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**COMPLETE**

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Page 3: Submitter Information

**Q1**

Personal Information

Name **Warwick Downing**  
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**Q2**

Are you making this submission on behalf of a business or organisation?

Yes (Please tell us your company/organisation):  
Rapid Advanced Manufacturing Limited (RAM3D)

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**Q3**

Would you like to be kept informed of the outcome of the Space Policy Review?

**Yes****Q4**

Are you happy for MBIE to contact you if we have questions about your submission?

**Yes****Q5**

Privacy

**Respondent skipped this question****Q6**

Release of Information

**I understand that if there is other information in this submission that I do not wish to be released, I will email this to [spacepolicyreview@mbie.govt.nz](mailto:spacepolicyreview@mbie.govt.nz) with the subject line "Release of information", together with my reasons for withholding the information and grounds under the Official Information Act 1982, for consideration by MBIE**

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Page 4: New Zealand's interests in space

**Q7** **Work in the New Zealand space sector**

What are your interests and relationship to space? Pick as many as apply below:

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**Q8** **Respondent skipped this question**

Please note any other interests and relationship to space below that you would like to share.

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Page 5: New Zealand's values in space

**Q9**  
To what extent do you agree or disagree that these values should apply to New Zealand's space activities and engagements?

Innovation	<b>Strongly agree</b>
Responsibility	<b>Strongly agree</b>
Stewardship	<b>Agree</b>
Partnership	<b>Agree</b>

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**Q10** **Respondent skipped this question**

Are there any other values, or aspects of kaitiakitanga (guardianship), that you think should apply to New Zealand's space activities and engagements? For example, cultural values regarding space.

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Page 6: New Zealand's space policy objectives

**Q11**  
Rank these key policy objectives in order of importance to you: Click and drag to reorder the objectives from 1 (most important) to 5 (least important)

Growing an innovative and inclusive space sector	<b>1</b>
Protecting and advancing our national security and economic interests	<b>2</b>

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Page 7: Growing an innovative and inclusive space sector

**Q12**

To what extent do you agree or disagree that these policy objectives will help the New Zealand government to grow an innovative and inclusive space sector?

Promoting New Zealand's natural advantage for conducting space activities, and research and development expertise across the space value chain	<b>Strongly agree</b>
Partnering within New Zealand and internationally to increase research and development capabilities	<b>Agree</b>
Identifying opportunities to increase diversity in the space sector	<b>Strongly agree</b>
Using cutting-edge space technology and space sourced data to support New Zealand's values and interests	<b>Agree</b>

**Q13**

Do you have any comments on these policy objectives? (e.g. any suggested change to how they are framed? Is there anything missing?)

There are a number of companies such as ours which are participating in the space industry and enabling the advancements and innovation such as launch services and satellite propulsion to enable the reduction of debris etc. Companies such as ours are often left out of the main conversation even though we are a big part of the picture. There are many opportunities within the space manufacturing industry for inclusiveness. As with most engineering based industries women and Maori are still under-represented. As a person who whakapapas to Te Atiawa and is leading a key space manufacturing business I feel the opportunity for inclusion is strong and the high profile of the space industry will help attract these groups into the engineering sector, which not just benefits the space industry but the wider engineering sector.

**Q14**

**Respondent skipped this question**

Are there any other policy objectives that you think would help the New Zealand government to grow an innovative and inclusive space sector?

**Q15**

Do you have any questions or comments about what these objectives would mean in practice?

As a company manufacturing for the space industry we have been able to grow with the industry. This has enabled us to become the largest manufacturer of our type in the Southern Hemisphere. We have grown by over ten times during our work in the space industry and the lessons we have learnt have been applied to other sectors we work in to create a stronger and more globally competitive company which is growing exports of a range of products (mostly outside the space industry but using that industry to drive quality and productivity).

The work we do in the space industry has enabled us to expand not only the number of staff we employ but also increase our productivity and as a result we are able to pay above market rates. I would expect that as a generalisation jobs in the space industry are better paying. Staff and local suppliers are very proud of the work they do and still watch each RocketLab launch as they can see how the work they are doing is creating this exciting future.

**Q16**

To what extent do you agree or disagree that these policy objectives will help the New Zealand government to promote the responsible uses of space internationally?

Advocating for effective international rules, norms and standards in space **Strongly agree**

Partnering with like-minded launch states to adopt peaceful, responsible and sustainable space practices **Strongly agree**

Collaborating internationally to increase New Zealand's influence and capabilities in the global space sector **Strongly agree**

**Q17**

Do you have any comments on these policy objectives (e.g. any suggested change to how they are framed? Is there anything missing?)

NZ has taken early steps, largely through RocketLab, to become a leader in the manufacturing of space assets and we can and should build on this to become a global leader in high tech manufacturing of launch vehicles and various satellites etc. This objective fits well with the development of the Advanced Manufacturing Transformation Plan.

**Q18**

**Respondent skipped this question**

Are there any other policy objectives that you think would help the New Zealand government to promote the responsible uses of space internationally?

**Q19**

**Respondent skipped this question**

Do you have any questions or comments about what these objectives would mean in practice?

Page 9: Protecting and advancing our national security and economic interests

**Q20**

To what extent do you agree or disagree that these policy objectives will help the New Zealand government to protect and advance our national security and economic interests?

Use space assets to protect and advance New Zealand's national security and economic interests **Strongly agree**

Manage the broad range of security risks in space to protect New Zealand's space industry **Strongly agree**

Collaborate with international space and security partners to pursue New Zealand's national security and economic interests **Strongly agree**

**Q21**

Do you have any comments on these policy objectives (e.g. any suggested change to how they are framed? Is there anything missing?)

NZ supports a rules based system but this relies on strong alliances and support from our partners. As we have seen recently the use of space derived information has been important to monitor the build up of weapons and other activities which may be detrimental to other peaceful nations. Military satellites play an important role in ensuring various actors, state or otherwise, are adhering to the peaceful activities of a rules based system. Also not to be missed the dual use of many of these technologies such as GPS etc.

**Q22**

Are there any other policy objectives that you think would help the New Zealand government to protect and advance our national security and economic interests?

It is possible that space assets partially made in and/or launched from NZ could be used not just for surveillance but also for weapons guidance systems via GPS etc. Where NZ has collaborated with allies for the deployment with these assets this is a responsible use of the space assets. A worse scenario is what we are seeing in Ukraine with the missile attacks on civilian targets. Having well targeted strikes ensure reduced casualties and preserves lives of those not engaged. On the other side of this coin is also the accurate use of missile defence system which again in Ukraine we see as critical to saving lives.

We cannot pretend these things do not exist and if we want to believe in a rules based system then we must be prepared to support those defending their same rights.

While launching weapons into space is not likely to fit with a general NZ mindset, surveillance, communications and weapons guidance and protection systems are an important part of ensuring a balance of power is maintained and an area NZ should be open to for allies and partner countries who hold the same ideals as we do.

**Q23**

**Respondent skipped this question**

Do you have any questions or comments about what these objectives would mean in practice?

Page 10: Modelling sustainable space and Earth environments

**Q24**

To what extent do you agree or disagree that these policy objectives will help the New Zealand government to model sustainable space and Earth environments?

Encouraging inclusive, sustainable space collaborations within New Zealand	<b>Agree</b>
Assessing the cumulative impact of space activities on the Earth environment	<b>Neither agree nor disagree</b>
Assisting with solving sustainability challenges through space data, including to better monitor or understand the Earth's environment	<b>Strongly agree</b>
Investing in New Zealand's capability to retain, grow, access and use sustainable space technologies	<b>Strongly agree</b>

**Q25**

Respondent skipped this question

Do you have any comments on these policy objectives (e.g. any suggested change to how they are framed? Is there anything missing?)

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**Q26**

Respondent skipped this question

Are there any other policy objectives that you think would help the New Zealand government to model sustainable space and Earth environments?

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**Q27**

Respondent skipped this question

Do you have any questions or comments about what these objectives would mean in practice?

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Page 11: Regulating to ensure space activities are safe and secure

**Q28**

To what extent do you agree or disagree that these policy objectives will help the New Zealand government to promote the responsible uses of space internationally?

Facilitating the safe and secure use of emerging space technologies from New Zealand

**Agree**

Clarifying what New Zealand space activities are inconsistent with the national interest

**Strongly agree**

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**Q29**

Respondent skipped this question

Do you have any comments on these policy objectives (e.g. any suggested change to how they are framed? Is there anything missing?)

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**Q30**

Respondent skipped this question

Are there any other policy objectives that you think would help the New Zealand government to ensure space activities are safe and secure?

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**Q31**

Respondent skipped this question

Do you have any questions or comments about what these objectives would mean in practice?

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Page 12: Regulating in line with our national interests

**Q32**

Are there any comments you would like to make about these criteria that inform consideration of the national interest?

Our national interests must align with global security. We cannot ignore the security threats that impact our allies and other peaceful nations. Without putting boots on the ground, the use of space assets is one way we can support like minded peaceful nations.

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**Q33**

**Respondent skipped this question**

What questions do you have about how the national interest is considered in practice?

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