

AUSTRALIA'S CAPABILITY IN COMMERCIAL SHIPBUILDING AND SERVICES



Australian Government



Australia
UNLIMITED

Efic

Finance for
Australian
Exporters



Cover

Photo courtesy Aluminium Boats Australia

This page

Photo courtesy Spear Green Design

DISCLAIMER

Austrade and Efic do not endorse or guarantee the performance or suitability of any introduced party or accept liability for the accuracy or usefulness of any information contained in this presentation. Please use commercial discretion to assess the suitability of any business introduction or goods and services offered when assessing your business needs. Austrade and Efic do not accept liability for any loss associated with the use of any information and any reliance is entirely at the user's discretion.

©Commonwealth of Australia 2017

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without prior written permission from the Commonwealth, available through the Australian Trade and Investment Commission. Requests and inquiries concerning reproduction and rights should be addressed to the Marketing Manager, Austrade, GPO Box 5301, Sydney NSW 2001 or by email to Marketing-Comms-Helpline@austrade.gov.au

Publication date: December 2017



INNOVATIVE, EFFICIENT AND HIGH QUALITY

Photo courtesy of Aluminium Boats Australia

> INTRODUCTION

INDUSTRY OVERVIEW

GOVERNMENT AND INDUSTRY ASSOCIATIONS

FURTHER INFORMATION

Australia, as an island continent, has had the sea as its lifeblood and maritime expertise was developed through necessity.

Today, Australia's maritime industry is renowned for its innovation and flexibility, with the appetite and ability to tackle unique challenges. Australian designs, manufacturing processes and concepts reflect a technologically-forward and outwardly-focused industry.

Australian commercial marine companies are advanced, experienced and offer world-class safety and manufacturing standards. Australian engineers and designers are highly trained and adaptable, and offer innovative solutions to complex problems.

The results of these abilities are vessels that are winning international awards for both quality and effectiveness.

The industry offers leading-edge capabilities from design to manufacturing, supported by in-country fabricators, outfitters and component/systems manufacturers. The combined capability ranges from small tourism and work boats through to the world's fastest ships.

Australia is continuing to see investment in the marine sector, and there are a healthy number of designers, shipbuilders, refit and repair yards and equipment suppliers with capabilities to contribute to this growing sector.



INTRODUCTION

> INDUSTRY OVERVIEW

GOVERNMENT AND INDUSTRY ASSOCIATIONS

FURTHER INFORMATION

The Australian marine industry is made up of the commercial, recreational, and naval sectors. Australian shipbuilders have an impressive record of efficiency and innovation, with Australian-made ferries, super yachts, patrol boats, fishing boats, and recreational vessels operational worldwide.

Australia's shipbuilding and maintenance repair overhaul (MRO) sector is made up of approximately 470 organisations that cater for both the defence and commercial market. With revenue set to grow at 4.3 per cent, the sector is expected to generate \$3.8 billion in revenue during the 2017-18 financial year, with exports valued at \$251.7 million¹.

Australia's commercial marine industry offers diversified capabilities, comprising of small, medium and large-sized facilities situated across the country. Factors that contribute to the industry's success include effective quality control systems, excellent through-life support and after-sales support arrangements.

Australian-built vessels are renowned for their sea ferrying capabilities, fuel economy, innovation, ingenuity and workmanship. These capabilities, along with a reputation for providing practical solutions to challenging marine situations, are the hallmarks of Australia's maritime industry.

Australian-built ferries, for example, are world-renowned and a number of Australian firms such as Austal, Incat and Strategic Marine are leading ferry manufacturers. Incat Tasmania has the distinction of being the builder of the world's fastest ship, which is fuelled by LNG and is of super-light construction.

The offshore support vessel (OSV) industry has grown rapidly in size and vessel range. Australian-built OSVs can be found servicing offshore tasks as far away as the North Sea, with great success.

Work boats are essential for various operational needs and often have to be customised to suit specific purposes.

Australia's competitive advantage comes from investment in innovation and in research and development, including access to the latest and most efficient technology and manufacturing techniques².

INTRODUCTION

> INDUSTRY OVERVIEW

GOVERNMENT AND INDUSTRY ASSOCIATIONS

FURTHER INFORMATION

The Commonwealth Science and Industrial Research Organisation (CSIRO) is at the cutting-edge of transformational technology in Australia's manufacturing industry. In response to a request from a leading cable manufacturer, Olex, CSIRO developed a plastic cable coating, a polymer, which transforms into a fire-proof ceramic in a fire. This protects electrical circuits for alarms, pumps and fans vital for safe evacuation and firefighting, and could keep electricity flowing in a fire at temperatures above 1000°C. In addition, all the materials in the cable have low calorific value, which prevents a fire from advancing or spreading and minimises smoke and hazardous gas emissions. Ceramifying polymers could transform fire prevention in ships.

From the complex software used to ensure the world's largest ships don't touch the sea bed, to seemingly simple devices to make vessel handling easier, many of the latest innovations in the industry have an Australian pedigree.

The Australian marine industry offers

- product design and development capabilities
- cutting edge manufacturing technologies
- superior repair and refit facilities
- internationally renowned marine architects and marine consultants
- ship/boat/yacht builders
- manufacturers of a range of marine equipment and accessories.

Australian marine equipment and accessory manufacturers have also gained global recognition for a diverse range of marine hardware, components and accessories, including marine ropes, winches, radars, buoyancy aids, autopilots and dock flotation systems.

Australian success stories include Muir, which exports windlass and anchoring systems to 50 countries around the

world for recreational, commercial and military purposes; and VEEM, an engineering company known for, among other products, gyro-stabilisers and propellers for the marine, oil and gas, aerospace and defence industries.

A company at the forefront of maritime safety is Liferaft Systems, whose liferafts and survival products are well known and used worldwide by recreational, commercial and military customers.

There is some cross-over between the recreational and commercial industries – particularly at the higher end of the market, where huge super yachts and luxury vessels are often built for commercial purposes. Fit out and refit expertise, as well as component design and operating systems, are most likely to service both markets.

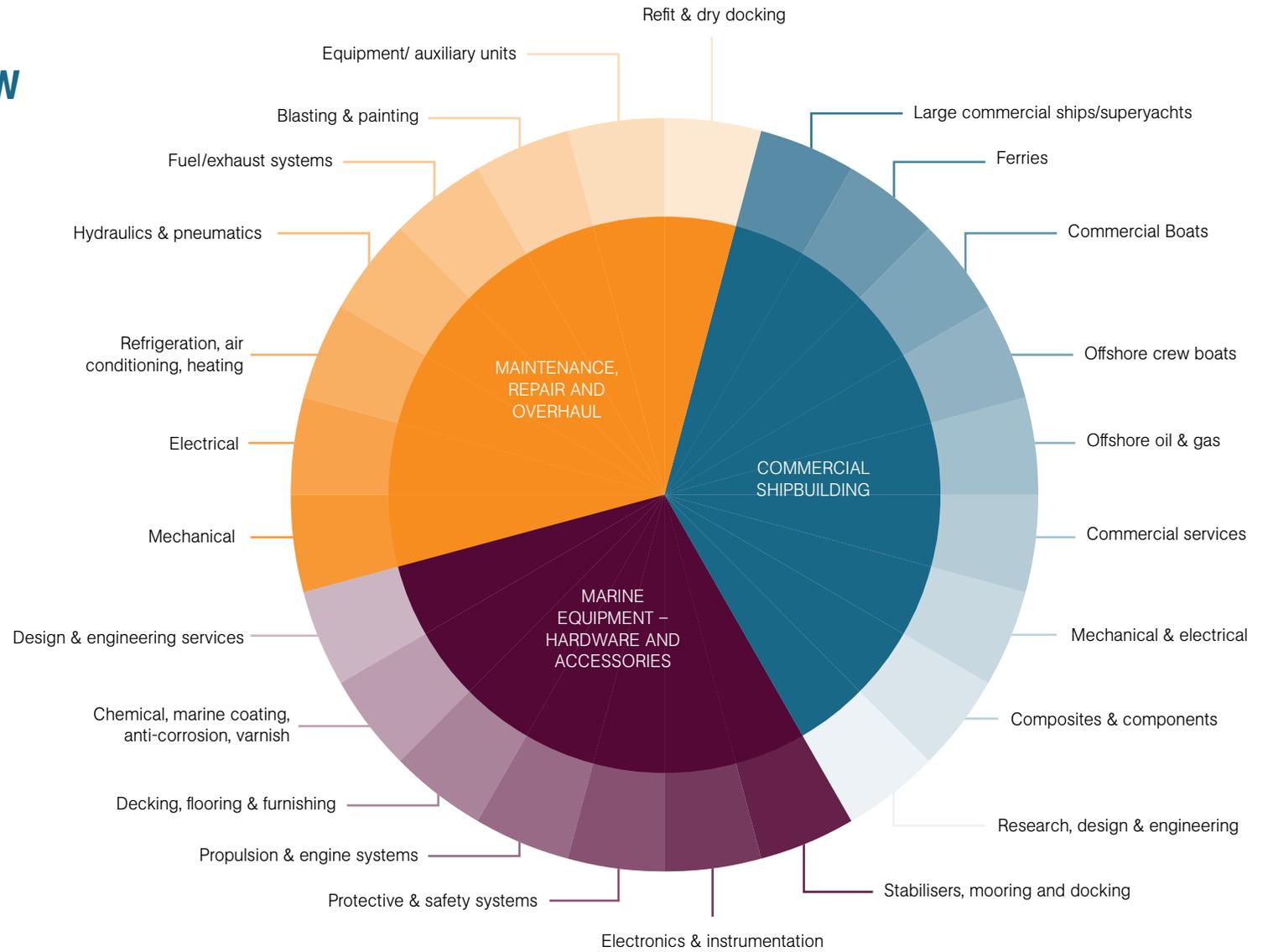
The case studies on the following pages further highlight the ability and diversity of the Australian industry.

INTRODUCTION

> **INDUSTRY OVERVIEW**

GOVERNMENT
AND INDUSTRY
ASSOCIATIONS

FURTHER
INFORMATION



INTRODUCTION

> **INDUSTRY OVERVIEW**

GOVERNMENT
AND INDUSTRY
ASSOCIATIONS

FURTHER
INFORMATION

Australian Government Assistance

The Australian Government is committed to helping international maritime companies take advantage of Australia's unique capabilities.

The Australian Government provides support to Australian businesses and buyers of Australian exports through its specialist agencies – Austrade and Efic.

The two agencies provide customer-centric services and solutions to engage and work with Australia's world-leading shipbuilding industry, and their international clients and business partners.

Austrade helps companies around the world to connect with the Australian shipbuilding industry and can introduce international buyers to Australian shipbuilders, suppliers and service providers.

Efic is a specialist financier, offering buyer finance solutions to help international businesses invest in Australia's high-quality shipbuilding products and services.

Both Austrade and Efic have worked with some of Australia's leading shipbuilding brands, such as Austal and Incat. These - and other case studies in this brochure - demonstrate the depth of Australia's expertise in this highly specialised segment.

For more information about Austrade and Efic's services and solutions turn to pages 33 & 35 or visit

Austrade.gov.au

Efic.gov.au

Case Study:
AirBerth boat lift storage systems

AirBerth's innovative boat lift system is designed to protect boats from the harsh marine environment; raising the boat out of the water to prevent fouling on the hull and saving metal parts from electrolysis.

The AirBerth is the ultimate in boat protection for commercial applications and has been associated with leading government associations and commercial operators around the world.

The company is the winner of the 2015 Maritime Australia Limited Industry Innovation Award and it's easy to see why. The AirBerth boat lift system's unique innovative capability is based on its robust design combined with its use

of heavy duty UV stabilised High Density Polyethylene (HDPE). The patented flexible cradle evenly distributes the weight of the vessel, ensuring maximum stability, even in adverse weather conditions. Importantly, it can also be operated by a single person.

The AirBerth system saves the customer time and money in maintaining the vessel and is estimated to have a 50-plus year lifespan. Corrosion is not a factor and marine growth has no impact, and AirBerth eliminates the need to use toxic anti-fouling paints, which have well-documented adverse effects on the environment.

The boat lift system is suitable for vessels up to fifteen metric tonnes, as well as multi-hull vessels such as catamarans.

AirBerth boat lift systems have a proud export history emphasising the reliability and strong reputation of the product and company.

Key AirBerth customers include the United States (US) Navy, US Coast Guard and the Australian Border Force.

AirBerth is the preferred system for commercial and maritime users as it maximises vessel deployment time, as well as the number of days a vessel is available for deployment.

airberth.com





Photo courtesy of AirBerth

Case Study:
Ranger and Akuna IV, Hart Marine

When Melbourne's Port Philip Sea Pilots (PPSP) decided to replace their ageing fleet of pilot boats in 2010, they didn't have to look very far.

All-weather boats that could withstand the rough seas of Bass Strait and The Rip, the notoriously difficult entrance to Port Phillip Bay, were sourced just across the bay in Mornington, where Hart Marine builds the ORC pilot boat.

Designed by French naval architecture firm Pantocarene, the ORC craft is of fibre-reinforced plastic (FRP) construction and boasts a self-righting capability.

The futuristic Pantocarene design focuses on safety, comfort and functionality for pilots and coxswains. The wheelhouse is carried on specialised vibration isolation mounts,

lessening the impact of residual vibration. This improves working conditions for the vessel's crew and passengers. The distinctive beak bow is designed for wave piercing to reduce vertical accelerations, adding to pilot comfort, and to give early gaining of buoyancy when the bow dips in a following sea.

The hull form minimises the 'Venturi effect', where pressure differentials suck a pilot boat's hull to the side of a ship, allowing for pilot transfer at greater travelling speeds. The unique fendering system softens contact between pilot boat and ship, which increases the lifespan of the vessel and makes transit easier for pilots. Coxswains enjoy the increased manoeuvrability afforded by oversized rudders.

PPSP initially ordered two vessels from Hart Marine, the 14.4 metre Ranger and the 18.1 metre Akuna IV. Since then, Hart Marine has built another two vessels for PPSP, with a third to be delivered in 2016.

Eight ports around Australia, plus another in New Zealand, have since chosen pilot boats from Hart Marine.

hartmarine.com.au





Photo courtesy of Hart Marine

Case Study:
Harwood Slipway, Harwood Marine

Harwood Marine closed their northern NSW Shipyard in October 2014 and carried out a complete rebuild/refurbishment of the slipway in-water foundations.

This was achieved by building a sheet pile wall at the entrance of the cutting, and pumping all of the water out, to expose the old slipway foundations built in 1969. All historical contaminants were removed under Environmental Protection Authority guidance and the old foundations were demolished and replaced.

The finished slipway was reopened in January 2017, with an in-water foundation structure certified to 12,800 tonne, a cradle strength of 8,800 tonne, and an estimated structure working life of 80 years.

Harwood Marine have invested heavily in their facility, with the recent upgrades and with the acquisition of nearly 200 acres of adjoining vacant land, with approximately 1.5 kilometres of deep water frontage on the Clarence River in the international-declared Port of Yamba.

Recent projects include heavy engineering and marine support for the local A\$4.3 billion Pacific Highway upgrade and new 1.4 kilometre long Harwood Bridge, construction of two new aluminium ferries for Captain Cook Cruises Sydney, as well as regular cliental and vessel surveys.

Future works include US Navy Defence contracts, construction of four cargo passenger ships for a European client, and various vessel conversions and refits.

Harwood Marine has been working internationally with the RDE Corporation in Japan on a CO₂/Fuel reduction green technology that utilises air lubrication with microbubbles, and are now in negotiations to fit this system on a Japanese Cargo ship under a joint venture with the inventor of the technology RDE Japan.

The Harwood Slipway is one of the largest shipyards on the East Coast of Australia, and is centrally located, to be a very strategic Australian Defence Force sustainment hub to ensure adequate vessel servicing for our South Pacific border force vessels.

harwoodmarine.com.au





Photo courtesy of Harwood Marine

Case Study:

Spear Green Design – International Marine Interiors Specialists

Two new passenger ferries bound for China will shortly enter service in the Hong Kong region with luxurious interiors designed by Sydney's Spear Green Design.

The two Australian designed 40 metre, 200 passenger vessels will service well-established passenger transfer routes to mainland China. They will boast leading-edge lighting effects and superior levels of comfort, with business class passengers able to recline in fully leather upholstered luxury.

Economy class passengers will also enjoy the opulence of leather in their aircraft-style reclining seating. The ferries have kiosks, modern LED controllable lighting features and superior amenity and efficient traffic flow features, along with environmentally responsible finishes

and equipment specified by Spear Green. The interiors are practical, functional, robust and beautifully unique, stylish and modern.

These ferries are just two examples of the state-of-the-art interiors being created in Australia for some of the world's premium vessels. Spear Green Design are experts at computer aided design – allowing the customer to visualise the finished result in an extremely realistic way.

As well as the Chinese ferries for Hong Kong, Spear Green, which specialises in marine interior design for new-build and re-fit projects has also recently completed design and specification works for several other vessels being built and due for launch in Q1 2018. These include the marine interiors and exterior styling for a 56m / 692

passenger vessel for Helgoland in Germany, built by Austal Ships of WA and a stunning and unique hybrid powered luxury tourism vessel for Tasmania, being built in Hobart. All will incorporate high levels of comfort, features and amenity and will utilise technology transferred from the aviation industry to ensure ultimate passenger comfort.

The vessels will also share the Spear Green Design trademark of Code Compliance and Lightweight Fitout, which results in greater efficiencies and reduced fuel burn over the life of the vessel. Their cutting-edge finishes and environmentally responsible furniture, fittings and equipment specification will help the vessel owners gain market share in a competitive environment.

Spear Green believes in the quality of product available in the Australian supply chain, and utilises it whenever possible. All of which means that for those travelling or working in a Spear Green designed interior, Australian marine design has never been better.

speargreen.com.au





Image courtesy of Spear Green Design

Case Study:

Creating bespoke luxury superyachts – Echo Yachts

Echo Yachts, an Australian superyacht builder based in Western Australia, is currently building an 84 metre aluminium trimaran superyacht and has recently completed a 46 metre resin-infused FRP catamaran explorer vessel.

Based at Echo Yachts' purpose-built waterfront manufacturing facilities, the 84 metre trimaran project is designed by Sorgiovanni Design and is the largest trimaran superyacht project globally. The trimaran is also the largest superyacht, as well as the first diesel electric superyacht, ever to be built in Australia.

M/Y Charley is a custom-designed and purpose-built catamaran using the latest in 5 axis CNC and vacuum resin infusion manufacturing technology. Built at Echo Yacht's superyacht manufacturing facility near Fremantle, Charley is the largest composite

resin-infused vessel ever to be built in Australia, with naval architecture performed by LoMocean.

The unique design of Charley provides extremely spacious interior and exterior accommodation and entertaining areas, a very large carrying capacity for a plethora of tenders and other water toys, plus superior sea keeping and fuel efficient performance.

Echo Yachts' in-house management, design and manufacturing team is comprised of experienced industry professionals. The team have many years of expertise gained from the world's leading shipyards and iconic superyacht projects.

Echo Yachts offer world-class experience, engineering, quality and attention to detail. The company are able to offer a full suite of vessel build options in aluminium, composite and

steel, in any mono, catamaran or trimaran hull form. In addition to full design and build flexibility, Echo Yachts offer numerous contract types to clients and designers, providing flexibility and value for money in the build process.

echoyachts.com.au





Image courtesy of Echo Yachts

Case Study:

Birdon delivers innovative bridge construction boats

Birdon Pty Ltd (Birdon) is a family-owned marine engineering business that provides a diversified range of services including shipbuilding and repair, dredging, and engineering and contracting services.

Birdon's innovative boats facilitate bridge construction and are road, air and sea transportable. They are used to construct and manage pontoon bridges for mobile armoured units, and are also used to ferry military vehicles across open water.

Birdon's US subsidiary, Birdon America Inc., won a contract for the construction of up to 374 Series II Bridge Erection Boats (BEBs) for the United States Army, with a contract value of up to

US\$261 million. This was a result of four years of design, tender submission and prototype trials, based on Birdon's work with the Australian Army.

Phase one of the contract involved the delivery of 25 BEBs. Following successful delivery, Birdon entered full production phase for up to a total of 374 BEBs. To help with the delivery of the project, Birdon established new manufacturing facilities in Denver, Colorado. The Australian division provided key technical direction.

With Birdon's Australian bank unable to provide support due to geographic restrictions, Birdon approached the Australian Government's export credit agency, Efic. Efic's Export Working

Capital Guarantee helped fund the start-up operations to support Birdon's contract for the manufacture and delivery of BEBs.

This provided Birdon with a global platform for controlled and profitable growth in international markets.

"Efic's approach to fully assess Birdon's capability, past contract performance and financial stability, was a determining factor in persuading the US Government to award the contract to Birdon."

Jamie Bruce, CEO,
Birdon Group of Companies

birdon.com.au



Photo courtesy of Birdon

Case Study:

Incat lightweight catamarans delivered in Europe

Incat Tasmania Pty Ltd (Incat) is a world-leading Australian shipbuilder known for its high-speed lightweight catamarans. Sitting at the cutting edge of environmentally friendly craft, Incat provide optimal lightweight ship solutions for ferry operators, special service providers and military.

Over the past 25 years, Efic, the Australian Government's export credit agency, has supported over 20 vessel financings for Incat, and has seen the business grow and develop over this time.

Incat secured export contracts for the delivery of two 100-plus metre, high-speed wave-piercing catamarans for European operators Virtu Ferries and Naviera Armas. The combined contract value was approximately EUR150 million.

One of the oldest ferry operators in the world, Virtu Ferries will be using the Incat vessel for their year-round lifeline service between Malta and the European Union.

Needing a vessel to navigate rough water conditions and offer their passengers the very best in reliability and comfort, Naviera Armas sought the qualities of Incat's wave-piercing catamaran for the Canary Islands.

Incat approached Efic to provide finance support for the delivery of the contracts. Efic was able to provide the supplier finance needed to help with the construction of the ferries and allow Incat to plan its forward orders.

"Efic's role in providing financial support is an important part of Incat's export business success. With a fast ferry market that is the best it has been for the past 10 years, we are aggressively pursuing new opportunities which will provide medium to long term certainty for our growing workforce well into the mid-2020s."

Robert Clifford,
Founder and Chairman, Incat

incat.com.au



Image courtesy of Incat

Case Study:
Austal ferry for Scandinavia

Austal Limited (Austal) is one of Australia's leading shipbuilders and defence prime contractors. Since 1988, Austal has delivered 266 vessels to more than 100 operators in 44 countries.

Efic, the Australian Government's export credit agency, has been helping Austal win export orders since 1994 and has helped fund 18 contracts, comprising a total of 33 vessels worth over A\$1.234 billion.

Austal secured a A\$108 million contract to design, build and sustain a new 109 metre high-speed catamaran for Fjord Line of Norway.

The all-aluminium ferry design incorporates key innovations including Austal's largest ever vehicle carrying

capacity of 404 cars, increased fuel efficiency and improved manoeuvring capability in strong winds.

The vessel will be operating on the Skagerrak Sea between Hirtshals, Denmark and Kristiansand, Norway. Passenger comfort was a key consideration for Fjord Line. Austal's vessel will provide customised layout and interior design focusing on delivering greater natural light, seating and public spaces – including retailing (duty-free store) and entertainment areas.

Needing financial support to deliver on the project, Efic provided Fjord Line with buyer finance to support vessel construction and purchase.

The contract from Fjord Line is Austal's eighth very large high-speed commercial ferry (over 100 metres in length). The vessel will join Fjord Line's fleet of four ferries operating in the Scandinavian region following delivery from Austal's Henderson, Western Australia, shipyard in January 2020.

"The support from Efic has helped Austal grow internationally through the provision of competitive finance for our customers and reliable, valuable advice and professional support whenever and wherever we needed it."

David Singleton, CEO,
Austal Limited

austal.com



Image courtesy of Austal

Case Study:
Marine Engineering ferries in Fiji

Marine Engineering Consultants (MEC) provide complete engineering services. They manufacture commercial vessels, aluminium catamarans, and can provide refit, repowers and project management services.

Since starting business 25 years ago, MEC has diversified its services from providing refits on pleasure and superyachts, to a business that is focused on boatbuilding. In the last ten years MEC has constructed 19 luxury and commercial aluminium catamaran ferries and charter vessels for the local and international market.

The business secured a contract with a cruise operator in Fiji for the supply of two 24-metre passenger catamarans worth a total contract value of about A\$7.4 million.

With long project delivery timelines and payment structures, MEC needed access to additional working capital to ensure it had the resources needed to deliver on the export contract.

Efic, the Australian Government's export credit agency, was able to provide support to the business through their online Small Business Export Loan. With fast access to funds, MEC were provided the help needed to successfully retain and expand their staff and facilities.

"Efic's support was critical in ensuring that we were able to continue to build our export business while delivering on our contract."

Murray Owen, Director,
Marine Engineering Consultants

marineeng.com.au





Photo courtesy of Marine Engineering

INTRODUCTION

INDUSTRY OVERVIEW

> GOVERNMENT AND INDUSTRY ASSOCIATIONS

FURTHER
INFORMATION

Australian Shipbuilding and Repair Group (ASRG) is the recognised peak industry body representing the Australian commercial, defence and other marine industry sectors. ASRG represents and promotes the capability of the Australian shipbuilding and repair industry sectors to the domestic and international market. The group circulates details of enquiries and potential export opportunities to all members, and provides professional advice relating to marketing and support and including exports, international banking, insurance, port security, legal, crew and other visas, tax including GST, environmental issues, and classification societies.
www.asrg.asn.au

Australian Commercial Marine Group (ACMG) represents a group of Australian companies involved in providing shipbuilding and repair facilities and services and associated marine products to the commercial and defence shipbuilding industries. ACMG develops and promotes Australia's international competitiveness in the commercial marine sector.
www.commercialmarine.com.au

The Department of Industry and Science is an Australian government department helping industry to become more efficient, competitive and innovative.
www.industry.gov.au

The Department of Industry, Innovation and Science (DoIIS) facilitates the growth and productivity of globally competitive industries, to help build a resilient and dynamic Australian economy. DoIIS works to achieve this goal by supporting science and commercialisation, growing business investment and improving business capability; and making it easier to do business in Australia.
www.industry.gov.au



INTRODUCTION

INDUSTRY OVERVIEW

GOVERNMENT
AND INDUSTRY
ASSOCIATIONS

> **FURTHER
INFORMATION**

REFERENCES

1. IBIS World (Nov 2016) Industry Report:
Shipbuilding and Repair Services
in Australia
[http://clients1.ibisworld.com.au/reports/au/
industry/keystatistics.aspx?entid=255#](http://clients1.ibisworld.com.au/reports/au/industry/keystatistics.aspx?entid=255#)
2. IBIS World (Nov 2016) Industry Report:
Shipbuilding and Repair Services
in Australia
[http://clients1.ibisworld.com.au/reports/
au/industry/competitivelandscape.
aspx?entid=255](http://clients1.ibisworld.com.au/reports/au/industry/competitivelandscape.aspx?entid=255)





Photo courtesy of BSE Maritime Solutions

ABOUT EFIC

EFIC – AUSTRALIA'S EXPORT CREDIT AGENCY

Efic is the Australian Government's export credit agency. It supports Australian exporters with tailored financial solutions to help them win business, grow internationally and achieve export success.

Efic works with a range of export businesses, from small to medium enterprises (SMEs) to large companies working on sizeable projects. Efic operates on a commercial basis and often works with banks to deliver solutions that help companies take advantage of global opportunities.

The eligibility criteria for the products offered by Efic are similar to those of commercial banks and also include the following requirements:

- The transaction has the necessary level of Australian content.
- There is a market gap due to financing not being available from the private market.
- Efic's due diligence requirements are met.

Finance solutions



For more information visit efic.gov.au



Image courtesy of Incat Tasmania



ABOUT AUSTRADE

The Australian Trade and Investment Commission – Austrade – is the Australian Government agency that promotes trade, investment and education, and develops tourism policy and research.

Austrade helps companies around the world to identify and take up investment opportunities in Australia as well as to source Australian goods and services.

Our assistance includes:

- providing insight on Australian capabilities
- identifying potential investment projects and strategic alliance partners
- helping you to identify and contact Australian suppliers

Visit austrade.gov.au to find out more

austrade.gov.au

efic.gov.au



Australian Government



Finance for
Australian
Exporters