

Critical building technology components that straddle Facilities and IT.

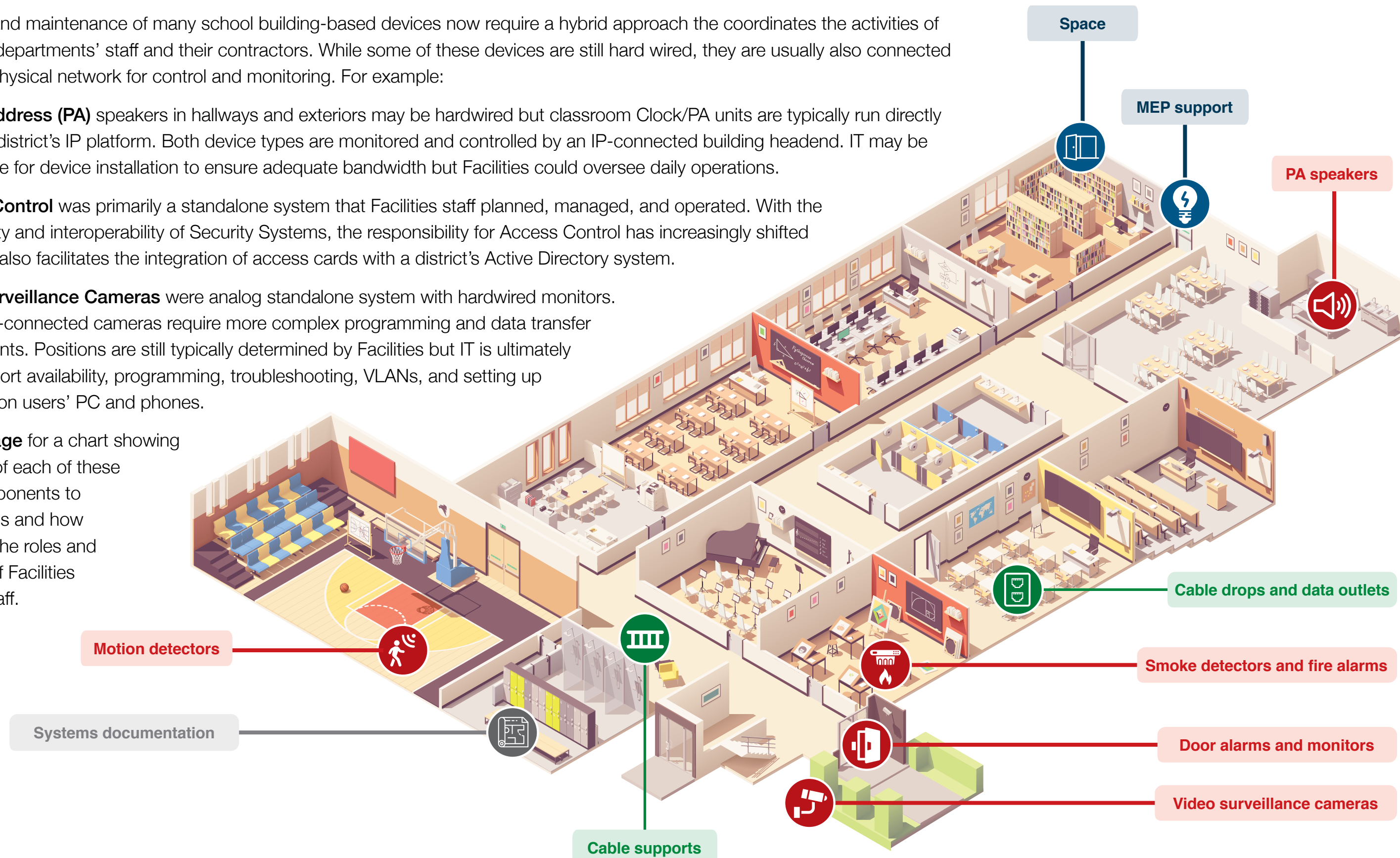
The installation and maintenance of many school building-based devices now require a hybrid approach that coordinates the activities of Facilities and IT departments' staff and their contractors. While some of these devices are still hard wired, they are usually also connected to the district's physical network for control and monitoring. For example:

Public Address (PA) speakers in hallways and exteriors may be hardwired but classroom Clock/PA units are typically run directly from the district's IP platform. Both device types are monitored and controlled by an IP-connected building headend. IT may be responsible for device installation to ensure adequate bandwidth but Facilities could oversee daily operations.

Access Control was primarily a standalone system that Facilities staff planned, managed, and operated. With the complexity and interoperability of Security Systems, the responsibility for Access Control has increasingly shifted to IT. This also facilitates the integration of access cards with a district's Active Directory system.











Video Surveillance Cameras were an analog standalone system with hardwired monitors. Newer IP-connected cameras require more complex programming and data transfer requirements. Positions are still typically determined by Facilities but IT is ultimately responsible for port availability, programming, troubleshooting, VLANs, and setting up camera viewers on users' PC and phones.

See the next page for a chart showing the importance of each of these technology components to district operations and how they may effect the roles and responsibilities of Facilities Departments' staff.



What Facilities staff needs to know about these building technology components.

These building-based technology components require a hybrid approach from Facilities and IT departments working in close coordination with each other and their respective contractors for planning, design, construction, and maintenance. This chart describes the functional importance of each component and what Facilities’ staff should know, at a minimum, about each of them.

IP-RELATED COMPONENT(S)	PARENT SYSTEM	FUNCTION/IMPORTANCE	WHAT FACILITIES’ STAFF SHOULD KNOW
 Cable supports (pathways cable tray, ladder racks, conduits, and J-hooks)	TECHNOLOGY INFRASTRUCTURE (physical network)	From classrooms to the business office, district daily operations depend on the cables that move data between and among buildings. Cable supports, drops, and outlets all need to follow industry standards to ensure reliable operation and to facilitate maintenance and service.	<ul style="list-style-type: none"> • Be sure cable is installed with correct supports such as cable trays, ladder racks, J-hooks, etc. • Don’t install other types of materials in these data cable supports which can compromise data transmission. • Data outlets should be consistently identified with machine-printed labels that show connection points.
 Cable drops and data outlets			
 Fire Alarm (detectors, alarms)	SAFETY AND SECURITY	While many of these Life Safety and Security systems still use analog hard-wired components, their functionality is often integrated on a common Internet Protocol (IP)-based platform so an event on one system can trigger an action on another. For example, the fire alarm system can trigger an emergency announcement on the PA system. This merged platform allows for building automation based on data and building occupants and activities.	<ul style="list-style-type: none"> • These systems and components should be checked annually to ensure that all devices function properly. • Both Public Address and video cameras should provide coverage of exterior areas where students gather (e.g., courtyards, athletic fields). • Electronic door hardware is required for main student and staff entrances which complicates exterior door installation.
 Public Address (speakers)			
 Video Surveillance Cameras			
 Door Alarms & Monitoring			
 Motion Detectors			
 MEP Support including connections	AMEP (Architectural, Mechanical, Electrical, and Plumbing)	Most all technology infrastructure and building systems require AMEP support including dedicated electric, conditioned environments, and secure spaces. Telecommunications Rooms (TRs) are among the most important IT support spaces with which Facilities staff interacts.	<ul style="list-style-type: none"> • Telecommunication and related IT equipment needs to be housed in a secure dedicated space that meets certain standards. • Both TRs and other fixed technology devices usually require dedicated electric, bonding and grounding, and environmental controls such as cooling. • Capital projects require tight coordination between Facilities, IT, BOCES/RIC, technology consultants, architects, and contractors.
 Space (environmental controls, secure, clearances, etc.)			
 Documentation	All	Building-based technology infrastructure and systems such as Communications (CM), Audio-Video (AV), and Security (SS) are updated frequently. Systems documentation needs to stay current with installations.	Fast, secure access to the latest AMEP and technology systems drawings, specs, O&M documentation, etc., reduces systems downtime and repair costs by facilitating troubleshooting and servicing.

The best way to prepare for the future is with a professional, objective Technology Conditions Survey from Archi-Technology LLC. The findings provide a platform from which a Telecom Room (TR) Master Plan and 10-year Comprehensive Technology Plan can be developed for your district. Our technology survey and strategic consulting services are state-aidable via BOCES CoSer or as part of your NYSED Building Conditions Survey aid.

Learn more at <https://www.archi-technology.com/tcs.html> (or google the term “archi-technology conditions survey”); then call **585.785.4429** to discuss your district’s needs.