

The Future of Aviation

Airservices Australia is streamlining and harmonising the way air traffic is controlled across the nation with the innovative OneSKY program and a range of cultural and technological improvements.

Images by Irene Dowdy

With tourism and air traffic increasing dramatically, the needs and demands of Australia's aviation industry are rapidly evolving. To meet this challenge, Airservices, Australia's air navigation service provider, is utilising leading-edge technology and working with key strategic partners to develop innovative initiatives.

As CEO of Airservices, Margaret Staib has led the organisation to new heights since assuming leadership in October 2012. Using her three decades of experience in the Royal Australian Air Force, Margaret has worked diligently with the Department of Defence and other partners to improve the air traffic services of Australia.

Throughout her career, Margaret has focused on collaboration, with

time as a member of the Chief of Air Force Advisory Committee and a posting with the United States Air Force at the Pentagon, where she was awarded the United States Meritorious Service Medal for her service there. Margaret is also a member of the Industry Advisory Board for the Centre for Aeronautical & Aviation Leadership of Embry-Riddle Aeronautical University; a Certified Practising Logistician; and a fellow of the Chartered Institute of Logistics and Transport. Margaret states that there are some fundamental lessons that she's learned throughout her career.

"Over the years, you learn very quickly that you can't achieve change of any sort without working with your people. You can't force change on people; you have to clearly articulate the vision and how it will affect them. I think I learned that particularly in the

last decade of my air force career working at the Pentagon, and more recently with the transformation in logistics.

"The key role of leadership is bringing your people in, working with stakeholders, and building relationships—because that's how things will get done. I think the other thing that I've learned is to develop some forward planning. When you work out what the key imperative is for your organisation—for Airservices, it's the huge growth in air traffic that is already occurring in Australia—you can then work out what are the things you have to get in place to address those challenges. We've certainly been working on that in the past two years."

This massive growth that Airservices predicts for Australian air traffic will be the core challenge for the organisation as >



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it moves forward. Margaret says, "Some projections predict an increase of 60 per cent over the next 20 years. What that means is that we'll have to move an aircraft every minute, 17 hours a day, in Sydney, Melbourne, and Brisbane, in all weather."

"To put that in context, at the moment we do that every two minutes, so it will double in 20 years. It's starting to put a lot of pressure on the air traffic control system to make sure that we continue to maintain our high safety standards."

In this rapidly evolving environment, Margaret and her team have implemented a range of changes and improvements. "One achievement is around aircraft noise. We've been far more proactive in the past couple of years about trying to improve the noise outcome for people who work and live near airfields. For example, we had a trial at Roleystone in Western Australia to look at whether we could move a flight path to improve the noise outcome for the people of Roleystone. We've just concluded that trial and we've been very successful in achieving that."

"Another change that I'm very proud of is that we've introduced a culture-building program for the organisation. It's about three areas that we need to improve so that we can meet the challenge of the air traffic growth. The first area is the need for a far sharper customer focus, get out there, talk to our customers, and understand what they expect from us in terms of service delivery. It's about maintaining safe service delivery, but it's also about being more efficient."

"The second area is developing teamwork in our organisation. I've



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got the most incredible people here at Airservices, with just over 4,300 employees, but we can do better by working as a collaborative team, particularly across the organisation—having our safety people working with our air traffic people, engineers, and corporate people and vice versa to deliver better outcomes.

"Third, putting our people first and understanding that I can't deliver all these changes without them. It's about building their capability and skill sets and making sure they feel that they can be the best they can be. We're two years into that program, and I think we're starting to see some significant improvements in that space."

Besides this widespread cultural change, Margaret says, another key achievement is the OneSKY program. "This program involves the replacement of the national air traffic control system that we currently operate; but we're also working collaboratively with the Department of Defence to replace the military system as well, so we'll have one national air traffic control system that will be used by both the military and the civil sector."

"A year ago, we released a request for tender to the market. We've just completed the evaluation of that and we're about to commence the negotiation phase. We're right on track to deliver that new system by 2018, and we should see the whole system in play by 2021."

It's a program that has been a long time coming, with Margaret stating that its roots trace back to 2009. "At that time, both the military and Airservices recognised that each of their systems were coming to the end of their life and needed replacing. That was a natural time to sit down and suggest the possibility of doing it together. Of course, that was manifested in the 2009 Aviation White Paper, which committed to having a harmonised approach to air space management in Australia."

"We're replacing old technology, and we'll deliver what we call a single flight information region. We'll see the entire air space over Australia with one system, which is very significant. It will be seamless air traffic management services provided by both Airservices and Defence. At the moment, we have a lot of hand-offs as aircraft transition through military and >

"We really like working with Airservices Australia. They make us as a supplier extend ourselves to new boundaries of capability. Almost everything we do with Airservices ends up becoming a new capability within our organisation that we can then provide to other customers." - Michael Thompson, ACT Branch Manager, Ethan Group



civil airspace, and we'll be able to improve that with the technology. We'll be able to integrate more of our other systems around some of the global navigation satellite systems, which will improve flexibility in the air space. They're the sorts of things that will be really significant.

"There will also be improvements to the resilience of the system. As more air traffic goes through, we'll be able to cope better with that capacity. We'll have a nationally

accredited and capability-focused workforce, and we're aligning those developments in technology with the international standards and procedures defined by the International Civil Aviation Organization. There are a lot of benefits there for Airservices, Defence, and for the industry and our airline partners."

It's the strong relationships with partners throughout the Department of Defence that have ensured that Margaret and her

team are working closely and collaboratively with key stakeholders on the OneSKY program. "It goes right through Defence. I work very closely with the Chief of Air Force, Air Marshal Geoff Brown, understanding what his requirement is for the air force. I also work with the Defence Materiel Organisation, as they're the acquisition arm.

"We have established a joint program to manage this activity, so I actually have air force officers sitting with our people here at the Alan Woods building in Canberra; and we also send our people up to RAAF Base Williamstown to make sure that we understand the requirements of the military. The team has just been fantastic in doing all the hard work. We worked together to do the evaluation on the tender, making sure that we both establish our requirements."

According to Margaret, the OneSKY project is just one example of their collaboration with Defence. "We've been working with Defence on a number of other areas and looking for efficiencies—for example, maintaining radars. We do some work for the Department of Defence in providing fire services up in Darwin and Townsville. It's like everything: you've just got to work on the relationship. You have to continually establish the dialogue, and at the end of the day get on the phone when there's something that you need to sort out."

This approach and attitude is also reflected in the strong partnerships that Airservices has with its suppliers and strategic partners. "We have many suppliers, but I suppose we've got a top 10," admits Margaret. "We've established a strategic supplier relationship framework. I will meet with the heads of our key suppliers on a quarterly or biannual basis, and we sit down and review the relationship and performance metrics.

"We have a general discussion about how we can improve things.

It could be sharing planning materials, like working with Telstra: If we need to lay some cable in a couple of years time, we look at whether Telstra can do it at the same time and get some efficiencies.

"In terms of our stakeholders, I meet quarterly with the major airports and we sit down and look at all the initiatives that we're working on together, identifying the issues that are emerging and reviewing our performance. I do that with the major airlines as well. That's really important, and it's part of our dedication to our customer focus. We have to understand what they're happy with and where they think we can improve. Once again, it's about the dialogue, building relationships, and focusing on performance."

With the challenges and needs of Australia's air traffic sector increasing drastically, Airservices will work with suppliers, partners, and Defence to implement a range of initiatives and innovations. "I think the key is collaboration," states Margaret. "There's no one element in the value chain that ensures success. If you look at all the players that deliver people and freight from point A to point B, there's air traffic, the airports, airlines, and other partners.

"We all have to work out how we can improve the flow, and we've done that with the Airport Capacity Enhancement program. We're working with the airports in Perth, Brisbane, and Melbourne on that, and we're also doing some work with Sydney Airport. It looks at how we can improve the capacity of each of those airports so that the travelling public aren't delayed. We're going really well in improving capacity on the airfield and reducing airborne holding times, which saves fuel for the airlines."

Technology will play a vital role in these changes as Margaret and her team at Airservices explore the opportunities and possibilities of new technologies. "We're increasingly moving towards

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satellite-based navigation systems rather than our traditional ground-based navigation aids. That improves the surveillance picture, and it's more efficient. For example, we've put in new systems, and for the first time in Australia's history we have a complete surveillance picture for aircraft operating above flight level 390 [39,000 feet]. That's a really good improvement for safety, which is absolutely critical to what we do.

"I think even the basics like increasing the computer processing power allows us to better process this doubling of air traffic in the next 20 years. Another area that we're starting to look at is how we can exchange data more effectively with our airline partners and other stakeholders—for example, with the airports, understanding where aircraft are being delayed at gates and where we can help improve that flow and reduce taxi time."

The Airservices team is also utilising technology to analyse and reduce its pollution, from noise to CO2 emissions. "We're trying to be more sustainable and working on our commitment there. One key area is our footprint. Airservices is at around 1,000 locations across Australia, so we do consume a lot of power and water.

"We're looking at how we can reduce this in a number of ways. For example, we're using solar power in some of our remote locations for back-up power. In terms of noise, I think we're making a significant contribution there in terms of analysing where

we can move flight paths to improve the noise outcome for the community. We're also helping airlines to reduce fuel burn. If we can make our flight paths more efficient, that means less fuel burned, less maintenance required, and less CO2 emissions."

These and other initiatives will see Airservices and its operations set the standards for the aviation industry as it continues to evolve. "The aviation industry contributes over 2.6 per cent of GDP in Australia, and that's equivalent to more than \$32 billion, with the sector supporting over 300,000 jobs," explains Margaret. "Delivering the OneSKY program will be the most significant milestone for our industry in the next 20 years because of the technology and the benefits that we'll be able to deliver to the aviation sector.

"Airservices has an absolutely vital role to play in the delivery of safe, efficient, and environmentally responsible services to the Australian aviation industry. We take our role very seriously, and I can say as CEO that I'm very proud of the work we do. We will continue to pursue the highest levels of safety and ensure that we deliver a safe product to the airlines and our travelling public."

This critical mission and responsibility lies in the hands of Margaret and her passionate and dedicated team. As Airservices rolls out the OneSKY program and other forward-thinking initiatives, its people will shape the future of the aviation industry. •