



THE OPEN CAMPUS

Security and Incident Response for Educational Institutions in a Global, Mobile World

By Glenn Farrant, Chief Executive Officer, CriticalArc

At Hogwarts School of Witchcraft and Wizardry, security was critical. Every day had the potential for an incident that threatened the safety of those on campus. Faculty, students and staff might encounter a troll, dragon or former student committed to the destruction of property and potential threat to life. This was a normal part of life in an open and global world that extended beyond the walls of the school to London and the world beyond.

Hollywood can teach us much about security in an open world, the theme of mankind's struggle to find balance between security and freedom is at the center of debate between totalitarian and democratic societies. It can also inspire us to consider new ways to address the security challenges we currently face.

In the real world, today, there are those that would build walls around college campuses, cities and countries to secure them. Far from Hollywood fantasy, the debate over how to secure a community without compromising freedom is real.

But, as it is in the world of Harry Potter, securing a campus with walls and barriers is impossible given that students and faculty are free to explore the world around them as part of their learning experience, added to which, many local communities and visitors are encouraged to use the facilities on campus. Education is less about walls, chalkboards and desks and more about the learning experience.

Without Borders

With ever-more fluid campuses, colleges and universities have become woven into the local community. This new open model for institutions has created a new environment, bringing with it challenges around the safety of students, faculty, and staff whether they live, work or study on or off campus.

The integration of campuses into the local community has made it difficult for public safety personnel and operations to maintain control and resolve incidents effectively. Without proper situational awareness and communication, incident response can be slow and inefficient and confusion over jurisdiction can lead to poor response times, and consequently suboptimal outcomes.

This model can slow the flow of information to and from the campus community, creating a knowledge gap in operations – the knowledge and information that departments need to identify actionable intelligence or preventative measures that are appropriate to their campus models.

In many cases, satellite campuses and remote overseas research locations are being established to expand the organization's reach and capabilities, placing their students and faculty beyond the existing communication and security systems.

There is a realization in most areas of the world that a duty of care for employees and students need to be standardized if they are on the main campus, travelling as part of their study/work, or visiting a satellite facility anywhere in the world. This has been evidenced in the UK with the recent launch by BSI of PAS3001:2016, "[Travelling for work – Responsibilities of an organization for health, safety and security – Code of practice](#)"

Challenges related to the new borderless campus extend far across the globe where distance, culture, timezones and logistics mean that traditional security strategies no longer apply. Over the last several years, the world has seen an increase of violence on civilian targets. Terrorist attacks impacting students studying abroad in cities and countries that were once deemed low risk, such as Paris, Brussels and Istanbul highlight the security challenges and real consequences of the globalization of student populations.

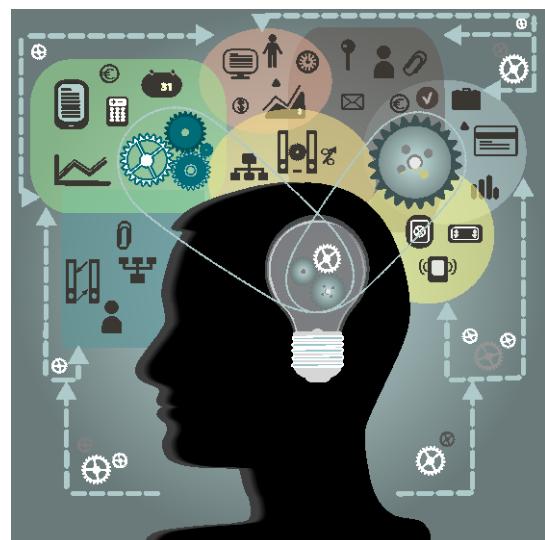
Fortunately, the latest technology can enable the creation of security “zones”, either in advance or on the fly, that provide a frame of reference within which these challenges can be addressed. By leveraging smartphone and secure cloud server technology, institutions can connect persons in any security zone globally. Institutions can secure the open campus from a centralized operations hub where appropriate decisions can be made in a timely manner to resolve an incident anywhere from down the street to across the globe, involving anywhere from one to many thousands of individuals.

A Human Approach

Humans are essentially living data points who can take in data and information and have the capability to control communications across multiple channels if they are given the right tools.

Maintaining effective security operations and situational awareness in an open campus environment relies heavily on people collaborating. Traditional approaches to security systems have been centered around integrating systems and not the most important asset of all - people. A key challenge of integrating people is that they are constantly in motion. Security risks can change dynamically based on the flow of people within and across campus borders, and response protocols are heavily dependent on the location of the people at risk and the available responders. Therefore at the heart of any security system in a dynamic environment is *communication*.

The traditional approaches to securing physical environments make use of surveillance and access control technology, along with electronic sensors that are embedded in building systems. This approach fails to take advantage of people as the most valuable detection and analysis assets available to security teams. Just as elderly neighbours rely on word-of-mouth or students rely on social media to keep up with



current events, security teams can draw on the collective observations of everyone on campus to create an accurate and detailed common operating picture of any situation.

Security control-rooms typically display less than 5% of all CCTV cameras in their control, so vision acquired by these systems is predominantly only useful as a forensic tool post-incident. Despite the significant investment campuses have made in surveillance cameras and other sensor technology, without communication and collaboration tools, interpreting that data and responding effectively in real time can be impossible. The volume of data security personnel receive far outpaces the number of staff assigned to monitor and interpret it.

By leveraging smartphone technology in an intelligent system which collects and transmits data as part of a networked communication response system, new channels of communication and collaboration for safety personnel are possible. These channels allow safety personnel in the field to have complete situation awareness, avoiding central communication bottlenecks and thus allowing the whole team to contribute to the most efficient and effective decision making and response. The potential to proactively impact the outcome of an incident rather than simply dealing with the aftermath is now a reality.

Consistent Practical Solutions

A key aspect to consider when taking the human approach is to ensure any solution is simple to use and comprehensive so that people will engage with it appropriately. Creating valuable, consistent tools and policies that are valued by staff and students, and are the central point of reference for security and safety on and off campus is a challenge which can be achieved.

Standalone solutions such as panic apps and mass communication apps offer limited value for many reasons including: disuse due to limited engagement, confusion between systems and not taking advantage of the opportunities of an integrated system. An example could be a specific travel application, which is not used generally on campus, where a staff member is travelling for the first time and has to try and use it under duress with no familiarity on how to use it.

Providing a solution with multiple capabilities, and a simple user experience whilst remaining relevant to the user's situation is of primary importance. Offering day to day value such as context based safety and security information based on a user's exact location, travel advice whilst overseas, the ability to be connected to the local emergency services

even if the number is not known by the user, and real time tracking of services such as shuttle and transport networks provide users with a valuable tool to maximize their security.

In my opinion is it's better to acquire a SINGLE holistic solution that addresses all the needs of end-users and response teams alike, during emergencies of all scales. Rather than buying a standalone duress alarm, a mass-SMS system and a lone-worker device, these should all be rolled into a single solution with appropriate standards, compliance, reporting and continuous service improvement capabilities. The end result is a system that works in practice for all users and one which can transform an organisation's ability to handle any situation in previously impossible ways.

Beyond Mass Notification

Since 2013, there have been 188 reported incidents of a school shooting on schools and college campuses in the United States. Alongside this, the use of mass notification systems have been mandated or highly encouraged to aid law enforcement and ensure communication across the campus population. These notification systems are obviously critical for broadcasting messages quickly and indiscriminately to a dispersed population.



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There is no question these notification systems are an important resource. However, most mass notification systems have major limitations. For example the communication can be limited in functionality with public safety officers only being able to send information out, and not being able to receive information back. In addition, people cannot be targeted for communication based on their real time location and needs. These aspects would be especially useful in scenarios such as an active shooter or in a travel security related incident.

Other areas traditional mass communication systems offer limited capability are:

- Little if any integration into your response protocols and real time visualization of assets – when a mass communication is sent out you are reliant on a standalone solution to manage the incident without real time tools for true command and control such as visualizing responders (Security, First Aiders, Fire Wardens) and Vehicles to direct your teams based on the flow of people or a situation.
- Currently do not take advantage of the differing technologies now available / in use. SMS, Push, Email, Onscreen, Social Media integration and SIP/EWIS (for Recorded Voice over IP). With a multi layered communication plan you have a better chance of communicating with more users. Having this available in one system is important for managing a situation in real time
- Multi lingual support – ability to send in multiple languages to meet the diverse international staff and students onsite.

Security must move beyond mass notification and incorporate tools for information and intelligence to flow across the team for incident response. Information gained from first person accounts and reporting in real-time can give more accurate details of events as they unfold and make all the difference in the ability to save lives.

An integrated system that distributes intelligence as well as notifications is necessary to better inform first responders and ensure the safety of those on campus is now technically possible and will become a standard capability in the near future.

Securing the Open Campus

No campus is an island, campuses are not closed ecosystems and they interact with the world around them. Universities are spreading internationally from what was once a single campus. We expect to be able to move freely across a campus and within the community.

Campuses are no longer cloistered behind iron fences. Completely locking down buildings with access control technology is not an option.

Security platforms need to have the flexibility to address this new distributed campus model. The ability to support operations anywhere in the world whilst managing your organisation's ability to respond and the organization's liability is key. To facilitate this, there is a distinct need to define where and when your organisation will provide security and safety coverage. This can be achieved through the creation of security geo fenced SafeZones either in advance or on demand.

More and more organizations are looking to deploy an open enterprise risk management solution, one that includes numerous tools and capabilities to support both their traditional campus and the increasing globalized students. It is therefore right to question whether existing standalone Panic Apps, Mass Notification Systems, siloed real time GPS Radio systems, Vehicle Tracking, Lone Worker and Emergency Management can be effective in an environment of downward pressure on costs. With these siloed systems, the most useful control-room tool might be a wheeled office chair that transports limited coordination officers between screens as they try to interpret a situation without the benefit of single, comprehensive common operating picture.

The Solution

With the open campus fast becoming the standard model for higher education across the globe. Freedom to move about a campus and its surrounding community is a common expectation of all campus users. Security systems must adapt to support these new realities.

Fortunately, a new breed of technology enables us to do just that. By integrating flexible communication and collaboration tools with distributed smartphone technology and traditional surveillance tools, campuses need not trade security for freedom.

CriticalArc, a global leader in this space, designs and delivers the distributed command and control solution, SafeZone™, which is fundamentally changing the way universities manage day-to-day safety and security operations across the globe. Deployed as a cloud service in hours, SafeZone provides response teams with complete operational awareness, to enhance the protection of students, staff, and facilities while delivering efficiency savings.

Accessed by staff and students through an intuitive app, SafeZone enables them to summon help and assistance right where they need it most, while providing security teams with an effective tool for geo-targeted mass notification, the monitoring of staff and students working

alone and for real time visualisation and coordination of many thousands of individuals when widespread emergency management is required.

Delivering a broad situational view across all environments from dense multi-story campuses, to dispersed estates, satellite locations and even overseas countries, SafeZone supports a rapid and coordinated response to incidents by distributing information to first responders and allowing them to collaborate as events unfold. SafeZone improves compliance with existing policies and protocols, while increasing the overall efficiency and effectiveness of security and response teams across dynamic education environments.

Turning back to the inspiration that Hollywood affords, one of the most important capabilities at Hogwarts for managing safety and security was provided by the unique Marauder's Map, a single, magical device that allowed a single person to see the situation across the school, including the location of everyone, students, staff and aggressors. This allowed that person to make quick powerful decisions about what to do as any incident unfolds.

I invite you to imagine the power of the Marauder's Map in the hands of everyone charged with managing the safety and security of today's open campus.

Well, imagine no longer, with the latest technology and systems such as SafeZone, we are now able to surpass even the imaginative leaps of Hollywood. No magic required.

About Glenn Farrant



A former Navy Weapons Engineer and manager of Maritime Command IT, Glenn more recently led security systems development for Honeywell, which included the delivery of software products for some of the highest profile and highest security sites in the world. During this time, Glenn developed a deep understanding of the technology and practical requirements of high security and regulated environments.

To this knowledge of software product development and operational requirements, Glenn adds frontline experience of coordinating and distributing difficult-to-manage events. It's this combination of factors that led to the vision for SafeZone.

Glenn regularly gives talks on the subject of using the latest technology in managing security and safety, and also contributes by speaking with, mentoring and advising early-stage technology companies.

Responsible for general management and product direction at CriticalArc, Glenn continues to stay at the forefront of new technology in order to ensure that CriticalArc's products are able to solve difficult problems in new, more effective and previously impossible ways.

An engineer at heart, Glenn is passionate about technology and the opportunities it provides for changing how the world works.

About Critical Arc

CriticalArc is a leader in public safety solutions and application development for emergency management serving higher education, healthcare, corporate enterprises, government and communities. CriticalArc's premiere security platform SafeZone is a unified cloud-based platform for public safety enabling real-time situational awareness and incident response management for emergency personnel communication and collaboration in campus environments. SafeZone is currently deployed in more than 400 locations across Australia, Europe, the Middle East and the United States. Founded in 2011 in Australia, CriticalArc is now operating on four continents with a focus on helping organizations and communities prevent, monitor and respond to threats in open environments. For more information, visit www.criticalarc.com.