

THE ROLE OF TECHNOLOGY IN CRIMINAL LAW ENFORCEMENT

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ABSTRACT

Technology is transforming the criminal justice system including police worldwide in the 21st century. Latest technologies make practical activities faster, more efficient, and more useful, and they portray police as high-tech crime investigators. Crime prevention, such as monitoring, crime examination, and offender monitoring, is law enforcement's most valuable role for society. The ability to prevent crime justifies police monitoring. Innovative technology has been created to reduce crime and enhance police effectiveness. As society becomes more complicated, crime rises. Preventing crime and protecting the nation requires a technical upgrade. In this context, this article examines why the Indian police system is behind in technical progress and outcomes.

Key Words: *Technology, Crime Prevention, Problems, and Prospects.*

1. Introduction

No human endeavor is unaffected by computers, internet, and IT. From primary education to healthcare, stock market apps to space shuttle launches, we are completely reliant on IT. The Internet, the century's biggest technical advance, has created a Global Information Village. It's disputed if all technical advances have been as damaging as positive. IT is no different. Good people use IT to create better ways to enhance human existence, whereas evil ones use it to injure people, steal money, scam corporations, and conceal their crimes. Crime used to include money-valued items. Although the knowledge that corporate data is as, if not more, valuable is spurring virtual crime. Cyber Crimes include these cybercrimes.

Cyber crime involves destructive, unlawful, or hazardous computer-related actions or attacks on computers, networks, or data. Cybercrime affects individuals, organizations, and governments. Using computers and the internet, cybercriminals perpetrate crimes. Cybercrime has two main categories. The first category includes new crimes created by computer and internet technology. Computer infections,

hacking, DoS and DDoS assaults, identity theft, spamming, email interception, and cyber stalking are examples. The second category is real-world crimes that went online. Crimes include theft, deception, counterfeiting, piracy, sexually explicit material, gambling, money laundering, and terrorism. Each crime is unique and has different effects (Prasad, 2023).

Technology targets key facets of crime if we start with crime. Technology has greatly aided criminal investigations. CCTV cameras along with other high-tech equipment have reduced crime. Thus, in the 21st century, criminal justice technology has advanced adjective law in many common law nations. Many soft and hard technologies are transforming conventional policing. Low enforcement has benefited from ICT advances. They have altered police work, from helping detectives recreate crime scenes to exchanging information across agencies. Technology has reduced the "torture" of the accused during investigations. However, using technology to prevent crime is difficult, particularly in India where police officers are not well-trained in crime detection and technology. Criminals employ tech ahead of the police, particularly ICT (Worrall & Schmallegger, 2023). As civilizations grow civilization, freedom,

education, and communication, police organizations, state institutions, have higher expectations. In particular, society expects the police to do their tasks with tolerance and compliance (Stainslas, 2023).

ICT refers to a variety of Indian technologies used to collect, analyze, and transfer data. Various soft and hard technologies provide these duties. With soft and hard technologies, crime detection and prevention have improved investigations and outcomes. There is a desire to prevent crime, but only specific techniques will work (Worrall & Schmallegger, 2023).

2. Technology and Crime Prevention

Technology literally means applying scientific information to practical applications or creating machines and gadgets from it. In other terms, technology is the set of methods, skills, and procedures utilized to produce things or services or achieve goals like scientific research. ICT includes television, radio, mobile phones, network and computer hardware and software, satellite systems, and their services and applications, such as videoconferencing and distance learning. As ICT technology becomes more accessible, preparedness to use it for varied objectives has changed. These new technologies can best accomplish good governance. Everything from business to government is evolving.¹¹⁶¹

ICTs¹¹⁶² have transformed police operations and service expectations. Internet cafés have thrived since the Internet era, despite limited Internet connectivity. This will accelerate when mobile phone networks allow Internet access. Mobile phone technology is crucial to improving community-oriented, responsive, and efficient police. Here, monitoring, crime analysis, and criminal monitoring are used. State and local police agencies say cost is the biggest obstacle to video as well as night vision monitoring. This may represent both the absolute expenses of these advancements and the trade-offs

between their advantages and other expenditures. Critics say monitoring may move crime to unnoticed areas.¹¹⁶³

3. Prospects of Crime Prevention

Crimes data analysis may identify trends that assist prevent, react to, and strengthen police accountability to leadership as well as the public. Most departments analyze crime, usually by compiling data. Police are learning how to utilize crime mapping and analytic technology as it improves. Many departments, particularly urban ones, geo-code and map data, whether computerized or not. Calls for service and incidents are the most geo-coded and mapped data by local police.¹¹⁶⁴

ICT and other modern technologies are helping law enforcement react to criminals, conduct hotspot policing, solve violent crimes, monitor employee performance, and more. Law enforcement uses surveillance cameras, data mining infrastructure, heat detectors, biometrics and surveillance GPS tracking, Internet, as well as telecommunications to identify, investigate, prosecute, and prevent crime. Technology is changing policing and police administration and delivery, as it did in the mid-20th century. Modern police models need real-time data for strategic planning, issue analysis, deployment choices, community interaction, inter-organizational interactions, accountability, threat detection, and more.¹¹⁶⁵

Police and technology now work together. The public saw the police as leaders of development due to technological improvements in communication, transportation, criminality, and other sectors and the police's use of science and scientific procedures. This growing usage of technology may indicate that more particular algorithms may be utilized in the future, improving criminal intelligence. Technology makes crime mapping

¹¹⁶¹ <http://searchcio.techtarget.com/definition/ICT-information-and-communications-technology-or-technologies>

¹¹⁶² Information and communications technology

¹¹⁶³ Available at https://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1349/MR1349.ch2.pdf

¹¹⁶⁴ http://www.rand.org/content/dam/rand/pubs/monograph_reports/MR1349.ch2.pdf

¹¹⁶⁵ <http://www.giimt.ac.in/wp-content/uploads/2012/12/N6.pdf>

reports simpler to compile and obtain. Technology has enabled more precise hot spot definitions. This approach means future crime mapping will pinpoint specific criminal hotspots. Computers are used in hot spot policing to display crime data patterns. Crime mapping assumes crime is unevenly distributed. Increased police patrols may target these issue areas to minimize particular crime. Early efforts to install cameras in police cars had technical and safety issues, but downsizing and technology have made mobile video recorders viable and inexpensive. In-car cameras for police cars will become standard as audio/visual recording technology advances.¹¹⁶⁶

Further, the prospects of crime prevention in India can be detailed into following areas:

4. Electronic Identification

ICT makes identifying people simple. Police may employ many tactics to track a person to curb crime and preserve order. A person's electronic communication technique becomes vital for electronic identification. Personal digital signature, bank account number, phone/mobile number, driving license number, passport number, Permanent Account Number With these sources, police can easily discover anybody to ensure society's security. These sources contain person details.

5. Electronic Transport (E-Transport)

Electronic gadgets simplify important transport system operations. E-Transport includes registering all motor vehicles, issuing driving licenses, issuing light and heavy vehicle permits, collecting taxes and fees by cash and bank challans, and monitoring pollution. Electronically stored data will aid traffic management.

6. Human Resource Management (HRM)

HRM is crucial for managing human resources to accomplish objectives. The police force is divided into divisions, sub-divisions, and districts based on department needs. In police recruiting, selection, training, promotions, and

personnel records, pay, and allowances, ICT may provide economy. ICT is used in the police recruiting process from advertising to form completion, written exam information, interview dates, and chosen applicants. The police department should train officers on the newest technologies.

7. Police-Public Interface

Police-public interaction would be the first use of ICTs. Public life and property are protected by police. The public may examine complaint status information and the police can offer comments using ICT. Online foreigner registration, stolen car database, passport verification, live updates, traffic control alternatives, and more may be done online. This will decrease police paperwork and redundancy. This increases openness and provides services within constrained timeframes.

8. Real-time Information Access

The GPS and GIS are utilized to monitor suspected terrorists and other information in a huge, difficult-to-manage region using data and video. The information allows coordination of all operations for improved monitoring, reporting, and action. Thus, technology lets cops respond proactively. GPS can follow a suspicious car, help with traffic routing and congestion, and alert police units to emergencies.

9. Intelligent Sensors

Intelligent sensors improve traffic management in real time. Car cameras are developing and becoming more cost-effective for crime control.

10. Centralized Information Storehouse

Police save and standardize a lot of data for rapid retrieval and analysis. Two data bases may exist: police and criminals. Accessible in seconds, personnel databases include current and past postings, service history, family background, postings and promotion, etc. For criminals, police analyze data and identify essential information by inputting their name,

¹¹⁶⁶ <http://eprints.covenantuniversity.edu.ng/2222/1>

which helps maintain law and order. This form of analysis may assist discover and predict crime, make future decisions, and avoid additional assaults and manmade disasters. Today, police demands more analytical ability to utilize information effectively.

11. Crime Mapping

Pin maps used to show criminal trends. A city, nation, district, or other area's map might include colored stick pins in different areas. Different colors represented offenses. While primitive, this method helped cops detect issues. The maps were dimensional & could rapidly get cluttered with pins, particularly for minor offenses. The National Institute of Justice in the U.S. founded the CMRC¹¹⁶⁷ to promote police research, training, and technical support due to its prevalence.

12. Geographic Profiling

It's utilized for murder, rape, robbery, and vehicle theft. Combined with serial offender databases, geographic profiling is useful. The HITS¹¹⁶⁸ System allows the Washington State Attorney General's Office to scan gang files, sex offender registries, parole records, and department of motor vehicle information concurrently.

13. Crime Intelligence Systems

Today, most patrol officers have a laptop in their vehicles that connects to vehicle registration and criminal history databases. Officers may immediately get extensive information on known gang members via Cal Gang (in California) or Gang Net (in other states).

14. CAD¹¹⁶⁹ and CAT¹¹⁷⁰

CAD/CAT is not low-enforcement technology, but it has been customized for police and criminal investigations. Many benefits come from CAD programs. They provide professional pictures. The program reduces crime scene

investigation costs. Low-level police training benefits from computers. Veteran police may have done a shoot/don't shoot drill on a non-interactive TV. Computers make such activities appear more plausible and dramatic.

15. Comp-stat

The term stands for computer statistics. Four main points are stressed in Comp-stat:

- Timely, accurate intelligence.
- Viable methods.
- Quick deployment.
- Constant evaluation.

The Comp-stat book was created after precincts meticulously measured criminal activity and computerized the information. Based on this book's crime statistics, precinct commanders were held accountable for local crime. Crime numbers are precinct commanders' most common performance indicator (Worrall & Schmallegger, 2023).

16. Suggestions

Police operations may be improved using these recommendations. Thus, society may become a safe environment for everybody. To ensure accountability, police should periodically share crime and accident data with transportation agencies and insurance companies for preventative action. To save time, police officers need technological abilities and expertise to integrate all necessary information online for police services.

- Indian police must invest in ICT, start technical skills programs, and be proactive by understanding crime data and patterns and using technology for precise detailing to prevent crime. Technology and crime-reduction techniques are needed now.
- As criminals are adept in utilizing technology and have always taken benefit from new technologies, police need to adapt technologies with new characteristics. India must make some fundamental modifications before attempting to prevent crime.
- Crime mapping always included a sociological perspective on crime causes and

¹¹⁶⁷ Crime Mapping Research Centre

¹¹⁶⁸ Homicide Investigation and Tracking

¹¹⁶⁹ Computer-Aided Drafting

¹¹⁷⁰ Computer-Assisted Training

socioeconomic factors. Crime maps help law enforcement and the public. Similar practices should be pushed in India to identify and prevent crime.

- Crime mapping has helped police identify risky regions for women due to the persistent threat of crimes against women, including rape. While increasing police and women policing are urgent remedies, adding CCTV, street lights, and cameras on public transit can detect, monitor, and encourage monitoring in these locations. Crime in India is growing and cannot be ignored. Advanced technology should help prevent crime, but it must be balanced with effectiveness.

- Women in India use pepper spray to deter crime in the absence of competent governmental agency. India must pursue study on how innovation may reduce crime and enhance police effectiveness. Positive outcomes will revolutionize Indian Policing, which is now seen negatively.¹¹⁷¹

- These proposals may help limit crime and maintain social order. To address future issues, the police must be up-to-date on ICTs in ordinary operations. The Indian police must also train its officers to adapt to modern times and address current issues.

17. Conclusion

Law enforcement's focus on accountability and openness increased their workload. Indian police force is one of the nation's most essential force that seeks to develop public trust and maintain law and order effectively. This will assist bring more crime to justice for fair verdicts with contemporary and effective enforcement. In addition to improving police efficacy in managing and detecting crime, ICT may boost police professional qualifications, stature, and organizational legitimacy. Technology may prevent and manage crime, but it must be planned and strategized based on geographical regions, crime mapping, and problem-oriented areas. Instead of replacing human jobs, technology (hard and soft) and

man power should be used to prevent and regulate crime in crime producers.

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¹¹⁷¹ http://shodhganga.inflibnet.ac.in/bitstream/10603/23693/10/10_chapter-6.pdf