



Comprehensive Asset Data Capture for Critical Healthcare Environments



“Kairos **listened to our needs and took the time to understand** both our (and our client’s) specific contractual deliverables and expectations.

They proactively ensured alignment at every step, **avoiding misunderstandings or assumptions** that might cause delays or add unnecessary costs.

In previous projects with other providers, we were forced into standard processes that didn’t suit our needs, often resulting in costly rework. Kairos was different—**they conducted a pre-commencement "Standardisation Session"** with us, the client, and their team.

They audited a test location, ran reports, and confirmed the outputs met our expectations. This gave us confidence that **the final data would be accurate and in the required format.**

Their professionalism made us comfortable including them in all client interactions. We received comprehensive dashboards that enabled **transparent progress reporting**, ensuring the auditing program **stayed on track and was delivered on time.**

The post-project reports allowed us to create a detailed pipeline of Capital Improvement Projects, ensuring **accurate budgeting and better asset spending.**

Due to the success of the AGFMA project, we’ve continued to engage Kairos for **precision asset data capture** on large commercial and government contracts.

They provide us with the audits and reports we need to **confidently begin large FM contracts.**

Their detailed asset lists and reports have fostered positive relationships and established clear plans with our clients for **improving asset maintenance.**

On the basis of the success of this project, **I highly recommend Trent and the Kairos team.**”



Brett Smith
Director of Mobilisation, **Ventia**



Project Background

In 2021, **the South Australian Government** shifted from a mixed model of in-house and outsourced facilities management to a fully outsourced approach. This shift was part of a broader effort to **enhance the management and maintenance of critical public infrastructure**. As part of the new arrangement, Ventia, an ASX-listed infrastructure services provider with a \$5 billion turnover, secured the facilities management contract, and **they brought Kairos on board as their asset data validation partner**.

We brought with us a depth of experience from our prior work with **Nexus Primary Health, Monash Health, and the NZ Hospital Network**. These engagements prepared us to navigate the unique demands of critical care settings.

The stakes were exceptionally high. With **17 hospitals spanning over 600,000 square meters**, Ventia needed to ensure that each facility's **asset data was accurate, complete, and actionable**. The asset register would not only to **support day-to-day operations** but also to **safeguard critical medical environments** where asset failure could directly impact patient care.

The initial project scope covered South Australian hospitals, including some of the state's largest medical centres. These facilities included **complex environments such as surgical suites, oncology wards, and ICUs**, each with unique requirements for asset reliability and maintenance continuity.

It quickly became clear that the **existing asset data was inconsistent and incomplete**, with discrepancies in location data for critical equipment and missing details across many asset categories. Recognising the operational risks posed by these gaps, **we proposed an end-to-end data capture solution** to rebuild an accurate, comprehensive asset register that could support hospitals in managing their infrastructure with confidence.

The Challenge

Ensuring Accuracy in Critical Hospital Environments

Initially, **we encountered major inconsistencies and missing information** in the existing asset data, inherited from prior contractors. Key assets lacked detailed location data, and essential equipment often had only vague or incomplete records. **These issues posed serious risks** for a hospital setting where asset precision is critical.

The hospital environment brought its own set of challenges. Our team needed to operate within **strict regulatory and operational constraints**, navigating high-risk areas like ICUs, operating theatres, and oncology wards. **Each of these zones required special consideration**, not only in terms of accessibility but also regarding the criticality of the equipment within them.

To add to the complexity, this project was completed during the **tail end of the COVID-19 pandemic**, requiring rigorous (and constantly evolving!) safety measures. Our team **followed strict protocols** including full vaccination, regular testing, room capacity limits, and enhanced PPE requirements. These precautions **were especially critical in sensitive healthcare environments**, demanding even greater planning, adaptiveness, and flexibility.

How Kairos Addressed Hospital-Specific Needs

Recognising **the unique demands of a hospital setting**, we tailored our approach to **ensure minimal disruption to patient care** while delivering the **highest standards of asset data capture**. Several strategies we followed, included:

✓ **Meticulous Access Planning:**

Working closely with hospital administrators, heads of nursing, and department managers to coordinate access to sensitive areas at times that would least impact patient care. We implemented a flexible access plan, with alternative zones pre-selected for auditing in case high-priority areas were unexpectedly occupied. This approach allowed us to **maintain steady progress and avoid delays**.

✓ **Redundancy in Asset Mapping:**

In environments like ICUs and surgical theatres, where asset failure could directly impact patient outcomes, we took **extra measures to document not only primary assets but also backup systems**, such as redundant HVAC units, HEPA filtration, and emergency power generators. This redundancy mapping ensured that each facility had a clear understanding of the assets supporting critical care areas.

✓ **Training for Hospital Protocol Compliance:**

Our field auditors underwent **specific training to adapt to hospital protocols**, including hygiene and sanitation requirements. When working in sterile environments, they adhered to **strict “scrub-in” and gowning procedures**.

✔ **Parallel Criticality in Asset Assessment:**

We adopted **the concept of “parallel criticality”** i.e. identifying assets that, while not directly critical, support critical functions.

For example, a distribution board might not seem vital on its own, but in a hospital, it could supply power to critical care areas. **Recognising and highlighting these interdependencies** allowed us to provide a more comprehensive view of each hospital’s operational backbone, enabling better-informed maintenance and replacement planning.

Through these strategies, we addressed the **operational and regulatory constraints unique to hospitals**, creating a reliable asset register that supports both immediate operational needs and long-term strategic planning.



Precision for High-Stakes Environments

We deployed two teams with each including: **three trade-based auditors**, a **project manager**, and a **quality assurance (QA) officer** - many with experience in sensitive environments. The methodology included:

- ✔ **Comprehensive Asset Inventory:** We documented every asset within the hospital facilities, from HVAC systems in operating theatres to backup power units in ICUs. **Our team audited over 600,000 square meters across 17 hospitals**, ensuring no asset was overlooked. Each asset received a **unique QR tag**, allowing for easy identification and tracking during future audits.
- ✔ **Trade-Based Auditors:** Our field team included **local, trade-based auditors**, allowing them to quickly identify and document critical systems with accuracy. This expertise enabled us to provide actionable condition ratings.
- ✔ **Room-by-Room Tracking with Real-Time Validation:** To ensure complete coverage, **we preloaded every hospital room and functional location into Audify**, our proprietary data capture system. This allowed our auditors to monitor non-linear progress through facilities in real time - even if they couldn't progress room-by-room as you otherwise might.

The Case For Trade-Based Auditors

Using trade based auditors meant we could identify and document HVAC systems, electrical equipment, and other critical assets **with a level of detail and accuracy that might have been missed.**

- ✓ **Enhanced Data Coverage:** A deeper understanding of system components, resulted in **more thorough asset discovery.** For example, our auditors knew that multiple sprinkler heads meant a fire panel, a fire pump, and a non-return valve could be nearby. This systematic approach ensured all relevant assets were identified and documented, significantly **improving data coverage.**
- ✓ **Increased Data Accuracy:** Trade specialists ensured high data accuracy by knowing exactly what to collect. Where non-specialist auditors might mistakenly record a unit's power as 240V - a detail that's inconsequential - our **team focused on the critical information**, such as kilowatts (e.g., 6.5kW or 4.5kW).
- ✓ **Actionable Condition Ratings:** Non-trade auditors often rely on "average" ratings, which makes it hard to prioritise maintenance. Our trade-based auditors used their hands-on experience to **assess assets more precisely.** This expertise resulted in a wider range of condition ratings, allowing for more effective resource allocation.
- ✓ **Reduced Data Noise:** Our auditors' ability to filter out inconsequential assets meant the data was focused and relevant. By reducing "noise," we made it easier to **prioritise key assets**, ensuring critical components received the attention they required.

Specific Tools & Technologies Used

The project faced significant technical challenges, particularly with the external software provided for data capture.

This software was prone to delays, with data sometimes taking up to four weeks to sync with the backend system. These issues created a **substantial risk of data loss and corruption**, necessitating alternative approaches.

- ✓ **Manual Data Management:** To mitigate the software's shortcomings, we implemented **manual data management techniques**. This included using spreadsheets and local databases to temporarily store and organise data until it could be properly uploaded.
- ✓ **Ad Hoc Solutions:** We developed several ad hoc solutions to address the data capture challenges. For example, when unexpected assets were discovered on-site, **the team created custom data capture templates** to ensure these assets were accurately documented without disrupting the project's timeline.
- ✓ **Continuous Stakeholder Engagement:** We maintained close communication with Ventia and the SA Government throughout the project. This involved **regular updates and transparent reporting** on the challenges being faced and the steps being taken to address them. This proactive approach helped maintain stakeholder confidence and kept the project on track despite the technical hurdles.

Despite these challenges, *Kairos's ability to adapt and innovate ensured that the project continued to progress smoothly.*

Quality Assurance (QA) Process

Ensuring Data Integrity in Sensitive Hospital Settings

We implemented a **robust, multi-layered QA process**, specifically adapted to the high-stakes and variable conditions of hospital environments:

- ✓ **Daily On-Site QA Checks:** Our QA officers conducted on-site, **high-level reviews each day**, focusing on key data points such as asset specifications, condition ratings, and location tagging. These checks were especially crucial in hospital settings, where the need to **avoid repeat entries into sensitive areas** like ICUs or surgical suites is paramount.
- ✓ **Weekly Deep Dives for Comprehensive Review:** Each week, our QA team performed an **in-depth analysis of the data collected**, cross-referencing condition ratings, defect reports, and critical asset metrics with on-site photographs and QR tags. This process allowed us to verify data accuracy and flag any potential discrepancies early, **avoiding costly delays and rework**.
- ✓ **Layered Redundancy and Oversight:** Our QA process included multiple layers of verification. After the initial on-site QA, a secondary QA officer reviewed the data, followed by **a final on-site verification conducted by the project manager**. This structured oversight was essential to maintaining the highest standards of data integrity in the complex, high-stakes context of hospital asset management.

Communication and Stakeholder Engagement

Coordinating Across Hospital Departments

Effective communication was vital to maintaining the flow of work across multiple hospitals, each with its own unique set of stakeholders and operational demands. From the start, **we prioritised clear and proactive communication**, ensuring alignment between our team and key hospital personnel to minimise disruptions to patient care.

✓ **Early Coordination with Hospital Departments:**

We engaged with hospital administrators and department heads—including nursing, surgery, and maintenance leads—at the outset to understand their specific needs and priorities. This allowed us to **develop a schedule to accommodate the different demands** of each department, reducing the impact of our work on critical medical areas.

✓ **Real-Time Access Management:**

Given the dynamic nature of hospital operations, our team maintained real-time communication with department stakeholders to **address access challenges as they arose**. If access to a particular area was delayed due to patient needs, we could **quickly pivot to alternate locations**, ensuring that progress continued without disruption to hospital routines.

✓ **Empowering On-Site Auditors for Flexibility:**

Our senior field auditors were given **direct responsibility for liaising with hospital staff on-site**, allowing them to make immediate decisions and adjustments as needed. This flexibility was essential in a hospital environment where schedules could change on short notice, ensuring our team could respond fluidly to evolving circumstances.

✔ **Regular Progress Updates and Transparent Reporting:**

Throughout the project, we provided Ventia and hospital administrators with regular progress updates **through comprehensive dashboards**. These updates enabled **transparent reporting on audit completion status** and helped keep all stakeholders informed, minimising the risk of miscommunication or delays.

By maintaining a consistent and transparent line of communication, we ensured that all stakeholders—from hospital departments to senior administrators—were informed, aligned, and able to **support the smooth progression of the project**.



Results

Our comprehensive asset data capture and rigorous quality assurance **delivered critical insights that transformed asset management** within South Australia's hospital network. The final outcomes provided Ventia and the hospital administrators with a detailed, reliable asset register that supported both immediate and strategic needs:



1. Complete and Reliable Asset Registry

We delivered a thorough asset registry that accurately documented over **600,000 square meters across 17 hospitals, capturing the details** of critical infrastructure such as HVAC systems, emergency power backups, and filtration units in sensitive areas. We **identified 25% more assets than were originally recorded.**

This provided a solid foundation for **day-to-day maintenance** as well as long-term **lifecycle planning.**



2. Enhanced Maintenance and Budgeting

With comprehensive condition ratings and an understanding of asset interdependencies, hospital administrators could **prioritise maintenance activities, plan replacement schedules, and allocate budgets more effectively.** This enabled more efficient resource planning and more effective asset management.



3. Informed Capital Planning

With accurate data on **asset conditions and expected lifespans**, Ventia could make well-informed decisions about capital improvements and asset replacements. This level of insight enabled the hospitals and facility managers to **forecast future expenditures** and **justify funding allocations** for critical asset upgrades.



4. Improved Risk Management

By applying our “**parallel criticality**” **framework** and **mapping redundancies**, we provided the hospitals with a clear view of the impact each asset has on operational continuity. This helped hospital managers identify high-priority assets for intervention, allowing them to mitigate risks associated with asset failures in critical care areas.

These outcomes empowered Ventia and the South Australian hospitals to manage their facilities with greater precision and confidence, ultimately contributing to **safer, more efficient patient care environments**.

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Conclusion



The South Australian Government hospital project highlighted Kairos’s ability to deliver exceptional results in one of the most demanding asset management environments. **Our expertise in capturing high-quality, accurate data allowed us to address the unique challenges of hospital infrastructure—environments where reliability is essential and risks are high.**

The asset register we delivered empowered Ventia and South Australian hospitals to plan maintenance, prioritise upgrades, and manage budgets with precision, ultimately contributing to safer and more efficient patient care environments.