

THE FUTURE OF FACILITIES MANAGEMENT: WHAT TO CONSIDER
BEFORE INSTALLING SMART TECHNOLOGY INTO YOUR BUILDINGS



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The Facilities Manager role can cover a range of disciplines, so most Facilities Managers are handling lots of different tasks day to day. While some aspects of the role are unlikely to ever change (such as building maintenance, repairs, refurbishment and dilapidation), technology is constantly developing to make the life of a Facilities Manager easier.

Systems that intelligently integrate the demands of people, systems and buildings can reduce overheads and deliver savings in terms of energy, maintenance and productivity. They can also help to meet **Energy Savings Opportunity Scheme (ESOS)** requirements. Recent technological innovations are moving towards just this, with more automated, increasingly advanced buildings systems. Smart Building Controls (automated or computer integrated mechanical or electrical building systems) enable a building's systems to be managed through a single interface, adapting and responding to the conditions/occupancy of the building.



For new buildings, Smart Building Controls can be built in and included in its Building Information Modelling (BIM - the process of modelling the physical and functional characteristics of a building to improve the way buildings are designed and constructed). 'Lifecycle BIM', the term given to BIM that extends beyond the design of the building. It offers improvements to the systems and functions of a business, including maintenance, operation, occupancy and end of life. This offers improved cost cycle control, reduced communication failures, optimised maintenance, rapid information sharing (particularly of Operations & Maintenance manuals). But for the many Facilities Managers looking after older buildings, installing Smart Building Controls is still an excellent idea, if well thought through.



A SMART RETROFIT DOESN'T HAVE TO MEAN TOTAL REPLACEMENT.

Smart building management technology can be deployed in any building with at least a few automated systems. If you're concerned about the level of investment required to retrofit your manufacturing, office or technical facilities, it's worth knowing that, by strategically investing only in certain, carefully selected equipment upgrades and implementing a smart building management service, you should be able to achieve energy savings. Even limited retrofits pay off quickly in terms of energy savings and building performance when combined with a smart building management system, allowing Facilities Managers to make more accurate budget forecasts and repair and procurement plans.

The appeal of investing in smart building technologies is clear - energy savings, more accurate budgeting, happier occupants and better building performance.

Here are some common places to start:

- 1** The main benefit is automated intelligent energy management. Your building will react to the people inside it, adjusting heating, lighting and air conditioning in rooms depending on whether rooms are occupied or not, saving energy in unoccupied areas.
- 2** Smart controls also provide huge quantities of data, that can be analysed to generate even greater efficiency savings. For example, looking at the energy management data generated by lighting and heating systems, it's easy to work out if it's worth upgrading to more efficient systems and where to start the process.
- 3** Smart lighting: EESI can design and install smart lighting systems that will produce significant energy savings, with automated controls, plug upgrades, occupancy sensors, and digital readouts of energy performance - improved lighting can also improve work performance, giving a 'double win'.
- 4** Demand control ventilation (DCV): Some intelligent DCV systems can be used with new and legacy HVAC (heating, ventilation and air control) systems, providing significant benefits without HVAC replacement, to reduce fuel consumption while improving occupant comfort.



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Advanced security systems: An intelligent security system designed and installed by EESI can provide sophisticated capabilities, such as visual recognition and data analytics, and centralised control of user authorisation and secured areas.

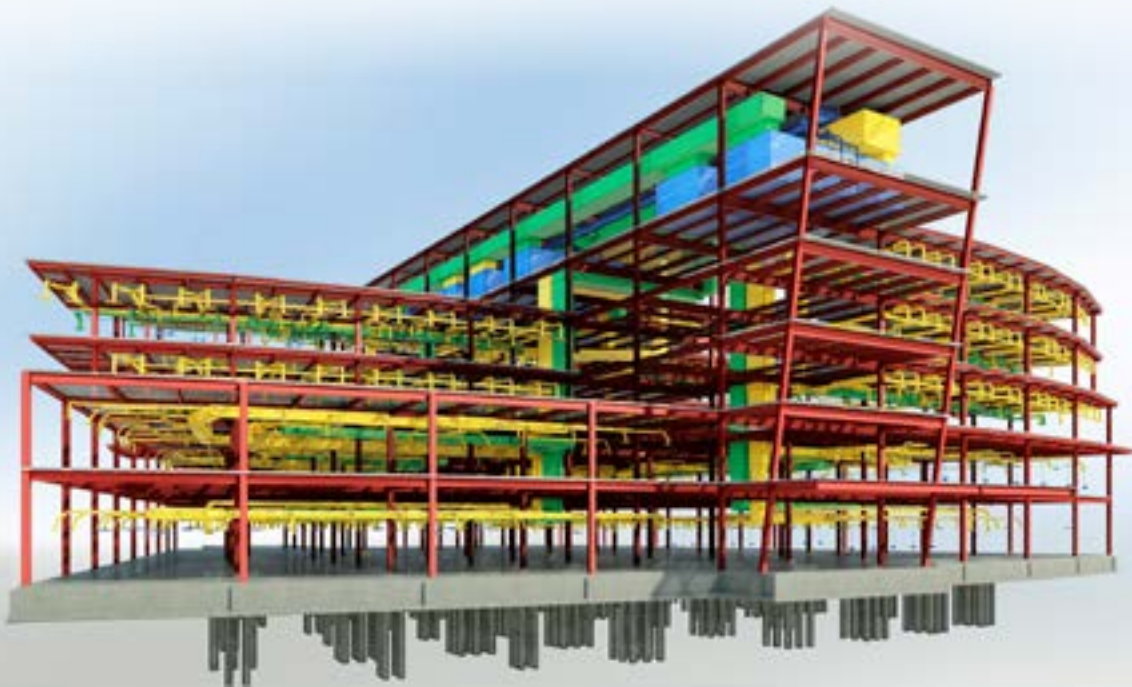
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Energy efficiency and production: Why stop with simply reducing energy? A smart building can return excess energy to the grid and respond to new services emerging from the growth of smart grids. Smart buildings also make it easier to adopt sub-metering, giving tenants more control over their energy use.

The key to a successful smart retrofit is to know your facility priorities - and the key to achieving rapid investment payback is to take a holistic approach.

Evaluate capital projects: EESI can help you to rank capital projects by energy impact potential.

Perform an energy study: Let EESI review all aspects of your energy consumption to create a baseline energy model against which potential projects can be compared. Plot costs, savings and performance indicators across potential projects to narrow down the most ROI-friendly options. Then, rather than pursuing every possible energy saving opportunity, narrow your choices down to the 'must-do' projects that will yield the greatest return. Modern building science, IT telecommunications, data storage and analytics are making facilities and, in turn, Facilities Managers, smarter than ever. Intelligent building technologies and management systems are improving buildings of all ages, bringing older ones into a smart new future.





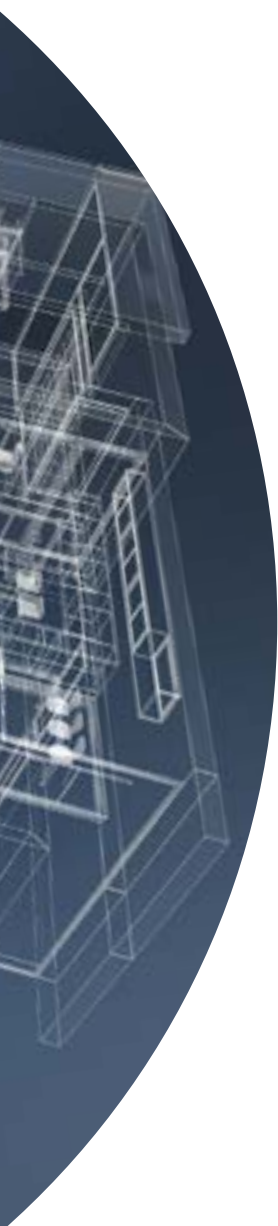
WHY CHOOSE EESI?

EESI stays at the cutting edge of industry improvements, ensuring that our designers and engineers have the information they need to help you take advantage of technological developments that can make your building(s) more efficient. Our teams can integrate with BIM solutions, utilising the information held in a BIM to design and deliver more effective installation, servicing and maintenance. An existing BIM can be used to model:

- lighting design
- air conditioning
- heating
- ventilation
- security systems and fire alarms

This can provide a simple visual depiction of how an area will be lit, its airflow and even temperature maps. It can show how a building will look after refurbishment, as well as provide detailed lifecycle costs and savings, allowing for a more accurate profitability analysis and lifetime ROI of the system.


For an assessment of your current BIM use, more information on smart building controls or to find out how EESI can integrate with a BIM to automate facilities or systems maintenance, contact us on 01453 821 550 or email info@eesi.co.uk.



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