# Submission on developing the Aotearoa New Zealand Aerospace Strategy

## Your name and organisation

| | |
|---|---|
| **Name** | Morgan Bailey, on behalf of Rocket Lab |
| **Organisation (if applicable)** | Rocket Lab |

## Overview of the Aerospace Strategy

| | |
|---|---|
| **Question 1:** | Do the four areas above provide the right basis for the Aerospace Strategy? |
| **Question 2:** | What are the critical factors that you see for aerospace sector development? |
| **Question 3:** | How would an Aerospace Strategy help you? |

**Please type your submission below. If applicable, please indicate the question(s) to which you are responding.**

**Question 1: Do the four areas above provide the right basis for the Aerospace Strategy?**

The structure of the four areas is sound however the content of each area lacks detail which we hope will follow when the strategy is finalised and the action plan developed. Is the intention to release the action plan at the same time as the final strategy?

Overall, the strategy is also watered down by attempting to combine aerospace and space activities which are distinct sectors with unique opportunities, technology, regulatory requirements, and international partnership implications. Separating aerospace and space would provide the necessary focus to home in on sector-specific opportunities and challenges.

**Question 2: What are the critical factors that you see for aerospace sector development?**

A more defined focus on identifying, leveraging, and expanding on the existing capabilities within New Zealand's space industry, including launch, spacecraft development and manufacturing, and spacecraft operations.

**Question 3: How would an Aerospace Strategy help you?**

Space is still a little known and even less understood industry in New Zealand. As a result the workforce pool and supply chain in New Zealand is severely limited. To support growth of, and investment into, the local space industry, an effective space strategy should place strong focus on inspiring and informing the industry, researchers, government and the New Zealand community at large to grow the next generation of the space workforce. The work the government has done in establishing scholarships and hackathons is a positive step toward this, but it's critical that this is expanded. The draft strategy mentions educational and promotional initiatives in the Pathway to the 2030 Future State but until the Action Plan around this is created it is difficult to comment on whether or not these initiatives will be on the scale required to best support the space sector.

While the long term workforce is being built, immediate focus should be placed on removing barriers to bringing highly skilled talent into New Zealand, enabling knowledge transfer to the domestic workforce.

## Area One - A strategy for building our aerospace sector

| | |
|---|---|
| **Question 4:** | Is the 2030 Future State set out in a way that enables New Zealand to build on its existing advantages to develop a leading place in the global aerospace economy? |
| **Question 5:** | Will the 2030 Future State support your ambitions for growth and participation in the sector? |
| **Question 6:** | What barriers are there to optimising sector growth? |
| **Question 7:** | How could the government and the sector work together to achieve the 2030 Future State? |
| **Question 8:** | How can the Government enable Māori ambitions for the sector? |

**Please type your submission below. If applicable, please indicate the question(s) to which you are responding.**

**Question 4: Is the 2030 Future State set out in a way that enables New Zealand to build on its existing advantages to develop a leading place in the global aerospace economy?**

The ambitions and direction laid out in the draft 2030 Future State are vague.

For example: "*This multi-billion dollar industry leads the world in disruptive aerospace technologies. New Zealand is acknowledged internationally as a place with strong comparative advantage for undertaking aerospace activity, including through partnerships with Government*." This provides little insight into which areas of the broad aerospace industry that New Zealand should focus on and become world leaders in. New Zealand is well placed to leverage existing capabilities, such as launch, so strategic focus and budget should be focused on expanding and supporting these promising areas and helping them reach a level of international acclaim and growth. By honing in on a few target areas of the global industry, investment and support can be most beneficial.

## Area Two - Building strong foundations (Three Pillars)

| | |
|---|---|
| **Question 9:** | What do you think of the Three Pillars and do you think they will support the 2030 Future State? |
| **Question 10:** | What else would you like to see in the Three Pillars? |
| **Question 11:** | What actions and initiatives could the sector focus on to support the Three Pillars? |

**Please type your submission below. If applicable, please indicate the question(s) to which you are responding.**

**Question 11: What actions and initiatives could the sector focus on to support the Three Pillars?**

Pillar two states that the government will strive to be an early adopter and investor in aerospace technologies. As one of the most prolific launching states, New Zealand now boasts cost-effective and reliable orbital launch capability. New Zealand is now also home to world-class spacecraft manufacturing capability, as well as spacecraft operations centres. A government supported national mission that leverages these capabilities should be a priority and could support many of the aspirations and goals set out in the 2030 future state including;

- A mission designed to contribute towards improving our environment through reducing greenhouse gas emissions,
- The creation of high-wage jobs,
- International partnerships,
- Technology development, supporting New Zealand's position leading the world in disruptive aerospace technologies,
- Aerospace technologies are incorporated into government services and systems, and support New Zealand's national interests and national security,
- Support the Aerospace Nation pillar of promoting the value of the sector, fostering greater engagement and interest in aerospace, and helping New Zealanders embrace the sector's growth.
- Support the development of a workforce that is skilled, innovative and meets the capability and capacity needs of the sector.

The following national mission is all possible today with existing capabilities in New Zealand and should be included in the Space Strategy to drive sector development.

- A mission developed domestically with New Zealand researchers and universities,
- spacecraft developed, manufactured and tested by New Zealand organisations,
- launched from New Zealand,
- operated from New Zealand to provide data for New Zealand researchers, government and commercial operators and international partners.

## Area Three - Goals for 2030

| | |
|---|---|
| **Question 12:** | What do you think of the Goals for 2030? |
| **Question 13:** | Are the goals framed in a way that will enable New Zealand to build on its strengths and comparative advantages to achieve the 2030 Future State? |
| **Question 14:** | What activities and milestones can help us achieve these Goals? |
| **Question 15:** | Where do you see yourself in realising these Goals? |

**Please type your submission below. If applicable, please indicate the question(s) to which you are responding.**

**Question 13: Are the goals framed in a way that will enable New Zealand to build on its strengths and comparative advantages to achieve the 2030 Future State?**

It would be useful to understand the rationale behind the focus on actively supporting a human presence in space. It's not clear how New Zealand's existing strengths support this or why it should be a focus area for the nation.

Goal four references leveraging current launch activity to support human presence in space, but it's unclear how the government sees that manifesting given New Zealand does not have human launch capability at the moment. Is the intention to enable this from New Zealand? Or is it focused on launching infrastructure, such as resupply missions or pathfinding spacecraft, that indirectly support human spaceflight?

The goals also don't seem to align with other sections of the strategy. For example, pillar one talks of unlocking aerospace's potential through high-value exports and services, including manufacturing, however none of the goals address growing the manufacturing sector or strengthening New Zealand's aerospace supply chain. Aside from the brief reference in goal four, which relates only to supporting human spaceflight, none of the goals seek to leverage the catalyst for New Zealand's space industry and its largest contributor in terms of revenue and employment; launch. The strategy would be best placed to focus on leveraging and growing New Zealand's existing launch and spacecraft manufacturing capability to create international partnerships, gain access to international programs, develop the talent base in New Zealand and create employment, and to develop innovative technology and data solutions that can be both exported and integrated into New Zealand's own data and research needs.

## Area Four - Pathway to the 2030 Future State

| | |
|---|---|
| **Question 16:** | What policies, ideas, actions, and/or initiatives would you like to see in the Action Plan to help achieve the ambitious 2030 Future State? |
| **Question 17:** | What would be the benefits of these actions and how would they help grow the New Zealand aerospace sector? |
| **Question 18:** | How would you like to be involved in the delivery of the Aerospace Strategy? |

**Please type your submission below. If applicable, please indicate the question(s) to which you are responding.**

Answered in question 11.