

How QICGRE's data-driven approach to sustainability is helping the global real estate investor evolve successfully in a changing world

QICGRE is taking a proactive and agile approach to managing climate risk by using building data insights to operate its retail portfolio.

Summary

Viewing climate change as a 'material' risk to business, QIC Global Real Estate (QICGRE) sought a solution to help it more intelligently manage its multi-billion dollar retail property portfolio, reduce the carbon footprint of its assets and build future resilience.

To deliver the best possible outcomes for investors, tenants and the wider community, QICGRE implemented CIM's building analytics platform PEAK across 23 prime retail assets. PEAK's data-driven insights helps QICGRE operate these assets at peak performance to reduce carbon emissions, future proof the portfolio and improve the customer experience.

KEY SUSTAINABILITY OUTCOMES OVER 12 MONTHS*



2800+
faults identified



> 4500 MWh
energy saved



5000 tCO₂
emission savings



87%
av. thermal comfort rating



Sept 2018 – Sept 2019

Challenge


“ We saw the potential of applying building analytics to the assets we own and operate to gain visibility into building performance issues and opportunities, ” said Damien Stacy, QICGRE Portfolio Facilities Manager

In response to rising energy costs and efforts to cut carbon emissions, QICGRE decided to implement operational best practices across its portfolio to optimise the efficiency of plant and equipment and eliminate waste.

Achieving this goal initially proved difficult as onsite teams found contractor management challenging, they lacked access to the data to understand and track progress, and the building management systems (BMS) were operated inconsistently.

“Our teams were often frustrated by how time consuming and difficult it was to operate their buildings,” explained QICGRE portfolio facilities manager, Damien Stacy. “Many were reliant on contractor expertise and found it difficult to accurately verify contractor performance and outcomes,” he said.

“We saw the potential of applying building analytics to the assets we own and operate to gain visibility into the building performance issues and opportunities, facilitate better workflows and drive consistent and transparent practices across the portfolio,” said Stacy.



CIM's building analytics platform PEAK integrates building intelligence, machine learning and technical engineering support in a way that is smart, simple and transparent.

Solution

Following a comprehensive investigation and tender process, QICGRE chose CIM's PEAK platform as its building analytics solution.

Compelling results from a successful trial at QICGRE's Robina Town Centre in Queensland prompted QICGRE to roll out PEAK across 23 of its major retail sites.

Every 15 minutes, PEAK reads more than 40,000 points across these 23 sites, including component data such as valve positions as well as fan and pump speeds. It combines this with other relevant data, such as inside and outside temperatures, electricity, gas and renewable consumption and people traffic. On some sites PEAK also captures indoor environmental conditions such as CO2 and humidity levels.

The building data from these points is captured and rapidly analysed using 1,100 unique rules-based algorithms developed by CIM's engineering and data science teams.

The analysis of the operational effectiveness of the plant and equipment is delivered to the QICGRE team as fast and accurate insights, giving them significantly more visibility and control of asset performance.



Building intelligence
smart



Machine learning
simple



Technical engineering support
transparent

Results

OPERATIONAL EFFICIENCY

PEAK has significantly reduced the time between issue detection, diagnosis and resolution across the QICGRE portfolio. After implementation, PEAK discovered more than 2,800 previously unidentified faults and pinpointed the exact cause of these faults for onsite teams and contractors to quickly resolve with the help of CIM's engineers.

PEAK also flagged opportunities to optimise chiller and air handling unit functionality—which were reconfigured to improve thermal comfort and subsequently reduce tenant complaints—and the car park exhaust systems, which were optimised to comply with local building codes.

Greater visibility into building performance has led to faster and more informed decision making which has resolved workflow issues and improved collaboration between QICGRE's contractors, operations teams and engineers.

"We can now produce a scope of works for contractors and receive more accurate quotations. The team then uses the data to verify in real-time whether or not the issue is fixed," said Stacy.



SMARTER CAPITAL PLANNING

“Scheduled maintenance checks and servicing is now a thing of the past as the data helps us determine precisely when and where maintenance is needed. We can now actively anticipate and prevent equipment breakdowns which means equipment is more likely to last its specified lifespan and we don't have to resort to costly fixes or replacements,” said Stacy, QICGRE Portfolio Facilities Manager.

PEAK's insights have also facilitated a proactive, transparent and accountable maintenance approach at QICGRE. This enables the team to take control of financial planning, make data-driven OPEX and CAPEX decisions, and conduct 'what if' analysis on plant and equipment.

"The data also help us determine whether or not we could improve our environmental performance and NABERS rating by upgrading a piece of equipment," said Stacy.

"Now we can confidently map out a 10-year capital expenditure plan and budget for our investment team based on accurate data rather than best estimates," he said.

BETTER ENVIRONMENTAL PERFORMANCE

This approach gives onsite teams, who were also recently provided with energy efficiency training, more time to identify how they could reduce energy consumption and carbon emissions even further. They can set targets to achieve these goals and track progress against them in PEAK.

The quick wins QICGRE has achieved with PEAK have delivered immediate reductions in energy consumption and greenhouse emissions, as well as substantial cost savings.

Encouraged by these early results, QICGRE is starting to apply PEAK's more advanced machine learning algorithms and predictive demand modelling to its building data to gain even greater dynamic control of systems and further enhance portfolio performance.



Robina Town Centre

QICGRE's first site to roll out CIM was Robina Town Centre in Queensland. Speed to value was very fast including:

- 🕒 Instant root cause diagnostics
- ⚙️ 200+ faults identified in real time and a fault closure rating of 90%
- 💡 15% (582MWh) reduction in energy consumption
- 😊 Identification of tenant issues before complaints were logged
- 👍 Streamlined contractor activity.

Compelling results at QICGRE's Robina Town Centre

The successful pilot at Robina Town Centre prompted QICGRE to roll out PEAK to its Australian retail asset portfolio, across which it started seeing similar results after a month of onboarding.

KEY RESULTS FOR QICGRE:

- ✓ **Faster fault detection, diagnosis and resolution** with 2,800 previously unidentified faults flagged and quickly resolved
- ✓ **Smarter capital and operational expenditure**
- ✓ **Proactive and predictive maintenance** to prevent equipment failure and extend lifespan
- ✓ **Transparent and accountable contractor management**
- ✓ **Greater team collaboration** with increase in ticket closure rate by 200%
- ✓ **Higher thermal comfort scores** and less complaints, resulting in a better customer experience
- ✓ **30-40% reduction in car park ventilation energy cost** without compromising air quality standards
- ✓ **Increased environmental performance** and NABERS ratings across the portfolio
- ✓ **Lower energy consumption and costs** with >4,500 MWh of energy savings in 12 months
- ✓ **Smaller carbon footprint** after cutting 5,000 tonnes of CO2e within 12 months.

PEAK

CIM's award-winning PEAK Platform integrates building intelligence, machine learning and technical engineering support to improve efficiency, sustainability and comfort across QICGRE's property portfolio. PEAK was recognised as "Best in Class" by the CSIRO following a 24-month independent evaluation of building analytics technologies.

- ✓ Simplifies and accelerates the end-to-end process of fault detection, diagnosis and problem resolution
- ✓ Automatically collects and monitors live building data, and leverages algorithms to pinpoint, highlight and prioritise inefficiencies
- ✓ Facilitates a collaborative workflow with stakeholders to quickly resolve issues
- ✓ Provides visibility and insight to optimise site and portfolio performance.

We look forward to hearing from you.

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