

CASE STUDY: DISRUPTING CRE

The changing business of owning and operating smart buildings

The term Smart Building isn't new but the definition has evolved from the early days of its inception.

No longer does the Smart Building only entail connected systems and networked built environments but it's become more philosophical – how do Smart Buildings support the future of work. Smart building initiatives have become more about improving everyone's overall experience interacting with a built environment rather than mere building efficiency or sustainability programs – going beyond simple analytics of subsystems to unlock true digital transformation of commercial real estate.

Commercial Real Estate (CRE) business models are changing. Data availability is pushing firms to consider new services that can accommodate changes in consumer behaviour and a shifting demographic of office workers. These younger, more tech savvy tenants are not drawn in by the smarts of the building alone – but by what those smarts can do for them. Thought leaders in the space have been thinking about the implications of these market forces and the potential of emerging technologies like IoT for several years. Often these firms have struggled with the challenges inherent with digital transformation – interoperability, operationalizing data, and change management.

OXFORD

Oxford Properties Group is one of the world's premier real estate investment, development and management companies. Established in 1960, Oxford manages over \$45 billion of real estate assets on behalf of its co-owners and investment partners, with a global portfolio spanning over 60 million square feet. Oxford is the global real estate arm of OMERS, the defined benefit pension plan for Ontario's municipal employees.

"No standards exist for what a Smart Building should be or could be."

– Matthew Lennan,
Innovator in Residence,
Oxford Properties

The Challenge

Oxford Properties, a forward thinking organization in Real Estate with a diverse portfolio of properties, began thinking about the disruptive forces seeking to change their industry about 8 years ago. Matthew Lennan, Innovator in Residence, who works as part of Oxford's innovation team said the process began by "working collaboratively with Cisco, to create two documents in an effort to begin thinking about what defines a Smart Building and what standards should be in place to execute against the strategy." The standards served as a guideline to define goals for a broader smart building strategy, namely to lower operating costs, improve operational efficiency and perhaps most importantly, improve the tenant experience. In defining these standards it became apparent that technology decisions made will have major impact on how these goals are achieved.

According to an Altus Group Innovation Report survey, **59% of owners and operators of buildings do not have significant integration between major management systems/ applications and 51% say they have issues around capturing, collecting and managing the data.**

When considering the implementation of smarts for a new building in downtown Toronto, Oxford worked closely with ThoughtWire to help define what this Smart Building would look like and what it could achieve. However, as is the case for other organizations embarking on digital transformation a few common challenges exist.

Challenges in unlocking value from a connected building:

- Building plan included a number of disparate systems and assets tied to point analytics solutions and application dashboards
- No single pane of glass view to allow for remote operations
- Tenant experience applications are often siloed and not connected to building operations systems
- Interoperability surfaced as a major challenge due to data diversity, complex relationships between subsystems, people, and process, and lack of automation

- Lack of context and personalization in existing solutions so information not getting to the right people at the right time

Through this process Oxford also discovered some key tenets that others embarking on digital transformation will face that have very little to do with technology and everything to do with people and change management:

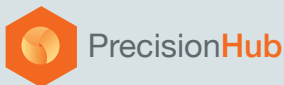
- Aligning stakeholders and getting buy-in – Digital transformation is necessary to ensure competitive advantage in the future but can seem nebulous without a clear plan for payback on investment
- Setting initial benchmarks for success metrics and ROI and iterating continuously became of paramount importance to ensuring initiatives sustained momentum and continued to grow throughout the organization
- Working with tenants to roll out tenant applications and get their buy-in on the vision for a digital workplace
- Underestimating the challenge of communications and adoption plans

The Solution

ThoughtWire worked closely with Oxford to ensure that our solution would be flexible to adapt to any building environment, scalable across multiple sites within the portfolio, and easy to use for the building managers and tenants who would interact with the application.

As North America's only leader in Operations Performance Management for the Built Environment, ThoughtWire's team understood the importance of not just data but how people will utilize data to transform the way they work in the operational setting or workplace.

ThoughtWire interconnected 8 subsystems and 5500 + connected devices to deliver real-time insights into 80+ KPIs at speeds of approximately 61 data points per second. Data is operationalized and used by building and facility managers through PrecisionHub, where they have full command and control of building operations to do complex tasks more simply and efficiently.



Use cases delivered by first phase of PrecisionHub deployment:

- Visually represent alarms on a building floorplan and identify them by severity
- Enable mobility for building and facility managers to move freely around the buildings they serve with PrecisionHub on a tablet device
- Correlate lighting, HVAC, and occupancy data to better understand when cost saving energy reduction can take place

Benefits delivered:

- Improve awareness of building state through meaningful alerts
- Reducing the occurrences of reactive maintenance
- Simplify standard tasks and reduce manual intervention through automation
- Remote monitoring and troubleshooting for alarms and events
- Faster response to events with context-rich information



ThoughtWire



The @WorkApp and PrecisionHub are designed to work together, making results even more powerful. PrecisionHub allows building managers to update optimization strategies based on tenant behaviour and the @WorkApp increases situational intelligence.



These strong results and benefits gave organization confidence to pursue more digital transformation by deploying the @WorkApp to improve the tenant experience.

With the @WorkApp, tenants can easily adjust environmental or comfort controls through a mobile app, providing them with greater control over their building experience including community engagement, building access controls, and wayfinding. Improving the tenant experience creates marketable differentiation for Oxford buildings and helps keep tenants engaged longer.

Tenants satisfied with the ability to control their environment – went from zero to 65% tenant engagement

Use cases delivered by first phase of @WorkApp deployment:

- Manage comfort settings like lighting and temperature using the mobile app
- See energy usage
- Get building and community announcements

Benefits delivered:

- Tenants satisfied with the ability to control their environment – went from zero to 65% tenant engagement
- Increased tenant awareness of energy efficiency and sustainability initiatives
- Helps building and facility managers understand how tenant behaviors and patterns impact building operations

Key Learnings

A device and vendor agnostic approach is necessary to success

A siloed approach will not always yield the results you want – look for an integrated building operations and tenant experience solution With PrecisionHub behavioural change came easy because Oxford was not forcing them to learn either Windows or Mac but rather the principles of an OS. PrecisionHub is the building's operating system of the future. The data being correlated and analyzed by PrecisionHub can be leveraged in other tools for reporting



About ThoughtWire

ThoughtWire is the leader in Operations Performance Management (OPM) for built environments, helping hospitals and commercial buildings operate smarter, safer, and healthier with software applications for OPM. Since 2009, ThoughtWire has been changing how we think about intelligent automation and process optimization, beginning with its award winning Ambient™ platform developed to interconnect and orchestrate people, data, and things in real-time.

Today, ThoughtWire's innovative applications empower built environments to connect previously unconnected systems, unlock high-value outcomes for patients and tenants, and put people in control of process change and optimization.

Find out how ThoughtWire is powering a new era of OPM at thoughtwire.com.

Contact us today

See what OPM can do for you and the people in your facility.

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