



EXECUTIVE SUMMARY

Research and innovation are key drivers of business competitiveness, economic growth, and ultimately improved living standards. In addition to economic benefits, Research and Development (R&D) investments are also crucial to address key societal challenges and improve wellbeing as they contribute to improving health outcomes, fight against climate change and build more inclusive and resilient societies (European Commission, 2017).

Within the broader research context, regional R&D activities can play a key role in securing an economically, socially and environmentally sustainable future for regional communities through (PC, 2011):

- improving the productivity and competitiveness of the rural sector
- providing new production and employment opportunities
- contributing to better environmental and social outcomes
- facilitating structural adjustment (greater capacity within rural communities to adjust to changing circumstances)
- building stronger regional communities.

Research and innovation activities currently occurring in the Mid West (MW) Region of Western Australia (WA) are numerous. However, in the broad regional context these activities are uncharted, uncoordinated and do not necessarily have value-added regional linkages, collaborative partnerships and regional industry relevancy (Jefferies & Associates, 2017).

In this context, the Mid West Research and Development Network (MWRDN) was established in 2018 as a group of educational and scientific institutions, key government agencies, not for profit organisations and committed individuals working to establish a regional Research and Development (R&D) network to build the MW Region as an exemplar of research and innovation. The aim of the MWRDN is to advance the MW Region's social, economic and environmental development by linking industry and researchers to facilitate R&D. The MWRDN's activities include:

- advocating for regionally based research
- fostering partnerships and alliances
- facilitating R&D networking events and workshops
- tracking research underway in the region
- establishing priorities for research in the Mid West.

To reach its full potential, the MWRDN is currently seeking:

- monetary support to appoint a regional R&D Director and Research Coordinators
- investment in regional R&D capacity through the placement of PhD students in the region
- seed funding to undertake research projects.

The leadership and dedicated expert resources that these investments would provide would help support, coordinate and growth the MW Region's R&D programs and capabilities and enable some of the benefits outlined above for the region.

The R&D Director and Research Coordinators would help businesses in the MW Region to identify and link with university talent (in particular, PhD students). They will also work with business and other parties to access government assistance such as ARC Linkage grants and PhD scholarships for university-business research, and regional programs for general business development. It is expected that this facilitation would result in:

- increased collaboration between businesses in the region and between the businesses and universities as a result of addressing obstacles to collaboration identified in the literature by:
 - bringing together the right partners with the aim of tackling complex inter-disciplinary challenges
 - pooling resources and in this way generating cost savings
 - identifying regional strategic priorities and engaging with local business and organisations to understand their barriers, R&D needs and opportunities
 - providing dedicated expert resources to link collaborative partners and delivering expert support to overcome the potential lack of regionally based skills and management capability
- increased leveraged investment, where business investment is leveraged with grant funding
- capacity building/upskilling which will increase the talent pool available in the region
- streamlining access to R&D for industry and researchers, which will result in efficiencies/reductions in transaction costs
- ultimately an increase in the R&D conducted in the MW Region.

Research activities enabled by the MWRDN can generate positive productivity and knowledge spillovers in the region as knowledge generated through these activities improves the productivity or processes of organisations (for example, a successful soil conservation project by a small group of farmers in the region can, with help from the MWRDN, be replicated by other farmers facing similar challenges). There are many ways in which regional research enabled by the MWRDN can induce such positive spillover effects. For example, spillovers from universities to businesses would be enabled by the MWRDN through direct R&D collaborations between the universities and firms, the publication and dissemination of research findings, or through upskilling of the talent pool available in the region's labour market.

Based on estimates of investment in future research projects that could be enabled by the MWRDN and some assumptions, ACIL Allen estimates the following potential benefits and costs of future research enabled by the MWRDN.

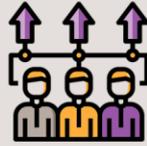
- The total investment in future research enabled by the MWRDN could be \$710,000 per annum from 2020-21 to 2023-24. The present value (PV) in 2020-21 of these costs using a 4 per cent real discount rate is \$2.7 million.
- In present value terms, it is estimated that the future research in the Mid West that could be enabled by the MWRDN could generate \$14.6 million in benefits.
- The Net Present Value (NPV) of the future research projects that could be enabled by the MWRDN is therefore estimated to be around \$12 million.
- The above figures imply that every \$1 dollar invested in future R&D activities in the Mid West that could be enabled by the MWRDN, has the potential to deliver around \$5.40 in benefits to the MW Region after 20 years.

This analysis shows that support for the MWRDN could generate significant benefits for the region and for Western Australia.

Research and innovation can help build a productive, competitive and sustainable economy for Australia



Innovative business are **78%** more likely to report increases in productivity



Businesses that engage in collaborative innovation are **3 times** more likely to report increases in productivity



Businesses which engage in collaboration are **70%** more likely to develop products that are new to the world

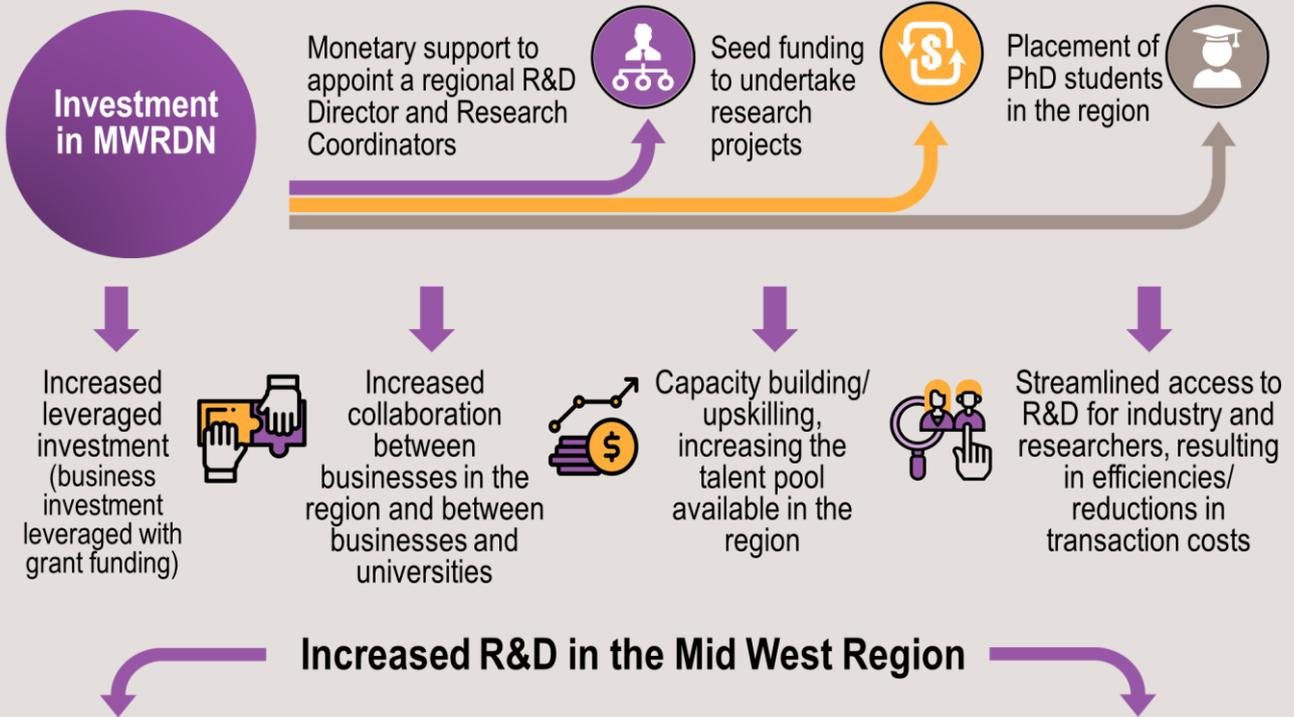


R&D activity has been estimated to explain up to **75%** of total factor productivity growth



R&D has high rates of return estimated to be more than **40%** per year for social return

The MWRDN can help deliver some of these benefits to the Mid West Region



\$12 million in net benefits from future research projects enabled by the MWRDN



Every **\$1 dollar** invested in R&D activities enabled by the MWRDN has the potential to deliver around **\$5.40 in benefits** to the region after 20 years