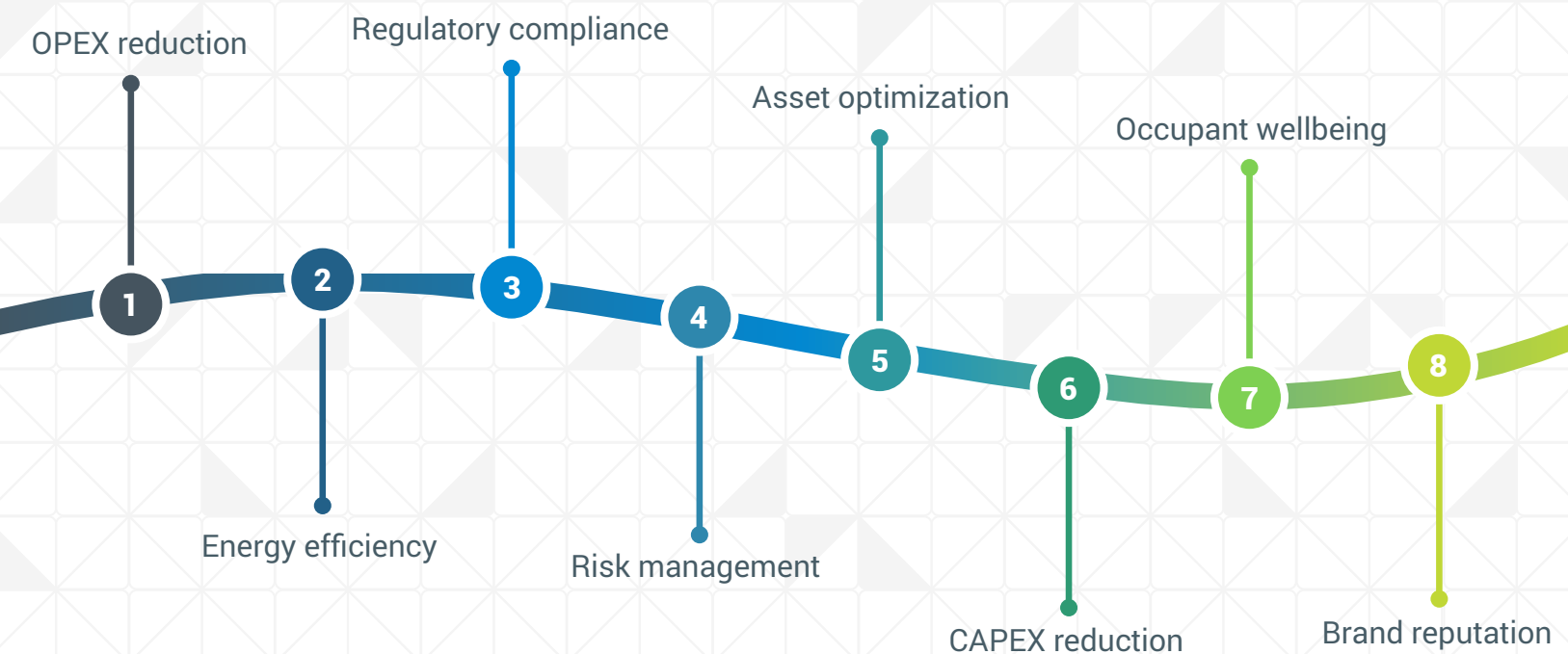




Smart building implementation checklist



Smart building implementation checklist

Use the set of questions below to take the guesswork out of planning for a program and evaluating vendors.

STRATEGY

Measure of success

- What do you want to achieve with a smart building solution?
- What does ROI look like for your company?
- What metrics do you want to measure and improve on?

i.e. reduce energy consumption, increase maintenance efficiency, better manage staffing needs, improve tenant comfort

- How do you plan to phase the roll-out?
- Do you need to work with an industry expert or consultant to better understand your unique challenges and goals?
- Are you interested in centralizing operations?

i.e. minimizing the number of software packages you must install and coordinating operations from a Building Operations Center (BOC)

Company landscape

- What systems do you leverage today? What types of data do you have access to today (i.e. BMS, building meters, sub-meters, IEQ sensors, people counters)? What missing pieces are you looking for?

- How will you future-proof your portfolio to avoid expensive commitments to proprietary hardware solutions?
- What are your company policies on cybersecurity? Who needs to sign off on solutions to ensure those cybersecurity policies are being adhered to?

Data storage

- Where is your operations, asset management and utility data kept?

i.e. in various systems, sub systems, spreadsheets or outsourced to service providers

- Do you own and / or have access to all your data?
- Do your BMS / BAS / control systems at the buildings permanently store interval data?
- Does your IT group prefer cloud or on-premise software?
- How do your data systems interact? For example, do you have a central data warehouse for operational data or does it reside in siloed systems and platforms?
- What tools does your organization support or provide for data visualization and analytics?

Use case

- Who are the project stakeholders?
- What matters to each stakeholder?

i.e. streamlined portfolio reporting, real-time analysis, proactive maintenance, equipment lifecycle cost analysis, Total Cost of Ownership (TCO), cross functional communication, developing a baseline of building performance, benchmark analysis

- How will end users interact with the technology in their day-to-day work?
- Are there any new objectives or metrics that the smart building program could introduce for users?
- What training is necessary to engage users with the technology and data?

Vendor management

- Is there an opportunity to better manage vendors and service contractors?
i.e. automation companies or maintenance technicians?
- Do you outsource operations / maintenance / services?
i.e. CBRE, JLL, C&W, Knight Frank, Spotless, Grosvenor Engineering
- If you outsource facilities operations to a third party or various regions of your portfolio to the best local vendor, how do you compare vendor performance?
- When contract values change or increase, what leverage do you have to negotiate competitive rates?
- Do you triage and remotely investigate tenant/occupant requests before generating work orders and/or sending technicians to site?

Real-time analytics

- How can you gain business intelligence by comparing various data sets (i.e. indoor air quality, people counting, temperature) with energy consumption? Where do these data sets reside today?
- How do you manage utility consumption?
i.e. water, electricity, waste
- Do you use data to measure how well core building systems like HVAC and lighting are operating?

Energy management

- How do you currently identify the root causes and drivers of energy consumption and peak demand?
- Have you set baselines, targets and long-term goals?

Tenant satisfaction and comfort

- What are your key performance indicators for measuring tenant comfort?

i.e. HVAC temperature / IEQ levels, parking lot security, reliable elevators, clean bathrooms

- What priority does your organization assign to tenant comfort vs. lowering operating costs? (*Note: There is often a trade-off*)
- How do you prove to your leadership / investors that you're improving on tenant comfort year-over-year?

Occupancy and space utilization

- How important is space occupancy and utilization to your organization?
- Do you currently collect any metrics on this? If so, what and how? Is there value in combining data from disparate systems?

For example, would it impact your real estate strategy to cross-analyze access control or badging data that measures total occupants, with meeting room booking system data that can indicate room booking hours?

DESIGN

Security

- What are your network / security requirements?
- Is your building network separate from your corporate network (physically or logically)? Or are they sharing the same infrastructure?
- Who manages external internet connections for remote access?

Note: This is typically provided by automation vendors without knowledge from corporate IT groups.

- Will you need to gain agreement from each site to participate in the program?

Communication

- Which protocols do your systems and devices use to communicate (i.e. BACnet / IP, Modbus TCP, etc.)? Are they interoperable (i.e. open or published or closed protocols for communication) or proprietary?
- Are you considering standardizing your suppliers or protocols?

Control

- Does your equipment have digital controls (“DDC”)?
- Have you standardized protocols for any equipment selections?

i.e. Modbus, BacNetIP etc.

- Have you standardized a naming convention for BMS/BAS/controls installations?

- Has your organization discussed implementing a unified user interface to minimize the number of systems that require logins or standardizing the user interface for all control systems?
- Have you implemented any Fault Detection & Diagnostics (“FDD”) on systems and equipment at any of your properties?

Meters

- Has your organization invested in sub-metering? Is that data currently available to all the key stakeholders?
- What data properties do your meters monitor?
i.e. power, current, etc.
- Is consistent utility metering and sub-metering an important baseline level of infrastructure for your portfolio? Or do you prefer deeper integration of an existing automation system?

IMPLEMENTATION

Roles and Responsibilities

- What are the key implementation milestones? What is the timeline to hit these milestones?
- Who are your BMS and service contractors? What role do they play today? Who has access to what data?
- How do you measure the performance of people involved in building operations? What KPIs are in place to hold vendors accountable?
- Who, internally AND externally, will use the technology? How will they receive training? How will you measure user engagement?

Architecture

- What is the IP network architecture and internet connectivity?
- What is the BMS / BAS, lighting control, metering network architecture?
- Where are the physical locations for appliance installation? What are the IP network settings for devices?
- What are the selected points of device integration?

About Switch

Switch Automation is a global real estate software company that helps property owners and facility managers reduce operating costs, improve energy efficiency and deliver exceptional occupant satisfaction. Our comprehensive smart building platform integrates with traditional building systems as well as Internet of Things (IoT) technologies to analyze, automate and control assets in real-time. We serve enterprise customers and partners in a variety of industries including financial services, retail, grocery, commercial real estate and more. Learn how Switch Automation creates technology to bring people and planet to the center of building operations at www.switchautomation.com.