



EMA ADVISORY
Commercial Consultants

Why Space Capabilities are Important!

Ms. Kelly Barlow, Principal, Space Capabilities | EMA Advisory
1 November 2023

For a while now I have been thinking about how best to articulate why is space so important. I have had many discussions with friends and colleagues, where I have inevitably embarked on a passionate rant, discussing in detail all the ways in which space-based capabilities are currently utilised every day to silently make our lives easier, more streamlined and simply better.

At the Parliamentary Friends of Space event, SIAA Chair Jeremy Hallett discussed how dinosaurs and astronauts are the two elements that get children interested in science and space. The following day, at the 2023 Southern Space forum, Ben Tett (ELA) lamented that launch is an easy message on space; as its exciting and engaging.

These sentiments are true. It is a common trope that kids want to be astronauts when they grow up (perhaps even a dinosaur) and launches do get the general public interested in space - because launches are exciting. The problem is; astronauts and launches are a small part of the wider space eco-system that generates thousands of jobs in Australia, and if we rely on these activities to inspire the future workforce, we are potentially limiting the number of engineers, lawyers, accountants, and operators who otherwise may not realise they can have a career in space. According to the Australian Space Agency, there is currently 17,000 personnel employed in the Space sector in Australia. **In order to get more people thinking about the potential career streams within the space industry, we have to educate them on the possibilities and the associated activities of space.**

This train of thought can be drawn out further, as to how we as an industry market the importance of space; because when push comes to shove, the sectors with the largest audience win the funding fight. If the general public understand space better, not only will more people be inspired to get involved in STEM, society will also be better educated, and decision makers will be driven to pay more attention.

Whilst less exciting than rockets; accuracy in Positioning, Navigation and Timing, reduced latency in banking, smarter tech in wearable personal electronic devices (smart watches, medical alert devices etc), more accurate weather forecasting and resilient communications (to name a few) are the elements that people care about. When everything is working as it should, we do not give these things a second thought... when they aren't, it is a far different story.

What happens when Space Capabilities fail?

In January 2007, two US Navy ships had been conducting a training exercise in the San Diego Harbour in California, testing procedures for when communications were lost. Technicians aboard the vessels jammed radio signals, unaware they were also inadvertently blocking the radio signals from GPS satellites being accessed across the city. This training exercise caused air traffic management systems at California Airport to malfunction; caused traffic management systems for the harbour to fail; caused mobile phones in the area to lose signal and local ATMs to stop working. Whilst this is an old example, it clearly demonstrates that a simple, two hour exercise, wreaked havoc on an entire city; leading to a three day investigation before finding the root cause. This situation clearly highlights to amount of technology that is reliant on space, that we depend upon 24x7 to keep life as we know it, functioning.

Should the general public understand that without satellites and space, life would resemble that of the 1940's, I'm pretty sure they would pay far more attention to the everyday management of space rather than only paying attention when there is an anomaly. Education around the very real benefits of investing in and growing the space sector is necessary to bridge the knowledge gap.

I look forward to discussing this topic in more detail at the upcoming ADM conference in Canberra, 28 November 2023.