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INCREASING USE OF TECHNOLOGY & TRENDS

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The increasing use of technology and tools is becoming more prevalent in law enforcement agencies. The law enforcement industry, like many other industries, has drastically shifted to focus on technology. Officers in the law enforcement industry can expect to combine their love for an action-packed career and the use of technology.

THE HISTORY OF TECHNOLOGY IN POLICING

The arrival of fingerprinting in the 1900s followed by crime laboratories in the 1920s revolutionized officer capacity to solve crimes. The two-way radio was invented and released to a widespread audience in the 1930s, multiplying officer productivity in responding to incidents. The Crime Commission was established in the 1960s to respond to rapidly rising crime rates, allowing them to advocate federal government funding and local criminal justice agencies to support their functions.

The launch of computer aided dispatch in early 1960, followed by 911 in 1968 shifted policing once again.

Within a few years, agencies were overloaded and overwhelmed in regard to calls for services and resources.

Fast forward to 1993, when more than 90 percent of U.S. law enforcement departments serving a population of 50,000 or more were using computers for criminal investigations, budgeting, dispatch, and manpower allocation (7).

Now, in 2020 law enforcement agencies can expect to see the use of social media to solve crime and connect with their communities, drones to catch crime, and robotics to detect and deconstruct explosives. Law enforcement officers look to technology for enhancing their effectiveness, solving crime, and keeping their communities safe.

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New Technology

Social Media

Increase of internet penetration over the last decade led to soaring popularity of social media and subsequent use as a crime fighting tool deployed by agencies to solve crimes or plan for resource deployment. Crimes have been prosecuted because of YouTube videos.

Social media will be used more frequently to gather and disseminate information, as well as engage and build rapport with the community. It is a tool that can help relay information quickly, but also cost effective in most cases. Law enforcement can use social media as an investigation tool to acquire probable cause for a search warrant, and/or help identify criminal activity.

40 percent of officers stated they've used social media to monitor special events and public gatherings.

Social media will be a crucial tool for law enforcement to locate evidences and screen candidates for employment.

Increasing public awareness of crimes, disasters, traffic issues, and other emergencies. Social media can be used to ask for the public's assistance.

According to a 2014 federal, state, local officer's survey, 40 percent of officers stated they've used social media to monitor special events and public gatherings, and 34 percent used it as a means to inform public of a specific criminal danger or disaster situation in their communities.

Digital ethics is likely to become a primary issue for law enforcement. Digital ethics is broader and includes how technology and data are used and the outcomes of that use.

Analysis and technology must be secure and ethical. Primary concerns of digital ethics focus on transparency, how data is used, and how algorithms generate results. Injudicious use of data can erode public trust.

Law enforcement may not be changed by technology, but law enforcement leaders will be faced with making difficult decisions on when (and how) to implement with minimal public backlash. Digital trust is created when an organization has good data integrity and data is governed by a code of ethics.

Body Cameras

Another technology tool gaining popularity is body cameras. Many agencies already require the use of body cameras. In fact, 32 percent of local law enforcement departments equipped at least some of their officers in 2013 with body cameras.

Body cameras have shown a decrease in number of complaints of officer force, and offer greater transparency. Citizens are less likely to fabricate incidences with the use of body cameras. They also help cure policing of its public trust deficit, and are useful to show where ingrained behavior has gone awry.

Using body cameras may raise privacy concerns. Privacy issues have surfaced with persons suggesting images captured on body worn cameras were used inappropriately. However, the reasonable expectation of privacy is that body worn cameras are capturing the same things the officer sees and hears without technology.

Agencies can maintain privacy concerns by adopting policies outlining when it is appropriate (or not) to be recording.

Facial Recognition

Facial recognition has great potential, and is being used more widely in surveillance as accuracy and sophistication increases. This technology tool is often used for reasonable suspicion; officers are not able to make an arrest solely on facial recognition.

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Biometrics

Biometrics taps into unique biological traits like fingerprints, retina scans, and DNA to identify individuals.

Early fingerprinting took weeks and was very messy, but now fingerprints are taken with a handheld scanner often built into an officer's laptops. Officers are equipped with a software reducing the time and backlog that once served as major impediments to solve crimes.

DNA and fingerprints are stored in databases that help to identify suspects more quickly. There has been a significant rise in rapid identification systems. Driving without a license can be identified instantly through an in-car computer search. Automatic tag and license plate readers allow officers to instantly analyze license plates within view range and be alerted of a stolen vehicle without lifting a finger.

Biometrics can be used to match individuals with criminal history through fingerprints, palm prints, iris recognition, and facial recognition.

GPS

GPS applications help to track and locate suspects and parolees' faster. This is increasing in popularity as technological advances enable agencies to remote track vehicles by shooting a bullet into the vehicle. GPS continues to expand, enabling officers to pinpoint location of traffic stops and crash investigations.

Information can be exported to maps. GPS technology can be used by crime analysts to help identify emerging trends in crime locations, plan for shift staffing, and patrol assignments. GPS adds increased accountability for officers allowing management and supervisory personnel to track locations and speeds officers have been traveling.

Robotic Cameras

Robots will be used to infiltrate spaces where officer safety is a concern. Robots are specially designed to deploy into places officers can't reach safely. Officers are able to throw robots into hard-to-reach areas or places without a clear line of sight and operate it wirelessly from a safe space. They can communicate with the officer/agency by sending audio and video.

Robots will be especially helpful to handle dangerous tasks involving explosives.

Predictive Policing

Predictive policing will help agencies move from reactive to proactive policing, made possible through advanced analytics. Many records managements systems (including the In-Synch RMS) offer features like investigative tools allowing users to make connections in data; solving crime more efficiently.

Next Generation 9-1-1

Technology is changing how consumers use 911. Most 911 systems were originally built using analog rather than digital technologies. Now, public safety answering points (PSAPs) across the country are being upgraded to a digital or Internet Protocol (IP)-based 911 systems, commonly referred to as Next Generation 911 (NG911).

Upon implementation, the reliability will be greatly improved with the implementation of NG911, enhancing emergency number services to create a faster, more resilient system. Future systems will be able to receive text messages, videos, and photographs.

This will help manage call overload, natural disasters, and transferring of 911 calls and proper jurisdictional responses based on location tracking.

Drones

Drones will be used – mostly for surveillance – in search and rescue, active shooter situations, and crowd monitoring. They can help solve and prevent crime. Drones act as eyes in the sky for law enforcement officials. Remote controlled drones equipped with cameras can investigate bomb threats, climb steps, and move like a human being without risking injury or death. Unmanned drones and remote robots can help patrol in ways officers cannot by capturing images and video as crime happens.

For example, surveillance drones quickly dispatch and follow a fleeing subject to their home or their hideout without the criminal's knowledge during a bank robbery; helping avoid a hostage situation or bodily injuries.

Google Glass, HoLo Lens, Augmented Reality

Special glasses like Google Glass or HoLo Lens record and analyze without any added effort. Officers simply tap the side of smart eyewear to snap a photo. The image is then stamped with the date, time, and location. This could be beneficial to capture a license plate number on suspicious vehicles.

Smartphone apps like "Around Me" provide an augmented reality experience using the phone's camera. These will help officers detect criminals that may match descriptions or if someone nearby has a warrant for arrest.

Portable Lasers

Handheld laser can detect chemical composition of unknown substances. This technology helps to cut down on lab time. The Raman spectrometers rely on highly focused beams of light at precise wavelengths to illuminate small samples of materials.

These sensitive detectors study the spectra of light, making it possible to determine chemicals present in the sample. This will be especially helpful in hazardous situations, allowing teams to respond before contamination.

Tablets and Smartphones

Laptops in patrol cars have morphed to smartphones and tablets. One major benefit of this transition is officers can use handheld translation services to communicate with non-English speaking individuals. They enable officers to use electronic ticketing devices, access/record/disseminate important information no matter where they are located. Technology like tablets and smartphones make information more accurate by avoiding misspelling of people's names or missing key information.

Processing will be more efficient with the ability to instantly upload reports to online systems. Automatically backup reports; eliminating the burden of loss, damage, or theft of manual reports. Data gathering will be more accurate as it is collected on scene, requiring less time spent in the office.

Tips for Using Technology

Its Importance

Technology helps to combat crime. It's important to use cutting-edge software, tracking systems, and more to keep the public safe and protect human life.

How to Implement

Determine what type of technology is best suited for your law enforcement agency, and implement first on a trial basis. Once officers are trained and comfortably using the new processes and procedures, implement new technology as your budget allows.

Safety Concerns

Law enforcement isn't excluded to facing serious safety concerns regarding data. As more agencies increase their online capabilities, their risk of identity theft, data breaches, and potential public relations disasters increase.

Agencies can safeguard their information by completing regular system updates, and adding additional layers of security. Its best to have an in-house information technology department, or contract with a third-party provider for agencies with smaller budgets.

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Resources

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