



White Paper 3: What's Required to Design and Build a Smart Building (from development and ideation to day 2 operations with the Digital Twin)

I assume you've already been exposed to use cases and benefits of a smart building, but now you're starting to think practically about what's required to build one for your organization. The following topic list is provided to give you a high-level outline of the steps required to build a world class facility. While the steps are similar across building types (from schools and hospitals to datacenters and convenience marts) the technology consultants, architects, engineers, general contractors and electricians may have a variety of different experiences.

In every successful smart building outcome, planning around needs and desired use cases makes a huge difference. You must visualize and articulate the end state before creating the development roadmap. This post is not intended to be a comprehensive list; it's intended to simply give you a high-level roadmap.

Designing an intelligent building demands planning. You'll need the right team at every step of the process.

1. Build the team.
2. Examine needs and define goals. Create a list of facility must haves—from number of offices and parking spaces to gym and cafeteria... Refine the list of needs, wants and aspirations.
3. Ask the team again to make sure the right people are included. Do you need someone else from technology? IT? Facilities? Employee Engagement? Security? What about application experts? Do you have an architect? MEP? OT? Sustainability? Intelligent Building Experts/Consultants?
4. Ideate.

5. Create a list of “must haves”; Create a list of applications (do you need license plate readers? Wayfinding? People Counting? Bathroom stall cleaning compliance? Energy monitoring with lobby dashboards? Air quality monitoring that tracks temp, RH, CO2, and particulates...)
6. Select the architect/MEPs/Tech consultants. MEPs are often not tech consultants.
7. The tech consultant will lead MSI selection and facilitate technology integration.
8. Create the building specifications.
9. Hire the GC and subs.
10. Select your technologies; create blueprints.
11. Install the technology. Test it. Confirm that it conforms to the manufacturer’s installation requirements. In many cases, low voltage solutions are eligible for a 30- or 40-year installation warranties.
12. Commission the systems. Obtain your occupancy permit. Move in. Operate the building.
13. Perform an after-action review with the clients. How was the process? Does the building meet the goals? What went well? What didn’t? What would you change? Review these feedback documents before building the next building.

Next Steps

At Cinch IoT we’re committed to helping companies optimize their building operations and reduce costs.

If you still have questions, call us, we’re happy to have a conversation about how we can help you. Our team has worked on hundreds of smart building projects with many of the leading architects, designers, engineers, technology consultants, GCs and EC’s in the world. No matter where your project is located, we can find the right people and partners to help.

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