R&D CENTER GETS
A HEALTHY DOSE OF INNOVATION

Honeywell deploys its Healthy Buildings solutions to create a safer environment at its R&D facility in Bangalore.

Case Study

"Our work in Bangalore proves that we can rapidly transform a standard building into a healthier building by implementing the right technologies. Our targeted approach and analytics platform help building owners create and maintain an indoor environment that puts well-being first."

MANISH SHARMA

Vice President and
Chief Technology Officer

Honeywell Building Technologies

Honeywell

OVERVIEW

During the pandemic lockdown, engineers at Honeywell's R&D campus in Bangalore needed access to on-site laboratories to support product innovation. To help employees be safer and to keep operations moving, Honeywell deployed its Healthy Building solutions to address critical business needs and improve its customer offerings. The project team was able to quickly turn the standard building into a healthier building by designing a custom-built solution that incorporated air quality, security, touchless technology, monitoring and compliance elements. The result is a healthier environment that can be visibly demonstrated to reassure occupants that the building is working to make them safer.

THE CHALLENGE

The Honeywell Bangalore Campus 2 facility is an important innovation hub for Honeywell across business units and geographical markets with typically more than 3,850 employees in the building. Employees on campus are responsible for critical research and development needs of products sold globally. Hundreds of employees still required access to on-site labs to continue their work despite the government lockdown due to the global pandemic, yet due to lockdowns and occupancy limits to manage social distancing, only approximately 30 people are currently allowed in the labs daily. The Honeywell project team needed to quickly design an effective solution to make the Bangalore building healthier and comply with local government mandates on air quality, temperature checks and occupancy.
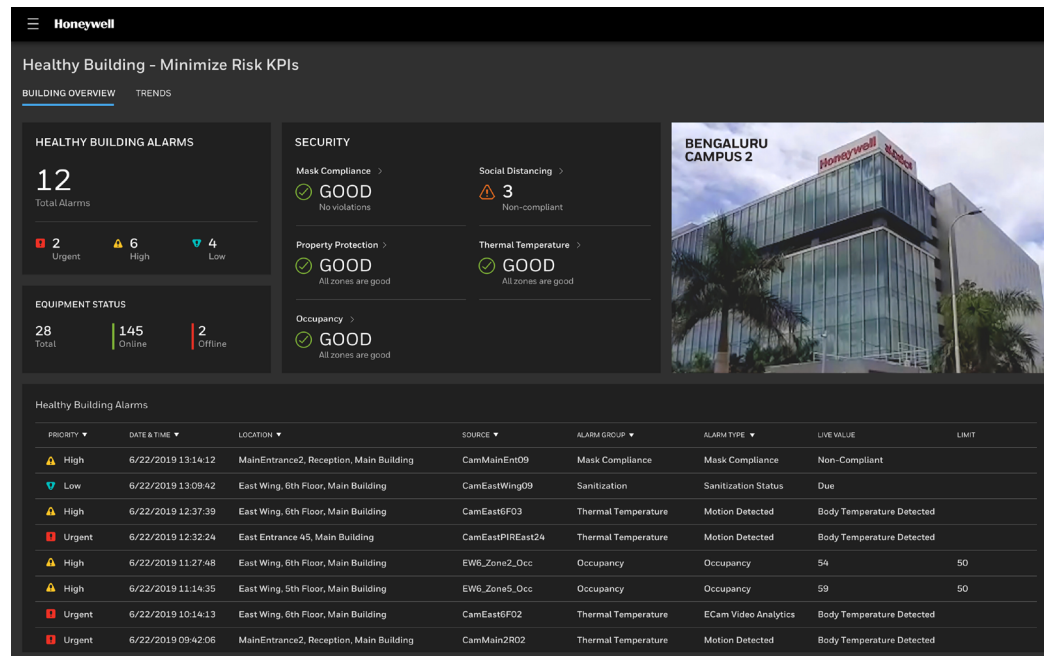
Honeywell needed to enable scalability when designing the solutions to respond to a rapidly changing regulatory environment.

CONDUCT HEALTHY BUILDINGS AUDIT

ESTABLISH BASELINES, GUIDELINES & COMPLIANCE KPIs

DEVELOP CUSTOM SOLUTIONS

DEPLOY SOLUTIONS

OPTIMIZE SOLUTIONS, TRACK KPIs AND ADJUST TO NEW REGULATIONS

- The Bangalore site went from audit to a fully operational Healthy Building in approximately 60 days.

- The holistic solution addresses a variety of building needs to help improve productivity and wellbeing and the technology works with other building sensors to deliver a full view of the building's performance, from air quality to energy efficiency.

- Set Healthy Building KPIs to manage safety and security and air quality to measure compliance to new regulations and identify if the building technology and occupants were meeting goals

- related to factors such as humidity, PM 2.5 levels, social distancing and mask compliance.

- While in the past indoor air quality would vary based on system and outdoor conditions, we have seen consistently high air quality since the system was enhanced; for example, the PM 2.5 levels are within World Health Organization guidelines.

- New security technology constantly helps to prescreen occupants prior to entry and monitors building people flow and counting as well as social distancing and mask compliance.

- The implementation of Bangalore's Healthy Buildings solution is permanent and will help reassure the general employee population and guests that the building is healthier in the new normal. The system can be easily configured to switch from 'pandemic' mode to 'normal' mode and accommodate changes in government mandates.

- The site is provisioned to meet up to 50% occupancy capacity while meeting all Healthy Buildings measures.

THE SOLUTION

Honeywell began the project with a thorough audit to understand the existing building infrastructure. The audit analyzed the status and condition of several building components, such as ventilation, humidity, entry access and surveillance. Audit results enabled the team to develop a targeted solution that addressed the building's specific needs: improved air quality, enhanced security, touchless technology, and monitoring and compliance tools. Honeywell was able to provide technology, implementation and maintenance, delivering full end-to-end service.

The changes to the facility are noticeable upon entry. Honeywell installed entry checkpoints to conduct initial screening of employees and guests using thermal imaging to detect elevated skin temperatures and PPE compliance. Once inside, cameras throughout the building monitor social distancing and mask detection to identify if occupants are adhering to policy. Frictionless access control technology helps to significantly decrease the number of communal surfaces that people need to touch.

Beyond security and touchless technology, air quality was a key factor in making the Bangalore building healthier. The Honeywell team installed electronic air cleaners (EAC) with UV to help capture and disinfect unsafe particles in the air. In addition, indoor air quality sensors (IAQ) and differential pressure sensors that monitor the condition of filters were installed. These technologies are designed to seamlessly integrate into an advanced Honeywell building management system.

To maintain an optimal healthy environment and reassure occupants, the new solution continuously feeds data into the Honeywell Forge platform. The data are analyzed to provide advanced insights and a real-time Healthy Building Score through an operational view dashboard. The deployment in Bangalore also demonstrated that a Healthy Building is most effective when people, processes and technology intersect to communicate and enforce guidelines, measure compliance and to identify the technology's impact.

Despite unprecedented challenges, such as reduced manpower and vendor availability, the Honeywell team successfully demonstrated that a standard building could be transformed into a healthier building in as little as four weeks for sensor and dashboard implementation and eight weeks for a more complete enhancement.

THE FUTURE

The Honeywell Bangalore Campus 2 facility is the company's first site to implement Healthy Building solutions. The learnings from the Bangalore site deployment and the team's experience are being applied to other Honeywell global offices including Atlanta; Bracknell, England; Charlotte, N.C.; Dubai, United Arab Emirates; Houston; Morris Plains, N.J.; Phoenix and Shanghai, among others. The team's insights have also been incorporated into the integration design and overall installation approach to better support customers on future projects as well as further internal deployments.

Visit here to learn more about how to transform your building into a Healthy Building.

THE FUTURE IS WHAT WE MAKE IT

—

Honeywell