

## LAW ENFORCEMENT AND TECHNOLOGICAL FACILITIES IN CHANGING AGENDA OF THE PUBLIC SAFETY AND SECURITY

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### Abstract

*It is possible to state that law enforcement officers have heavier responsibilities as well as having more diverse and confusing works in comparison to the last decade. It is obvious that the most fundamental reasons behind this situation are the instability in the world and changing percept of the public safety and security. Fighting against crime and criminal techniques which vary from antiterrorism to cybercrimes have changed the working style of law enforcement officers thanks to technology. This study, within this framework, aims to determine what the anticipated technological needs are and what should be attached importance to in order that law enforcement officers work effectively and efficiently within the next years. This study has been carried out in a theoretical foundation by reviewing the literature. In this study, the first step will be followed by explaining changing threats of the public safety and security and the technological facilities that law enforcement officers in the world utilized. Aftermath, the facilities of technology which are capitalized on as part of Law Enforcement Units in Turkey will be highlighted.*

**Keywords:** *The Public Safety and Security, Law Enforcement, Technology*

## KAMU EMNİYETİ VE GÜVENLİĞİNİN DEĞİŞEN GÜNDEMİNDE KOLLUK VE TEKNOLOJİK İMKANLAR

### Öz

*Günümüzde kolluk kuvvetlerinin geçmiş on yıla göre sorumluluklarının daha ağır, görevlerinin ise daha çeşitli ve karmaşık olduğu söylenebilir. Bunun en önemli nedeninin dünyada yaşanan istikrarsızlıklar ile kamu emniyeti ve güvenliği anlayışındaki değişim olduğu açıktır. Terörle mücadeleden, siber suçlara kadar çeşitlenen suç ve suçluyla mücadele teknikleri, teknoloji sayesinde kolluk kuvvetlerinin iş yapma biçimini de değiştirmiştir. Bu çalışma, kolluk kuvvetlerinin önümüzdeki yıllarda etkin ve verimli çalışması için öngörülen teknolojik gerekliliklerin neler olduğu ve nelere dikkat edilmesi gerektiğinin tespit edilmesini hedeflemektedir. Çalışma, literatür taraması yapılarak teorik bir zeminde yürütülmüştür. İlk olarak kamu emniyeti ve güvenliğinde değişen tehditler ve dünyada kolluk kuvvetlerinin faydalandığı teknolojik imkânlar açıklanacak, müteakiben Türkiye’de kolluk kuvvetleri bağlamında teknolojiden istifade edilen alanlar vurgulanacaktır.*

**Anahtar Kelimeler:** *Kamu Emniyeti ve Güvenliği, Kolluk, Teknoloji.*

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## **INTRODUCTION**

Law Enforcement (LE) units have taken a more significant mission and responsibility than ever before in the last decade. The most significant reason behind this is the security needs increasing together with the changing agenda of security. The end of Cold War period in 1990s and terrorist incidents during September the 11th, 2001 in USA are of great significance with being a historical cornerstone in terms of arising importance and interest in the public safety and security. Although there is no doubt that several terrorist incidents occurred in USA, European Countries and also Turkey in the later years, these two critical incidents affected all of the countries. This is an extra-territorium period during which the security threats of the enemy which include defence against conventional military units lost their reputation. Instead of the security threats in question, threats: notably antiterrorism which aims direct intervention in individual safety, life style and prosperity of countries and citizens, attack against nuclear facilities, humanitarian and environment disasters, mass migration and any kind of trafficking have been effective in recent years. It is obvious that total war assumption has not disappeared. Total war is still regarded as one of the last resorts in order that governments achieve their political goals. However, changing threats till the outbreak of a war have turned towards the the public safety and security needs and increased the importance of the the public safety and security more in terms of preserving national interests. LE units have the biggest responsibility for protecting the public safety and security against these new threats. It is essential that LE units will capitalize on the technological facilities which are devoted to the new security threats. Today, the style how LE units work has changed and developed more thanks to technology in comparison to 20 years ago. From drones to criminal analyses in the sky, any kind of technology is used by the LE units. Within this framework, this study is associated with the relationship between LE units and technology for identifying the changing dimensions of the the public safety and security together with the technological facilities and capabilities that the LE units will be able to benefit from. Thus, it is aimed to determine what the anticipated technological needs are and what should be attached importance

to in order that LE officers work effectively and efficiently within the next years. In this study, the first step is to explain the changing threats of the public safety and security and the technological facilities that LE officers in the world utilized. In the follow-up phase of the study, the facilities of technology which are capitalized on as part of LE Units in Turkey will be highlighted (US Office of Homeland Security, 2002: 1-4; US Homeland Security Council, 2007: 3-6; Reese, 2013: 9; Ak, 2018: 75-78).

## **1. THE PUBLIC SAFETY AND SECURITY, LAW ENFORCEMENT AND TECHNOLOGY**

Asymmetrical security threats such as terrorism, organized crimes, ethnic and religious conflicts, drugs, migrations, natural disasters, climate change, environment pollution, conventional and mass destruction weapons, cyber terrorism has come into prominence with the impact of globalization on earth. Therefore, the public safety and security approach which completes the national security has come into prominence. It is apparent that countries cope up with the security threats in question in two ways:

- Firstly, reorganization as part of the government in terms of the public safety and security is necessary or cooperation should be boosted among the major agencies such as the LE agencies, the intelligence community and the armed forces.
- Secondly, the technological facilities and capabilities should be utilized as much as possible so that security needs can be met quickly and effectively.

Up to now, there have been countries who turn to reorganization on a central organization basis so as to be successful in the public safety and security as well as the countries who have tried to develop mechanisms which will increase coordination among current agencies. In fact, after the terrorism incidents on September, 11<sup>th</sup>, when USA has been going into a new reorganization with the name of Department of Homeland Security, boosting cooperation mechanisms among local and central administrations in Europe has come to prominent (Borchert, 2006: 4-5; Föhrenbach, 2006: 43; Us White House,2011: 11; U White House, 2018: 1-3; Ak,2018: 78-79).

The LE units enable criminal justice system which is against changing security system in the country to be implemented under the umbrella of the responsibilities assigned by constitution and laws by taking into consideration human rights law. Terrorism, ethnic and religious conflicts, organized crimes, drug trafficking, human trafficking, individual crimes, cybercrimes, mass migration, protection of the critical facilities, money laundering, cultural property trafficking, environmental crimes, illicit organ transplation and trading crimes as insecurity factors has become significant in terms of organizing the public policy of LE units. Every one of the technological facilities related to preventing these crimes from occurring should be specific to the crime and gain wide currency to be able to cater to public order responsibilities of LE officers. In other words, there are three crucial points in the use of technology by LE units.

- Firstly, even the lowest level personnels who work patrol and carry out special operations will be able to capitalize on the most of the technological facilities easily.

- Secondly, the use of technology by the LE units should have a deterrent factor on the citizens in the context of committing a crime. If a citizen commits a crime on purpose, he/she should not be oblivious of the fact that he/she will be busted easily with the help of LE agencies' technological infrastructures.

- Thirdly, these technological facilities should not violate the constitutional right to live and privacy acts of the citizens within the context of human rights law.

The technological capabilities that staff who is responsible for being conservators of the public order and working patrol will capitalize on can be specified as:

- (i) The drones will be effective in urban and rural areas, in both preventing and solving crimes some part of urban and rural areas may be unsafe for foot patrol. Drone use can supply real-time information flow and imagery record related to hazardous situations and the moment when the crime actually takes place. This helps the LE officers to make correct and reliable plans, quick decisions and reaction so as to save the life of the citizens.

**(ii)** Digital Google: In order to provide effective crime prevention, LE agencies need to take speed action against crime. The digital google was developed for the speed action required the information and knowledge. The LE agencies are currently using the digital google for authorization of Id Cards, Face Recognition, car license plate control. LE units will be able to record and analyze anything that they see within city, know people passing by and have real time information flow by central system about houses and tools thanks to digital glasses. Therefore, this is considered as a major invention.

**(iii)** The biometric data has two sides, on the one side, it provides self protection of data. On the second side, secures the other security infrastructures. Not only the main usage area of biometric data is access control but also use in the person identification process in juridical and criminal systems. The most popular biometric data for juridical and criminal systems are fingerprint, DNA and odontology records. During patrols, the LE officers, who can easily access these data with a portable device, will be able to prevent the crimes before committed by identification of vehicle and persons. The fingerprint and DNA databases are very critical and important for forensic examinations. These databases are used for identification of an unknown dead body, the crime suspects, and made the connection among the different crimes.

**(iv)** The use of smart phones, tablet PCs and licence plate reader has shown a considerable development in public order services. LE units used laptops once but they have been replaced with smart phones and tablet PCs, which makes everything more convenient for them such as communicating in different languages, electronical fine and dealing with the stolen properties.

**(v)** The use of GPS (The Global Positioning System) has gained more popularity among LE units even though this technology isn't new. GPS-The Global Positioning which provides quick help for the citizens who need help could be beneficial for planning patrol works better, recording and mapping the areas in traffic and accidents, as well. In addition, GPS, lets LE

commanders be aware of the places and actions of their own personnels (Roufa, 2018). With the widely used of GPS and digital mapping technology, Geographic Information Systems (GIS) advantages become more eligible for crime mapping and risk management.

LE has technological capabilities peculiar to each crime type, and these capabilities increase the effectiveness, efficiency, and speed in analyzing the crimes and criminals. These special technological objectives in LE units can be specified as:

**(i)** Drone technology: to observe wide areas like the borders of the country and to protect the critical facilities.

**(ii)** Bomb disposal tools and micro-drones for special operation units.

**(iii)** Tablet PCs which show any kind of real-time data related to special operations.

**(iv)** Renewable energy sources at the LE stations /posts which are located far from the city center and mobile operation/control centers.

**(v)** Developing softwares to determine cyber attack and cyber frauds. On the other hand, it should be borne in mind that technological facilities pave the way for committing a crime. Therefore, LE officers should improve themselves to fight against this situation. For instance;

**(a)** Because the use of social media and internet is popular today, it is known that tendencies, habits of the society and the individuals come out and their weak points are used against themselves.

**(b)** The increase in artificial intelligence and robotic systems is regarded as a problem as they can be misused such as terrorist actions and assassination.

**(c)** Developments in genetic and biotechnology create diseases or biological weapons specific to the society or the person and the food security is imperilment.

**(d)** The use of virtual money is used with the aim of money laundering.

(e) Fraud via internet has increased and this violates privacy acts. As is seen, one can clearly anticipate that these crimes and the ones similar to these will come out day by day.

When LE officers capitalize on technological capabilities, this issue should be borne in mind: When the LE provides public order and security as well as capitalizing on technology at the same time, it should not violate right to live and it should respect privacy acts of the citizens, which is of great importance. The government is responsible for providing their citizens with these rights as these are of importance to protect prosperity, life style and help the citizens to live in safety. Add to this, these are the reasons why the LE units exist.

## **2. LAW ENFORCEMENT AND TECHNOLOGY IN TURKEY**

LE units in Turkey improve themselves in terms of technological innovations in order to live up to the changing needs of the public safety and security. The general framework of the projects which can be evaluated under the umbrella of continuous modernization of the gendarmerie and police is:

- The improvement of the communication system from analog to digital systems.
- The improvement of communication system, viewing/observation and acquisition talents.
  - Restoring patrol and operation tools.
  - Improving the abilities of air patrol and special air operation.
  - Improving special materials such as weapon, vest, telescope and thermal.
- In the scope of public order and antiterrorism, making and constructing special designs for buildings and facility needs.

Major technological innovations which help gendarmerie and police get ready for the changing threats of the public safety and security and which are still a workpiece are: (JGnK, 2018; EGM, 2018: 10-11; SSB, 2018: 39-43; SSB, 2019; JGnK, 2019; EGM, 2019: 15-16; ASELSAN, 2019)

(i) LE officer who has been formed with the name of Gendarmerie Integrated Communication and Information System works as automatized when it comes to crime and criminal investigation, information collection and storage, reaching the information and decision-making. Data can be conveyed via mobile systems by being included in a wireless telecommunication system up to patrol levels. There are a vehicle tracking system, license plate reader and investigation applications within this system. Patrol car tracking at the station is possible to carry out thanks to using satellite images, voice and data communication with digital battle safety, radio and telephone communication, messages, photograph sharing, investigations at a level of motor patrol. In addition, it is seen that similar applications to the police information system called Pol-Net which has been formed within the Turkish National Police are used.

(ii) Electronic document management system and web-based corporate softwares are used for getting information and decision-making functions related to personnel requirement in gendarmerie and police, public order, intelligence, logistics and finance.

(iii) Criminal system and forensic laboratories have been set together with the Crime Scene Investigation Teams and the Improvised Explosive (IED)/ Ordnance (EOD) Disposal Teams so as to increase criminal effectiveness fighting against crime and criminal. Three forensic laboratories are in Turkish Gendarmerie, and ten forensic laboratories are in the Turkish National Police. These forensic laboratories in gendarmerie and police study on fingerprints, ballistics, handwriting and questioned document, tool marks, forensic chemistry, explosive and flammable materials, forensic biology, speech and voice, video, digital evidence, and narcotic substance analysis. Any kind of finding and evidence can be examined in detail and investigations can be carried out via forensic databases in the forensic laboratories.

(iv) Different kinds of helicopters, planes, and simulators are supplied so as to be used in maintaining during public order and during special operations in gendarmerie and police.



(v) Different types, sizes, and models of drones are supplied, which will be advantageous for the LE officers in the urban area and these officers will be responsible for antiterrorism, public order patrols, and special operations in gendarmerie and police.

(vi) Uniforms and equipment that LE officers will use and wear during public order and standardized uniforms, a ballistic vest and ballistic helmet suitable for special operation units are supplied. With the developments in the wearable sensors and technologies, the location and the route of the LE officers will be determined in the digital maps and the physiologic situations such as temperature, pulse, and any injuries etc will be observed.

(vii) It has been observed that tools and systems to be incorporated into the organization are evaluated within the life cycle management system before inventory and the system, tool and devices are analyzed in terms of their expected life related to their physical and technological uses.

(viii) Security cameras, license plate reader/identification systems, red light, and speed limit violation detection systems with the name of Urban Security Management System has been established by police and they have gained popularity in every city and district.

(ix) It has been observed that information systems against cybercrimes have been used in order to identify criminals.

(x) Against the Improvised Explosive Devices and Explosives Ordnance Devices, both gendarmerie and police use the remote sensing and disposal equipment and technologies. According to new threats in this area, the new technologies are developing and supplying by LE agencies.

Utilizing these technological facilities are essential for gendarmerie and police to protect critical facilities and fight against terrorism, illegal immigrant and drug fraud. Therefore, gendarmerie and police who continuously increase their technology capacity as an agency and supports their personnels with new projects consider the technology as an important facility and capabilities which makes their works much easier to execute.

## **RESULT**

As a result of the increase in instability and globalization in the world; terrorism, transnational organized crimes, ethnic and religious conflicts, drug trafficking, transnational migrations, environmental threats, cybercrimes have become prominent topics of the public safety and security. Nowadays, we need an public safety and security approach along with national security. On the one hand, we feel that LE units should be re-evaluated in terms of organization level. On the other hand, the need for technological innovations has increased, as well.

Technological advancements in today's world change and develop both LE agency and LE officer each passing day (Roufa, 2018). LE units should not neglect major issues that they are supposed to dwell on within this period while dealing with changing threats of public safety and security and benefitting from technology. These issues are that technological innovations should be spread among all of the LE units, the technology should add to preventive measures for the citizens committing a crime with the thought that people can be busted easily and these technological facilities should not violate the right to live and privacy act of the citizens. When the technological facilities and capacities that LE units utilized in Turkey are evaluated, it is possible to state that they adopt approaches which provide individual security and bind over the lifestyle and prosperity of the citizens.

## REFERENCES

- Ak, T. (2018). “Dünyada İç Güvenlik Yaklaşımında Değişim ve İç Güvenlik Yönetimine Etkisi”, **Van Yüzüncü Yıl Üniversitesi İİBF Dergisi**, (6), 74-93.
- ASELSAN (2019). **Kamu Güvenliği Haberleşme Sistemleri**, <https://www.aselsan.com.tr/tr-tr/cozumlerimiz/kghs> (erişim tarihi: 11.02.2019).
- AYTAÇ F. G. & YILDIRIM G. Ç. (2015). **Savunma Sanayii için Teknoloji Hazırlık Kılavuzu**, Savunma Sanayii Müsteşarlığı, Ankara.
- Borchert, H. (2006). **Homeland Security and Transformation: Why It Is Essential to Bring Together Both Agendas**, Transforming Homeland Security: U.S. and European Approaches içinde (3-22), Ed.Esther Brimmer, Washington DC: Center for Transatlantic Relations.
- EGM (2018). **İçişleri Bakanlığı Emniyet Genel Müdürlüğü 2017 yılı Faaliyet Raporu**, Emniyet Genel Müdürlüğü Strateji Geliştirme Daire Başkanlığı, Ankara.
- EGM (2019). **2018 yılı Performans Programı**, İçişleri Bakanlığı Emniyet Genel Müdürlüğü, Ankara.
- Föhrenbach, G. (2006). **Transatlantic Homeland Security and the Challenge of Diverging Risk Perceptions**, Transforming Homeland Security: U.S. and European Approaches içinde (43-58), Ed. Esther Brimmer, Washington DC: Center for Transatlantic Relations.
- JGnK (2018). **2017 yılı Faaliyet Raporu**, Jandarma Genel Komutanlığı, Ankara.
- JGnK (2019). **Modernizasyon Hedefleri**, [http://www.jandarma.gov.tr/genel/MODERNIZASYON\\_HEDEFLERI.pdf](http://www.jandarma.gov.tr/genel/MODERNIZASYON_HEDEFLERI.pdf) (erişim tarihi: 11.02.2019).
- Roufa T. (2018). **Technologies That Are Changing the Way Police Do Business**, <https://www.thebalancecareers.com/technologies-that-are-changing-the-way-police-do-business-974549> (erişim tarihi: 06.02.2019).

- Reese, S. (2013). **Defining Homeland Security: Analysis and Congressional Considerations**, Congressional Research Service Report for Congress, Washington DC, USA.
- SSB (2018). **2018-2022 Savunma Sanayii Sektörel Strateji Dokümanı**, [https://www.ssb.gov.tr/Images/Uploads/MyContents/F\\_20180626095928654133.pdf](https://www.ssb.gov.tr/Images/Uploads/MyContents/F_20180626095928654133.pdf) (erişim tarihi: 11.02.2019).
- SSB (2019). **Türk Savunma Sanayii Ömür Devri Yönetim Platformu**, <https://tssodyp.ssb.gov.tr/Sayfalar/default.aspx> (erişim tarihi: 11.02.2019).
- US Homeland Security Council (2007). **National Strategy for Homeland Security**, The White House, Washington DC.
- US Office of Homeland Security (2002). **National Strategy for Homeland Security**, The White House, Washington DC.
- US White House (2011). **National Strategy for Counterterrorism**, Washington DC.
- US White House (2018). **National Strategy for Counterterrorism of the United States of America**, Washington DC.