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Police Technology: An Investigation into the Benefits for Law Enforcement

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Abstract

The police must perform their duties every hour of each day during the year. While they have been able to complete their responsibilities in the past, they have become more efficient due to technological advancements. Such technological advancements as fingerprinting, the 911 system, or vehicle location systems have revolutionized policing in the modern era. Other forms of technology have been a benefit to police as this paper will prove.

Police Technology: An Investigation into the Benefits for Law Enforcement

Introduction

Policing is a concept that effects almost all of the population of the United States in one form or another. Law enforcement is deeply rooted in serving the people whether it is the municipal police departments in the cities, the sheriff's department that responds to those living in the county, state agents investigating police corruption and other state crimes, or federal agents responding to high profile cases. Every individual that is employed in law enforcement is able to work more effectively if there is technology that proactively serves their purpose. The demand for technology to counter and detect crimes is increasing due to the constant technological advances in the twenty-first century. Police must be able to keep up with advancing technologies in order to uphold the law and protect the general populous from cyber-crimes and other developing types of crime. Without progress in police technology, law enforcement officers will not be able to perform their duties and deter crime as effectively or as safely. Law enforcement is more likely to be effective in safeguarding the community with detecting and solving crimes as police technologies continue to advance and evolve with society.

Early Police Technologies and Their Effectiveness

Identifying Early Technology and Their Practical Applications

Technology is crucial to the betterment of officers in performing their daily job functions and solving crimes. Fingerprinting and crime laboratories were first introduced in the early 1900s and revolutionized forensic technology (Seaskate, 1998). Two-way radios and automobiles also impacted law enforcement efforts in the 1930s, increasing productivity and incident response time (Seaskate, 1998). In 1967 the President's Crime

Commission was established as a means of combating rising crimes in urban areas (Seaskate, 1998). The President's Crime Commission advocated for improved technologies for criminal justice agencies at the local, state and federal levels to enhance their capacity to better perform their job functions (Seaskate, 1998). Their advocacy for funding better criminal justice technologies successfully resulted in the 911 system to respond more effectively to field calls and used automated computers to filter and screen emergency calls (Seaskate, 1998). Despite hundreds of millions in federal assistance to advance technologies in the early half of the twenty-first century, computerization progressed slowly, hindering police efforts (Seaskate, 1998).

Traditional Fingerprint Methodology

Fingerprint technology pioneered one of the first technological advances in forensic capabilities of law enforcement. Traditionally fingerprints were extracted using ink and ten print cards later filed by some kind of classification system (Wilson & Woodard, 1987). Traditional fingerprinting was typically used at the time of an arrest, or acted as a pre-employment and pre-licensing requirement to determine if an individual had a criminal record (Wilson & Woodard, 1987). Fingerprints discovered during investigations known as latent fingerprints, were usually of poor quality due to the prints being partial or fragmented from adjacent fingers and also were high unlikely to be compared with a known print (Wilson & Woodard, 1987). If no matches were discovered they were placed into a latent file, and would only be reevaluated if new evidence emerged raising the priority on a case (Wilson & Woodard, 1987). The process for searching someone's fingerprints in this system was classified based on biographical information (Wilson & Woodard, 1987). If no information was found on an individual based on their biographical information than a trained technician would conduct a technical search on an individual's fingerprints and manually compare and verify fingerprints (Wilson & Woodard, 1987). Hiring trained fingerprint technicians was costly and time consuming and their retrieval efforts in locating fingerprints through technical searches were only effective 8% of the time according to a study conducted in California (Wilson &Woodard, 1987).

Fingerprints taken for non-criminal purposes such as employment and pre-licensing under the traditional fingerprint methodology also was prone to erroneous findings. In California under this fingerprint system, 5% of non-criminal applicants had criminal records (Wilson & Woodard, 1987). For non-criminal applicants fingerprints were searched based on name only (Wilson & Woodard, 1987). Technical searches were rarely performed because they were not only too extensive but the results were not a direct representation of the costs associated with the findings (Wilson & Woodard, 1987).

Automated Fingerprinting Identification Systems (AFIS)

In 1987, the U.S. Department of Justice determined that the Automated Fingerprinting Identification Systems (AFIS) was second in ground breaking technologies only to the introduction of computers to law enforcement (Wilson & Woodard, 1987). AFIS technology was first introduced in 1985 and was significantly helpful in the apprehension of criminals and solving crimes (Wilson & Woodard, 1987). The AFIS system takes unique ridge patterns in fingerprints and converts them into a binary code using algorithms that can be interpreted in a matter of minutes through its computer software system (Wilson & Woodard, 1987). AFIS system is successful in distinguishing and deciphering fingerprints from an immense database hosting millions of individuals (Wilson & Woodard, 1987). To truly appreciate AFIS technology it is imperative to note how much more effective this technology was in comparison to traditional fingerprint methods. This technology was groundbreaking at the time, increasing identifications immensely in implemented jurisdictions, solving crimes that would have been unsolved without AFIS (Wilson & Woodard, 1987). AFIS is able to search 500-600 fingerprints per second (Wilson & Woodard, 1987). In a matter of minutes AFIS is able to search approximately 500,000 fingerprints, and latent prints in approximately 30 minutes (Wilson & Woodard, 1987). AFIS is not only less time consuming but also introduced a new mathematical match system that would assign points based on different criteria to insure higher accuracy in its findings (Wilson & Woodard, 1987). It is not surprising that higher accuracy and faster retrieval of fingerprints results in a more efficient fingerprinting system. Of the roughly 50% of fingerprints not located under a name or other biographical information, 60-74% of those fingerprints can be found through AFIS (Wilson & Woodard, 1987). Prior to AFIS, the traditional fingerprinting methodology had major flaws and was counterproductive, hindering the clearance ratings of law enforcement agencies (Wilson & Woodard, 1987).

Pin Maps

As an original form of crime mapping, pin maps were first used by police in order to establish trends between certain types of crime in a given location (Sever et al., 2008). In order to create a pin map a certain sequence of steps must be taken. First, the type of crime that is being mapped must be identified and be assigned a color-coded pin (Sever et al., 2008). Next, information must be gathered from police databases or from eyewitness accounts that detail when and where these certain types of crime occurred. After gathering this information, each assigned color-coded pin representing a type of crime is placed on the map in the location that the incident occurred (Sever et al., 2008).

This early form of crime mapping was useful to police because it provided officers a visual representation of hot spot areas depending on the type of crime (Sever et al., 2008). Pin mapping allowed officers to focus their patrolling efforts in hot spot areas causing more proactive deterring of crimes in those areas. Aside from localizing where crimes are taking place, pin mapping is also useful to temporally determine the influx of crimes. The time in which crimes occurred is indicated through supporting documentation such as police reports (Sever et al., 2008). By determining the time and place where crimes were occurring, police departments were able to allocate their resources and conduct investigations appropriately, better serving the people. If one area had a high concentration of crimes that took place at night departments could assign more officers to patrol these areas. If another area of town was reported to have high gang activity, then it would be pertinent to assign multiple officers to be within close proximity of each other in order to increase their own safety and be able to properly respond to the threat of that particular location. However, while the pin map was useful to law enforcement in certain regards, it had limitations that would soon lead to its discontinued use.

The map was most useful when dealing with only a singular type of crime within a specific time frame. The pin map could easily become cluttered with too much past information causing a loss of area correlates. The effects of this paradox worsened if more than a singular classification of crime was investigated on the same map. If multiple types of crimes were placed on the same map, then the information could quickly become jumbled due to the inability to maintain organizational standards (Sever et al., 2008). The pin map was also ineffective when dealing with any background information on a specific crime. Reports would have to be kept and manually sorted by hand to retrieve information from a specific incident other than the location and the type of crime. These limitations quickly led to the pin map being outdated and ultimately overtaken by other technologies such as computerized maps created using geographic information systems (Sever et al., 2008).

Present Police Technologies

Geographic Information Systems

Also known as computerized crime mapping systems, geographic information systems work through a culmination of various forms of data that is analyzed and used by law enforcement (Sever et al., 2008). The data may come from internal sources such as police reports, or from external sources such as the United States government (Sever et al., 2008). After the data has been analyzed the system is able to create a virtual map that incorporates all of the extrapolated information. With this map it is possible to make connections that would not be as easily noticeable otherwise. Such connections as the time certain crimes took place, the different locations, potential eyewitnesses, community details, suspect information, and victim information can all be viewed easier when all of the data has been preassembled into a crime map (Sever et al., 2008).

Crime mapping is effective in reducing and preventing crimes such as theft, burglary, assault, and other similar law violations. Crime maps are able to identify patterns and locate hot spots based on the information that is available within the department’s database (Sever et al., 2008). This ability can direct department supervisors to more efficiently deploy their officers that are on patrol. This places the officer in a better position to reduce crime and answer calls in a timelier manner (Sever et al., 2008). By noticing hot spots that continue to arise in certain areas, it is also possible for police to set up a community help program in order to better not only the area, but the relationship between law enforcement officials and the people (Sever et al., 2008). By enhancing the relationship between the community and the police, community-oriented policing will have a greater likelihood of success.

Tasers

Also known as the stun gun, electronic control device, or conducted energy device, the taser is a tool that most law enforcement personnel carry with their equipment when on duty (Sussman, 2012).The taser was given its name from its original creator, the company known as TASER International (TI) (Sussman, 2012). The tasers that are used today are designed to be handheld and fire projectile devices (Sussman, 2012). The taser is designed to look similar in appearance to a handgun, an idea that was envisioned to help increase product sales (Sussman, 2012). The taser is designed to fire in one of two modes, dart mode or drive-stun mode (Sussman, 2012). Either way the taser is used can be effective in subduing a potential criminal when used in the hands of a trained and qualified law enforcement officer.

The taser’s first mode of fire, the dart mode, is the first method that officers will rely on when using the device. In dart mode, the projectile is ejected from the device using compressed nitrogen (Sussman, 2012). However, this was not always the case. In the earlier models the darts were ejected using gunpowder. This caused the taser to be classified as a firearm and in turn subject to stricter regulations as to who could buy and make use of the device (Sussman, 2012). This method of ejection was redesigned in 1993 in order to remove the device from its classification as a firearm (Sussman, 2012). This reduced the strict regulations that had been placed on it for being considered a firearm by the United States government (Sussman, 2012). This redesign caused an upwelling in sales of tasers in 1999 by the thousands (Sussman, 2012). From 2002 to 2005 there was an increase of agencies requiring officers to carry the device, from 159 agencies before the taser reconfiguration to 1,735 departments afterwards (Sussman, 2012).

The darts are fired from the device with a high enough velocity to pierce the clothing of a suspect up to two inches in thickness (Sussman, 2012). Once the barb has pierced the clothing and skin of the intended target, an electrical current of 50,000 volts is passed between the two barbs and into the suspect’s body (Sussman, 2012). One variation of the taser can cause the electrical current to last for only a total of 5 seconds before the trigger must be activated again (Sussman, 2012). Another model is designed so the electrical current will continue until the officer releases the trigger or the taser depletes the battery life (Sussman, 2012). The distance between the two barbs is determined by the distance that the officer is from the intended target. The best spread is made at close range as every 7 feet the officer moves away from the target, the spread is increased by an extra 13 inches, or a spread of almost 2 inches per one foot (Sussman, 2012).

The other deployment option of the taser is the drive-stun mode. This mode is usually used by police after the first mode has already been completed, or the suspect is resisting another officer. If the suspect is resisting another officer, this is the best mode of use as it reduces the risk of hitting the other officer. In the drive-stun mode, the officer will force an electrical current into the target by manually pressing the prongs, located on the front of the taser, into a desired area on the suspect (Sussman, 2012). This causes the current to expand from the point of contact contracting muscles and causing pain to the intended target (Sussman, 2012). However, this mode is most often used after the first mode of use due to its high probability of leaving burn marks or scars on the suspect (Sussman, 2012). While these are the most common uses of tasers, TI has been in development of more uses and deployment methods of tasers (Sussman, 2012).

911

911 centers, also known as Public Safety Answering Points (PSAP), have been assisting communities in dealing with natural disasters and emergencies for over 40 years (Malac, 2016). In fact, most of the systems that were set up with the 911 organized structure are still in place today (Malac, 2016). On average, the 911 system in the United States receives over 240 million calls each year (Malac, 2016). With this influx of calls to 911, it may be time to update the system in order to operate more efficiently (Malac, 2016).

When a call comes into 911, the first step is for an operator to sort information into the Computer-Aided Dispatch (CAD) system (Malac, 2016). From there a dispatcher is given the information and shares it with the appropriate officer in the area through the use of a two way radio (Malac, 2016). The responder of the call will then obtain the facts of the occurrence from a mobile data terminal (MDTs) or a mobile data computer (MDCs) (Malac, 2016). From this point any more information gained or conversations that take place will be recorded for reports and/or training practices (Malac, 2016).

The 911 system that was set up over 40 years ago was able to handle the information that came in and can still handle the basic information today. However, now there is a greater wealth of information that can be obtained from an individual who contacts 911. For one example, a vast majority of people in the United States feel it is necessary to carry a cell phone on their person at all times. If someone witnesses a crime and reports it on a cell phone, there is much more information that can be obtained besides only what the caller tells them. The 911 system could be upgraded in order to handle text messages from cell phones in instances where citizens are too afraid or are unable to talk on the phone (Malac, 2016). The 911 system could also be outfitted to automatically pull available location information on the caller to aid in officer deployment (Malac, 2016). The system should also be set up to receive any pictures that an individual may be able to capture on their cell phone (Malac, 2016). With a rate of over 70 percent of calls to the 911 system being placed on wireless cell phones, if the 911 platform was updated it could be equipped to better handle the available information (Malac, 2016).

Next Generation 911

In 2009 the project "Next Generation 911" or "NG911" was created by The National Emergency Number Association (NENA) in order to keep pace with the technological advancements of recent years (Malac, 2016). This new generation of 911 will be able to receive voice, video, text and data messages from the caller and transmit this information to the police, fire departments, or emergency medical services (Malac, 2016). The new system will also be outfitted to accurately locate individuals who have the location availability accessible on their cell phones (Malac, 2016). The primary concerns with this new system has been the overall costs of transitioning outdated technology, lacking the required number of personnel to operate this new development, and a lack of training in order to teach each employees how to handle the different aspects of the recent platform (Malac, 2016).

The NG911 NOW coalition is a congregation of groups that have come together in order to expedite the transition from the former 911 system to the Next Generation 911 (Malac, 2016). The coalition contains such groups as the NG911 Institute, the National Emergency Number Association, the Industry Council for Emergency Response Technologies, and the National Association of State 911 Administrators (NASNA) (Malac, 2016). The group plans to accomplish several goals, the first being to increase the likelihood that emergency medical services, fire departments, and police will succeed in their responsibilities to the public (Malac, 2016). The second is to transition all previous servers over to a more efficient software capable of completing their assigned functions (Malac, 2016). The third is to establish a system in which each 911 center is managed properly financially, and does not fail due to lack of funding (Malac, 2016). The fourth and final task is to firmly establish the policies associated with the new 911 system and explain in further detail how the NG911 system should be handled for future reference (Malac, 2016). The NG911 NOW coalition hopes to accomplish all of these tasks by the year 2020 (Malac, 2016).

A poll taken at the end of 2015 showed that on average there were 120 primary and secondary PSAPs per state resulting in a net of over 6,000 PSAPs (Malac, 2016). Progress has been made in the transition of each of these stations and there is a hopeful goal of completing the process by the year 2020 with the help of the NG911 NOW coalition (Malac, 2016). Once the new system is complete, it will allow information to be transferred more easily between agencies as well as contain up to date policies (Malac, 2016). Along with the new system, there will be mandatory training in order to operate it effectively (Malac, 2016). The new system will also be better equipped to make the most out of all data acquired, and respond to it faster than the previous platform (Malac, 2016).

Body Cameras

Body-worn cameras have become a standard component of the police officer’s uniform. They are used to monitor and capture audio and video footage of interactions between officers and the public. Body-worn cameras were first introduced in the late 2000s and later increased in popularity after recent criticism of police use of force of unarmed civilians (Taylor, 2014). The cameras record when an officer comes into contact with a civilian and the information is then saved to a database to be accessed at a later date if necessary. These cameras were first introduced in the late 2000s as test runs, but later became necessary in 2015 when President Obama promised funding to supply more of these instruments to law enforcement personnel across the United States (Taylor, 2014). Body cameras were designed to be used by officers for a twofold purpose. The first purpose was to protect the civilian from any potential abuse of authority, such as racist or sexist acts by officers, and make law enforcement officials take responsibility for their actions or lack thereof depending on the circumstance (Taylor, 2014). The second purpose is to protect the officer from the civilian and make sure that any potential wrongful allegations against the official are handled with the visual and audio truth from the body cameras (Taylor, 2014).

Another potential argument that supports body worn cameras is the idea that the cameras function as a preventative measure (Timan, 2016). The concept is based on the idea that people will behave differently when they are under surveillance (Timan, 2016). The hope is that the potential change in behavior is positive and that the person that is in contact with the police will act in accordance with the law and the officer's request (Timan, 2016). This concept can also be equally effective with the police as well as the civilian. The officer that is utilizing the camera will be more likely to change their behavior in conjuncture with the civilian since they too will be recorded (Timan, 2016). The camera is not biased and would provide an objective viewpoint from which to observe any occurrence between officer and civilian (Timan, 2016). This idea would provide a safer workspace for not only the officer, but the civilians that are encountered on a daily basis (Timan, 2016).

Automatic Vehicle Location Systems

Automatic vehicle location (AVL) systems have become a growing technology due to their effectiveness in the field. AVL systems function by using global positioning system (GPS) receivers to determine the location of a police unit (Weisburd et al., 2015). The dispatch center will use a radio wave signal that is sent out at even intervals in order to keep track of where the vehicle is located (Weisburd et al., 2015). This process is known as polling and is used in managing vehicles for emergency dispatch and locating potentially lost or stolen police units (Weisburd et al., 2015). However, while these systems have been used for previously mentioned functions, individuals are reluctant to use AVL's as a means to measure police patrols (Weisburd et al., 2015). This has been largely in part due to unions rallying for no unfair intrusion into the daily duties of law enforcement officers (Weisburd et al., 2015).

Weisburd et al. (2015) were able to conduct a study into the potential use of AVL systems as a means to increase patrols in hot spot areas in Dallas, Texas. 873 vehicles were outfitted with the AVL systems and took part in the patrol aspect of the study (Weisburd et al., 2015). The city was mapped off into grids with some grids being normal crime rate areas and others being hotspots (Weisburd et al., 2015). A signal would be sent out every 15 seconds for unmoving vehicles and once the vehicle began to move, a data point would be mapped for every 300 meters that a vehicle commuted (Weisburd et al., 2015). These data points were taken from the total patrol and unallocated patrol time (Weisburd et al., 2015). Unallocated patrol time can be measured as time that is not spent on beats or patrolling in grids and is essentially time the officer has free of immediate threats or responsibilities (Weisburd et al., 2015).

The purpose of this experiment was to impact how managers directed patrols to beats and crime hot spots, and if increasing the efficiency of patrols would impact crime as a deterrent (Weisburd et al., 2015). While the study itself seemed to contradict the answers to these questions, there could have been more at play than the study accounted for in the beginning (Weisburd et al., 2015). One idea to explain the results of this study is a displacement theory (Weisburd et al., 2015). This states that officers were able to reduce crime in one area only because an increase in patrols forced the criminals to move to another location (Weisburd et al., 2015). However this is unlikely due to crime control benefits that took place in areas around hotspots (Weisburd et al., 2015). The most likely cause of the lack of reduction in crime deals with the amount of hours that were put into the different areas. Out of the 5,000 hours of unallocated patrol time, there was only about a 1.6% increase in the number of hours put towards hot spot areas (Weisburd et al., 2015). The results would be insignificant because the amount of time put into the experimental group was insignificant in comparison to how much time could have been allotted (Weisburd et al., 2015).

This experiment may not have been a complete success in the idea that simply putting more officers in a hot spot location will reduce crime significantly, but it has shown there is an impact. Now that there is evidence that increasing patrols through high crime areas is effective, further studies can take place to determine how to increase the overall impacts (Weisburd et al., 2015). Such ideas as increasing evidence-based strategies can work to greater effect if there are more officers there to implement said strategies (Weisburd et al., 2015). This study was only able to be completed through the use of AVL systems. Without this technology there would not be an effective way to actively record where an officer spends their time. This study can be taken as a stepping stone approach. First the AVL systems had to be in each vehicle, then the study was able to be completed, and once the data is interpreted then future studies can branch off from there. Without AVL systems this study could not have been as effective and would not have laid the foundation for future studies to occur.

Advancing Police Technologies

License Plate Recognition

License plate recognition (LPR) readers have become a benefit to police over recent years. A LPR reader is useful in gathering information on vehicles, and by extension their owners, through the use of scanning software (Merola & Cynthia, 2014).

This technology has been added to some police vehicles for test runs in recent years. The camera is attached to the officer's patrol car in a fixed area, much like their radar cameras (Merola & Cynthia, 2014). The camera is able to scan license plates as long as it is in the field of vision of the reader and is not obscured through high speed or bad weather (Merola & Cynthia, 2014). The LPR reader, at the time of use, takes a photo of each license plate, maps the location, marks the date and time the picture was taken, and stores the information in a secured mainframe (Merola & Cynthia, 2014). Further technology runs a comparison between the license plate collected and databased entries in order to search for stolen cars or vehicles whose owners have warrants for their arrests (Merola & Cynthia, 2014). If a result comes back to the officer then they are given authorization to continue investigation on the suspicious vehicle or offender (Merola & Cynthia, 2014). The speed of these cameras to scan and match plates with the recorded databases is extremely efficient in comparison to previous methods. For example, one officer could scan an entire parking lot, depending on the size, in a matter of minutes (Merola & Cynthia, 2014). With this technology, thousands of vehicles could be scanned and databased daily by officers.

While LPR readers are directly useful in investigating found vehicles that have been stolen or whose owners have warrants, this technology can further be used to database any vehicle it scans by location and time (Merola & Cynthia, 2014). This documentation can help investigators find future suspects. Once someone has a warrant put out for their arrest, all an officer would need to do is access the LPR reader database and see where the vehicle was last seen (Merola & Cynthia, 2014). The officer would also be able to look at past locations of the offender and possibly create a usable timeline.

For example, if the offender is unable to be found at their house but has been documented shopping at a local store, the officer may be able to look at previous locations, such as the store in question, to increase the likelihood of finding the suspect (Merola & Cynthia, 2014). However, while this database of scanned license plates could potentially benefit law enforcement, there are some legal issues that need to be addressed first.

There have been many cases in the past that have dealt with privacy concerns for the civilian. Such cases as Katz vs U.S. determined the constitutionality of listening in on someone's private conversation and broadly helped to define how law enforcement cannot violate an individual's privacy. In the case of LPR readers, it is possible to see how individuals would be concerned with the data that is stored on a vehicle that has not been stolen or the owner does not possess any warrants. This could be seen as a violation of privacy by some that is necessary in apprehending potential criminals, or it could become a civil rights violation that needs to be addressed and stopped before more instances occur.

Breathalyzers

Pre-arrest breath test instruments (PBT) are used by officers who are on the scene with a suspect and need to test the individual's blood alcohol level (Polissar et al., 2015). This measurement in turn can determine if there is probable cause for arrest (Polissar et al., 2015). A benefit provided by these instruments are the objectivity they possess (Polissar et al., 2015). When looking back at the encounter the officer may say that the individual appeared to be intoxicated, but a breathalyzer can give a definite number that is void of any bias. The key number that these PBT instruments are trying to reach is 0.08

g/210 L (Polissar et al., 2015). This is the legal limit that qualifies someone as being too intoxicated to properly operate a motor vehicle (Polissar et al., 2015).

Most officers who carry breathalyzers have the choice to implement the instrument or to instead complete a field sobriety test, this is up to the discretion of the officer (Polissar et al., 2015). The offender also has the ability to refuse a PBT test and is only required to submit to the test if a legal arrest has been made, they have been informed of their implied consent rights, and the officer has reasonable suspicion that the offender is under the influence of alcohol (Polissar et al., 2015). If at this point the suspect still does not submit to the breath test then the driver's license will be immediately revoked (Polissar et al., 2015). However this revocation can only occur is the officer makes a legal arrest and the suspect still refuses the PBT instrument test. For an officer to make a legal arrest they would need to obtain probable cause (Polissar et al., 2015). In order to do this, an officer may administer a roadside sobriety test and if the suspect fails then a legal arrest could be made. This legal arrest now requires the suspect to comply with an officer if they are administering a breathalyzer test (Polissar et al., 2015).

Conclusion

Technology over the years has come into being through the necessity of needing a more efficient way to perform a task. This spark of necessity has led to various technologies that have been previously mentioned in the earlier paragraphs. After the creation of the technology, it must continue to evolve and adapt to better suit the required needs. If it does not, then something else will take its place and the old technology will be deemed outdated. Law enforcement has gone through several technological ages throughout the years and has continued to adapt based on their necessities at that time. With the use of improving technologies, law enforcement will be able to better complete their duties to the public.

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