Situational Awareness: The Key to Preventing Ignorance-based Loss

White Paper Provided by Status Solutions

Lacking or inadequate situational awareness is one of the primary factors in accidents attributed to human error, according to research. What is situational awareness? Originally a military term referring to a pilot’s operational status and knowledge of immediate threats, today situational awareness refers to real-time information about what’s happening in a single facility or across an entire enterprise to protect people and property. In addition to emergency alerting/response, situational awareness also applies to business operations, making personnel aware of potential problems before they become costly disruptions. With situational awareness delivered in real time to as many communication devices as possible, action can be taken to prevent loss of life, property, business and convenience. This risk management strategy includes three primary components: monitoring, alerting and reporting with applications for life safety, security, environmental monitoring and mass notification in virtually every industry.

Monitoring

The first component of situational awareness is monitoring in order to know when a triggering event occurs. Life safety, security and environmental controls produce alarms when triggered by such events as nurse call within a senior living facility or hospital, intrusion detection at a school or retail store, a power generator failure in a hotel or manufacturing facility, etc. Whatever the triggering event, information about it must be conveyed in real time to the people likely to be affected as well as those responsible for response and remediation. While multiple alarm systems may be at work, they most likely operate in siloes, independent of one another. Unmonitored systems generally provide only local alerting in the form of buzzers, lamps or annunciation panels. In addition, training and support often is complicated, duplicated and therefore inefficient when managing disparate systems, contributing to human error. But situational awareness ensures that triggering events are monitored from a central point via the integration of existing alarm systems on the IP network to provide flexibility, scalability and customized dashboards. And with central alarm management comes the potential for faster, more efficient communication and emergency response as well as the opportunity for early intervention.
Alerting

The second component of situational awareness involves producing alerts that include detailed information about a triggering event. While a siren produces an audible alert, it lacks specificity – there’s no data as to where the emergency is unfolding. Alerting for existing life safety, security and environmental monitoring systems also often lacks redundancy and scalability, limiting alerts to a single method such as email. With managed alerting, real-time information about a triggering event goes to key individuals, select groups or entire populations based on an organization’s predefined alerting/emergency response protocols. And these alerts will be delivered automatically to numerous communication devices, such as smartphones, pagers, emails, computer screens, two-way radios, PA systems, etc. Such mass notification reduces the chance of information about a triggering event falling through the cracks. If any one alerting method should fail, the alternate channels provide redundancy so critical information is sure to be disseminated. Managed alerting also allows for alerts to be created and sent on demand for emergency as well as non-emergency events, such as schedule changes or courtesy reminders.

Reporting

By recording triggering events and their associated alarms, the managed alerts produced, and the subsequent notifications and acknowledgements, reports can be generated for important operational insights. Organizations can use this information to analyze response times and escalation protocols as well as to demonstrate regulatory compliance. For example, histories can be generated to show that refrigeration units for medication are kept within acceptable temperature ranges. Other reporting capabilities will combine multiple data sources/streams with artificial intelligence in complex decision engines to aid in awareness and response.

Centralized Monitoring, Alerting and Reporting

The Situational Awareness and Response Assistant (SARA) from Status Solutions enables any organization – large or small – to centralize monitoring, alerting and reporting by integrating existing, stand-alone life safety, security and environmental controls. The SARA system is based on an open architecture for IP- and RF-enablement across any environment, allowing all communication protocols and connection methodologies to be used in harnessing triggering
events (alarms) and driving custom awareness transactions (alerts). Triggering events are monitored from a central point with detailed alerts delivered automatically to virtually any communication device – from smartphones to desktops to digital signage. By ensuring that the right information goes to the right people on the right devices in real time, SARA mitigates risk. And with situational awareness for life safety, security and environmental monitoring driven to as many screen as possible via mass notification, the right actions can be taken to protect people, property and business operations.

**Life Safety**

With integration to nurse call systems, telemetry devices, mobile panic buttons and a variety of other life safety systems such as fire panels, SARA helps protect people from injury and speeds emergency response. SARA turns alarms from these disparate systems into detailed voice and text alerts for automatic delivery to designated communication devices, including smartphones, landlines, pagers, emails, computer screens, two-way radios, PA systems, etc. SARA also provides enhanced location support for mobile duress devices within the Inovonics EchoStream RF infrastructure through its patent-pending vector-mapping technology. Points of interest can be defined anywhere within or around a facility to provide multiple points of data to more quickly and easily find those who need help.

**Security**

Integrating disparate systems onto one common platform can enhance security, and new sensors (e.g., glass-break detectors, motion detectors, door contact alarms, etc.) can be deployed at any time for additional protection. Sensors also can be added to existing or new video surveillance cameras to enable video paging. When a device alarms – such as a glass break detector – text, audio and video alerts can be sent to various communication end points, including PC screens and mobile devices. Alerts with video pages enable responders to address an unfolding situation remotely for a more efficient and appropriate response. And transmitters with key switches also can be set up as checkpoints, requiring security officers to insert a key into each checkpoint at certain intervals to generate a history within SARA to show that the appropriate rounds are being made.
Environmental Monitoring

Sensors can be used to monitor HVAC systems, power generators and refrigerators for food and medicine. If a sudden change occurs or an acceptable threshold exceeded, an alert goes from SARA to the appropriate staff for investigation and remediation. Sensors also can be used to control energy costs plus detect moisture/humidity in server rooms as well as cigarette smoke in undesignated areas. Most important, Status Solutions can integrate SARA with existing environmental controls to expand their alerting capabilities. For example, if a building management system only sends emails, notifications can be expanded to the desired communication devices through SARA, ensuring that alerts reach maintenance staff who most likely use smartphones or pagers.

Mass Notification

Mass notification increases awareness, mobility and safety. SARA sends emergency as well as non-emergency alerts to key individuals, select groups or entire populations via smartphones, pagers, emails, two-way radios, PA systems, etc. The software’s text-to-speech capability enables voice alerts to be delivered via integration with phone systems. And SARA’s eMessenger extends mass notification to the desktop, enabling information to be delivered as browser-based, pop-up alerts to PC screens. These pop-up alerts may contain color-coded text, audio, video footage or maps and always show up in a window regardless of the application in use.

The Power of Information

SARA is a proven technology for centralized monitoring, alerting and reporting with each deployment customized to meet each customer’s desired outcomes, leverage their existing technology infrastructure, and provide ease of administration. With the situational awareness SARA provides, action can be taken to prevent ignorance-based loss, ensuring that people and property are protected. With its wireless sensor network, robust integration tools, and mass notification capabilities, SARA provides a wide, real-time view of what’s happening in and around a single facility or large enterprise. From early threat detection to emergency alerting to general announcements and courtesy reminders, SARA harnesses the power of information to save lives and property, protect business continuity, and prevent the loss of convenience/comfort.