Economic complexity? We'll need some culture change for that.
Jane O'Dwyer

As final preparations are made for the Jobs and Skills Summit this week in Canberra, it is worth thinking about what it will really take to transform Australia's economy to one that builds in prosperity for future generations in a world increasingly affected by climate change, geopolitical shifts and ever-increasing uncertainty.

We need to ask the question – what type of jobs and careers do we want to create for future generations? Our economy has become less and less complex over the past decades. The Harvard University Atlas of Economic Complexity ranked Australia number 91 in the world in 2020. We were 55 in 1995. That is quite a drop. It means that the type of jobs – and therefore the talent we develop and attract – is limited. We know we have a great lifestyle, but in the intense global competition for talent, that doesn't cut it. Think about the career opportunities for bright young people in the top ranked countries of Japan, Switzerland and Germany. If you have a great PhD, possibly even an industry-focused PhD, you want an interesting career, one that uses the skills you have developed, builds on them, and perhaps gives you the opportunity to create something new and big.

Minister for Industry and Science Ed Husic has been very clear that he is acutely aware of our ranking on the economic complexity scale, and his ambition to improve that ranking. If we want greater economic complexity and all the benefits that affords us, then we need to figure out what we do well and can scale up fast, and we need to change. We do research well in Australia. It might not fit with national myths about ourselves, but we do it very well. Right from the fundamental level. We can translate our research into products, processes and ideas that change our world and our lives. We all know the list – wifi, the Cochlear implant, spray-on skin, silicon hydrogel contact lenses, google maps, polymer bank notes and on it goes.

But too often, the translation of the research and the highly skilled people who can translate great ideas are lost to us. They head offshore to countries who have the capacity to scale at speed, and where the ingenuity and value of a research-trained workforce is well understood and well valued by industry.

If we want to attract, keep and retain highly skilled workers – those with research skills like Masters by Research and PhD graduates – then we need to makes some big cultural shifts. We need to figure out how to build ecosystems that support the translation of research to support industrial transformation. That means understanding how all the – currently disconnected – parts of our system could and should interact with each other, and making sure they do. Portfolio and state boundaries are simply breaks on our potential.

We need to figure out how to make it easier to work together for our research institutions, national critical research infrastructure facilities, centres of excellence, Cooperative Research Centres, Industry Growth Centres, entrepreneurs programs, state based incubators and the myriad of pockets of excellence, capital and government investment. In a relatively small system, it that competition rather than collaboration and coordination undermines our national interest. Let's recognise innovation is messy, and not linear, and

build ecosystems that allow for that by building mechanisms that allow movement across and between programs.

We need to bust some myths about the value of research qualifications. Too many Australians and too many potential Australians think there is no home for a PhD here. That a PhD makes you less employable. Too many businesses fail to grasp the potential of the talent they can harness by employing research-qualified staff, and investing in collaboration with research institutions.

A higher degree by research can equip you for a spectacularly interesting, curiosity-driven career in academia. It can also equip for an equally exciting career creating new businesses, changing existing businesses, bringing new products and processes to market, and inventing things that change lives for the better.

To build a workforce that will foster a more complex economy into reality requires some investment. We need to provide incentives and evidence to businesses about the value of research-qualified staff. We need stipends and scholarships for research training that are not less than you can earn working in a fast-food joint. It is a disincentive that prevents diversity by locking out those without the means to take the time to pursue a higher degree by research, and puts off talented mid-career people who are often the real research translation powerhouses. We need rapid pathways to permanent residency and citizenship for research qualified people. We need to recognise, celebrate, value and support talent as an investment in the future prosperity of Australia.

Jane O'Dwyer is the CEO of Cooperative Research Australia, which represents Australia's industry-research collaboration community.