



Aviation Green Paper Response

Australian Aviation White Paper Project

November 2023

Introduction

Wisk would like to acknowledge the significant undertaking of developing a new Aviation White Paper and to congratulate the Government for its progress to date. To help in the development of this important policy document, Wisk would like to offer the following response.

Who is Wisk?

Wisk is a leading Advanced Air Mobility (AAM) company seeking to bring autonomous, passenger-carrying, electric Vertical Take-off & Landing (eVTOL) air taxis to the market by the end of the decade.

Established in 2010, our team has been developing, building and flying multiple generations of aircraft and have conducted more than 1750 full-scale test flights. Recently, we conducted the first public flight of a fully autonomous, electric vertical takeoff and landing (eVTOL), fixed-wing air taxi in the world. Earlier this year (2023), Wisk became a wholly-owned Boeing subsidiary.



Wisk's fifth generation aircraft, Cora, flying the first public demonstration flight of an autonomous, fixed-wing, eVTOL air taxi

Wisk is currently developing our Generation 6 (Gen 6) aircraft. This aircraft is a four seat, high-wing eVTOL with a combination of tilting and vertical electric motors. This aircraft has commenced Type Certification through the US Federal Aviation Administration (FAA).

While Wisk is a US-based company, headquartered in Mountain View, California, it has team members located around the world, including a growing team in Australia. In 2021, we announced [a strategic partnership with the South-East Queensland Council of Mayors](#) (COMSEQ). Our local team is already working with local, state and federal stakeholders on developing an air taxi network within the greater Brisbane area. Our objective is to have, subject to regulatory approvals, this network operating by 2030, well in advance of the 2032 Olympic and Paralympic Games.



South East Queensland Council of Mayors and Wisk Representatives in front of Wisk's Gen 6 Aircraft

In addition to being the aircraft manufacturer, Wisk will also be operating its aircraft under a Wisk Airline organisation. Operating under an Air Operator's Certificate (AOC), Wisk Airline personnel will be responsible for the establishment of our operational network, the scheduling and supervision of our flights, and the ground handling and maintenance of our aircraft. A Wisk fleet will be deployed to a city/region market following extensive analysis of the operating and market environment and in close consultation with the local community.

Contributing to Australia's Aviation Future

As the Aviation Green Paper notes, Australia wants an aviation sector that is safe, sustainable, connects us and meets the market's needs. While Wisk might be considered part of the "era of disruption"¹ mentioned within the paper, we see in these objectives our own mission of "safe everyday flight for everyone."

¹ Australian Government, [Aviation Green Paper](#), page 2

In terms of safety, we are engineering our Gen 6 aircraft to meet or exceed the highest possible aviation standards - for both the design and operation of the aircraft. These standards will be assessed through the FAA's Type Certification process, which is currently underway. This process will be supported by rigorous flight testing and operational validation programs. In parallel, Wisk will be undertaking surrogate aircraft trials in the United States and Australia, with Australia providing attractive opportunities for regulatory and operational sandbox environments.

For Wisk, sustainability covers not just our decarbonisation efforts with respect to direct emissions but also opportunities to deploy retired aircraft batteries in meaningful ways. Wisk's Gen 6 aircraft is a battery-powered electric aircraft that, when combined with renewable energy sources, not only supports the Government's net zero emission targets for aviation but local transport as well. In line with safety standards, aircraft batteries will have a relatively limited operational life. However, retired batteries could be installed at vertiport locations or elsewhere in the grid to support peak demand of our transport network or even the local area.

In line with these efforts, Wisk also sees growth in related jobs. [Analysis of the opportunities associated with AAM](#) has identified significant new employment opportunities especially those regarded as high-paying roles in aviation, engineering and technology-related disciplines. Contrary to some concerns regarding autonomous aircraft, Wisk's operation will not operate with minimal people. Instead, Wisk personnel fulfil vital roles in planning, supervision, ground handling, maintenance, and customer services.

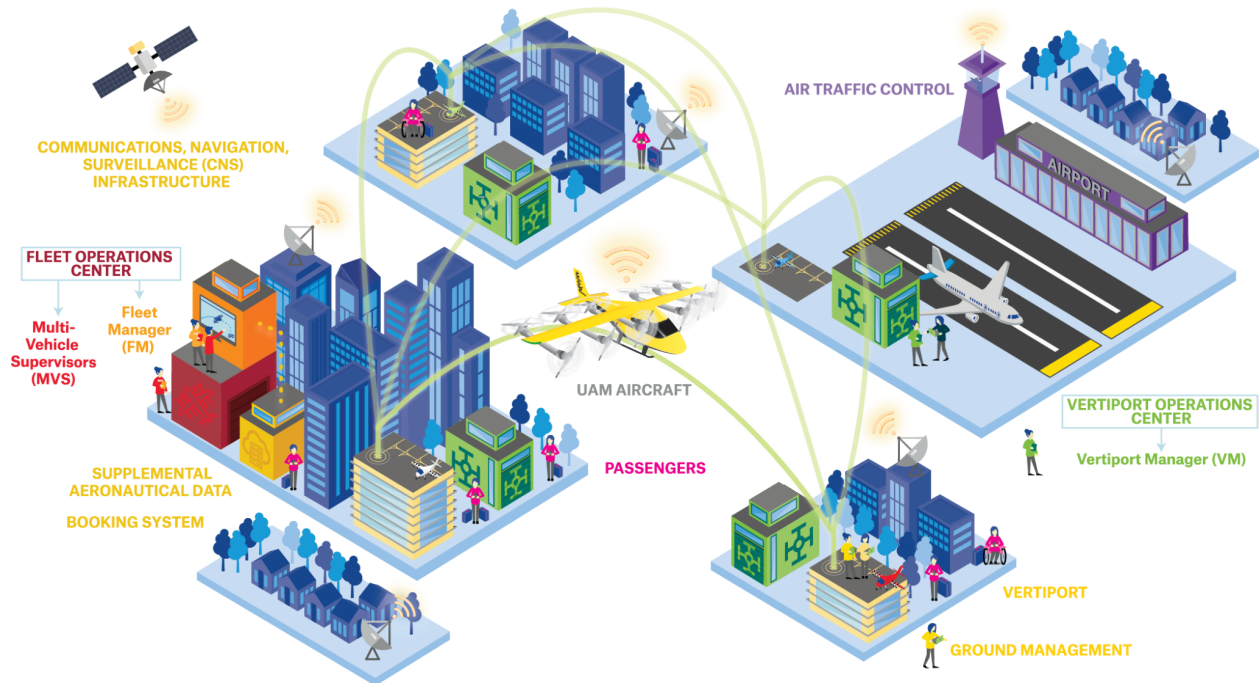
One of the key benefits of Wisk's autonomy is maximising capacity of our airspace environment. As identified in the Aviation Green Paper, emerging technologies could see a three-fold increase in aircraft movements.² Wisk believes the key to unlocking airspace capacity is through autonomy and while we recognise the regulatory, operational and social challenges ahead, we believe certified, passenger-carrying autonomous flight will be a reality this decade.

Wisk's AAM model is focussed on establishing and strengthening connections within its operating area. We are looking to deploy our autonomous, eVTOL aircraft in ways that may help to alleviate pressure on existing transport networks, open up new routes where infrastructure is limited, or overcome geographic barriers that hinder ground transport, such as mountains, rivers and bays. While initial operating networks may be built around urban centres, they are expected to grow to encompass broader regional environments and provide inter-city connections.

Making connections for people with mobility challenges and other accessibility issues is a particularly important objective for Wisk. [Empowering people living with disabilities, being inclusive and overall accessibility have been driving forces behind our design.](#) Wisk will continue to engage with advocacy groups, research organisations and authorities on

² Australian Government, [Aviation Green Paper](#), page 13.

supporting and developing best practices for the aviation industry and we applaud the Government’s inclusion of these initiatives in the Aviation Green Paper.



Wisk's Urban Air Mobility Concept of Operations

The final component of the Government’s vision we wish to address relates to the aviation market. The paper calls for an aviation industry that is reliable, competitive and affordable. To highlight Wisk’s alignment on these goals, we’d like to refer back to our mission, “safe everyday flight for everyone.” Flying everyday requires reliability but more than this, we are working on developing operating networks that support and complement existing transportation systems. We plan on using intermodal connections to enhance both our own network reliability as well as the overall transportation system’s performance. Flying everyone, not just the wealthy, requires achieving a scale that supports a price point that is accessible to the market. This can only occur in a competitive environment where market pressures drive efficiencies and support the investment that AAM will require to establish its operating networks.

Government Support for AAM in Australia

Bringing this vision of AAM to fruition will require significant public and private collaboration and investment. For its part, Wisk is keen to participate, contribute and support this process.

As noted in the Aviation Green Paper, the US-Australia relationship on the “promotion of safety and airworthiness certification”³ is a key component of mutual recognition and international alignment. These arrangements and this relationship are an important driver behind the industry’s deployment in Australia. Wisk will be looking to leverage the US-Australia Bilateral Aviation Safety Agreement to bring Gen 6 here as will other aircraft manufacturers. We would support continued and increased collaboration between CASA, the FAA and other future-focused regulators.

To support this, Wisk is committed to ongoing, transparent engagement with the Civil Aviation Safety Authority (CASA) including our collaborative approach to the development of a local Concept of Operations. Confidence in the forward-thinking posture of the Australian aviation safety regulator has been buoyed by CASA’s work on their RPAS and AAM Strategic Regulatory Roadmap and our interactions with staff to date. We wish to acknowledge the challenges ahead in resourcing CASA in support of the establishment of AAM and would like to highlight the importance of cooperation in developing the knowledge, skills and experience required on both sides of the public-private fence in the lead up to commercial operations. Wisk also supports an industry approach through collaboration with other aircraft manufacturers and industry bodies, such as the Australian Association for Uncrewed Systems (AAUS)

To this end, we were further encouraged by the exploration of regulatory sandboxes in the Aviation Green Paper. Wisk has been and is continuing to work with the FAA and the New Zealand Civil Aviation Authority (NZCAA) on targeted simulated and trial programs designed to support the deployment of autonomous aircraft. In the US, we are working in simulated environments and [using surrogate aircraft](#) to inform policy and guidance on ecosystem development. As 2023 comes to a close, we will have completed work in New Zealand on Phase 2 of the [Airspace Integration Trials Programme \(AITP\)](#) with programme partners, the NZCAA, Airways New Zealand, Insitu Pacific, and other local stakeholders. Future overseas activities will also include flight testing and operational validation activities and Wisk would like to leverage and continue work like this within the Australian environment.

Some of the key lessons for Wisk from the AITP has been the need to work with a diverse group, regulators and industry partners, and to start early. Again, Australia is taking promising steps towards an operational ecosystem that will not only accommodate our Gen 6 aircraft but actualise the benefits of AAM and autonomy. Presentations by Airservices Australia on their vision for the Flight Information Management System (FIMS) for AAM and eventual integration

³ Australian Government, [Aviation Green Paper](#), page 136.

of Uncrewed Aircraft System Traffic Management (UTM) and Air Traffic Management (ATM) concepts have been encouraging. Wisk is eager to work with Airservices Australia on developing the technical and operational frameworks that will support deployment of FIMS in this way.

Perhaps the greatest challenge for AAM will be developing the necessary ground infrastructure to support flight operations. Many of the hurdles to establishing a vertiport network are centred around local engagement. While local planning schemes, approvals, supporting infrastructure, noise and social licence activities will be undertaken locally, coordinated efforts across regions, within states and federally will foster a strong environment for investment.

Wisk has already been working with local governments on developing the necessary awareness of AAM and outlining the challenges ahead. Through its relationship with COMSEQ, Wisk and other AAM proponents, including CASA, have engaged with local planning and economic development personnel on various AAM topics. One of Wisk's key messages was the need for standardised planning requirements across the SEQ region.

The Federal Government has already established a framework for coordination between federal objectives and local planning requirements in the form of the National Airport Safeguarding Framework (NASF). Wisk would support the ongoing efforts to strengthen the NASF in relation to land-use planning, noise and other aviation impacts.

Despite this work, commercial pressures, such as long return on investment periods, may require Government investment in the AAM industry, especially in enabling infrastructure. As a new industry, initial vertiport networks will require support in the near future due to the long lead times required for community engagement, siting, and construction. These initial networks will be critical to the safe and sustainable scaling of the industry.

Conclusion

As an industry leader in autonomous AAM, Wisk sees in Australia an exciting opportunity to realise a vision of aviation that is safe, sustainable, market-driven and socially positive. But this vision need not be of a far-off future. Rather, we are looking at the real potential for autonomous AAM this decade. The realisation of this future will require significant government-industry collaboration with the seeds of these efforts already being planted. Wisk is prepared to be a part of this collaboration and we are very grateful to the Australian Government for the opportunity to contribute to the Aviation White Paper project. Australia has a real opportunity to be at the forefront of aviation's next chapter - establishing and safely integrating AAM and autonomous aviation.