

REVIEW OF NEW ZEALAND'S AIR NAVIGATION SYSTEM

Terms of reference

Purpose

New Zealand does not have a current high level statement of the principles and national level objectives for the air navigation system. Without that foundation, it is difficult to determine if the systems meet our current and future needs.

The purpose of the review is to take a high-level, first principles approach to establishing agreed objectives for the air navigation system, assess the current policy and regulatory, institutional and funding settings against those objectives, and recommend options for strengthening the system now and thirty to fifty years to the future.

Background

The air navigation system exists to enable aircraft operations. The system works as an integrated whole, providing the information and infrastructure for aircraft from the start to the end of a flight.

The air navigation system is a key part of New Zealand's transport infrastructure. The system contributes to New Zealand's economic growth and prosperity, social connectivity, resilience, and our role as a participant in regional and global fora. As a remote island nation, we rely almost exclusively on air transport to connect our people to the world.

We have international obligations and opportunities. We are a member state of the International Civil Aviation Organization. New Zealand is responsible for the world's largest search and rescue region which stretches from the Pacific Islands to the Antarctic and provides aviation safety and security support to our Pacific neighbours. This country is also home to innovators in aviation and space activities, with significant potential for growth. We export our aviation knowledge and expertise around the world.

Context for the review

The most recent national policy statement on aviation is the *National Airspace Policy of New Zealand*, published in 2012.

In the intervening decade the demands on and expectations of the air navigation system have continued to change, presenting challenges and opportunities, such as:

- new technologies: airframe materials, autonomous and remotely piloted aircraft, artificial intelligence, digitalisation, alternative fuels, and new propulsion systems
- drives for the decarbonisation of aviation
- demands for different design and use of airspace, including low altitude and urban airspace, and providing for aircraft and launch vehicles transiting to and from space

- emergence of new business models and alternative providers for some components of the air navigation system
- emerging threats and risks around cyber security and security of physical infrastructure
- ongoing globalisation of system components
- new international standards and regulations
- movement to performance-based regulation and other regulatory responses to rapidly changing technology.

Stakeholders have raised questions about the current settings for the air navigation system, including:

- clarifying and addressing the expectations on the system from aviation participants, and a range of other sectors such as civil defence and emergency management, health, economic development, and defence
- the effectiveness of the user pays model for funding air navigation services and system components
- identification of and funding for air navigation services and system components provided as a public good
- the characteristics and performance of the market for the air navigation services and system components
- the role of the aviation system in regional development, connectivity, and resilience
- the cost of air navigation services and system components
- planning for and the flexibility to enable timely investment in new air navigation system technologies
- the impacts of COVID-19, including reliance on passenger volume as the primary funding source for air navigation service provision.

Method of work

The review will be conducted in accordance with these terms of reference, and in a way that demonstrates:

- transparency
- independence and impartiality
- timely and open engagement
- consideration of the full range of stakeholders' views
- a systems-based approach
- partnership with iwi and Māori in good faith and in accordance with the principles of Te Tiriti o Waitangi (CO(19)5, Te Tiriti o Waitangi / Treaty of Waitangi guidance
- commitment to an enduring approach to continuous improvement of the air navigation system, taking a multi-generational view.

Assumptions

The review includes the following working assumptions:

- Safety is the primary objective.
- The current system is safe.
- The air navigation system is an essential part of New Zealand's national infrastructure.
- A safe, efficient, sustainable, innovative, and responsive air navigation system helps New Zealand flourish.
- New Zealand supports and participates in the global rules-based system governing civil aviation
- The system is resource limited and there will be competing demands and tensions
- The system is challenged by new and emerging technologies.

Scope

Description of the air navigation system and the scope of the review

For the purposes of this review, the air navigation system comprises the system components, the providers and users of the system components and air navigation services, and the authorising environment in which they operate.

Appendix 1 illustrates the system and its connections to and influence on the wider economy and society.

Air navigation system components and characteristics

The review will consider the air navigation system components: those elements that are essential for the aviation system to operate and to deliver on user and national expectations. The scope will include consideration of how the settings influence the provision and maintenance of the system components.

In the context of the review, characteristics refers to how the system should operate, for example it should be safe, efficient, secure, integrative, future-focussed, resilient, and responsive to emerging opportunities, threats, and risks.

Air navigation system providers, users, and authorising environment

The review will consider the roles, obligations, and needs of air navigation system providers, users and authorisers, and how the settings facilitate or inhibit their work.

Dependents and beneficiaries of the air navigation system

Several sectors and agencies depend on and/or benefit from the provision of the air navigation system, though they are not providers or direct users of the air navigation system components.

Matters for consideration

The review may consider the following:

- policy settings that influence the air navigation system
- roles, functions, obligations and duties of the agencies and organisations involved in the provision, use, regulation, and monitoring of the components of the air navigation system
- the relationships between those roles, functions, and duties
- the monitoring and evaluation of the performance of those roles and functions
- revenue, funding, and pricing mechanisms in the system
- mechanisms for identifying, providing, funding, and overseeing air navigation system components and services that are provided wholly or partly as a public good, within aviation and/or as part of other systems
- the impact that the air navigation system (and any recommended changes to the applicable settings) has on the wider ambitions for New Zealand society, economy, environment, resilience and security, and our global profile and participation
- the system and its objectives and outcomes in the context of Te Tiriti o Waitangi and a te ao Māori view
- the influence of the system on regional connectivity
- integration of new technologies into the air navigation system
- alignment with international standards and practices, and interconnectivity between systems operated by different states
- the operation of the air navigation system in the New Zealand Flight Information Region and the Auckland Oceanic Flight Information Region¹, and the delivery of other regional aviation-related services such as meteorological information for aviation, and the Volcanic Ash Advisory Centre - Wellington.

The review will give due consideration to:

- international models of policy and regulatory, institutional, and funding settings for air navigation system planning, delivery, and assessment of system performance
- other work relevant to this review, including but not limited to the Civil Aviation Bill, the review of the Outer Space and High Altitude Activities Act 2017, the New Zealand Aerospace Strategy, Airways' pricing round, the Civil Aviation Authority funding review, New Southern Sky, and relevant government initiatives such as the Emissions Reduction Plan and the biofuels mandate.
- the impact of COVID-19 on the aviation sector.

Matters out of scope

The following are generally out of scope of the review:

¹ The New Zealand Flight Information Region is our domestic airspace. The Oceanic Flight Information Region is airspace over the high seas that New Zealand manages under an International Civil Aviation Organization Regional Air Navigation Agreement.

- technical and operational matters, for example technical standards for air navigation system components; operational procedures and rules; or application of operational policies or methodologies in particular instances or locations²
- detailed examination of specific commercial agreements between parties, though the review may consider the influence the system settings have on how commercial agreements are generally developed and applied, and the results of those methods
- COVID-19 response and recovery support measures.

The review will not make recommendations that:

- directly create obligations on sectors that depend on or benefit from the air navigation system (see Appendix 1)
- relate directly to operational, tactical, or procedural matters or specific commercial arrangements regarding the operation of the air navigation system components, provision of services, or use of the system by aviation participants
- refer to amending or creating specific Civil Aviation Rules, notices, or guidance, though it may consider the regulatory system settings with respect to the agreed system objectives.

The review will, however, consider how its recommendations would impact on matters and sectors outside its scope.

Process and outputs

The review will focus on the policy and regulatory, institutional, and funding settings for the air navigation system and conduct its work in two phases.

Phase 1

In its first phase the review will:

- identify the base principles and objectives for the air navigation system
- identify the components and characteristics of an optimally performing air navigation system for New Zealand now, and 30-50 years into the future, considering:
 - national objectives
 - current providers and users of the air navigation system
 - future use cases
 - those sectors dependent or and/or benefiting from the operation of the system
 - international standards, guidance, and obligations.

Phase 1 output:

Recommendations to the Minister of Transport and Government on a set of principles and objectives, components and characteristics for the air navigation system now and 30 to 50 years into the future.

² The review may use case studies but will focus its recommendations on system-wide matters.

Phase 2

The second phase of work will focus on assessing the current system, including all parties and how they operate, against the principles and outcomes identified in Phase 1.

Phase 2 output:

Recommendations to the Minister of Transport and Government on options to strengthen the air navigation system's ability to meet the agreed principles and objectives.

The recommendations will focus on the policy and regulatory, institutional, and/or funding settings, and consider current and future needs.

Recommendations will consider possible impacts on aviation safety.

Given its high level nature, the review may make recommendations for further detailed examination of specific aspects or issues.

The methodology and the findings and recommendations from both phases will be subject to review by international experts in air navigation system policy, design, regulation, funding, and delivery.

Structure

The review will be conducted by a Ministerially appointed independent advisory panel.

Independent advisory panel membership

Debbie Francis (Chair)

Howard Fancy

Ed Sims

Danny Tauto'o

Term of appointment

The panel will be appointed for the duration of the review.

Secretariat

Secretariat services will be hosted by the Ministry of Transport. The Secretariat will provide research, analytical, project coordination, communications, and technical subject matter expert input as required.

Stakeholder engagement

The review will establish a reference group including (but not limited to) agencies with an interest in the air navigation system, and industry and sector stakeholders. Sub-groups may be established if required.

The Panel will seek stakeholder review of its findings and recommendations during the process of the review.

An engagement plan will ensure all relevant stakeholders are included and can present their views.

Timeframe

The review will begin in June 2022 and will be completed by May 2023.

Timeframes for the implementation of recommendations from the review will form part of the advice to the Minister of Transport and Government at the end of Phase 2.

Engagement

The Panel Chair will report to the Minister on a regular basis. The Panel will report to the Minister and the Government at the end of each phase.

The Minister of Transport may consult with colleagues responsible for portfolios that are involved in and/or potentially affected by the review.

The Panel will engage with stakeholders to inform its work.

The Panel will provide regular updates to stakeholders and their constituents through the reference group and direct communications.

A web page will provide information and updates on the review and provide a point of contact point for stakeholders.

Appendix one: Air navigation system map

