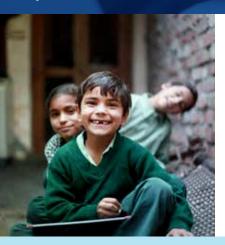
## **Customer Stories**

Johnson Controls is committed to actively supporting our customers and communities during this crisis. We are dedicated to providing safer, more secure spaces and places as we adjust to a new normal. Here are just a few of the many stories.





#### Serving rural areas in India with mobile primary health centers

During a crisis, medical treatment, education and sanitization can be major challenges for those living in secluded areas, or for those with limited mobility. Johnson Controls – Hitachi Air Conditioning India (JCH-IN) has initiated mobile primary health centers to help support lockdown efforts in rural areas by providing medical services to people's doorsteps. One of the main goals of the units is to provide medical services to those who cannot travel, such as the elderly and pregnant women. The fully fitted units are staffed by medical specialists and paramedics to address health concerns and discuss preventative measures. These specialists are also educating the community on sanitization, social distancing and immunity.

#### Setting up an alternative care facility in the State of New York

As our customer's technology partner of choice for all low voltage work, we helped set up an alternative care facility at a University by providing structured cabling, nurse call, cameras, life safety, network, and a variety of solutions. The customer appreciated our ability to mobilize and execute quickly.





#### Increasing care capacity in Wuhan

As the coronavirus swept across China's Wuhan province, the government rushed to build two hospitals in a matter of weeks. When asked for assistance our response came just 45 minutes later, and in less than 12 hours, we had mobilized our team. We provided a broad range of infrastructure systems to enable the hospital teams to maintain continuity of care to more patients and mitigate risk for patients and caregivers during the COVID-19 outbreak. The project was completed within 8 days.



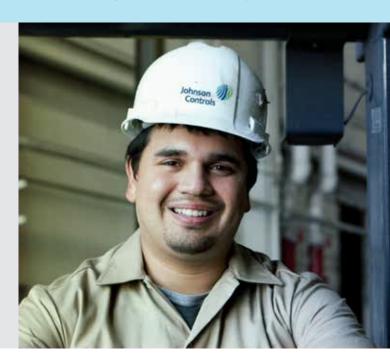


### Providing safe, accurate and efficient solutions for retailers in Hong Kong

Our local team is helping retailers in Hong Kong deal with the extraordinary demands of the COVID-19 crisis by providing temperature screening & video surveillance solutions to protect customers and staff. The thermal imaging cameras provide real time temperature readings and offer an added advantage over traditional temperature reading methods as they retain both the readings and video footage. These contactless solutions comply with social distancing recommendations as they can be positioned a safe distance (up to three meters) away from customers.

### Intensifying support to help a large hospital in Chile

To help ensure sufficient treatment facilities are available for COVID-19 patients, we are accelerating implementation work at a large health facility. Our team is implementing more than ten integrated solutions that optimize building performance to improve safety and enhance comfort. This includes fire protection, security systems, climate control and structured cabling and networks. We are also implementing a GPON multiservice communications network. This high tech internal communications system integrates access control, security, telephony, internet and comfort and climate technological systems. It enables technology and building services to be faster, more reliable and allows a superior connection.



## Volunteering personal time to protect hospitals and elderly care facilities in Spain

In response to the COVID-19 pandemic, Johnson Controls Spain is offering remote Building Management System (BMS) and Controls monitoring services to its hospital, health center and elderly care facility customers free of charge. This service helps facilities safely operate and service patients during this critical time. Johnson Controls will execute remote periodic reviews of these facilities' Controls and HVAC systems throughout the pandemic including the inspection of: communications systems, temperature and humidity, dirty filters, cold and heat production capacities, other critical zones/equipment and the functioning of Air Handling Units in critical areas.



#### Seamlessly converting Canadian operating rooms into negative pressure rooms

A Canadian hospital urgently needed to convert an operating room into a negative pressure room for COVID-19 infected patients. After developing a thorough plan with design engineers, our team began implementation at 9:30 pm when surgery was completed. We worked throughout the night programming changes and validating that the mandated temperature and humidity ranges were met. Because of the quick, seamless implementation we have been asked to convert the remaining three operating rooms and assist the hospital in keeping individuals safe by preventing cross-contamination from room to room.



### Retrofitting non-medical areas to increase capacity in the Netherlands

The COVID-19 crisis has forced unprecedented rapid transformation of facilities around the world. A University Medical Center in the Netherlands needed to retrofit non-medical areas in fifteen of their buildings in order to meet their increased patient capacity requirements. We provided the care communications and nurse call systems to enhance communication and provide remote medical monitoring.

## Stepping up to the challenge in China, Hong Kong, Thailand and Malaysia

Johnson Controls was at the epicenter of the virus outbreak in Asia as the lack of adequate care facilities, scarcity of surgical masks and forced shut downs presented major challenges. On February 10th, our plant was authorized as the first manufacturing facility in China to resume operations. Acting quickly, we helped build six emergency hospitals in China followed by a surgical mask factory in Hong Kong. Solutions included quick delivery air-cooled chillers, fan coil units and air handling units. Continuing to find ways to serve customers during the crisis, we delivered air handling products to two customer sites in Thailand supporting the Malaysia plant during their forced shutdown.



#### Protecting retailers with daily on-site fire protection services

Retailers in Chile operating during the COVID-19 crisis needed fire protection maintenance and monitoring services to keep their customers and staff safe. Every day, more than 50 Johnson Controls technicians are onsite monitoring the situation, looking after all of our customer's needs and making sure that our customer's places and spaces continue to be safe, comfortable and intelligent.





### **Ensuring secure, undisrupted operations for iconic building in the Middle East**

Remaining open during the COVID-19 crisis with undisrupted operations is mission critical for this multi-purpose tower. As one of the most iconic tourist attractions in the Middle East, and home to residential units, corporate suites, a hotel, and observatory decks, it was of utmost importance to keep both individuals and businesses safe and secure. Our team of engineers, technicians and subcontractors have been working around the clock on an integrated security management system to ensure that the right contingency and mitigation plans are in place in the event of a total lockdown.

### Assisting the US government in setting up alternative care facilities

Supporting the US government with three separate projects at two different sites, we helped set up alternative care facilities for COVID-19 patients. Our team, working closely with the general contractor, provided a fire alarm retrofit and wireless nurse call system in a New Jersey campus followed by a wired nurse call system in the US Virgin Islands. As a dedicated partner we were able to resolve their critical issues in days.



#### Accelerating construction for a healthcare center

A medical center in Pennsylvania urgently needed to build a temporary corridor in the basement of the existing hospital to access the underground tunnel between the old and new tower. The tunnel will be used to transport non COVID-19 patients to the new hospital. We designed and installed fire alarm equipment so code requirements were met during accelerated construction. The HVAC team helped the customer convert existing hospital patient floors to make them negative pressure through new monitoring.



### Rapidly replacing vital chiller in COVID-19 patient ward in Belgium

Chillers are an essential HVAC component of a healthcare facility, as they maintain comfortable temperature and humidity conditions. Our customer, a University hospital in Belgium, urgently needed to replace a mal-functioning chiller they had sourced from another company. Working closely with the hospital, we delivered a YZ Magnetic Bearing Centrifugal Chiller in three weeks. The fully optimized chiller will primarily cool operating rooms in the COVID-19 ward.



#### Increasing protection for an international aerospace manufacturer

One of the world's largest airline manufacturers approached us for support in implementing global procedures aimed to heighten protection for their clients, staff and contractors working the final assembly line. Leveraging our extensive network of experts, we provided a Project Manager who was on site within 24 hours. Our Project Manager worked with the Director of Environment, Health & Safety to begin implementation of the program, provided daily updates to our customer's leadership and participated as an active member in their COVID-19 crisis response.





### Rapidly customizing HVAC equipment for a field hospital and N95 mask production facility

A convention center in Rhode Island, U.S. was converted into a field hospital to meet the rapid increase in COVID-19 anticipated cases. Our customer needed reliable, efficient HVAC equipment and a fast turnaround time for oxygen and negative air flow to prevent the escape of possible contamination. Within 48 hours we provided two 15T rooftop Air Handling Units. As a result of our quick turnaround time we were asked to provide an additional six 6T rooftop Air Handling Units to another facility making N95 masks that needed to expand its capacity.

### Covering significant increase in demand for critical environment controls (Triatek)

With the demand for COVID-19 equipment increasing around the world, our production facilities have been working at an increased capacity. Producing controllers, room pressure monitors (to transform existing patient rooms into ICU rooms) and other key components, we have been delivering life-saving equipment and services to customers world wide.



### Providing a safe environment for world-renown medical center

Our customer, a top medical center in Minnesota, urgently needed a security solution to keep their staff and patients safe. We implemented access control and video surveillance in three areas including COVID-19 testing kits, a new lab for the COVID-19 testing equipment, and a public access door in the drive-through testing area. All systems were up and running within 24 hours.

#### Keeping essential businesses operating in India

In response to the crisis, our team has been actively supporting critical infrastructure projects in India. Our portfolio of projects encompasses 600 telecom sites, 32 bank branches and 21 hospitals. Customers include a laboratory that is developing a medicinal treatment for COVID-19 and a hotel that was recently converted to a 200-bed quarantine center. To assure that our own actions and operations are managed safely and efficiently, we created a COVID-19 awareness training for service calls.



#### Supporting the fast startup of a functioning ER

For the accelerated opening of a new patient hospital tower in Pennsylvania, Johnson Controls Fire Solutions expedited FA equipment to the electrical contractor, working efficiently with other trades to speed up the process. We also provided custom air handling units and chillers. Integrating our equipment created a functioning ER triage within 3 weeks.

#### Accelerating school construction

Our team worked seven days per week to accelerate projects for a school in Los Angeles while buildings were unoccupied with students due to the virus. They completed over a dozen remaining projects in a 3 month time frame while earning a 100% safety award.

# Quickly implementing security for a drive-through testing area

In Tallahassee, cameras were needed in the city's only drive-through testing area. We delivered a variety of services with the total response time less than 8 hours.



### Increasing supply of ventilators for three leading innovation centers

The tech ecosystem collaborated and mobilized to design solutions that can directly support the fight against COVID-19. The three hubs pulled together a team of engineers and entrepreneurs to develop low-cost solutions to quickly increase the supply of ventilators. We appointed a dedicated Johnson Controls team of engineers to this initiative.

#### Helping employees stay safe

Due to the COVID-19 virus, our customer, a leader in US fresh prepared food was mandated to install video on their assembly line. We integrated our solution in 4 hours allowing our customer to monitor quality control remotely and help keep employees safe.



### Converting correctional facilities to alternative care treatment centers

In response to COVID-19, an old correctional facility in Minnesota was transformed into a medical facility with a capacity to treat as many as 300 patients. Our group of fire/sprinkler technicians quickly completed the needed repairs to make the facility operational.



### Creating a fully functioning and secure ICU

A 170 bed hospital in Pennsylvania was equipped with advanced security solutions; creating a first care floor in less than 6 days and a fully functioning ICU in less than 10 days.



#### Supporting local business and feeding front line workers

FLAG (Front Line Appreciation Group) was founded to support local restaurants by supplying meals to healthcare workers treating COVID-19 patients. Across the US, FLAG has raised more than \$1.8m, purchased over \$1m in meals from restaurants, and delivered over 100,000 meals. Actively involved in FLAG Florida, a member of our local team has helped raise more than \$7000. FLAG Florida has purchased \$6100 worth of meals from local restaurants and fed 860 healthcare workers in twelve facilities in the past three and a half weeks.

### Aiding new testing area containment

We completed a project to aid in containment for new testing areas of expansion including a bubble tight damper for a leader in the Global Specialty Chemical Industry.

### Transforming spaces to become emergency centers

An existing state building in Illinois was rehabbed in record-breaking time, to become an emergency COVID-19 trauma center. Under tight lead times our team supplied registers and fire dampers.



### Helping to build 60 residential package units

Our customer is building field hospitals to support the crisis. The Johnson Controls Ducted Systems manufacturing facility in Wichita, Kansas is partnering with their distributor and contractor network to ensure needs are met. The factory is currently building 60 residential package units for these types of infrastructures.



### Providing vital refrigeration solutions for hand sanitizer production

Our customer, a multinational brewing company needed vital refrigeration equipment to start producing hand sanitizer in one of their facilities in Argentina. Our Johnson Controls Frick equipment provided them with the necessary temperature control to ferment high alcohol wort. The resulting wort will be transformed into hand sanitizer and donated to hospitals and health care facilities. We continue to support the plant remotely.





### Securing the health of visitors and personnel with thermographic detection

As a global leader in food, snacks and beverages, our customer requires a safe and healthy manufacturing environment. We were selected to ensure personnel and visitors entering their facilities do not have any known health concerns. We supplied, installed and programmed forty FLIR A320 Tempscreen cameras. These critical and potentially lifesaving devices detect temperature deviations across groups of populations and can help to confront, delay and stop the spread of COVID-19.

### Delivering instantaneous connection between ICU patients and caregivers in Tennessee

Remote patient monitoring can improve the quality of care and increase patient capacity. A forty-two bed ICU in Tennessee urgently needed remote patient monitoring to improve the quality of care and increase patient capacity. Within 24 hours our team had enabled the system design for a video and intercom solution. The solution supports a continuous, instantaneous connection between people and their caregivers.





### Helping Canadian hospital retrofit abandoned ward for COVID-19 patients

A Canadian hospital urgently needed rare pneumatic valves to retrofit an abandoned ward in order to prepare for the expected surge of COVID-19 patients. Working with one of our partners, we were able to expedite the order, and deliver the components in a short period of time.





### Transforming an academic building into a COVID-19 overflow hospital

An academic building in Ohio is being transformed into a temporary, 1000 bed overflow hospital for non-critical COVID-19 patients. The building is currently served by Johnson Controls equipment, including: 20 air handling units, 3 centrifugal chillers, 2 air-cooled chillers along with over 1000 VAV controllers. When asked to support the facility transformation, we worked together with the customer's team of engineers and provided a proposal in 48 hours. The Building Automation System (BAS) is an intelligent system connecting heating, venting and air conditioning, lighting, security, and other systems to communicate on a single platform. We made complex BAS adjustments to meet the requirements for COVID-19 patients, including solutions to accommodate the influx of oxygen and virtual access to the building's BAS system, increasing overall comfort, safety and security. Our team also worked on preventative maintenance, making sure the equipment was ready to serve the new role of the building and strengthen the effort to save lives.

### Biotech company developing vaccine for COVID-19 in urgent need of turnkey HVAC solution

Our customer, a clinical stage biotechnology company is developing a vaccine to assist in the fight against COVID-19. Needing additional space for their development, they purchased a vacant building adjacent to their current facility in Massachusetts. Our team of engineers inspected the building and developed the design for efficient and reliable HVAC equipment. We installed three rooftop units, a custom high plume exhaust recovery unit, an air handling unit, a condensing unit, duct-free splits and hot water re-heat coils. Our ability to quickly coordinate, design, deliver and install, while never over-committing, were instrumental in the project's success.



#### Expediting HVAC equipment for Massachusetts quarantine building at a critical time

Critical material was urgently needed to finalize a quarantine building in northwest US. Our Massachusetts based plant reacted quickly by expediting two orders of essential material to our customer, a wholesale distributor of HVAC equipment and supplies. One order was shipped the same day and the other order was shipped the next day.

### **Ensuring uninterrupted security service and support in Malaysia**

Considered as an essential service under a special category in the telecommunication sector, our security team in Malaysia is continuing to ensure service and support for our customers seven day per week around the clock. The team has developed robust business continuity plans including back-up work stations in separate locations.



### Maintaining critical humidity levels at COVID-19 dedicated hospital in Turkey

One of five buildings at a large 2,682 bed integrated health campus in Istanbul, Turkey was recently converted into a coronavirus dedicated facility. Because of the critical need to maintain humidity levels, our cooling systems were vital to the success of this conversion. We supplied the hospital with 17 centrifugal chillers that will help patients and staff stay comfortable, and in a healthy environment. We'll continue our efforts to keep the equipment serviced and maintained at the hospital and at other critical facilities during these challenging times.





#### Solving mission-critical chiller issues and beyond in India

Our mobilized, dedicated team has been relentlessly supporting customers throughout India to assure that important operations go undisrupted. From replacing and repairing condensers at data centers to resolving compressor issues at a dairy factory, our team is dedicated to serving customers through the crisis and beyond. We are working alongside customers every step of the way, from providing fixes to fire alarm systems to providing assistance in unloading chillers. Recently our team solved several mission-critical chiller issues – one that houses a server maintaining important card data and another at a top hospital treating COVID-19 patients.

### Volunteering for state wide infection control team in Georgia

Sanitizing assisted living facilities is crucial for protecting the vulnerable during the crisis. A member of our team in Georgia is a Staff Sergeant in the US Air Force. He has stepped up to the challenge as a volunteer to help the State of Georgia fight the crisis. Since the beginning of April he has been traveling across the state, sanitizing assisted living facilities and establishing remote COVID-19 testing sites. During the weekend he continues to volunteer his time by transporting specimens from remote test sites to Georgia Public Health Centers.





### Remotely supporting Metasys® customers with tools to work smarter and more efficiently

To help our customers and their facility teams navigate through this difficult time, we provided virtual training on how Metasys® can help them work both smarter and more efficiently. Our experts tackled subjects such as how to avoid major breakdowns, managing critical alarms and scheduling regular automated reports that summarize critical operations. Other important topics for facility teams such as cybersecurity concerns and considerations were also covered.



#### **Delivering ICU products and resources in short timeframe**

A large teaching hospital in Milan, Italy urgently needed to retrofit an area for COVID-19 patients. With an aggressive timeline of 60 days, they looked for a partner with the right portfolio and resources. Providing both the products and resources under tight timelines, our local team delivered the ZETTLER fire detection system that was needed to set up the new intensive care unit and additional beds.

### Leading reopening efforts around the world with crisis recovery webinars

Johnson Controls is taking the lead in the guidance and conversations around reopening. In an effort to prepare retailers we hosted a "Reopen Plans: Retail Trends Around the World" webinar addressing what every retailer needs to know to make informed re-opening decisions. We also launched a "Back to Work" 5-part webinar series. Our goal is to create an educational forum. Each weekly webinar consists of a 20–30 minute panel discussion led by one of our experts in Security, Fire, HVAC, and Controls followed by a Q&A.



### Quickly expanding isolation areas for an influx of COVID-19 patients

We partnered with a University hospital in Virginia on a multiphase hospital expansion project to create additional capacity for COVID-19 patients. In less than one month, our team helped transform a section of the expansion area into an isolation area to help protect patients and personnel. We provided additional dampers for duct work changes, and additional hardware/ software to control the spaces using our Metasys® controls. Our work supported the hospital's effort to provide patients and hospital staff the care space they needed when they needed it most.

#### Furnishing agile cooling solution for missioncritical pharmaceutical production facility in the UK

A mission-critical pharmaceutical production company in the UK was facing a cooling failure that would significantly impact their operations. Taking into account their need to implement a temporary cooling solution, our team suggested leasing 4 chillers with external pumps. Our quickness and agility made us their preferred partner for this time sensitive project.



