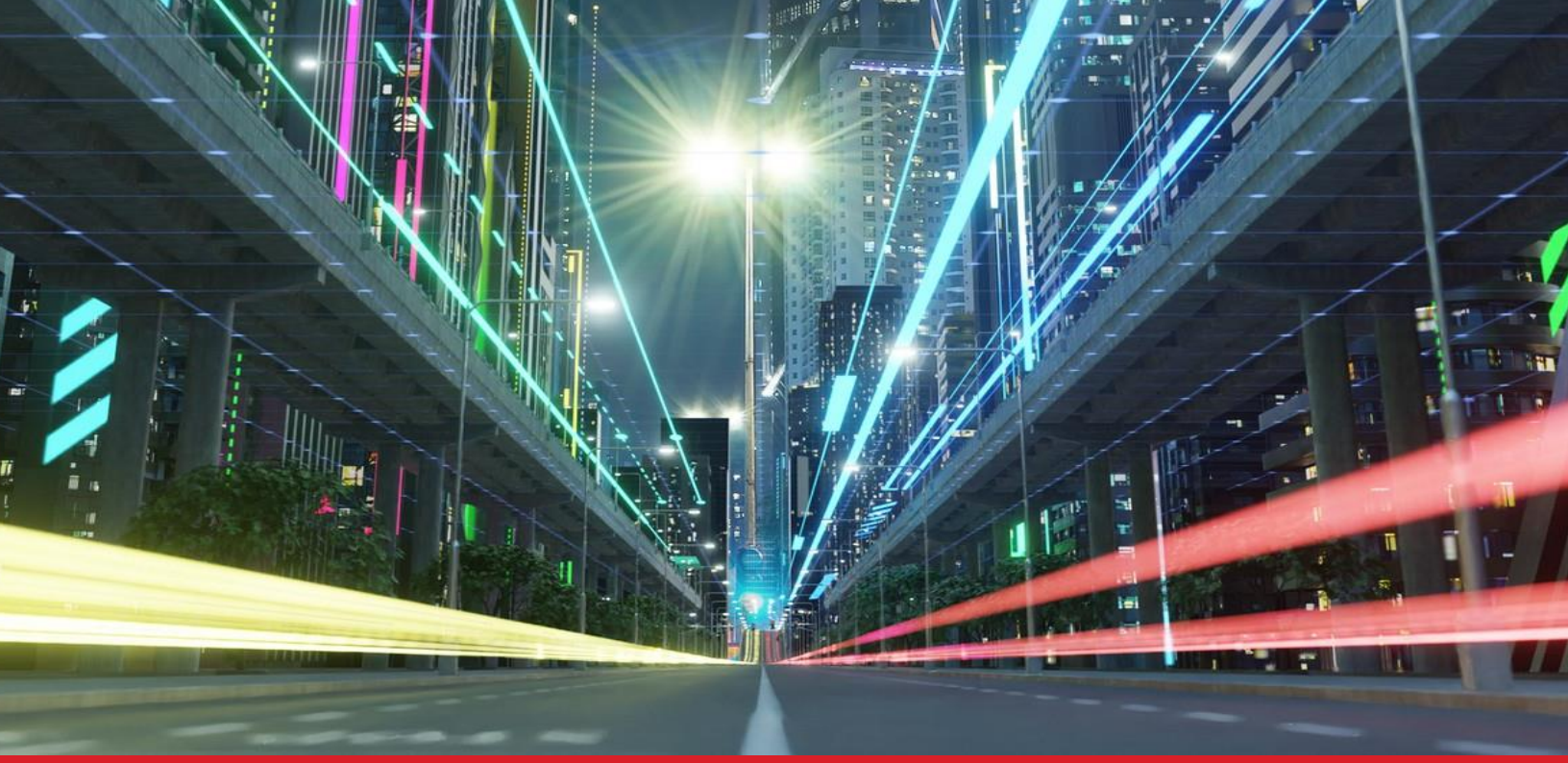

Boosting Productivity, Strengthening Safety: The BYDA Digital Utility Portal

Before You Dig Australia
October 2025

Zero damage - Zero harm - Zero disruption

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From the CEO: BYDA Digital Utility Portal Supporting Australian Economic Reform

Australia's infrastructure sector stands at a critical turning point. With the demands of housing growth, the energy transition, and major national projects accelerating, the way we plan and deliver infrastructure must evolve. At the centre of that evolution is how we manage and share underground and overhead utility information, data that underpins every project, every design decision, and every safety outcome.

Before You Dig Australia (BYDA) has a clear mandate: to protect the nation's essential infrastructure and enable safer, more efficient project delivery. For 40 years, we've provided the trusted national platform for utility referral. Now, we are building on that foundation to deliver the next generation of utility coordination; the **BYDA Digital Utility Portal (BDUP)**.

Developed in collaboration with major asset owners and over 1,000 industry stakeholders, the BDUP has proven what's possible. Our Proof of Concept (PoC) and research for the BDUP demonstrated productivity and safety gains, saving millions of engineering hours, reducing strike risk, and creating a foundation for consistent, digital-by-default design and planning across Australia.

The next step is clear: to move from Proof-of-Concept to national implementation.

Delivering BDUP as a national product will require shared commitment from asset owners, governments, and industry partners. BYDA has built the secure, standards-aligned platform. The opportunity now is for the sector to come together, contribute data, and embed BDUP as the trusted, national system for digital utility information.

This paper sets out the evidence for the benefits, and the path forward. The case for reform is compelling, BDUP delivers real economic savings, strengthens safety, and aligns with every major infrastructure, housing, and productivity policy across Australia.

BYDA is ready to lead. With the partnership of industry and government, we can deliver a national digital utility platform that strengthens safety, boosts productivity, and sets a new standard for how Australia builds.

Mell Greenall
CEO, Before You Dig Australia

Context

About Before You Dig Australia (BYDA)

Before You Dig Australia (BYDA) is a national not-for-profit organisation committed to protecting Australia's essential infrastructure and promoting safe excavation practices.

BYDA comprises over 700 utility network owner and operator members, operating the country's primary referral service for underground utility information. BYDA connects contractors, planners, and homeowners with asset owners to prevent accidental strikes on buried infrastructure. BYDA's primary aim is to minimise damage to the national network of essential utility services.

Digitising utility asset location information

Every year, more than **20,000 strikes on utilities** **occur across Australia**. BYDA's *2024 Economic Assessment of Utility Strikes in Australia* found these incidents **cost the economy over $4.6 billion annually** through delays, outages and costly repairs. Beyond the financial burden, utility strikes also pose serious safety risks to workers and the public.

At the same time, driving Australian economic growth and productivity is the rapid expansion of the infrastructure pipeline, driven by housing demand, the net zero transition, and major projects such as Brisbane 2032. The sector's success depends on engineering capacity and productivity, yet a **nationwide engineering skills shortage** threatens to constrain delivery.

BYDA has identified a solution that addresses both challenges: a national digital utility data platform. The 2024 National Study concluded such a platform could reduce utility strikes by approximately 17%, saving more than $782 million each year, while also transforming inefficient PDF-based utility information processes. By giving planning engineers direct digital access to utility data, the platform can dramatically boost productivity, reduce rework, and unlock broader economic value across the infrastructure sector.

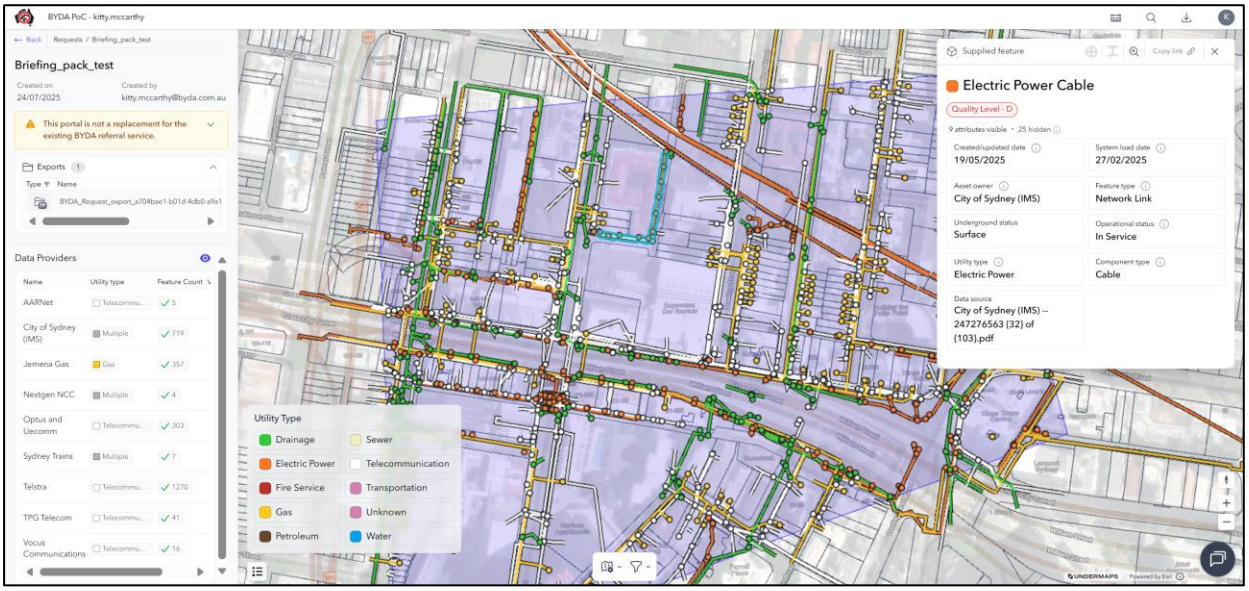
Furthermore, national utility data platforms are rising in prominence globally, with platforms such as the UK Government's National Underground Asset Register (NUAR), the Netherlands' KLIC system, and Hong Kong's Underground Utility Information System (UUIS) all launching in recent years. A national platform keeps Australia in step with international practice. With BDUP's ability to continually improve data quality, Australia can exceed current benchmarks.

The BYDA Digital Utility Portal (BDUP)

In response to Australia's accelerating infrastructure expansion, and the recommendations of BYDA's *2024 Economic Assessment of Utility Strikes*, BYDA commenced development of the BYDA Digital Utility Portal (BDUP) in 2025. The initiative began with a Proof of Concept (PoC) to test the platform's technical feasibility and value to both industry and the public. Developed in collaboration with Reveal and more than 1,000 industry stakeholders, the PoC successfully demonstrated that a secure, GIS-enabled digital asset location system can make utility information faster to access, safer to use, and more productive for infrastructure planning and design.

The BDUP is a secure, GIS-enabled digital map that brings together underground and overhead utility asset information in one place. Users can interact with layered utility data, view asset details, and download location information in digital formats such as GeoJSON. A short demonstration video, the *BYDA Digital Utility Portal Showcase*, illustrates both the platform's current functionality and its potential for future development. Key features include: a centralised, interactive GIS-enabled map; alignment with AS5488 and OGC MUDDI standards; compliance with the Security of Critical Infrastructure (SOCI) Act; Australian-based Azure hosting and ISO 27001 compliance.

Figure 1. Screenshot of the BDUP during PoC



The 2025 PoC confirmed the BDUP's technical feasibility, cyber resilience, and strong industry demand and clear benefits, with major asset owners, including Telstra, NBN Co, Ausgrid, Jemena, and Endeavour Energy, either contributing or committed to share data. Together, these outcomes position BDUP as a proven foundation for digital reform in Australia's infrastructure sector.

By replacing fragmented, PDF-based processes with a single, secure digital view of utility information, BDUP directly enhances how projects are planned, coordinated, and delivered - laying the groundwork for significant productivity and economic benefits, as outlined in this paper.

Productivity and economic benefits

Demonstrated productivity benefits

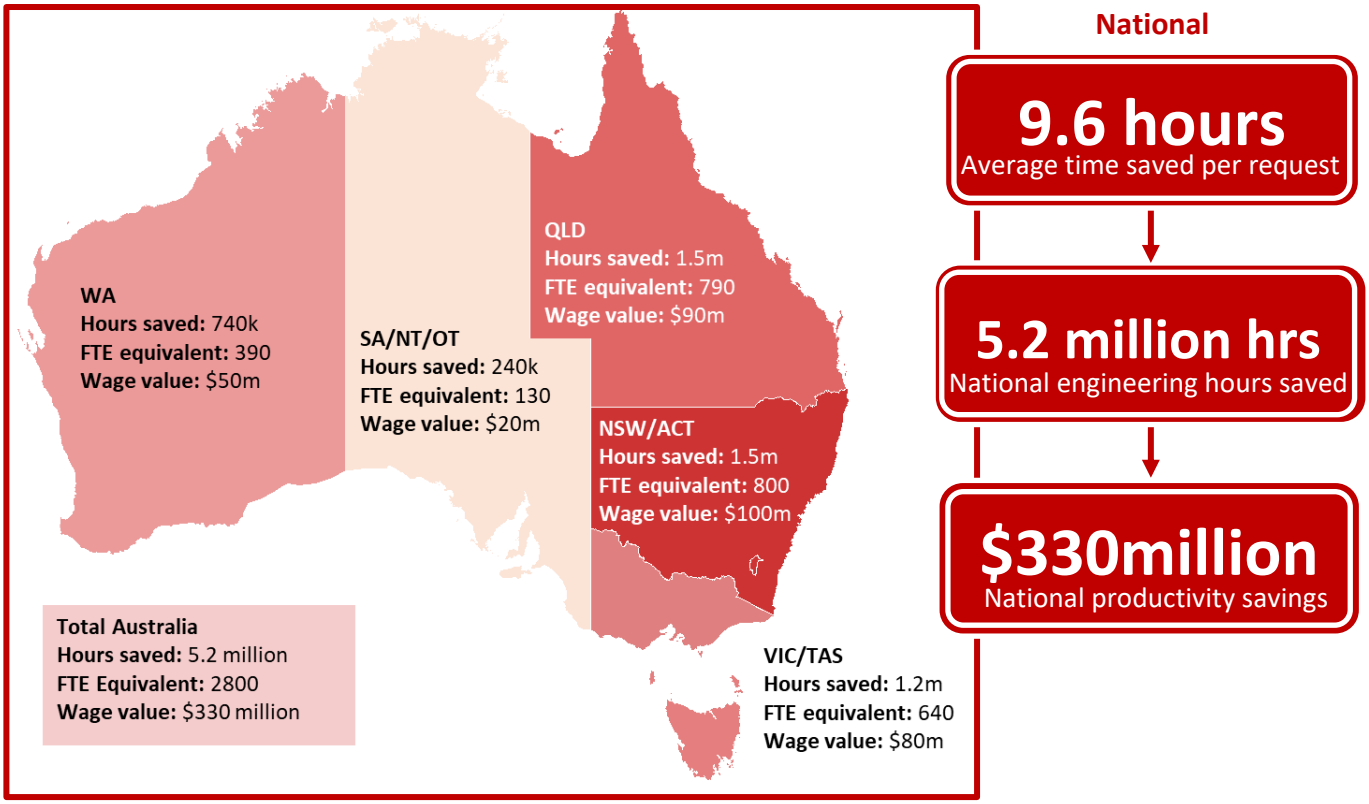
The BDUP directly addresses one of the biggest challenges facing Australia's infrastructure sector: how to deliver more with limited engineering capacity. With the infrastructure pipeline expanding through housing growth, the energy transition and major projects such as Brisbane 2032, improving productivity is essential.

The BDUP PoC showed clear engineering time savings. On average, users reported saving 9.6 work hours per planning and design request, equivalent to about 1.3 working days. For construction delivery, the average time saving increased to 2.4 working days.

Using BYDA's national data, these results were scaled across historical planning and design volumes. At full adoption nationally, BDUP could save 5.2 million engineering hours a year, equivalent to around 2,750 full-time equivalents (FTEs) and valued at $330 million in engineering wages. Even at 50% adoption, savings remain substantial at 2.6 million hours (around 1,375 FTEs), valued at roughly $165 million annually.

These gains stem from removing manual re-digitisation of plans, reducing rework and enabling earlier design starts. As shown in Figure 2, the impacts are consistent across all states and territories, with every region expected to see measurable savings in engineering hours, labour costs and project delivery timeframes. Together, these improvements help ease ongoing engineering skills shortages and create smoother, more coordinated workflows across Australia's infrastructure sector.

Figure 2. Estimated hours saved, FTE equivalents and wage savings by region



Wider economic benefits and public value

While productivity was the most measurable outcome from the BDUP PoC, BDUP will delivers broader benefits across the economy by improving safety, coordination and environmental performance.

Evidence from Australian and international studies support wider impacts, underpinning the wider benefits classification in Table 1. *FrontierSI* (formally CRC-SI) found better integration of spatial information in design and asset management **improves design coordination** and **reduces need for site visits**. The UK's *NUAR economic assessment* and *Impact assessment* identified major economic gains from **fewer utility strikes**, **improved on-site efficiency**, **streamlined back-office processes**, with potential for **enhanced emergency response** and **resilience planning**.

Makana et al. and BYDA's *Economic Assessment of Utility Strikes* highlight strike reduction through digitisation and provide cost modelling. *Kessler et al.* and *Roads Australia* emphasise improvements in **system coordination** and long-term decision-making through digital collaboration, data sharing and **reduced duplication, legal claims and project delays**. Environmental analyses, including by *Geospatial Council of Australia*, demonstrate digitisation helps **minimise excavation and site disturbance**, **lowers emissions**, and aligns infrastructure delivery with broader sustainability and net-zero goals.

Table 1. Benefits and impacts of the BDUP

BDUP will enable	Immediate benefits	Broader impacts
Project efficiency and productivity		
Faster access to utility data; digital workflows; earlier design inputs	Quicker planning; fewer rework cycles; improved collaboration	Improved delivery timelines; higher sector productivity; reduced project delays and failure
Safety and emergency response		
Accurate utility location data; field-accessible mapping; strike-risk visualisation	Fewer utility strikes; improved on-site safety; improved emergency response	Fewer injuries and incidents; safer communities; enhanced utility safety culture
Operational and system efficiency		
Auditable data sharing; industry collaboration; improved planning certainty	Less duplication; faster reviews; reduced legal claims; greater accountability	Reduced system costs; more reliable asset management; better investment decision-making
Environmental and sustainability outcomes		
More targeted excavation; digital map overlays; machine-readable data formats	Less soil disturbance; reduced fuel use and emissions; fewer unnecessary works	Improved environmental protection; reduced carbon footprint; stronger ESG alignment

These findings show BDUP will deliver benefits well beyond time-saving productivity gains. By improving coordination, safety, and data quality across projects, BDUP drives operational efficiencies, reduces rework, and supports smarter investment and planning decisions. Over time, these effects flow through to wider economic, environmental and social outcomes, including safer worksites, fewer disruptions, lower emissions, and a more resilient and efficient infrastructure system.

Government policy and priority alignment

The BDUP is strongly aligned with existing federal, state and territory government strategies focused on improving productivity, safety, housing delivery and digital capability. Across all jurisdictions, government policy already recognises that better use of data and technology is essential to meeting infrastructure, housing and sustainability goals. The BDUP directly supports these objectives by providing a secure, nationally consistent system for accessing and sharing utility asset information: enabling faster, safer, more efficient project delivery.

> **BDUP is a practical example of policy in action. It helps governments deliver on existing commitments to data-driven productivity, safer construction, and more efficient housing and infrastructure delivery.**

Government policies relevant to the BDUP range from **data and digital strategies** to **infrastructure, housing, and net zero policies**. These exist not only at the **federal level** but also across **every state and territory**. While a detailed overview is provided in Annex 2, several examples listed below and in Figure 3 illustrate the alignment[1]:

National infrastructure and productivity reform

Federal initiatives such as the *Infrastructure Australia 2021 Infrastructure Plan* and the *Productivity Commission's 5-Year Productivity Inquiry* call for coordinated, technology-enabled reform to lift productivity and improve infrastructure delivery. BDUP supports these directions by improving planning efficiency, reducing rework, and providing a secure, scalable platform that strengthens productivity and safety across the sector.

State infrastructure and productivity strategies

State infrastructure strategies, such as the *Queensland State Infrastructure Strategy 2022–2042* and *New South Wales Infrastructure Digitalisation and Data Policy 2025*, emphasise digital transformation to lift productivity and accelerate project delivery. The BDUP provides a ready-made tool that delivers proven productivity gains and can be implemented across multiple jurisdictions.

Digital government and open data policies

Digital strategies at the federal level, such as *Intergovernmental Agreement on Data Sharing*, and across all territories promote the faster adoption of new technologies in public service delivery. BDUP helps realise these goals by securely digitising and sharing utility data between public and private sectors, in line with the *Australian Data and Digital Government Strategy (2023)* and the *Security of Critical Infrastructure (SOCI) Act*.

[1] The policies represent only a selection of relevant examples. Across all jurisdictions there are many more strategies and programs focused on boosting productivity, enabling data sharing, supporting digital transformation, and improving infrastructure coordination that the BDUP aligns with.

Housing and construction policy reform

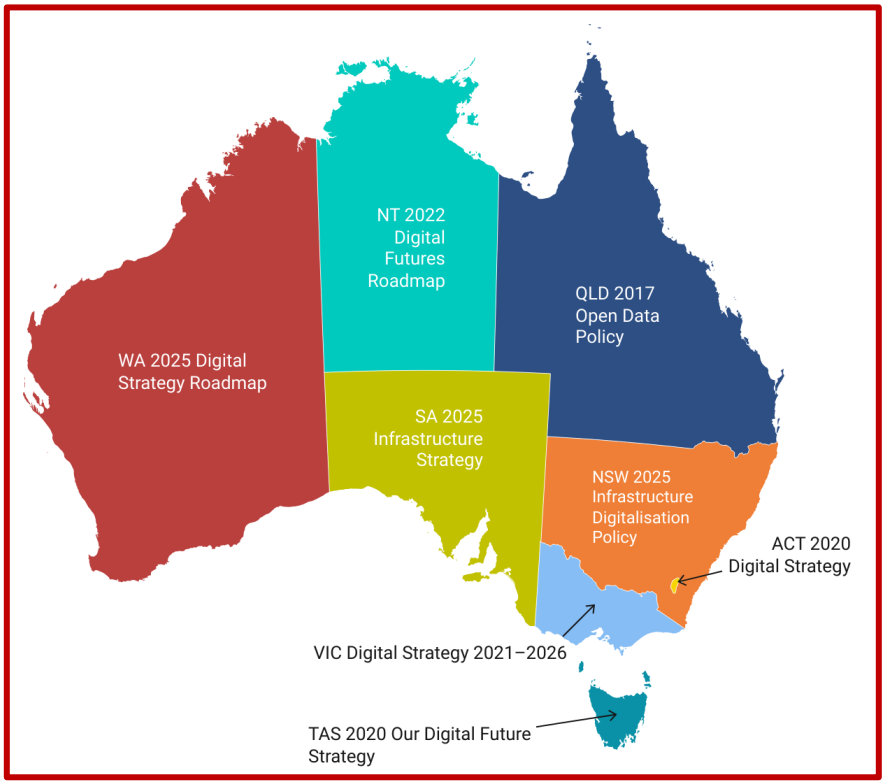
Federal, state and territory housing and construction strategies, such as the *Treasury's Increasing housing supply* and the *Homelessness Plan* and *NSW Housing 2041*, aim to accelerate housing delivery and address workforce and supply constraints. BDUP helps by streamlining design and pre-construction processes, reducing rework and delays on housing and infrastructure projects.

Net zero and sustainability commitments

Federal, state and territory energy and climate policies, including the *National Energy Transformation Partnership* and Australia's *Net Zero 2050 Target*, emphasise coordinated, efficient delivery of renewable and low-carbon infrastructure to support the energy transition. BDUP contributes by improving planning accuracy, reducing rework and unnecessary excavation, helping deliver renewable and clean energy projects more efficiently.

These policies demonstrate that BDUP is not only consistent with government direction but actively enables it. BDUP provides a ready, scalable platform that supports government goals for digital transformation, productivity, safer construction, and efficient housing and infrastructure delivery.

Figure 3. Policies and priorities aligned to BDUP by region[2]



[2] Many government data policies referenced in Figure 2 focus primarily on improving the use of internal public-sector data. The utility information used in the BDUP combines data from both publicly owned agencies and private asset owners, offering a strong example of how public-private collaboration can improve data quality and create shared value, whilst also supporting government objectives.

Next steps: national partnership and implementation

The BDUP PoC has now concluded but BDUP continues to evolve based on the lessons and feedback gathered during its development. BYDA is incorporating user insights, conducting targeted case studies with tier-one construction firms, and finalising a series of enhancements that will be implemented and tested through the upcoming pilot and refined over time, extending BDUP's benefits across planning, design and delivery, and supporting a long-term national platform that improves safety, efficiency and sustainability in every state and territory.

BYDA's immediate focus is to secure **national support from state and federal governments and utility asset owners** ahead of a multi-state pilot planned for early 2026**.** The pilot will demonstrate the platform's performance and value in live project environments and inform national rollout. Locations will depend on asset owner readiness and data availability, with early indications suggesting Western Australia, Greater Sydney and major projects such as Brisbane 2032 as likely candidates.

Asset owner support

The next phase of the BDUP depends on strong partnerships with utility asset owners across Australia. BYDA has already received significant backing from champion of change partners involved in the PoC, including Telstra, Ausgrid, Endeavour Energy, Jemena Gas, and NBN Co. There is also strong momentum from asset owners in Western Australia, where the 2026 pilot is expected to commence.

For those not yet involved, formally supporting the initiative and contributing asset location information will help create a safer, more efficient, and digitally connected infrastructure network nationwide: driving industry-wide gains in productivity and public value.

Asset Owners

1. **Sign a Memorandum of Understanding (MoU) to share asset location information**: BYDA is inviting Members to sign a non-binding MoU confirming their organisational support and intention to contribute asset location data once onboarding begins. More information and MoU available at the BDUP Member Partnership Hub.

2. **Collaborate as a Case Study Partner**: BYDA is looking for asset owners interested in participating as case study partners to demonstrate measurable safety, productivity, and coordination benefits in real-world projects.

3. **Talk to Us**: To discuss data readiness, pilot participation, or partnership opportunities, please contact: Mell Greenall, BYDA CEO **(**Mell.Greenall@byda.com.au**)**

Federal, State and Territory Government support and recommendations

The BDUP presents a practical reform opportunity to enhance national productivity, safety, and digital capability. Delivering these benefits will require collaboration between the federal, state and territory governments to align policy, data standards, and infrastructure programs in support of national rollout. Practical actions to support these recommendations are outlined in Annex 3.

Federal Government

1. **Establish a national utility data-sharing framework.**
   Lead development of consistent, secure protocols for utility data sharing, aligned with the *data and digital government strategy* and the *SOCI Act*. Embed interoperability standards across infrastructure, planning, and permitting.
2. **Recognise BDUP within national infrastructure and productivity agendas.**
   Acknowledge BDUP as a national productivity reform supporting infrastructure Australia and productivity commission objectives. Incorporate outcomes in the *National Infrastructure Pipeline* and apply BDUP across housing, energy, and net zero programs.
3. **Support digital capability in the infrastructure workforce.**
   Integrate subsurface data management and digital design safety into programs under the *National Skills Agreement* and *Jobs and Skills Councils* to strengthen national workforce capability.

State & Territory Governments

1. **Formally endorse BDUP as a planning and design tool.**
   Embed BDUP within procurement frameworks, planning approvals, and MMC guidelines, and align with digital twin strategies.
2. **Pilot BDUP in major capital works programs.**
   Pilot BDUP across key projects such as transport corridors, housing and *Brisbane 2032,* to demonstrate productivity and safety outcomes.
3. **Adopt structured digital formats for utility data.**
   Work with industry to support a phased transition from static pdf plans to digital formats (e.g. GeoJSON) through planning and regulatory frameworks.
4. **Position BDUP as a model for digital reform.**
   Use BDUP as a case study for successful Gov-Industry collaboration, showcasing its contribution to productivity, safety, and modernisation goals.

Find out more

BYDA will continue working with government, asset owners and industry to prepare for the 2026 pilot and future national rollout. Over the coming months, our focus will remain on building support, sharing evidence and maintaining momentum for reform.

More information, resources and updates can be found on:

- Advocacy and Reform Page: BYDA Portal | Reform for Utility Safety
- BDUP Member Partnership Hub: BYDA Portal | BDUP Member Partnership Hub
- BDUP User Hub: BYDA Portal | BDUP User Hub
- Watch the BDUP Showcase Video: BDUP Digital Utility Portal Showcase

Recent BYDA submissions and related research include:

- BYDA Digital Utility Portal PoC Findings Report
- BYDA Submission to the Queensland Productivity Commission, September 2025
- Paper to Portal: Australia's Call to Action on Underground Data – August 2025
- Economic Reform Roundtable – July 2025
- Economic Assessment of Utility Strikes in Australia November 2024

Conclusion

The BDUP is a proven, industry-built reform that advances Australia's productivity, safety, and digital economy agendas. It requires no recurrent government funding, delivers multi-billion-dollar efficiency gains, and establishes the foundation for smarter, safer infrastructure delivery.

Contact

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Zero Disruption.

Annex

Annex 1. Reference list of links

Full URL for all links noted in the paper in order of mention.

Title	Full URL
BYDA Damage Data Dashboard	https://portal.byda.com.au/damage-data-dashboard/
BYDA Economic Assessment of Utility Strikes in Australia	https://portal.byda.com.au/byda-initiatives/economic-research/
UK's NUAR Program	https://www.gov.uk/guidance/national-underground-asset-register-nuar
Netherlands' KLIC system	https://klic-app.nl/en/
Hong Kong's Underground Utility Information System	https://www.uuis.gov.hk/web/
BDUP Showcase Video	https://www.youtube.com/watch?v=DnS-qVwFZa0
FrontierSI (CRCSI) Report: Economic Value of Spatial Information in NSW	https://www.crcsi.com.au/assets/Consultancy-Reports-and-Case-Studies/Value-of-NSW-Spatial-Information-final.pdf
National Underground Asset Register: unlocking value for industry and the wider economy	https://www.gov.uk/government/publications/national-underground-asset-register-unlocking-value-for-industry-and-the-wider-economy
Makana et al. Cost estimation of utility strikes	https://www.emerald.com/jinam/article/7/2/64/442255
Kessler et al. Case studies: Digital twins of subterranean assets	https://www.emerald.com/books/book/13460/chapter-abstract/84059442/Case-studies-Digital-twins-of-subterranean-assets
2023 Roads Australia Fellowship Program: Digitising BYDA	https://www.byda.com.au/wp-content/uploads/2023/11/RA-Fellowship-Program_QLD-Design-Team-Research-Paper.pdf
Geospatial Council of Australia: Economic impact of geospatial services	https://geospatialcouncil.org.au/wp-content/uploads/2024/10/GCA-Report-30-October-2024_Final.pdf
Intergovernmental Agreement on Data Sharing	https://federation.gov.au/sites/default/files/about/agreements/iga-on-data-sharing.pdf
Productivity Commission Inquiry into Data Availability and Use	https://www.pc.gov.au/inquiries-and-research/data-access/
QLD State Infrastructure Strategy 2022-2042	https://www.statedevelopment.qld.gov.au/infrastructure/infrastructure-planning/state-infrastructure-strategy
NSW Infrastructure Digitalisation and Data Policy 2025	https://www.infrastructure.nsw.gov.au/media/e2ni0yo1/insw_nsw-idd-policy_wcag.pdf
Australian Data and Digital Government Strategy 2023	https://www.dataanddigital.gov.au/strategy
Treasury Statement on Increasing Housing Supply	https://treasury.gov.au/policy-topics/housing/increasing-housing-supply
Homelessness Plan and NSW Housing 2041	https://www.planning.nsw.gov.au/sites/default/files/2023-03/housing-2041-nsw-housing-strategy.pdf
National Energy Transformation Partnership	https://www.energy.gov.au/energy-and-climate-change-ministerial-council/national-energy-transformation-partnership

Net Zero 2050 Target	https://www.dcceew.gov.au/climate-change/emissions-reduction/net-zero
BDUP Member Partnership Hub	https://portal.byda.com.au/bdup-member-partnership-hub/
BYDA Reform for Utility Safety	https://portal.byda.com.au/byda-initiatives/reform-for-utility-safety/
BDUP User Hub	https://portal.byda.com.au/bdup-user-hub/

Annex 2. Alignment of Federal, State and Territory Policies with the BDUP

Note: This is a **sample** of policies at the federal, state and territory level that align with BDUP, non-exhaustive.

Federal Government		
Policy/Report	**Policy key points**	**BDUP Relevance**
Intergovernmental Agreement on Data Sharing	Commitment of jurisdictions to share public sector data as a default position	Central to BDUP is its national focus: incorporating utility data across all jurisdictions
2017 Productivity Commission Inquiry into Data Availability and Use	Calls for comprehensive reform of Australia's data infrastructure and greater access to improve productivity and public value	BDUP delivers these outcomes in a critical, high-cost area of infrastructure delivery: utility data
Increasing housing supply | Treasury.gov.au	A long-term framework to increase housing supply and streamline delivery.	BDUP helps remove infrastructure barriers to housing by improving coordination and reducing delays in utility connection and design.
2021 Australian Infrastructure Plan | Infrastructure Australia	Sets national reform priorities to lift productivity, improve project delivery, and embed digital practices across the infrastructure sector.	BDUP supports these goals by improving data coordination and providing digital tools that reduce delays and rework.
Australian Net Zero Targets - DCCEEW	Australia's *Net Zero 2050* target aims to cut emissions to net zero by 2050.	BDUP supports this by reducing rework and strikes and helping deliver renewable and low-carbon projects more efficiently.
CSIRO Digital Twin Framework	Outlines how interconnected digital systems can improve infrastructure planning and management.	BDUP provides a foundational data layer that can integrate with emerging digital twin systems to give planners complete visibility of underground networks.

State and Territory Governments		
Policy/Report	**Policy key points**	**BDUP Relevance**
Queensland		
2025 QLD Productivity Commission Interim Report	Calls for cross-cutting reforms to lift construction productivity across procurement, regulation and labour including for for better uses of data	BDUP directly supports these priorities by improving coordination, reducing rework and delays, and addressing workforce pressures through digital efficiency gains
2017 Open Data Policy Statement	Mandates government agencies to make non-sensitive data open by default	BDUP enables relevant, non-sensitive utility data sharing to support transparent, data-driven infrastructure planning
2022-2042 State Infrastructure Strategy	Focus on improving infrastructure across five focus areas	BDUP increases overall productivity – relevant to achieving the focus area 'Building a Brisbane 2032 legacy'
New South Wales		
2025 Infrastructure Digitalisation and Data Policy	Supportive of expediting adoption of digital practices and technologies	BDUP provides a ready platform to operationalise digital-by-default infrastructure delivery
Infrastructure NSW - Digital tech in infrastructure planning	Recommends adopting digital engineering, BIM, and spatial digital twins	BDUP provides the trusted subsurface data layer that enables these digital systems to operate safely and efficiently
South Australia		
2025 20-Year State Infrastructure Strategy	Aim in the 2045 Vision is to embrace new technologies to lift productivity	BDUP's digital, geospatial data enables resource-efficient planning, supporting circular-economy and net-zero objectives
Victoria		
Victorian Transport Digital Engineering - Victoria's Big Build	Establishes standards for digital engineering to improve data quality and collaboration on major projects.	Provides standardised underground utility data that supports safer, more efficient digital project delivery.
Digital Strategy 2021–2026	Seeks to develop policy that both leverages digital tools and supports digital legislation	BDUP supports the Strategy by digitising utility data to improve coordination and overall public sector capability
Australian Capital Territory		
2020 Digital Strategy	Commitment to actively engage with industry to support digital innovation	BDUP advances the Strategy by supplying trusted utility data that enables community-centred service delivery
Western Australia		
2025 Digital Strategy Roadmap	Aims to improve government services by establishing a safe, data-sharing environment	BDUP aligns with the *Better Services* and *Informed Decisions* priorities through infrastructure data sharing across government and industry
Tasmania		
2020 Our Digital Future Strategy	Access to appropriately managed, accessible data	BDUP enables data-driven infrastructure foundations that support the state's vision for a resilient and inclusive digital economy

Annex 3. Practical actions for Federal, State and Territory Governments

Federal Government	
Recommendation	**Practical actions**
1. Establish a National Utility Data-Sharing Framework	1.1 Develop a *National Utility Data-Sharing Framework* under the *Australian Data and Digital Government Strategy*, defining protocols for cyber-secure sharing of subsurface data across jurisdictions. 1.2 Endorse interoperability standards (e.g. AS5488, OGC MUDDI) through the *Digital Transformation Agency* and *Geoscience Australia* to support consistency in spatial data exchange. 1.3 Align data-sharing requirements with the *Security of Critical Infrastructure (SOCI) Act* and publish supporting guidance through the *Cyber and Infrastructure Security Centre (CISC)*. 1.4 Facilitate inter-jurisdictional cooperation via the *Data and Digital Ministers Meeting* to harmonise approaches and remove regulatory duplication. 1.5 Encourage participation of government-owned corporations and regulated utilities in early adoption of structured data formats through ministerial direction or incentive programs.
2. Recognise BDUP within National Infrastructure and Productivity Agendas	2.1 Reference BDUP within *Infrastructure Australia's National Infrastructure Audit* and *National Infrastructure Pipeline*. 2.2 Acknowledge BDUP as an enabling reform within the *Productivity Commission's* work on data and digital productivity. 2.3 Promote BDUP integration across Federal Government funded initiatives, including the *Housing Support Program*, *National Urban Policy*, and *Net Zero Infrastructure Plan*. 2.4 Use BDUP metrics and case studies in Infrastructure Australia's productivity reporting to demonstrate measurable reform outcomes. 2.5 Endorse BDUP through a *Ministerial Statement* or inclusion in the Federal Government's *Digital Public Infrastructure Strategy*.
3. Support Digital Capability in the Infrastructure Workforce	3.1 Incorporate BDUP and digital utility data management into the *National Skills Agreement* and *Jobs and Skills Council* training frameworks. 3.2 Fund pilot programs with TAFEs and universities to integrate digital design safety and subsurface data literacy into engineering and construction curricula. 3.3 Promote professional recognition of BDUP-related competencies through Engineers Australia and relevant registration bodies. 3.4 Support short-course training and micro-credentials focused on digital utility coordination for project managers and planners. 3.5 Include BDUP case studies in Federal Government workforce capability publications and national skills reporting.

State and Territory Governments	
Recommendation	**Practical actions**
1. Formally endorse BDUP as a planning and design tool	1.1. Issue a *Ministerial Statement* or include BDUP in a *Digitally Enabled Infrastructure Strategy* to formalise its recognition in planning and design. 1.2. Integrate BDUP within enterprise architecture or digital investment frameworks (e.g. *QGEA*, *NSW Digital Government Strategy*) to ensure interoperability across agencies. 1.3. Mandate BDUP adoption in digital transformation or ICT investment proposals where relevant to infrastructure planning. 1.4. Direct state-owned utilities to sign data-sharing agreements with BYDA, supported by cyber-security and compliance guidance. 1.5. Encourage privately owned utilities to participate through regulatory incentives or public-private partnership frameworks.
2. Pilot BDUP in major capital works programs	2.1. Identify priority programs such as *transport corridors*, *housing precincts*, and *Brisbane 2032* for early BDUP adoption. 2.2. Embed BDUP outcomes in project assurance frameworks to measure safety, efficiency, and cost performance. 2.3. Coordinate pilots through infrastructure or digital transformation agencies, with clear data-sharing and reporting requirements. 2.4. Establish a shared learning framework to capture and publish productivity and safety outcomes from pilots. 2.5. Use pilot findings to inform state-wide integration of BDUP across planning, permitting, and infrastructure delivery processes.
3. Adopt structured digital formats for utility data	3.1. Amend planning and permitting frameworks to require asset data in GeoJSON, GML, or equivalent interoperable spatial formats. 3.2. Provide technical guidance and templates to utilities to support conversion from PDF plans to structured data. 3.3. Include data readiness requirements in procurement and grant funding criteria. 3.4. Integrate BDUP-compatible data standards into existing digital twin or geospatial systems. 3.5. Publish progress through annual state infrastructure or digital capability reports.
4. Position BDUP as a model for digital reform	4.1. Feature BDUP as a case study in *digital government* and *productivity* reporting. 4.2. Promote cross-agency collaboration and data reuse using BDUP as a live example of practical digital transformation. 4.3. Host intergovernmental workshops or forums showcasing BDUP's safety and efficiency outcomes. 4.4. Include BDUP in state digital infrastructure roadmaps as a model for scalable reform. 4.5. Partner with federal and industry bodies to share lessons and standardise best practice nationally.

Before You Dig Australia

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