BUILDINGS

TOP TIPS

Seven Steps to Get Started with Smart Buildings

Could your building be smarter? Only 1-2% of commercial buildings have incorporated "smart technologies with fully integrated products and services," according to BSRIA Inc.[1] While 40% have some level of smartness, the majority have yet to be connected.

Embracing advanced technologies such as intelligent controls, the Internet of Things (IoT), data analytics, and even AI are key strategies to better facility performance. But a smart building can be daunting to develop, especially if you manage an older property. Use these seven steps as a starting point to increase your operational efficiency.

1

STEP 1 – GET CONNECTED

Smart buildings can communicate. When designing your control system, it may be necessary to first adopt a protocol standard such as BACnet. This ensures that devices from different manufacturers can communicate with each other, which enables interoperability.

Data from smart sensors should also be consolidated into a centralized platform like a building automation system (BAS). This allows operators to manage building-wide systems like lighting and HVAC from a single interface, enabling facility managers to make data-driven decisions like other departments within the business.

2

STEP 2 – GET TOOLS TO THE RIGHT PEOPLE

Smart buildings are powered by smart people. Every organization needs to decide who should have access to automation tools in order to facilitate collaboration and project coordination. Even third-party service partners and technicians might need the ability to interact with your data. Make sure everyone has proper training so they feel confident using the technology.

3

STEP 3 – SET TANGIBLE TARGETS

Smart buildings need specific outcomes. Like beginning a fitness plan, start with the end goal firmly in mind. To avoid getting overwhelmed by the number of potential objectives, pick three to prioritize.

Common benchmarks to consider:

- Satisfy a new emissions target
- Safeguard against downtime
- Prioritize occupant comfort
- Reduce energy consumption

The good news is that many outcomes are complementary rather than competing. For example, conserving energy will lower operating costs while also fulfilling requirements for ESG (environment, social and governance). Look for improvement opportunities that will yield multiple benefits.

4

STEP 4 – SPECIFY A TIMELINE

Smart buildings have S.M.A.R.T. targets. These outcomes should be **S**pecific, **M**easurable, **A**chievable, **R**elevant and **T**ime-bound. When clearly defined, they provide a concrete starting and end point.

Embrace milestones for any target that needs an extended timeline. For example, it isn't realistic to achieve a 50% reduction in emissions in a single year. Divide the end goal into phases instead, such as a 10% decrease per year, with full target completion within five years.

It's also good to anticipate the resources needed to reach a benchmark. For example, if your goal is "to connect all HVAC equipment so it can be serviced remotely by the end of next quarter," you'll need to

consider the necessary steps to reach this goal and how long these steps will take. You might need to secure funding approval, order and receive retrofit parts, and contract technicians — all of which can impact the project schedule.

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STEP 5 – TRACK THE OUTCOMES

Smart buildings benefit from documentation. It's important to demonstrate the many advantages of automation and interoperability. Many performance metrics also require verification that can be shared with company leadership, shareholder reports, certification programs or government entities.

It's especially compelling to capture progress with numbers. The easiest to track are reduction results in utility spend, water consumption or emissions. These figures are also your foundation for calculating ROI and payback periods — data that is compelling to the C-suite if you need to justify an expenditure.

What happens if an unexpected weather event, modifications to operational parameters, or new regulations are thrown into the mix? Hard numbers are also helpful if you hit a flatline in your progress or the goalposts have moved. You have to know where you started and where you currently are to determine how to make the appropriate adjustments moving forward.

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STEP 6 – STRIVE FOR CONTINUOUS IMPROVEMENT

A smart building requires dynamic management. It's not a "set it and forget it" approach. Efficiency will degrade if performance isn't constantly monitored and finetuned, no matter how advanced the technology is.

However, this level of hands-on attention means that facility operators can participate in continuous improvement. By constantly elevating performance, building managers will be able to keep pace with the principles of Lean Six Sigma or Total Quality Management.

7

STEP 7 – SHOWCASE THE RESULTS

Smart buildings should be celebrated. Much of facility operations is behind the scenes, hidden from the view of occupants and leadership alike. Every completed project and milestone achieved is an accomplishment worth highlighting.

References

1. *BSRIA showcases insight into the latest global HVAC trends*