



MATESHIP

AUSTRALIA & UNITED STATES

THE NEXT 100 YEARS

AUSTRALIA-UNITED STATES INFRASTRUCTURE RELATIONSHIP





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MATESHIP THE NEXT 100 YEARS

In 2018, Australia and the United States celebrated a *Centenary of Mateship* – a friendship formed in the trenches of World War I when Australian and American troops first fought side-by-side at the Battle of Hamel on 4 July 1918.

Since that day, Australian and American soldiers, sailors, marines, airmen and women have served alongside one another in every major conflict. This is symbolic of the deep and enduring bond, mutual respect and close co-operation that exist between Australia and the United States.

The relationship between Australia and the United States is unique in its breadth, depth and length, and is characterised by genuine cultural affinity and a spirit of collaboration. The two countries’ contemporary relationship encompasses many shared fields of endeavour, including defence and security cooperation, extensive trade and investment links creating jobs for Australians and Americans, cultural exchanges, sporting pursuits, education participation, research and development, tourism and infrastructure.

There is no doubt that the Mateship between Australia and the United States will further develop and strengthen over the next one hundred years.



FOREWORD

As Australia's Ambassador to the United States, I have had the privilege of witnessing the depth and strength of the United States-Australia relationship since first landing at Dallas Fort Worth Airport in January 2016. The relationship between our two countries is perhaps deeper and stronger than any two countries. While our Mateship has its origins in our military ties, in 2019 it extends right across the spectrum of our mutual interests and nowhere is this more evident than in infrastructure.

Infrastructure in the United States, much like Australia, is at the center of political debate. It featured heavily in the 2016 presidential election and has remained a top priority of both Republican and Democrat lawmakers. In Australia, lawmakers of all political stripes agree on the importance of infrastructure for the wellbeing of our people and our economy. Observing the significance of infrastructure to our two countries, I have made it a priority to understand and grow this critical aspect of our partnership.

I have been struck by the quality and extent of our infrastructure ties. At a government level, we are engaging on everything from autonomous vehicles to renewable energy and innovative forms of infrastructure financing. I was honored to have been twice invited to speak to Congress' House Transportation and Infrastructure Committee (T&I) on Australia's infrastructure experience, not to mention our countless engagements with governors, mayors and state and local officials. But perhaps, above all, I have been impressed with our business engagement.

Australia and the United States share some of the world's largest and most innovative players in the infrastructure space and they are helping to solve infrastructure problems on both sides of the Pacific. Whether it be US firms providing world-leading energy storage solutions in Australia or Australian firms reducing congestion on US roads by using the technologies of the future, our private sectors are the shining beacons of our Mateship in infrastructure.

I am pleased to launch this publication, the first in a series that explores Australia-United States Mateship beyond our enduring military ties. I invite you to read on and be captivated, just as I am, by the depth, strength and innovation of our infrastructure Mateship.

The Honourable Joe Hockey
Australian Ambassador to the United States

IMAGE COURTESY OF AUSTRADE





A BRIDGE BETWEEN MATES

THE AUSTRALIA-US INFRASTRUCTURE RELATIONSHIP

Australia and the US have much in common. Our populations are spread over continental-sized landmasses, from global cities such as Sydney and New York to beautiful rural towns and world-class farms and ranches. While our two countries are oceans apart, we both share vast infrastructure demands and are drawing on each other's expertise to address these needs together.

Australian organizations have established themselves as significant players in the US infrastructure market and are valued for their

knowledge, experience and capability. Two of the world's largest infrastructure asset managers are Australian firms – *IFM Investors* and *Macquarie Group* via *Infrastructure and Real Assets* – and both have extensive operations across the United States. As one of the world's largest toll road operators, *Transurban* has been a pioneer of Public-Private Partnerships (P3s) for major transportation infrastructure in the Greater Washington region. A global property and infrastructure firm, *Lendlease* has established a strong partnership with the Department of Defense's Military Housing Privatization Initiative, managing more than 12,000 hotel rooms for US Army service members and

their families. While the *Queensland Investment Corporation (QIC)* is working innovatively with US universities on implementing transportation technologies and mobility services of the future. *National Australia Bank (NAB)*, one of Australia's largest banks and a global leader in clean energy finance, has committed over US\$2 billion to infrastructure in the US utilizing a number of specialized financing products.

And at a government level, the *Australian Capital Territory* and *New South Wales* are working with the *District of Columbia* and the *Infrastructure Lab* at the *Bipartisan Policy Center* on a US-first Asset Recycling Pilot program.

Similarly, US organizations with extensive infrastructure experience are also large

investors in the Australian market. *Bechtel*, one of the world's biggest engineering, construction and project management firms, was recently selected as the project manager for the Western Sydney Airport – an A\$5.3 billion greenfield project providing Australia's largest city with a new gateway to the world. There are countless additional examples of US companies supporting infrastructure development in the Australian market, including firms such as *Jacobs Engineering*, *BlackRock* and *The Carlyle Group*.

The Australian Embassy has launched this publication to demonstrate the innovation and dynamism which underpin the Australia-US infrastructure relationship. With some of the world's most forward leaning infrastructure legislation and largest and most experienced infrastructure firms, Australia has a lot to offer. The following pages demonstrate how Australian and US organizations are taking lessons learned from Australia's pioneering infrastructure market and are applying them in the United States. Our goal is to highlight examples that inspire new ways of thinking about our collective infrastructure challenges and offer innovative solutions to these challenges to jurisdictions right across the United States.

CASE STUDY: BIPARTISAN POLICY CENTER

THE US-AUSTRALIA ASSET RECYCLING PILOT PROGRAM

AT A GLANCE

The Bipartisan Policy Center (BPC) is a non-profit organization based in Washington, DC whose credibility for facilitating bipartisan policy solutions and expertise in infrastructure policy has earned it a reputation as one of the most respected think tanks in the US.

The Infrastructure Lab at BPC developed an innovative pilot initiative for American municipal governments to learn about asset recycling from Australian governments that participated in Australia's Federal Government 2014-16 Asset Recycling Initiative.

Phase One of the BPC program brings together the Australian governments of New South Wales and the Australian Capital Territory to share their expertise with the Government of the District of Columbia as the District seeks to develop asset recycling capacity.

WHAT IS ASSET RECYCLING?

In an asset recycling strategy, governments lease or sell existing infrastructure assets to the private sector and reinvest the proceeds in either improvements to existing infrastructure or new infrastructure projects. Governments

can receive either a lump sum or ongoing payment for the asset allowing them to invest in needed infrastructure without increasing taxes or adding to public debt. Asset recycling can also introduce new revenue streams by bringing previously government-owned assets into the tax base. Governments have complete control over the transaction, including contractual responsibilities for the new entities that manage the divested asset. The possibilities are compelling, as the Australian example demonstrates.

THE ASSET RECYCLING PILOT PROGRAM

Phase One was launched in July 2018 and is currently underway, with the DC Government in the process of shortlisting an asset for sale or lease. The pilot is expected to bring significant benefits for the DC population upon its completion, including the provision of much needed new infrastructure, which could include anything from roads and bridges to schools and public transportation.



As stated by Jill Eicher, Director, BPC Infrastructure Lab, *"The pilot was inspired by Australia's Federal Government that developed the concept of asset recycling in 2014, along with Australian state and territory governments that led the way in developing asset recycling practices and implemented asset recycling as a standard financing option"*.

Phase Two, expected to commence in July 2019, will provide an opportunity for additional US governments to collaborate with their Australian counterparts to learn about asset recycling and the practices and strategies that were successful for the Australian states and territories. By providing their expertise, knowledge and know-how, the Australian states and territories are strengthening relationships with their US counterparts.

PROJECT HIGHLIGHTS:

- Demonstrated the benefits of **dynamic asset management practices**.
- Persuaded DC public finance leaders that asset recycling is a **compelling new financing model**.
- Phase Two will provide an opportunity for additional American governments to participate in the pilot and to **learn about asset recycling from Australian governments** who have asset recycling expertise.

"It makes all the difference for US public finance officials to learn how their Australian peers approached asset recycling. To then see that they mastered it quickly provides inspiration."

JILL EICHER, DIRECTOR, BPC INFRASTRUCTURE LAB.

Asset recycling and the Infrastructure Lab's pilot have the potential to:

- Accelerate the restoration of America's infrastructure.
- Move the dialogue on infrastructure forward.
- Facilitate the opening of the US infrastructure market to investors.

The pilot demonstrates how smart action and innovative solutions can be applied at the municipal level to restore essential infrastructure.

CASE STUDY: IFM INVESTORS

THE INDIANA TOLL ROAD

AT A GLANCE

IFM Investors Pty Ltd (IFM) is a global infrastructure player with a demonstrated track record of successful infrastructure investments. As one of the world's largest infrastructure managers, IFM is focused on contributing to communities by investing in businesses, providing credit, operating critical infrastructure and creating jobs, all while seeking to deliver competitive net investment returns to enhance the retirement savings of the workers whose capital IFM invests.

Currently over 100 US pension funds count IFM as their partner through its global portfolio of assets. With a focus on long-term and sustainable investment commitments, IFM has made sizable investments in US infrastructure assets, including the Indiana Toll Road (ITR).

The ITR is an example of how public pension capital can be used to invest in public infrastructure to effectively address both the infrastructure investment gap and the pension funding gap.



PROJECT HIGHLIGHTS:

- Since IFM's acquisition, ITR has had the **highest level of investment** into the asset than at any other time since it was built in the 1950s.
- In the decade to 2025, more than **US\$500 million** in upgrades will have been invested on the ITR, which is expected to generate an estimated **2,000 jobs** and over **US\$1 billion** in economic activity in Northern Indiana.
- Project PUSH: **US\$220 million** rehabilitation program of 73 miles of pavement and 53 bridges – the largest investment in the road since original construction in the 1950s. These improvements will **enhance** the driving, safety and travel experience for users.

THE ITR PROJECT

The ITR is a 157-mile divided highway that opened in 1956 and spans Northern Indiana from the Ohio border to the Illinois state line near Chicago. It was leased by the State of Indiana as a concession in 2006 and acquired by IFM in 2015 out of restructuring.

The investment in ITR, for which the concession runs another 62 years, has enabled IFM to:

- Develop a strong partnership with the State of Indiana.
- Make substantial upfront investments to improve safety and enhance the user experience.
- Create jobs for local communities, including through construction.
- Work with the Governor to help achieve other local infrastructure investment objectives through an innovative agreement.
- Invest in ITR on behalf of over eight million US retirement savers in addition to other workers worldwide.

"The fact that we're able to do it without burdening taxpayers in Indiana, without burdening motorists on the Toll Road, I think is a real testament to this project."

THEN GOVERNOR OF INDIANA AND NOW VICE PRESIDENT OF THE UNITED STATES, MIKE PENCE, DURING THE 2016 ANNOUNCEMENT OF PROJECT PUSH.



INNOVATION LEADS TO COMMUNITY BENEFITS

The initial leasing of the ITR asset through a long-term concession agreement provided immediate funding for the State of Indiana to invest in other infrastructure projects. This included a state-wide highway construction program that has since delivered hundreds of road and bridge projects across the state.

In 2018, the shareholders of ITR (including IFM) committed to pay an additional US\$1 billion to the State of Indiana in exchange for a one-time 35 per cent increase in heavy vehicle tolls to bring truck toll rates into line with those of toll road facilities across the I-80/90 corridor. The US\$1 billion will be used to fund planned road projects in seven Indiana counties, which will free up the Indiana Department of Transport's (INDOT's) resources to be directed to funding of road and transportation projects in northern Indiana.

In acquiring ITR, IFM committed to maintain the road to high standards, providing maximum availability and usability for motorists. Among other things, it has improved the pavement quality, continued rehabilitation of structures, refurbished the travel plazas and addressed hazards to enhance the safety and travel experience for users. By 2025, it is expected that 95 per cent of ITR's pavement will be entirely reconstructed and will rank among the best in the nation.



CASE STUDY: LENDLEASE CORPORATION

PRIVATIZATION OF ARMY LODGING (PAL) PROGRAM

AT A GLANCE

Lendlease is a leading international property group established in Australia in 1958. Since expanding to the United States in 1971, Lendlease has played a pivotal role in creating market-leading solutions throughout the US.

In 2009, the Army embarked on the Privatization of Army Lodging (PAL) program, an initiative to organize private-sector ownership, management and development expertise for approximately 12,000 Army hotel rooms. This proved to be one of the most ambitious privatization programs in US history and Lendlease, along with its operational partner InterContinental Hotels Group (IHG®), became the Army's first lodging privatization partners. Lendlease and IHG have jointly administered this program for the last decade.

Based on this innovative P3 model, the program successfully delivers a dependable and comfortable guest experience for service members, their families and all government travelers. PAL has significantly improved Army lodging by introducing

industry best practice, commercial standards as well as alternative equity and debt from the private sector to revitalize and improve on-base lodging facilities.

THE PAL PROGRAM

While the US Army has historically owned and managed on-base lodging facilities, it recognized that hotel administration was not a core military function. The Army settled on privatization as a proven path to raise the necessary capital to rejuvenate properties, implement world-class hospitality standards from the hotel industry and reduce government manpower and maintenance costs. Privatization also ensures the long-term maintenance of the facilities in support of the military's primary mission.

On military installations across the country, Lendlease is renovating and upgrading existing lodging facilities to improve convenience, satisfaction, safety and sustainability in each property. This includes bringing select hotels up to the standards required to operate under IHG's Holiday Inn Express® brand and constructing new Candlewood Suites® and Staybridge Suites® brand hotels.

SUSTAINABLE COMMUNITIES

Lendlease embraces innovation and is committed to delivering sustainable outcomes. Through its experience pioneering Cross Laminated Timber (CLT) in Australia, it has become an industry leader in the use of CLT and has integrated this approach into recent projects in the PAL program. CLT is a renewable

"Privatization offers vast benefits to military travelers and we work diligently to ensure our collective efforts remain productive and innovative. We focus on improving the on-base lodging experience and creating comfortable, welcoming accommodations."

DENIS HICKEY, CHIEF EXECUTIVE OFFICER,
LENDLEASE AMERICAS.

material harvested from sustainably managed forests that allows for shorter project timelines and smaller construction teams, is strong and robust and has a lower carbon footprint compared with buildings of the same size in similar climates. In fact, Lendlease was responsible for building the first CLT hotel in the US, a Candlewood Suites hotel, in the former troop barracks area on Redstone Arsenal.

As part of the program, Lendlease also completed the world's largest Candlewood Suites on Joint Base San Antonio. A new Candlewood Suites facility on Joint Base Lewis-McChord, located in the Seattle/Tacoma region, will utilize low-waste construction methods to significantly reduce the amount of unused material sent to landfills.

Ten years into the privatization process, the benefits of the PAL partnership are widespread and feedback on privatization from military leadership as well as guests has been overwhelmingly positive.

PROJECT HIGHLIGHTS:

- Lendlease will spend an estimated **US\$7.5 billion** on development and construction costs for more than **12,000 hotel rooms across 40 military installations** over the life of the PAL program.
- The Army has demonstrated that a single portfolio-based lodging privatization program can provide **quality, cost-effective accommodations** while delivering operational savings without government funding or guarantees.
- A **consistent and comfortable** guest experience across the portfolio with most hotels branded and operated by leading international hotel partner, IHG®.



CASE STUDY: MACQUARIE GREEN INVESTMENT GROUP

MACQUARIE AT A GLANCE

Macquarie Group is a global provider of banking, financial, advisory, investment and funds management services. Founded in Australia, it now operates in 27 countries and has over 2,300 staff in the US¹, with a further 22,000 people employed at its invested assets across the country².

In the US, Macquarie has pioneered investment in the infrastructure and energy sectors. It is the second largest physical gas marketer in North America and has led a number of landmark projects over its 25-year presence including the replacement of Goethals Bridge in New York and the development and construction of the Midtown Tunnel in Virginia.

PROJECT HIGHLIGHTS:

- The Canadian Breaks Texas windfarm will help avoid **450kt CO₂e greenhouse gases** per year.
- The Electrodes battery storage portfolio will help **alleviate grid congestion** and lower customer electricity bills across the West Los Angeles Basin.
- GIG's 10 gigawatt solar development pipeline will generate enough energy to power about **two million** average American homes.

GREEN INVESTMENT GROUP

Through the recent launch of the Green Investment Group (GIG) in North America, Macquarie continues to be a leading participant in the evolving US infrastructure and energy landscape.

GIG is a specialist developer, sponsor and investor, with a mission to accelerate the transition to a greener global economy. It was acquired by Macquarie in 2017 and has since expanded its activities from the UK to Europe, Asia and North America. Following the successful North American launch last year, GIG is investing in the development of almost 10 gigawatts of capacity in the US. As well as focusing on established renewables technologies such as solar, onshore wind and battery storage, GIG is also focused on emerging sectors including biomass, offshore wind and carbon capture storage.

DRIVING INVESTMENT

Through these first three ventures GIG is building a pipeline of high-quality investment opportunities for later stage investors, including utility companies across the US. These ventures are:

- **Canadian Breaks**, an onshore wind farm in Texas. The first wind farm to be successfully financed in the Texas panhandle since 2016, upon completion it will feature 87 Siemens 2.3-108 wind turbines with a nameplate production capacity of 200 megawatts.
- **Electrodes**, a 340 megawatt-hours behind-the-meter battery storage portfolio in Southern California, developed in partnership with Advanced Microgrid Solutions. The world's largest operating virtual power plant, it required executing one of the largest project financing in the emerging behind-the-meter energy storage sector, which was an industry first for this type of asset in the US.
- GIG's solar development strategy, including a partnership with sector-leading solar development team **Candela Renewables** and the recent agreement to acquire **Savion**, the solar development and energy storage unit of Tradewind Energy (a subsidiary of Enel Green Power). Through these development platforms, GIG has gained a national footprint in US solar, with a 10 gigawatt development pipeline.



"GIG is committed to growing green energy generation in the United States in established and emerging technologies by using Macquarie's own balance sheet to back development teams and platforms, and also investing directly in new renewable projects."

NICK BUTCHER, GLOBAL CO-HEAD OF INFRASTRUCTURE & ENERGY, MACQUARIE CAPITAL

INNOVATION AND COMMUNITY BENEFITS

GIG is committed to driving growth in the solar and wind sectors, while also focusing on emerging technologies. This includes battery storage and other energy efficiency enabling technologies that will help drive innovation and new opportunities across energy markets. Alongside emerging technologies, its innovative approach is helping discover new ways to finance and deliver projects that will help drive the green energy transition in the US.

GIG's current projects are already providing a number of community and environmental benefits including lowering greenhouse gas emissions and customer electricity bills, and alleviating grid congestion.

Outside its core work, Macquarie also supports the communities in which it operates through the Macquarie Group Foundation. US staff completed over 20,000 volunteer hours last financial year, with a focus on college access, persistence and career attainment for underrepresented youth and supported organizations that include America Needs You, Breakthrough New York, Girls Inc., the HAY Center, Opportunity Network, Philadelphia Futures and Read Ahead.³

CASE STUDY: NATIONAL AUSTRALIA BANK

GIP'S CLEARWAY ENERGY

AT A GLANCE

The National Australia Bank (NAB) is one of the four largest financial institutions in Australia with over 10 million customers globally. NAB has been in the US for more than 40 years and continues to broaden its specialized financing services, prioritizing investment in infrastructure and clean energy.

NAB's commitment to clean energy has enabled it to assist many clients globally, including Global Infrastructure Partners (GIP) in the US. NAB recently played a key supporting role in one of GIP's acquisitions, which resulted in the Clearway Energy Group. Clearway Energy is GIP's primary platform for clean energy investment in the US, with wind and solar assets across 28 states, more than 500 employees and the capacity to power approximately 2.7 million homes.

Among the Clearway projects under construction are three new solar farms on Oahu, Hawaii, also being supported by NAB alongside US and European lenders. Borrowing on its experience from across the globe, NAB is able to work alongside select specialist lenders and provide financing in support of the development and operation of the Clearway platform as well as project-level support.



PROJECT HIGHLIGHTS:

- GIP's Clearway Energy Group comprises a number of subsidiaries and assets at varying stages of development and operation that require **innovative financing structures**.
- The solar projects in Kawailoa, Waipio and Mililani will have a combined capacity of 110 megawatts and produce enough renewable energy for approximately **32,000 Oahu, Hawaii homes**.
- The complexity of the platform and **non-recourse finance** is not often seen in the US market for renewable finance.



CLEARWAY ENERGY RENEWABLES PLATFORM

The Clearway Energy platform is bringing reliable and clean power to the US market, as evidenced by the Kawailoa, Waipio and Mililani solar projects in Oahu, Hawaii. Hawaii set ambitious renewable portfolio standards targeting 100 per cent renewable energy by 2045 and these projects are key to reaching this goal.

Kawailoa Solar is the largest of the three projects and will be constructed on land owned by Kamehameha Schools. Once completed, it will be the largest solar farm in Hawaii and will power 14,500 homes on Oahu, approximately five per cent of the Island's total electricity demand.

Giorgio Caldarone, Regional Asset Manager and Renewable Energy Sector Lead at Kamehameha Schools states⁴, "This project will not only help the State meet its renewable energy goals, but it will also help preserve and support continued agricultural production for future generations."

The projects are on track for completion in 2019.

"NAB has a proud history of financing sustainable energy using innovative finance structures. It's been recognized as a Green Bond Pioneer, having brought 18 innovative transactions to the Australian, European and US private and public debt markets."

STEVEN VELLA, DIRECTOR RESOURCES AND INFRASTRUCTURE,
NATIONAL AUSTRALIA BANK LIMITED.



CASE STUDY: QIC

INNOVATIVE UNIVERSITY CARPARK REDEVELOPMENTS

AT A GLANCE

QIC is a global diversified alternative investment company that specializes in infrastructure and real estate among other asset classes. It is currently working with US universities to re-purpose carparks and implement innovative transportation technologies and mobility services for the future.

QIC Global Infrastructure has been in the US since 2012 and has a growing portfolio of infrastructure assets in the region, including CampusParc and MasParc.

- **CampusParc** manages all aspects of the parking system at The Ohio State University in Columbus, Ohio. Over US\$27 million has been invested for major facility repair projects and to implement new technologies, ensuring the parking system is maintained and optimized over a 50-year period.
- **MasParc**, recently established in a first-of-its kind partnership for a private US university, will oversee all aspects of the campus-wide parking system at Northeastern University in Boston, Massachusetts. This agreement is the first to include mobility-as-a-service provisions for developing technology-enabled solutions to address changing campus transportation needs over time.

Both partnerships are long-term, unique agreements with ongoing benefits for carpark users, the universities and their broader communities. Both universities received significant upfront capital commitments from QIC, allowing them to further support their education missions in various ways.

MEETING DEMAND

CampusParc was formed in 2012 and is one of the largest university parking systems in the US with 16 garages, 196 lots and more than 36,000 spaces. At the time of QIC's investment, it was the only campus-wide parking concession in the US.

With a focus on integrating innovative new technologies into its facilities, CampusParc has introduced:

- New lane equipment for faster entry and exit.
- Platforms for customers to pay and view garage occupancy levels on their cell phones and Pay-by-Plate machines.
- NuPark software, which links with gate equipment, in the first full integration of smarter parking technologies on a large campus system.

MasParc was established in 2019 and will implement technology solutions to modernize the university's parking system, including:

- Implementing gated Parking, Access and Revenue Control System (PARCS) equipment to automate entry and payment processes.
- Investigating and implementing a web-enabled parking management system so customers can pre-book parking, assess system availability and receive real-time updates via mobile app or email.

ENDURING COMMUNITY BENEFITS

Both universities received upfront capital commitments from QIC allowing them to further support their core education missions. At Northeastern University the proceeds will

support its education mission and priorities of globalization and innovation in higher education and research.

Ohio State has invested its US\$483 million up-front payment in supporting student scholarships, faculty positions and improvements to the Arts District and its Campus Area Bus Service. CampusParc also partners with the Ohio State community on projects of importance to them and encourages faculty and university departments to use the parking facilities as learning labs for innovation in transport and mobility solutions.

PROJECT HIGHLIGHTS:

- Enhancing customer experience by modernizing university campus parking for **100,000** daily visitors to Ohio State and a user base of about **35,000** at Northeastern.
- A one-time, up-front payment of **US\$483 million** made to The Ohio State University is supporting student scholarships, faculty positions and improvements to the Arts District and its Campus Area Bus Service.
- MasParc is the first agreement of its kind to provide for the development of technology-enabled mobility solutions on a university campus – to **enhance the customer experience** with the flexibility to offer services to meet the transportation needs of the future.

"We bring to our US partnerships our long-held belief in the importance of being an active steward of infrastructure assets, a philosophy that underpins our successful track record in Australia."

ROSS ISRAEL, HEAD OF QIC GLOBAL INFRASTRUCTURE, QIC.



CASE STUDY: TRANSURBAN

495 AND 95 VIRGINIA EXPRESS LANES

AT A GLANCE

Australian-owned Transurban is one of the world’s largest toll road operators. In North America it is a pioneer of the P3 managed lanes concept.

Transurban started working with the Commonwealth of Virginia in 2007 and shortly thereafter began working to develop one of the first dynamically tolled Express Lanes networks in the US. Now operating on 495, 95 and soon 395 in Northern Virginia, the Express Lanes provide drivers with faster and more predictable travel options.

The projects, a result of P3 partnerships between Transurban and the Virginia Department of Transport (VDOT), expand roadway capacity, reduce travel times for all drivers and offer a reliable Express Lanes option. Today, the 495 and 95 Express Lanes serve more than six million customers and save commuters more than three million hours each year. The Lanes also introduced a first-ever incentive for ridesharing, carpooling and the use of mass transit on 495, as well as increased demand for carpooling outside of peak hours on 95 compared to the previous HOV system.

Transurban was among the first to use innovative financing techniques, including federal loan programs like the *Transportation Infrastructure Finance and Innovation Act* (TIFIA) and Private Activity Bonds to deliver transformative P3 transportation infrastructure.

PROJECT HIGHLIGHTS:

- The 95 and 495 Express Lanes combined saved commuters **3.2 million hours** last year, with an average round trip time savings of **80 minutes**.
- The Lanes have an **83 per cent** satisfaction rate among frequent customers and **50 per cent** of region drivers have used the Lanes.
- **100,000 High Occupancy Vehicle (HOV)** users and **800 buses** use the network each day.

WHAT ARE MANAGED LANES?

Managed lanes are innovative highway management systems that provide drivers with a free-flowing driving experience by controlling supply and demand. Toll prices are adjusted based on the number of cars on the road to ensure unhindered mobility and are paid electronically using transponders mounted in the driver’s vehicle.

UNLOCKING CONGESTION

To address the traffic gridlock plaguing the 495 Capital Beltway in Virginia, Transurban and engineering leader Flour-Lane pioneered an innovative solution for the VDOT – two new dynamic high-occupancy toll (HOT) lanes in both directions. In 2007, VDOT finalized a long-term partnership agreement with a consortium led by Transurban and in 2012 the 495 Express Lanes opened to traffic. The Lanes successfully shifted risk away from taxpayers, reduced community impacts along the way and introduced new travel choices to Northern Virginia drivers

Congestion on 95/395 outside of Washington, DC – one of the worst hotspots in the nation – also needed to be addressed. Transurban was selected to design, build, finance, operate and maintain new dynamic, reversible HOT lanes. The 95 Express Lanes opened in 2014 and have helped to significantly alleviate traffic and improve commuting times by an average of 54 minutes round trip in this very busy region.



“Transurban’s Express Lanes demonstrate the profound impact that is possible when the public and private sectors join forces. Together, we are getting customers home faster and helping taxpayer dollars go farther.”

JENNIFER AUMENT,
PRESIDENT OF TRANSURBAN NORTH AMERICA.

INNOVATIVE SOLUTIONS

Transurban delivered transformative P3 transportation infrastructure through innovative financing techniques, including federal loan programs like TIFIA and Private Activity Bonds.

In addition, the Express Lanes were among the first dynamically tolled managed lanes in the US and incorporated the technology to support pricing adjustments up to every 10 minutes – to keep drivers moving at steady speeds 24/7. The 95 Express Lanes are now among the longest reversible toll systems in the nation.

As a long-term operator and part of the local community, Transurban supports neighborhood groups and non-profits in the northern Virginia area through community grant programs. To date, the program has awarded US\$875,000 to over 200 organizations in Virginia.



REFERENCES

1. Correct as of March 2018.
2. Correct as of September 2018.
3. These examples may not be representative of every client's experience. Past performance is not a guarantee of future performance or success. Macquarie Capital (USA) Inc. is a registered broker-dealer and member of FINRA and SIPC. "Macquarie Capital" refers to Macquarie Corporate Holdings Pty Limited, its worldwide subsidiaries and the funds or other investment vehicles that they manage. Macquarie Corporate Holdings Pty Limited is an indirect, wholly-owned subsidiary of Macquarie Group Limited. This document does not constitute an offer to sell or a solicitation of an offer to buy any securities. This document does not constitute and should not be interpreted as an investment recommendation or financial, legal, tax, accounting or other advice. Macquarie Capital is not an authorized deposit-taking institution for the purposes of the Banking Act 1959 (Commonwealth of Australia). Obligations of Macquarie Capital do not represent deposits or other liabilities of Macquarie Bank Limited ABN 46 008 583 542 ("MBL"). MBL does not guarantee or otherwise provide assurance in respect of the obligations of Macquarie Capital.
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Australian Government



MATESHIP
AUSTRALIA & UNITED STATES
THE NEXT 100 YEARS

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