

27th March 2023

Dear House of Representatives Standing Committee on Industry, Science and Resources,

Re.: Developing Advanced Manufacturing in Australia

Manufacturing Excellence Forum (Sunshine Coast) Ltd is pleased to submit our views on developing advanced manufacturing in Australia.

As an industry-led organization focused on supporting manufacturing excellence and innovation, we believe that the development of advanced manufacturing is crucial to Australia's economic growth and competitiveness. More information on our organisation, our mission, and our activity to promote Advanced Manufacturing can be found on our website here - <https://www.mefsc.org.au/>.

Economic and Population Drivers

No matter how it's measured, our global standing on innovation and our national capability is commercialising intellectual property is not where it needs to be if a prosperous future for our country is an outcome we seek.

For example – while Australia ranks 9th in the world for GDP per capita, we also rank:

- 25th on the global innovation index (per https://www.theglobaleconomy.com/rankings/GII_Index/)
- 91st on Economic Complexity (per <https://atlas.cid.harvard.edu/countries/14>), per Figure 1.

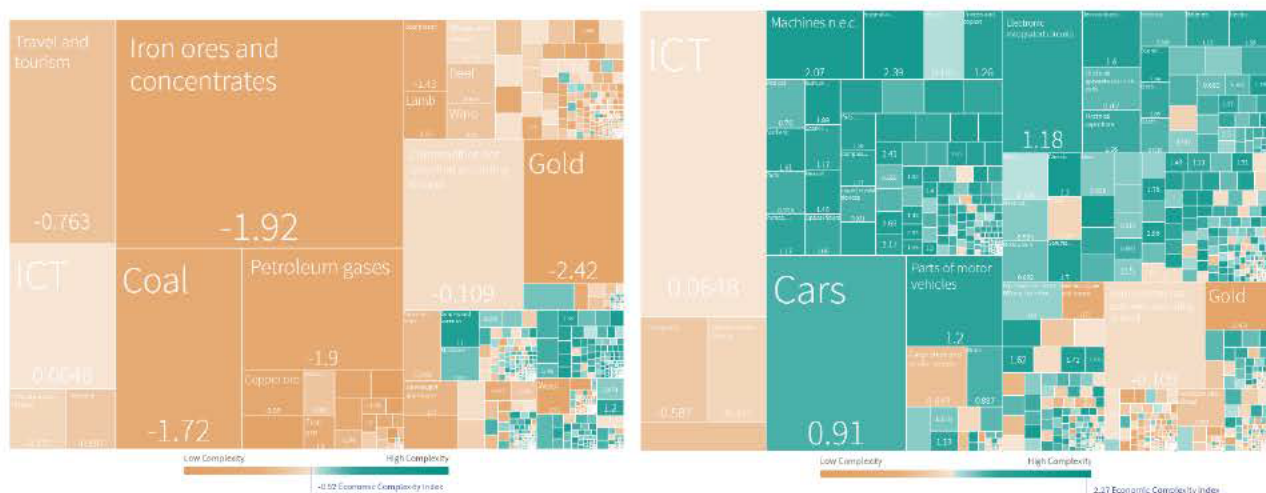


Figure 1 - Economic Complex of Australia (Left - rank 91 of 133) vs. Japan (Right - rank 1 of 133) per Harvard (2023)

Ultimately, we're left punching well below our economic weight-class. Much of this is due to the success we've had in the areas of mining, tourism, and agriculture, which has led to conclusions that Australia is suffering from Dutch Disease (for example, per Corden 2012 – [link here](#)). The antidote to Dutch Disease is making strategic investments that underpin sovereign capability in areas of future demand, comparative advantage, and strategic need.

Further, Australia's population density is largely centralised around 7 major cities (per Figure 2) that are feeling significant economic and cost-of-living pressures around rapid growth.

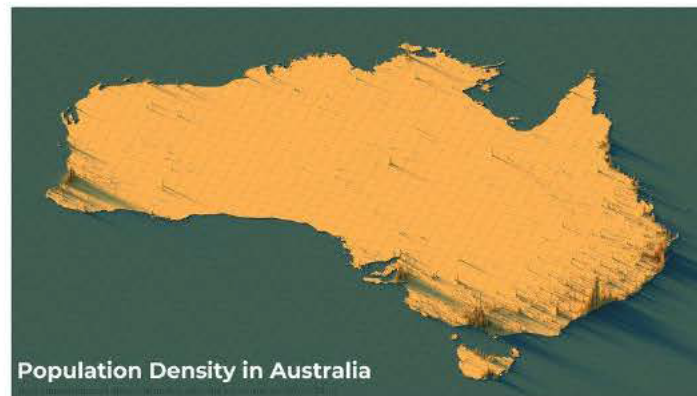


Figure 2 – Population Density of Australia per [Vivid Maps](#) (2023)

Considering the sale of this challenge, we believe that the solution needs to be both collaborative and regional.

Locally speaking - the Sunshine Coast Manufacturing Ecosystem is made up of almost 1400 amazing business, which provide over 8000 highly skilled jobs to our local community. Despite making up only 4% of our total business base, manufacturing makes up almost 20% of the Sunshine Coast's exports at over \$900M per year, punching well above its weight and helping our local region to thrive.

However, to continue tackling the issues of local career opportunities for future generations and steadily increasing the GRP contribution per employee, the widespread adoption of Advanced Manufacturing is not optional.

It is our belief that an increase in governmental and institutional support is required to bring Australian manufacturing up to speed to the other leaders in the developed world (such as Japan, Germany, and South Korea) so that we can simultaneously become sustainably internationally competitive and ensure our sovereign security.

Adopting Advanced Manufacturing

By definition - Advanced manufacturing is the application of technology, automation, and data to enhance productivity, efficiency, and quality in the manufacturing process.

Australia has the potential to become a global leader in advanced manufacturing, given our strong research and development capabilities, skilled workforce, and access to innovative technologies. However, to achieve this potential, we need to focus on several key areas.

Firstly, we need to invest in research and development to enable the development of innovative products and processes. This investment should be directed towards cutting-edge technologies such as robotics, automation, and artificial intelligence, which have the potential to transform the manufacturing industry.

In support of this, the MEFSC partners with the University of the Sunshine Coast and industry partners such as the Sunshine Coast Maker Space to collaboratively support the development of new products and technologies for manufacturers within our ecosystem. Information on the monthly events we run in support of this can be found here - <https://www.mefsc.org.au/past-events>.

Secondly, we need to address the skills gap in the manufacturing industry. This can be achieved by providing targeted training and education programs to upskill workers and ensure they have the knowledge and skills required to work with advanced technologies.

In partnership with TAFE Qld, UniSC and industry partners – the MEF developed and delivered a number of advanced manufacturing courses, aimed at breaking down barriers to contemporary skills. More information on our work in this space can be found here - <https://www.mefsc.org.au/future-skills> and here - <https://www.mefsc.org.au/stem-outreach-1>.

Thirdly, we need to create an environment that supports innovation and entrepreneurship in the manufacturing industry. This can be achieved by providing tax incentives and funding to start-ups and SMEs, encouraging collaboration between industry and academia, and promoting the adoption of advanced technologies.

At a smaller scale, the MEF is aiming to create a supportive and innovative local environment through a range of community grants programs, that target business areas including cash flow forecasting, R&D Tax, leadership, and green energy adoption, through to production automation. More information on this can be found here - <https://www.mefsc.org.au/community-grants>.

Finally, we need to focus on sustainability and reducing the environmental impact of manufacturing. This can be achieved by investing in sustainable manufacturing technologies, promoting circular economy principles, and implementing energy-efficient manufacturing processes.

While our foray into support this area is in it's infancy, it is critical moving ahead. Apart from the Green Energy grant (info here - <https://www.mefsc.org.au/upstream-grant>), we're also working on a collaborative event early in the new FY that focuses on the use of AI, Computer Vision, and Automation in upcycling and the circular economy generally.

Conclusion

In conclusion, the Manufacturing Excellence Forum (Sunshine Coast) Ltd supports the development of advanced manufacturing in Australia. We believe that by investing in research and development, addressing the skills gap, creating an innovation-friendly environment, and promoting sustainability, Australia can become a global leader in advanced manufacturing.

As has been demonstrated herein, we're not just talking about it, we're actively out there doing it (within the limits of our resources and reach).

Thank you for considering our views on this important topic.

Sincerely,

Tim Kelly

Director

Manufacturing Excellence Forum (Sunshine Coast) Ltd