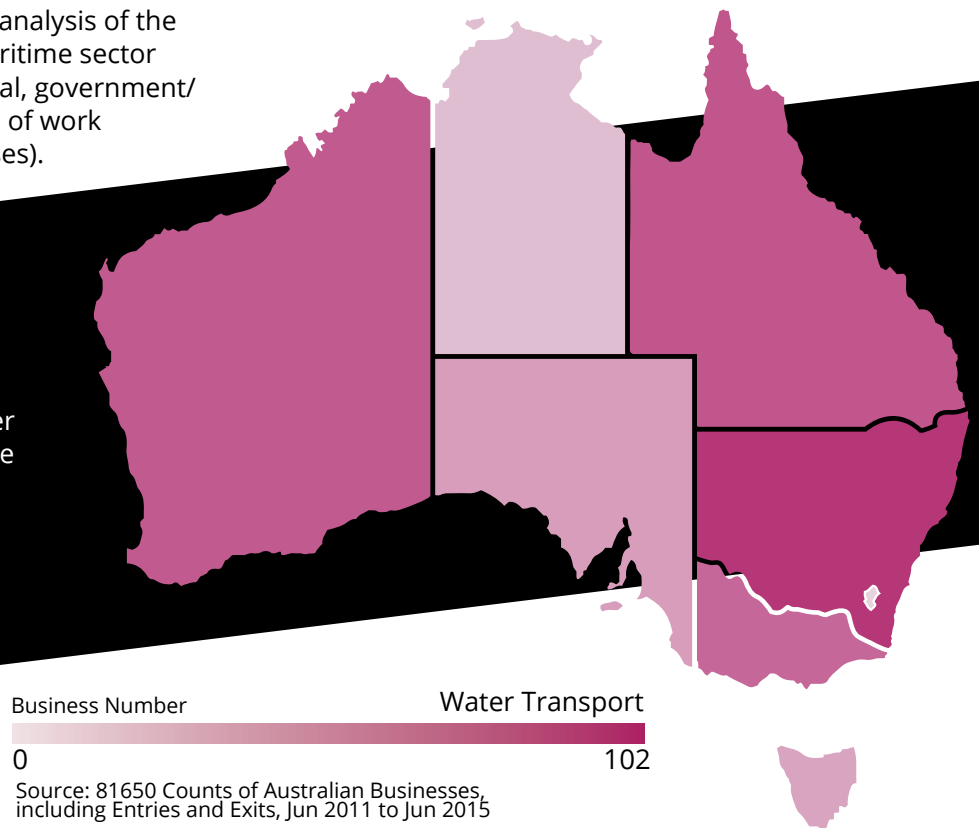
FRONT PAGE



MARITIME BUSINESS ANALYSIS

The following image provides analysis of the businesses involved in the Maritime sector (size, local/state/national/global, government/not-for-profit/for-profit, scope of work undertaken by those businesses).

There are more than twice as many Maritime enterprises per person in WA and TAS than the State average.

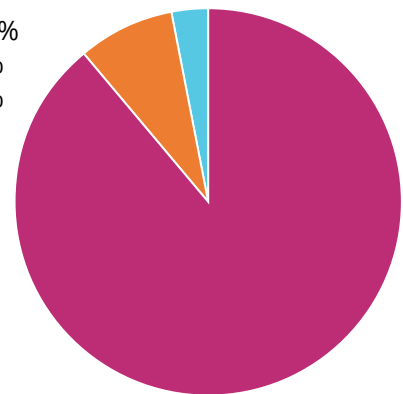


Business Analysis Metrics

Revenue (\$m)	9,269.40
Profit (\$ m)	1370.3
Average Wage (\$)	109,251.81
No. of Businesses	1440
Employment Growth (% to 2021)	5%

Business Size (Composition)

Small	89%
Medium	8%
Large	3%





KEY MARITIME STAKEHOLDERS

Stakeholder Category	Organisation	
Employers	Australian Superyachts Australian National Lines CSL Australia Australian Defence Force Farstad Shipping Go Marine Inco Ships Maersk Supply Services MMA Offshore Ltd	P&O Maritime Passions of Paradise Programmed Total Marine Services Spirit of Tasmania Svitzer Toll Shipping Total Marine Yachting Australia
Employer Representatives	Australian Institute of Marine Surveyors Australian Mines and Metals Association Boating Industry Association of Western Australia	Marina Industries Association Maritime Industry Australia Ltd Superyacht Australia
Employee Representatives	Australian Institute of Marine and Power Engineers Australian Maritime Officers Union Maritime Union of Australia	
Licensing/Regulatory	Australian Maritime Safety Authority	
Government	Federal, State/Territory Departments Australian Communications and Media Authority	
Industry Advisory	Automotive Training Board - NSW Industry Skills Advisory Council - NT Logistics Training Council - WA	
Training Organisations	TAFEs, Private RTOs, Enterprise RTOs	

The Maritime Training Package is in the Scope of Registration of 61 Registered Training Organisations.



INDUSTRY CHALLENGES AND OPPORTUNITIES

OPERATING ENVIRONMENT

Stagnation in the growth rate of the Australian mineral and energy commodities sector has had an immediate effect on shipping activity. To add to this there is ongoing decline in numbers of 'blue-water' Australian flagged ships operating within Australia. However, longer-term trends forecast that container throughput will double by 2030. There has also been significant growth in the cruise liner sector within Australia, with a six-fold increase of passengers over the past decade. Jobs growth within this sector is likely to increase to meet the demand.

TECHNOLOGY

The introduction of new technologies is ongoing and companies are shifting their use of these technologies at a rapid pace. Over the next decade, technologies will continue to evolve and further integrate operations. New technologies shaping the maritime sector include¹:

- robots, sensors, and big data
- propulsion and powering
- smart ships and autonomous systems
- deep ocean mining, marine biotechnologies

Operations will likely change dramatically over the coming decades and companies will need to invest in capacity building through education and training of their people. Specialist training will also be a priority and may present a challenge to the sector.

EMPLOYMENT



**EMPLOYMENT
STATISTICS**



**WORKFORCE
CHALLENGES AND
OPPORTUNITIES**

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EMPLOYMENT

EXPLANATORY NOTES

Workforce

The size of an industry's workforce is established by the Australian Bureau of Statistics (ABS) using two different approaches. The Labour Force survey, which provides a 30-year view of the industry, assigns each industry category based on the main job of the respondent. The Australian Industry dataset (which the Workforce Projections charts are based on), uses a topdown approach where industries are primarily classified by the single predominant industry class associated with a business' ABN. An industry's workforce therefore is bounded in the first instance by the occupations of workers and in the second by the primary business of an enterprise. The different approaches can therefore result in quite different workforce figures.

AIS has chosen to distinguish these approaches using the terms **Workforce – Occupation based** and **Workforce – Employer based**.

Enterprise size

Industry definition by ABN also applies to the Counts of Australian Businesses data (size and distribution). Furthermore, low level values in these tables are subject to perturbation to anonymise the data. This may result in some areas with a low level value being perturbed to zero.

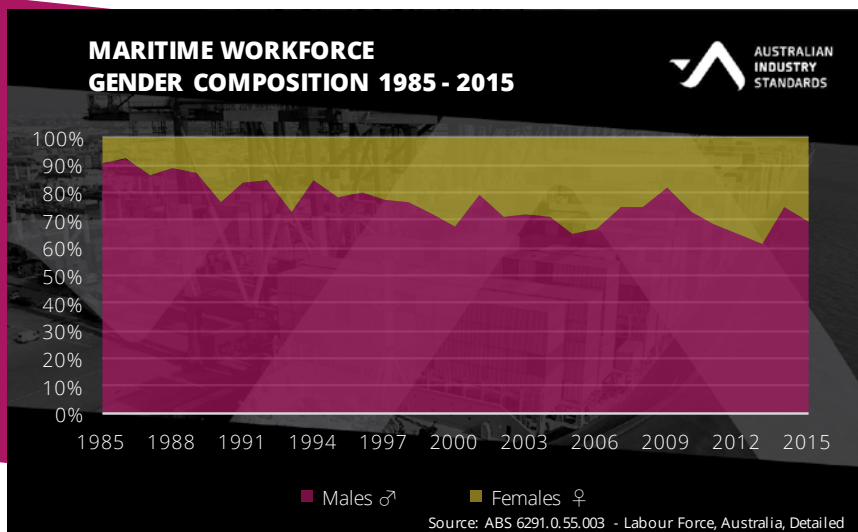
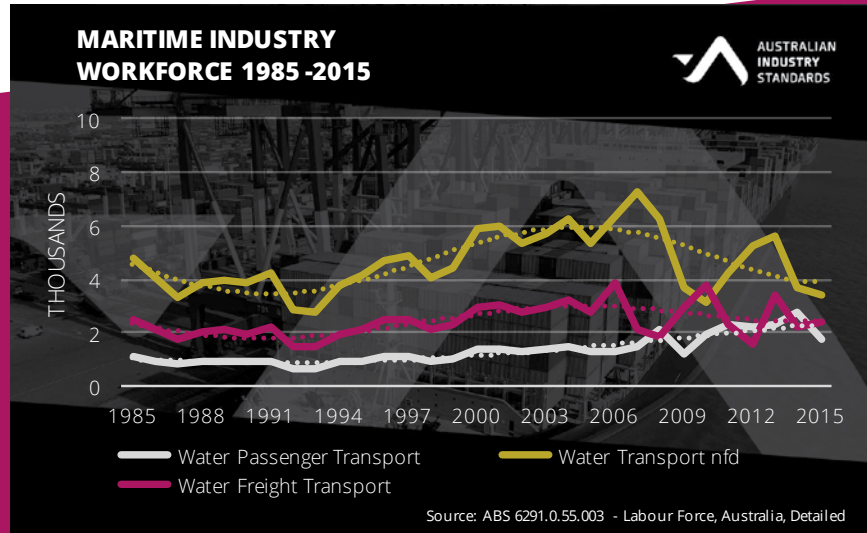
Exemptions

The scope of the Labour Force Survey is limited to the civilian population of Australia and therefore members of permanent defence forces are excluded from the survey.



EMPLOYMENT HISTORY - OCCUPATION BASED

The decline in the Maritime workforce since the early 2000's is being moderated by an increase in Passenger transport.

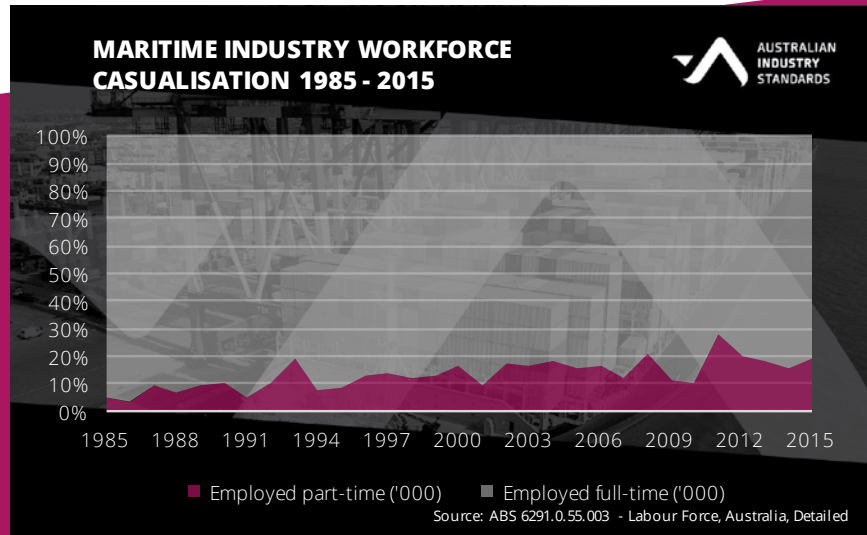


The proportion of females in the industry has more than tripled in thirty years.

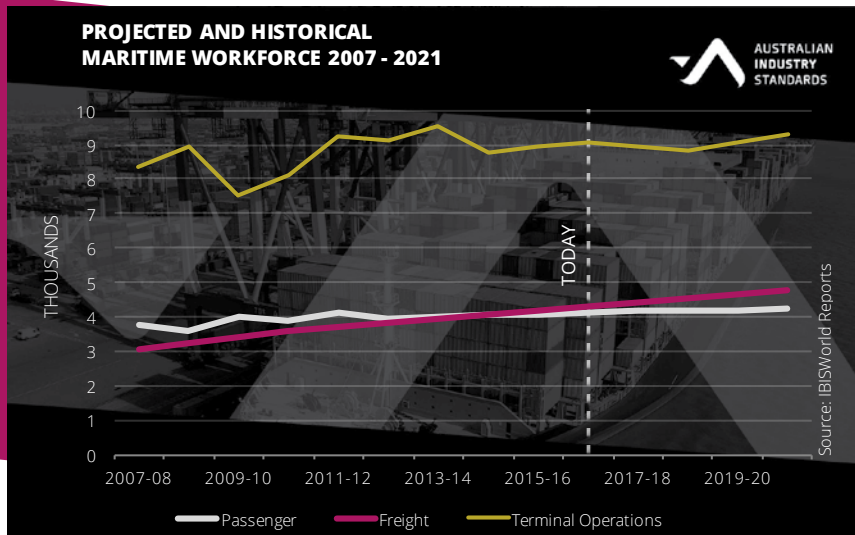
**EMPLOYMENT
FRONT PAGE**



Part-time work has grown from 5% to nearly 20% in thirty years.



EMPLOYMENT PROJECTION - EMPLOYER BASED



The Maritime workforce is expected to increase by 5% in the coming five years.

**EMPLOYMENT
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WORKFORCE SUPPLY-SIDE CHALLENGES AND OPPORTUNITIES

AGEING WORKFORCE

Australia's maritime workforce is one of the oldest in the country, with 65 per cent of workers 45 years or older².

In the short to medium term, the ability to successfully attract, train and retain young workers will be critical in meeting the skills' needs of the industry.

Provision of mentoring and leadership training to skilled operators with comprehensive technical knowledge will enable them to help develop younger workers and assist employers with retention. Targeting female participation could increase the available labour pool.

STRONG COMPETITION FOR SKILLED WORKERS

There is strong demand for electro-technical officers and marine engineers within the industry³. As new technologies are adopted by companies, the skill requirements will also change.

The provision of specialist skills in robotics, design, engineering, and big data analytics will need appropriate training and capacity building.

To develop these projected skills, companies will need to start providing the right education and training programs to ensure that on-boarding of new technologies and operations are adequately resourced.

Some stakeholders report concerns about potential misalignment between skilled migration arrangements and maintaining viable career pathways for Australian trained seafarers. Improved mechanisms for moving from near-coastal to ocean-going operations via efficient skilling pathways would support enhanced career opportunities for seafarers.



ACCESS TO TRAINING

Seafarer training is affected by the scarcity of training berths, which is due to the decline of blue-water vessels within the Australian fleet. Finding a solution to the shortage will be a priority for the industry.

A recent announcement by Great Southern Shipping Australia and Rizhao Port Group, indicates intentions to bring five container ships under the Australian flag. What this means for potential training berths is still to be seen, but may assist the training industry⁴.

Variations in jurisdictional funding and traineeship arrangements are reported as impacting the viability of delivering training in a narrow market for specialist technical areas. Longer term this situation may lead to capacity constraints for industry and training organisations alike. These conditions present challenges for Registered Training Organisations (RTOs) when considering future investment in training infrastructure and equipment, particularly those involved in new technology.



**EMPLOYMENT
FRONT PAGE**

SKILLS OUTLOOK

A black and white photograph of a person on a boat, wearing a life jacket and handling ropes. The person is in the foreground, and the boat's deck and rigging are visible. The background shows the sea and a distant horizon.

**INTERNATIONAL
/ NATIONAL
WORKPLACE
TRENDS**

A photograph of three men in business attire (shirts and ties) standing in a room with large computer monitors. They appear to be in a meeting or presentation. The image is overlaid with a semi-transparent magenta filter.

PRIORITY SKILLS

FRONT PAGE



SKILLS OUTLOOK

INTERNATIONAL / NATIONAL WORKPLACE TRENDS

The Maritime industry operates in a globalised network, shipping almost two thirds of the world's trade goods. The Asia Pacific region accounts for one third of this trade. The Maritime industry is highly competitive as organisations compete for market dominance within a growing industry. Locally, these markets also include fishing and aquaculture, tourism, patrol, and rescue operations.

Many organisations are seeking productivity gains through improved use of technology and systems. Robotics, big data, and biotechnologies are all contributing to new innovations in propulsion and powering, smart ships and autonomous systems and ocean mining and marine biotechnologies.

There is global demand for highly qualified personnel who can work and innovate with these technologies. The provision of specialist skills in robotics, design, engineering, and big data analytics will need appropriate training and capacity building.

FUNDING

Variations in jurisdictional funding and traineeship arrangements are reported as impacting the viability of delivering training, in particular for narrow markets and in specialist technical areas. Longer-term this situation may lead to capacity constraints for employers and training organisations alike. These conditions also present challenges for RTOs and when considering future investment in training infrastructure and equipment, particularly those involved in new technology.



PRIORITY SKILLS

MARITIME TECHNICAL SKILLS

Australian Industry Standards has developed a list of technical skills from analysis of the qualifications in the Maritime Training Packages.

These skills can be grouped into six categories:

1. Regulations and Port Operations
2. Manoeuvring Vessels
3. Marine Engineering
4. Marine Surveying
5. Seamanship
6. Watchkeeping

An overwhelming number of IRC responses indicated that Maritime Technical Skills were the highest priority for the Industry.

GENERIC SKILLS

Ranking of the 12 generic workforce skills in order of importance to the Maritime Industry.

Skill	Priority
Managerial / Leadership	1
Design mindset / Thinking critically / System thinking / Solving problems	2
Communication / Virtual collaboration / Social intelligence	3
Learning agility / Information literacy / Intellectual autonomy and self-management	4
Language, Literacy and Numeracy (LLN)	5
Technology	6
Science, Technology, Engineering, Mathematics (STEM)	7
Environmental and Sustainability	8
Financial	9
Customer service / Marketing	10
Data analysis	11
Entrepreneurial	12

16 per cent of Maritime IRC responses indicated that Generic Skills were more important than Technical Skills.



CROSS-SECTORAL SKILLS

A list of cross-sector skills was derived from analysis of the qualifications in the Transport and Logistics, Aviation and Maritime Training Packages.

The five most important cross-sectoral workforce skills are listed below in order of importance to the Maritime Industry.

Skill	Priority
Safety	1
Equipment and Systems Operations	2
Cargo/Load Handling	3
Equipment Testing and Maintenance	4
Administration	5

13 per cent of IRC responses indicated that the five most important Cross-Sectoral workforce skills were more important than Technical Skills.



MARITIME SKILLS - RELATED INSIGHTS

The Maritime Industry had an estimated annual revenue of \$9.3 billion, adding \$3.7 billion to the Australian economy in 2015-16. While Australian flagged freight ships are in decline, Australia has the fourth largest cruise market in the world which is expected to grow further.

Seafarer training is affected by the scarcity of training berths, which is due to the decline of blue-water vessels within the Australian fleet. Stagnation in the growth rate of the Australian mineral and energy commodities sector has had a pronounced effect on shipping activity.

Longer-term trends forecast that container throughput will double by 2030, with a decline in Australia's manufacturing industry expected to see an increase in maritime freight movements into the country.

There has also been significant growth in the cruise liner sector within Australia, with a six-fold increase of passengers over the past decade. Jobs growth within this sector is likely to increase to meet the demand.

The Maritime Industry Reference Committee (IRC) has overwhelmingly indicated that Maritime Technical Skills are the highest priority for the Industry. It has highlighted the need for a balance of technical and safety-related skills to prepare the workforce for current and future challenges. Technical skills focus on areas related to Regulations and Port Operations, Manoeuvring Vessels, Marine Engineering, Marine Surveying, Seamanship and Watchkeeping.

Industry stakeholders noted the reducing number of Australian-flagged ships, the ageing of the maritime workforce, and issues relating to engaging and training the existing workforce in new technology.

Safety management, risk assessment and emergency response skills are identified as being critical to maintaining Australia's safety for those in the Maritime industry.

Environment sustainability skills, particularly in areas of pollution prevention, need to be addressed to ensure Australian seafarers can maintain the current high level of environmental protection which will in particular benefit Australia's aquaculture industries.

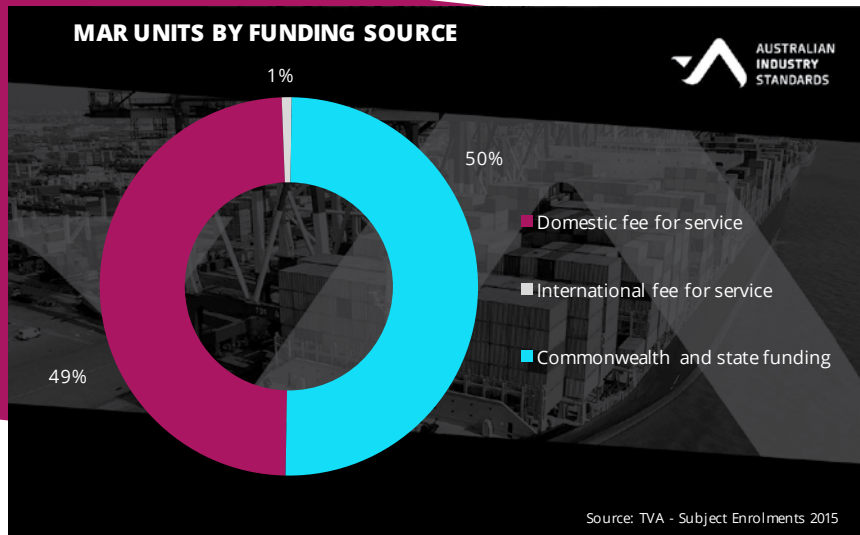
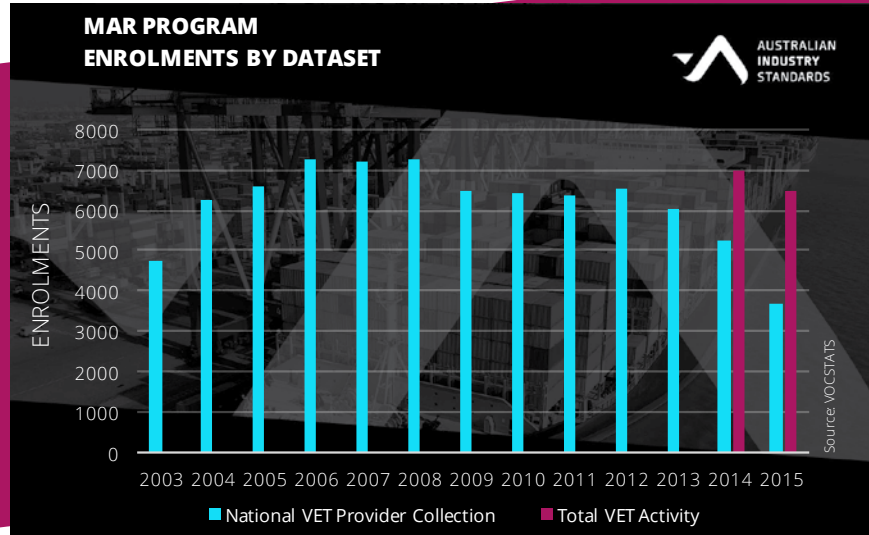
From 1 July 2017 new Federal regulations aimed at revitalising the Maritime industry come into force. There is an ever present tension between meeting regulatory compliance requirements and maintaining global competitiveness in a tight market.

Operational activity will change over coming decades and companies will need to invest in education and training of their people. Over the next decade, technologies will continue to evolve and further integrate operations. The provision of specialist skills in robotics, design, engineering and big data analytics will need appropriate training and capacity building.

The industry is supported by the MAR Maritime Training Package consisting of a range of ocean-going and near-coastal qualifications. Total VET activity figures show a decline in enrolments in recent years, the increased use of technology and forecast workforce growth will see this decline arrested.



The decline in enrolments since 2012 corresponds to the decline in mining activity over the same period.



Funding for Maritime units in 2015 was split almost exactly between Government and Industry.



Australia's maritime workforce is one of the oldest in the country, with 65 per cent of workers 45 years or older. The capacity to successfully attract, train and retain young workers will be critical in meeting the skill needs of the industry and for the workforce to confront the challenges of a changing sector.

The decline in the Maritime workforce since the early 2000s is being moderated by an increase in passenger transport. In the near term, the total workforce is expected to increase by 5 per cent in the coming five years. Part-time work has grown from 5 per cent to nearly 20 per cent in 30 years, and the number of women in the workforce has tripled over the same period.

EXPLANATORY NOTES

The Training Enrolments charts compare two datasets; the **National VET Provider Collection** and the **Total VET Activity (TVA)** dataset. The primary distinction between the two is that Total VET Activity data is collected from all types of providers and not only those in receipt of Commonwealth or state funding. TVA data collection commenced in 2014.

Exemptions

Where the submission of training data to TVA conflicts with defence or national security legislation, or jeopardise the security or safety of personnel working in defence, border protection, customs or Australian police departments, an exemption from reporting training data is available.

Organisations that deliver training for vital services to the community (such as emergency, fire, first-aid and rescue organisations) may have received an exemption to submit data to TVA. From 1 January 2016 however, the exemption from reporting will apply only in respect of training activity not delivered on a fee-for-service/commercial basis.



REFERENCES

INDUSTRY CHALLENGES AND OPPORTUNITIES

¹ Lloyd's Register, QinetiQ and University of Southampton. August 2015. Global Maritime Technology Trends 2030.

WORKFORCE SUPPLY-SIDE CHALLENGES AND OPPORTUNITIES

² Australian Government Job Outlook. <http://joboutlook.gov.au/occupation.aspx?search=alpha&tab=stats&cluster=&code=2312>

³ TLISC 2015 Environmental Scan.

⁴ Fully Loaded. Container shipping initiative challenges longhaul road and rail. Accessed August 2016. <http://www.fullyloaded.com.au/industry-news/1605/container-shipping-initiative-challenges-longhaul-road-and-rail/>

MARITIME TRAINING PACKAGE REVIEW PLAN 2016/17 - 2019/20

REVIEW PLAN – TIMING AND PRIORITISATION

The Maritime IRC has identified an approach to the review and development priorities of the MAR Training Package, that will be flexible and enable rapid response to additional industry and regulatory requirements identified within this period. The review priorities will be re assessed annually by the Maritime IRC.

2016 – 2017

The training product identified for review and development in the 2016 Workplan will maintain its priority in this first year. The Maritime Training Package review to incorporate the Australian Maritime Safety Authority (AMSA) regulatory requirements will commence phase one in this year and phase 2 will be initiated and completed in the following year. This development work has a direct correlation to 24 qualifications, and has been split into Near Coastal and Standards of Training, Certification and Watchkeeping (STCW). This aligns with the repeal of the Marine Order 506, that currently addresses AMSA requirements currently not included in the MAR Training Package. Extensive stakeholder consultation will be required.

The maintenance relating to imported units contained within the Maritime Training Package will be addressed in the first year, and in consultation with the relevant Skills Service Organisation.

Training Package review in year one comprises of:

- MAR10413 - Certificate I in Maritime Operations (Coxswain Grade 2 Near Coastal)
- MAR10313 - Certificate I in Maritime Operations (General Purpose Hand Near Coastal)
- MAR20313 - Certificate II in Maritime Operations (Coxswain Grade 1 Near Coastal)
- MAR20413 - Certificate II in Maritime Operations (Marine Engine Driver Grade 3 Near Coastal)
- MAR30813 - Certificate III in Maritime Operations (Marine Engine Driver Grade 2 Near Coastal)
- MAR31013 - Certificate III in Maritime Operations (Master Inland Waters)
- MAR30913 - Certificate III in Maritime Operations (Master up to 24 metres Near Coastal)
- MAR40513 - Certificate IV in Maritime Operations (Marine Engine Driver Grade 1 Near Coastal)
- MAR40613 - Certificate IV in Maritime Operations (Master up to 35 metres Near Coastal)
- MAR50613 - Diploma of Maritime Operations (Marine Engineering Class 3 Near Coastal)
- MAR50713 - Diploma of Maritime Operations (Master up to 80 metres Near Coastal)

2017 – 2018

The review and development of the identified qualifications (see below) will require widespread stakeholder consultation on the appropriateness and flexibility of the current qualifications. The AMSA review project commenced in year one of the workplan will continue as phase two in this year. The development of a qualification and skill sets for regulatory requirements will occur in this year. It also includes industry skill sets required to meet specific industry specialised skills identified.



Training Package review in year two comprises of:

- MAR30115 - Certificate III in Maritime Operations (Marine Engine Driver Steam)
- MAR30215 - Certificate III in Maritime Operations (Marine Surveying)
- MAR30415 - Certificate III in Maritime Operations (Marine Cookery)
- MAR30116 - Certificate III in Maritime Operations (Integrated Rating)
- MAR40115 - Certificate IV in Maritime Operations (Marine Surveying)
- MAR40116 - Certificate IV in Maritime Operations (Chief Integrated Rating)
- MAR50115 - Diploma of Maritime Operations (Engineer Watchkeeper)
- MAR50215 - Diploma of Maritime Operations (Marine Surveying)
- MAR50315 - Diploma of Maritime Operations (Watchkeeper Deck)
- MAR50415 - Diploma of Maritime Operations (Master up to 500 GT)
- MAR60115 - Advanced Diploma of Maritime Operations (Marine Engineering Class 2)
- MAR60215 - Advanced Diploma of Maritime Operations (Marine Engineering Class 1)
- MAR60315 - Advanced Diploma of Maritime Operations (Master Unlimited)
- MAR40115 - Certificate IV in Maritime Operations (Marine surveying)
- MAR50215 - Diploma of Maritime Operations (Marine Surveying)

Training Package development in year two comprises:

- Electrical Trade Officer qualification (ETO) to address Marine Order (MO) 70 and 72
- Skill sets and new units of competency for:
 - the International code of safety for ships operating in polar waters incorporating STCW Table A-V/4-1 and 2
 - Able Seafarer Deck and Able Seafarer Engine
 - Roll on roll off freight

2018 - 2019

Training products requiring review and development to address regulatory requirements or industry skill needs will be addressed in the third year of the review plan.

Training Package development in year three comprises of skill sets and new units of competency proposed for:

- compliance with the STCW convention concerning gas and low flashpoint fuels and to meet the development of vessels operating on LNG as the primary fuel
- compass adjuster's where currently there are no units of competency that comply with Marine Order 27
- dredging

Higher level skill sets and new units of competency are proposed for:

- chemical tanker cargo incorporating STCW Table A-/1-1-3 and MO70 endorsement
- liquefied gas tanker Skill Set incorporating STCW Table A-V/1-2-2 and MO70 endorsement
- oil tanker cargo Skill Set incorporating STCW Table A-/1-2 and MO70 endorsement



2019 - 2020

The remaining qualifications, skill sets and units of competency that have not been reviewed or had any development between 2016-2018, will be reviewed in this period.

The review will examine all stakeholder feedback and involve consultation with stakeholder groups, including regulatory bodies, on the appropriateness and flexibility of the current qualifications.

With the increasing use and development of robotics and design engineering, it will be imperative that these specialist skills are considered in the Training Package review enabling industry to obtain the benefits associated with this new technology.

Units of competency that are in multiple qualifications or skill sets may require to be reviewed more than once in a four-year period, due to the initial review of MAR Training Package to incorporate the regulators (AMSA) training requirements. Specific industry skill requirements, new technology or Marine Orders may also instigate further review or development within this workplan period.

Regulatory Requirements

The Maritime Training Package has built into the qualifications, skill sets and units of competency the requirements of the Australian Maritime Safety Authority (AMSA). These are in the form of Marine Orders or a direct relationship to the Standards of Training Certification and Watchkeeping for Seafarers (STCW 95) Convention.

AMSA is responsible for monitoring ship, crew and coastal pilot compliance with maritime safety standards. The following have direct links to the current MAR Training Package:

- Providing occupational health and safety inspectorate services under the [Occupational Health and Safety \(Maritime Industry\) Act 1993](#).
- Ensuring safety training and maritime qualifications of crew on ships operating under the [Navigation Act 2012](#) meet the standards of the Standards of Training Certification and Watchkeeping for Seafarers (STCW 95) Convention.

Any Marine Order or regulatory change requirements identified, would take precedence over other reviews planned as these are often associated with higher workplace risk.

As Marine Orders or regulations are updated the Maritime Training Package and Companion volume will need to be amended.

The Maritime IRC has not identified any training product review or development work that is expected to be contentious or lengthy in development.



INTERDEPENDENCIES

The Maritime Training Package qualifications include imported units of competency, within core and elective qualification packaging rules.

Industry sector interdependencies that will potentially initiate future MAR qualification and/or skill set reviews include imported units from 11 separate Training Packages (inclusive of predecessors).

- AUR12 - Automotive Industry Retail, Service and Repair Training Package
- BSB - Business Services Training Package
- CHC - Community Services
- HLT - Health
- MEM05 - Metal and Engineering Training Package
- MSA07 - Manufacturing Training Package
- PSP04 - Public Sector Training Package
- PUA00 - Public Safety Training Package
- SIT12 - Tourism, Travel and Hospitality Training Package
- TAE10 - Training and Education
- TLI - Transport and Logistics Training Package

Two Training Packages import units from the Maritime Training Package:

- TLI - Transport and Logistics Training Package
- SFI11 - Seafood Industry Training Package

Training Product Review Plan – 2016/17 – 2019/20
Maritime Industry Reference Committee
Contact details: GM IRC Operations, Australian Industry Standards
Date submitted: 30 September 2016

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2016 - 2017	MAR – Maritime Training Package		MAR10313	Certificate I in Maritime Operations (General Purpose Hand Near Coastal)	(Phase 1 & 2)	<p>The AISC have agreed to commission the Maritime IRC to develop a business case to review and amend the MAR Training Package to address the AMSA requirements Marine Order 506, Marine Order 505 and NSCV Part D.</p> <p>Marine Order (MO) 506 requires RTOs delivering near coastal qualifications to apply to AMSA for approval and specifies on-going approval for a qualification to be accepted by AMSA for near coastal certification.</p> <p>To reduce regulatory burden AMSA will repeal MO506 and work with the Australian Skills Quality Authority (ASQA), the Victorian Registration and Qualifications Authority (VRQA) and the Training Accreditation Council Western Australia (TAC) to regulate the domestic maritime VET sector. The repeal of MO506 will allow VET Regulators to undertake this function, currently undertaken by AMSA.</p> <p>To enable a smooth transition from the current arrangement to the proposed arrangement there needs to be a review of the Near Coastal qualifications and relevant units of competency.</p>
			MAR10413	Certificate I in Maritime Operations (Coxswain Grade 2 Near Coastal)		
			MAR20313	Certificate II in Maritime Operations (Coxswain Grade 1 Near Coastal)		
			MAR20413	Certificate II in Maritime Operations (Marine Engine Driver Grade 3 Near Coastal)		
			MAR30813	Certificate III in Maritime Operations (Marine Engine Driver Grade 2 Near Coastal)		

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2016 - 2017	MAR – Maritime Training Package		MAR30913	Certificate III in Maritime Operations (Master up to 24 metres Near Coastal)	<p>This process will update and align qualifications with the certification requirements for licencing and support consistent delivery and assessment.</p> <p>It is anticipated that this review and development work will include but is not limited to:</p> <ul style="list-style-type: none"> Reviewing and update units to include certification and licensing. Amending assessment requirements to strengthen and add rigor. Remove any ambiguity in assessments. Inclusion of a final assessment The specification of minimal physical resources required for the assessment <p>Note: Business Case development has commenced</p>	
			MAR31013	Certificate III in Maritime Operations (Master Inland Waters)		
			MAR40513	Certificate IV in Maritime Operations (Marine Engine Driver Grade 1 Near Coastal)		
			MAR40613	Certificate IV in Maritime Operations (Master up to 35 metres Near Coastal)		
			MAR50613	Diploma of Maritime Operations (Marine Engineering Class 3 Near Coastal)		

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2016 - 2017	MAR – Maritime Training Package		MAR50713	Diploma of Maritime Operations (Master up to 80 metres Near Coastal)		
2017 - 2018	MAR – Maritime Training Package		MAR30115	Certificate III in Maritime Operations (Marine Engine Driver Steam)		
			MAR30215	Certificate III in Maritime Operations (Marine Surveying)		
			MAR30415	Certificate III in Maritime Operations (Marine Cookery)		
			MAR30116	Certificate III in Maritime Operations (Integrated Rating)		

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2017 - 2018	MAR - Maritime Training Package		MAR40115	Certificate IV in Maritime Operations (Marine Surveying)		
			MAR40116	Certificate IV in Maritime Operations (Chief Integrated Rating)		
			MAR50115	Diploma of Maritime Operations (Engineer Watchkeeper)		
			MAR50215	Diploma of Maritime Operations (Marine Surveying)		
			MAR50315	Diploma of Maritime Operations (Watchkeeper Deck)		

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2017 - 2018	MAR – Maritime Training Package		MAR50415	Diploma of Maritime Operations (Master up to 500 GT)		
			MAR60115	Advanced Diploma of Maritime Operations (Marine Engineering Class 2)		
			MAR60215	Advanced Diploma of Maritime Operations (Marine Engineering Class 1)		
			MAR60315	Advanced Diploma of Maritime Operations (Master Unlimited)		
2017 - 2018	MAR – Maritime Training Package		New Qualification - Electrical Trade Officer qualification (ETO) to address MO70 and 72		Develop a qualification for ETOs. There is currently no MAR qualification for ETOs. AMSA (Regulator) has provided an interim position for industry until the qualification can be developed.	

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2017 - 2018	MAR – Maritime Training Package			New units of competency and skill set development		Develop new units of competency to create a skill set to address Marine Order 70 and 73 (2014), under the Navigational Act 2012. Able seafarer Deck and Able Seafarer Engineer are not covered in the current MAR Training Package.
						Develop new units of competency to create a skill set for Roll on Roll off and passenger ship operations incorporating STCW Table A-V1/2 to meet industry needs and regulatory compliance.
						Develop new units of competency to create a skill set for international code of safety for ships operating in polar waters incorporating STCW Table A-V/4-1 and 2. This will be a mandatory regulatory requirement from July 2018.
						Review the General Purpose Hand (Near Coastal) qualification and develop skill sets and units of competency for incorporation into the qualification that are required in the sectors of the industry covered by legislation.
2018 – 2019	MAR – Maritime Training Package		MAR40115	Review the Certificate IV in Maritime Operations (Marine surveying)		Review the Certificate IV in Maritime Operations (Marine surveying) and Diploma of Maritime Operations (Marine Surveying). Concerns raised by the Australasian Institute of Marine Surveyors (AIMS) that the Certificate IV does not adequately address the training needs of

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2018 – 2019	MAR – Maritime Training Package		MAR50215	Diploma of Maritime Operations (Marine Surveying)		industry and the assessment requirements in the units of competency need amending.
2018 – 2019	MAR – Maritime Training Package		Review relevant units of competency			Deck and Engineer officers, leadership and management skills development units of competency review to ensure leadership and management conventions are included.
						Global Maritime Distress and Safety System (GMDSS). Review existing relevant units of competency that incorporate GMDSS and develop new units to reflect current industry and regulatory requirements.
2018 – 2019	MAR – Maritime Training Package		New units of competency and skill set development			Develop new units of competency to create a skill set for dredging. This skill set will provide the skills and knowledge required to assist in the operation of a dredge and carry out under general direction all required operational, maintenance and safety procedures required for the effective and safe operation of the dredge.
						Develop new units of competency to create a skill set at a higher level, oil chemical tanker cargo skill set incorporating STCW Table A-1/1-3 and MO70 endorsement. There is currently nothing in the MAR package to meet the required industry skills needed.

Planned review start (Year)	Training Package code	Training Package name	Qualification code	Qualification name	Unit of competency code	Unit of competency name
2018 - 2019	MAR – Maritime Training Package					Develop new units of competency to create a skill set at a higher level liquefied gas tanker skill set incorporating STCW Table A-V/1-2-2 and MO70 endorsement. There is currently nothing in the MAR Training Package to meet the required industry skills needed.
						Develop new units of competency to create a skill set at a higher level oil tanker cargo skill set incorporating STCW Table A-/1-2 and MO70 endorsement.
2018 – 2019	MAR – Maritime Training Package		New skill set and new units of competency			Develop new units of competency to create a skill set at a for compliance with the STCW convention concerning gas and low flashpoint fuels and to meet the development of vessels operating on LNG as the primary fuel.
2018 – 2019	MAR – Maritime Training Package					Develop new units of competency to create a skill set for compass adjuster’s. Currently there are no units of competency that comply with Marine Order 27.
2019 – 2020	MAR – Maritime Training Package					Review all remaining qualifications within the MAR Training Package that have not been reviewed within the four-year period.

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Australian Industry Standards acknowledges the financial support received by the Commonwealth to operate as a Skills Service Organisation.