

In Higher Ed Emergency Communications, Policy Comes Before Technology

The director of emergency management at Washington University in St. Louis talks about what to do before the RFP.



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Mass notification takes more than technology to be successful. It takes careful planning, a comprehensive emergency communications policy and sophisticated understanding of your intended audience. This is especially true of colleges and universities that have multiple campuses or very diverse populations they need to reach. This is the case at Washington University in St. Louis (WUSTL), where the school recently won an award for its emergency communications solution.

“We’re very decentralized. We have six campuses and seven major schools,” says Mark Bagby, director of Emergency Management at [WUSTL](#).

The school uses a number of technologies for mass notification including digital signage, outdoor sirens, text-to-voice, email, SMS messaging and desktop pop-up alerts. Of its six campuses, one is a medical school that may have patients on-site. Unlike the staff and students in the school, their contact information is not readily available. If an emergency were taking place on campus, a mass text or email would do nothing to notify those patients of danger.

“That’s one of the reasons we have such a multimodal system. By using digital signage and then also by using voice we can reach those populations,” says Bagby.

The university’s disparate technologies are coordinated through [Alertus](#), which provides the school’s alert beacons, desktop alerts, digital signage and cable TV override capabilities. The digital signage piece is an assortment of indoor LCD screens powered by Four Winds Interactive software. Because Washington University is decentralized, individual schools choose the displays that hang in their buildings. There is no university-wide standard.

“The screen itself doesn’t matter. What matters is the software behind it and that’s where we try to get the standardization,” says Bagby.

The school can also tap into the National Weather Service’s feed using the Common Alerting Protocol (CAP). Emergency alert messaging is published to digital signage using an RSS feed. Text and email alerts are delivered via [Everbridge](#), a mass notification software platform.

Think Policy Before Technology

Behind this impressive array of technology is a comprehensive emergency communications policy that clearly defines alert protocol. Before you send out an RFP for your own system, you need to answer a few questions:

- Have you developed an emergency notification policy?
- What technology are you thinking of using? Do you want to standardize?
- Who has the ability to set off the system? Who is authorized to send out a message?
- Who has control of the system?

Once you’ve answered those questions, you need to conduct a hazards assessment to identify the types of emergencies you need to prepare for. If you’re located in the Midwest, maybe you’re concerned with tornados. If you’re on a fault line, then earthquakes are a risk. A college located in a major city needs to worry about crime. An open campus might be concerned with intruders.

“You need to do a needs assessment to build your system instead of building your system and then trying to make your system work to your needs,” says Bagby.

Sending Out Alerts

The WUSTL system is operated via an online dashboard that has a series of check boxes you can use to select the mass notification technologies you want to deploy. This system is provided by Alertus and the virtual “easy button” feature was a major component of university’s RFP. As a result, alert deployment times have been greatly reduced.

Who issues an alert and how it is disseminated may depend upon the situation. At WUSTL, County Emergency Management activates the school’s sirens in a weather related emergency.

“We don’t have a weather center on campus. We don’t have meteorologists on staff. We’re not going to interpret the weather to see if something needs to be sent out in terms of a tornado alert,” says Bagby.

The National Weather Service sends out alerts to entities like County Emergency Management. Since the university’s outdoor sirens are tied into the county’s network, if an alert is issued, the school’s system picks up on keywords and sets off the outdoor sirens that issue a pre-scripted message.

“It takes the human factor out,” says Bagby. If the automated process should fail, university dispatchers can trigger an alert from the dashboard.

Events like an active shooter have no real warning and a situation needs to be reported before the campus community can be made aware of a threat. This is where schools would be unwise to rely solely on technology. There has to be an education component to emergency communication as well.

“We have a very robust informational campaign. We call it ‘Where to Go in Emergencies,’ and all faculty and students get a brochure, a wallet card and a magnet about what to do in various emergencies,” says Bagby.

For example, if there is a shooter on campus the protocol is “run, hide, fight.” If you can get out of the area, run. If you can’t, then hide and lock down. If the shooter confronts you, then fight back. Then call the emergency number to report the incident so dispatch officers can get information on the threat and respond accordingly. If the situation is something like a bomb threat where there may be no credible evidence to support the claim, police supervisors make the call on whether or not to issue an alert.

Lessons Learned

WUSTL has the ability to initiate cable TV override if an emergency is occurring on campus. When the school first implemented this emergency notification feature, an alert would take over students’ TV screens for 15 minutes.

“That was a problem. We’re telling them to tune into local media if they’re in the path of the storm so we had to go back to Alertus and have them build in a timer. Now if cable TV override is initiated it only lasts for three minutes and then it returns to normal programming,” says Bagby.

Another lesson the university learned early on was that text-to-voice is the best option for voice alerts through an outdoor speaker or fire alarm system. Fortunately, the university was aware of this before implementing its own system.

“If you have live voice, somebody has to pick up a microphone. They have to be trained on how to use it. They need to know to speak in a calm, slow and low voice so that people can actually hear and understand what happened,” says Bagby.

In an active situation when adrenaline is pumping and every second counts it’s unlikely anyone could perform those functions effectively. A pre-recorded message may also fall short because you can’t add details that may be pertinent to the situation unfolding. If there’s a fire in the building, you may need to tell staff and students which hallway or stairwell to avoid and which exits are safe.

“Text-to-speech is truly the best. It’s more reliable. You can modify it on the fly to whatever message you want. There’s an algorithm that makes sure it has the right pitch and slowness to it and it’s also built in so that your indoor voice versus your outdoor voice is going to be different due to acoustics and reverberation,” says Bagby.

The university also learned an “opt out” approach to text alerts is better than “opt in.” When the school first began building a mass notification system in 2007, its communication methods consisted solely of text and email notifications.

“After Virginia Tech happened we started seeing some of our holes. Only 10 percent of our population was opting in. We needed to make this mandatory so we switched to opt out,” says Bagby. “We use our HR system and our student information system as kind of a record or source of truth. When a student registers with us they have to put in a cellphone number and a local address. We already have all that information so why not use it?”

After switching to an “opt out” approach, WUSTL now has a 99 percent compliance rate for text and email notifications.

Assessing Your System

The university conducts a thorough after action review anytime its mass notification system is deployed or tested.

“We look at what worked and what didn’t work so we get feedback from faculty, staff, students and even visitors at times and if for some reason we are missing part of the population we look at how we can get to that population,” says Bagby.

For example, the computer labs at WUSTL are located in the basement. It quickly became apparent that students working in the labs did not have cellphone service and could not receive text alerts so the school decided to install desktop pop-ups. The pop-up alerts take over the computer screen no matter what the student is working on.

The review process brings together a committee that consists of members from the Public Affairs department, Campus Police, Emergency Management, IT, HR, Risk Management and Student Life.

“First we’re looking at were there any injuries or deaths or those ‘aha’ moments if something didn’t work or didn’t go right,” says Bagby. “Then it’s also looking at what did work and was effective.”

The committee reviews whether the campus community received the emergency alerts and whether they took the appropriate actions to ensure safety. For example, did students and staff go to the spot the notifications told them to? Did anyone ignore the message? What can the university do to prevent that? If for some reason a certain area of the campus didn’t get the message or wasn’t adequately notified, the committee will take steps to correct that. The solution may be something as simple as installing more desktop alerts or a few speakers at the end of a hallway. A mass notification system is always a work in progress.

“We go through those steps and then weigh the risks versus reward or the return on investment and then move it along from there,” says Bagby.

Related Articles:

- [Your Emergency Notification Cheat Sheet](#)
- [Solutions to Your Common Emergency Notification Problems](#)
- [How to Select a Digital Signage System](#)
- [How to Get the Public to Pay Attention to Emergency Alerts](#)