SUMMARY OF SUBMISSIONS

Developing the Aotearoa New Zealand Aerospace Strategy

DECEMBER 2022

**MINISTRY OF BUSINESS,
INNOVATION & EMPLOYMENT**
HĪKINA WHAKATUTUKI

**Ministry of Business, Innovation and Employment (MBIE)
Hīkina Whakatutuki – Lifting to make successful**

MBIE develops and delivers policy, services, advice and regulation to support economic growth and the prosperity and wellbeing of New Zealanders.

More information

More information about the topics covered here can be found on our website: **www.mbie.govt.nz**.

Disclaimer

This document is a guide only. It should not be used as a substitute for legislation or legal advice. The Ministry of Business, Innovation and Employment is not responsible for the results of any actions taken on the basis of information in this document, or for any errors or omissions.

ISBN (online) 978-1-99-104197-5

DECEMBER 2022

Contents

Purpose of this document

1. This document summarises and provides a record of views from submissions received on the consultation document 'Developing the Aotearoa New Zealand Aerospace Strategy'. This document asked for views on developing the content for the following areas of the Aotearoa New Zealand Aerospace Strategy (the Aerospace Strategy):

   a. Overview of the Aerospace Strategy
   b. A strategy for building our aerospace sector
   c. Building strong foundations (Three Pillars)
   d. Goals for the 2030 Future State
   e. Pathway to the 2030 Future State

Introduction to the Aerospace Strategy

2. Aerospace is an innovative, high-value, research and development (R&D) intensive industry. New Zealand's aerospace sector currently has the foundations of a highly skilled workforce, well-connected research system, and a safe and enabling policy and regulatory environment. However, a clear direction for the future of aerospace is needed for the sector to unlock its true potential.

3. Globally, aerospace is big business, worth over $600 billion and growing. Aerospace has value beyond economic development in enabling environmental and social outcomes that improve the wellbeing of all New Zealanders.

4. The development of the Aerospace Strategy will provide the foundation on which we can grow a globally competitive aerospace sector, while ensuring we keep New Zealanders, our livelihoods, and our national interests safe.

5. The Aerospace Strategy will set a path to accelerate sector growth, provide strong foundations for fast-paced change and develop a distinctly New Zealand approach to aerospace. By doing so, we can carve out New Zealand's niche on the global stage while also strengthening our connections to the global aerospace economy.

6. By 2030, we want to have a strong and resilient aerospace sector that is coordinated in its activities, leverages shared strengths and seizes new opportunities. We want a sector that is acknowledged as world-leading in key areas of aerospace technology.

Consultation process

7. In September 2022, we published a consultation document on the Aotearoa New Zealand Aerospace Strategy and invited submissions from the public.

8. Submissions on the consultation document were open from Monday 5 September to Monday 31 October 2022.

9. The consultation document builds on previous targeted engagement with stakeholders in the aerospace sector during 2021 and 2022, which included workshops and engagement on the Goals for 2030.

10. We have also engaged with a Māori Stakeholders Group throughout development of the Aerospace Strategy, which includes a range of experts on Māori interests in aerospace.

Submissions received

11. We received a total of 55 submissions on the consultation document. Figure 1 below outlines the number of submissions received by type of submitter:

Figure 1: Submissions received by type of submitter

12. Submissions were predominantly received from groups and individuals with existing involvement in aerospace and the New Zealand aerospace sector. Most submissions were received from New Zealand-based submitters, although many of these were organisations with an international presence. A small number of submissions were received from submitters based outside New Zealand.

13. Some submissions received were also relevant to the Space Policy Review process for which consultation was also open at the same time as the Aerospace Strategy. We have worked with the Space Policy Review team throughout development to ensure that the two processes are connected and aligned.

Key themes

14. Submissions are summarised below by key themes. Where submissions raised minor points or points did not appear in many submissions, they may not be reflected below but they will be considered as part of the process to finalise the Aerospace Strategy.

Number of submissions

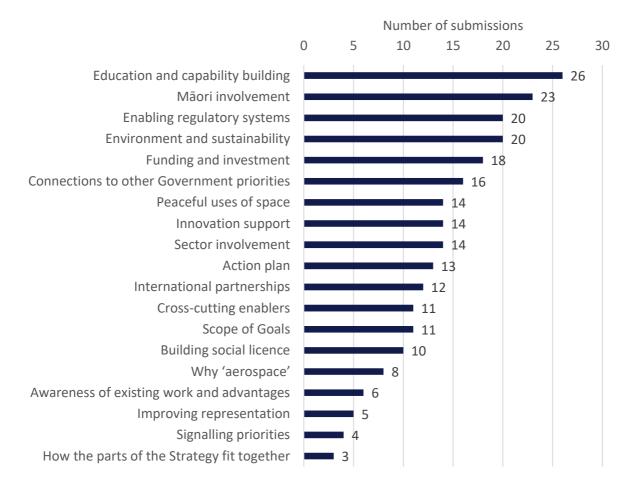| Theme	Number
Education and capability building	26
Māori involvement	23
Enabling regulatory systems	20
Environment and sustainability	20
Funding and investment	18
Connections to other Government priorities	16
Peaceful uses of space	14
Innovation support	14
Sector involvement	14
Action plan	13
International partnerships	12
Cross-cutting enablers	11
Scope of Goals	11
Building social licence	10
Why 'aerospace'	8
Awareness of existing work and advantages	6
Improving representation	5
Signalling priorities	4
How the parts of the Strategy fit together	3

Figure 2: Key themes in submissions

15. These themes have been further categorised as follows:

   a. **Structure and scope of the Strategy**
      - Action plan
      - Cross-cutting enablers
      - Scope of Goals
      - Why 'aerospace'
      - How the parts of the Strategy fit together

   b. **Engaging with stakeholders**
      - Māori involvement
      - Sector involvement
      - International partnerships
      - Signalling priorities

   c. **Government enablers**
      - Enabling regulatory systems
      - Funding and investment
      - Connections to other Government priorities
      - Innovation support

   d. **Growing the sector**
      - Education and capability building
      - Building social licence
      - Building awareness of existing work and advantages
      - Improving representation

   e. **Other themes**
      - Environment and sustainability
      - Peaceful uses of space

16. The following sections summarise the feedback received on each theme and our planned response to address the points raised.

17. We have highlighted quotes in each section that reflect the feedback received. We have indicated the type of submitter that provided each quote but have anonymised these to protect the privacy of individual submitters.

Structure and scope of the Strategy

18. The following themes relate to the content and structure of the Aerospace Strategy, including the scope of different elements, detail on plans for implementation and highlighting enablers required to realise the level of ambition in the Aerospace Strategy:

    a. Action plan – 13 submissions
    b. Cross-cutting enablers – 11 submissions
    c. Scope of Goals – 11 submissions
    d. Why 'aerospace' – 8 submissions
    e. How the parts of the Strategy fit together – 3 submissions

Action plan

19. Submitters wanted to see more information included on the actions that will follow publication of 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." – a New Zealand space company
>
> "In addition to the discrete steps included in the Action Plan, MBIE could consider proposing phased reviews at intervals shorter than the proposed strategy refresh in five years' time, given the fast-developing nature of the aerospace sector." – an international space company

20. We are developing an Action Plan for the Aerospace Strategy which will include a summary of ongoing workstreams and workstreams that will be initiated following publication of the Aerospace Strategy.

21. An initial Action Plan will be included in the Aerospace Strategy, with commitments to investigate further actions following publication. We expect to update the Action Plan throughout the duration of the Aerospace Strategy to reflect evolving workstreams.

Cross-cutting enablers

22. Some submitters felt that enablers for aerospace activity such as manufacturing and supply chains were not adequately emphasised in the consultation document.

> "[A critical factor for sector development is] 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." – a New Zealand space company

23. We will update the Aerospace Strategy to highlight the importance of cross-cutting enablers for aerospace activity. This will include extending the enabling factors referenced in the Pillars throughout the Aerospace Strategy, including in the Future State and Goals.

24. We will also add reference to the Advanced Manufacturing Industry Transformation Plan and supply chain work underway across government.

Scope of Goals

25. Submitters ware largely supportive of the Goals for 2030 but some wanted clarification on the scope of the goals in the Aerospace Strategy.

> "The proposed goals in the Aerospace Strategy provide ample opportunity for international collaboration as well as domestic capability and capacity development to address significant global challenges" – a New Zealand university

26. Submitters were largely supportive of the content of the goal to 'Actively support a permanent human presence in space' but raised some concern about the wording of the goal, noting that the terminology *permanent human presence* could be seen to limit the scope of the goal to sending astronauts into space. The content of the goal notes that it also includes launch activity and other space activities so we will seek to clarify the wording of the goal to highlight support for space exploration more broadly.

27. Some submitters were concerned that the goal to 'Safely integrate all forms of autonomous aerial vehicles' could include autonomous weapons systems in scope. This goal is focused on non-weapon applications and all aerospace activities taking place in New Zealand will also need to be consistent with our international obligations and commitments.

28. Submitters also suggested broadening the sustainability objectives under the goals to 'build a sustainable air passenger journey' and position New Zealand 'at the forefront of global sustainable space activities'. We will consider how we can reflect a range of sustainability considerations under these goals.

Why 'aerospace'

29. Some submitters questioned the scope of the Aerospace Strategy including both space and advanced aviation activities.

> "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." – a New Zealand space company

30. Combining these related sectors helps to build critical mass in a small economy and recognises use cases that span both areas. It also creates opportunities to strengthen cross-cutting enablers such as manufacturing for the benefit of both sectors.

31. There will be scope for different workstreams where requirements differ between space and advanced aviation activities, such as in the implementation of the Goals.

32. We will include a section in the Aerospace Strategy that acknowledges the different layers of airspace within the scope of the Aerospace Strategy and the related but distinct needs of each sector.

How the parts of the Strategy fit together

33. Some submitters were unclear about how the different elements of the Aerospace Strategy fit together, specifically the Goals, Pillars and Future State.

> "[The] "Areas", "Pillars", "Goals", and "Future State" in the strategy may create confusion unless the overall "framework" is clearly described at the outset. … All of New Zealand's aerospace stakeholders, government and industry, may find it easier to achieve the 2030 Future State if the strategy clearly identifies and differentiates the key elements of this strategy, how they connect, and the interdependencies between them." – an international cloud services company

34. We will add a section to the Aerospace Strategy clarifying the relationship between these different components, especially between the Pillars and Goals. The Pillars underpin the Aerospace Strategy and are intended to support development across the sector while the Goals provide more targeted aims in specific areas.

Engaging with stakeholders

35. The following themes relate to engagement with stakeholders during the development or implementation of the Aerospace Strategy and the use of the Aerospace Strategy as a signalling tool for stakeholders:

    a. Māori involvement – 23 submissions
    b. Sector involvement – 14 submissions
    c. International partnerships – 12 submissions
    d. Signalling priorities – 4 submissions

Māori involvement

36. Many submitters wanted to see more detail on how Māori will be involved in the implementation of the Aerospace Strategy and greater recognition of the role Māori play and could play in a thriving aerospace sector.

> "We see the need for a clear plan to grow participation of Māori in the aerospace sector and to ensure that its scope captures all forms of activity, including education, business and research, coupled to a clear understanding of the present participation of Māori in the space sector." – a group of New Zealand academics working in the space sector

37. Some submitters also wanted to see better ongoing engagement with Māori throughout the development and implementation of the Aerospace Strategy.

38. We are progressing plans for research on Māori participation and interests in aerospace to assist development and implementation of the Aerospace Strategy. We will also formalise a process for ongoing Māori involvement in implementation of the Aerospace Strategy as part of developing the Action Plan and creating governance arrangements for the Aerospace Strategy.

Sector involvement

39. Submitters from within the aerospace sector were strongly interested in being actively involved in implementation of the Aerospace Strategy and showed strong support for a sector-government taskforce.

> "Industry groups, such as Aerospace New Zealand and Aerospace Auckland, and collaborations, such as Project Tāwhaki, are vital fora to engage with and involve industry to support better policy and decision making." – an executive working in aerospace

40. We will continue with plans to establish governance arrangements for the Aerospace Strategy led by MBIE and will establish a mechanism for ongoing sector involvement.

International partnerships

41. Submitters wanted to see increased emphasis on international partnerships and connectedness in the Aerospace Strategy given the small size of the New Zealand sector.

> "[A] strategy which values collaborations with other countries is essential for New Zealand Aerospace companies, looking to serve the global market. Collaborations may help develop talent and expertise in New Zealand, give access to R&D initiatives, and enhance business development." – a New Zealand aerospace firm

42. We will emphasise the importance of international collaboration throughout the Aerospace Strategy and highlight opportunities to build on existing relationships with other countries in aerospace.

Signalling priorities

43. Several submitters noted the significance of having a published and up-to-date Aerospace Strategy to signal Government priorities in aerospace and to support their engagement with investors and other international stakeholders. Submitters also noted the importance of having a document like the Aerospace Strategy to help inform business plans.

> "The industry needs to be able to see what is planned, when and how so that it can make the investment decisions that will sustain and grow their operations, which will benefit New Zealand." – a New Zealand aerospace sector group
>
> "Having a national aerospace strategy, and one that is open for public consultation, is an important signal both domestically and internationally that the New Zealand Government is prioritising this sector" – an international cloud computing company

44. Regular reviews of the Aerospace Strategy and its Action Plan will ensure that it contains an accurate and up-to-date description of New Zealand's priorities and interests in aerospace.

Government enablers

45. The following themes relate to enablers for aerospace activity within government, including fit-for-purpose systems and specific support for the aerospace sector:

    e. Enabling regulatory systems – 20 submissions
    f. Funding and investment – 18 submissions
    g. Connections to other Government priorities – 16 submissions
    h. Innovation support – 14 submissions

Enabling regulatory systems

46. Submitters noted the importance of ensuring that the regulatory systems that support aerospace activities are sufficiently enabling.

> "Appropriate resourcing and forward-facing structures for CAA and Airways are critical to ensure robust regulatory, procedural, and safety oversight. Regular and frequent assessment of the alignment between policy and regulation towards realising the aerospace strategy to ensure efficient and timely progress [is also critical]" – an aerospace company operating in New Zealand
>
> "New Zealand's Aerospace Strategy should highlight the importance of a policy and regulatory environment that provides transparency, certainty, and predictability" – an international space company

47. Submitters noted that the space regulatory system is operating relatively well but raised the need for more capacity in the Civil Aviation Authority for emerging aviation technologies.

48. The Ministry of Transport and the Civil Aviation Authority are undertaking further work to improve regulatory processes following the announcement of an Emerging Technologies Programme in the Civil Aviation Authority at the New Zealand Aerospace Summit.

Funding and investment

49. Submitters wanted to see commitments to specific government funding and investment for the aerospace sector in the Aerospace Strategy, including in infrastructure.

> "Provide certainty of funding, including a timeline for future opportunities. This would enable the sector to move more quickly to realise the goals and develop an ambitious and targeted programme of research aligned to strategy." – a New Zealand university
>
> "Introduce specific calls for the aerospace sector that focus on predetermined goals aligned to strategy and contestable funding to support new and emerging ideas" – a New Zealand university

50. Submitters proposed a range of ways that government could directly support the growth of the sector but many agreed that specific support for aerospace activity is required and that government should be an early adopter of aerospace technologies.

51. We will highlight existing investments in aerospace and opportunities for funding in the Aerospace Strategy and investigate further options as part of the action plan. Funding announced at the New Zealand Aerospace Summit for the Airspace Integration Trials Programme and projects with NASA will support achieving the goals set out in the Aerospace Strategy.

52. We will also continue to build connections to other Government initiatives increasing investment in high-tech sectors, such as the Business Growth Fund, Research and Development Tax Incentive and New Zealand Growth Capital Partners.

Connections to other Government priorities

53. Some submitters raised questions about how the Aerospace Strategy fits with other pieces of work, while others raised questions that may be best addressed by other agencies.

> "It would be helpful to understand how the 2030 Future State will intersect with the proposed New Zealand Space Policy, other space polices and existing regulation." – an international space company
>
> "We would welcome an integrated and cohesive cross-government approach to the aerospace strategy that complements other work programs and strategies across the economy, including the soon-to-be established public-private body focused on aviation decarbonisation, Sustainable Aviation Aotearoa, the draft Freight and Supply Chain Strategy, the New Zealand Infrastructure Strategy and the National Energy Strategy." – a New Zealand aviation company

54. We will strengthen and reveal connections to other Government priorities, strategies and objectives in the Aerospace Strategy. This will include a section on active work programmes across government which highlights the responsibilities of different agencies.

Innovation support

55. Submitters wanted more emphasis on support for innovation, including enabling investment, supporting start-ups to scale up and protecting intellectual property.

> "Ensuring New Zealand values start-ups is critical to ensuring we remain on the cutting edge of aerospace technologies." – an aerospace company operating in New Zealand
>
> "There is also an opportunity for more focused grant investment through Callaghan Innovation and NZTE to support the scale up of organisations. Government has placed a lot of focus on small business and startups but scale-up is the key to capturing social and economic benefits in the future." – a New Zealand aerospace sector group

56. We will highlight existing support for innovation in the Aerospace Strategy and investigate further needs as part of the Action Plan.

Growing the sector

57. The following themes relate to building awareness of and support for aerospace and creating pathways for more people to enter the sector:

    a. Education and capability building – 26 submissions
    b. Building social licence – 10 submissions
    c. Building awareness of existing work and advantages – 6 submissions
    d. Improving representation – 5 submissions

Education and capability building

58. Education and capability building was the most raised theme in submissions. Submitters noted the need for educational opportunities at all levels to support the level of ambition in the Aerospace Strategy.

> "Building a skilled technical workforce to meet the current and future demands of a growing global aerospace industry will continue to be a pressing issue." – an international space company
>
> "Key factors in ensuring a sustainable talent pool for a growing industry include an ongoing focus on tertiary education in aerospace-relevant disciplines, an increased focus on retraining and upskilling, and making aerospace an accessible career opportunity for young people." – an aerospace company operating in New Zealand
>
> "MBIE should regularly survey industry leaders to determine what skills and resources are in greatest demand, and work more closely with Te Pūkenga to support the development of people in skilled trades" – a group of New Zealand academics working in the space sector

59. Some submitters noted the need to make it easy to bring in expertise from overseas, especially in the short term, however the emphasis was on building our domestic capability to ensure a self-sustaining aerospace sector.

60. We will include a workstream in the Action Plan on education and capability.

Building social licence

61. Some submitters noted that greater social licence and awareness of the benefits of aerospace technologies are required to enable the success of the Aerospace Strategy.

> "The vision needs to go beyond 2030 and have in mind developing a space culture so kids dream of becoming pilots, scientists or engineers." – an individual interested in the space sector
>
> "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" – a New Zealand space company

62. We will emphasise social licence, awareness raising and inspiration in the Aerospace Strategy through Pillar Three, 'Aerospace Nation'.

Building awareness of existing work and advantages

63. Some submitters felt that the Aerospace Strategy needs to better explain New Zealand's existing strengths and advantages to justify its areas of focus.

> "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." – a New Zealand space company
>
> "In a sector where technology is advancing rapidly, we must ensure the strategy does not confine us to the landscape we understand today. It must provide an enabling ecosystem – focussed on the things that encourage and allow the sector to continually push the boundaries." – a New Zealand engineering consultancy

64. We will outline existing work programmes in the Aerospace Strategy and the characteristics that make New Zealand attractive for aerospace activities to build greater awareness of the work we have done to date in aerospace and our existing advantages and expertise.

Improving representation

65. Submitters noted ongoing challenges with diversity in aerospace and the need to support broader gender and ethnic representation in the aerospace sector.

> "Aotearoa has an opportunity to set out a bold ambition within the aerospace strategy to lead the world in action to radically improve the equity for and the representation of women in the aerospace sector" – a New Zealand space sector network
>
> "Without a full understanding of the extent and nature of such participation to date, it is difficult to identify (and dismantle) any barriers to supporting and enhancing increased participation, and where investment is best utilised to achieve that outcome." – a Māori-led aerospace venture

66. Submitters also emphasised that increasing participation of underrepresented groups in the aerospace sector requires getting people interested in aerospace from a young age.

67. We will include diversity considerations in educational workstreams in the Action Plan and encourage existing initiatives that engage with groups underrepresented in the sector. We will work with the sector and these groups to identify barriers to participation and how best to address these.

Other themes

68. The following themes were raised by significant numbers of submitters but do not fall under any of the above categories:

    e. Environment and sustainability – 20 submissions
    f. Peaceful uses of space – 14 submissions

Environment and sustainability

69. Some submitters raised concern about the environmental impact of aerospace technologies, while many submissions from within the sector raised the potential to better highlight the more sustainable aerospace technologies being developed in New Zealand.

    > "[It is possible] that the industry not only actively contributes to improving the environment but actively mitigates and solve environmental challenges through space technologies" – a New Zealand space consultancy

70. We will emphasise environmental considerations and sustainability throughout the Aerospace Strategy. This will include highlighting the potential contribution of aerospace technologies to environmental targets and expanding on the two goals in the Aerospace Strategy that reference sustainability to capture a broader range of impacts of aerospace technologies.

Peaceful uses of space

71. Some submitters were concerned that aerospace activity is associated with military activity and wanted the Aerospace Strategy to commit to peaceful uses of space.

    > "Aotearoa New Zealand's obligations and commitments to ensuring that space is used only for peaceful purposes must be upheld and protected" – an individual submission
    >
    > "The vision of '2030 Future State' must refer to New Zealand's commitment to the peaceful use of space, and to consistency with New Zealand's disarmament, human rights and humanitarian obligations." – a New Zealand peace advocacy organisation

72. The Aerospace Strategy and all aerospace activities in New Zealand will need to be consistent with the New Zealand Space Policy, which will outline high-level values and objectives for New Zealand in space. Aerospace activities also need to be consistent with international commitments made by New Zealand.

Next steps

73. MBIE is working to make changes to the Aerospace Strategy based on the feedback received as summarised above.

74. Once the Aerospace Strategy has been finalised, the final document will be released along with information about the Action Plan.