

Beyond Borders:

Case study

How DFAT and Verizon keep travellers safe in a connected world.



Necessity is often the mother of invention, especially in times of crisis. During the COVID-19 pandemic, global airports stood empty, with 612 million fewer passengers in the first quarter of 2020 alone. Yet, within this crisis, Australia's Department of Foreign Affairs and Trade (DFAT) embarked on a ground-breaking partnership with Verizon to secure Australia's International COVID-19 Vaccination Certificate, setting a new gold standard for how governments should approach the digitisation of government services. This case study delves into the public-private sector partnership, demonstrating that securing data is as crucial as securing physical borders.

The global stage

DFAT is Australia's global ambassador, safeguarding the nation's security and prosperity, issuing passports, and ensuring these documents are a highly secure form of identification so people can travel confidently. DFAT's task of ensuring the authenticity and integrity of digital travel documentation was a massive undertaking made possible with its strong technical partnership with Verizon. Verizon's technology infrastructure aligns with international standards, including those set by the International Civil Aviation Organisation (ICAO) and the International Standards Organisation (ISO). The security of the passport has become even more important with the expansion of the myGovID IP3 and the increased use of digital credentials due to the widespread uptake of remote working during the pandemic. This saw cyber threats involving stolen credentials increase to 61 per cent of all breaches (up from 37 per cent pre-COVID).

The power of partnership

Verizon's Advanced Security Operations Centre (SOC) services emerged as a crucial component of the partnership between DFAT and Verizon. These services ensure the secure digital signing of passports and vaccination certificates, preventing unauthorised access and tampering. Verizon's extensive network infrastructure, fortified by hardware security modules (HSMs), provided a robust foundation for protecting private digital keys. This collaboration involved designing, building, and supporting digital signing solutions, and scaling their capabilities to meet the demands of millions of signatures per annum. Roughly 2,000 certificates are signed per second, conforming to the highest degree of supply chain integrity and security.

“This project sets the benchmark for how governments should approach the digitisation of their services in terms of security and usability.”

Russell Reed, Managing Client Partner - Major Accounts, Verizon Business

“We’re highly impressed by the technology and note the possibility of the process paving the way for future digital travel projects. It’s world-leading in using Visible Digital Seals (VDS) technology for digital authentication”,

Tony Harb, ANZ Head of Solutions Architects,
Verizon Business

From crisis to confidence

The partnership between DFAT and Verizon yielded impressive results. Implementing secure-by-design solutions has enhanced security monitoring and intelligence across the board, with more than 1.3 million certificates downloaded in the first month as Australia re-opened for global travel. Over 10 million Australian travellers are protected and use a Medicare account, myGov, or the Medicare Express app to activate the certificate. Real-time digital signatures, supported by Verizon's solutions, have proven invaluable in protecting the integrity of passports and vaccination certificates.

Securing traveller data

The certificates contain a unique QR code – similar to an Australian passport chip, but in a 2D, printed format – that border authorities and airlines can scan. This QR code meets the highest standards for proof of vaccination set by international organisations like ICAO and the World Health Organisation (WHO). Additional inputs by ISO further the technology's global interoperability while maintaining its uniqueness. The Visible Digital Seal technology has established DFAT and Australia as a world leader in certificate security. It is sharing this technology with other Asia-Pacific countries and has made components available via open source, helping develop their vaccination certificates.

Certificates awarded the highest honour

Building the technology – encompassing the principles of 'Zero Trust' – in such a short time frame garnered national recognition for DFAT – the IPAA Spirit of Service Award in the 'Breakthrough' category.

A project that would ordinarily take years to complete was compressed into months, covering end-to-end project scope, design, test, launch and scale, that ultimately helped restore and protect travel.

Cryptography experts' seal of approval

Cryptography experts have also welcomed the secure, interoperable technology that has won global border authorities' trust. The partnership with Verizon cements a two-decade relationship helping to modernise infrastructure and give it an edge in global technology solutions.

Guardians of your journey

Verizon's defence-grade solutions deliver up to 100,000 real-time digital signatures daily. At the same time, DFAT has firmly established itself as an award-winning IT innovator. The public-private partnership was born during a crisis but now offers hope for delivering best-in-class technology solutions across various other governmental services, including those provided by DFAT.

“Speed and accuracy were critical for this important national initiative to get established and operational; we’re incredibly proud to work with the Australian Passport Office to deliver a service instrumental in opening up Australia to the world again.”

Russell Reed, Managing Client Partner - Major
Accounts, Verizon Business

As Australia grapples with privacy and data sovereignty issues in an unstable geopolitical climate, the International COVID-19 Vaccination Certificate has set a new standard for Australian citizens who crave security without compromising their personal information.

The service continues to operate with extremely high availability, performing millions of signatures annually. The DFAT-Verizon partnership creates enhanced safety and connectivity, supporting Australia's security and prosperity and ensuring passports and vaccination certificates remain trusted and reliable credentials for international travel.