

oday, there is significant increase in the number of hospitals, clinics, and outpatient centers that are being built or remodeled across the country, in part due to the rise in demand for healthcare from an aging population and more access to health insurance. To accommodate this rapid growth, however, requires a sophisticated level of technology integration that goes beyond brick-and-mortar construction to the design and installation of networking, communications, electronic record-keeping, and patient/staff security systems.

SINGLE SOURCE TECHNOLOGY

As a result, the healthcare industry is increasingly turning to single source technology integrators during the earliest phases of construction, that can design, install, and manage an integrated package of systems while coordinating with other more traditional aspects of construction.

Integration, defined on dictionary.com as "an act or instance of combining into an integral whole," can be a somewhat vague concept because the combination of parts can be unending, while each individual solution is specific to the application.

What is known is that the best integrators are those that have an extensive knowledge of the available

products and component parts of any system and are able to connect them together in a manner that extracts significant added value. In other words, the "whole" [a properly integrated system] should be much greater than the sum of its parts.

In healthcare, with new construction booming "integration" has taken on new meanings as well.

To start, technology integration in new hospital, medical group, or clinic construction now encompasses an array of options from network IT and Wi-Fi access points, to access control systems, physical security cameras, alarms, VoIP phones, nurse call systems, and environmental and temperature monitoring—to name a few.

Then there is integration of effort and coordination with other aspects of new construction when installing such systems.

COORDINATED EFFORT

Technology integration, it turns out, is not covered under the umbrella of the general contractor. That means technology integrators, often hired by building owners, must coordinate and integrate their efforts with the general contractor and associated plumbers, electricians, drywall installers, painters, and other tradesmen in a side-by-side effort.

In addition, technology integrators often coordinate with healthcare company personnel tasked with overseeing specific aspects of the installation, whether environmental control managers, IT staff, or physical security experts.

In short, any integration—if not properly coordinated, scheduled, and executed with accommodations for last minute changes, etc.—can be a nightmare for those responsible for managing the overall effort and all the contractors.

SINGLE SOURCE COMPANY

To avoid this scenario, healthcare companies are turning to single source companies that not only can handle the full array of technologies, but can do so down to the installation of the low voltage wiring, cabling, conduit trays, wireless antennas, hubs, electronic equipment racks, and even the locks on the exit doors.

"By working with a single source technology provider that offers a menu of technology offerings, there is an advantage of having a single point of contact for overall system design, installation, management, and support," says Eric Brackett, president of BTI Communications Group, a technology convergence provider serving the healthcare, logistics, and aerospace sectors.

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Brackett adds that this can save healthcare organizations significant time and money in technology consultation, along with saving "a lot of aggravation and headaches" related to managing construction staff.

EVOLVING TECHNOLOGY

Traditionally, voice, data, network, and physical security system purchases have been made independently. Security cameras and access control systems, for example, are implemented by security integrators, while VoIP phone systems are installed by telecom providers. In this approach, each vendor offers a proprietary solution with little consideration as to how it will be converged with other aspects of the network.

However, integration of these applications during new construction or remodeling can offer immediate significant revenue, security, and savings to a healthcare organization's bottom line, says Brackett.

"If you go to a traditional vendor in commercial security, VoIP or even IT, they may try to interest you in products that are currently promoted," says Brackett. "It might not end up being a fully operational solution to the business problem they are attempting to solve."

"Some vendors may not comprehend the full integration potential and so are not able to go the extra mile to deliver advanced functional capabilities that are built into the system," adds Brackett.

As an example, an access control system can be integrated with the HR database to coordinate changes in employee status such as termination, to automatically activate or deactivate an employee keycard. If that same employee has remote access to the security cameras, the network can disable the account immediately.



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CLOSING THOUGHT

It is important to note also that the role of the technology integrator does not end once the system is installed. Proactive monitoring should be employed, so that the system actively oversees technology performance to identify anomalies even before a malfunction occurs. Problems are addressed proactively often without the customer even knowing about it. When site visits are required, the monitoring system dispatches an engineer without interrupting the customer.

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