



Creating the building of the future

Enabling building automation, operational efficiency, workforce productivity, sustainability objectives, and fast-track innovation with the Internet of Things (IoT) and Hyper Connectivity through Private 5G

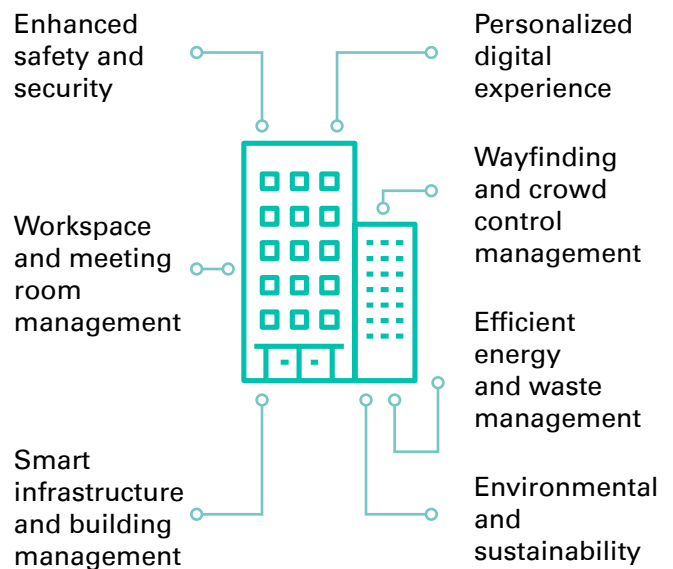
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Creating the building of the future through IoT

As IoT rapidly digitizes the physical world, companies are leveraging data from connected devices to transform business and operating models—improving decision-making, driving greater efficiency, increasing profitability, and introducing new revenue streams.

- Smart Buildings are the next generation in office work environments by providing both an enhanced employee experience and driving building operational efficiency.
- Operationally, integrated systems and sensors provide the ability to track and monitor critical aspects of the building while driving efficiency across the building management system.
- Aggregated sensor and system data will provide new operational insights and allow for the automation of current manual processes (i.e., scheduling room service, room cleaning, preventative maintenance, etc.).



IoT is a network of devices that collect and share data for analysis, which has evolved from a stand-alone industry to a mainstream set of tools that can be leveraged, often paired with other technologies, to solve complex business issues.

IoT use cases and benefits for Smart Building



Building management

Building management actively interacts with the building's Smart dashboard to understand critical priorities. A scheduling alert is generated indicating maintenance of an elevator overlaps with a high-occupancy event. Proactively scheduling a maintenance mechanic will prevent an interrupted employee experience. The dashboard also monitors building floors for occupancy, temperature, etc., and automatically adjusts the environmental factors (lights, HVAC) to reduce operational costs and meet sustainability guidelines.



Employee and guests

Upon arrival at the building, guests and employees interact with customized digital signage, informing them of their meeting/desk location, lunch options, and nearby activities occurring throughout the workday. While entering their workspace or meeting room, they speak to the digital assistant, adjust the temperature, enable AV equipment, order lunch, close blinds, and adjust other environmental factors. Before leaving, the employee/guest pays for parking, books a workspace for tomorrow, and asks the assistant to provide the best route home based on current traffic patterns.

Employee conference room preferences



Personalized employee experience

UVA sanitization lighting



Workforce safety from viruses

Increased sustainability capabilities



Carbon credits and employee satisfaction

Utility management/optimization



Reduced maintenance cost

Digital signage



New advertising revenue streaming

IoT - more than just devices

There are four main aspects of the Smart Building ecosystem: Things, Data, Strategy/Operations, and Employee/Building Operations. Things such as sensors and devices connect the physical world to the virtual world. They in turn collect data to drive new insights. Strategy/Operations define how everything integrates and operates in a seamless fashion. Employee inputs are leveraged to optimize the overall employee and building experience.

These elements interact together in a connected ecosystem, which is highly interdependent and only as strong as its weakest link. Therefore, having strong embedded technology risk mitigation and security measures are a foundational element of any Smart Building solution. IoT introduces new risks related to security, privacy, and safety that are more efficiently and effectively managed throughout the design and implementation lifecycle and require ongoing technology governance to maintain a trusted platform over time.



Things



Strategy/
Operations



Employee/Building
Operations



Data

KPMG: Breadth of experience and leadership in IoT and 5G

KPMG has assisted clients in navigating complex, interconnected technology long before the phrase “Internet of Things” was coined. Decades of experiences have led to an industry-tailored approach to IoT solutions. KPMG provides clients with streamlined, secure, integrated business solutions to help protect their business and customers.

Distinctly, KPMG IoT services bring together specialists in business, technology, and risk and leverage resources from across the firm’s advisory teams to help clients realize the full value of smart, connected things. The firm’s IoT leadership team is comprised of subject matter specialists in each of these groups—enabling stronger collaboration, quality of delivery, and innovation.

As an experienced global player with considerable strategic input and big project management experience, KPMG attained Winners Circle status in the HfS Blueprint Report: Internet of Things Services 2018.

Private and secure 5G – A building of the future game changer

Private and secure 5G is not an evolution, but instead a revolution. Unlike previous wireless generations that were almost entirely driven by the consumer, the 5G market provides an early entry point for the enterprise community. It will allow for high-speed, massive connectivity, enhanced battery life, and low latency communications. Along with an enhanced employee experience offering unprecedented mobile networking capabilities, 5G allows a million devices to be connected in a half-mile radius, providing building management with the ability to split one 5G network into multiple managed networks while replacing current wireless and wired networks throughout the building. 5G will be the **backbone of campus and building communications** in the future.



We help clients identify the business value that IoT can deliver

- **Strategy services** provide you with a strategic roadmap for achieving business objectives through IoT and related technology adoption.
- **Design and build services** help you to create valuable business solutions for your unique organization, internal systems, digital strategy, and risk factors.
- **Implementation services** unlock the value of the designed IoT solution and integrate it into the existing IT infrastructure. KPMG can also help you adopt the organizational changes required to transition to the new system.
- **Post-implementation services** provide you with a sustainable foundation and the skills to manage, maintain, and effectively utilize the new IoT solution.

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