



## 1NSS: an Intelligent Building

1 New Street Square (1NSS) is Deloitte's flagship London building which opened its doors in July 2018. As well as offering more flexible work spaces for staff and improved facilities for clients, the building will be made "intelligent" through the adoption of Internet of Things (IoT) technologies.

### What is an Intelligent Building?

Intelligent Buildings contain connected networks of sensors and actuators, which integrate with traditional building systems (such as lighting and air conditioning) to continually improve and automate the operations of the building in question.

The network of sensors might include occupancy tracking which measures the "busyness" of the cafeteria and suggests when to visit. Sensors that monitor the indoor environment and the efficiency of air conditioning could be linked with actuators that automatically optimise energy consumption and make the working environment more comfortable for each individual employee.

Automated systems of sensors and actuators drive operational efficiency, reduce cost and environmental impact, and improve the employee experience, which in turn generates value by improving productivity.

A key enabler for Intelligent Buildings is the Internet of Things. The trend of lowering costs of electronics, data transfer and compute power means that building systems that were previously isolated, or real-world events that were too hard to capture digitally, can now be captured through sensors. Furthermore, the data can be aggregated and analysed on scalable platforms, and then changes to building systems can be securely automated.

### The intelligent building “buzz”

Intelligent Buildings and the Internet of Things in real estate are much talked-about, and for good reason. Analyst predictions suggest that there will be over 10 billion connected devices deployed in real estate by 2020 (Memoori).

Often the term “Intelligent Building” is applied to eye-catching new-build headquarters, but not to pre-existing buildings. It’s estimated that 85% of building stock that will exist in 2050, is already in existence today (Existing Homes Alliance). There’s a significant opportunity to retrofit existing spaces with this technology.

Historically, traditional building subsystems could be centrally controlled and were connected with one another. However, a building being connected doesn’t equate to it being intelligent. Data from these subsystems needs to be shared and augmented by other sensor data, so that robust insights can be derived and used to help solve wider business problems. While knowing where to find a free desk is useful, being directed to sit next to a previously unfamiliar colleague who shares your interests to try and create an opportunity for serendipity – that’s intelligent. Developments in technologies allow these systems to learn how a building is used over time and to predict what should be done to maintain optimum comfort in the most energy efficient way.

### Approach to intelligence in 1NSS

In 1NSS, a central platform connects traditional building subsystems with data from new sensors. In addition to maintaining a comfortable working

environment (temperature and air quality), monitoring the usage of desks, non-traditional working spaces and meeting rooms is key for Deloitte to understand how people use the building and where to make improvements. A mixture of security card access data, anonymised Wi-Fi and wired network statistics and optical sensor technology has been installed to present employees with information on available working spaces when they visit the office.

By installing the underlying infrastructure and creating a system where this data comes together for storage and analysis, Deloitte has created a foundation on which they can continue to iterate. The opening of 1NSS is only day one for this intelligent building and represents the beginning of Deloitte UK’s journey in making use of these new tools. We expect to see more features introduced over the coming months and years, leading to ongoing improvements in the day to day lives of employees and insights to create efficiency savings for the building’s operational teams.

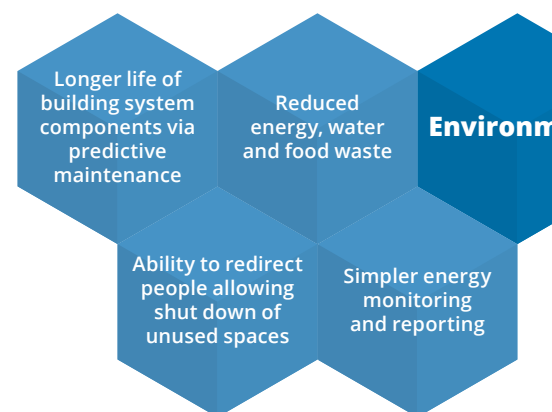
### Enabling the workforce

Increasingly, drivers such as automation, varied workforce types (e.g. the gig economy), and flexible working are changing the nature of work and how workforces operate. To succeed in a continually disrupted future, organisations must consider 3 facets: work, worker and workplace. 1NSS contributes to our compelling employee experience, and this is in conjunction with rethinking how work is done and using technology to work in the most effective and efficient ways.

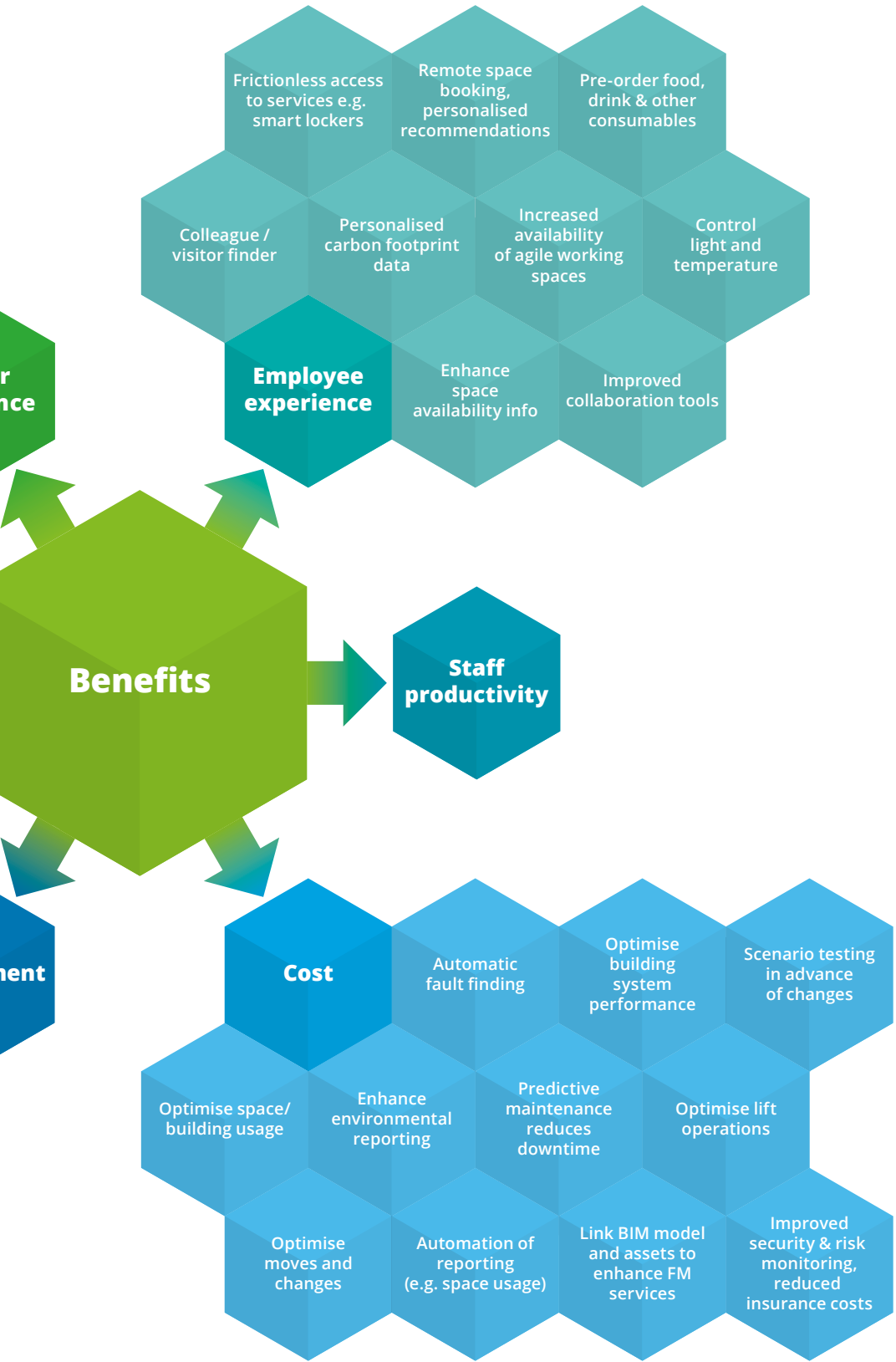
Workspace is more than a physical environment. We think of it as a setting, a stage set on which you can perform and do your best work. It’s not just about buildings.

From the introduction to Deloitte employees about 1NSS and the wider workspace programme: 1NSS is more than just fresh facilities and modern technology.

### A simple benefits framework for Intelligent Building



Buildings



# Contacts

For information about how we're helping clients understand Intelligent Buildings as part of the Global Consulting "Future of Work" agenda, contact Andrew Carey, for information on the Internet of Things more broadly, contact Ben Steward, and for information on the impact of the Future of Work on work and the worker, contact Neera Ridler-Mayor.



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