

## Space Sector Considerations

Signing the Artemis Accords might allow New Zealand the opportunity to participate in, or contribute to, NASA's Artemis missions. Participating in Artemis has several intangible benefits for our space sector and some drawbacks.

The first of these is an **increase to our space sector's reputation internationally**. New Zealand would be seen participating in the most high profile and technologically advanced space mission in recent history. It is likely that such an association would position New Zealand as a serious and advanced space nation for those not already aware of our activities. Many are already aware of New Zealand's launch and satellite capability through Rocket Lab. However, Deloitte's report on the NZ Space Economy revealed that the space sector is valued at NZ\$1.7b and is directly responsible for 5,000 jobs. Artemis poses an opportunity to demonstrate the full range of NZ's capabilities.

[REDACTED] s 9(2)(g)(i) Australia are planning on contributing AU\$150m to Artemis in the following areas: mapping of celestial bodies; next generation communications; remote autonomous operations; in si [REDACTED] s 9(2)(g)(i)

[REDACTED] We are hosting an optical communications workshop with the German Aerospace Center (DLR) and planning to fund research in this area. [REDACTED]

Thirdly, there would be **improved domestic public awareness of New Zealand's space activities**. [REDACTED]

[REDACTED] s 9(2)(g)(i) This would generate significant public interest in New Zealand's space sector. [REDACTED] s 9(2)(g)(i)

[REDACTED] Launching exploratory payloads to the Moon tends to generate a lot of public excitement as illustrated by India's Chandrayaan-2 and Israel's Beresheet lunar missions in 2019. Similarly, a lunar mission from New Zealand would likely generate a lot of positive publicity for space activities. As demonstrated by other space missions – notably NASA's Apollo – **New Zealand's participation would also likely increase STEM engagement** at a secondary and tertiary education level, creating more STEM professionals that New Zealand significantly lacks.

The aforementioned benefits are predicated on New Zealand participating in Artemis. **If New Zealand signs the Accords but does not participate in Artemis then our industry could still benefit from a formalised position on space resources**. The Artemis Accords present an interpretation of the Outer Space Treaty that space resource utilisation is permissible for exploration purposes; [REDACTED] s 9(2)(g)(i)

s 9(2)(g)(i)

s 6(a), 9(2)(g)(i)

s 9(2)(g)(i)

## International Relations Considerations

**Signing the Accords might improve international relations with Artemis partners,** s 9(2)(g)(i)

Signing does potentially pose risks to New Zealand's international relationships though. Many countries think that the Artemis Accords are a positive first step at a very high level, s 6(a)

s 6(a) The United Nations (UN) deals with the kinds of issues raised in Artemis, such as space resource utilisation, through the Committee on the Peaceful Use of Outer Space (COPUOS). COPUOS provides a forum for large-scale multilateral discussions. s 6(a)

Therefore, the Accords may be viewed by some nations as an attempt to bypass the UN COPUOS process and the UN treaty-making process. New Zealand has engaged in multilateral discussions on other significant matters. It might be s 6(a)

s 6(a)

s 6(a), 9(2)(g)(i)