

Real-Time Crime Centers Are Transforming Policing—A Criminologist Explains How These Advanced Surveillance Systems Work

By Kimberly Przeszlowski, PhD

In 2021 a driver in Albuquerque, New Mexico, ran a red light, striking and killing a 7-year-old and injuring his father. The suspect fled the scene and eventually escaped to Mexico. Using camera footage and cellphone data, the Albuquerque Police Department's real-time crime center¹ played a crucial role in identifying, apprehending and charging the person at fault. The driver was ultimately sentenced to 27 years in prison, providing a measure of justice to the grieving family.

Real-time crime centers are specialized units within police departments that use the latest technology to monitor public spaces and record incidents. The New York City Police Department was the first to institute a real-time crime center in 2005.

Real-time crime centers often focus on video surveillance, using closed-circuit television systems, license plate scanners, body cameras worn by officers and drone cameras. The centers sometimes also include gunshot detection and computer-aided dispatch systems, live or static facial recognition, cellphone tracking and geolocation data, and access to probation, parole and arrestee information. Police departments are adding the latest innovations, such as video analytics driven by deep learning artificial intelligence, to identify objects and assess subjects' behavior.

Some real-time crime center operations and surveillance methods are controversial, especially those using technologies that are rapidly evolving, such as drones and automated image analysis.

As a professor of criminal justice and criminologist formerly embedded within the Miami Police Department, I can explain how these centers function—and the safeguards they employ to assure accountability and appropriate use.

¹<https://www.kob.com/new-mexico/an-in-side-look-at-apds-real-time-crime-center/>

Instant Assistance

Real-time crime centers typically function around the clock and fulfill several critical roles. They provide real-time video feeds and other essential data to officers responding to incidents. Police departments also use them to monitor ongoing situations such as protests or threats to critical infrastructure.

In some real-time crime centers, like those used by the Chula Vista Police Department,² near San Diego, and Metro Atlanta,³ drones act as an initial first responder and can stream live footage from the field back to the center.

Real-time crime centers also can support investigations after an incident has occurred. The monitoring technologies can track the movement of a suspect's vehicle, assist in documenting video evidence for prosecution or even pinpoint where gun casings may be found at a crime scene. Many incidents showcase how this process leads to faster resolutions of criminal investigations,⁴ often allowing investigators to locate suspects in hours instead of days.⁵

Agencies of various sizes increasingly collaborate with business communities and large institutions to share live CCTV video footage.⁶ This collaboration allows agencies to access video feeds from locations like hotels or arenas without needing to install their own expensive equipment,

²<https://www.chulavistaca.gov/departments/police-department/programs/uas-drone-program>

³<https://www.axios.com/local/atlanta/2022/03/21/atlanta-police-drones-911-call>

⁴<https://www.local10.com/news/local/2021/07/29/suspect-arrested-following-investigation-into-burned-body-found-by-miami-train-tracks/>

⁵<https://www.pnj.com/story/news/local/escambia-county/2024/03/15/escambia-pensacola-real-time-crime-center-modernizes-police-work/72969134007/>

⁶<https://www.mobilepd.org/project-shield/>

which can cost tens of thousands of dollars per unit.⁷

Expanding, But Effective?

Real-time crime centers are rapidly expanding across the U.S., growing by 148% over the past four years. Around 150 police agencies have adopted these units.⁸ Despite this growth, real-time crime centers are still considered relatively new in policing (Przeszlowski, 2022), used by less than 1% of all agencies nationwide. Even among larger police agencies, characterized by the amount of full-time personnel and corresponding budgets, only 12% have done so.

Despite the increasing presence of real-time crime centers, only a few major studies have investigated their impact. A 2019 evaluation of decentralized real-time crime centers (Hollywood) within the Chicago Police Department showed a 3% to 7% decrease in both violent and property crimes after the centers had been installed. A study of real-time crime center effectiveness (Arietti) using data from the same source revealed a 5% increase in solving violent crimes, a 12% increase in solving property crimes and an 11% overall improvement in case clearance rates.

A more recent Miami Police Department real-time crime center evaluation found a 66% higher likelihood of clearing cases⁹ of violent crime incidents compared with cases not supported by the center. Clearance rate is a measure of how many reported crimes the police successfully

⁷<https://honeyoptics.com/how-much-do-ptz-cameras-cost/#:~:text=A%20low%2Dcost%20PTZ%20camera,up%20to%20a%20certain%20degree.>

⁸<https://atlasofsurveillance.org/atlas>

⁹<https://www.smart-policing.com/index.php/spi-sites/miami-florida-2019>

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handle. A crime is considered cleared when the police arrest and charge those involved, or if it's resolved in other ways, such as if the suspect dies or if the victim decides not to cooperate.

Nonetheless, real-time crime centers have shown limited effectiveness (Przeszlowski, 2023) in addressing some types of violent crime such as sexual assault and domestic violence, likely due to the typically private nature of these offenses. Further research is needed to fully understand how effective real-time crime centers can be across all types of crimes.

Safeguards Against Abuse

Accountability in policing is essential. The rapid advancement of technology raises particular concerns about privacy,¹⁰ surveillance¹¹ and secure storage of sensitive information.

These issues underscore the need for strong safeguards, which are rapidly evolving and are sometimes overlooked by the police¹² or those in charge of the systems they acquire. Recently, police departments have made changes¹³ to address these concerns to alleviate systemic issues or biases in investigations, including changing policies for the use of technologies like facial recognition. Human verification remains crucial for validating information and outcomes in each case.

Departments keep detailed records whenever any search or monitoring occurs, both to improve transparency and to justify additional support or funding. People can request these records through a Freedom of Information Act or request information from their local agencies records unit, though fees may apply. Commonly documented materials include video footage and license plate reader data.

¹⁰<https://www.eff.org/issues/community-control-police-surveillance-ccops>

¹¹<https://www.aclu.org/issues/privacy-technology/surveillance-technologies/community-control-over-police-surveillance>

¹²<https://www.macarthurjustice.org/blog2/shot-spotter-is-a-failure-whats-next/>

¹³<https://www.freep.com/story/news/nation/2024/06/28/detroit-police-revises-face-recognition-technology/74251313007/>

Records related to less severe offenses are generally retained for no more than 30 to 90 days,¹⁴ while evidence pertinent to homicide investigations may be preserved indefinitely. Ongoing investigation data is typically withheld until the case is resolved.

Of the over 1,100 agencies that use drones,¹⁵ most offer the public access to a live drone flight map to improve transparency, and most are cautious that negative community feedback could result in a program eventually being cut.

Becoming Commonplace

Real-time crime centers are rapidly expanding nationwide and likely to become commonplace in policing soon. The technologies they use are powerful, particular when combined in real time, but some of the concerns they raise are valid.

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¹⁴<https://www.brennancenter.org/our-work/research-reports/police-body-camera-policies-retention-and-release>

¹⁵<https://www.route-fifty.com/emerging-tech/2023/08/policing-police-drones-how-regulations-can-protect-privacy-while-expanding-public-safety/389403/>

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