



Australian Government

MAKE IT HAPPEN

The Australian Government's
Modern Manufacturing Strategy



Minister's Foreword



Our manufacturers have risen to the challenge to deliver during COVID-19 and now, we're unlocking their potential to deliver for our future.

In a world that has been shaken and changed by COVID-19, Australians are understandably concerned about where to from here.

But history has shown that through adversity, greatness can be borne. As Australians, it's something we know too well.

And so it is with Australian manufacturing. Our manufacturers have risen to the challenge to deliver during COVID-19 and now, we're unlocking their potential to deliver for our future.

There is no business as usual in the post-COVID-19 economy.

Tinkering at the edges on manufacturing policy is not an option. It hasn't worked in the past. Despite our world-class skills and incredible natural assets, manufacturing has been in decline for decades. Well before COVID-19, the Morrison Government began actively working to change this.

Now, driven by both imperative and opportunity, we are adopting a whole-of-government strategy that will see Australian manufacturers scale-up, become more competitive and more resilient.

Australians instinctively know that strong, successful manufacturing businesses make for a stronger country.

The world knows too, that when Australians promise, we deliver. We are recognised for our reliability, our ingenuity and our quality products. Now in a disrupted global economy we have the opportunity to grow that reputation.

By playing to our strengths, strategically investing and harnessing our world-class science and research, we can open up new markets and take more of our quality products to the world. *Making us more prosperous.*

By fundamentally addressing supply chain issues, not just plugging gaps, we can build resilience and enhance our ability to deal with challenges in the future. *Making us more secure.*

And by doing it all in a targeted, strategic way, we can create high-paid, lasting jobs – not just for this recovery, but for generations to come. *Making our future brighter.*

This Strategy is all about government backing an enterprise-led recovery. It sends a clear signal that not only is Australia open for business, but we mean business.

Let's "Make it Happen".

A handwritten signature in blue ink, reading "Karen Andrews".

The Hon Karen Andrews MP

Minister for Industry, Science and Technology

Our Modern Manufacturing Strategy



Our Vision

For Australia to be recognised as a high-quality and sustainable manufacturing nation that helps to deliver a strong, modern and resilient economy for all Australians.

We will achieve this through four pillars

Getting the economic conditions right for business

Making science and technology work for industry

Focusing on areas of advantage

Building national resilience for a strong economy

We will work closely with industry to achieve our goals

2 years

Create the business environment to support manufacturing jobs and encourage new investment

5 years

Support a more industry-focused science and technology system which helps boost productivity, scale and competitiveness

10 years

Lock in productive and competitive firms with high impact sectoral growth

Australia's National Manufacturing Priorities



Resources Technology
& Critical Minerals Processing



Food & Beverage



Medical Products



Recycling & Clean Energy



Defence



Space



Key Initiatives

\$1.3 billion

Modern Manufacturing Initiative

\$107.2 million

Supply Chain Resilience Initiative

\$52.8 million

Manufacturing Modernisation
Fund round two

Modern Manufacturing Initiative

Will transform manufacturing businesses and help them to scale-up, translate ideas into commercial successes and integrate into local and international value chains.

Supply Chain Resilience Initiative

Will help Australia address identified gaps in critical supply chains.

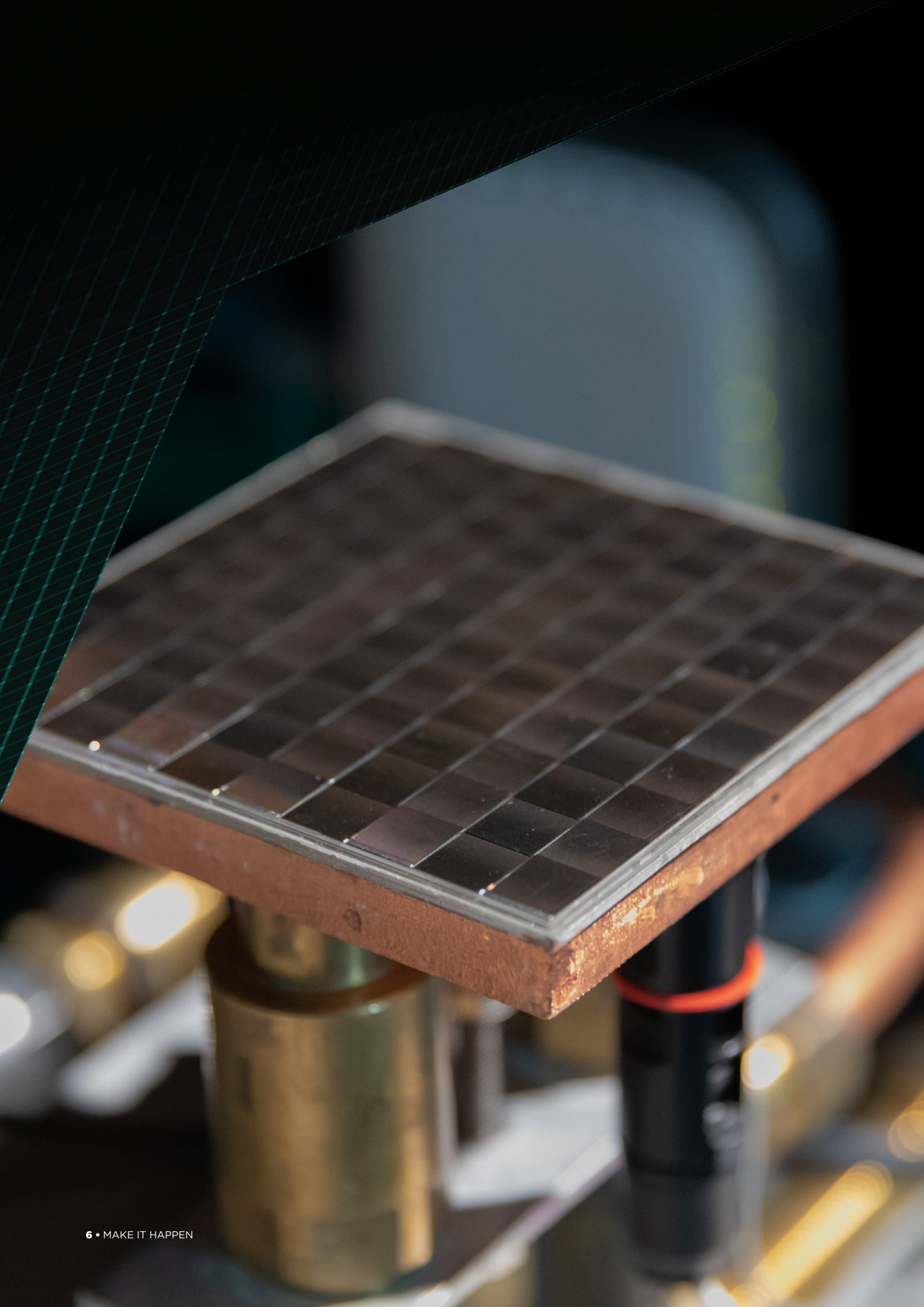
Manufacturing Modernisation Fund

Will deliver quick action to unlock business investment on shovel ready projects.



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Executive Summary

The Australian Government is manufacturing a new future for our nation. Manufacturing is critical to a modern Australian economy — a key part of almost every supply chain that adds significant value to all sectors. This Modern Manufacturing Strategy (the Strategy) is led by industry, for industry, to help our manufacturers to scale-up, become more competitive and build more resilient supply chains. The Australian Government will be a strategic investor in this, in order to drive productivity and create jobs for Australians, both now and for generations to come.

Manufacturing is critical to national resilience and a vital part of our response during times of crisis. Agile manufacturing capability helps to secure essential items quickly. Manufacturing has been a key part of our nation's

COVID-19 response — from ensuring we have essential medical supplies through to producing enough food and groceries to keep supermarkets stocked.

Our local success stories are manufacturers that compete on value rather than cost alone. They have lifted their competitiveness and productivity by investing in new technologies, research and development (R&D) and effective business practices. However, when compared to similar economies, not enough of our manufacturers are scaling-up in areas that provide good returns. The Australian Government is committed to doing something about this. We can position manufacturing as a big income earner for the nation, harnessing our talent to support high value-add activities across a range of areas. It will create well-paying jobs and help restart the economy.

Issues faced by Australia's manufacturers

For any business to succeed the underlying economic conditions need to be right. They need access to skilled and productive labour; low energy costs; a fair industrial relations framework; a competitive taxation system; efficient regulatory mechanisms; and favourable trade arrangements.

To drive growth and grasp new opportunities, businesses must also work *on* the business not just *in* the business. Focusing on the here and now prevents them from investing in new ideas that are seen to take too long — an issue exacerbated in the COVID-19 environment.

While technology is viewed as a great enabler and booster of productivity, the speed at which it develops or the uncertainty on how to apply it in their business limits adoption. A lack of connections can prevent them from reaching out to collaborate with scientists and researchers regarding their problems and to identify solutions.

Many businesses struggle to access the same economies of scale as global competitors given Australia's big distances both in terms of remoteness from global markets, and large distances between urban centres.

The goal is for a partnership between Government, industry and the science and research community to develop manufacturing to deliver positive economic outcomes and create jobs.

Economic importance of manufacturing

Manufacturing contributes about six per cent of Australia's GDP and supports 862,200 jobs.¹ It also punches above its weight in its contribution to R&D and is a growing contributor to our exports. It played a critical role in supporting the health response to COVID-19, with our manufacturers able to pivot towards delivering Personal Protective Equipment (PPE) and essential medical equipment. However, Australian manufacturing has declined. While this is a common trend in other advanced economies, our share of manufacturing compares poorly — and we can and must do better.

This Strategy is a key part of the Government's JobMaker plan, supporting our economic recovery by building innovative and high-value manufacturing in Australia. A clear vision for modern Australian manufacturing will promote the business confidence needed to hire new workers and invest for our recovery.

In the longer-term, the Strategy will support productivity growth, leading to more competitive businesses and higher wages. It is underpinned by whole-of-economy reforms in areas such as tax, industrial relations, energy, trade, expansion and diversification, innovation and skills.

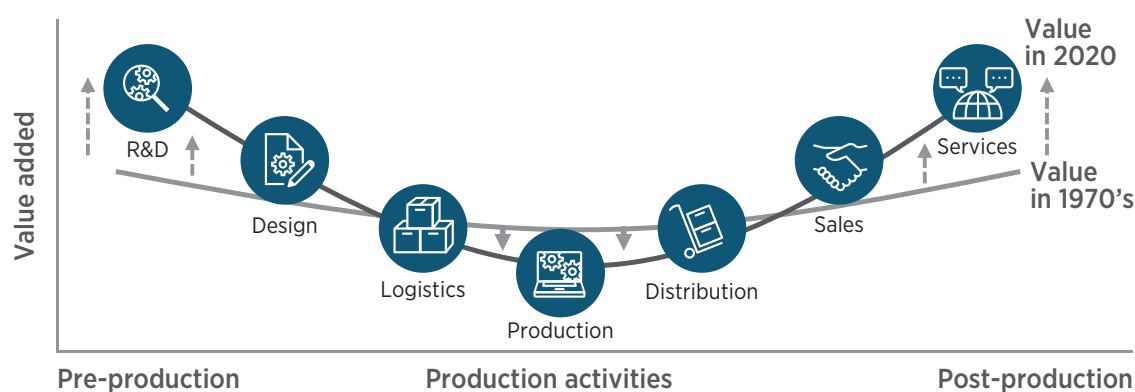
A high-value path to recovery

Rapid industrialisation and population growth are leading to changes in consumer spending patterns and demand for manufactured products. Asian economies are leading the charge. By 2030, the Asia-Pacific will be home to an estimated 65 per cent of the world's middle class.² Customers are demanding greater variety of tailored products that reflect their needs and values.

In Australia, we are moving out of heavily protected production to specialised production. However, we have not yet evolved to a stage where production is geared towards more complex, high value-add manufacturing. Production will always be important but greater value can be gained from activities both pre and post-production. It is activities like R&D, design, logistics, sales and services that better play to our strengths.

Successful manufacturing businesses are specialising in the design or manufacture of intermediate goods, or are producing personalised products for consumers at scale. Digital technologies are helping firms achieve this by allowing customised solutions, enhanced precision and more efficient production. We must encourage more of our manufacturers to make this shift to high-value revenue streams.

Figure 1: The manufacturing 'smile curve': It demonstrates the value Australian manufacturers are well-positioned to capture if they are able to strategically shift their market focus and adopt technology.



¹ ABS Cat. no. 6291.0.55.003, Labour Force, Australia, Detailed, Quarterly, August 2020, EQ06, Employed persons by Industry group of main job (ANZSIC.) Seasonally adjusted.

² CSIRO 2019, Australian National Outlook 2019, p.8, accessible at: www.csiro.au/en/Showcase/ANO

The opportunity for Australia's manufacturers

Australia has highly-skilled manufacturing capabilities that position us to compete on value rather than on cost alone. The key is getting our manufacturers to scale-up. We will focus our efforts in sectors of strategic and comparative advantage, such as resources and food.

Solidifying the role of Australian manufacturers in global supply chains will position Australia as a strategic partner in international markets. This will also provide the right environment for our businesses to capture export opportunities as global demand for high-quality Australian products increases.

Seizing upon this appetite for change, we can rebrand ourselves as a manufacturing nation and take the opportunity to clearly signal that Australia is open for business.

A new plan to build scale, create a competitive platform and boost supply chain resilience

The Strategy is the Australian Government's action plan to make Australia a globally recognised, high-quality and sustainable manufacturing nation. We have a renewed focus on competitiveness and growth, and we are backing businesses to expand and create the jobs that will increase the earning power of all Australians.

We are putting industry in the driver's seat to reignite Australian manufacturing. Government and industry are coming together to make bold changes that will create strong, resilient, thriving and internationally competitive manufacturing businesses.

We have looked at what we are good at and what we can be good at. We know we have advantages in resources and food. We can build on these to create strengths in sectors of strategic importance like medical products, recycling and clean energy, defence, and space. We are working with industry to identify and address opportunities.

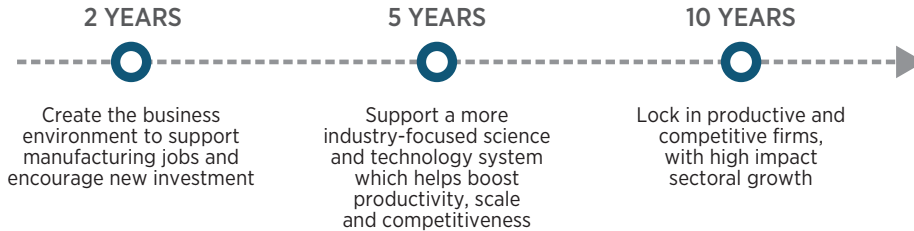
We will drive growth by getting business conditions right. We will ensure science and technology work for industry by fostering the environment needed to improve collaboration, which includes boosting the role of the CSIRO. We will invest in priority areas to help manufacturers compete, scale-up their operations, access global markets and move into higher value manufacturing. We will work with industry to better understand our supply chains and how we can improve their resilience to external shocks. This will position Australia for success into the future.

We will take action to support short-term economic recovery, including having the right investment and advisory structures in place. In the next five years we will support a more industry-focused science and technology system to help boost productivity, scale and competitiveness. Within the next decade, Australian manufacturing will be characterised by productive and competitive firms that deliver high impact sectoral growth. We will continue to work with industry to ensure the Strategy evolves over its life. Partnering with industry, we will build a manufacturing capability that delivers positive economic outcomes and jobs for local communities, including in regional areas.

Our Vision

For Australia to be recognised as a high-quality and sustainable manufacturing nation that helps to deliver a strong, modern and resilient economy for all Australians.

Australia's Manufacturing Goals



Australia's Modern Manufacturing Strategy

GETTING THE ECONOMIC CONDITIONS RIGHT FOR BUSINESS	MAKING SCIENCE AND TECHNOLOGY WORK FOR INDUSTRY	FOCUSING ON AREAS OF ADVANTAGE	BUILDING NATIONAL RESILIENCE FOR A STRONGER ECONOMY
<ul style="list-style-type: none"> Helping restore business confidence and recovery through the JobMaker plan Delivering lower energy costs Building management capability Getting our tax settings right Tackling red tape Improve our industrial relations system 	<ul style="list-style-type: none"> Aligning research and innovation capabilities and programs to priority areas Unlocking investment proposals through the Manufacturing Modernisation Fund round two Backing digital transformation 	<ul style="list-style-type: none"> Setting National Manufacturing Priorities and developing road maps for action Backing projects with wide reaching impacts through the Modern Manufacturing Initiative 	<ul style="list-style-type: none"> Making supply chains more resilient to external shocks including through a Supply Chain Resilience Initiative Supporting global market diversification

Australia's National Manufacturing Priorities

There are manufacturing growth opportunities in each of our National Manufacturing Priorities, with the potential to deliver long-term transformational outcomes for the Australian economy.



Resources Technology & Critical Minerals Processing



Food & Beverage



Medical Products



Recycling & Clean Energy



Defence



Space

Our plan for Australian manufacturing

Delivering our plan to help manufacturers grow

Australian manufacturers face a challenging business environment due to the COVID-19 pandemic. Despite historically low interest rates, we are still seeing investment and growth hampered by low business and consumer confidence.

But, working together we can help manufacturing grow by:

- **Creating a competitive business environment**
 - Taking action to get our tax settings right, lower energy costs, reduce the regulatory burden, open up trade opportunities and improve our industrial relations system.
 - Encouraging higher levels of technology investment.
 - Ensuring the education system is providing workers with the skills to support uptake of automation, data analytics and artificial intelligence.
 - Building business management capabilities.
- **Building scale**
 - Focusing on our strategic and comparative strengths and leveraging our hard fought gains.
 - Supporting greater levels of collaboration between businesses and researchers so that they can understand the benefits of innovation, harness our world-class research capabilities and translate our great ideas into commercial outcomes.
 - Increasing opportunities for Australia's manufacturers to improve their capabilities and shift up the value chain.
 - Facilitating connections between and within sectors, both domestically and internationally, focusing on enabling capabilities to add value right across the economy.
 - Enabling partnerships with various levels of government to build scale and better leverage investment.
 - Sending a strong signal that Australia is open for business and we are backing our manufacturers.
- **Boosting supply chain resilience**
 - Recognising the value of domestic manufactured items to drive demand for our high-value goods.
 - Working across and within various supply chains to discover new business opportunities, strengthen relationships, and expand sources of supply.

Immediate actions

We are resetting our approach, putting manufacturing policy front and centre of the Government's JobMaker plan. However, this is not a task the Government can or should achieve on its own. The barriers to growth are varied and the solutions require a tailored approach.

We are taking immediate steps to deliver business competitiveness and resilience at scale by directing our support to our National Manufacturing Priorities, including our programs and investments. We will work with industry to co-design road maps that outline the vision, opportunities, actions and key milestones for our agreed priority areas.

We are investing in a round two of the Manufacturing Modernisation Fund, fast-tracking capital investment to support Australia's recovery following COVID-19, by helping build the business confidence needed to take on new employees and invest in new equipment over the recovery period.

Road maps to recovery and beyond

We will partner with industry to immediately lay the groundwork for prioritising and boosting collaboration and investment in our National Manufacturing Priorities. We will facilitate a co-designed process with industry-led expert teams to develop road maps against each of the National Manufacturing Priorities. Together with industry, we will identify the roadblocks to growth and actions to overcome them. A refocused and refreshed Industry Innovation and Science Australia will have a key advisory role on the road maps and investment decisions.

The road maps for each National Manufacturing Priority will build on existing sector plans. They will outline:

- a shared vision for manufacturing in each priority sector
- opportunities and barriers to achieving scale in manufacturing
- opportunities for exports, global market diversification and foreign direct investment
- sector-specific Key Performance Indicators and performance metrics to assess growth in manufacturing over time
- common views on new approaches which could deliver improvements in capability
- identification of opportunities for partnerships which deliver on the objectives of the Strategy

Each road map will set the direction for these sectors over ten years and signal how we are responding to industry needs. The road map development cycle will be finalised in the first half of 2021.

Getting the economic conditions right

Australian manufacturing will not grow if broader economic conditions are not right. These are the critical building blocks necessary to attract investment, boost business opportunities and deliver a strong recovery. This is principally a role for government and we are pursuing reforms to our tax and industrial relations systems.

We are taking action to reduce energy costs, which is a significant factor in the competitiveness of our manufacturers. Affordable energy and energy technology is critical for our manufacturers, especially where they play an important role in producing critical food and medical supplies.

We are removing unnecessary regulation and reducing business compliance costs. We are focused on lifting the performance of our regulators to reduce the time and effort spent by businesses on unnecessary red tape.

We are delivering lowering taxes for businesses to encourage investment and growth. We are working on reforms that will help reduce the time and costs associated with insolvencies and we are reforming the Research and Development Tax Incentive to ensure that it supports and encourages businesses to undertake more R&D investment.

On the skills front, we continue to put the necessary building blocks in place to ensure that we have a pipeline of highly skilled workers to support technologically-advanced, high-value manufacturing. We are taking action in priority sectors that require new skills and in which there are shortages.

Our focus

- We are delivering reliable **gas supply at affordable prices**, underwriting electricity infrastructure to support reliability and competition, and progressing electricity market reforms.
- Key to this work is making Australian gas work for Australians. Gas supplies some 40 per cent of the energy the manufacturing sector consumes, and is a critical input to chemicals and fertiliser production.
- To deliver **reliable gas supply at affordable prices** to manufacturers, the Government is investing \$52.9 million to unlock new sources of gas supply, get additional gas to market as efficiently as possible, and empower domestic gas consumers to get better deals.
- Additionally, the Government's **Technology Investment Roadmap** and annual **Low Emissions Technology Statements** will unlock new opportunities and sources of competitive advantage across the country by focusing on low emissions technologies with the potential to deliver the strongest economic and emissions reduction opportunities for Australia.

- We are taking action to promote the uptake of energy-efficient technologies to reduce energy costs and attract investment in Australian manufacturing, including by establishing the \$95 million **King Review Technology Co-Investment Fund**. This initiative supports our technology-focused approach to reducing emissions, by helping companies to identify, assess and trial new technologies.
- As part of **JobTrainer**, we are skilling job seekers in areas of priority skills and providing wage subsidies for apprentices and trainees to help keep them in work. Similarly, reforms to the vocational education and training sector (including apprenticeships) will be critical in addressing current skills shortages, while our higher education reforms are aligning short-term training places with future skills needs.
- We have established a **Global Business and Talent Attraction Taskforce** to help the economy to recover and grow. The taskforce will operate as a strike team to lure international businesses and exceptional talent to Australia in priority industries, including advanced manufacturing.
- We are considering how **Commonwealth procurement** can build local manufacturing, including for Australia's manufacturers, in line with international obligations.
- We are helping small businesses get paid on time by establishing the **Payment Times Reporting Scheme**. Under the scheme, large businesses will have to report publicly on how and when they pay their small business suppliers. This scheme will provide unprecedented transparency and will help small businesses and the general public make more informed decisions about who they do business with.
- We have committed \$37.7 million to deliver a **Cyber Security National Workforce Growth Program** recognising that all industries, including manufacturing need cyber security professionals to support secure digital engagement into the future.
- The **Deregulation Package** includes a Digitisation of the Therapeutic Goods Administration measure that will streamline the application, tracking, payment and management of product listings for regulated and subsidised health related services.
- The **Simplified Trade System** will make trading simpler and cheaper by reforming our trade systems and regulations – ensuring an internationally competitive trade system that supports market expansion and resilience.

Case Study



ASM — Advancing resources technology

ASM is an integrated materials business that intends to become a global producer of value-added materials and speciality metals, including rare earths and zirconium. These materials are critical for a diverse range of advanced technologies, such as clean energy and electric vehicles.

The foundation of ASM is a large in-ground resource of rare earths, zirconium, niobium and hafnium, located near Dubbo. This will require a materials processing facility to unlock the value of these metals.

The Dubbo Project development is fully approved and ready for construction once financing is finalised.

As a new manufacturing business in regional NSW, ASM represents a significant economic boost for the region during construction and operations.

ASM is also advancing a new metallisation technology in partnership with South Korean company Ziron Tech. The technology creates high-purity metals from oxides (such as those produced by the Dubbo Project) efficiently and with significant environmental benefits than conventional industry processes.

“ASM represents an alternative, sustainable and reliable source of critical materials, from the mine to high-purity metals,” said Managing Director, David Woodall. “This year especially, we’ve seen that diversifying supply is increasingly important in a global market.”

Making science and technology work for industry

Clever use of science and technology will build industry capability and improve productivity. Enabling digital technologies, such as artificial intelligence (AI), block chain and cyber security, will also help our manufacturers to create entirely new products, processes and business models.

Australia's science, research and innovation capabilities are critical enablers of transformation in manufacturing. There is clearly an opportunity to find ways to improve technology, processes and practices, and digital operations. These enablers support business competitiveness and have positive spill-overs across our economy.

We are focusing our industry, science and technology investments, including through the work of the CSIRO, to support our National Manufacturing Priorities. This will help our manufacturers supercharge their operations and harness emerging opportunities.

We are fostering strong collaboration between business and our world-class researchers to leverage economies of scale, knowledge transfer and innovation, so together they can find creative solutions and better leverage our bright ideas. We are encouraging businesses to invest in innovation to improve their processes and practices.

We will work closely with industry, seeking their guidance to ensure our programs and investments — some of which will be joint enterprises between government and industry — target the right activities and the right businesses to achieve success.

Our focus

- We are aligning **research and innovation capabilities and programs to support the National Manufacturing Priorities**.
- We are supporting a range of measures to encourage businesses to increase their investments in productivity-enhancing technologies. This includes \$52.8 million to conduct a second round of the successful **Manufacturing Modernisation Fund** to back manufacturers that are planning for the future and seeking to improve their competitiveness and productivity.
- We are providing \$454.2 million to the **CSIRO** to ensure our world-class science, research and innovation capabilities can continue to work for industry.
- We are working to ensure the sustainability of our research system to support our economic recovery, productivity gains and research commercialisation. Our \$1 billion boost to the **Research Support Program** will help universities retain the research capability necessary to continue delivering world-class research and the \$41.6m **Strategic University Reform Fund** will support universities to establish pilot initiatives designed to increase local business-research collaboration and commercialisation.
- We are lifting the digital capability of Australia's manufacturing business leaders through our **Digital Directors Training**, which will support successful digital transformation of manufacturing and improve productivity. To emphasise our focus on building the digital capability of manufacturing and other business decision-makers, we are also setting a target for 10 per cent of all Australian board directors to have a digital background by 2030.
- We are also launching a **Digital Readiness Assessment Tool** to provide businesses with personalised and targeted information about how they compare to other firms in their market and connect them to a range of services to help them on their digital journey.
- We are providing \$11.4 million to fund a round of the **Business Research and Innovation Initiative** focused on the development of regulatory technologies, or **regtech**. Through this initiative we will provide critical early stage funding to innovative SMEs to develop solutions that help business to navigate and comply with regulatory requirements.
- Through the **2020 Cyber Security Strategy** we have also committed \$8.3 million for the **Cyber Security Connect and Protect Program**, which will assist SMEs, including those in manufacturing supply chains, to uplift their cyber security capability.
- For small businesses in particular, we are **expanding the Australian Small Business Advisory Service Digital Solutions** program to support a further 10,000 small businesses in 2020-21 to go digital.

Case Study



Dresden — A vision for greener glasses

Frustrated by the fragility, wastefulness and high cost of traditional prescription glasses, **Dresden Vision** co-founder Bruce Jeffreys set about reinventing how prescription glasses are made.

Traditional manufacturing processes and supply chains didn't support Dresden's goal to create affordable, high-quality frames from sustainable materials, so they started from scratch. Supported by a Cooperative Research Centre Projects (CRC-P) grant, Dresden worked with a range of industry partners and the University of New South Wales Sustainable Materials Research & Technology (SMaRT) program to develop a unique injection system that can produce high-quality frames using recycled and recyclable plastics more cheaply than using virgin plastics.

Now the only mass producer of prescription eyewear in Australia, Dresden's closed-loop system transforms shampoo bottles, discarded fishing nets and even plastic banknotes into high-quality eyewear. Their products are being retailed in Australia, New Zealand and Canada, competing with the world's major brands on quality and price.

"As an Australian manufacturer, we think sustainability is a critical competitive edge. The current product is so wasteful; for us, sustainability is a core part of how an Australian manufacturer differentiates themselves in a busy global market. Projects like ours are a great example of combining traditional skills with new digital skills to reinvent a product," says Bruce Jeffreys, Co-founder of Dresden Vision.

Leaning into our strengths — our pathway to a strong, modern and resilient economy

There are manufacturing growth opportunities along the value chain in each of our National Manufacturing Priorities, with the potential to deliver long-term transformation outcomes for the Australian economy.



Focusing on areas of advantage

For too long we have attempted to be all things to all people. We can't do everything, but we can punch above our weight in those sectors where we have an edge over our international competition. Australia has been highly successful in sectors like mining and agriculture because of the internationally competitive strength of our natural resources sector. Our food manufacturers are helping farmers achieve more value from their produce by enhancing efficiency through better food processing techniques that extend nutritional value and shelf life of goods.

To understand our strengths, we have used a range of techniques to identify areas of comparative advantage and strategic importance for manufacturing. Australia continues to have a clear comparative advantage in resources and food & beverage, consistent with previous analysis including by the World Bank and the OECD. Horizon scanning has uncovered areas where we have significant potential in new and emerging areas.

We can lift our capabilities in key sectors:

- Resources Technology & Critical Minerals Processing
- Food & Beverage
- Medical Products
- Recycling & Clean Energy
- Defence
- Space

Together, these sectors form our National Manufacturing Priorities. They play to our strengths and have real potential to deliver economic growth and create new jobs.

We are backing manufacturers in these sectors. Our investment and actions are aimed at building our industry in general — not individual firms.

Businesses are more likely to grow and attract investment when there are fewer barriers and they are supported by a thriving business environment. We are focusing our investment on projects that will create collaborative environments, encourage the market to invest, and partner with business, research organisations and state and territory governments. But this isn't a "one size fits all" approach — together with industry, we need to be clear about the opportunities, the barriers and the required actions.

Our focus

- We are co-designing industry-led road maps to act as a pathway for future government and industry action and investment in each of the **National Manufacturing Priorities**.
- We are investing \$1.3 billion through the **Modern Manufacturing Initiative** to encourage more private investment and support large projects that will build the scale, connections and capabilities of local manufacturers, allowing them to shift up the value chain and grow.
- We are making sure the existing programs in the Industry, Science and Technology portfolio are fit for purpose and making a substantial contribution to this agenda.



Case Study



Natural Evolution — scaling-up thanks to the power of flour

Natural Evolution began accidentally when Rob Watkins, a second-generation banana farmer, drove over a bunch of dried bananas. They released a puff of flour, leading to the discovery of a superfood goldmine. When Rob accidentally discovered a rich source of resistant starch that is a gut friendly fibre, he had no idea that his business would shift from selling fresh bananas, to developing an innovative product line using unwanted waste to generate a far more successful and sustainable business.

With the help of the Australian Government, Rob and wife Krista invested in the world's first and only pharmaceutical/nutraceutical grade processing factory that now produces a much wider range of Aussie superfoods.

Natural Evolution's export journey began in July 2017 when it launched its business in Japan. Since then, increased demand for green banana powder has seen the company experience significant growth across all aspects of the business. Asia, UK, New Zealand to follow.

Their patented food processing technique, NutroLock™ is gaining attention from Africa, Asia and the Pacific regions who have all expressed interest in buying a licence.

The global success of Natural Evolution, thanks to this Queensland farming family committed to saving wonky bananas, shows the power of ideas and innovation in turning a problem into a global opportunity for Australian businesses.

Case Study



Gilmour Space Technologies — leading the new space race

Founded by two brothers in 2013, this Queensland startup is now one of Australia's leading space companies pioneering new and innovative hybrid propulsion technologies that will offer lower cost small satellite access to space.

The company has embraced many aspects of advanced manufacturing. They use advanced manufacturing for their rocket engine components. They also use precision manufacturing and complex electronics for their flight vehicle avionics system.

Supply chain continuity is critical to Gilmour Space Technologies. There are over 1,000 components that go into their launch vehicles. They want to see the vast majority of components in that vehicle manufactured in Australia.

Gilmour Space Technologies wants to be the first to launch an Australian payload into orbit, on board an Australian rocket and from an Australian launch site.

"We believe strongly Australia should have its own manufacturing base in-country and see no reason why we can't build a supply chain in Australia that enables us to build a vehicle that takes things to space" says CEO Adam Gilmour.

The global space sector is undergoing a massive transformation. As commercial enterprises develop smaller, cheaper and more capable technology, the cost of access to space reduces.

Today, space-enabled technologies impact our everyday lives – from GPS maps on mobile phones, to images from space being used to predict weather, to providing the telecommunications links that bring us together.

The Australian Government has set a target to triple the size of Australia's space sector to \$12 billion per year and create up to another 20,000 jobs by 2030. The Australian Space Agency has been tasked to lead this effort.

Advancing Space: Australian Civil Space Strategy 2019-2028 sets a clear path to take the space sector into the next decade and beyond. It includes seven priority areas, from robotics and automation, earth observation through to access to space, which is seeing exciting businesses emerge and grow across Australia.

Growth in Australia's space sector supports capability across the economy. Space-related advanced manufacturing and its supply chain is driving development of new skills and experience that are globally relevant and that can be applied to other projects, helping to boost Australia's competitiveness and productivity.



Building national resilience for a stronger economy

COVID-19 has reshaped the way government and business think about economic resilience. The importance of secure and diversified supply chains has been brought into sharp focus.

We've learnt Australian manufacturers do not back down from a challenge. Their responsiveness and ingenuity allowed Australia to produce the medical devices and PPE we needed to save lives and protect frontline workers, and the food packaging and essential products we all needed day-to-day.

The continued operation of our core industries was also essential. Acting as 'keystones', they have been, and continue to be, vital to the ongoing operation of other critical sectors. For example, Australian steel producers are helping treat air for medical grade oxygen used in hospitals.

Domestic manufacturing is not the only solution to resilience, but it is one way to reduce risk, provide agility and reduce response time and cost. It can also contribute to international supply chains, helping other countries meet their needs. By positioning ourselves as a manufacturing nation and reliable supplier of quality products, Australia can take an enhanced role in helping "solve" global supply chain issues at this critical time.

We will work closely with industry and other jurisdictions to ensure we better understand our supply chains, and to determine the best mechanisms to ensure we can access what we need in times of crisis.

Our focus

- As part of a broad package of new initiatives to ensure Australia has secure, reliable and resilient supply chains, we are establishing the \$107.2 million **Supply Chain Resilience Initiative** through which we will work closely with industry to better understand supply chains, identify gaps and take action to address them.
- We are also encouraging market diversification by working to increase the reach of our **Free Trade Agreements**, bolstering economic relationships with regional partners and supporting businesses to engage in digital trade.
- Growing Australia's network of 14 free trade agreements (FTAs), increasing the reach of our existing FTAs, helping business to engage with digital trade, advocacy in support of open international markets and rules-based trade, removing non-tariff barriers, and enhanced cooperation with key trade partners are our best tools for supporting market diversification.
- We are making trading simpler and cheaper by building an internationally competitive **Simplified Trade System** which will support market growth and expansion for Australian industry.
- We are taking further steps to strengthen Australia's liquid fuel security, including working to keep prices low, boosting the resilience of food supplies and ensuring Australia maintains a viable domestic refining industry.

Case Study



ResMed — Helping Australia breathe easier

When the first continuous positive airway pressure machine (CPAP) was developed, **ResMed** founder, Peter Farrell saw the potential to help treat patients with sleep apnea.

ResMed commercialised CPAP, making it quieter, smaller, more comfortable and more accessible to millions worldwide. They have since expanded their product range to provide solutions for the whole journey – from diagnosis to treatment.

While sleep apnea remains a focus for ResMed, they are also a global top 5 producer of hospital-to-home ventilators and a top 2 producer of non-invasive ventilation devices, also known as bi-level devices. With the Australian Government's support, ResMed produced 7000 of these life-saving devices for Australia's medical stockpile in the first half of 2020.

ResMed's innovative technology has the potential to improve quality of life, reduce the impact of chronic disease and save healthcare costs.





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