



**LABOR:  
INNOVATING  
FOR AUSTRALIA**

# MESSAGE FROM KIM CARR

Innovation policy is the thread that draws industry, science and research policy together.

And innovation policy is about much more than promoting the latest industrial practices and technologies.

At the deepest level, it is about the future of Australia – of all of us.

Innovation policy matters because good governments must be concerned with more than the latest growth figures and unemployment figures.

They must be concerned with what drives prosperity in the long term.

To govern for the future means to make choices about what sort of country we want to be.

We need to make choices that ensure growth can be sustained, so that good quality, secure jobs will be created, and so that all have a chance to share in the prosperity of the nation.

The OECD has emphasised that prosperity depends upon knowledge-based economies having a vibrant innovation system.

A nation that fails to foster innovation is not investing in its future.

For Labor, innovation policy applies not just to a small section of the economy, but to every enterprise.

It applies not just to industry, but to universities and TAFEs, research institutes, the public service and the community sector.

Innovation can intimidate people because, for the first time since the industrial revolution, technological change is projected to destroy more jobs than it creates.

This is the age of the fourth industrial revolution, or Industry 4.0 – the enhanced automation brought about by digitalisation and interactive machines.

But the solution to the challenges of this revolution cannot be a repudiation of new technologies, a retreat into wishful thinking or anti-science prejudice. That path leads to national failure.

As governments elsewhere have shown, with the right policy settings opportunities for new industries, products and jobs can be expanded under Industry 4.0.

But that means not letting the market rip. There must be a public policy framework that embraces the flexibility of the factory of the future.

A flexibility that is a spur to innovate, creating new jobs for our people, rather than becoming a source of destruction.

The science and new technologies underpinning Industry 4.0 have the potential to transform Australian industry.

Labor will work with industry, unions and researchers to develop a vision for a 21st century industrial structure that will guide our innovation and industry policies.

For Labor, innovation policy has at its heart a fierce commitment to growth and opportunities for all.

A Shorten Labor Government will work with all sectors of the economy to foster a culture of inclusive innovation that drives economic opportunity and increases participation.

**Senator Kim Carr**  
**Shadow Minister for Industry, Innovation, Science and Research**

# RESEARCH AND DEVELOPMENT

Innovation and investment in research and development are about future-proofing the Australian economy.

At the centre of our policy is a commitment to Australia as a science nation, an entrepreneurial nation and an advanced manufacturing nation.

These are different facets of the same initiative, directed at the same objective – our future national prosperity.

A Shorten Labor Government will aim for 3 per cent of GDP to be devoted to research and development (R&D) each year by 2030.

We can only do this through a national partnership with all levels of government, business and researchers. The key to achieving this will be a true culture of collaboration and increased investment from business.

To that end, a Labor Government will reform the Research and Development Tax Incentive, the principle measure integrating the taxation and innovation systems.

We will introduce a 10 per cent additional premium rate for firms that collaborate with universities and research agencies to do R&D.

Labor will also introduce an Australian Investment Guarantee (AIG), which will provide accelerated depreciation incentives for manufacturers investing in new capital equipment.

We need a strong research base providing a wellspring of technical know-how, with rich and deep connections to the global science enterprise.

# RETURNING SCIENCE TO THE CENTRE OF GOVERNMENT

Labor will end the war on science that has been waged under the Liberals.

A war that has seen 1,100 science jobs disappear, and researchers in our universities and public agencies deprived of the resources they need.

We will restore science to the centre of national decision making and reset the relationship between scientists and government.

We will make a charter with Australia's scientists and researchers.

Under this charter, we will provide them with the best equipment the nation can afford.

In return, we expect that they will do everything they can to assist Australia's government in meeting the challenges of the 21st century.

But they will not be subject to political interference in their work. Labor will uphold the free inquiry that is needed for science to flourish.

Science, as the well spring of innovation, must be understood in the broadest possible meaning of the term, to include all organised, rational disciplines of inquiry.

It includes the humanities, arts and social sciences just as much as mathematics, the natural sciences and engineering.

To assist us in reaching our goal of 3 per cent of GDP invested in R&D per year, we will undertake a root-and-branch review of Australia's research needs.

This will be no ad hoc survey, to be hastily conducted and quickly discarded.

It will be a comprehensive review of the entire research sector, the first in more than a generation.

The review will be led by the former Chief Scientist, Professor Ian Chubb, assisted by other eminent researchers.

As well as ensuring that science has a seat at the Cabinet table, Labor will restore the Prime Minister's Science and Innovation Council.

The council will be the key to restoring the prominence science deserves in government deliberations. It will bring scientists and public servants together to provide the advice government needs, both for what is urgent and for the long term.

## **WE WILL INVEST IN OUR SCIENCE AGENCIES AND BASE CAPABILITIES**

Labor will also help safeguard the future the Great Barrier Reef and marine systems through our Marine Science Plan, which will provide additional resources to the Australian Institute of Maritime Studies, refit the Great Barrier Reef research vessel – the RV Cape Ferguson – and provide \$35 million for a major new reef research initiative.

Labor will invest \$10 million in the CSIRO Climate Science Centre. The investment will allow the CSIRO to employ more scientists and develop a national climate science capability plan to guide future scientific investments in climate science.

A Shorten Labor Government will ensure that girls and women have equal opportunities to learn, work and conduct research, by combating entrenched and systematic gender inequalities.

We will fund SAGE and direct the Australian Research Council and the National Health and Medical Research Centre to fix systematic barriers, establish targets for government appointments in the research sector, and establish a National Women in Science Day.

The Liberals have time and time again ignored and attacked funding for research infrastructure.

Unlike the Liberals, Labor will never threaten the jobs of scientists and researchers in national research facilities. We will continue the process for investment into national research infrastructure and will keep the Education Investment Fund.

Labor will establish better methods to consult the sector over decisions around research infrastructure in line with the Clark Research Infrastructure Review and the 2016 National Research Infrastructure Roadmap.

And we will ensure that humanities, arts and social sciences are treated fairly in decisions around future national research infrastructure investments.

## **GROWTH DEPENDS ON AN ACTIVE ROLE FOR GOVERNMENT**

Ensuring that growth can be sustained for the long term requires a government that understands the urgency of change and encourages new ideas.

But that is not happening in Australia under the Liberals.

Under the present Liberal Government, income inequality in Australia is the highest it has been for 70 years.

This is not only because of the Liberals' regressive wage policies, or because their tax policies concentrate wealth at the top end of town.

It is also because Liberal governments do not have the vision to build a future-focused, innovative Australia.

There has been a 10 per cent decline in real terms in spending on science, research and innovation during the life of the Abbott-Turnbull-Morrison Government.

In the past three years, Business Expenditure on Research and Development has declined by more than

30 per cent.

To reduce levels of inequality, we need an innovative economy that embraces the challenges of modernity and ensures that the benefits of our prosperity can be shared by all.

Labor knows that government has a crucial role in the innovation system.

The idea that an innovation system can be built without government is an illusion, held only by those who don't understand how the most successful businesses of our time arose.

Virtually every significant discovery and technological breakthrough of the past hundred years and more was made on the back of research policies and investments put in place by governments.

The lesson of history is that public investment in research delivers private as well as public benefit, with a return many times greater than the cost.

Governments must not only encourage, they must enable, because there are some things that markets do not do well.

Government is uniquely placed to create and entrench the conditions in which innovative businesses and institutions can thrive.

## **HOW A SHORTEN LABOR GOVERNMENT WILL BACK MANUFACTURING**

Our \$1 billion Advanced Manufacturing Future Fund will provide concessional loans to innovative manufacturers, especially small and medium enterprises, that find it difficult to obtain finance from private lenders.

Our Local Projects, Local Jobs plan will lower the thresholds for implementing Australian Industry Participation Agreements, creating more opportunities for local industry and more local jobs.

Labor will respond to the challenges of climate change in key industry sectors. Tripartite innovation councils will develop roadmaps and innovation missions for the electrification of transport, low-energy building and construction, food and fibre processing and for emissions-intensive but strategically vital industries like steel, aluminium and cement. These innovation missions will stimulate research and development and help achieve our target of devoting 3 per cent of GDP to R&D per year by 2030.

We will invest \$57 million in an Electric Vehicle Manufacturing and Innovation strategy, to grow the jobs and firms of the transport future. The strategy will help achieve Labor's target of 50 per cent of new vehicle sales to be electric vehicles by 2030.

We will invest \$20 million in the \$50 million Australian Centre for Advanced Manufacturing at Flinders University's Tonsley campus. The Centre will be Australia's first fully reconfigurable advanced manufacturing and Industry 4.0 training facility.

We will increase resources for the Anti-Dumping Commission, to safeguard Australian jobs in steel, aluminium and other industries that are vulnerable to the dumping of cheap, substandard foreign products on the domestic market.

A National Rail Plan will ensure that every dollar of federal funding spent on rail projects goes towards creating local jobs and expanding our rail manufacturing industry.

We will protect building safety by introducing national licensing of all building practitioners, strengthening penalties for infringements, ensuring that a federal Cabinet minister chairs the Building Ministers Forum, and banning the import, sale and use of flammable aluminium cladding.

The National Space Agency will be transformed, with a mandate to double the size of Australia's space industry, creating thousands of jobs in research, Earth observation, space technologies and manufacturing.

We will invest \$25 million in a Food and Fibre Industry Strategy to attract investment to innovative manufacturing and create jobs, especially in rural areas.

We will invest \$1 billion in TAFE, apprenticeships and skills training. This commitment includes scrapping upfront fees for 100,000 TAFE students who choose to learn the skills that Australia needs to become an advanced manufacturing economy.

A \$1 billion Hydrogen Plan will support R&D, commercial deployment, industry development and regulatory reform to increase Australian participation in the global hydrogen industry and increase the take up of hydrogen as an alternative fuel.

Labor will supercharge Australia's battery metal manufacturing industry, to create jobs and support our drive towards a clean energy future.

We will invest \$3 million in a National Centre of Artificial Intelligence, to examine the impact of technology on the jobs of the future and help firms prepare for the challenges ahead.

We will restore the Pharmaceutical Industry Working Group to consult firms in this crucial manufacturing industry and coordinate the implementation of policies affecting them.

## **THE CHOICE FACING AUSTRALIANS**

Labor and the Liberals have fundamentally different priorities - in innovation, industry, science and research, just as much as in education, health care or taxation.

What the Liberals present as innovation policy is just a host of bits and pieces, covering up billions of dollars in cuts.

The Liberals have trashed our science and squandered our research potential, while other nations and advanced economies invest in the assets for growth.

To meet the challenge of creating the industrial structures of the 21st century, Australia's economic growth must be innovation-led.

Only Labor is willing to provide the necessary leadership in government.

Only a Shorten Labor Government will do what is necessary to ensure that every Australian has an opportunity to share in the future prosperity of the nation.