**Facility Manager Guide
to ABB Cylon® solutions**

Make your life easier with
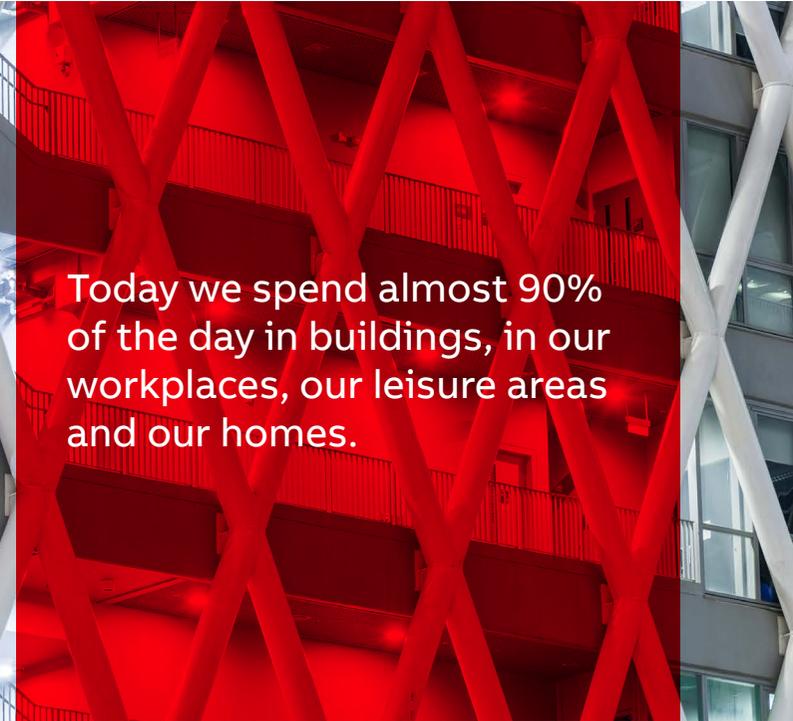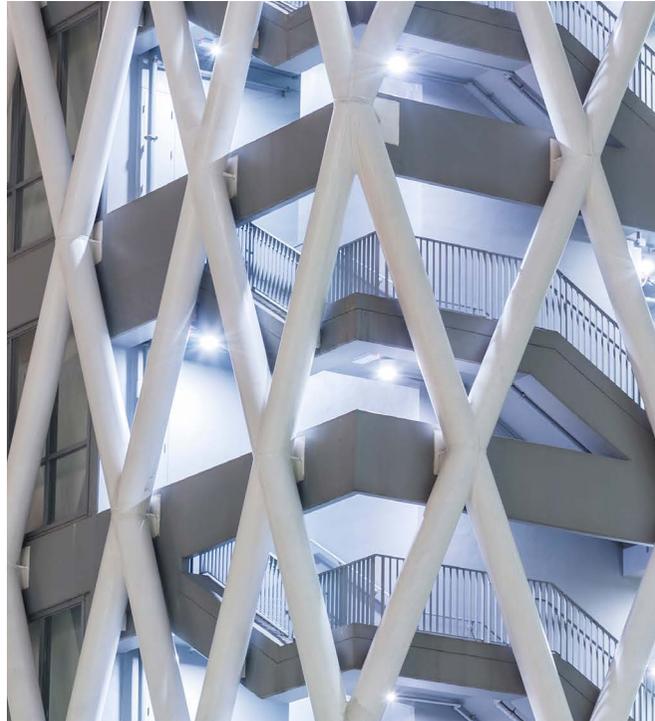the latest in smart building
technology

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Content

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Efficient, scalable, easy-to-use: ABB Cylon®

Today we spend almost 90% of the day in buildings, in our workplaces, our leisure areas and our homes. Given the dramatic increases in utility costs and the forecast for future price hikes, energy management is now a board-level issue in all organizations. However, the energy management needs of organizations large and small are changing faster than ever. More remote working and digital meetings are reducing energy demand and emissions in many commercial buildings, while operations are becoming smarter.

Technologies like IoT are crucial in helping us advance to the buildings of tomorrow, providing spaces that respond intuitively to our requirements and adjust automatically. Creating spaces people want to work in.

With the growing awareness of sustainability, energy efficiency also plays an important role in smart buildings. Some will find it challenging to balance sustainability objectives with profitability. In some cases, more volatile energy costs may also work against sustainability objectives, changing financial models.

So, what can be done today? Considering that heating and cooling accounts for 20-40% of energy costs in a typical office environment, monitoring and optimization should be at the heart of every organization's strategy. Continuous monitoring

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and management of HVAC and lighting, the largest users of energy in modern buildings, can prevent up to 20% building energy drift per annum, caused by unexpected and unscheduled change in the level and type of usage, unpredicted changes in weather conditions, and fluctuating occupancy rates, something that is becoming more prevalent with the increased demand for remote working.

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ABB Cylon®

ABB Cylon delivers scalable, front-end building automation solutions, open protocol building controls, and cloud-based energy analytic tools to meet the needs of today's high-performance, green-conscious commercial facilities.

ABB Cylon can help you integrate smart building solutions into the planning of new facilities, retrofitting to an existing site, or upgrading current systems in a way that optimizes return on investment.

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Attract and retain high value tenants

ABB Cylon Smart building solutions provide the flexibility building owners and tenants require to control and optimize workspaces while managing energy usage and reducing costs. Smart buildings attract and appeal to the demands of high-quality tenants through the installation, management, and maintenance of smart HVAC, lighting, and room controls that provide improved air quality, light, shading and temperature control, creating an ideal environment for greater work productivity for occupants, while increasing the value of a building for investors and building owners.

The high level of configurability of the ABB system also enables the building owner to accommodate multi-tenants' requirements very quickly and with minimum cost.

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Balancing energy consumption and occupant comfort
## Intelligent IoT BEMS control beyond automation

A well commissioned and programmed BMS will deliver on schedules, controlling lighting and HVAC comfort levels at set times/days according to expected occupancy. An intelligent IoT BMS goes beyond schedules and expectations and operates on actual sensor data to make adjustments, control lighting, and adjust HVAC conditions depending on occupancy, with no need to worry about lights being left on or wasted heating/cooling energy in empty meeting rooms all day.

And if it's a brighter warmer day than expected, external temperature sensors, weather data, room light levels, and temperature sensors feed information back to the BMS causing it to respond and make intelligent adjustments to lighting, shading, and HVAC to ensure occupant comfort is always maintained.

Put control in users' hands
With on-site UI eXplore, users can easily manage operating parameters of the connected systems: monitoring values, equipment, and system status viewing trends and active system alarms to perform diagnostics and take actions such as overriding or adjusting setpoints.

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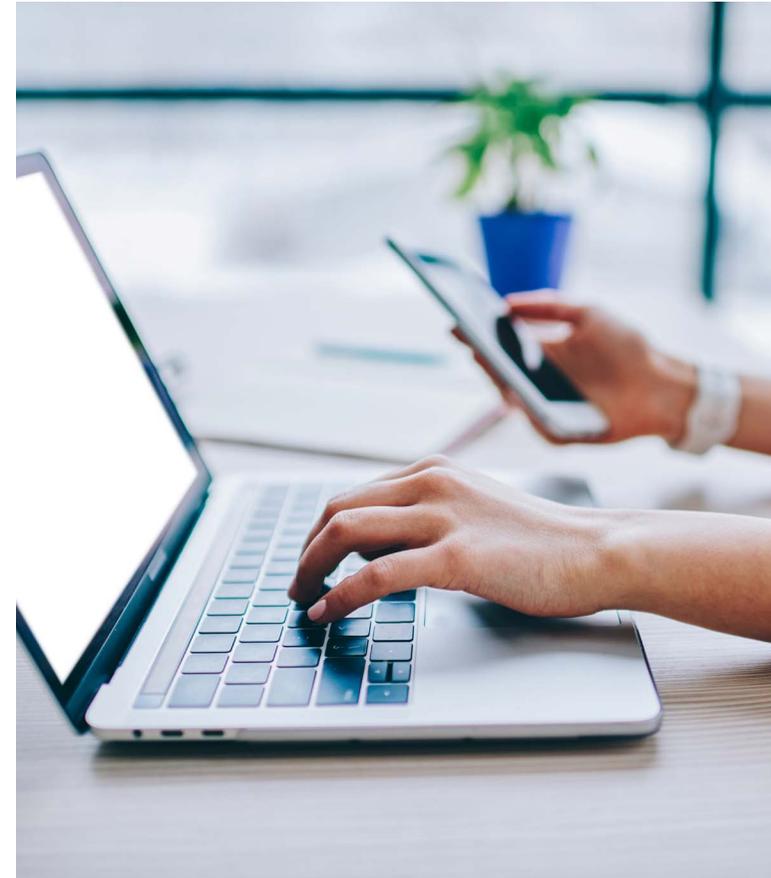
Safety and wellbeing
Air quality and adequate ventilation play a key role in maintaining healthy environments for employees and visitors.

Latest figures show that indoor air pollution is 3.5 times higher on average inside a building compared with outside1, with the World Health Organization citing the issue as "the world's largest single environmental health risk."

Adequate and appropriate ventilation is the key to improving indoor air quality (IAQ) and reducing exposure to volatile organic compounds (VOCs). This contributes towards a healthy environment, protects the health of building occupants and ensures productivity.

Research also shows that poor IAQ can cause headaches, throat and eye irritation, lack of concentration and decreased pxroductivity, with VOCs being linked to sick building syndrome.

Indoor air quality has been an important issue for many years, but now the added risk of airborne transmissible viruses raises additional concerns. There is a need to take concerted action to reassure occupants that the environment is as safe and healthy as possible.

ABB FusionAir Smart Sensor helps to address these growing concerns about indoor air quality and promotes healthy, safe and comfortable environments for users. FusionAir Smart Sensor

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provides a touch-free room sensor with optional room control sensors capable of monitoring the temperature, humidity, carbon dioxide (CO2) and VOCs to improve the overall IAQ and reduce the risk of viral exposure.

In addition to temperature, humidity, CO2 and VOC sensing, the FusionAir Smart Sensor can also deliver intelligent control of HVAC, lighting and blinds via connection to passive infrared (PIR) sensors or door entry data. The FusionAir Smart

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Sensor feeds information back to the connected controller triggering it to react and make intelligent adjustments to lighting, shading, and HVAC, ensuring lights are not left on in empty meeting rooms and costly HVAC is turned off when not required.

FusionAir Smart Sensor features optional touch-free control via an app for temperature adjustment, HVAC, lighting, and sun blind control. It allows contactless control, providing additional safety against the transmission of surface-borne diseases for building occupants.

When connected to ABB Cylon ASPECT®, ABB's scalable building energy management and control solution, bookable meeting rooms can be set to auto-initiate safe preparation prior to usage, ensuring the temperature and humidity are perfect, the lighting and sun shading are adjusted, and the overall indoor air quality is as safe as possible.

Air safety levels are continuously checked when the room is occupied to provide a safe indoor environment. Occupants will be alerted via visual indicators, and the FusionAir Smart Sensor will inform the building management system to take remedial action if required. When the room is vacated, the FusionAir Smart Sensor will initiate an automatic purge of the air in the room through highspeed accelerating air exchange, ready for the next occupants.

FusionAir Smart Sensor is quick and easy to install, reduces the need for multiple sensors and enhances the overall look and feel of a space. Available with a range of sensing options, FusionAir is ideal for use in commercial buildings, hotels, educational settings, or shared recreational environments.

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Day to day BMS management
Reduce time spent on analysis across mixed platforms

Centralized supervision simplifies the management of a single building or across an estate irrespective of geographical location. Enhance your operational efficiency with 24/7 web-enabled access to your BEMS. Change point values, alarms, schedules, graphics, trends, and system variables on the fly.

Award-winning ABB Cylon ASPECT® is a powerful and dynamic interface that works seamlessly with commonly-used business tools and any standard Internet browser enabling users to monitor and control their facilities from anywhere at any time.

ABB Cylon ASPECT® provides the tools you need to gain insight into your buildings' performance and arms you with the intelligence to react to any situation that may adversely affect energy costs, business performance and ultimately your bottom line.

ASPECT® collects data every five seconds and via services such as Pushover issuing alerts immediately, so you can monitor equipment

performance, track anomalies of operation outside of setpoints and acceptable parameters, and respond to resolve any issues quickly, reducing downtime and ensuring consistent levels of occupant comfort. Early alerts also enable service teams to be on site quicker with the correct tools and equipment to take appropriate action.

Straightforward and uncomplicated
With ABB Cylon ASPECT® you no longer need to learn how to operate a separate, proprietary building energy management system (BEMS) to get real-time information, analyze data, make

operational decisions, or even to change settings. You can do it all, more naturally, through the business programs and apps you are already using on your computer, tablet and smartphone. For example, schedule building zones automatically through Microsoft Outlook, Google Calendar, or Apple iCal. Simply book the room and the zone is scheduled.

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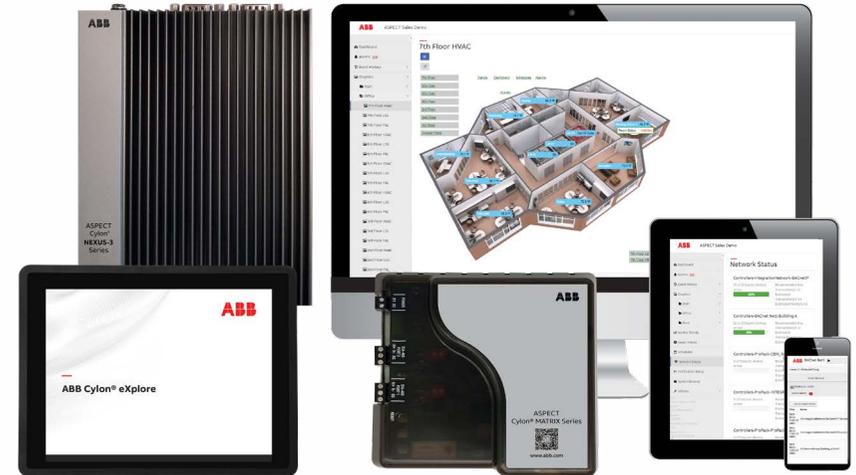
Addressing changing needs

What if you have multiple tenants with various or even opposing requirements? You know this can be costly: our flexible design means you can always accommodate multi-tenants' requirements quickly and at minimum cost.

ABB Cylon BMS controllers are uniquely freely programmable, support multi-protocol communications and offer enhanced flexibility. With an ABB Cylon controller, you can remotely change the program once installed, allowing for the most innovative strategy updates, ensuring the most efficient strategies are deployed.

Our controllers feature expansion modules that are available in a variety of options to allow maximum flexibility in achieving the required point configuration to support changing needs.

Replacing or extending I/O points is quick and easy, as our extension modules snap together without the need for the system integrator to prepare special cabling. This coupled with pre-configuration via the dip switch addressing facility reduces on-site installation time, simplifies setup and system checks, and reduces the skill level requirement for a hardware upgrade or expansion.

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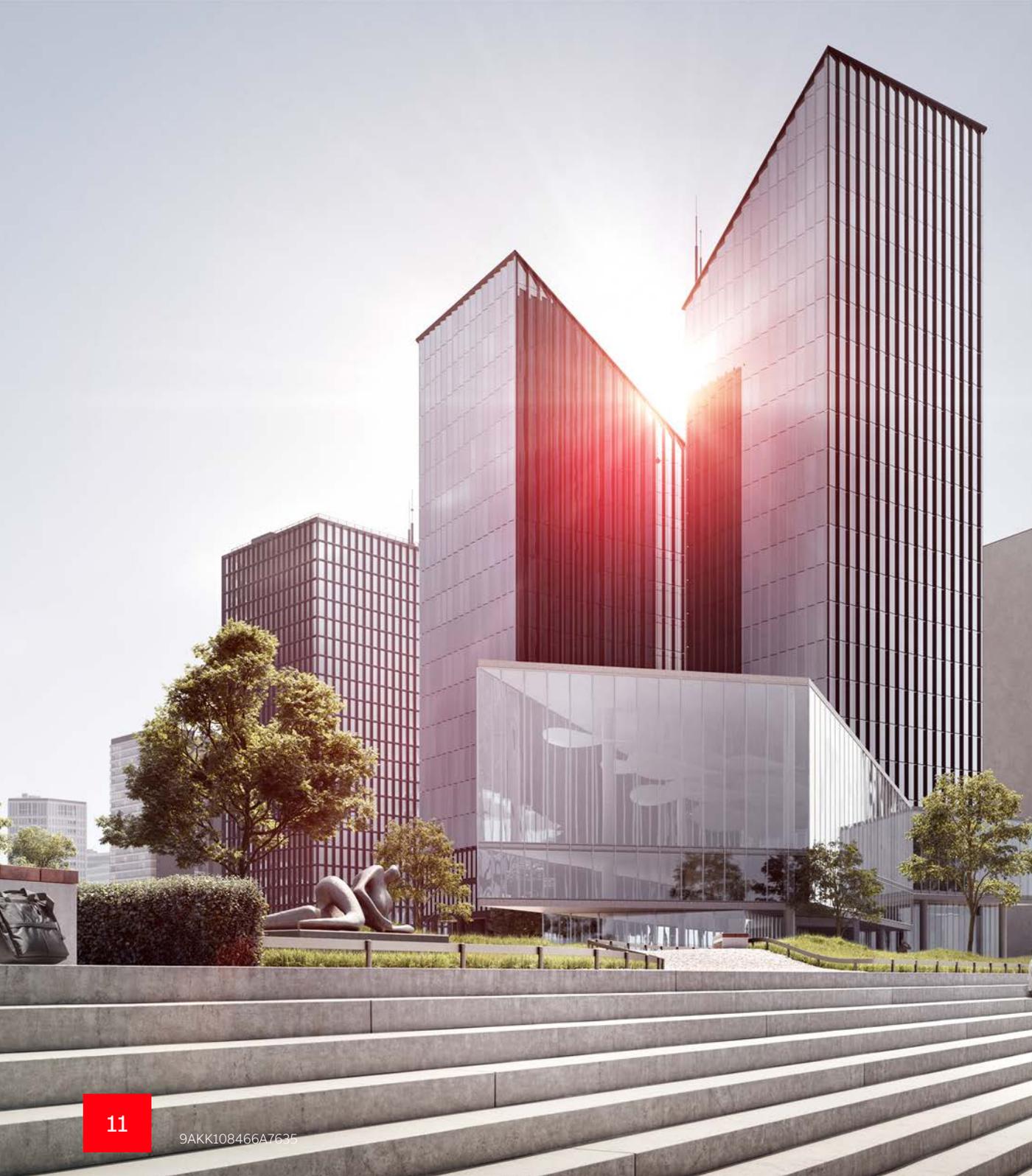
Seamless integration

ABB Cylon offers the BACnet open protocol that creates greater interoperability, bringing products and information together regardless of sensor or control manufacturer. By deploying the BACnet infrastructure from ABB, users are not locked into using control systems from any one supplier, providing more choice and more control.

Simplified integration is available with many third-party, non-HVAC systems, including lighting and energy management. ABB Cylon's open platform solutions make integration with third-party systems and legacy systems easy, bringing building and energy management systems together.

ABB Cylon BMS integrates seamlessly across IT networks, between buildings, and between remote sites, making it ideal for multisite and campus building management.

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Flexibility for a smarter world
Delivering the best-in-class IoT solution to address the increasing need for connected control now and into the future.

Our scalable design and flexible building solutions allow smart devices, systems, and people to connect more easily. Our range of IP controllers built on an open platform provides the interconnectivity and flexibility required to create smarter buildings.

Extending I/O or future-proofing a site is quick and easy with reduced inventory requirements thanks to our patented UniPut™ I/O technology for flexible point configuration and flexibility in strategy changes, which also has the benefit of minimizing the cost of design changes even at late stages in commissioning.

With flexibility in strategy changes and maximized control utilization our range of controllers is ideally suited to the changing demands of most facilities.

Highly flexible, easily extendable, ABB Cylon BACnet also allows for straightforward expansion or upgrades to the BMS that may be required in years to come, future-proofing today's BMS installations.
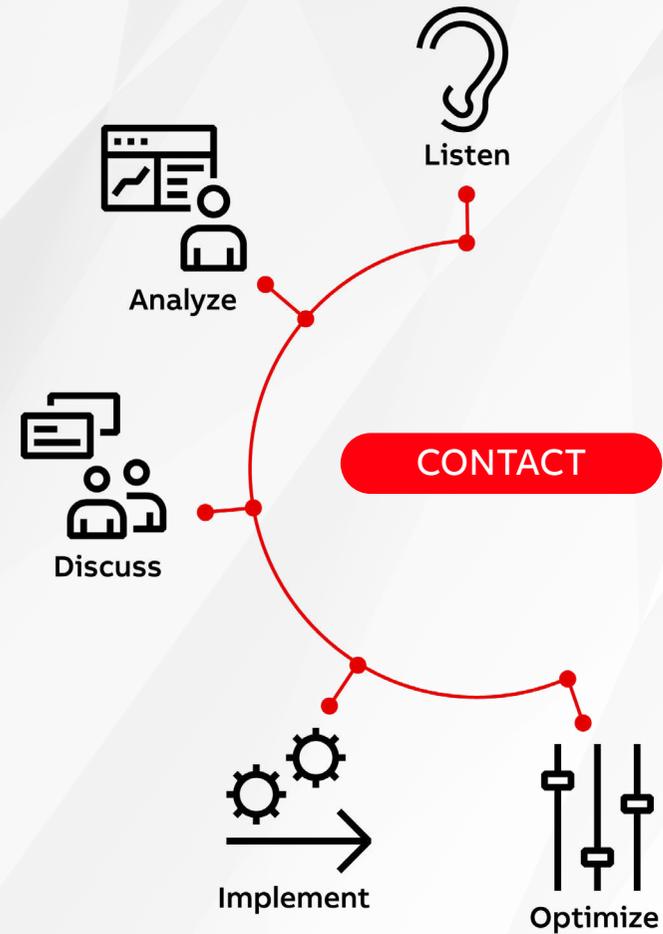
We hope this guideline has given you an effective and useful idea of the various benefits of what is a highly advanced and flexible smart building system. ABB Cylon will no doubt make your life much easier, allowing you to satisfy the various demands made from all sides on you as the facility manager. Layout changes, different occupant types, building use, regulations: all of these can change. What will remain, though, is ABB Cylon. Working for you.

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Contact
We are the partner that can power and digitalize your future.

Together we can ensure you reach efficiency providing scalable automation and energy control of any size commercial or industrial building, thanks to ABB Cylon® Smart Building Solutions.

Listen

Analyze

Discuss

CONTACT

Implement

Optimize

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