INTERACTIVE SESSION: ORGANIZATIONS

New York City Moves To Data-Driven Crime Fighting

Nowhere have declining crime rates been as dramatic as in New York City. As reflected in the reported rates of the most serious types of crime, the city in 2015 was as safe as it had been since statistics have been kept. Crimes during the preceding few years have also been historically low.

Why is this happening? Experts point to a number of factors, including demographic trends, the proliferation of surveillance cameras, and increased incarceration rates. But New York City would also argue it is because of its proactive crime prevention program along with district attorney and police force willingness to aggressively deploy information technology.

Cyrus Vance Jr., New York County's district attorney, is vigorously trying to mine more crime-fighting information from the data collected by the city to drive crime rates even lower. He believes that New York could get crime rates to zero—if one looked harder at the data.

There has been a revolution in the use of big data for retailing and sports (think baseball and *Moneyball*) as well as for police work. New York City has been at the forefront in intensively using data for crime fighting, and its CompStat crime-mapping program has been replicated by other cities.

CompStat features a comprehensive, citywide database that records all reported crimes or complaints, arrests, and summonses in each of the city's 76 precincts, including their time and location. The CompStat system analyzes the data and produces a weekly report on crime complaint and arrest activity at the precinct, patrol borough, and citywide levels. CompStat data can be displayed on maps showing crime and arrest locations, crime hot spots, and other relevant information to help precinct commanders and NYPD's senior leadership quickly identify patterns and trends and develop a targeted strategy for fighting crime, such as dispatching more foot patrols to high-crime neighborhoods.

Vance and his team think there is much more that can be done with data to reduce crime. Dealing with more than 105,000 cases per year in Manhattan, New York's assistant district attorneys did not have enough information to make fine-grained decisions about charges, bail, pleas, or sentences. They couldn't quickly separate minor delinquents from serious offenders.

In 2010 Vance's team created a Crime Strategies Unit (CSU) to identify and address crime issues and target priority offenders for aggressive prosecution. Rather than information being left on thousands of legal pads in the offices of hundreds of assistant district attorneys, CSU gathers and maps crime data for Manhattan's 22 precincts to visually depict criminal activity based on multiple identifiers such as gang affiliation and type of crime. Police commanders supply a list of each precinct's 25 worst offenders, which is added to a searchable database that now includes more than 9,000 chronic offenders. A large percentage are recidivists who have been repeatedly convicted of grand larceny, active gang members, and other priority targets. These are the people law enforcement wants to know about if they are arrested.

This database is used for an arrest alert system. When someone considered a priority defendant is picked up (even on a minor charge or parole violation) or arrested in another borough of the city, any interested prosecutor, parole officer, or police intelligence officer is automatically sent a detailed e-mail. The system can use the database to send arrest alerts for a particular defendant, a particular gang, or a particular neighborhood or housing project, and the database can be sorted to highlight patterns of crime ranging from bicycle theft to homicide.

The alert system helps assistant district attorneys ensure that charging decisions, bail applications, and sentencing recommendations address that defendant's impact on criminal activity in the community. The information gathered by CSU and disseminated through the arrest alert system differentiates among those for whom incarceration is an imperative from a community-safety standpoint and those defendants for whom alternatives to incarceration are appropriate and will not negatively affect overall community safety. If someone leaves a gang, goes to prison for a long time, moves out of the city or New York state, or dies, the data in the arrest alert system are edited accordingly.

In speeches praising intelligence-driven prosecution, Vance often cites the example of a 270-pound scam artist who for more than a decade made a living by bumping into pedestrians in the Times Square area and demanding money, claiming they had broken his glasses. He had been convicted

19 times but only for a misdemeanor charge and never served more than five months in jail. When flagged by CSU after his arrest in July 2010, he was convicted of felony robbery and sentenced to three and a half to seven years in prison.

Information developed by CSU helped Vance's Violent Criminal Enterprises Unit break up the most violent of Manhattan's 30 gangs. Since 2011, 17 gangs have been dismantled. According to New York's chief assistant district attorney Karen Friedman Agnifilo, murders dropped from 70 in 2010 to 29 in 2013 because the DA's office and police now had the information to identify the people driving crime in Manhattan and to take these people off the streets and put them behind bars.

There's another side to this, however. When prosecutors begin to compile databases for data-driven crime fighting, one needs to ask what people have been selected for inclusion in these databases, what are the selection criteria, and how harmful is this practice. Could the criminal justice databases include people who really shouldn't be there and nevertheless are targets for police scrutiny? According to Steven Zeidman, director of the criminal-defense clinic at the City University of New York (CUNY) School of Law, the answer is yes. More than 1,000 people are arrested in New York City each day. An overwhelming and disproportionate number are people of color arrested for minor offenses like riding a bicycle on the sidewalk or jaywalking. Zeidman recalled a time when he was in court with a teenager arrested for jaywalking. The arresting officer said he had stopped the young man because he was wearing a red shirt that was known to be a gang color. The young man was not a gang member, but he's probably in the database. People with arrest and conviction records find it next to impossible to find legitimate work on release, and this result lasts for as long as the records are retained.

Sources: Pervaiz Shallwani and Mark Morales, "NYC Officials Tout New Low in Crime, but Homicide, Rape, Robbery Rose," *Wall Street Journal*, January 4, 2016; "Prosecution Gets Smart" and "Intelligence-Driven Prosecution/Crime Strategies Unit," www.manhattanda.org, accessed March 4, 2016; and Chip Brown, "The Data D.A.", *New York Times Magazine*, December 7, 2014.

CASE STUDY QUESTIONS

1. What are the benefits of intelligence-driven prosecution for crime fighters and the general public?
2. What problems does this approach to crime fighting pose?
3. What management, organization, and technology issues should be considered when setting up information systems for intelligence-driven prosecution?

company. The data originate in many core operational transaction systems, such as systems for sales, customer accounts, and manufacturing, and may include data from website transactions. The data warehouse extracts current and historical data from multiple operational systems inside the organization. These data are combined with data from external sources and transformed by correcting inaccurate and incomplete data and restructuring the data for management reporting and analysis before being loaded into the data warehouse.

The data warehouse makes the data available for anyone to access as needed, but the data cannot be altered. A data warehouse system also provides a range of ad hoc and standardized query tools, analytical tools, and graphical reporting facilities.

Companies often build enterprise-wide data warehouses, where a central data warehouse serves the entire organization, or they create smaller, decentralized warehouses called data marts. A **data mart** is a subset of a data warehouse in which a summarized or highly focused portion of the organization's data is placed in a separate database for a specific population of users. For example, a company might develop marketing and sales data marts to deal with