

# How IoT is set to transform the property industry

Internet of Things Alliance Australia – Collaboration Workstream

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**Much has been said and written about the Internet of Things (IoT) and its potential to transform virtually every industry, but what does it mean for the property sector – for property developers, owners, facility managers, tenants and users?**

Each group has very different priorities yet, as this paper explores, IoT-enabled Smart Buildings offer tangible benefits for all, including cost reductions, enhanced security and operating efficiencies, and a differentiated tenant and user experience. All of which are critical today and likely to be increasingly so as we all navigate an uncertain future and strive to gain an edge in a competitive market. And at the heart of it all is secure connectivity and a well thought out strategy to digitise buildings so they are more interactive, responsive and ‘smart’

## Why property needs to change – now more than ever before

Look inside the fabric of many of today’s buildings and you may discover a veritable rat’s nest of expensive cables, hastily devised point solutions and siloed systems that are slow, inefficient and pose a very real cyber security risk. Even where there is a Building Management System (BMS) in place, few of the systems it controls are integrated, beyond HVAC and lighting.

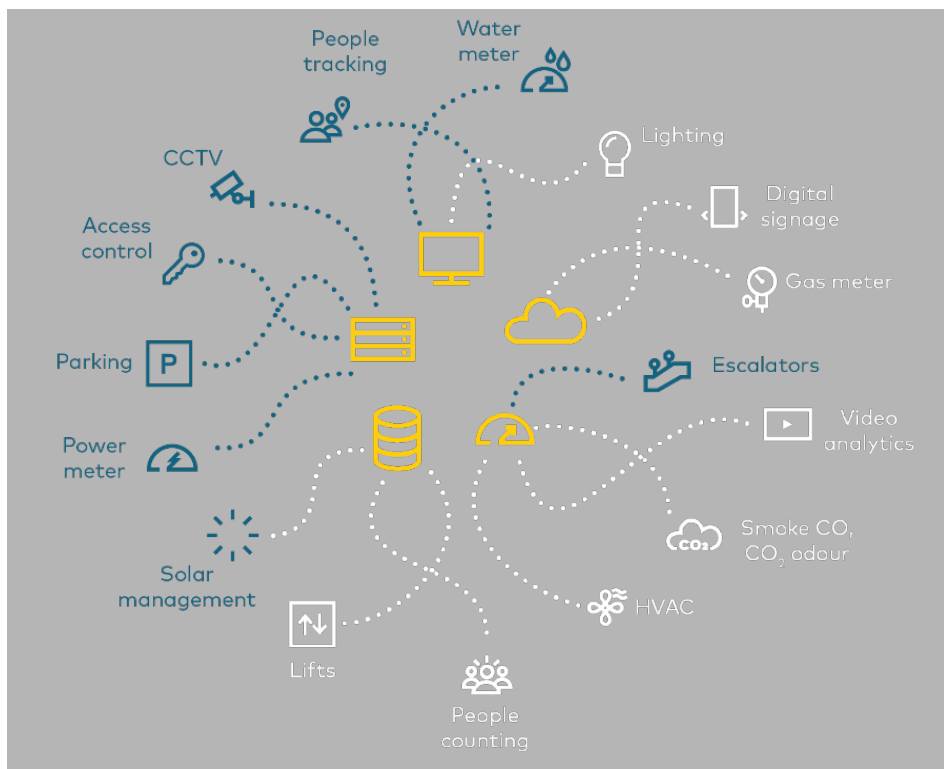


Figure 1: Present state of BMS components and it’s integration

Traditional BMSs are also expensive to operate and maintain, and often involve limited applications, multiple connections and local services and third-party providers with limited expertise in cyber security. Even new buildings often have far more attention paid to the aesthetics – lighting, marble, views – than to the technologies that actually connect the building’s users, systems and spaces.

This lack of foresight will increasingly come at a cost:

- To occupiers, tenants, users, workers and visitors, whose experience and productivity is hampered by a lack of amenity, safety or connectivity
- To tenants or owners who need to adapt to rapidly changing workplace scaling and safety requirements
- To developers and portfolio owners who struggle to leverage their investment in BMS or OT (Operational Technology) or to differentiate themselves in a rapidly changing market – to add applications that deliver efficiencies or make business decisions using insights from the data generated by existing systems.

Why is this so? Despite the emergence of technologies such as 5G-enabled superfast internet, edge computing and cloud, inertia and the acceptance of ‘this is how things are done’ have seen the property industry languish behind others in terms of how ‘smart’ their assets really are.

And it’s already having an impact, with the property sector being disrupted by new technologies as well as current circumstances – for example, commercial premises affected by the shift to Working From Home (WFH) during the COVID-19 crisis, education through online study and health through telemedicine.

Spaces will always be important, but we also need to think about what makes spaces ‘work’. Today the digital experience – how the space actually works in line with modern needs – must be given equal consideration in order for users, landlords, developers and owners to derive value from their assets.

In today’s market, more than ever before, connectivity and IoT is likely to become the must-have factor that’s potentially the difference between tenants or no tenants, customers or no customers and a healthy bottom line or spiralling costs.

*“IoT is not just about the latest technology or smart use cases, no matter how clever they may be. It’s about adding value, streamlining operations and making people’s lives better.” – Deon Liebenberg, Vice President of Product Innovation and Strategy at Optus Business*

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### **So, what’s the clear path forward?**

Now imagine a new reality – a Smart Building that entices workers and visitors into its spaces and actively enhances their experience or protects their wellbeing. A building that allows users to engage with the premises with an app, tenants to expand or contract their floor space on an hourly basis, to reduce energy usage by up to 40%, or property managers to protect against cyber threats to the aircon system, lighting, access control or other OT in much the same way as threats to IT are handled.

And imagine the amplified benefits, if all of this were to be expanded across a whole property portfolio – and to offer both centralised and local control.

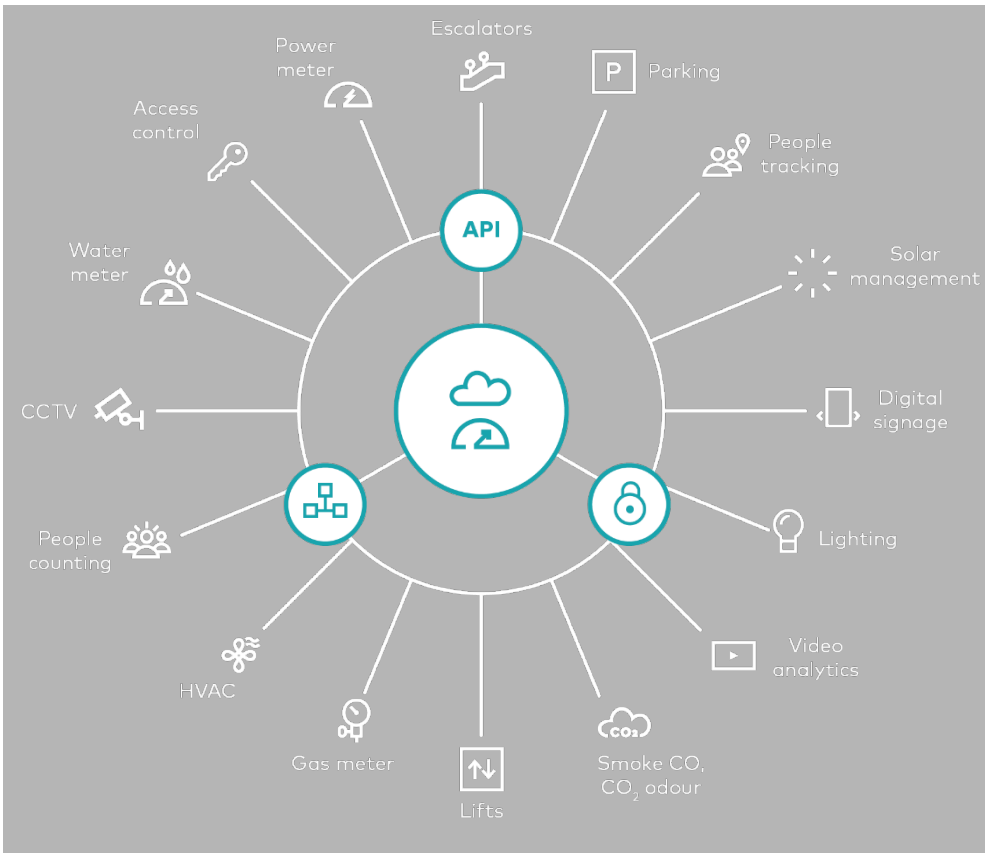


Figure 2: Future state of BMS components and it's integration

A Smart Building has connectivity at its core, albeit not necessarily through 'wired' connections. This enables connections between people, places and things, including users and employees, IOT devices, BMS & OT systems, also data drawn from beyond the building itself.

This connectivity – ideally baked in during the design phase but also able to be retrofitted – can connect the building's disparate systems and external data sources to a central enterprise 'brain' for analysis and decision-making that enables the building to operate more efficiently and deliver a differentiated experience.

#### Why make buildings smart?

- Increase revenue
- Improve the user, customer and/or tenant experience
- Reduce expenses and energy consumption
- Improve compliance and safety

Few truly Smart Buildings exist today, yet with the right solutions, connectivity, security and thinking in place, a Smart Building will be able to:

- **Automatically adapt to the needs of its occupants**, ensuring they are safe, comfortable and informed. Think of a cinema complex that can adjust the temperature of a particular space depending on how many people bought tickets to a particular movie session. This capability enhances the customer experience while automatically conserving energy consumption when possible.
- **Enable the building occupant to engage with the space they're using**, as well as any other occupants and the building's surrounds— easily and automatically. Think of a commercial tenant who's able to monitor their space usage with sensors that gather and present data to a central platform (e.g. app) that enables occupants to maximise use of the building's space. Or an asset or property manager who draws on the same data pool to build long-term growth by providing a great user experience, reducing costs and increasing sustainability via IoT.
- **Provide ubiquitous, and secure connectivity**. Think how in-building IoT applications – enabled by connectivity – can help retailers enhance the customer experience and engagement. Assist industrial premises leverage robotics and automation for process efficiencies. And help property developers and builders with the foresight to incorporate 5G to offer a better in-building experience and true point of differentiation.

Some of the personas that will take advantage of such solutions:

#### **TENANT**

An improved occupancy experience – reduced ongoing costs, improved building efficiency and a differentiated user experience

#### **FACILITY MANAGER – SINGLE BUILDING**

Remote access and control of systems in the building, with automated decision-making, improved sustainability and efficiency, and reduced operating costs

#### **ASSET MANAGER – PROPERTY PORTFOLIO**

Increase the portfolio value and amplify ROI, with potential to increase rents and reduce costs across the portfolio, via both centralised and local control.

**Choose your future foundation**

Remember, there is no IOT or Smart Building without connectivity. So no matter what stage of the journey you are at right now, the next step starts with considering how you can improve your building’s connectivity – via 4G to 5G, Wi-Fi, In-Building Coverage and more.

With this foundation in place, it’s time to think of which pressing business or strategic issues you wish to solve, from reducing costs on aircon to providing a better in-store customer experience. It’s about laying the right foundations to future proof your building or property portfolio so you can optimise your assets.

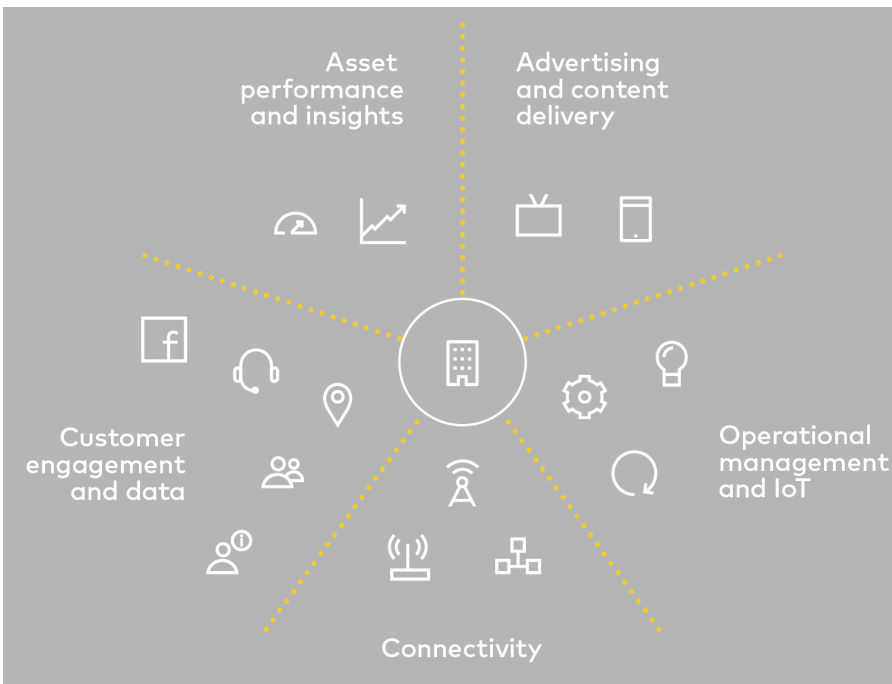


Figure 3: Making the right connections: how it all works

**References:**

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