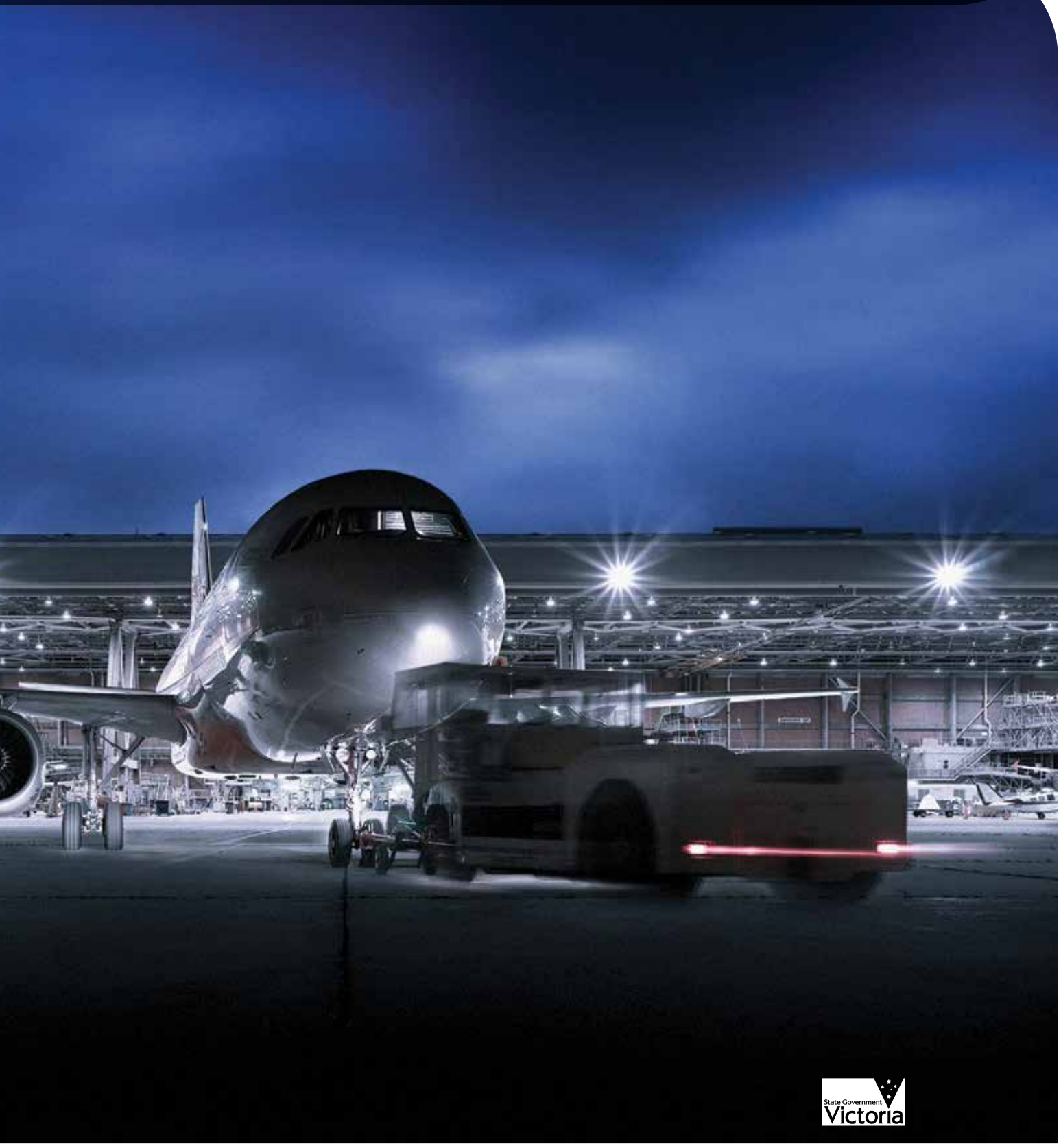
National Aviation Services Precinct Discussion Paper

MAY 2012

DEPARTMENT OF BUSINESS AND INNOVATION



State Government Victoria

Table of Contents

Minister's Message

The Asia-Pacific region encompasses several of the fastest growing economies in the world.

As the region's economies continue to expand, significant growth expected in the aviation industry will result in increased passenger air traffic and aircraft orders.

In turn, this will lead to an increased need for maintenance, repair and overhaul activity, an increased demand for skilled aviation personnel in the region, as well as increased capabilities in providing the business solutions and environment that will be needed in order to take advantage of those opportunities.

These circumstances present Victoria with a unique opportunity to position itself both as a leader in aviation maintenance training and as a base for regional maintenance, repair and overhaul (MRO) operations, while also securing Victoria's reputation as a leader in research, innovation and business solutions in the aviation industry.

The *National Aviation Services Precinct* seeks to capitalise on this opportunity.

The Victorian Government is seeking the aviation industry's meaningful participation and investment in the development and implementation of the *National Aviation Services Precinct*.

I look forward to receiving your feedback.

The Hon. Gordon Rich-Phillips, MLC

Executive Summary

The *National Aviation Services Precinct* (NASP) initiative aims to develop a fully integrated aviation precinct in Victoria, offering the following opportunities:

- an opportunity for every aspect of the aviation industry to be situated and work in a collaborative space, supporting innovation and growth across the sector
- a more streamlined and targeted aircraft training experience, including the ability for students to gain both on the job and classroom experience
- a strong pipeline of suitable, qualified and trained professionals who can effectively and efficiently transition into the aviation sector

This Discussion Paper encapsulates the Victorian Government's current vision for the NASP initiative.

We welcome constructive comment, critique and suggestions to assist us in further developing and refining the NASP concept in a manner consistent with industry and training provider needs and expectations.

We are seeking written responses to this Discussion Paper and will also be undertaking a structured workshop process with interested industry and training stakeholders.

Introduction

Project Objectives

The NASP initiative seeks to achieve the following project objectives:

- position Victoria to respond to the expanded aviation training demand in the Asia-Pacific region
- promote a collaborative aviation precinct that assists the attraction of industry investment into Victoria, supporting innovation and growth across the aviation sector
- identify industry partners who are interested in being situated in a converged work space
- promote an aviation training environment that caters for the needs of both the local aviation industry and across the Asia-Pacific region
- create an efficient and attractive model for the training of aviation professionals that is consistent with all regulatory requirements, including aligning training packages to current international trends
- deliver world class training and research for new and emerging technologies
- identify industry partners and training providers who can deliver the appropriate training, and invest in maintenance and support facilities in Victoria
- provide an environment which allows for students to obtain 'on the job training' via coordination between industry and education providers
- market the aviation industry to secondary school students

Purpose of Discussion Paper

The purpose of this Discussion Paper is to put forward the Victorian Government's current vision for the NASP.

The NASP concept is still in development. Consequently, the NASP model will be further refined through the stakeholder response and consultation processes outlined in this Discussion Paper.

This Discussion Paper builds on earlier investigations of industry requirements for aviation training, which identified several issues, including the looming shortfall in Aviation skills given the expected growth for the Asia-Pacific region, and the opportunity it presented for Victoria.

Stakeholder Consultation

This Discussion Paper calls for written responses from both aviation industry stakeholders and aviation training providers.

The Victorian Government, through the Department of Business and Innovation, will also undertake a structured workshop process with interested industry stakeholders and training providers.

This consultation process will inform further refinement and development of the NASP initiative.

Industry Summary and Trends

Aviation Industry Growth

Significant growth is forecast across the aviation industry, and particularly in the Asia-Pacific region, over the next two decades.

Recent Boeing forecasts anticipate the following growth over the period 2011 to 2030[1]:

- Global forecasts:
  - the delivery of 33,500 new aircraft valued at more than US$4.0 trillion
  - passenger traffic will be buoyed by growing demand in emerging markets such as China, and bolstered by low-cost carriers. These drivers will help keep worldwide demand for air transport at or above the historical 5 per cent per year growth trend
- Asia-Pacific region (including Oceania):
  - approximately half of the world's air traffic growth will be driven by travel to, from, or within the Asia-Pacific region
  - total air traffic for the region will grow 6.7 per cent per year
  - to modernise their fleets and meet the growing demand for air transport, Asia-Pacific carriers will need 11,450 new aircraft valued at US$1.5 trillion
  - the number of transport aircraft in the Asia-Pacific fleet will nearly triple, from 4,410 in 2010 to 13,480 in 2030
- Oceania (Australasia):
  - total air traffic for the region is expected to grow at an annual rate of 5.5 per cent per year
  - approximately 970 aircraft will be delivered to airlines within Oceania, including 670 single-aisle aircraft to transport people within the region and to nearby Southeast Asia.

This growth is supported by Airbus forecasts, which anticipate that[2]:

- the Asia-Pacific region will be the highest ranking region for new aircraft deliveries (9,160 new passenger aircraft deliveries, being 34 per cent of world deliveries)
- Australia will rank 9th in the world for new aircraft deliveries (609 new passenger aircraft deliveries at a value of US$80.2 billion).

[1] Boeing (2011) Current Market Outlook – 2011 to 2030

[2] Airbus (2011) Global Market Forecast – 2011 to 2030

MRO Industry Snapshot

As the world's commercial fleet expands over the next two decades, its airlines will need to add 650,000 maintenance technicians to maintain the new aircraft and to replace current personnel who are due to retire during the period.[3] The need for maintenance personnel will grow most rapidly in the Asia-Pacific region, which will require 247,400 new personnel.[4]

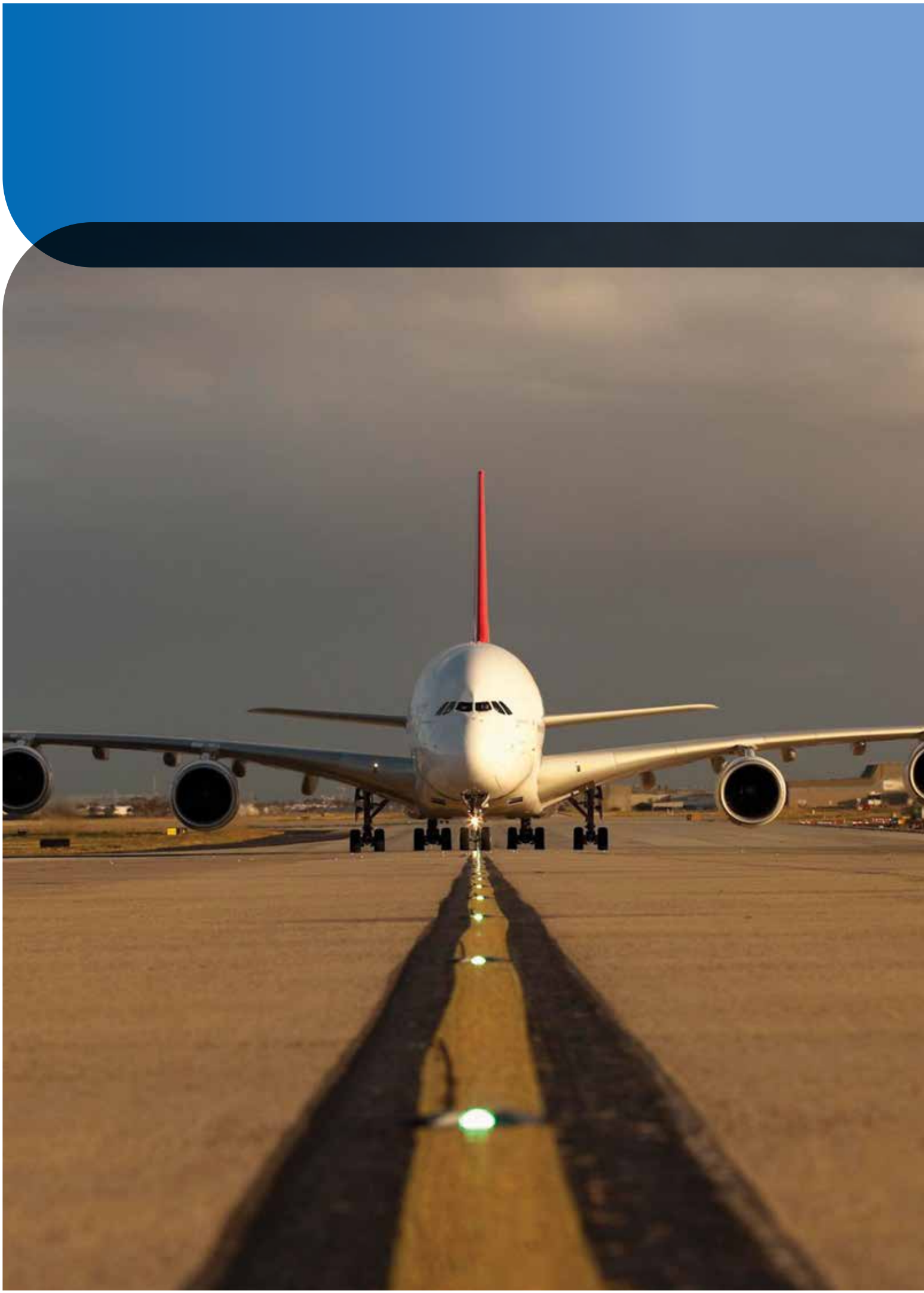
The aviation maintenance industry is also being impacted by emerging trends in the aviation industry, including new aircraft technology and the growth of low-cost carriers. Changes in the way that aircraft repairs are now carried out have occurred because new materials are being used to construct aircraft.

The MRO industry in Australia is currently facing a number of developments and challenges, including:

- Ageing workforce and lack of skilled labour:
  - Victoria has an ageing aviation maintenance workforce, with the average Licensed Aircraft Maintenance Engineer being 54 years old
  - the lack of trained maintenance workers being produced locally is forcing MRO providers to recruit trained maintenance professionals from outside Victoria. This looming skills shortfall has the potential to materially undermine business MRO investment and employment growth in Victoria
- New aircraft technology:
  - MRO providers will need to ensure that necessary skills are available to support new aircraft technologies
- Existing MRO infrastructure:
  - Victoria has a shortage of appropriate infrastructure and workforce to accommodate wide body aircraft
- Competition from offshore MROs:
  - because of a continued focus by airlines to utilise offshore MROs, airline networks now take aircraft directly to Asia, negating the need to ferry empty aircraft for maintenance.

[3] Boeing (2011) Current Market Outlook – 2011 to 2030

[4] Boeing (2011) Current Market Outlook – 2011 to 2030



Aviation Training Snapshot

Aviation training is a diverse industry with a number of different delivery arrangements depending on the available resources and level of skills required. It can be undertaken in house by airlines and other private employers or be outsourced to external operators and training providers.

The aviation training sector in Australia covers both the VET and higher education sectors. Aviation maintenance training in Victoria is currently primarily delivered by the TAFE system, as well as by airlines and specialist MRO companies.

The aviation training sector in Australia is facing the following challenges and developments:

> Move to outsourced training:

– the aviation services sector is currently undergoing significant structural transition around the world and particularly in Australia. While large airlines have traditionally trained their own workforce, low-cost carriers tend to outsource training

> New aviation technologies:

– new aviation and aircraft technologies are also demanding changes in training delivery and making current training tools obsolete. The aviation training sector faces challenges in keeping pace with these new aviation and aircraft technologies

> Shortfall in training enrolments:

– there has been no growth in the number of students enrolling in aviation maintenance training, in sharp contrast to the growth in demand for maintenance technicians. Moreover, existing training facilities are insufficient to meet the forecast growth in demand

– industry is being forced to train its workforce outside Victoria because the state does not have the required training capacity

> Course structure:

– it currently takes longer to be fully trained and qualified as a Licensed Aircraft Maintenance Engineer in Australia than in other jurisdictions that are recognised by the Civil Aviation Safety Authority, which is contributing to the MRO skills shortage

> Growing need in developing markets:

– aviation industry growth in emerging markets (for example, China) will drive a strong need for basic skills training in those markets to develop a local source of technicians

– to meet demand, many emerging markets currently recruit trained maintenance professionals from outside the region, and may look to Australia as a source of skilled labour.

Pilot Training Industry

Boeing long-range forecasts for 2011 conservatively estimate delivery of approximately 33,500 new aircraft globally over the next 20 years, with a market value in excess of $4.0 trillion. To service these deliveries, the world's airlines will need to add 460,000 pilots and 650,000 maintenance technicians, both to fly and maintain the new aircraft and to replace current personnel who are due to retire during the period. As airlines expand their fleets and flight schedules to meet surging demand in emerging markets, aviation personnel supply chains are becoming increasingly constrained. Asian airlines in particular are experiencing delays and operational interruptions due to pilot scheduling constraints. The forecast doubling of the worldwide commercial fleet emphasises the increasing need for well-trained aviation personnel. The largest projected growth in pilot demand continues to come from the Asia-Pacific region, with a requirement for 183,200 pilots over the next 20 years. China's expected requirement for 72,700 pilots is the region's largest.

Already home to pilot training programs for a number of major international airlines, the NASP presents further opportunity for Victoria to capture future growth in this market through investment in pilot training infrastructure, including aircraft simulators, classrooms and facilities for delivery of ground theory training, general aviation maintenance facilities and airport infrastructure.

NASP Concept

Overview

The Victorian Government's vision for the NASP involves the development of integrated aviation training, MRO and aviation industry facilities located within a single precinct.

The development is likely to include:

- aviation training facilities (including both classroom and practical workshops)
- one or more operational MRO and workshop facilities
- onsite office space for aviation business solutions providers
- shared facilities such as a hard stand, additional hangar and conference space
- other complementary aviation facilities.

The NASP initiative may also involve the development of a more efficient and targeted model for delivering aviation training in Victoria.

Together with the commercial benefits to be gained from operating within a collaborative aviation precinct, the initiative has a number of broader benefits for the aviation industry, including:

- a more streamlined and targeted aircraft training experience, including the ability for students to gain experience in a classroom environment as well as in a live MRO environment
- a strong 'pipeline' of suitable, trained engineers who can effectively and efficiently transition into the aviation sector
- an opportunity for the aviation industry participants to support the growth of the industry in Victoria.

Given these benefits, the Victorian Government is seeking meaningful private sector participation and investment in both the development and operation of the NASP.

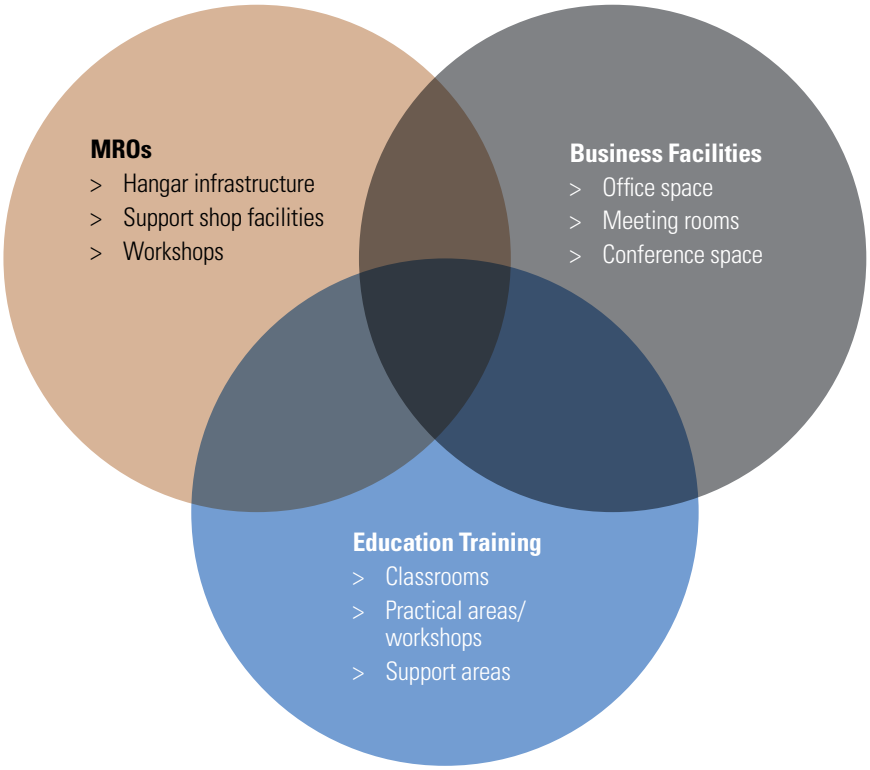
It is anticipated that the NASP development will be located at one of the major airports, due to the need for proximity to large MRO operators and other aviation companies, and the need for at least part of the NASP to be located air-side.

Integrated Precinct

The Victorian Government's vision is for an integrated NASP model, which supports collaboration between industry business, MRO and training facilities.

Ideally, all of the facilities would be co-located, where collaboration can occur.

Competitive, productive & growing Aviation sector



At the conclusion of the stakeholder engagement process outlined in this Discussion Paper, the Victorian Government expects to develop a schematic design and operating model for the NASP.

Description of Facilities

Training Facility

While the scale of the training facility will ultimately be driven by demand, it is currently envisaged that the NASP will incorporate a comprehensive aviation training facility, including:

- workshops / practical areas
- classrooms
- staff / student break-out areas.

While the scope of training courses to be provided is still under consideration, the focus is on basic training and type training on Airbus and Boeing airframes, engine type training, and other specialised training.

The Victorian Government also recognises that there may be opportunities and synergies in providing other training courses, including cabin crew training, that could include pool access, full aviation security training, baggage handling training, air traffic controller training, airline/airport management training, pilot training, aviation professionals and para-professionals, and potentially cross industry training.

MRO Facilities

The NASP will incorporate one or more MRO facilities. Depending on where the NASP is located, this may include:

- existing MRO facilities currently being leased and operated by MRO organisations
- the design and construction of new MRO facilities/hangars.

At this stage, the proposed scale and type of MRO facilities is not limited, and could include:

- hangar infrastructure that accommodates line base and heavy maintenance
- full support shop facilities that include but are not limited to composite repairs, engineering services
- workshops that support other component maintenance activity.

The aviation maintenance environment is one of the most heavily controlled and legislated working environments, with onerous requirements placed upon both the MRO organisations and engineers working in those organisations. Appropriate access arrangements would therefore need to be established between the MRO facilities and training facilities to allow students to gain on the job training within a live MRO environment.

Business and Commercial Facilities

The NASP is expected to include business and commercial facilities, including:

- office space
- meeting rooms
- conference hall

These facilities could either be leased on a long term basis by specific aviation organisations, or otherwise independently managed and hired on an 'as needs' basis by the aviation industry.

The NASP could also include certain commercial opportunities, such as a small retail area.

Other Facilities

The NASP may include additional facilities that are shared between the training facility and the MRO facilities, such as a hard stand and/or additional hangar infrastructure.

Industry and Training Provider Involvement

The project delivery, operating and governance models for the NASP have not yet been developed. Given the potentially significant benefits of the NASP, however, the Victorian Government does not intend to deliver the NASP under a traditional government-funded capital build model.

Instead, the Victorian Government is seeking meaningful private sector participation and investment in the delivery, operation and governance of the NASP.

The Victorian Government is considering all models, including the potential for some or all of the facilities to be leased, designed, constructed and operated as entirely commercial ventures.

Private sector participation and investment is being sought for one or more of the following project components:

- Training facilities:
  - design and construction
  - facility management
  - provision of training courses
- MRO facilities:
  - design and construction
  - facility management
  - MRO operations
- Business facilities:
  - design and construction
  - facility and property management
- Shared facilities:
  - design and construction
  - facility management

Stakeholder Consultations

The key purpose of this Discussion Paper is to stimulate constructive comment, critique and feedback on the NASP concept.

The Victorian Government is keen to hear the views of interested industry stakeholders and relevant training providers on all aspects of this Discussion Paper, including its factual basis, analysis, arguments, and the NASP concept itself.

This Discussion Paper builds on previous investigations into the aviation training environment in Victoria, but with a renewed focus on aviation industry attraction and development in Victoria.

The aim of the stakeholder process is to align the NASP concept as closely as possible to the needs and expectations of the aviation industry.

Written Responses

While all forms of feedback are welcome, written responses are preferred.

No formal template is prescribed for written responses, however respondents may wish to address some or all of the questions set out in Attachment I to this Discussion Paper.

All written responses should be sent electronically to nasp@dbi.vic.gov.au.

The closing date for responses is Monday 16 July 2012.

Workshop Process

Concurrently with receiving written responses, the Department of Business and Innovation intends to run a series of one-on-one workshops with interested industry and training stakeholders to further develop and refine the NASP concept.

If you would like to be considered for participation in this process, please register your interest electronically at nasp@dbi.vic.gov.au.

Further Announcements

The Victorian Government looks forward to working with the Aviation and Aerospace industry on the development of the NASP concept.


P&H
P&H

Attachment I – Questions for Consideration

Scope of Discussion Paper

- Do you think the project objectives and scope of the Discussion Paper are appropriate? If not, what would you change?
- Do you think the need for an NASP is adequately demonstrated?
- Do you think the benefits of an NASP are adequately explained?

Case for the NASP

- Do you think the NASP initiative will address some or all of the project objectives outlined in this Discussion Paper?
- Are there any other examples of similar precincts (locally, nationally or internationally) that you think may be relevant?
- Is it possible to practically integrate a training facility with an MRO?
- Does the current training model need to be updated to address new aircraft technologies?
- Is the current level of MRO activity in Victoria sufficient to commercially sustain a new training facility?
- Would a new training facility be likely to also attract international students?
- Can you suggest any improvements or enhancements to the NASP concept?

Industry and training provider participation

- Do you agree that there is potential market demand for an NASP?
- What can the aviation industry contribute to the NASP concept?
- What support would be required from the Victorian Government to attract private investment and participation in the NASP?

Your organisation

- What relevance does the NASP concept hold to your organisation?
- Would your organisation benefit from (1) the training facilities, (2) the MRO facilities, or (3) the business support facilities?
- Would your organisation be interested in participating or investing in one or more components of the NASP?

Processes for engagement and delivery

- Do you think that the consultation and engagement process outlined in the Discussion Paper is appropriate?
- Do you think that the broad approach and sequence of steps relating to procurement and implementation of the NASP are appropriate?