

# What on Earth is a TSA?

**Joel Lisk**

**Joel Lisk – Research Associate  
(Space and Regulation)**

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**Technology Safeguards Agreements are not documents that get much attention, but for some they can make or break the viability of their business.**

When we think about the space industry, we typically think about big rockets taking brave astronauts or large satellites into orbit. Most of the time we imagine these launches happening in the United States. The US is a world leader for space technology, and home to many of the largest and most successful launching companies in the world, including SpaceX, United Launch Alliance, Rocket Lab, Virgin Galactic as well as a range of emerging businesses including Blue Origin, Firefly and Astra. In most cases, these businesses set themselves up in the US and then never leave. They launch from the US and their customers – whether they be governments, satellite owners or militaries – have to take their payloads to the US to be launched. But the big question is why?

## **Missiles and Non-Proliferation**

The rockets developed by the space sector are effectively missiles without warheads. Much of the technology developed to launch objects and people into outer space is the same technology used by militaries across the world (and some

of the launch businesses active today started out using missile delivery systems as the core for their rockets). Controlling this technology is then essential to ensuring public safety and national security.

The Missile Technology Control Regime (MTCR) emerged in 1987 as a way of ensuring that missile technology did not end up in the ‘wrong hands’. The MTCR is an international arrangement, with States voluntarily signing up to the framework.

Each country that is a member of the MTCR needs to comply with its obligations under the regime. One aspect of this is national laws – the laws within each country – that control the movement of technology falling within the MTCR. This means laws that strictly restrict the movement of rocket technologies. One of the biggest controls within the MTCR is on the export and sharing of rocket systems.

## US Law and Rockets

The US has one of the strictest technology control laws in the world. The International Traffic in Arms Regulations (ITAR) covers a range of technologies used for exclusively military purposes as well as those technologies that might also have a valid civilian use (dual use technologies). ITAR captures space rocket technologies.

The ITAR laws effectively prohibit the export of rockets from the US.

While this is important from a national security and public safety perspective, it does restrict opportunities for space businesses to look beyond the US to establish launch activities.

## The Technology Safeguards Agreements

One of the only ways to export rocket technology from the US is through the use of a 'technology safeguards agreement' – or 'TSA'. This is a treaty-level agreement between the US and another country that includes commitments around the protection of the ITAR-subject technology to ensure that it does not reach the wrong hands.

When looking at space activities, there are two prominent examples of TSA already in place in New Zealand and the United Kingdom. The NZ TSA has been essential to the establishment of a space launch capability there. Without a TSA in place between the US and NZ, Rocket Lab, a US-based company, would never have been able to send its rocket technology to NZ. Between 2017 and 2023, Rocket Lab launched exclusively from NZ and without a TSA, this would not have been possible.

### Why Australia?

There have been several attempts over time to establish a space launch industry in Australia. While the reasons for a launch industry having not yet materialised vary, the US ITAR is commonly cited as a barrier to finding customers.



During a Federal Parliamentary Inquiry into the Australian space sector in 2020 and 2021, several space industry participants used the opportunity to advocate for Australia to enter into a TSA with the US. Businesses such as Southern Launch argued that until Australia entered into a TSA with the US, it was effectively 'locked out of the US space market'. The now defunct Virgin Orbit, another business that was based in the US, also advocated for Australia to seek a TSA with the US, saying that it would be necessary for their entry into the Australian space industry. As part of the same inquiry, the current Head of the Australian Space Agency also described a TSA as being 'really important for the sector'

### A TSA for Australia

In July 2021, the then-Australian government announced that it would commence negotiating a TSA with the US in order to support collaboration between the US and Australian space industries. Just over two years later, it was announced on 26 October 2023 that Australia and the US had signed a TSA to support 'new space-related commercial opportunities'.

The TSA was tabled in the Australian Federal Parliament on 27 February 2024 – starting the process for TSA to eventually come into force here in Australia. The TSA is complex and incredibly restrictive, but it is important to note that it is serving a narrow purpose – it is only allowing US businesses to bring their regulated technologies to Australia. The TSA does not necessarily allow, nor was it established to, allow collaboration and technology sharing between US and Australian businesses.

The TSA contains some clauses that present headline concerns including:

- Preventing the Australian Government using funds derived from the launch activities of US businesses in Australia to acquire, develop, produce, test or deploy new rocket systems – although these funds can go into general revenue.
- The creation of controlled and segregated areas within Australia that are restricted to US citizens.
- Strict controls in the case of an accident or incident involving a US launch vehicle.
- Limitations on the other countries Australia allows to launch from its territories so that United Nations Security Council sanction countries and those not party to the MTCR cannot launch from Australia.

While these requirements look restrictive, they need to be interpreted in context. The US, with the TSA, is allowing the export of highly controlled technology and it wants to be sure that the technology is protected in accordance with its national requirements. The TSA can be criticised for this, but at the same time it creates opportunities for US businesses to seriously consider launching from Australia.

What is important is that the TSA presents opportunities for Australian space businesses. The conditions might be strict, but again they will only apply to a narrow range of activities. The next step is implementation. This is when we will hopefully see whether the TSA is an opportunity or just another meaningless agreement.



**Joel Lisk is a Research Associate with the Jeff Bleich Centre.**

**His research focuses on the ways that nations approach the regulation of technology, with a focus on digital technology and outer space. Joel writes on topics in areas such as space regulation, competition and consumer protection law and data protection.**

**Joel spoke to Space Connect for their podcast on the topic of the Technology Safeguards Agreement and what it means for the Australian space sector. You can listen to the podcast episode on their [website](#) or by searching 'Space Connect' wherever you get your podcasts.**



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**[jbc@flinders.edu.au](mailto:jbc@flinders.edu.au)**