



# Smart, Safe Campus

A Planning Guide for  
Higher Education Leaders

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**TABLE OF CONTENTS**

Introduction..... 3

History of Campus Policing..... 3

Campus Safety Today ..... 3

Connected Student..... 4

University Brand Image..... 4

Executive Summary of Key Investment Areas..... 5

    Key Investment #1 (Emergency Notifications)..... 6

    Key Investment #2 (Video Cameras) ..... 7

    Key Investment #3 (Real-Time Situational Awareness)..... 7

    Key Investment #4 (Access Control)..... 8

    Key Investment #5 (Social Media Mining) ..... 8

    Key Investment #6 (Transportation, Parking and Lighting)..... 8

    Key Investment #7 (Wireless Coverage)..... 9

    Key Investment #8 (Mobile Applications)..... 9

    Key Investment #9 (Next Generation 911)..... 10

    Key Investment #10 (Interoperable Communications) ..... 10

Conclusion..... 11

    Key Takeaways..... 11

About the Author..... 12

The Digital Decision Team ..... 13

Sources and References..... 14

**THE SAFE CAMPUS**



## INTRODUCTION

Today's college and university campuses are evolving to meet students' growing and changing needs globally, including the influx of millennials or Generation Y. According to Forbes, more than 250 million students globally will enroll in higher learning institutions by 2025. Moreover, with the current pandemic, a growing number of remote students are connecting virtually to learning institutions. Consequently, higher learning administrators and technology leaders must strive to achieve a "Connected Campus" during this COVID season and beyond. A "Connected Campus" includes many ways universities can utilize technology to better meet students' needs, thereby keeping them more engaged in their studies and in **campus** life. Despite the rapidly changing university and college landscape, there is one thing that remains the same: **the importance of campus safety and security for students, faculty, and staff**. First and foremost, safety and security must be top priorities for any campus administration. Safety is a fundamental need, and campuses must have the requisite "smart" security technology and processes to be able to keep students, faculty, and staff safe at all times. The onus is on learning institutions to adopt mobility solutions, social media-friendly technology, and the internet of life-saving things (IoLST) to help people connect, collaborate, communicate, and remain safe on campus.

## History of campus policing

The origins of campus policing date back to the late 1800s when Yale University entered into an agreement with the New Haven Police Department with the goals of deterring potential crime and improving relations between students and law enforcement. In the 1960's most colleges and universities deployed security personnel who would later evolve to sworn law enforcement as a direct result of the Vietnam War, the 1970 Kent State University shooting, and increasing crime on college campuses around the country. As the campus policing model changed for some, the 1970s still saw private colleges and universities maintain unarmed security forces.

## CAMPUS SAFETY TODAY

With over 15 million students and several million more faculty and staff at U.S. institutions of higher education, it is not surprising that campus safety is of great interest to both the public and the public safety community. According to the United States Department of Justice, most universities and colleges in the U.S. now have armed police on campus. Recent campus violence has brought more attention to our colleges and universities relative to the protection of students, faculty, staff, and visitors. Every year college students throughout the country become victims of stalking, sexual assault, robbery, homicide, and other crimes. Campus public safety services vary significantly on the nation's college and university campuses. Campus law enforcement agencies include full-service police departments (armed and unarmed), private security operations, and other contractual security services. However, in the wake of isolated national protests, and with challenges to some university policy growing, a few universities have suspended the development of a private police department so that the school may benefit from the national "re-evaluation of policing in society." This movement has developed amid a growing call on campuses across the country to disarm or disband university police departments. These initiatives may grow, forcing policy changes and some hope, paving the way for a new campus public safety vision.

## CONNECTED STUDENT

Student mobile device usage is on the rise. As noted by recent EDUCAUSE research, 95 percent of postsecondary students have smartphones, and 91 percent own laptops. The result is a growing demand for anytime, anywhere access that supports peer-to-peer collaboration, project coordination, and student-to-staff communication. This growing demand also requires support for how the campus community connects with public safety and first responders who can provide emergency services. To meet these evolving expectations, colleges embrace enhanced connection deployments, including mesh networks, 4G LTE, and 5G cellular. Today, higher education institutions are facing a new wave of transformation shaped by increased competition, reduced government funding, declining enrollment numbers, and in the United States rising tuition costs. As a result, institutions are tasked with reimagining how they engage with students across their entire lifecycle. Students expect their institution to know who they are and are frustrated with having to supply the same information to different university departments multiple times. Sixty-three percent of students report having to sign into two or more platforms to get the answers they require. Coupled with this, sixty-nine percent of staff currently use or plan to use artificial intelligence (AI) in the next two years, placing an even greater demand for digital infrastructure. AI technologies hold the promise of improving campus public safety. Its potential to reduce, prevent and respond to crimes, for example, creates a unique opportunity to establish safer campuses and communities: so far, it has been used for facial and image recognition, managing crime scenes, and detecting criminal behaviors.

## UNIVERSITY BRAND IMAGE

Future recruitment may suffer if it is deemed that the institution is even slightly negligent where safety is concerned. If negligence is suspected, irreparable damage can be done to the university brand, and image and hefty financial implications can devastate the higher education budget. Keeping students safe is not limited to criminal incidents, natural disasters, fires, accidents, and health-related concerns. All potential hazards mandate the use of the latest security monitoring, communications, notification, and emergency response systems and technologies on today's campuses. These technologies must address not only student safety but that of faculty, staff, and visitors as well.

*“Every university, college and higher learning institutions must have a comprehensive safe-smart campus technology plan that includes key investments in security and situational awareness tools that are all part of the campus safety equation.”*

## EXECUTIVE SUMMARY OF KEY INVESTMENT AREAS

### KEY INVESTMENT #1 — EMERGENCY NOTIFICATIONS

The University must have the ability to quickly get the word out to an entire campus population of a local incident, along with specific lockdown or safety instructions.

### KEY INVESTMENT #2 — VIDEO CAMERAS

Video provides real-time situational awareness that facilitates the detection and investigation of crimes or incidents and deters and protects students from unforeseeable future harm.

### KEY INVESTMENT #3 — REAL-TIME SITUATIONAL AWARENESS

Real-Time Response Systems unify public safety systems and integrates data from multiple independent systems, thus providing true situational awareness in near real-time.

### KEY INVESTMENT #4 — ACCESS CONTROL

Today's access control technology must have sophisticated features and integrate with other systems to prevent breaches and allow appropriate access to authorized personnel.

### KEY INVESTMENT #5 — SOCIAL MEDIA MINING

The use of social media mining (defined as "the process of representing, analyzing, and extracting actionable patterns from social media data") can be leveraged by administrators and public safety to provide comprehensive campus safety.

### KEY INVESTMENT #6 — CAMPUS TRANSPORTATION PARKING AND LIGHTING

Today's best transportation solutions should provide a 360-degree view of campus operations enabling schools to improve and efficiently manage bus services, promote safety, and reduce environmental impact and costs.

### KEY INVESTMENT #7 — MOBILE APPLICATIONS

With the rise in the creation of mobile applications designed for safety and security, many colleges and universities are deciding to make safety and security applications available on their campuses for students, faculty, visitors, and staff.

### KEY INVESTMENT #8 — WIRELESS COVERAGE

Ubiquitous wireless coverage provides access for all the Internet of Life-Saving devices. As such, wireless connectivity is critical to achieving campus safety.

### KEY INVESTMENT #9 — NEXT GENERATION 911

NG911 will support a more diverse set of IP-based communications, including **text, data, photos, and video exchanges** that will enhance the speed, accuracy, and preparation of campus first responders. The successful implementation of NG911 on all college campuses will be crucial to achieving enhanced campus safety with its ability to provide pinpoint locations of those who need immediate assistance.

### KEY INVESTMENT #10 — INTEROPERABLE COMMUNICATIONS

Comprehensive interoperability means Campus public safety and other response providers with shared jurisdiction can communicate with whom they need and when they need, regardless of network, platform, or device. Our nation's universities and campuses deserve and must have comprehensive interoperability.

## KEY INVESTMENT #1 — EMERGENCY NOTIFICATIONS



The ability to quickly get the word out to an entire campus population of a local incident, along with any specific lockdown or safety instructions, is of paramount importance for any higher learning institution. An SMS text has grown to be a major tool in this area. Any emergency notification system should be designed to:

- Create an alert for emergency situations, including school evacuations and weather-related school closings
- Send emergency alerts and response procedures to all parents and staff members instantly during these emergencies
- Rapidly deliver emergency alerts via all communication channels
- Reach hundreds or thousands of staff, student families, and school community members in minutes.

### The Jeanne Clery Act 1990

The Clery Act requires colleges and universities (that receive federal funding) to disseminate a public Annual Security Report (ASR) to students, faculty, and staff every October 1st. The ASR must include statistics of campus crime for the proceeding three-calendar years and details about the efforts to improve campus safety. The ASR must also include policy statements regarding crime reporting, campus facility security and access, law enforcement authority, the incidence of alcohol and drug use, and the prevention of/response to sexual assault, domestic or dating violence, and stalking. When a crime occurs, that is covered by the Clery Act.

Campus officials are required to evaluate if there is a serious or on-going threat to the campus community to determine if a timely warning needs to be issued to students, faculty, and staff. In the event of immediate, significant danger to the campus community's health or safety, campus officials may issue an emergency notification. The notification can include the entire campus or be limited to a specific area deemed to be at risk.

### Alyssa's Law

Alyssa's law requires all public elementary and secondary school buildings to be equipped with a silent panic alarm connected to local law enforcement. On October 4, 2019, Alyssa's Law was introduced to Congress at the Federal Level. Several states are already in the process of enacting Alyssa's Law requirements into legislation at the state level (NJ, FL, NE already have laws). Equally important is students, faculty, and staff's ability to have access to mobile panic buttons to notify school staff immediately, 911, and nearby first responders about incidents such as an active shooter, fire, or medical emergency. This technology has the ability to directly dial 911, providing the incident type and location, indicating to responders exactly where help is needed.

## KEY INVESTMENT #2 -VIDEO CAMERAS



The growing use of video cameras as part of the campus safety equation is a testament to their effectiveness, not just in detecting or investigating crimes or incidents after the fact, but in deterring and protecting students from future harm. A video surveillance system can help an institution maintain secure facilities with limited security personnel, acts as a visual deterrent to criminals, and even prevent vandalism. Today's campus video camera systems should have the capabilities to:

- Help make real-time notification for out-of-place actions and individuals
- Direct the attention of first responders/security personnel to potential problems
- Allow for the quick dispatch of the closest first responder/security officer with the ability to display on-scene video to the responding unit
- Reduce video storage

## KEY INVESTMENT #3 — REAL-TIME SITUATIONAL AWARENESS



University and campus public safety agencies are face a torrent of data that is both complex and costly to manage. The ability to rapidly ingest, analyze, and deliver information systems is the backbone of data-driven public safety. Data gathered from 911 call systems, video surveillance, license plate detection, shot detection, and other systems can help agencies find perpetrators and victims.

Moreover, these systems can track suspects, uncover patterns, and better manage planned and unplanned events.

While many departments have individual solutions to gather this information, they are often not integrated and require the time-consuming manual collection to build a holistic picture. Most agencies have limited IT staff or budget to integrate siloed systems, or to efficiently manage manual data collection, integration, and analysis. Many also lack the data hygiene tools needed to ensure that information is viable, current, and actionable, as too much data can be as problematic as no data at all. These, and other financial and functional challenges, have thus far impeded the widespread implementation of smart-safe campus technology.

Real-Time Response Systems address these issues through a managed decision-support system, delivered over a secure public safety network. Such systems unify public safety systems and integrate data from multiple independent systems such as computer-aided dispatch, video sensors, record management systems, and third-party databases into a single near real-time view of the campus and nearby jurisdictions.

## KEY INVESTMENT #4 — ACCESS CONTROL



Ensuring the right people have access to the right resources at the right time is another vital aspect of campus safety. Lock and key simply do not give security staff and administrators the assurance of authorized entry. Today's access control technology must have sophisticated features that integrate with other systems to prevent breaches.

In today's world, it is more important than ever to keep track of who visited, when they arrived, when they left, and who they were there to see. Visitor management systems have become very popular in recent years as an important part of an overall security plan. The coronavirus pandemic has added the additional need for contact tracing.

## KEY INVESTMENT #5 — SOCIAL MEDIA MINING



The exploding use of social media has naturally become part of the campus experience. The use of social media mining is defined as "the process of representing, analyzing, and extracting actionable patterns from social media data" can be leveraged by administrators for many valuable reasons, including campus safety. Any campus security solution should have the ability to:

1. Gauge campus sentiment
2. Set outgoing school alerts and messages to automatically post to selected social media accounts, including Facebook, Twitter, and others, and
3. Improve the institution's ability to spot harmful trends that can threaten students' safety, such as bullying.

## KEY INVESTMENT #6 — TRANSPORTATION/ PARKING/LIGHTING



Nothing causes more frustration than traffic congestion and the inability to find parking. Students and faculty need to be able to get around the campus efficiently. Many universities have campuses spread out among multiple locations (cities). University Transportation Managers need visibility into the trouble spots and data to provide recommended changes to alleviate congestion.

They need to understand parking availability and time/day of week parking needs from a parking perspective. The students and faculty want an easy way to find available parking and well lighted public spaces, so everyone feels safe walking throughout the campus.

Today's best transportation solutions should provide a 360-degree view of operations. As a result, schools can improve and efficiently manage bus service, promote safety, and strive to reduce environmental impact and costs. Technology solutions available today can help schools with transportation management and safety, including:

- Transportation safety
- Parking management
- Route optimization
- Asset and fleet management
- Traffic flow Analytics
- Intelligent Lighting



## KEY INVESTMENT #7 — WIRELESS CONNECTIVITY



Most students, faculty, staff, and visitors have a personal cell phone and rely upon them for several uses to include capturing images to contacting law enforcement, to receiving emergency notifications. Consequently, wireless (4G/5G cellular, Wi-Fi-6, Wi-Fi Mesh Networks) connectivity is one of the most critical requirements for campus safety. 5G brings increased speed, capacity, security, and ultra-low latency, meaning that more devices can connect at once while also enjoying better download/upload speeds. In the classroom, that increased speed will get students and faculty closer to a seamless experience when it comes to multi-media and connecting with public safety. True mobility is the greatest strength of 4GLTE and 5G networks: reliable, authenticated connections at a scale that travel with users as they move.

## KEY INVESTMENT #8 — MOBILE APPLICATIONS



In recent years, we have seen a rise in mobile applications designed for safety and security. In combination with smartphones' technical abilities, the creation and demand for safety applications are growing out of security concerns across the nation in the wake of campus shootings and other safety incidents. Many colleges and universities are deciding to implement safety and security applications on their campuses for students, and in some cases for, faculty and staff as well.

Institutions may pay for a subscription or a license fee, making the applications accessible to users as a free download. Some mobile applications offer a direct connection to campus public safety offices, allow for tip reporting, live GPS location monitoring, or real-time video and audio recording. This information is often saved on a secure server and available, if needed, for criminal investigations. This emerging mobile technology can be part of a campus's toolbox of responses. One of the advantages of mobile applications is that students may feel more comfortable communicating with campus safety and law enforcement officials through the applications instead of calling, which may be an intimidating task for some.

## KEY INVESTMENT #9 — NEXT GENERATION 911 (NG911)



A large part of keeping students safe is making it easier for 911 call centers and first responders to take action and respond quickly. Public safety must know exactly what is happening and many other crucial details that can speed up response time and improve situational awareness. There is no way to control where an emergency happens, which means staff members must have the ability to contact 911 regardless

of where they are located. It includes less obvious campus areas, such as sports fields, parking lots, dormitory rooms, or the cafeteria. The majority (roughly 78 percent) of reported 911 calls originate from cellular phones. NG911 introduces a broad array of public safety advancements that will significantly expand emergency communications capabilities.

In contrast to the legacy 'voice-centric' E911 network, NG911 will support a more diverse set of IP-based communications, including text, data, photos, and video exchanges that will enhance the speed, accuracy, and preparation of campus first responders. Significant progress has been made in the capability to process text-to-911. Some campus jurisdictions now have text-to-911 capability, while many others are slow to implement due to the lack of funding and technical obstacles. The successful implementation of NG911 on all college campuses will be critical to achieving enhanced campus safety.

## KEY INVESTMENT #10 — INTEROPERABLE COMMUNICATIONS



Let there be no confusion, since September 11th, 2001, University and Campus Public Safety stakeholders expect, deserve, and must have comprehensive interoperability. The ability of emergency response agencies from multiple jurisdictions to talk to one another via radio and commercial broadband communications systems – to exchange secure voice and data with one another on-demand, in real-time, anywhere, anytime is critical to public safety. Public Safety comprehensive Interoperability is not merely

the ability to complete a voice call, send a text, or email between different networks. Full interoperability is only accomplished when all areas of interoperability are achieved to ensure that the functionality and capabilities of the services provided to Public Safety are available to all First Responders. Public Safety Interoperability is more than just interconnecting different networks. It calls for uniform standards to help ensure multi-jurisdictional communications are achieved at any incident scene. It connects users on LTE networks with users on LMR networks, and it requires push-to-talk and device-to-device capabilities to work effectively across all networks. Further, true public safety interoperability absolutely means that nonproprietary and nonexclusive public safety applications are accessible by all first responders, regardless of the network they use.

## CONCLUSION

Universities are facing unprecedented pressure to do more to keep campuses safe. Smart-Safe Campus technologies provide a new toolset to deliver more efficient and effective services, increase awareness for first responders and improve residents' and visitors' quality of life. The potential benefits of Smart-Safe Campus technologies include:

### SECURITY AND SAFETY:

- Live situational awareness and alerts in case of an incident through a network of cameras
- Greater wireless coverage on campus with more eyes on the street
- Supporting operations at major events, such as crowd control and community safety
- Preventing crimes by detecting and deterring criminal activity and by helping identify and assist in the apprehension of offenders, leading to their prosecution

### IMPROVED RESPONSIVENESS:

- Providing students, faculty, staff, and visitors access to the police for quick and effective response, along with improved visibility, transparency, and perception of safety
- Improved response times and a general reduction in fear of crime in an area on campus
- Providing response assistance to emergency services and fast turnaround time

### EFFECTIVE POLICING:

- Addressing threats
- Assisting in the management and policing of planned or unplanned events
- Aiding investigations by integrating analytics tools
- Providing evidence for criminal and civil action in courts

## Be Part Of The Smart-Safe Campus Movement

In summary, maximizing safety on campus relies on investments in ten (10) key areas:

- |                                    |   |
|------------------------------------|---|
| 1. Emergency Notifications         | 6. Transportation, Parking And Lighting |
| 2. Video Cameras                   | 7. Ubiquitous Wireless Connectivity     |
| 3. Real-Time Situational Awareness | 8. Mobile Applications                  |
| 4. Access Control/Security         | 9. Next Generation 911                  |
| 5. Social Media Mining             | 10. Interoperable Communications        |

Faculty, staff, students, and parents have grown aware of the vulnerability and security concerns facing our colleges and universities each day. The expectation is that institutions are encouraged to invest in the technologies in an ever-growing world of threats. Proactive planning and research are the keys to success. Campus safety stakeholders must educate themselves about leading-edge security technologies and advancements that are best for their campus environments. No matter if you are a public college, urban institution, or a private university in a rural setting, establishing a comprehensive public safety strategy leveraging the technologies included in this whitepaper will enable a smart-safe campus environment.

## ABOUT THE AUTHOR



Gary D. Lewis Jr., is the Assistant Vice President/Chief of Police at the University of Louisville and provides administrative leadership and operational management for the campus safety departments to include, e.g., Police Department, Emergency Management, Fire Marshal, Parking Office, Marketing Communications, and Business Services while in this role since August of 2018. The daily functions include implementing and maintaining a Campus Security Master Plan and while ensuring enforcement of Campus Security Rules and Regulations.

Previously, Lewis served as the Chief of Police at Cleveland State University from 2015-2018 and prior to that, he spent 22 years with the Ohio State Highway Patrol as a Commander where he retired from in 2013. The day-to-day responsibilities included data collection and analysis, investigations, human resource management, invoice processing, investigations, fleet management, etc. Lewis also served as the Division's Public Information Officer (PIO) and handled crisis communications, media/marketing, on-scene crisis management, critical incidents, and statewide communications.

Additionally, Lewis served as the Senior Director of Media and Public Relations at The Ohio State University from 2013 to 2015 where he acted as spokesperson for all University-related matters. His responsibilities included handling the day-to-day operations within Media & Public Relations, strategic communications, and planning for senior leadership, along with managing all public records requests.

Lewis holds a master's degree in Criminal Justice from Michigan State University, a bachelor's degree in Public Safety Management from Franklin University, an associate degree in Visual Communications, Art Institute of Pittsburgh, and is a 2003 F.B.I. National Academy graduate. In 2017 Gary completed the Executive Leadership course which focused on Crisis Communication at Harvard University's John F. Kennedy School of Government.

# THE DIGITAL DECISION TEAM

## THE DIGITAL DECISION EXECUTIVE TEAM

The Digital Decision Team combines hundreds of combined years of subject matter expertise in a variety of Public Safety and Public Sector areas



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