

## Massachusetts General Hospital

# Leading Edge Upgrades for Healthcare Campus Security Operations Center

### THE CUSTOMER

Established in 1811 to provide care to Boston's sick regardless of socioeconomic status, Massachusetts General Hospital has been ranked among the top five hospitals in the United States by U.S. News & World Report since the rankings began. Mass General, as it's commonly referred, has the largest hospital-based research program in the United States with an annual research budget of more than \$912 million spanning more than 30 clinical departments and centers. Its 999-bed medical center annually admits approximately 48,000 inpatients, handles nearly 1.5 million outpatient visits, records more than 100,000 emergency room visits, and performs more than 42,000 operations.

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**Robert F. Leahy, CPP, PSP**  
*Senior Manager, Systems and Technology  
Massachusetts General Hospital*

### THE CHALLENGE

Healthcare facilities, and especially those as large as Mass General, face a number of challenges on a daily basis — with the main overarching goal of ensuring the safety and security of some of the most vulnerable individuals, as well as physicians and staff tasked with promoting health and well-being. These facilities require oversight 24 hours a day, seven days a week, which can be difficult for security directors and operators to achieve.

“In a facility like Mass General, one of the most challenging aspects for security directors is the number of visitors coming in and out of the buildings on our campus,” said Robert F. Leahy, CPP, PSP, Senior Manager, Systems and Technology, Massachusetts General Hospital Police, Security & Outside Services. “Not only do you have patients coming in for outpatient procedures, but there are also patients in the facility getting visitors, a variety of employees accessing various rooms that have varying access levels, and critical equipment that needs to be protected from this influx of people.”

In 2001, Mass General upgraded its communications and security center, and at that point, the equipment was state-of-the-art, encompassing digital recorders and matrix switching. Over the years, the technology has changed tremendously, with the transition from analog to IP video surveillance cameras, from digital video recorders to video management systems, and more. “The advancements in technology changed the way we looked at video and access control across the campus,” Leahy said. “As more and more technology was added, we began to outgrow our current security operations center (SOC) and needed an upgrade to the facility to meet our current needs.”

## THE SOLUTION

Mass General worked with security integrator Pasek Corporation, which called in Vistacom to help redesign and reimagine the hospital’s SOC and control room. “Mass General was using an aged dispatch center where two operators were working with outdated video equipment and consoles that were not conducive to the work being done,” said Dan Gundry, Director of National Control Room Sales, Vistacom. Some of the initial findings were a non-ergonomic console with a number of fixed displays, outdated keyboards/mice, equipment racks within the space and a “rat’s nest” of connections from various technology pieces being added over the years.



“Mass General needed to do several things in their SOC: modernize the space, implement technology that they could manage with the two operators they have, clean up the wires that were creating spacing issues and install new line-of-sight technology,” Gundry said. The room that housed the SOC was completely gutted during the upgrade process, down to the floor.

Vistacom installed a 4-wide, 2-high Barco video wall and hardware. Additionally, two new Winsted Consoles sit/stand desks were included in the space to accommodate the two operators that are present at any given time in the SOC monitoring the facility’s security alarms and dispatch calls. Vistacom worked on their portion of the install alongside Pasek and Mass General technicians, who all worked together to ensure the space met the needs of the organization. “All of the updates to the SOC were done with the operator in mind, even down to noise pollution,” Gundry said.



“Our goal was to make the operators more effective and less fatigued so that they can do their job better in support of the patients and staff of the hospital.” Leahy said the entire process involved a number of vendors working together to realize the vision that Mass General had to streamline its security systems, better visualize all areas of the hospital in the event of an emergency and make security operators more efficient when responding to incidents.



Pasek Corporation was instrumental in integrating the facility’s Milestone video management solution with a variety of cameras — most of which are manufactured by Axis Communications. Honeywell Enterprise Building Integrator is also a major part of the SOC and is used to help manage the facility. Additionally, the comprehensive system needed to incorporate the Hugs Infant Protection solution from STANLEY Healthcare.

“We had so many systems and solutions in place to protect the entire campus and we needed to bring it all together and figure out how we were going to simplify it for our SOC operators to get all the information they need in one single location instead of going from system to system gathering intelligence,” Leahy said.

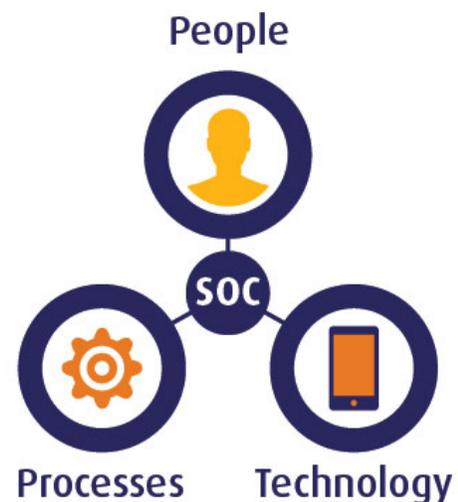
## THE RESULTS

The Mass General SOC is unique in that the coverage isn’t only within the “four walls” of the hospital, but also encompasses the perimeter of the building during busy times, monitoring traffic and incoming information from the various security systems as well as outside news and events. “The emergency department, for example, becomes an area where there’s a lot of activity, so it’s crucial for our operators to keep an eye on what’s going on since it changes constantly,” Leahy said. “With the SOC and communications center, we are able to see all activity and respond instantly to those changes. That’s what we were looking for when we started this endeavor.”

In the old SOC, two operators often had only one control point, so they would have to split duties or share a space. “If someone needed something, they either had to pass off the technology to the other person or communicate verbally to do what was necessary in the event of an incident,” Leahy said. With the new video wall that projects critical information to operators, along with two operator consoles, both operators are able to control all of the equipment at all times. This is crucial to the management of at least 18 on-duty officers across the campus at any given time.

The SOC updates allow operators to focus on incoming calls and monitoring, as well as responses to duress alarms. For example, when a duress alarm is set off, dispatchers can not only access and view any and all cameras that are in the area on the video wall, but also call the area to ask “yes” or “no” questions that can give first responders more information about a situation. “Being able to integrate all of the different technology pieces into one easily controllable interface is crucial to the success of a large-scale SOC like ours, and Vistacom was able to do that for us,” Leahy said.

The team at Mass General also looked at the lighting within the space, taking into consideration the 24/7/365 nature of the operation and the removal of ultraviolet and blue light, which can contribute to fatigue in operators. Lighting in the space also was situated to reduce glare on the video wall, redirecting the lighting toward the operator consoles.





Choosing a video wall that incorporated displays for viewing content was also a critical element in delivering the right brightness to reduce eye strain and allow for sustained viewing to not impact an operator's sightlines. "At every point in the design and implementation of the Mass General SOC, we took the operator's comfort into account so that they would have the ability to concentrate on the overall goal of monitoring the entire facility for extended periods of time," Gundry said.

Mass General also made the decision to reduce noise pollution by minimizing the amount of equipment that was housed in the SOC room and instead relocating it to a nearby room. This also resulted in the reduction of heat being radiated from various pieces of equipment that had fans, which can also raise the temperature of the room and make operators uncomfortable.

Ensuring the comprehensive satisfaction of security personnel in Mass General's SOC ultimately leads to the overall safety of the hospital itself, where special considerations have to be made, according to Gundry. "Healthcare clients are different in a lot of ways, facing the transient nature of visitors on a daily basis, patients who are restricted from movements in terms of evacuations, along with the overall vulnerability from a security perspective — all of these factors require specialized knowledge to be able to create an SOC that can deliver the kind of results the organization needs," he said.

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