

# ADVANCED AIR MOBILITY IN VICTORIA

Economic growth through efficient  
zero-emission transport and supply  
chain networks



**Industry Vision  
Statement**

August 2022

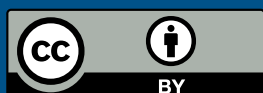
## Acknowledgment of Traditional Owners and Aboriginal Victorians

The Victorian Government proudly acknowledges Victoria's Aboriginal communities and their rich culture and pays respect to their Elders past and present. We acknowledge Aboriginal peoples as Australia's first peoples and as the Traditional Owners and custodians of the land and water on which we live, work and play.

We recognise and value the ongoing contribution of Aboriginal people and communities to Victorian life and how this enriches our society more broadly. We embrace self-determination and reconciliation, working towards equality of outcomes, ensuring an equitable voice and developing partnerships to improve the values we cherish across our cities, towns, suburbs and regional areas.

1 Treasury Place  
Melbourne Victoria 3002  
Australia  
Telephone: +61 3 9651 5111  
Facsimile: +61 3 9651 2062  
[invest.vic.gov.au](http://invest.vic.gov.au)

Authorised by the Victorian Government  
1 Treasury Place, Melbourne, 3002  
Printed by Doculink Australia  
D1/28 Rogers St, Port Melbourne VIC 3207  
Printed on recycled paper.



© State of Victoria 2022

You are free to re-use this work under a Creative Commons Attribution 4.0 licence, provided you credit the State of Victoria (Department of Treasury and Finance) as author, indicate if changes were made and comply with the other licence terms. The licence does not apply to any branding, including Government logos.

Copyright queries may be directed to [IPpolicy@dtf.vic.gov.au](mailto:IPpolicy@dtf.vic.gov.au)

ISBN (pdf/online/MS word)

Published 2022

If you would like to receive this publication in an accessible format please email [information@dtf.vic.gov.au](mailto:information@dtf.vic.gov.au)

This document is also available in Word and PDF format at [invest.vic.gov.au](http://invest.vic.gov.au)

The images contained in this document are for illustrative purposes only and do not imply Victorian Government endorsement or support towards any particular concept, operation or organisation.

Front cover image courtesy of Vertical Aerospace.

# Contents

<b>1. Ministerial foreword</b>	<b>2</b>
<b>2. Introduction</b>	<b>4</b>
<b>3. AAM ecosystem development in Victoria</b>	<b>6</b>
<b>4. Industry Vision</b>	<b>8</b>
4.1 AAM ecosystem development	10
4.2 Next steps	11
<b>5. Victorian AAM market</b>	<b>12</b>
5.1 New connection possibilities	13
5.2 Community expectations	14
5.3 Supply chain capacity	15
5.4 Resilience and preparedness	16
5.5 Sustainability	19
5.6 Innovation	20
<b>6. Fostering partnerships</b>	<b>22</b>
6.1 Incubating R&D and development capability	23
<b>7. Ecosystem activation</b>	<b>24</b>
7.1 Supporting the testing and trialling of new technologies	25
7.2 Integration of AAM into existing transport networks	26
7.3 Supporting the development of ground infrastructure	27
<b>8. Regulatory innovation</b>	<b>28</b>
8.1 Regulatory implications on land use, planning and infrastructure	30
8.2 Contributing to and learning from a coordinated national and global approach	30

# 1. Ministerial foreword

Victorians have an innovative spirit – a spirit that has been harnessed to solve some of our biggest challenges and improve our way of life. Our achievements in advanced manufacturing, digital technologies and clean energy have made significant positive impacts in Australia and around the world.

On the back of this legacy, Victoria continues to innovate and push boundaries in response to our current challenges, such as climate change, natural disasters and global pandemics.

Victoria also has a long history of aviation innovation.

Shortly after the Wright Brothers' first powered flight in the United States in 1903, the first Australian-built powered aircraft, the Duigan Biplane, was flown in Mia Mia in regional Victoria in 1910.

Victoria's innovation in aviation continued through the 1920's with the establishment of a key aircraft manufacturing capability at Fisherman's Bend, which has continued through to the present day.

Just as the Duigan Biplane was enabled by advances in powered flight in the early 1900s, modern transformation in new battery technology, electric propulsion, hydrogen fuel cells, composite materials and digital avionics provide significant opportunity to transition to new ways of moving people and goods around Victoria.

Globally, the Advanced Air Mobility (AAM) sector is moving fast, with several companies seeking to enter the market from 2024-25. This fast-approaching horizon further emphasises the necessity for governments to develop the foundational structures, systems and market frameworks required for AAM.

The use of AAM in Victoria has the potential to revolutionise logistics, service delivery, emergency services regional connectivity and passenger transport – providing opportunities for improvements in safety, time, cost and noise. As a zero-emission transport mode, AAM will also support the decarbonisation of our society.

The Victorian Government cannot develop an AAM market in isolation. We will work collaboratively with industry, academia, across all levels of government and the community with other key stakeholders on ecosystem building initiatives and implementation plans to provide certainty for investments in Victoria.

Through this collaborative spirit, we will look for opportunities to support local trials, market validation, partnerships and novel research and development.

The Victorian Government will continue to support the development of local capability in key sectors, such as renewables, advanced manufacturing, digital technology and aviation skills, which will encourage the creation of a strong Victorian AAM sector.

The Victorian Government is embracing this transformational opportunity and we are committed to being a leader in the adoption of zero-emission aviation technologies.

For companies and investors looking to operate in a dynamic market and participate in this exciting journey with us – Victoria welcomes you.



**Tim Pallas MP**  
**Minister for Economic Development**

## 2. Introduction

This industry vision statement presents the Victorian Government's agenda to harness advances in AAM technology to move people and goods in an efficient and environmentally sustainable manner.

According to Deloitte Access Economics<sup>1</sup>, the increased uptake over the next 20 years of efficient and renewable AAM and drone technologies could:

- > increase Victoria's Gross State Product (GSP) by \$2.8 billion – of which \$800 million would be in regional Victoria
- > increase aggregate employment in Victoria by an average of approximately 1300 new full time equivalent (FTE) jobs per annum
- > provide cost savings of \$546 million across multiple industries, with \$68 million of this in transport.

This industry vision statement outlines the overarching legal frameworks, principles and expectations that will support the ongoing development of these technologies and ensure their responsible integration into our society and transport systems.

Any new sector must be established in a considered and coordinated manner that satisfies community expectations and regulatory requirements. The Victorian Government acknowledges that responsibility for the AAM ecosystem is spread across Commonwealth, state and local governments.

<sup>1</sup>Economic Benefit Analysis of Drones in Australia - Deloitte Access Economics  
Commissioned by the Commonwealth Government

**The Victorian Government is committed to fostering an AAM industry ecosystem premised on:**



providing valuable social and economic benefits to communities



preserving community amenity



supporting the Commonwealth to ensure a safe, secure and considerate AAM ecosystem



fostering market sustainability



reducing environmental impacts and the decarbonisation of our society.



creating employment that draws on existing Victorian capability

The AAM sector must also be resilient in its design and deployment, ensuring fairness in access for a diverse industry.

A thriving AAM ecosystem in Victoria will create a significant number of jobs through the development of a strong local industry that can contribute to novel research and development (R&D), trials and testing, and capability and capacity in advanced manufacturing.

AAM will contribute to Victoria's longstanding legacy as a technology leader and innovation hub in the Asia-Pacific region, supporting existing and emerging business models. Fostering this sector will also open opportunities in adjacent industries, including traditional aviation, space, automation technologies, communications, transport and logistics.

Victoria aims to be a world-leading hub for research, development and testing of AAM technologies. To achieve this aspiration, the Victorian Government will coordinate and cooperate with industry partners, universities and all levels of government to establish and promote best practice approaches, products and technology development for the AAM sector.

The success of the AAM ecosystem within Victoria will only be fully realised through sustained and incremental steps towards viable commercial services informed by community needs and expectations. In turn, these technologies can enrich lives and have positive social and economic benefits across Victoria.

### 3. AAM ecosystem development in Victoria

AAM will support the transportation of people and goods in a safe, clean and quiet manner between locations that are not currently served or are underserved by existing transport systems – regional, intra-regional, urban – using revolutionary new aircraft that are only now becoming possible through recent advances in technology.

AAM will encourage an array of novel connection possibilities and create new efficient options for some existing transport and logistics networks.

Developing the ecosystem for AAM will make it possible for businesses to flourish across new and specialised supply chains. The AAM sector will support capability building efforts and job creation in adjacent sectors, including:

- > manufacturing, design, components and industrial technology
- > clean energy and utilities
- > lightweight materials, carbon fibre and composites
- > battery systems and storage
- > electric motors, electrical and electronics
- > skills, training, research and development
- > digital hardware, software and data services
- > communications
- > vertiport planning, construction and operation
- > support industries, such as maintenance, repair and overhaul services.



AAM will offer opportunities for connections, including:

- > replacement of multi-stop services with direct services
- > between towns and regions that can't sustain regular mass transport services such as trains, buses or large aircraft
- > on-demand and high-speed connections
- > low-volume high-frequency transport markets
- > geographically isolated areas or areas surrounded by mountains or water (such as islands or bay crossings)
- > special events where efficient and flexible transfer of people and goods is required
- > expedited delivery of goods.



CityAirbus Next Gen - because small journeys demand a big change.

Image courtesy of Airbus

## 4. Industry vision

A clear and coordinated government approach is required to enable the societal and economic benefits that AAM will deliver for our cities and regions across Victoria. This industry vision statement articulates Victoria's commitment to leading the growth and development of the AAM sector in Australia.

## Industry vision overview

### Vision

Economic growth through efficient zero-emission transport and supply chain networks.

Vision attributes		Guiding principles	
AAM sector growth shaped through <b>understanding of community needs and expectations</b>		<b>Sustainability:</b> AAM should strive to minimise environmental impacts and contribute to the decarbonisation of the aviation sector	
Victorian transport and logistics network shaped through <b>integration opportunities offered by AAM</b>		<b>Community first:</b> AAM should address community needs and concerns such as safety, noise, privacy and visual amenity	
<b>Local jobs</b> in development, incubation and manufacturing of AAM technology		<b>Cross-sector innovation:</b> AAM should stimulate technology development and knowledge transfer across multiple sectors	
<b>Supported partnership arrangements</b> between government, industry and academia		<b>Regional development:</b> AAM should strive to increase connectivity, boost new jobs and improve supply chains in regional Victoria	
Fostering an environment that activates <b>testing</b> and <b>trailing</b> of new technologies		<b>Local industry development:</b> AAM in Victoria should support industry growth, investment and workforce development opportunities	
<b>Regulatory innovation</b> to enable vertiports, infrastructure and community amenity <b>aligned to community expectations</b>		<b>Trust and collaboration:</b> Victoria’s AAM ecosystem will promote trust and collaboration between relevant stakeholders	
<b>Advocating for Victoria’s best interests</b> as the sectors grows by supporting the development of consistent national and international frameworks and policies		<b>Open platform:</b> The development of AAM should be based on open access infrastructure and support enhanced levels of data driven decision making	
Anticipated outcomes			
<b>Social</b> <ul style="list-style-type: none"><li>• Regional connectivity</li><li>• Reduced travel times</li><li>• Reduced emissions</li><li>• Improved emergency management</li></ul>		<b>Economic</b> <ul style="list-style-type: none"><li>• Boost skills</li><li>• Jobs creation</li><li>• Supply chain resilience</li><li>• Efficient and cost-effective</li></ul>	

## 4.1 AAM ecosystem development

Unlocking the economic and societal benefits of AAM technology also requires a shift in the regulatory and policy landscape.

The Victorian Government vision for an AAM ecosystem will be supported by:

1. Ongoing collaboration with the community, industry and governments to understand and address community priorities and expectations regarding any risks and impacts of the AAM sector as it develops.
2. Positioning Victoria to be a vibrant centre for the development, incubation and attraction of AAM technology. This will boost local jobs and skills, leverage existing capability in the technology and manufacturing sectors, and encourage seeding of a local AAM market.
3. Preparing Victoria to be an early adopter of AAM by establishing a regulatory environment that supports AAM initiatives while aligning with community expectations. This may include regulatory change or guidance material on vertiports, pick-up/delivery sites and other infrastructure to enable new amenity.
4. Promoting strong, outcomes-focused partnerships between government, industry and academia to identify collaborative solutions to priority challenges that will foster the ecosystem.
5. Exploring options to shape Victoria's long-term transport strategy through planning for the integration of AAM operations into existing transport networks and logistics systems.
6. Supporting test and trial activities in Victoria to unlock local opportunities for innovation, development and market validation.
7. Continuing to advocate Victoria's best interests in the growth of a harmonised and coordinated sector through supporting national and international frameworks and policies.

Freespace Operations is a Victorian based manufacturer of world leading industrial heavy lift multirotor drone systems.

Image courtesy of Freespace Operations



## 4.2 Next steps

Working in close collaboration with relevant stakeholders, the Victorian Government will develop implementations plans in 2023, outlining key responsibilities, deliverables and outcomes.

Once finalised, the Victorian Government will publicly release the implementation plan outlining the methodical approach to implementing the AAM vision in Victoria.

### What have we done so far?

- > Established initial partnership programs and innovation hubs
- > Signed MOU with Commonwealth to collaborate on fostering the development of the AAM sector
- > Explored dedicated areas for testing and trialling of technology
- > Participated in AAM the World Economic Forum Cities and Regions Coalition

### Where are we at?

- > AAM industry vision statement

### What are next steps?

- > Develop implementation plans
- > Continue to establish foundational structures to foster innovation and investment
- > Establish appropriate, scalable and outcomes focused regulatory environment
- > Foster sustainment of the AAM ecosystem
- > Development of further trials and partnerships

## 5. Victorian AAM market

AAM will connect Victorians, improve supply chain resilience and support Victoria's legacy as a sustainable and innovative State.

## 5.1 New connection possibilities

As the state's population grows, improving connectivity between urban and regional settings becomes ever more critical. New modes of transport will be required to supplement existing transport networks to move people and goods around and into developing regions across the State.



Transport trips across Victoria are expected to reach 38 million per day by 2050.<sup>1</sup>

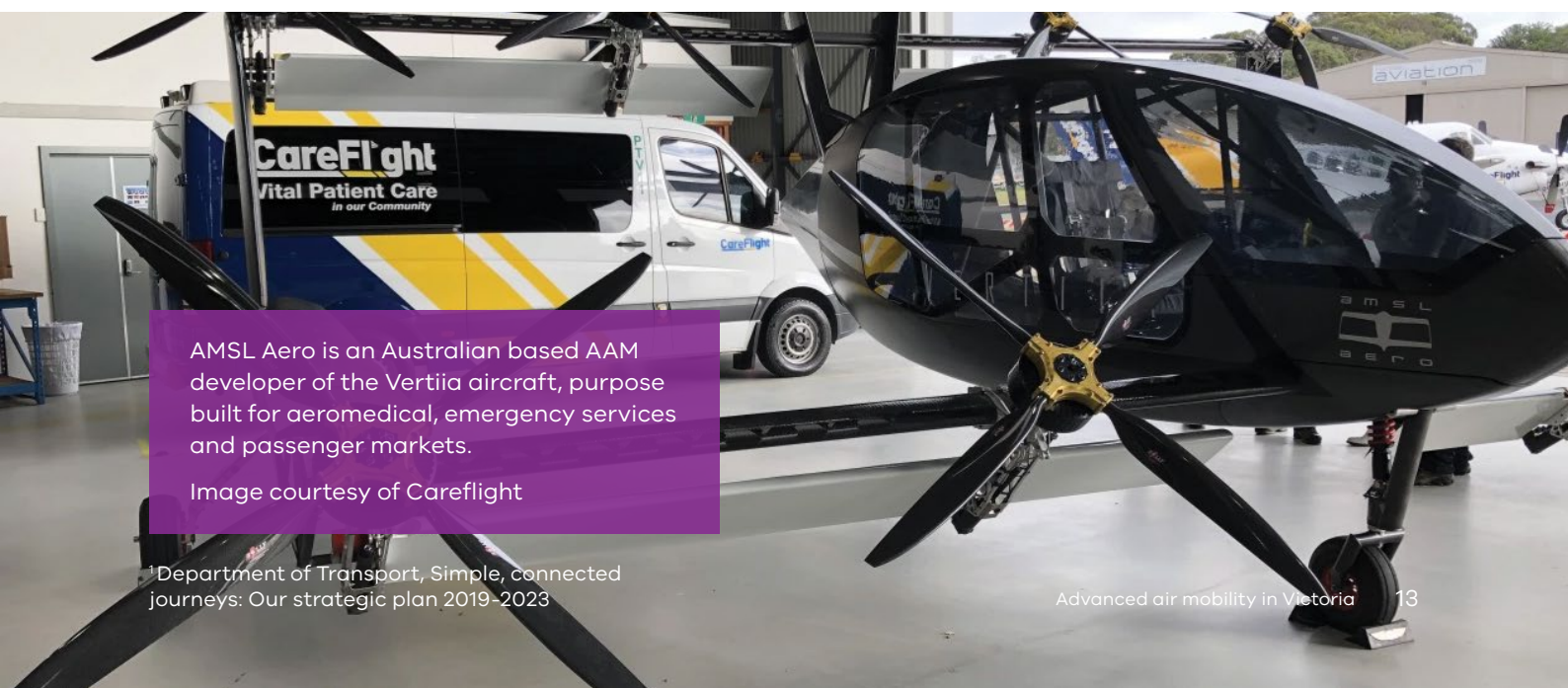


The population of regional Victoria will double to two million people over the next 20 years, with cities and towns within a two hour arc of Melbourne growing fastest.

Unlocking new modes of transport will enable new connections for many communities, particularly in regional Victoria. It will also increase the attractiveness of regional areas for investment and tourism.

The Victorian Government, through the Department of Transport, has identified six strategic directions to guide policy decisions to shape the future of the Victorian transport system. This industry vision statement aligns with these strategic directions, which aim to maximise the opportunities created by new and emerging technologies to complement Victoria's strategic transport direction.

Victoria's regional centres, such as Traralgon, Geelong, Ballarat and Bendigo, have growing commuter markets, thriving commercial centres and strong tourism opportunities. AAM has the potential to provide fast, cost-effective methods for connecting city/town pairs, especially where the cost and complication of scaling traditional aviation, or constructing fixed infrastructure, do not justify the likely demand.



AMSL Aero is an Australian based AAM developer of the Vertiia aircraft, purpose built for aeromedical, emergency services and passenger markets.

Image courtesy of Careflight

<sup>1</sup> Department of Transport, Simple, connected journeys: Our strategic plan 2019-2023



#### POTENTIAL USE CASE:

### Enhancing the regional airline network footprint

Globally, airlines are already positioning themselves to utilise AAM technology to support the expansion of their flight route network. Air travel in Victoria remains an efficient and viable option to improve overall transport networks within and between cities and regions, reducing the need to build inflexible and capital-intensive land transport infrastructure.

Regional airline networks could leverage the step-change in AAM technology to boost air connectivity between regional communities in Victoria, unlocking new transport opportunities through innovative business models.

## 5.2 Community expectations

Engaging with Victorians and understanding community needs and expectations improves decisions about infrastructure, regulation, policy and service delivery. Proactive engagement with communities will be critical to the growth of the sector, from early use case development to widespread commercialisation of AAM technologies.

Collaboration will also be required with the Commonwealth, local government and industry to understand the operational capabilities of AAM technologies. This will ensure that AAM technology is deployed in an informed, consistent and considerate manner, in line with community needs and expectations.



## 5.3 Supply chain capacity

High-quality and reliable transport and logistic services are essential for Victoria's economy. Robust logistic systems are also critical to the success of Victorian businesses across the supply chains.

Victoria's supply chain and logistics industry itself contributes approximately \$21 billion per year to the economy and employs around 280,000 people.<sup>2</sup>

Demand for fast delivery of goods to business and homes has hit unprecedented levels due to the growth of online shopping and e-commerce. Existing supply chains must become more efficient, resilient and flexible as demand increases into the future.

In line with the Victorian Government's Victorian Freight Plan, emerging technologies like AAM have the potential to increase existing network capacity, improve reliability and resilience, and reduce the cost and time of freight transport and logistic services to improve connectedness and liveability.

An increase in Victoria's gross products by \$40 billion over the next three decades will see freight volumes more than double.<sup>3</sup>



Victoria's population will grow from **6 million in 2016 to 10 million in 2050.**



Freight volumes are expected to grow from 360 million tonnes a year in 2014, to nearly **900 million tonnes by 2051.**



Freight volumes in **regional Victoria** are forecast to grow at an annual average rate of **1.5 per cent each** year between 2014 and 2051.

**Metropolitan freight** is expected to grow at an average annual rate of **2.6 per cent** over the same period.<sup>4</sup>

<sup>2</sup> Retail and Supply chain and logistics - Live in Melbourne

<sup>3</sup> Ports and freight | Department of Transport

<sup>4</sup> Delivering the Goods - Victorian Freight Plan | Department of Transport

Victoria is already the leader in supply chain freight logistics and home to the largest logistics companies in the region, such as Toll, Qube, and Linfox, allowing cost-effective connections to global markets. With 24/7 curfew-free operation, a single-terminal precinct, and extensive arterial road access, Melbourne airport's geographic and logistical features have made it the nation's largest and busiest freight airport. Enabling the inclusion of AAM will complement existing freight capability by providing new and efficient expansion opportunities.



Melbourne is **Australia's domestic air freight hub**, with Melbourne Airport handling more than 30 per cent of Australia's international air freight market.



Port of Melbourne is the **largest container and general cargo port in Australasia** and one of the top four container ports in the southern hemisphere.

## 5.4 Resilience and preparedness

The COVID-19 pandemic has exposed vulnerabilities in supply chains across the globe, including here in Australia. A paradigm shift is required now to rethink existing end to end supply chain certainty, planning, capability, development and supporting technology.

The AAM sector can directly improve supply chain resilience, enabling transport of high-value goods and services that have traditionally been cost prohibitive with some traditional transport services.


Additionally, AAM has the potential to aid emergency services in prevention, preparedness, response and recovery for fire and emergency operations.

AAM technologies will revolutionise some of our emergency, safety and environmental activities, such as wildlife management, ambulance and police services, surf lifesaving and shark spotting.

The Victorian Government will explore opportunities for government services, including emergency management services, to leverage emerging aviation technologies for the benefit of Victorian communities.





An aerial photograph showing a controlled bushfire burn in a dry, grassy field. Thick white smoke rises from the fire line on the left. In the lower right, a white fire truck with yellow and black checkered patterns and the number '1305' is parked. Two firefighters in green uniforms are near the truck, one holding a red hose. The background shows a hazy landscape with some trees and buildings under a grey sky.

Drones being used for situation awareness during planned burning efforts to reduce the risk of bushfires in Victoria.

Image courtesy of Fire Rescue Victoria

#### CASE STUDY:

### Drone trials assist planned burning in the Wimmera

As part of a trial carried out by Forest Fire Management Victoria (FFMVic), an ecological planned burn was conducted in the Grampians National Park utilising a drone, saving time and reducing risk to firefighters. Drones proved to be ideal technology for the planned burn, given the thick vegetation and creek systems that limited access for crews in the Grampians National Park.

This trial was part of the Victorian Government's approach to protecting biodiversity, communities and the environment through a mix of bushfire risk management techniques.





#### CASE STUDY:

## Sustainable access to essential health supplies, pathology services and routine medications

Swoop Aero, a drone-logistics organisation based in Melbourne, is already improving access to essential supplies, pathology services and routine medications in Australia and overseas.

Swoop's remotely piloted aircraft provides a novel electric vertical take-off and landing (eVTOL) capability to unlock a full spectrum of pathology services, medications, blood and other healthcare commodities for the community.

Swoop Aero is currently undertaking an industry first joint certification process with the Federal Aviation Administration and the Civil Aviation Safety Authority for their newest and most advanced aircraft, the Kite™.



## 5.5 Sustainability

As the state moves towards a clean energy future, Victoria's transport technologies will need to adapt. New transport technologies will reduce emissions through using renewable power sources, which will also improve our energy security. Victoria's transport upgrade plan will deliver a world-class transportation system with safety, accessibility, reliability and sustainability at its heart. This is reflected as a key action within Victoria's Renewable Energy Action Plan.

The Victorian Government has established a long-term target of net-zero greenhouse gas emissions by 2050 through the Victorian Climate Change Act 2017.

The Victorian Government continues to prioritise the development of smarter, more sustainable transport solutions and reducing regulatory and physical barriers that might prevent technology adoption. The Energy Innovation Fund demonstrates the Victorian Government's commitment to driving innovation in new energy technologies.

AAM will contribute to Victoria's long-term target of net zero emissions by 2050 by supporting the electrification and subsequent decarbonisation of transport and logistics systems in the state. Through collaborative partnerships with universities and industry partners, advancements in renewable technology, such as green fuels, hydrogen and electric propulsion systems will become a reality, not just for AAM, but for the entire transport system.



Based in Melbourne, Kite Magnetics is developing electric motors and generators that are safer, quieter, significantly cheaper and emissions free to support a new age of electric aviation.

Image courtesy of Kite Magnetics

## 5.6 Innovation

Victoria is a world-leading launch market for ground-breaking products with clear commercial applications that benefit the community and the economy. Victoria's thriving research ecosystem is underpinned by government investments in cutting-edge technology and infrastructure that support commercially focused partnerships from concept to operationalisation.

Victorian universities are already leading the way through the commercialisation of novel and innovative transport technology, which complements the world-class education and training, design and manufacturing of AAM technology already taking place.

Manufacturing is a multibillion dollar industry and a cornerstone of the Victorian economy, providing a diverse range of jobs, boosting exports and contributing to economic growth. The Victorian Government is committed to creating new jobs in this area as demonstrated through the Advancing Victorian Manufacturing plan.

Scaling up of R&D and manufacturing activities will support job creation across urban and regional communities, aligning with the tenets of the Victorian Government's Regional Jobs and Infrastructure Fund, which supports efforts to decentralise population growth from Melbourne and shift towards regional centres.

Victoria is Australia's technology hub, with Melbourne being ranked as the top tech city in Australia and within the Top 30 globally.<sup>4</sup> Melbourne has the most graduates in science, IT, and engineering of any Australian city, and the skilled workforce can be leveraged across the AAM value chain in areas such as software development, sensor technology, advanced manufacturing, renewable fuels and assembly.

Deakin University's carbon fibre precinct, Monash University's 3D printing centre for the manufacturing of aerospace components, and RMIT's Autonomous and Intelligent Aerospace Systems Lab for AAM air traffic research provide local opportunities to enhance AAM capability. Additionally, Victoria is home to an existing advanced aviation manufacturing sector that can be leveraged during the adoption and commercialisation of AAM.

Victoria is home to three key aerospace R&D institutions (Defence Science & Technology Group, Defence Materials Technology Centre, and Defence Science Institute) and a key manufacturer and designer of commercial aerospace components in Boeing Aerostructures Australia. These facilities further demonstrate Victoria's commitment to fostering a strong aviation sector.

<sup>4</sup> Savills | Tech Cities 2020



## CASE STUDY:

# Swinburne's Aerostructures Innovation Research Hub (AIR Hub)

In late 2021, Swinburne University of Technology launched an Australian-first Aerostructures Innovation Research Hub (AIR Hub) with support of \$12 million in funding from the Victorian Government's Higher Education State Investment Fund.

Led by Swinburne, AIR Hub is bringing together the best of Victoria's aerospace research, design and manufacturing to work with industry on real world design and manufacturing problems for the next generation of air mobility. Already, the Air Hub is fostering new, highly skilled talent and upskilling the existing workforce to increase job opportunities in the rapidly evolving aerospace and space sectors.

Facilities across Victoria, including the Swinburne-CSIRO Industry 4.0 Testlab for Composite Additive Manufacturing in Clayton and the manufacturing sites of key industry partners, are supporting AIR Hub's R&D activities.

## 6. Fostering partnerships

Victoria is positioning itself to be a leader in renewable energy and a location of choice in the APAC region for the adoption of sustainable modes of transport.

In order to achieve this ambitious goal, the Victorian Government recognises the importance of collaboration across academia, industry and the community to build and sustain a mutually beneficial AAM sector. By fostering transparent and coordinated partnerships, cross-sector capabilities can be harnessed to deliver all the potential social and economic benefits of AAM.

The Victorian Government is committed to unlocking the emerging aviation technology industry's full potential through a multidisciplinary approach within R&D, manufacturing, trialling, and testing through to operationalisation and maintenance.

This will be achieved by:

1. Positioning Victoria as a vibrant centre for developing, incubating, manufacturing and operating AAM technology. This will support growth in local jobs and skills in the technology sector and will encourage seeding of a local AAM market. It will also leverage the existing capability and expertise of Victorian universities that are already breaking ground in novel aviation technologies and systems.
2. Promoting strong, outcomes-focused partnerships between government, industry and academia to collaboratively address priority challenges and support solutions that will foster the ecosystem. The Victorian Government is already working closely with Commonwealth agencies and industry partners to explore opportunities for programs and initiatives that will accelerate development in the sector.



## 6.1 Incubating R&D and development capability

Fostering existing and new partnership arrangements will harness technology leadership, expertise, and capability, while opening opportunities for technological step-change. These strategic partnership arrangements will enable coordinated and complementary development across the

complete spectrum of the AAM sector, supporting implementation, particularly where this occurs in a segmented approach.

The Victorian Government will work with industry, academia and other stakeholders to address key issues and develop partnership arrangements.



Based in Melbourne, Textron Systems Australia (TSA) is a highly experienced developer and manufacturer of uncrewed aircraft systems (UAS). TSA's highly successful Aerosonde UAS is used worldwide in a range of applications.

Image courtesy of Textron Systems Corporation

### CASE STUDY:

## Regional feasibility trials

Regional feasibility trials provide opportunities to understand existing regulatory, policy and operational barriers facing AAM operations.

Trials can accelerate strategic opportunities in supply chain resilience, emergency management services and regional connectivity across the State and demonstrate future applications to support renewable modes of transport.

## 7. Ecosystem activation

The Victorian Government is committed to supporting activities that will support investment and growth of a local thriving AAM sector.

## 7.1 Supporting the testing and trialling of new technologies

Fostering the testing and trials for emerging aviation technology is a key enabler to the growth of the sector. Sandboxing refers to a method where testing and trialling is undertaken in a safe, segregated environment, unlocking opportunities to advance concepts and prototypes in operations, network integration and airspace management while simultaneously supporting evolving regulatory frameworks to manage risks and impacts.

Local testing and trialling capability will entrench Victoria's value proposition for AAM technology developers, manufacturers and international market entrants, and serve as a useful mechanism to drive policy, regulation, commercial engagement and digital service delivery models in the sector.

Testing and trialling of AAM concepts in Victoria will provide opportunities for the community to gain an understanding of the novel characteristics and potential applications of AAM technology and provide feedback about expectations, needs and opportunities.

The Victorian Government is exploring opportunities to enable and support the development of local areas for testing, trialling and evaluation phases of AAM technologies, and is leveraging arrangements with the Commonwealth Government to pursue this in a coordinated and consistent manner.

## 7.2 Integration of AAM into existing transport networks

Victoria continues to make significant investments and bold decisions to expand the transport network as part of the Big Build Program. Some of these projects include the North East Link, the Suburban Rail Loop, the Metro Tunnel and the Level Crossing Removal Project. Significant potential exists to use AAM technology to unlock new connections, complementing the existing transport network and new investments underway.

Integrating AAM technologies with existing transport networks will require a shift in the traditional approach to aligning airspace and ground infrastructure to ensure safety, flight efficiency, capacity, access and equity, flexibility and predictability are assured and maximised.

This requires whole-of-government planning, in close coordination with Commonwealth agencies and local governments, to ensure consistency between airspace arrangements and the ability to access ground infrastructure in a manner that will provide certainty for the growth of AAM operations and support future ground development needs.

The Victorian Government, in consultation with industry and the community, will investigate potential locations for the early integration of AAM with existing transport networks, consistent with the aims of Victorian Government transport strategies.



Vertical Aerospace (UK) has developed the VX4, an electric vertical takeoff and landing (eVTOL) aircraft designed to transport people and goods.

Image courtesy of Vertical Aerospace



## 7.3 Supporting the development of ground infrastructure

Key metropolitan activity areas that support industrial, health and education precincts could significantly benefit from the connection opportunities that AAM can provide.

Vertiport infrastructure will need to address safety, noise and visual pollution considerations. These considerations will also apply to smaller launch sites of AAM technology, such as drone operations that specialise in freight delivery.

Additionally, vertiports will need to accommodate a range of operational conditions, including the size, weight and performance characteristics of various AAM technologies, approach and departure flight corridors, landing and take-off, charging, maintenance and storage.

Vertiports will also need to consider public amenity aspects, such as safety, accessibility, security, access to parking, and integration with the existing transport and logistics system.

The Victorian Government will:

- > Consider public amenity aspects for vertiports in consultation with industry and the community
- > consider bespoke infrastructure requirements for drone-delivery, freight and regional vertiports, including the necessity of specialised infrastructure
- > explore the feasibility of a proof-of-concept vertiport network to test and identify challenges facing vertiport integration
- > partner with industry and communities to shape commercialisation opportunities for new markets and new business models for operators
- > support community participation to shape AAM operations.

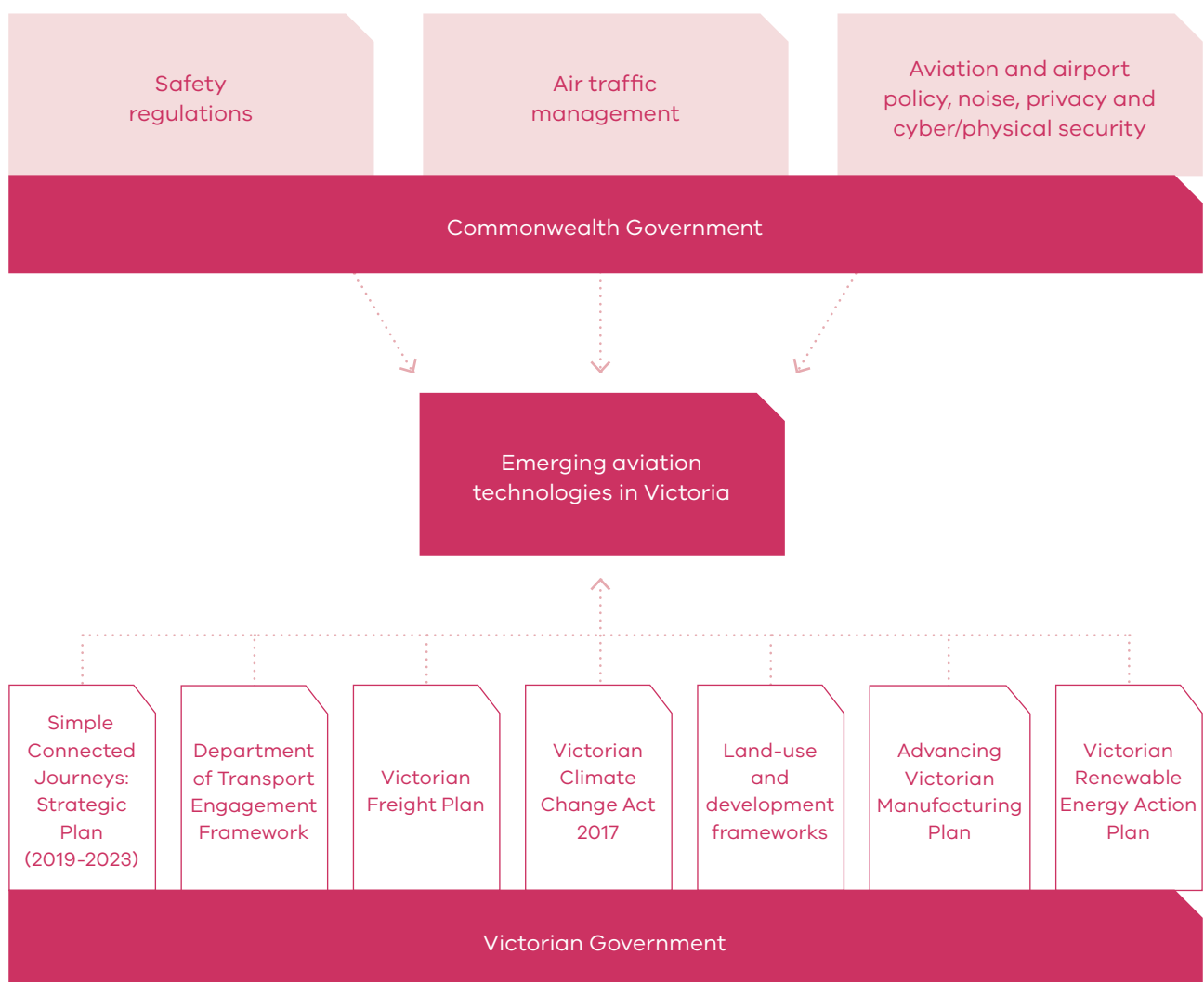


## 8. Regulatory innovation

Clear regulatory application and approval pathways for AAM operations are critical to achieving key government policy outcomes and attracting investment, innovation, talent and capability to Victoria.

Legal frameworks for AAM should be transparent, agile, outcomes based and proportionate to risk and impacts. Such frameworks will also need to support trials and demonstrations to understand how AAM can be appropriately integrated into current airspace and ground transport systems.

## Policy and regulatory landscape across Commonwealth and state governments



## 8.1 Regulatory implications on land use, planning and infrastructure

The Victorian Government has commenced work to explore issues and opportunities relating to land use, planning and infrastructure aspects required for the AAM sector.

This will include consideration of the authorising environment for planning schemes, and the implications on land-use and development from AAM operations and vertiport networks.

This work will help inform opportunities for any regulatory reform or guidance on planning processes in consultation with the community, industry and Government agencies.

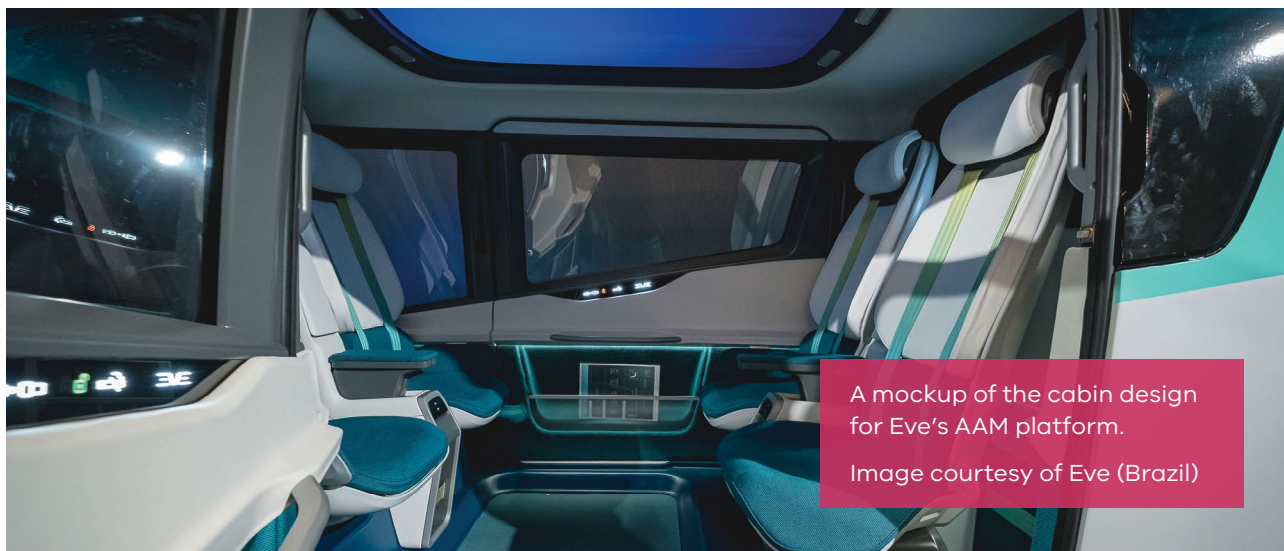
## 8.2 Contributing to and learning from a coordinated national and global approach

The Commonwealth Government, given its responsibility for aviation (including aviation safety and aviation noise), airspace and security, has publicly committed to developing a nationally consistent legal framework to enable a safe, secure and considerate approach to the growth of the sector.

The Victorian Government continues to work collaboratively with the Commonwealth Government to advocate Victoria's best interests in the growth of a nationally coordinated AAM sector

through supporting the development and evolution of Commonwealth policies, legal frameworks, programs and other initiatives.

Additionally, the Victorian Government actively participates in the Advanced and Urban Aerial Mobility Cities and Regions Coalition, led by the World Economic Forum. The forum provides opportunities to share lessons between international jurisdictions and publicly highlights the successes and lessons learned from policy making efforts and pilot projects.



A mockup of the cabin design for Eve's AAM platform.

Image courtesy of Eve (Brazil)



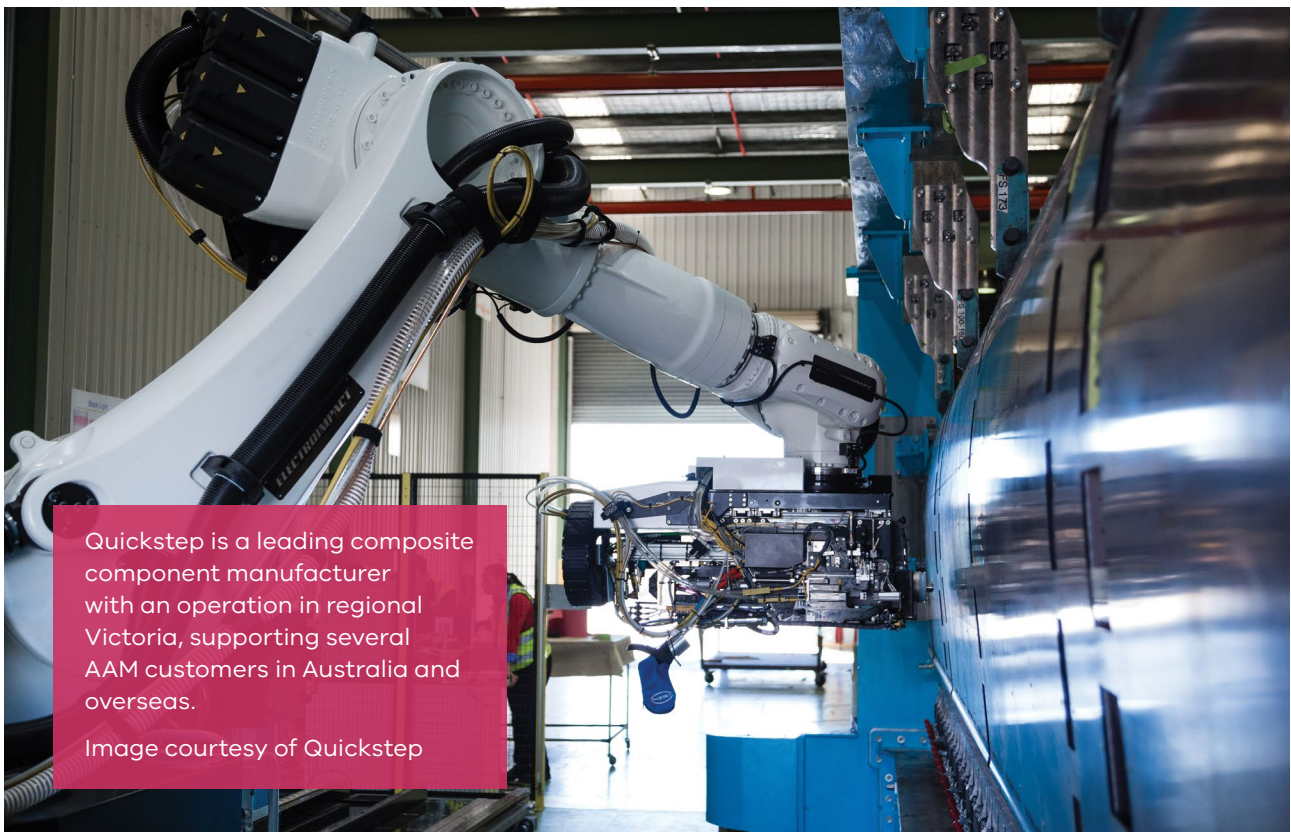
## CASE STUDY:

# Memorandum of Understanding between DITRDC, CASA, ASA and the State of Victoria

A Memorandum of Understanding (MoU) between the Department of Infrastructure, Transport, Regional Development and Communications, the Civil Aviation Safety Authority, Airservices Australia and the State Government of Victoria was established in late 2021, strengthening collaborative efforts between state and Commonwealth agencies to foster the long-term growth of the AAM sector.

The MoU provides a high-level framework for agencies to coordinate regulation and supports efforts to establish a safe, sustainable and resilient AAM ecosystem. The MoU will also help establish an operating environment within Victoria that assists industry achieve regulatory readiness in anticipation of a national network.

For further information, please visit:  
Working together to support advanced aviation industry | Department of Infrastructure, Transport, Regional Development and Communications, Australian Government



Quickstep is a leading composite component manufacturer with an operation in regional Victoria, supporting several AAM customers in Australia and overseas.

Image courtesy of Quickstep

