KAIROS®
TRUSTED ASSET INTELLIGENCE

CASE STUDY:

Department of Transport and Planning Victoria

Precision Asset Data Capture & Lifecycle Planning

Managing Victoria's Critical Infrastructure

Imagine managing **$170 billion worth of roads, bridges, trains, and ports**. Now imagine knowing exactly when each piece of infrastructure will need maintenance, replacement, or expansion—**before it becomes a problem**.

That's the challenge faced by the **Department of Transport and Planning (DTP) Victoria** every day. From 24,000km of road networks to 126 million tonnes of port trade, they're responsible for ensuring Victoria's transportation infrastructure keeps the state moving efficiently and safely.

In 2023, DTP turned to Kairos to **elevate their asset data** to meet the demands of a system of this scale. Faced with incomplete audits, ageing depots, and the need for long-term planning, DTP needed an expert partner to **strategically maintain their infrastructure**.

> " *DTP turned to Kairos to elevate their asset data to meet the demands of a system of this scale*

"

"[Kairos'] capability and capacity has been on par with much larger Tier 1 firms"

*"After being exposed to Kairos' capabilities and capacity, I was impressed and elected to continue working with them as they demonstrated their **ability to deliver high quality outcomes with a strong sense of customer service***

*The experience has been very positive. The outputs have been of great quality and their **ability to deliver on tight timeframes** – more often than not at the last minute – has been very well received.*

*They provide clear and concise reports and data outputs used to engage with a multitude of diverse stakeholders. Ultimately, **I got exactly what I wanted** out of the brief with very little rework.*

*It's almost as if **they knew what I wanted** and delivered it on the first couple of attempts*

*For a small and 'young' team, their capability and capacity has been **on par with much larger Tier 1 firms**."*

Long Nguyen
Senior Manager Built Environment and Compliance
Department of Transport and Planning

The Challenge: An Incomplete Picture

At the heart of Victoria's transport infrastructure are 23 depots, strategically located across metropolitan and regional areas. **These depots house critical equipment, facilities, and personnel** essential for keeping the state's transport network operational.

Previous audits of these depots left significant gaps, with **inaccurate data that didn't meet compliance and strategic planning needs**. Due to past funding constraints, many of these depots received only ad-hoc maintenance over the years.

Without a current, comprehensive record of asset conditions, DTP faced the risk of unplanned failures and costly emergency repairs. They needed an accurate and detailed asset audit to meet both immediate operational needs and **ensure long-term lifecycle management**.

> *Previous audits left significant gaps, with inaccurate data that didn't meet compliance and strategic planning needs*
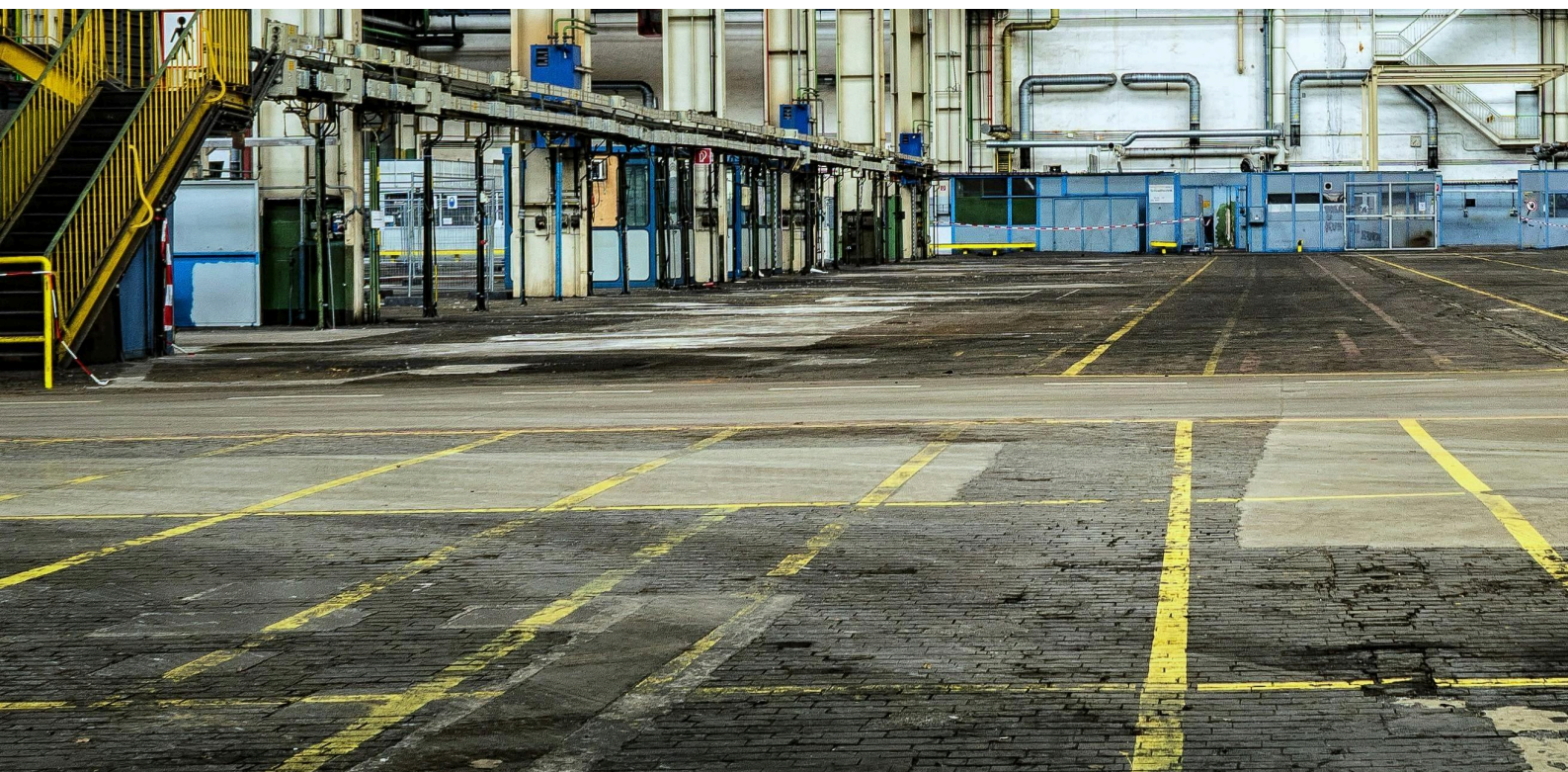
How We Won the Bid:

From Pilot to Strategic Partner

We participated in a **competitive private tender process** alongside the incumbent provider. Both companies were tasked with **auditing a pilot depot**, and our precise approach to asset data capture ultimately secured us the project.

The project was broken into two main parts:

✅ Part 1: Focus on Operational Maintenance

Initially, **we were engaged to capture maintainable assets** such as HVAC systems, fire safety equipment, and specialised equipment like hot bitumen emulsion tanks, triple interceptor traps, and backflow prevention devices, which are critical to depot operations. Our focus during this phase was to **ensure these systems were functional and well-documented** for operational maintenance, safety, and compliance.

✅ Part 2: Expanded Strategic Scope

As the project progressed, senior DTP executives recognised **the broader potential of our work**. The project scope expanded to **include a more strategic asset lifecycle plan** that also covered external grounds, building fabric, and capital infrastructure. This strategic shift allowed DTP to move beyond immediate maintenance and **start planning for asset longevity** and replacement schedules, maximising long-term value and operations.
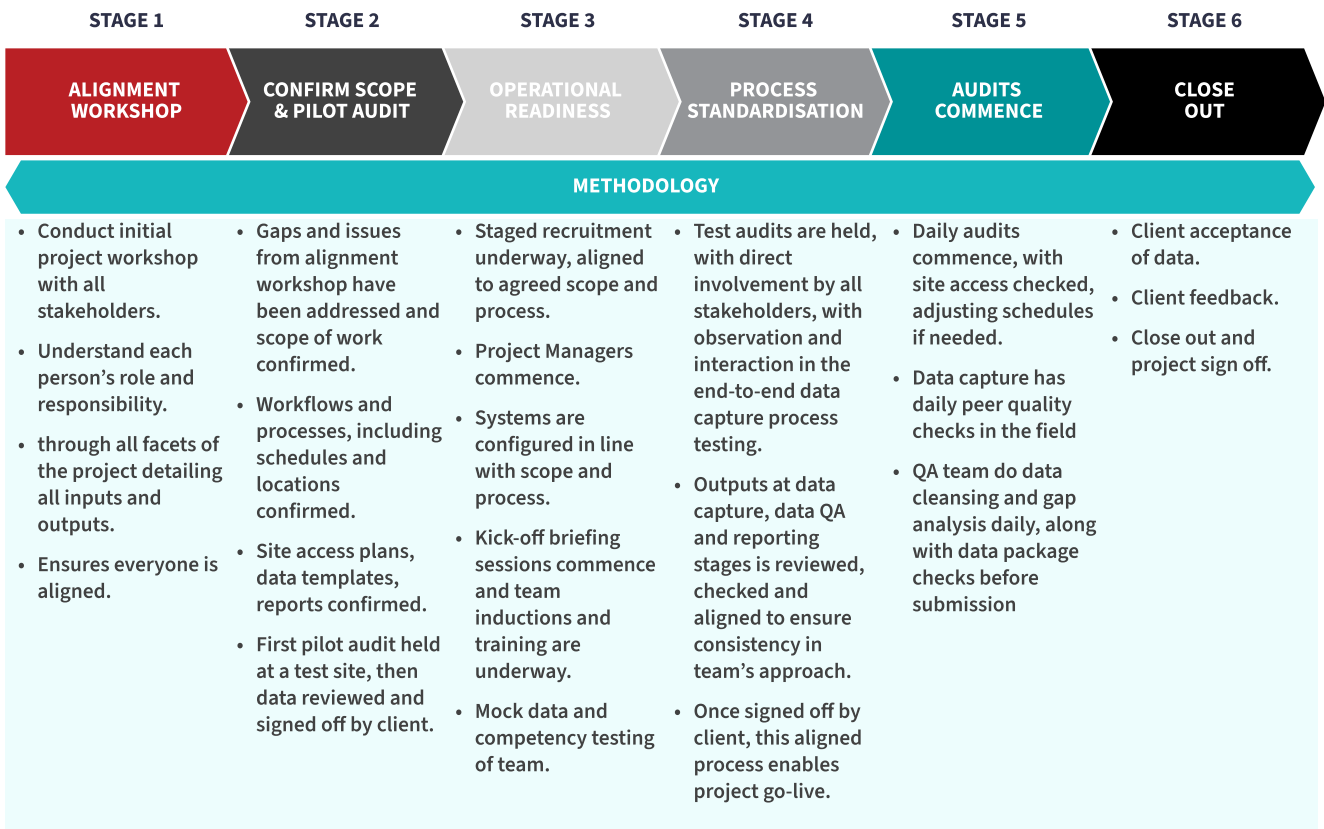
Our Methodology

Data Capture Methodology

Our data capture process followed **a rigorous, step-by-step methodology** to ensure accuracy and comprehensiveness. We systematically assessed assets for condition, compliance, and remaining useful life. Key highlights included:

- ✅ **Comprehensive Asset Registry:** We audited more than **5,000 assets across 23 depots**, ensuring no detail was overlooked.

- ✅ **QR Tracking Tags:** We tagged assets with rugged, **UV-resistant QR codes** for long-term tracking and future audits.

- ✅ **Grounds and Landscaping Audit:** We conducted an audit of **external grounds**, including landscaping and operational areas, providing DTP with a complete picture and helping forecast maintenance costs accurately.

- ✅ **Specialised Equipment:** We assessed **highly specialised equipment**, from wash bays to hot bitumen tanks, requiring bespoke assessments.

- ✅ **Trade-Based Auditors:** We employed **trade-based auditors** with a deep understanding of the assets, leading to more accurate and complete data collection.

- ✅ **Integration with Urbanise Platform:** We integrated the data into DTP's **Urbanise platform**, creating a centralised repository for tracking asset status and facilitating future audits.

- ✅ **Audify Data Capture App:** Our proprietary software, **Audify**, mapped seamlessly to DTP's system, ensuring we captured all required details—and more.
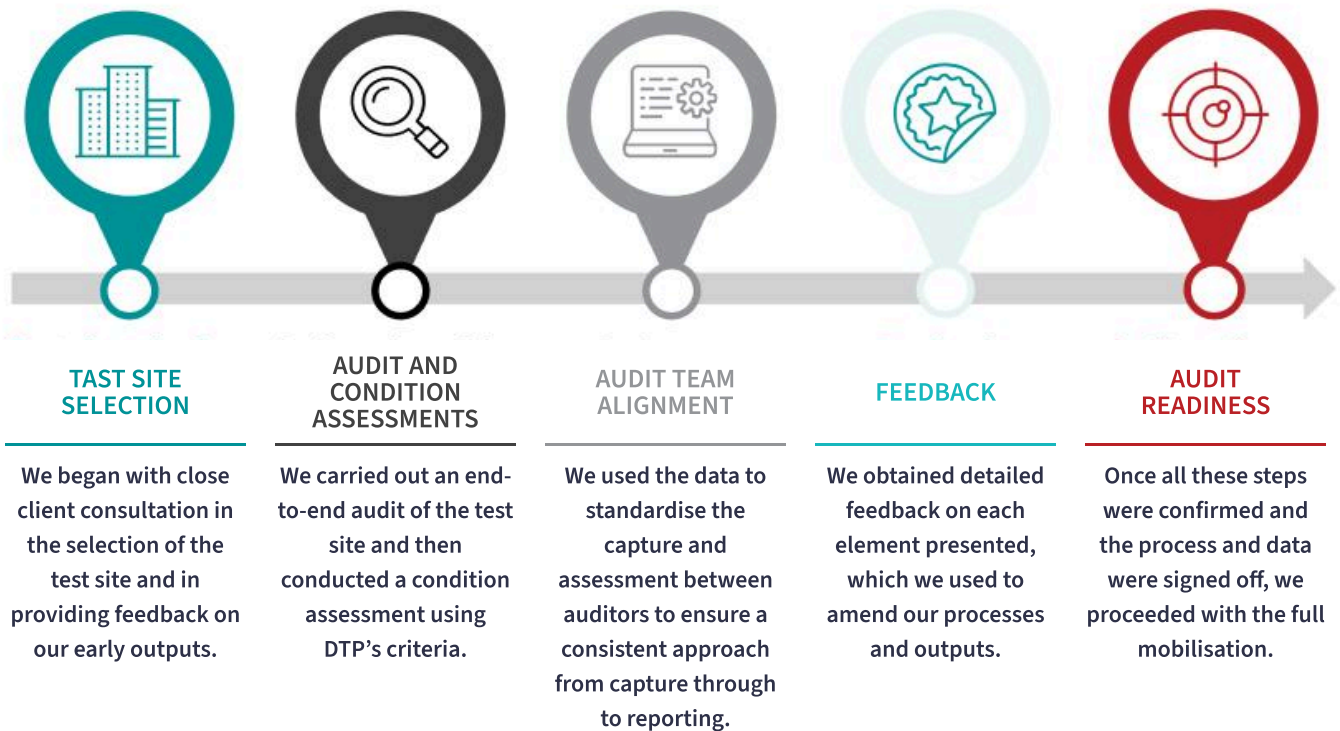
STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5	STAGE 6
ALIGNMENT WORKSHOP	**CONFIRM SCOPE & PILOT AUDIT**	**OPERATIONAL READINESS**	**PROCESS STANDARDISATION**	**AUDITS COMMENCE**	**CLOSE OUT**

METHODOLOGY

• Conduct initial project workshop with all stakeholders. • Understand each person's role and responsibility. • through all facets of the project detailing all inputs and outputs. • Ensures everyone is aligned.	• Gaps and issues from alignment workshop have been addressed and scope of work confirmed. • Workflows and processes, including schedules and locations confirmed. • Site access plans, data templates, reports confirmed. • First pilot audit held at a test site, then data reviewed and signed off by client.	• Staged recruitment underway, aligned to agreed scope and process. • Project Managers commence. • Systems are configured in line with scope and process. • Kick-off briefing sessions commence and team inductions and training are underway. • Mock data and competency testing of team.	• Test audits are held, with direct involvement by all stakeholders, with observation and interaction in the end-to-end data capture process testing. • Outputs at data capture, data QA and reporting stages is reviewed, checked and aligned to ensure consistency in team's approach. • Once signed off by client, this aligned process enables project go-live.	• Daily audits commence, with site access checked, adjusting schedules if needed. • Data capture has daily peer quality checks in the field • QA team do data cleansing and gap analysis daily, along with data package checks before submission	• Client acceptance of data. • Client feedback. • Close out and project sign off.

Standardisation Process

To maintain consistency and reliability across all sites, we adhered to **a clear standardisation process** with several key steps:

✓ **Gated Onboarding Process:** We set **specific milestones** for each audit phase, requiring tasks and checks to be completed before moving forward.

✓ **Consistent Validation Checks:** At every stage, we validated the data for accuracy and completeness to **ensure uniform assessments**.

✓ **Uniform Protocols for All Sites:** We applied the **same procedures to all locations**, whether metropolitan or regional, ensuring every asset received equal attention.

✓ **Phased Approach for Immediate Corrections:** By breaking the process into phases, **we addressed inconsistencies early**, minimising their impact on the overall project.

- ✅ **Training and Support for Auditors:** We provided **ongoing training and support** to our auditors, promoting a culture of quality in data capture.

- ✅ **Documentation and Reporting:** We maintained detailed records of every stage, creating a **clear audit trail** for transparency and accountability throughout the project.

Elements of Standardisation Process

TAST SITE SELECTION	AUDIT AND CONDITION ASSESSMENTS	AUDIT TEAM ALIGNMENT	FEEDBACK	AUDIT READINESS
We began with close client consultation in the selection of the test site and in providing feedback on our early outputs.	We carried out an end-to-end audit of the test site and then conducted a condition assessment using DTP's criteria.	We used the data to standardise the capture and assessment between auditors to ensure a consistent approach from capture through to reporting.	We obtained detailed feedback on each element presented, which we used to amend our processes and outputs.	Once all these steps were confirmed and the process and data were signed off, we proceeded with the full mobilisation.

Communication

We facilitated **weekly Project Control Group (PCG) meetings**, ensuring all stakeholders—from portfolio managers to senior executives—stayed aligned on priorities and outcomes. These regular check-ins **minimised the risk of costly rework** and **kept the project on track**. We also collaborated closely with KPMG, who provided third-party oversight to validate that our data met DTP's broader asset lifecycle and capital planning requirements.
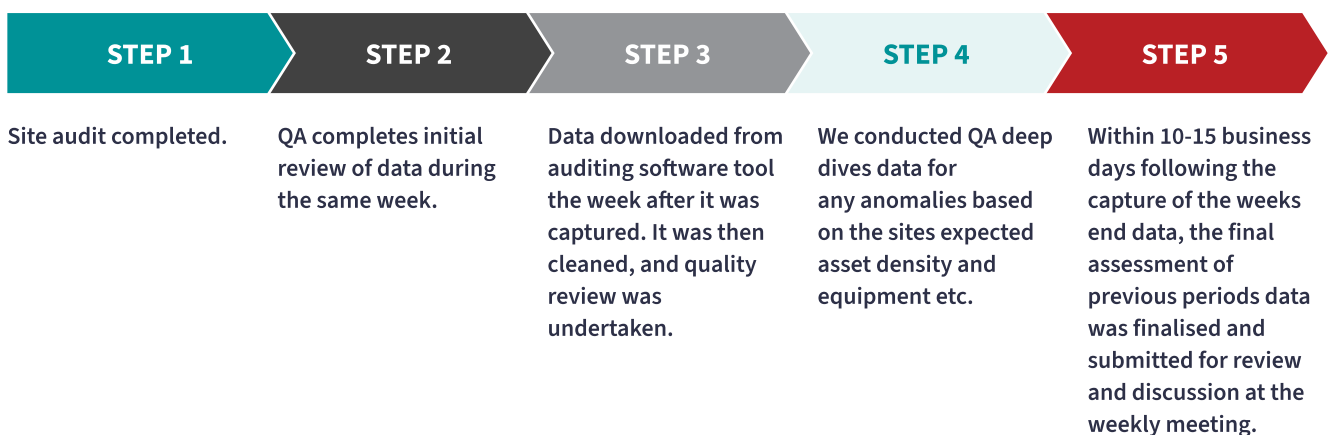
Quality Assurance (QA)

Quality assurance was central to our process, ensuring the accuracy of the data collected. Our QA process included:

✓ **On-Site QA:** We conducted **spot checks and high-level reviews** at each location before our auditors left, confirming the data was correct and complete.

✓ **Back-End QA:** After the audit, we performed a second round of validation, using **automated scripts to identify and fix errors**, followed by manual checks.

✓ **Continuous Monitoring:** We continuously monitored data quality, conducting **QA "deep dives"** to address any anomalies based on **expected asset density**.

✓ **Feedback Loop:** We finalised and submitted data for **review and discussion in weekly meetings** within 10-15 business days following the end of each week's capture.

Quality Assurance Process

| STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
Site audit completed.	QA completes initial review of data during the same week.	Data downloaded from auditing software tool the week after it was captured. It was then cleaned, and quality review was undertaken.	We conducted QA deep dives data for any anomalies based on the sites expected asset density and equipment etc.	Within 10-15 business days following the capture of the weeks end data, the final assessment of previous periods data was finalised and submitted for review and discussion at the weekly meeting.

📅 Data Submission Timeline

We followed a phased timeline, **delivering data incrementally** to DTP for review. This agile approach allowed us to provide actionable insights throughout the audit, meeting contractual milestones while ensuring timely, validated data delivery.

Data Submission Timeline
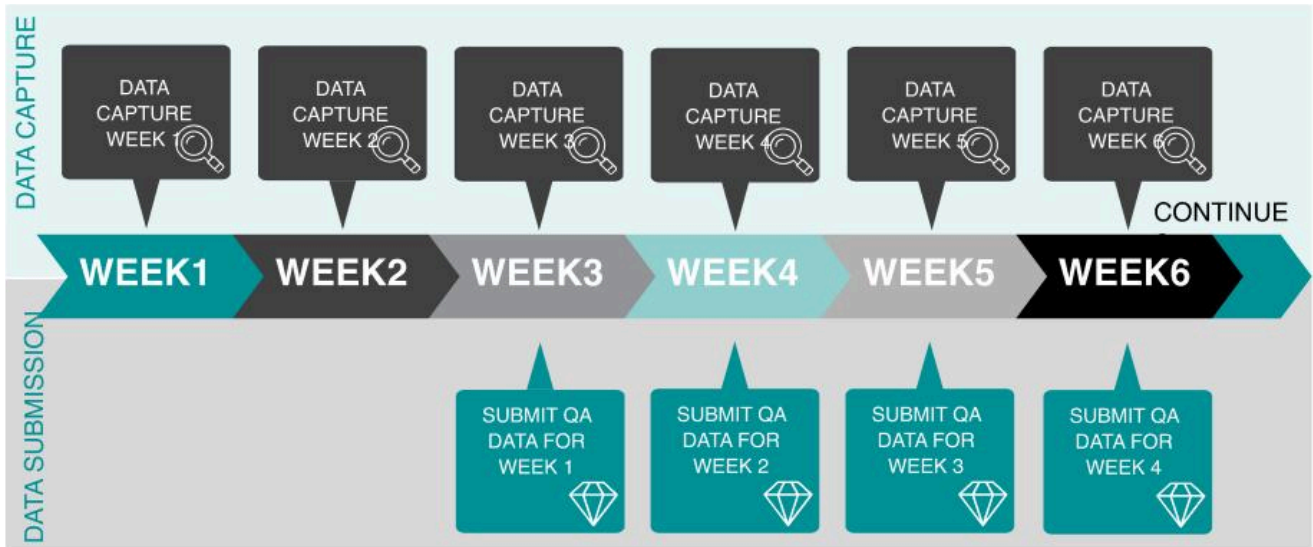
Results:

Tangible, Actionable Outcomes

✔ **Complete Asset Registry:** We delivered a **comprehensive asset register**, mapping data into DTP's Urbanise platform and capturing over 5,000 assets.

✔ **Informed Lifecycle and Capital Planning:** Full asset lifecycle plan outlining **remaining useful life, maintenance needs, and replacement schedules**, enabling DTP to forecast future capital expenditure.

✔ **Preventative Maintenance Plan (PPM):** We developed a **3-year Preventative Maintenance Plan** covering both soft and hard FM services, ensuring operational efficiency.

✔ **Backlog Maintenance Plan:** We identified **355 defects, including 100 critical OH&S issues**, and compiled a **$5 million backlog maintenance plan**.

✔ **Facilities Management Tender Advisory:** Our data **informed DTP's future FM tenders**, aligning new contracts with long-term strategic goals.

KPMG

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"The quality of asset data capture and financial forecasting work that Kairos provided was at an **exceptional level that I could not fault**.

The asset data, condition assessment and financial forecasting was **perfectly aligned with the needs of the client**. Trent and the team were always open to reconfigure data and provide tailored reporting as needed.

No question was too great and resolution was always timely.

Effective **asset data capture and analytics are often very challenging for clients** and Kairos worked seamlessly to provide a data set that effectively supported the asset management gaps with **consideration for effective future use**.

I look forward to working with the team again!"

Benjamin Naughtin
Associate Director - Infrastructure, Assets & Places
KPMG Australia

🏔️ Conclusion

Our comprehensive asset data capture and lifecycle planning work helped DTP align their asset management strategy with the scale of Victoria's $170 billion transportation infrastructure.

By focusing on precision data capture, rigorous QA, and close stakeholder alignment, **we empowered DTP to make informed decisions that will future-proof their assets and ensure long-term sustainability**.

Our partnership continues to deliver value, helping keep Victoria's transport infrastructure running smoothly for years to come.

> "The outputs have been of great quality and Kairos' ability to deliver on tight timeframes has been very well received"
>
> *- Department of Transport and Planning*