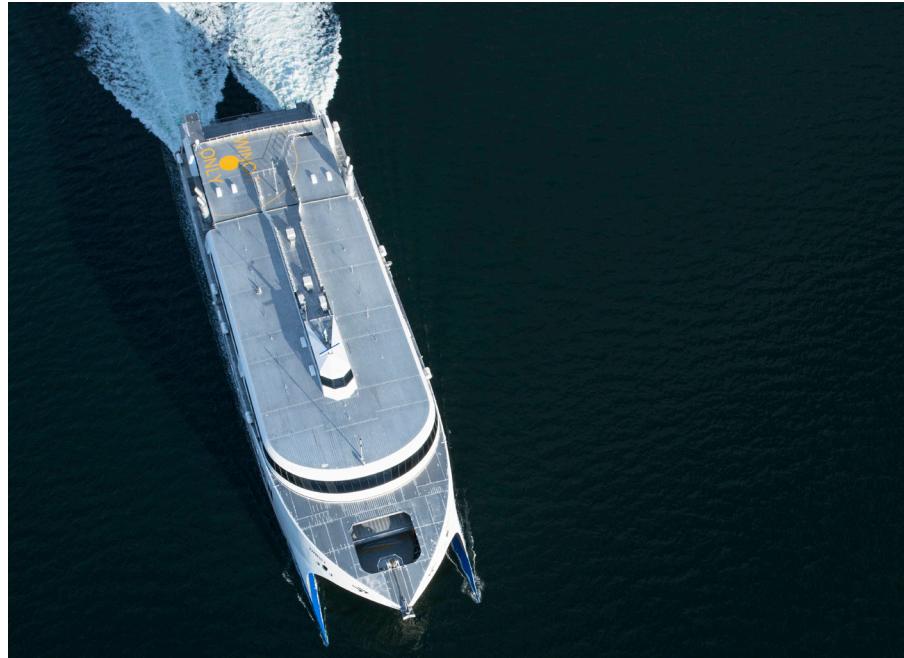


# Tasmanian Advanced Manufacturing Action Plan 2028

People, productivity, and market success





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# Message from the Premier and Minister for Trade and Major Investment



Tasmania is an island of makers. Our ability to craft, innovate, and manufacture has long been a source of pride, and a pillar of our state's economy and social fabric.

The 2030 Strong Plan for Tasmania's Future recognises the manufacturing sector as a key contributor to the Tasmanian economy.

Manufacturers in Tasmania directly employ close to 20,000 Tasmanians, and support over 33,000 more local jobs through the flow-on effects to their supply chains and in their local communities. Our manufacturers span large employers and major industrials through to niche businesses making high quality, bespoke products that leverage Tasmania's unique resources and geographical position.

Tasmanian manufacturing supply chains reach into every sector of the economy, creating an interconnectedness that is vital to our prosperity. Local manufacturers provide access to reliable, locally made products for use by other Tasmanian businesses and for sale into domestic and export markets.

Nationally, the need for Australia to maintain a strong manufacturing sector has recently been in the spotlight as a buffer against potential disruptions to global trade and supply chains.

We are now in a period of rapid change. Global dynamics are shifting, and technologies are advancing at an unprecedented pace. Input costs, labour and skills availability, and overall operational costs all create a challenging business environment. Amid this flux, the global competition our manufacturing industry faces is as fierce as ever. Despite this, the state's manufacturing sector remains strong and resilient. It is incumbent upon us to ensure that our manufacturers continue to thrive in this dynamic environment and that we help to support the challenges they face.

Which is why as the Minister for Trade and Major Investment, I am proud to support our manufacturing sector by introducing the new *Advanced Manufacturing Action Plan 2028*.

This plan is focused on building a resilient, diversified, and sustainable manufacturing industry that contributes significantly to the state's economy, creates jobs, and positions Tasmania as a leader in high-value, innovative manufacturing on the global stage and strengthening the "Brand Tasmania" identity.

It is a plan that will foster collaboration between manufacturers, suppliers, and service providers to create strong industry clusters that can innovate together. Creating a supportive ecosystem with government incentives, industry support programs, and assistance to help manufacturers grow.

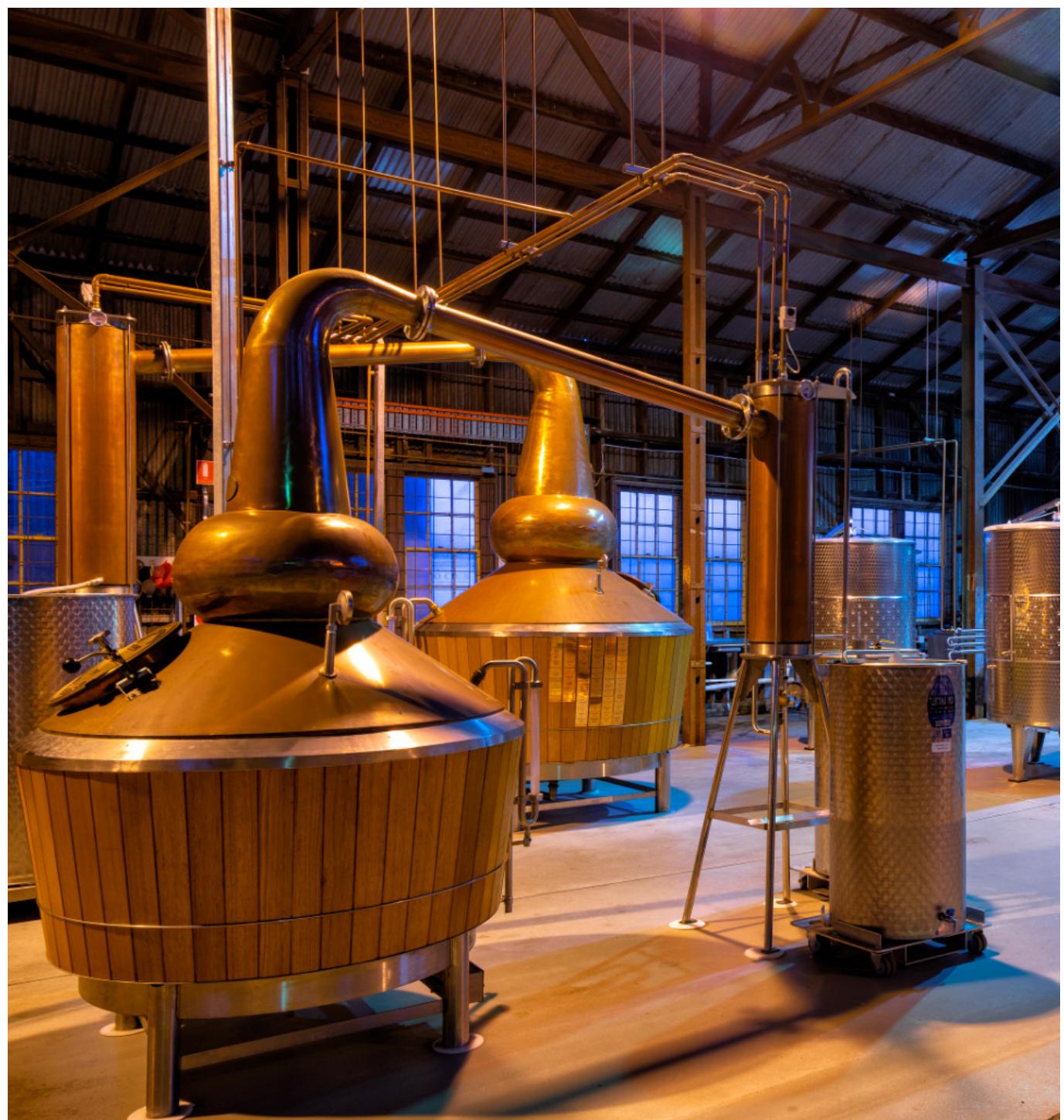
A plan that invests in skills programs that equips the Tasmanian workforce with the skills needed for modern manufacturing jobs and supports strategies to attract skilled workers into the industry. A plan that supports the adoption of advanced manufacturing technologies to increase productivity and competitiveness to bring new products and processes to market.

A plan focused on enabling Buy Local and expanding access into international markets, including New Zealand, the United States, European Union, Asia, and United Kingdom to increase exports of Tasmanian-manufactured goods.

By working together and ensuring policies align with a long-term vision for the sector, we will continue to grow and transform manufacturing in Tasmania, so that our international reputation for delivering innovative and world class quality products endures and excels, and we provide stability and confidence for manufacturers in our island state.



The Hon. Jeremy Rockliff MP  
Premier and Minister for Trade and Major Investment



# Executive summary

Tasmania's manufacturing sector is a vital element of the state's economy and community. Manufacturing contributes over \$2 billion annually to Tasmania's Gross State Product.

It provides high paying, skilled jobs and underpins the economies of large and small communities across the state. Manufacturing directly employs 19,800 people in Tasmania (2021–22), up from 18,000 in 2018–19, and indirectly generates an estimated 33,115 additional local jobs through flow-on impacts.

New technologies, practices and products are rapidly changing the face of manufacturing globally. However, this also means that there are ongoing skills and training needs impacting the sector during a period of cross-sector labour shortages.

Manufacturers are also being challenged by increased production costs and an uncertain global economy. However, the sector continues to perform strongly as business owners adapt to their ever-changing environment.

This Advanced Manufacturing Action Plan 2028 (AMAP) has been developed in close consultation with industry and industry organisations, involving over 90 conversations and a statewide workshop to identify industry needs, concerns and areas where government can assist.

Three priority areas were identified during consultation and research:

1. people
2. productivity
3. market success.

The actions identified under these areas enable government to work with industry and industry organisations to address challenges and realise opportunities. The plan has been designed to avoid duplication of effort and leverage work underway in other areas including:

- TasTAFE
- the Tasmanian education system
- the Bell Bay Advanced Manufacturing Zone
- the Tasmanian Manufacturing, Minerals and Energy Council.

# Objective

The objective is to identify government actions agreed with industry, that will support a successful and sustainable manufacturing sector in Tasmania.

This plan builds on previous iterations and complements other government industry strategies. For example, the *Advanced Manufacturing Industry Skills Compact* and *Tasmanian Trade Strategy 2019-2025*, and the forthcoming *Tasmanian Defence Industry Strategy* and *Tasmanian Advanced Technology Industries Strategy*.

The Tasmanian Government, through the Department of State Growth, will work with the manufacturing sector to help develop the workforce needed now and into the future. It will build capability through encouraging uptake of advanced practices and technologies, and it will facilitate industry to leverage its strengths and comparative advantages to thrive in a complex and competitive global market.

## Introduction

The Advanced Manufacturing Action Plan 2028 is the Tasmanian Government's third successive action plan for the sector. Since the release of the original plan in 2016, the Tasmanian manufacturing environment has seen extraordinary change. New products, technologies and industries are part of the manufacturing landscape. New challenges exist, but the industry moves into the next period in a generally strong position.

The business environment our manufacturers operate in is markedly different from 2020, when the second plan was released. The COVID-19 pandemic has faded, technologies continue to evolve, and business are experiencing both areas of growth and emerging challenges. This reflects the complex interplay between persistent inflation, labour market dynamics, potential disruptions due to geopolitical tensions, fluctuating energy prices and broader economic growth.

There are new opportunities with changing technologies and a renewed push to decarbonise the Australian and global economy. Our major industrials, large manufacturers and processors hold a key position in the Tasmanian economy as they drive continual improvements, build local supply chains and generate wealth for the state.

Small businesses are a critical part of the Tasmanian economy and comprise most of Tasmania's manufacturers. Their flexibility means they can adjust quickly and innovate to meet market needs, and they are important contributors to the supply chains of Tasmania's major industries. However, it can be difficult for small businesses to find the resources to introduce business improvements and keep pace with the rapidly changing environment.

Constant change brings both challenges and opportunities for Tasmanian manufacturers. As industry responds and adapts, so too must government's support.

This need has been recognised by the Australian Government with advanced manufacturing identified as a part of its seven priority areas of the Australian economy. Innovative manufacturing is eligible for support under its flagship National Reconstruction Fund, and Industry Growth Program. Manufacturing also benefits from other government support programs and investments in new technological advancements and sustainability and emission reduction investments, including the Future Made in Australia policy.

This plan is designed to ensure that Tasmanian businesses can access Australian Government support programs relevant to their needs. It has been formed through extensive consultation with manufacturing industry enterprises and stakeholders, including one-on-one consultation between the Department of State Growth and manufacturers across the state.

The resulting plan combines this industry and government experience.

# The Plan

## Theme 1: People

Attracting and developing a workforce skilled for the manufacturing careers of today and the future.

Action 1	Promote career opportunities and pathways in the manufacturing sector to learners and the broader community. Support initiatives that encourage greater diversity in the manufacturing industry.
Action 2	Assist industry to deliver the Advanced Manufacturing Industry Skills Compact and Manufacturing Industry Workforce Development Plan, supporting initiatives that meet industry's current and future training and workforce needs.
Action 3	Enable Tasmanian manufacturers to network, collaborate, and encourage access to information and resources sector-wide.
Action 4	Deliver 'Insights into Excellence' activities to expose Tasmanian manufacturers to domestic and global best practice in manufacturing processes, management and procedures.
Action 5	Support the development of Tasmanian Aboriginal-owned manufacturing enterprises.

Tasmanian manufacturers have gained a reputation in global markets for producing highly sought after and differentiated advanced products. This creates significant opportunities for Tasmanians to perform high value, highly skilled jobs in an innovative, globally connected work environment. However, there is work to be done in informing the new generation of manufacturing industry workers of the exciting and varied careers available.

The plan was developed during a period where unemployment was at near record low levels in Australia. A period of intense competition for workers has seen the manufacturing sector struggle to attract and retain the workforce it needs. Many manufacturing roles require vocational qualifications or other specialist skills, and there is a shortage of workers with the skills required.

In addition, cutting edge technologies are reshaping manufacturing and have led to the need for new skillsets, alongside ongoing demand for more traditional skills. The continued digitisation of manufacturing technologies brings productivity and quality benefits but necessitates computer literacy and specialist skills such as cyber security, automation and process engineering, and other skills in the digital domain.

There is a need for close collaboration between government, industry and training and education providers to ensure the delivery of training that is accessible, meets the needs of industry and learners, and keeps pace with changing technologies and innovations. Industry associations play a particularly important role in communicating industry workforce needs.

Existing workers in the manufacturing sector are a critical resource, and there is an opportunity to develop the skills of the manufacturing workforce further in response to a shortage of skilled workers. Supporting manufacturers to develop and invest in existing staff and facilitating connection and collaboration across the sector will help to improve the capability of the sector's workforce.

Manufacturers are also increasingly finding workers from diverse backgrounds to meet their workforce needs. Women, migrants, older people, unemployed and under-employed, people with disability and other underrepresented groups all provide opportunities to alleviate workforce issues, and to modernise the Tasmanian manufacturing workforce. Government has a role to play in arming industry with the information and support needed to embrace workers from each of these groups.

We know that we will not be able to meet our workforce needs from the local labour pool alone. The migrant community has been identified as a much needed source of workers with a range of applicable skills. We will continue work to demystify migration for manufacturers, and to advocate for the sector's needs to be accommodated through migration settings at the state and Commonwealth levels to maximise access to this valuable labour pool.

Fostering and supporting entrepreneurship in the Tasmanian Aboriginal community strengthens industry overall. This can be achieved through bespoke initiatives including support to access various state and commonwealth services.



## Theme 2: Productivity

Pursuing excellence and driving productivity improvements across Tasmania's manufacturing industry.

Action 6	Connect manufacturers with expert advice to improve awareness and knowledge of modern manufacturing technologies. Support increased readiness for technological and best practice adoption across the sector.
Action 7	Deliver an Advanced Manufacturing Productivity Program, funding Tasmanian manufacturers to grow productivity through obtaining accreditations, expert advice and developing staff and business skills.
Action 8	Establish a manufacturing business advisory group to provide strategic advice and insights to the government on issues, opportunities, and challenges within the Tasmanian manufacturing sector.
Action 9	Deliver comprehensive Government-to-business client engagement through the Department of State Growth, brokering knowledge and relationships across manufacturing and other sectors that create value. Understanding and strengthening supply chains in strategically important manufacturing and processing businesses in the state.

Enhanced productivity in the sector is paramount for sustained growth and global competitiveness. This plan will support industry to adopt best practice systems and principles. Improved practices and systems can help business to adopt advanced technologies to streamline operations, improve outputs, reduce waste, and enhance overall efficiency.

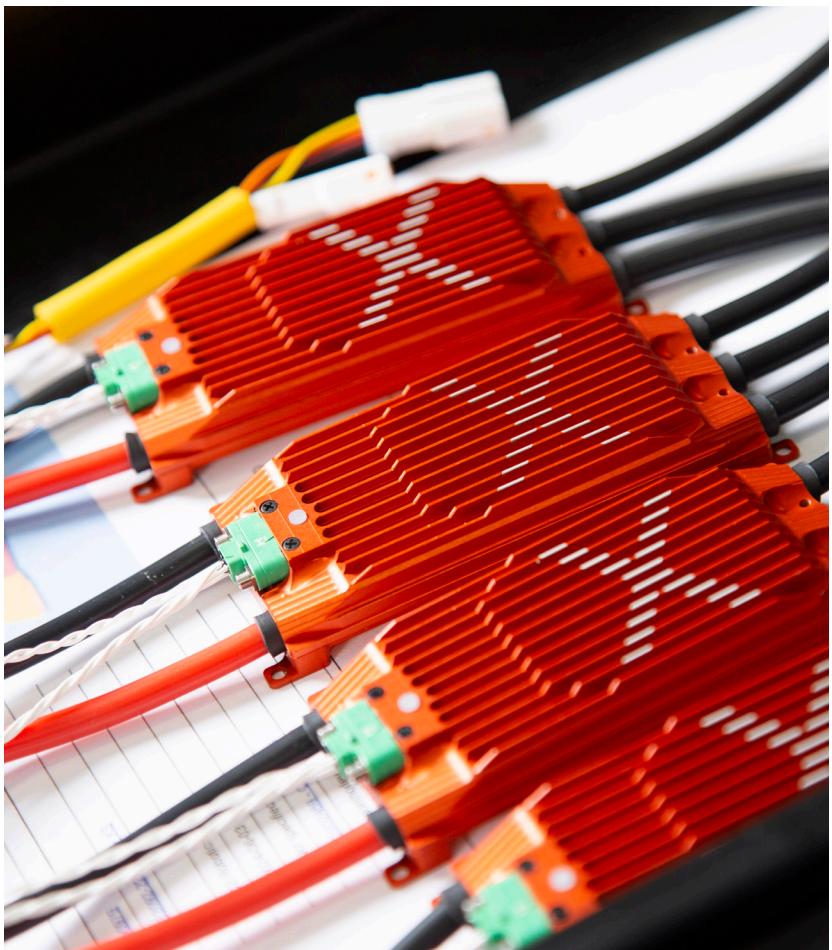
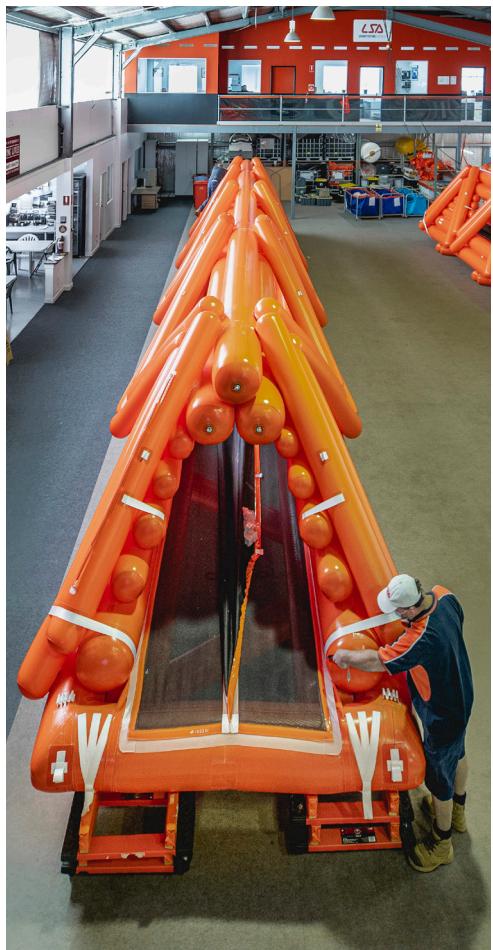
Productivity improvements also help reduce the impact of workforce challenges, as manufacturers do more with the constrained resources available to them. Knowledge sharing across industry, and exploring examples of global best practice, will demonstrate different ways to improve performance. Government, with support from industry organisations will help to facilitate access to these examples and assist business to identify and implement process and productivity improvement solutions.

Increasing productivity can act as a countermeasure to escalating operational costs and help maintain competitiveness and profitability. Costs are rising across power, insurance, and freight, which force manufacturers to raise prices. Support to minimise waste and enhance productivity will be key to ensuring the continued competitiveness of the manufacturing industry.

A new Advanced Manufacturing Productivity Program will be designed and delivered by State Growth over the AMAP 2028 period. This program will provide targeted funding to Tasmanian manufacturers to grow productivity and performance across business, including staff upskilling, engaging the services of specialist advisors and consultants, and working towards obtaining quality or environmental accreditations.

It will also recognise the growing interconnectedness between manufacturing and the ICT sector as Industry 4.0 and other innovations are adopted into businesses across the state.

The Tasmanian Government will maintain its comprehensive client engagement service for the sector. State Growth will continue to provide a high level of service and engagement, facilitating connections and relationships across the sector and with related industries.



## Theme 3: Market success

Connecting Tasmanian manufacturers with domestic and global opportunities.

Action 10	Link Tasmanian businesses and project owners with procurement and contract opportunities throughout Australia and New Zealand through the Industry Capability Network (ICN). Support Tasmania's Buy Local Policy by identifying Tasmanian capability for major project owners and help to maximise Tasmanian content in government and private sector procurement.
Action 11	Assist Tasmanian manufacturers to understand and work effectively in national and global markets.
Action 12	Support Tasmanian manufacturers to identify and implement improvements in environmental sustainability, including across energy efficiency, decarbonisation and waste reduction to best position them to meet market opportunities.
Action 13	Support Tasmanian businesses to build understanding and resilience in cyber security and related fields.
Action 14	Continue to deliver support to assist Tasmanian manufacturers to access professional bid and tender writing services or advice to prepare defence, major project and other specialist tenders.
Action 15	Deliver a refreshed Advanced Manufacturing Accelerating Growth Program to assist Tasmanian manufacturers to boost their manufacturing capability to meet identified market opportunities.

In addition to a range of initiatives addressing people and productivity, there are opportunities for government to boost the market success of Tasmanian manufacturers. These opportunities include connecting manufacturers with support services such as the TradeStart program delivered by the Tasmanian Government in partnership with Austrade, trade events, and international trade and investment missions.

ICN Tasmania will continue to ensure that Tasmanian manufacturers are well-connected to major projects, helping them to secure these contracts and grow. ICN offers a pipeline of major projects including renewable energy generation, power transmission and major construction projects. As ICN Tasmania expands its membership and project listings, new procurement opportunities will emerge.

Targeted business development initiatives will assist Tasmanian manufacturers to build on existing successes and provide new opportunities to enter interstate and international markets. The Department of State Growth will provide targeted support to Tasmania's manufacturing industry to achieve sustainable growth in the competitive global manufacturing landscape.

In addition to meeting waste reduction and energy efficiency goals, supporting the sector to obtain and leverage green manufacturing credentials will provide increased global opportunities. Tasmania's strong renewable energy generation and unique brand position give our manufacturers an advantage in some markets. The international market is increasingly demanding environmentally sound supply chains, providing commercial incentives to improve and certify sustainability credentials.



The digitisation of advanced manufacturing and the networking of devices has led to the emergence of cyber security as a key threat to manufacturers. Buyers are increasingly concerned with the security of their supply chains. Securing intellectual property and preventing disruptions from the digital domain is now essential. State Growth will work to raise awareness of threats and best practice in the digital domain and help build resilience across the manufacturing sector. This will help Tasmanian manufacturers to demonstrate their cyber-resilience and reliability to customers.

Major contracts, including defence procurement, can provide significant boosts to small and medium enterprises (SMEs), but can be costly and time consuming to bid for. The Tasmanian Government will continue to provide support for eligible businesses to access tender writing and identification over the coming period. Under the previous plan, the Advanced Manufacturing Tender Incentive program helped Tasmanian businesses to tender for major contracts in excess of \$444 million, including large projects which proved transformational.

The Advanced Manufacturing Accelerating Growth Program provides support for capital acquisitions matched to identified market demand. Supporting industry to build novel capabilities, expand product development and to improve quality and efficiency will enable industry to continue building its international competitiveness.

# Global context

Previous decades have seen a significant shift in global manufacturing to lower cost economies, creating a challenging environment for manufacturers in economies such as Australia. Manufacturers in these high-cost economies have responded by largely focusing on high quality and differentiated products across specialised niches, while the bulk of global mass manufacturing has shifted to lower skill and lower cost economies.

Since the COVID-19 pandemic, as companies and nations grapple with the vulnerabilities exposed by distant supply chains, risk and complexity has become a key driver for supply chain decisions. This has been compounded by low reliability married with high costs in the global freight system.

This global move towards building and maintaining domestic capability in manufacturing, near-shoring (reducing risk by minimising distance) and friend-shoring (reducing risk through manufacturing in friendly and allied economies), is gaining momentum. It is likely to result in fresh opportunities for Tasmanian manufacturers. Despite these trends, the highly globalised world economy forces our manufacturers to compete both domestically and internationally.

Technological change continues to accelerate. Automated systems, robotics and artificial intelligence are increasingly being adopted around the world, facilitating a trend towards mass-customisation and customer-driven high value products. This creates opportunities for Tasmanian firms. The improved productivity and customisation capability delivered by new technologies offsets higher wages, allowing the local sector to counter the comparative advantage of developing nations that compete based on low-skill and low-cost bulk production.

In Australia and around the world slowing economic growth and inflation have contributed to an uncertain economic outlook post-pandemic. A lagging global economy would also impact Tasmania's export-oriented manufacturing sector and the sector is vulnerable to further disruptions to the global economy through conflict, natural disasters, or other unforeseen events.

In today's more conscientious marketplace, customers are prioritising environmentally friendly and socially responsible products. Globally, manufacturers are working to reduce their environmental impact, with consumers and investors alike increasingly demanding sound environmental, social and governance (ESG) credentials. Tasmanian manufacturers are well placed to benefit from this with the state's strong renewable energy production and brand.

# Manufacturing in Tasmania

## Impact on employment and the economy

Manufacturing is key to the economic prosperity of Tasmania. It provides high paying, skilled jobs and underpins the economies of communities across the state. Manufacturing directly employs 19,800 people in Tasmania (2021–22), up from 18,000 in 2018–19, and indirectly generates an estimated 33,115 additional Tasmanian jobs through flow-on impacts.

Manufacturing contributes over \$2 billion annually to Tasmania's Gross State Product. It is the state's largest export industry, creating flow-on economic impacts that benefit the state economy broadly. Tasmanian manufactured products are exported across the world, allowing Tasmanian businesses to both specialise and achieve scale that would not be possible serving the small local market alone.

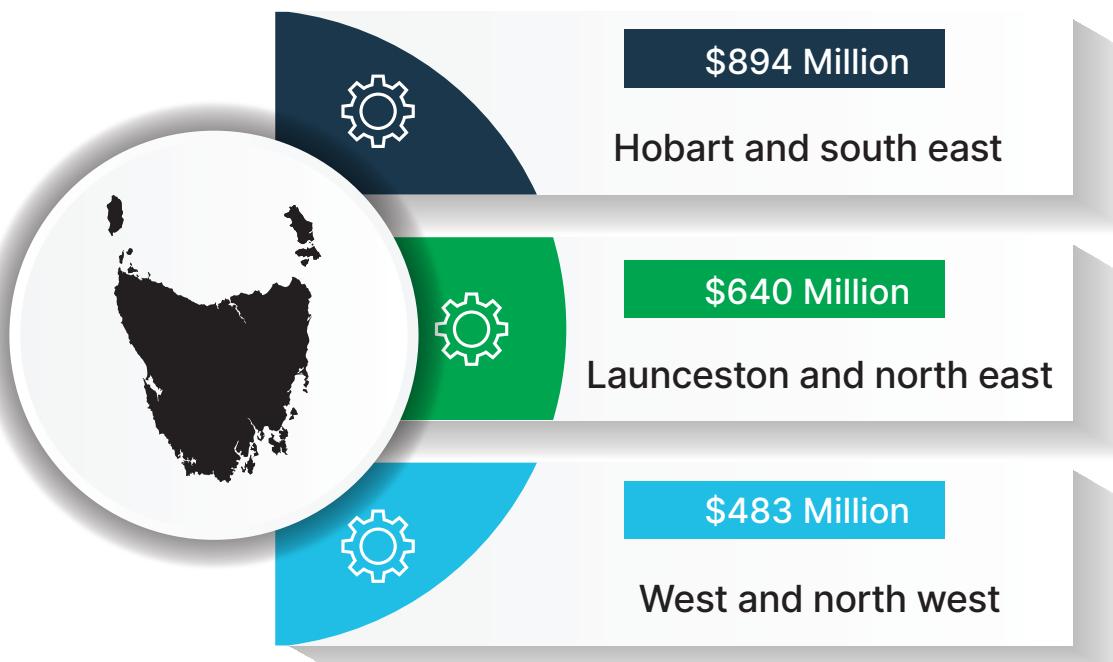
Advanced manufacturers operate across a range of subsectors including food and beverage processing, smart technologies, forestry, maritime, mining equipment, technology and services, renewable energy, transport equipment and the defence industry.

## Geographical dispersion

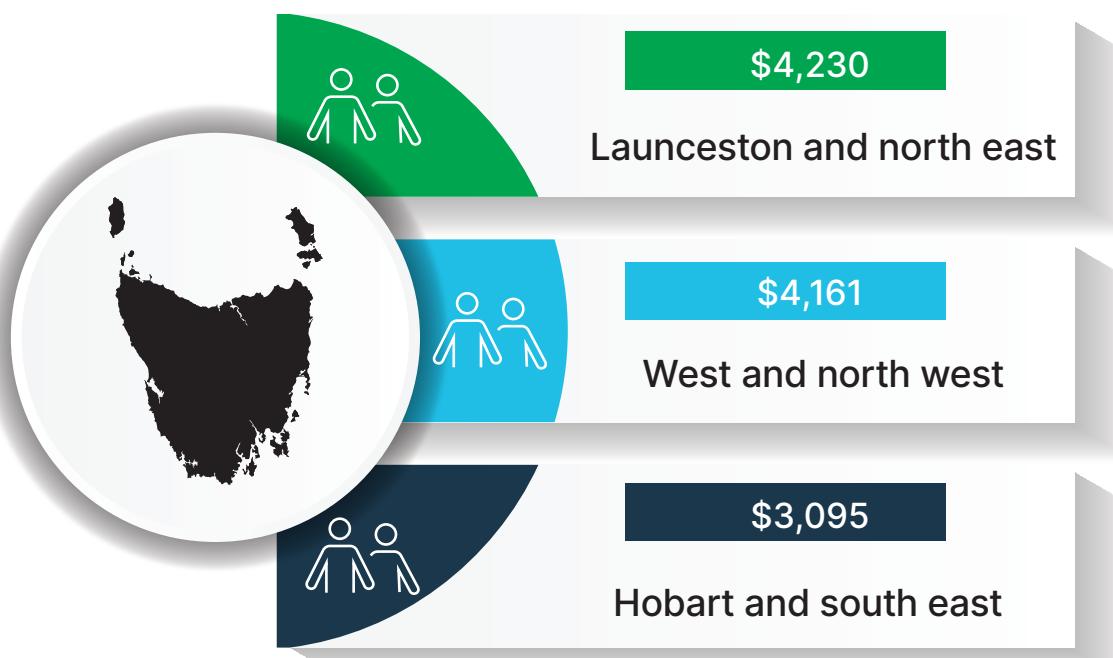
Importantly for Tasmania, the presence and economic benefit of manufacturing is spread fairly evenly, including across both major population centres and regional areas. Pockets of world-leading specialisation exist, such as a thriving maritime manufacturing ecosystem around the Hobart area, and a strong heavy vehicle manufacturing hub around Burnie.

Regionally, Hobart and the south east contributes 44 per cent of the state's Gross Value Added (GVA) from manufacturing; Launceston and the north east contributes 34 per cent and the west and north west contribute 24 per cent. On a per capita basis, Launceston and the north east make the greatest contribution, with a greater proportion of employment attributable to the manufacturing sector.

### Manufacturing contribution to GSP per region:



### Manufacturing GVA per person per region:



## Recent trends

Across Australia, the manufacturing sector's share of the economy has steadily decreased over recent decades. A period of increasing globalisation and offshoring saw a decline in domestic manufacturing. However, in 2023 Australian manufacturing saw a 2.8 per cent increase in output growth along with a 1.5 per cent decrease in employment growth. In Tasmania, the sector's share of the economy (as measured by Gross State Product (GSP), decreased from 11.3 per cent in 1998–99 to 5.5 per cent in 2021–22, consistent with the national average. Over this period, manufacturing fell from being Tasmania's largest industry by share of GSP, to its sixth largest (out of 19).

Nevertheless, after years of contraction prior to the pandemic, the sector bounced back, growing by six per cent (constant price) annually during both 2020–21 and 2021–22.

Employment in manufacturing grew too, and in 2021–22, reached its highest level since 2009. A renewed government focus at state and national level to revitalise the domestic manufacturing industry is being driven by a desire to decrease Australia's dependence on tenuous supply chains, build knowledge and wealth generation capabilities domestically and grasp emerging opportunities for future prosperity. The introduction of the Australian Government's Future Made in Australia program, \$15 billion National Reconstruction Fund and \$392.4 million Industry Growth Programs all exemplify the push to revitalise the country's manufacturing industry.

## Flow on effects

The economic impact of the manufacturing sector flows to many other sectors in the Tasmanian economy. In Tasmania, each dollar spent in the manufacturing industry generates \$1.84 in flow on impacts, higher than the national average of \$1.74.

Direct impacts	Direct impacts	Flow on impacts	Total impact
Gross State Product (\$ million)	\$2,017	\$3,455	\$5,472
Employment	19,786	33,115	52,901
Turnover (\$ million)	\$8,282	\$7,500	\$15,782

A strong Tasmanian manufacturing helps to strengthen other areas of the economy. It is a reliable provider of high quality products to other local industries, with local manufacturing capability shielding their supply chains from global disruptions.

## Key challenges

Tasmania's island geography, distance from markets and relatively high costs such as labour relative to the global market cause a comparative disadvantage in low-value add manufacturing. These factors have led many Tasmanian manufacturers to focus on high value, lower volume differentiated products, often in specialist niches.

Tasmanian manufacturers rarely mass-produce and usually are not the cost leader in their market. Instead, they generally compete through a focus on quality and innovation. While there are clear benefits of growing the strong export-oriented manufacturing sector, Tasmania's manufacturing sector is somewhat exposed to shifts in the global economy.

As with many industries nationwide, manufacturing is experiencing an acute shortage of skilled workers. Labour shortages of trades such as welding are prevalent across the state. Meanwhile new manufacturing technologies require enterprises to develop new workforce skills, which is proving challenging in the current environment.



Action is being taken to increase the pipeline of workers entering the industry, however workforce shortages are expected to continue for some time. Tasmania's ageing population is another challenge for the industry as a greater number of people leave the workforce than enter it.

Manufacturers face cost increases across their inputs. Ai Group has recently found that since 2020, manufacturing input prices have risen by 22.7 per cent, although this increase eased in 2023 as supply chain pressures began to ease. Absorbing or passing these costs on can be challenging for manufacturers who often compete against cheaper imported alternatives. However, across Australia some manufacturers have enjoyed growth in pricing, indicating a variation of business performance across sub sectors<sup>1</sup>.

Increased costs and a challenging environment are seeing some manufacturing subsectors growing, while others face some contraction. For example, across Australia food and beverage manufacturing and metals production have grown, while petrochemicals, machinery and other manufacturing subsectors have declined.

The relative freight costs of moving goods from Tasmania by sea or air as opposed to road often add costs for businesses competing with interstate producers. While the Tasmanian Freight Equalisation Scheme offers some assistance, for many, higher costs to move product across Bass Strait remain. This impacts on their profitability and competitiveness in domestic and international markets. Freight availability in peak times is also a significant challenge for some manufacturers.

The global rise in cross-border cybercrime, coupled with greater digitised manufacturing equipment and processes has rapidly formed a significant area of risk for manufacturers. Cyber security is now a growing concern that manufacturers must actively manage as with their physical security to avoid costly disruptions and intellectual property theft. Raising awareness of this issue and how to respond to cyber security threats is needed across Tasmania.

<sup>1</sup> Manufacturing in Australia: Performance benchmark report 2024, AiGroup Reserach and Economics

## Key advantages

Several specialised manufacturing ecosystems exist in Tasmania, with groups of firms producing world class products in niche areas.

A highly capable and interconnected maritime manufacturing industry, largely based in southern Tasmania, is producing watercraft and specialised products which are in demand throughout the world. In north west Tasmania, there is a well evolved and growing heavy vehicle manufacturing capability and supply chain.

These strong collaborative networks are underpinned by a number of industry organisations, such as the Tasmanian Minerals, Manufacturing and Energy Council, Tasmania Maritime Network, Tasmanian Polar Network, Bell Bay Advanced Manufacturing Zone, and Tasmanian Agricultural Productivity Group. These organisations will continue to play a key role in the sector's development, as they advocate for and support business development across the sector.

Across the state, food and beverage manufacturing and engineered timber product manufacturing is thriving and building on Tasmania's strong international reputation. Tasmania is also seeing rapid development in future industries such as low carbon liquid fuels.

Tasmania is 100 per cent self-sufficient in renewable electricity generation with a legislated target of 200 per cent by 2040. This is globally notable, unique in Australia, and provides Tasmanian manufacturers with enviable sustainability credentials. Tasmanian manufacturers are well positioned to obtain accreditations to maximise this advantage in markets. This green energy is providing a strong tailwind for rapid development of future industries such as low carbon liquid fuels, for example, green methanol, which aim to use forestry waste in combination with renewable hydrogen in the manufacturing process.

Low carbon production is increasingly becoming a commercial imperative and a corporate social responsibility. Markets are demanding sustainable supply chains, including formal accreditations and certifications driven by regulation. The European Union's Carbon Border Adjustment Mechanism will apply to imported manufactured products from 2025, effectively taxing high-carbon imports to the EU to level the playing field for its own green manufacturers. Tasmanian manufacturers are positioned to benefit commercially from the low carbon intensity of the Tasmanian energy supply.

## The fourth industrial revolution: digitisation, mechanisation and data in manufacturing

In the evolving landscape of modern manufacturing, a collection of digital technologies has emerged as a transformative force, reshaping the way industries operate and paving the way for unprecedented levels of efficiency, productivity, and innovation.

Known as the fourth industrial revolution, or Industry 4.0, this era is characterised by the connection of advanced manufacturing with analytics, automation, and data connectivity through emerging technologies like cloud-based computing, machine learning and additive manufacture. Exploring these opportunities can lead to significant productivity increases for manufacturers, particularly in regions with high labour costs meaning they are able to compete more effectively in the global market. Failure to adapt to these changes will challenge manufacturers' long-term sustainability.

Manufacturers are also improving safety, productivity, and quality through the adoption of robotics, automation, artificial intelligence and other modern manufacturing technologies. A new generation of manufacturing machinery and automation systems are bringing unprecedented levels of precision and speed to manufacturing processes. The adoption of these technologies requires an agile training industry that can respond to the emerging demands, as well as reliable and resilient digital connectivity and infrastructure.

Data, often referred to as the ‘new oil’ in the digital age, plays a pivotal role in Industry 4.0. An interconnected web of devices generates vast amounts of data that can be harnessed for informed decision-making. Real-time analytics and predictive modelling enable manufacturers to identify inefficiencies, anticipate maintenance needs, and optimise resource allocation. At the same time, digitisation creates vulnerabilities in the cyber domain, and cyber security is a key risk.

Embracing Industry 4.0 technologies is increasingly necessary for local manufacturers to increase competitiveness and sustainable growth, and to secure the next prosperous era for Tasmanian manufacturing.

## Domestic and global opportunities

### Market opportunities

Tasmania’s comparatively small size necessitates that our firms are active in national and international markets. The local market will continue to be an important pillar but most future growth is likely to be found in other states and export markets. Manufactured products from Tasmania are already exported globally, with a reputation for innovative design and quality.

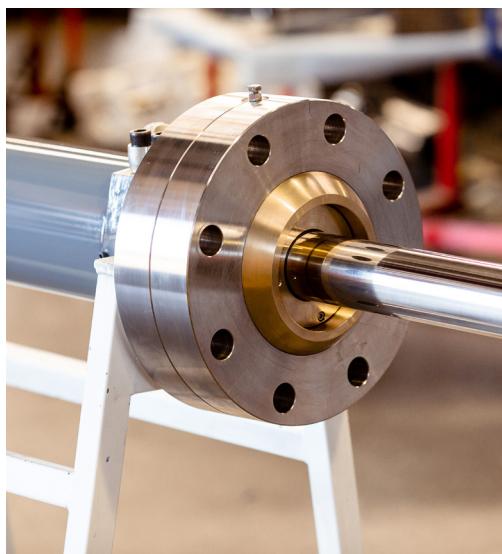
The benefits of these exports filter down to the local economy through highly skilled employment and business expenditure in Tasmania, feeding a virtuous cycle.

Existing markets identified in the Tasmanian Trade Strategy as having good potential for growth include the United Kingdom, United States, ASEAN, New Zealand, South Korea, the European Union and Taiwan (for food manufacturing).

Tasmanian manufacturers are finding new market opportunities by applying their existing expertise and capability to alternative sectors. The defence market is providing more opportunities for Tasmanian manufacturers. The number of Tasmanian entities with defence related contracts increased from 13 to 18 over the last six years, and the total value of these contracts awarded to Tasmanian companies and organisations over the last four years exceeded \$160 million.

Tasmania’s position as one of the world’s five Antarctic gateways also provides opportunities for manufacturers to diversify and grow, with the Australian Antarctic Division and other nations’ Antarctic programs providing a valuable group of customers. The burgeoning Tasmanian renewable fuels industry provides a unique opportunity to decarbonise Antarctic shipping and operations.

Incorporating digital technologies into previously non-digital products is creating fresh opportunities. Manufacturers are also creating increased value for customers through the provision of services. This shift from offering products to offering solutions is linking traditional manufacturers with software and other technology focused industries.



## Investment

The Tasmanian Government plays an important role in business attractions and investment facilitation. Tasmania is increasingly being recognised as an attractive investment location, especially for sophisticated global partners that value Tasmania's points of difference in the market. The state's strong brand, sustainability credentials and growing reputation in areas like clean energy, the blue economy and aquaculture are attracting significant investment from around the globe.

Tasmania's size allows for a nimble response to market changes and a strong collaborative culture among like-minded organisations. There are areas of deep knowledge and understanding, for example in the maritime sector, where institutional capability includes expertise in boat building, simulation technology, undersea operations, cabling and marine insulation. Market niches like these are attracting growing international interest and investment.

The Tasmanian Government will continue to identify and work with interested parties to facilitate access to our state. Investment from major entities interstate and overseas creates employment and economic activity, provides valuable opportunities for partnerships with established Tasmanian businesses, and grows the ecosystem in which they operate.

These efforts will be coordinated across Government, working collaboratively with and drawing on the expertise of sector-specific teams and the Office of the Coordinator General, the Tasmanian Government's dedicated investment attraction entity. Growing Tasmania's investment pipeline through international trade and investment missions will continue to be a focus throughout the term of this plan as well tapping into programs offered through other levels of government, such as the Australian Government's Global Business Attraction Program.

## Major projects

Increased investment, transformation in the energy sector, and major infrastructure projects have led to an increase in major projects in Tasmania. The Industry Capability Network (ICN) Tasmania service supports the state's businesses to identify project opportunities and be considered by major project decision makers.

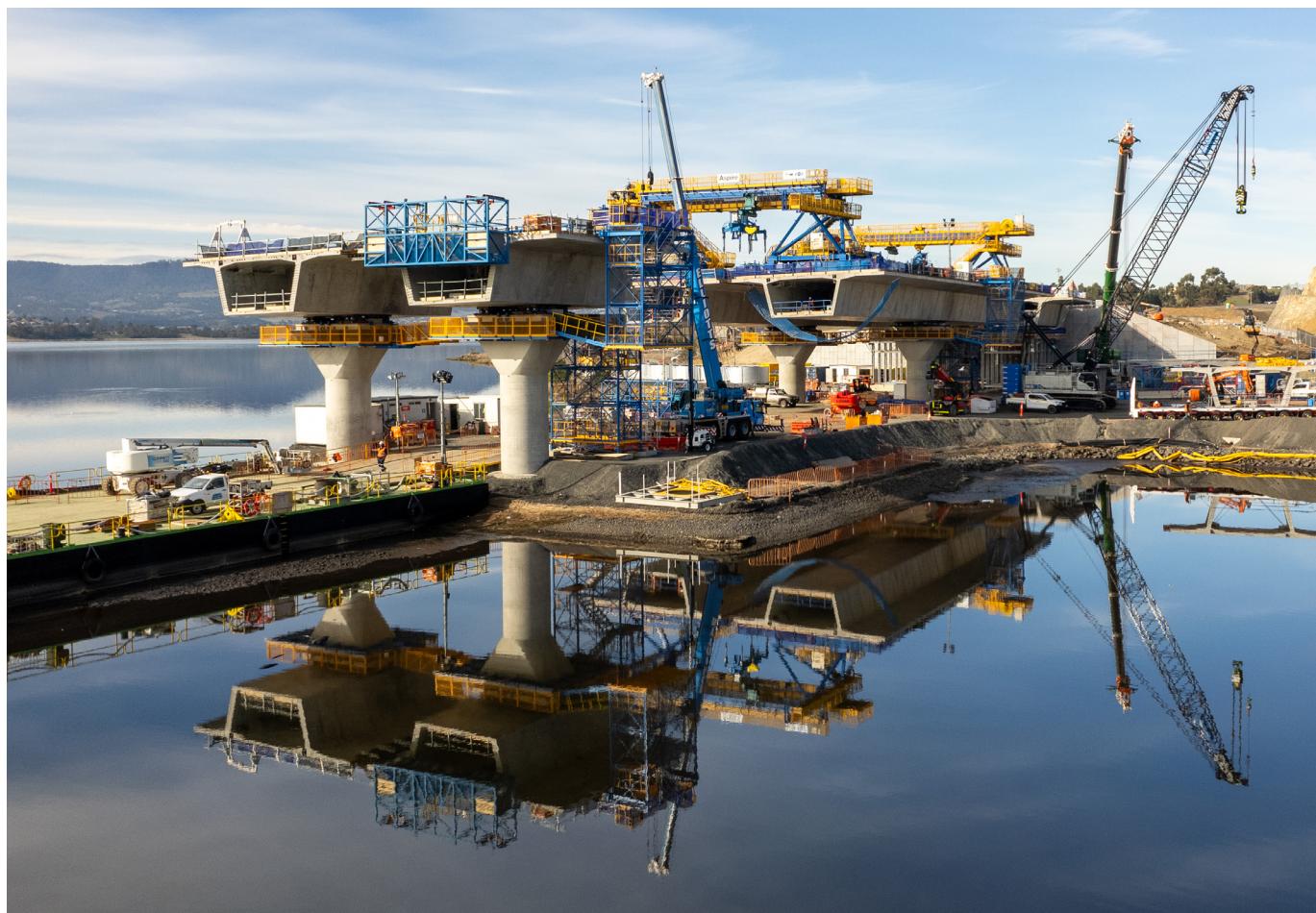
Renewable energy projects, such as onshore and offshore wind in Tasmania and around Australia, bring extensive direct opportunities to local industry, including ongoing opportunities for services and manufacturing replacement components. These projects have led to an increase in transmission capacity resulting in major projects that upgrade electricity transmission lines and energy infrastructure for the state's renewable energy projects.

The ICN Tasmania team publishes the Tasmanian Renewable Energy Supply Chain Directory and works directly with project decision makers to put local businesses in the best possible position to secure work.

Major infrastructure projects, green energy and power transmission projects, Antarctic and Southern Ocean sector procurement, and the defence sector all provide substantial opportunities for Tasmanian businesses including the ability to diversify beyond their traditional market, and to invest in their own capability for sustained future growth.

Projects such as Sun Cable's planned manufacturing facility at Bell Bay benefit from Tasmania's existing expertise and capability in manufacturing and will be a key provider of skilled and specialised jobs for Tasmania's manufacturing sector. This plan will help build Tasmanian manufacturing capability to maximise local collaboration and contribution to these types of projects.

While not all Tasmanian manufacturers are positioned to bid and benefit directly from major projects, the increase in aggregate demand benefits the industry broadly including through increased employment.



# Governance and reporting

State Growth, is responsible for the implementation of this plan, supported by other Tasmanian Government agencies. Industry will contribute to the actions within the plan and provide advice and feedback.

State Growth will release annual interim action plans throughout the life of AMAP 2028. These plans will contain specifics of the initiatives that the Government will undertake each year.

State Growth will conduct a biannual review of the plan and refine it in light of emerging opportunities and issues where appropriate.

# Acknowledgements

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- Tasmania Maritime Network
- Tasmanian Agriculture Productivity Group
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