

Smart retail spaces make smart business sense

By [Paul Dival](#)

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Intelligent technologies have become increasingly common, both within the business and consumer space. Utilising such 'smart' technologies results in reduced costs, improved efficiencies and enhanced convenience, among other benefits. This is particularly relevant in buildings such as corporate offices and shopping malls. However, the real value of these smart solutions is only derived when they are integrated and interlinked, turning a host of disparate smart technologies into a 'smart building'.

Connectivity at the heart of the smart building

At the heart of the smart building is ubiquitous connectivity, which is delivered through a combination of wireless, fibre and mobile networks. Connectivity is the backbone of every smart building and last mile connectivity to the facility ensures that all tenants will have access to the Internet via fibre, ADSL and Wi-Fi. However, many facilities, including corporate office parks and shopping malls, face the challenge of poor mobile and Wi-Fi connectivity, as these technologies are unable to penetrate between floors and through multiple walls. In order to address this challenge, distributed antenna systems (DAS) are an important component as they extend wireless and mobile network coverage with additional antenna nodes.



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Furthermore, smart technology that is IP enabled utilises connectivity and cloud-based platforms to offer the intelligence, software and applications that deliver value. This connectivity can be provided to tenants as a value-added service, negating the need to acquire their own telephone and internet lines for applications such as credit card machines and voice calling.

The implementation and integration of connected technologies

A 'smart building' also includes technologies to automatically control a multitude of functions, such as lighting, heating and cooling, energy management, security, alarm activation and more. Intelligence is derived from the implementation and integration of connected technologies, with each system working together to create a more efficient, effective overall space that minimises the need for manual intervention. As an example, lighting, heating and cooling can be linked to access control, surveillance and security, to automatically switch lights and regulate climate control when people enter a space or when they leave it.

This functionality delivers improved cost efficiencies due to reduced energy consumption and the requirement for less

infrastructure hardware such as servers and cabling. This in turn reduces installation, maintenance and support costs as well as operating costs. These tangible cost benefits are often the quickest win when it comes to the 'smart building'. However, there are many other benefits that can be leveraged to aid in attracting tenants and maximising revenue.

Integrating security applications and devices

Smart buildings and smart retail spaces also enable the deployment of Physical Security Information Management (PSIM), which integrates various security applications and devices into a single user interface for enhanced security and control. By bringing together information from a variety of disparate security and information systems - including video, access control, networks, analytics, building management systems and more - functionality is enhanced and personnel are empowered to proactively resolve security situations.

PSIM also enables organisations to track all security information, including regular reports, incident logs, continuous process improvement initiatives, training drills and system healthcare checks. This information can be used not only to improve security but also for compliance reporting. Ultimately such solutions offer a competitive edge by improving security intelligence, which in turn reduces costs. Utilising PSIM, smart buildings are more secure, and this can provide tenants with peace of mind. A full-service lease not only adds value but also often delivers these services at a lower cost than the tenants could arrange themselves, by leveraging economies of scale throughout the retail space.

Non-traditional applications that deliver additional value and benefits

Intelligent integrated technologies can also be leveraged for non-traditional applications that deliver additional value and benefits. For example, CCTV functionality can be extended from security and into customer profiling, to provide granular information on footfall into stores, buying patterns and more. This information assists building owners to plan their use of space more effectively, and can also benefit tenants by providing intelligence that enables them to better understand their customers.

Wi-Fi networks can be opened up to consumers visiting the retail space, allowing outlets to gather information about their customer to create further depth of consumer understanding, as well as to target advertising, promotions and so on, specifically to the correct target market. Smart technology enables building owners to better measure people flow and provide more active, targeted advertising concepts.

Energy optimisation and management tools, energy continuity such as UPS and generators, renewable energy solutions and fire detection and suppression also create more value proposition and form an important component within a 'smart building'. Given the current power situation in South Africa, renewable energy is increasingly becoming a competitive differentiator. Utilising the available rooftop real estate, retailers can implement solar farms, offsetting utility costs and keeping the lights on during load shedding.

By automating and integrating these solutions using a common network, connectivity and cloud-based software and solutions, 'smart buildings' deliver a host of value-added benefits that make smart business sense for all parties involved.

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