

FEBRUARY 5, 2024

Our Smart Journey at 150 Holborn

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Here at 150 Holborn, we're proud to call our new **Sidara** (<https://www.linkedin.com/company/sidara/>)
London HQ one of the smartest buildings in the world.

But what does having a smart building actually mean? And **what technology does an expert in smart buildings** choose for itself?

What is a smart building?

A smart building uses **technology such as sensors to monitor, talk to, and control everything inside it**, such as the lights, heating, air quality, security, etc.

These sensors provide information that's ultimately intended **to make your life easier**. For example, when you have a meeting booked, the sensors can create the most comfortable room conditions (heat, light, ventilation, etc) for a productive meeting..

And that's not all. As the building's sensors and computers **learn more about how you use the space**, **they'll begin to adjust these services** to meet your energy use and occupancy demands. They'll know

when to use less power and water to save money, energy, and reduce carbon emissions. As well as create a healthier indoor environment for the occupants.

But smart buildings aren't only about energy efficiency, they integrate all kinds of other technologies too. Such as Internet of Things (IoT) sensors, automation systems, and data analytics, to optimise building operations, enhance occupant comfort, improve security, enable predictive maintenance, and support sustainable practices. In short, **they aim to create more productive, safe, and sustainable surroundings.**

Imagine having **a very clever, helpful personal assistant for your living or working space** who can make your life easier when you're inside it. Rather like Marvel's Avengers HQ, where Tony Stark programmed multiple sensors and a super brain, Jarvis, with the intelligence and ability to take care of all kinds of things automatically.

What technology does an expert in smart buildings choose for itself?

Sidara's London HQ is a highly efficient building whose **design aims to maximise the sustainability aspects as far as possible**, within the tight constraints of building in a challenging urban environment.

150 Holborn was **certified under BREEAM** New Construction 2014, and achieved a total design stage score of 89.9%, well above the "Outstanding" threshold of 85%. Our building is projected to achieve 98% in BREEAM Post Construction Certification. In addition, 150 Holborn is **on track to achieve LEED Platinum certification**, targeting a score of 86 credits.

Our choice of smart technology supports collaboration, sustainability, productivity, and wellbeing. And the scalable foundations provide future proofing for prudent energy use, **supporting Sidara's ESG principles**, and enabling measurable performance efficiencies, improvements, and savings over time.

Our smart journey at 150 Holborn has been **a three-stage process** involving best-in-class, dynamic technology.

IBMS (Integrated Building Management Structure)

We chose **Schneider Electric** (<https://www.linkedin.com/company/schneider-electric/>)'s **Smart Building EcoStruxure Control System** for its flexible approach to how a building can be managed and operated. 150 Holborn will be able to sense the energy use and occupancy patterns and adjust the services to meet the demand as required.

IWMS (Integrated Workplace Management System)

Our **Planon** (<https://www.linkedin.com/company/planon/>) **solution** includes modules such as: meeting room booking; visitor management; fault reporting, and Computer Aided Facility Management (CAFM).

This means we can **optimise the building management**, which in turn helps us reach our goals efficiently.

150 Holborn has also delivered **a mobile Application (available for iPhone, Android, and web)** which lets occupants engage with the building now and in the future. Currently, 150 users can book meeting resources, keep up to date with news feeds, and view food menus. And this App will continue to grow. For example, we have fault reporting and community forums on the roadmap, which will be coming soon and add further value to the overall user experience.

And **Ideal** (<https://www.linkedin.com/company/ideal-networks-ltd/>)'s IT converged network system enables all our building systems to interact with each other.

Digital Twin Technology

The last stage of our smart journey at 150 Holborn, using **Sidara's proprietary technology from Para** (<https://www.linkedin.com/company/para-twin/>), is where the magic starts to happen in our new Living Lab.

What is digital twin technology?

A digital twin is **a virtual model of a physical object which uses real-time data from sensors to simulate behaviour** and monitor operations. Applicable on single factory items up to entire cities (such as **Cairo's New Administration Capital** (<https://www.dar.com/work/project/new-administrative-capital/>)), digital twin technology is like having a magical helper who copies, watches, learns, and predicts the overall performance of an asset, identifying potential faults and fixes. Digital twin technology at 150 Holborn will help us make better-informed decisions about the building operation, maintenance, and lifecycle.

Para (<https://paratwin.io/home>)'s flagship digital twin and analytics platform will make 150 Holborn more energy-efficient, cost-effective, and sustainable by providing insights and targeted recommendations to enhance performance and operations. Already operating in Dar's Cairo office and in Perkins&Will's Atlanta office, Para is also the first software programme to ever receive the **UL Smart Systems Gold Rating**, awarded by the global leader in applied safety science UL Solutions (<https://www.linkedin.com/company/ulsolutions/>).

What are the benefits of having a digital twin for our smart building?

Digital twinning sounds exciting but it's about much more than simply installing the latest must-have gadget. **There are real benefits** too, such as:

Real-Time Monitoring and Control

Smart buildings with digital twins will access real-time monitoring and control systems, which **enables automated adjustments to building operations based on changing conditions and occupant needs**. For example, lighting, temperature, and ventilation systems can be optimised in real-time to enhance energy efficiency and occupant comfort.

Predictive Maintenance

Digital twins can leverage real-time data and analytics to forecast maintenance issues. Machine learning algorithms can **identify data patterns and anomalies to predict equipment failures or maintenance needs** before they occur. This proactive approach can minimise downtime, reduce costs, and improve overall building performance.

Sustainability and Energy Efficiency

Future trends in digital twin technology are likely to focus on enhancing sustainability and energy efficiency in smart buildings. Digital twins can simulate and evaluate different scenarios to **identify energy-saving measures, optimise resource utilisation, and support better energy implementation**. This aligns with the increasing emphasis on green building practices and reducing carbon footprints.

Looking ahead...

150 Holborn isn't quite at Marvel's Avengers HQ level just yet (!) but our **WiredScore** (<https://www.linkedin.com/company/wiredscore/>) **SmartScore Platinum certification** means we're one of the smartest buildings in the world. And this award is testament to the top tier technology within our building, as well as demonstrating its future-readiness. In truth, **our smart journey at 150 Holborn has only just begun**. Stay tuned for further updates, and get in touch if you'd like to find out more.