A Landscape Report on
Measuring Community Sentiment and Perceptions of Safety and Law Enforcement Performance

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Criminal Justice Testing and Evaluation Consortium
A Program of the National Institute of Justice

Criminal Justice Testing and Evaluation Consortium (CJTEC)

CJTEC is a program of the National Institute of Justice (NIJ), which uses research-based methodologies to enhance the capabilities of law enforcement, courts, and corrections agencies. As a consortium, CJTEC leverages expertise from varied criminal justice community stakeholders to understand and test technologies and practices in a variety of NIJ's research areas.

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Criminal Justice Testing and Evaluation Consortium

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EXECUTIVE SUMMARY

Measuring community perceptions and opinions of law enforcement can help agencies, government officials, and the communities they serve understand the community's feelings and perceptions about law enforcement and safety, which may be influenced by both crime and non-crime-related issues. Having this information enables agencies to learn, evaluate effectiveness of interventions, refine their policies and practices, and improve their performance, while building trust through increased transparency and responsiveness to public concerns. Traditionally, community perceptions are measured by collecting data through surveys.

Collecting data and undertaking analyses related to community perceptions are challenging tasks. Collecting information from community members who are representative of the population served by a particular law enforcement agency is particularly challenging. It is important not only for organizations to collect community perceptions, but also to collect that information in a manner that results in high-quality, reliable information that is representative of the entire community that they serve.

However, very often, the people who are most affected by crime and policing are less likely to participate in surveys[1,2,3] because they are difficult to locate, difficult to contact, difficult to persuade to participate, or difficult to interview. Many have long-standing mistrust of police and the criminal justice system. Moreover, traditional modes of surveys, for example, mailed paper surveys, door-to-door in-person household surveys, telephone surveys, and web surveys, present significant planning and budgetary challenges when quality is prioritized. Traditional modes can also take weeks or months to conduct only to produce data reflective of a single snapshot in time.

These challenges have spurred innovation to develop products specific to law enforcement and city managers[4] that are easy to use and accessible and produce timely, geographically specific community perception measures of their agency's and officers' performance. These products are using newer modes of outreach, including digital advertisements, text messaging, and QR codes. Additionally, existing data sources, such as social media and body-worn camera (BWC) audio recordings and video footage, are being leveraged to measure community sentiment and police performance.

"Law enforcement agencies should track the level of trust in police by their communities just as they measure changes in crime. Annual community surveys, ideally standardized across jurisdictions and with accepted sampling protocols, can measure how policing in that community affects public trust."

—President Obama's Task Force on 21st Century Policing[5]

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1. Chapin, M. M., Kim, J., Lopez, J., & Belton, J. (2018, November 1–2). 2020 Census: Counting everyone once, only once, and in the right place. Presented at the National Advisory Committee on Racial, Ethnic and Other Populations Fall 2018 Meeting, Suitland, MD. Retrieved from https://www2.census.gov/cac/nac/meetings/2018-11/chapin-hard-to-count.pdf

2. Tourangeau, R. (2014). Defining hard to survey populations. In R. Tourangeau, B. Edwards, T. Johnson, K. Wolter, & N. Bates (Eds.). *Hard-to-survey populations*. Cambridge University Press. https://doi.org/10.1017/CBO9781139381635

3. U.S. Census Bureau. (2019, July). *Counting the hard to count in a census*. U.S. Census Bureau. Retrieved from https://www.census.gov/content/dam/Census/library/working-papers/2019/demo/Hard-to-Count-Populations-Brief.pdf

4. The practice of measuring community perceptions of law enforcement can be conducted by many stakeholders, including law enforcement agencies, city or town leaders (e.g., mayor, city council, city manager), community organizations, and police oversight boards. For the purposes of this report, CJTEC uses the terms *agency* and *organization* interchangeably to refer to the entity that is measuring community perceptions.

5. Department of Justice, Office of Community Oriented Policing Services. (2016). *Discussions on the President's Task Force on 21st Century Policing*. Washington, DC. Retrieved from https://portal.cops.usdoj.gov/resourcecenter/content.ashx?cops-p352-pub.pdf

This landscape report focuses on innovations for the three approaches to measuring community perceptions: general population surveys, post-contact surveys, and leveraging of data from existing sources. The objectives of this report are to:

1. Provide foundational principles on survey methodology.

2. Highlight three different approaches that can be used to measure community perceptions.

3. Describe novel modes for carrying out the various approaches.

Approaches to Measuring Community Perceptions

General Population Surveys	Post-contact Surveys	Leveraging of Data From Existing Sources
Surveys that are sent to a sample of a particular community or jurisdiction to gather general perceptions about police performance and public safety	Surveys that are administered a few days or weeks after recent police contact that may have emanated from a resident-initiated 911 call, traffic stop, investigation, or other encounter	The use of tools such as sentiment analysis and natural language processing to derive community perceptions by aggregating disparate information sources, including social media and data from BWCs

Figure 1: The three approaches for measuring community perceptions differ in terms of the data sources and the information that can be measured effectively.

Key Findings

- Measuring community sentiment or perceptions reflects an interest in understanding how community members perceive law enforcement and their own personal safety, which can help law enforcement agencies improve or update their policies, practices, and performance, and gives community members the opportunity to express their opinions and identify issues of concern.

- Community perceptions are often collected using traditional survey modes, such as telephone and web surveys. These modes have known limitations, including challenges with gaining cooperation; high costs; timeliness; and, most notably, the limited ability to contact and collect data from those persons most affected by policing and crime. Several emerging products and tools have been brought to market that claim to quickly and efficiently collect community perceptions measures.

- The currently available information or evidence that the new products and tools produce results that are sufficient in terms of quality and utility is limited. Future research is needed to evaluate some of the emerging products designed to measure community perceptions and compare these products with more traditional survey-based approaches.

- Community perceptions can be measured using three approaches:

  - **General population surveys** are meant to represent all persons who reside in a particular community or jurisdiction. These surveys are excellent for measuring perceptions of law enforcement effectiveness and residents' fear of crime and for identifying problems in the community. Because these surveys go to all residents, or to a representative sample, some of whom may have no contact or interaction with the police, perceptions may be influenced by many sources and different experiences.

  - **Post-contact surveys** gather information from residents who recently had contact with a law enforcement agency. These surveys are ideal for measuring officer response and performance along with the resident's overall level of satisfaction with respect to a particular interaction. However, because these surveys go to only the small subset of the community that had an interaction with law enforcement, they are not representative of the community.

  - **Leveraging of data from existing sources** refers to the process of analyzing data from disparate information sources, such as social media and body-worn camera (BWC) audio recordings and video footage, to systematically extract measures of police conduct.

    - The use of BWC data to assess the quality of police-resident interactions presents a novel and potentially objective assessment of police response. Like post-contact surveys, the use of BWC data is limited to just persons who had recent contact with the police, so these data are not representative of the community. They do not allow for follow-up questions related to resident satisfaction, general police performance, and residents' perceptions of fear and safety.

- The different approaches and modes to measuring community perceptions have their own strengths and limitations. Some jurisdictions use a multilayered approach, employing a combination of approaches. Prioritizing an approach based on an organization's goals and its budget is a best practice for determining the fit-for-purpose strategy for a specific organization.

Case Study

The Seattle Police Department uses a multilayered approach to measure community perceptions.

Each approach to measuring community perceptions provides a unique perspective into different measures and topics of concern for residents. A multilayered approach to measuring community perceptions employs a combination of these approaches, collecting multiple data points across different measures to paint a more robust picture of perceptions across the community. Employing a multilayered approach is best practice for an organization because it enables feedback on different measures, which ultimately provides a more comprehensive and representative look at community sentiment and perceptions. Over the years, the Seattle Police Department (SPD) has employed a multilayered strategy to measure community sentiment and perceptions by using the three approaches.

- **General population surveys**—Every 3 to 4 years, SPD conducts a telephone survey using a probability sample to understand the public's attitudes toward the police. Typically, SPD works with a survey research firm to administer the survey. Seattle's political leadership values this survey as a way to gauge residents' perceptions and inform future policy decisions. Additionally, SPD uses Zencity's Blockwise to push out surveys to residents via digital advertisements. Blockwise is designed to help agencies understand the community's trust in the police and perceptions of safety and to identify community concerns.[6] SPD also partners with Seattle University to conduct the annual "Seattle Public Safety Survey," a convenience survey focused on understanding public safety concerns within micro-communities (i.e., neighborhoods). This survey is pushed out through social media, personal networks, in-person community meetings, and other community events. Because this survey is not based on a probability sample, it is prone to selection bias because responses tend to reflect the opinions of individuals who are engaged with SPD. Seattle uses these survey data in conjunction with neighborhood-level crime data, police-community engagement, and focus groups to inform the Micro-Community Policing Plans' strategies and priorities.[7]

- **Post-contact surveys**—In 2008, SPD began using an internally developed customer satisfaction survey. One week per quarter, an officer was assigned to make calls for all Priority 3 cases, until 250 responses had been obtained to solicit feedback on the interaction the resident had with the SPD. To automate its customer satisfaction surveys, SPD recently replaced its internally developed customer satisfaction survey with SPIDR Tech. SPIDR Tech is a post-contact survey platform that sends automated text messages and emails to crime victims and individuals who call 911. The tool is designed to provide enhanced customer service by providing real-time progress updates on agency responsiveness, solicit feedback on specific interactions, and help improve future interactions between the community and law enforcement.[8] SPD aggregates feedback that meets certain criteria and displays it in public areas of the agency to boost officer morale. As a part of SPD's Equity, Accountability, and Quality program, the data are available on a public-facing dashboard.

- **Leveraging of data from existing sources**—SPD experimented with an emerging technology that provides qualitative insights about police-community interactions by analyzing BWC audio recordings.

Each of these approaches is limited on its own and only gives you one part of the story. However, with a multilayered approach, you can see how different measures and indicators of the same measure move together. Seeing that type of convergent validity is important, especially with these types of relative measures. The best thing you can do is measure as many metrics from as many angles as you can, to ensure you are getting the fullest picture.

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Law Enforcement INSIGHT

Loren Atherly
Director of Performance Analytics and Research
Seattle (WA) Police Department

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6. More information on Zencity's Blockwise is presented later in the report.

7. The Micro-Community Policing Plans are a strategic plans that focus on the distinct needs of individual Seattle micro-communities, including crime control, crime prevention, neighborhood-specific priorities, and quality-of-life strategies.

8. More information on SPIDR Tech is presented later in the report.

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CHAPTER 1:

INTRODUCTION TO MEASURING COMMUNITY PERCEPTIONS

What are community sentiment and perceptions?

What are the different measures of community perceptions?

What is the value of measuring community perceptions?

What are the different ways to measure community perceptions?

What do organizations need to consider before measuring community perceptions?

What are community sentiment and perceptions?

Various terms are often used to describe the process of gathering feedback from the community. Although they are often used interchangeably, the terms *community sentiment* and *community perceptions* have distinct meanings. For consistency, this document uses the following definitions:

- **Community feedback**—A term used broadly to discuss the practice of gathering data to understand the attitudes, needs, and opinions of a particular community. Community feedback can refer to both community sentiment and community perceptions.

- **Community sentiment**—A term that refers to a general thought, feeling, or sense about a particular topic. Sentiment is typically analyzed on a binary—good or bad, positive or negative. In the context of this report, community sentiment is most commonly used to describe the triangulation of data, such as social media data and body-worn camera ((BWC) audio recordings and video footage, to estimate the community's feelings about a particular topic, incident, officer, or agency.

- **Community perceptions**—A term that is broader than simple sentiment and refers to an organized thought or understanding. It captures a person's assessment and description of police performance, community problems, and measures of safety.

By the Numbers: Measuring Community Perceptions

According to the 2016 Law Enforcement Management and Administrative Statistics (LEMAS) survey, 10% of police departments and 7% of sheriff's offices conducted or sponsored a survey of local residents on crime, fear of crime, or satisfaction with the police.[9] Larger agencies are more apt to sponsor or conduct surveys than smaller agencies, as shown in **Figure 2**.

Percentage of Agencies That Conduct or Sponsor a Survey

Agency Size by Number of Full-Time Sworn Officers
Local Police Department   Sheriff's Office
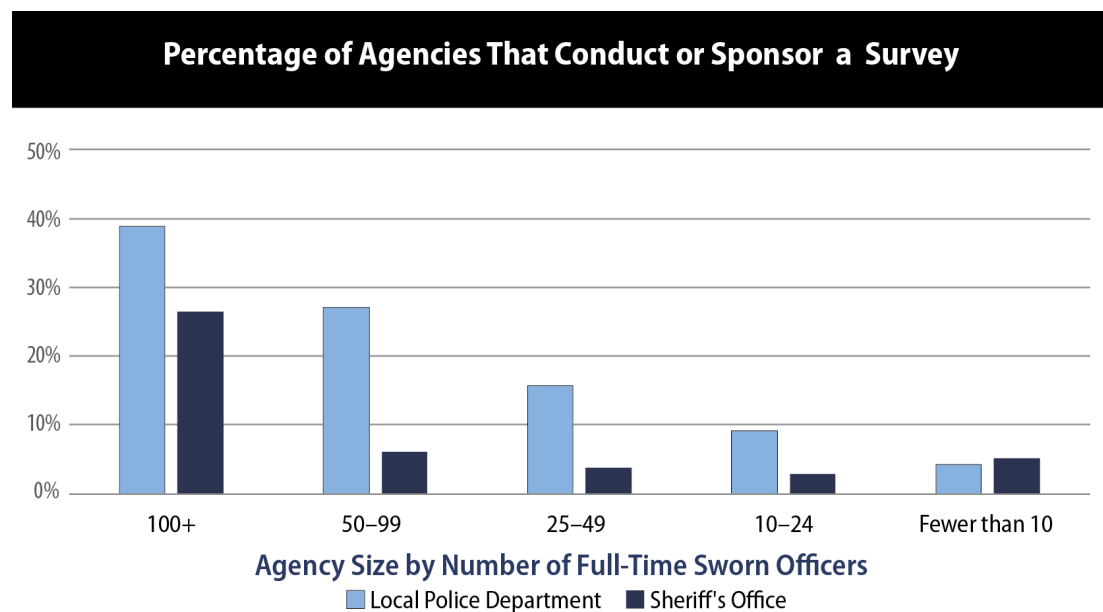
Figure 2: Large agencies conduct or sponsor surveys at higher rates than smaller agencies.

9. Special tabulation generated by RTI using 2016 LEMAS data from the Bureau of Justice Statistics: https://bjs.ojp.gov/data-collection/law-enforcement-management-and-administrative-statistics-lemas.

Collecting community feedback allows agencies, municipalities, and other community stakeholders to not only better understand the community's sentiment and perceptions toward law enforcement, but also to increase transparency and responsiveness to public concerns, evaluate programs or interventions, refine policies and practices, and improve legitimacy and performance.

Community perceptions of law enforcement reflect a variety of people's viewpoints and experiences, as illustrated in **Figure 3**. Members of a given community could be asked to share their opinions about law enforcement following a 911 call for assistance, street stop, or traffic accident. In some cases, law enforcement presence supports other services and may not be directly involved with the response, such as a social service crisis intervention incident or during a fire-and-rescue call. For others, perceptions might reflect what they hear from family and friends or see on television or in a movie and may not be a result of direct contact or interaction with their local police. Community members could also be asked to share their perceptions of a specific law enforcement agency or a specific officer whom they had contact with during a recent incident.

Community Perceptions of Law Enforcement
Relevant Levels and Factors

Law Enforcement in General
Everyone has perceptions of law enforcement, agencies, and officers that are based on a wide range of direct and indirect sources and experiences.

Local Law Enforcement Agency
Local law enforcement agencies typically serve specific geographic communities and can include a wide range of agencies representing different but often overlapping areas including counties, cities, and institutions (e.g., universities).

People can hear or learn about or be involved in incidents that give them direct or indirect experience with or exposure to officers, and those incidents can influence their perceptions of law enforcement.

Incidents

Officers
Individual officers are involved in incidents, and people's experiences with those officers can influence their perceptions of law enforcement.

Sources of Influence

| Calling 911 | Traffic and Street Stops | Arrest | Witness/ Bystander | Crime Victim | Observation | Movies/TV | Experience of Family/Friends | News | Social Media |

Figure 3: Community perceptions can be influenced by direct sources of influence, such as calling 911, or indirect sources of influence, such as social media.

What are the different measures of community perceptions?

Law enforcement agencies are charged with protecting and serving their communities, which can be framed using five interrelated activities or responsibilities: preserving the peace, protecting people and property, investigating crimes and arresting those who commit crimes, preventing crime, and enforcing laws.[10] In light of these responsibilities, law enforcement agencies' and officers' activities and performance can be evaluated and described in many ways. Depending on the motivation, priorities, and goals for measuring community perceptions, the measures agencies wish to assess differ. **Figure 4** presents key measures from the literature and from past surveys done in the field.

Measures of Community Perceptions		
Measure	**Definition**	**Example Prompt**
Perceptions of Effectiveness	The community's perceptions related to controlling and responding to crime are a direct measure of police efficacy and performance.	How effective do you think the City Police Department is at controlling crime?
Public Satisfaction	The public's satisfaction reflects how well they think the police control and respond to crime or how they handle key problems or incidents in the community. This perception may reflect a recent police contact that is either resident (e.g., 911 call) or police initiated (e.g., traffic stop).	Overall, how satisfied are you with your recent experience with the City Police Department?
Procedural Justice and Legitimacy	Police legitimacy is the "acceptance of the rules, laws, and precepts that define the police role in society, and a willingness to grant deference to police as a consequence of the belief that they are the authorized representatives who dutifully carry out the rules and laws that make society function smoothly."[11] Legitimacy is the perception that an authority figure, such as law enforcement, acts fairly and is concerned with residents' interests. A high level of perceived legitimacy is believed to result in more compliance and cooperation with that authority.[11,12,13] Procedural justice focuses on how law enforcement interacts with the community and is considered a necessary precursor to positive public perceptions.[14] People's notions of procedural justice affect their levels of trust and confidence in law enforcement, and measuring this concept can give insights into how they are doing and how to improve.	On a scale of 1–10, how much would you agree with the following statement: city police officers treat people fairly? On a scale of 1–10, how much would you agree with the following statement: city police officers are honest?
Fear of Crime and Safety	Fear of crime and concerns about personal safety can have negative effects on residents' behaviors and quality of life.	How safe do you feel walking around in your neighborhood at night? How often are you worried about being physically attacked in your neighborhood?
Social Disorganization and Emerging Community Problems/Issues	Concepts reflecting the public's perception of key crime problems or quality-of-life indicators in their community often help identify emerging issues or chronic problems that have not been addressed.	How often are the following a problem in the neighborhood where you live: noise, drug sales, illegal sex work, street harassment, physical disorder (e.g., vacant buildings, graffiti, excessive litter)?

Figure 4: Organizations can assess different measures of community perceptions depending on their motivation, priorities, and goals.

10. Bouza, A. V. (1990). *The police mystique: An insider's look at cops, crime and the criminal justice system*. Plenum Press.

11. Gau, J. M. (2014). Procedural justice and police legitimacy: A test of measurement and structure. *American Journal of Criminal Justice, 39*, 187–205. https://doi.org/10.1007/s12103-013-9220-8

12. Tyler, T. R. (2006). Psychological perspectives on legitimacy and legitimation. *Annual Review of Psychology, 57*, 375–400. https://doi.org/10.1146/annurev.psych.57.102904.190038

13. Reisig, M. D., Bratton, J., & Gertz, M. G. (2007). The construct validity and refinement of process-based policing measures. *Criminal Justice and Behavior, 34*, 1005–1027. https://doi.org/10.1177/0093854807301275

14. Peterson, E., Reichert, J., Konefal, K., & Holihen, K. (2017, November 7). Procedural justice in policing: How the process of justice impacts public attitudes and law enforcement outcomes. Retrieved from https://icjia.illinois.gov/researchhub/articles/procedural-justice-in-policing-how-the-process-of-justice-impacts-public-attitudes-and-law-enforcement-outcomes

What is the value of measuring community perceptions?

Organizations may have different motivations for measuring community perceptions depending on their goals, philosophies, and communities they serve. Possible motivations might be to:

- Understand gaps in service.

- Measure the effectiveness of interventions.

- Inform strategic resource allocation.

- Identify opportunities or areas for improvement.

- Recognize positive service.

- Comply with the Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA) Law Enforcement Standard 45.2.2 Citizen Survey.

> **CALEA Law Enforcement Standard 45.2.2 Citizen Survey**
>
> This standard stipulates that agencies should conduct and document a survey of citizen attitudes and opinions at least every 2 years. Some organizations may be motivated to conduct a survey for the sole purpose of gaining accreditation.

Measuring community perceptions can help law enforcement agencies and the communities they serve understand the community's opinions and attitudes toward law enforcement. Collecting and using data directly from community members enable agencies to learn about their activities, potentially refine their policies and practices, and improve their performance, while increasing transparency and responsiveness to public concerns. Community input can inform whether police treat their constituents in a fair and respectful manner and help identify emerging issues and concerns in the community. Subsequently, public trust and confidence increase when police are seen as being effective, acting with integrity, and working with the community. Increased trust and confidence, in turn, can facilitate community cooperation, an essential element of high-quality policing. Measuring perceptions of police effectiveness and public trust also allows for an assessment of progress over time through trend analyses and benchmarking comparisons against national averages and similar agencies, when data are available. **Figure 5** highlights how agencies that conduct surveys are using the collected information, according to the 2016 LEMAS data.[15]

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15. Special tabulation generated by RTI using 2016 LEMAS data from the Bureau of Justice Statistics: https://bjs.ojp.gov/data-collection/law-enforcement-management-and-administrative-statistics-lemas.

How Agencies Use Survey Data

Ways Agencies Use Data From Surveys

▢ Local Police Department ■ Sheriff's Office
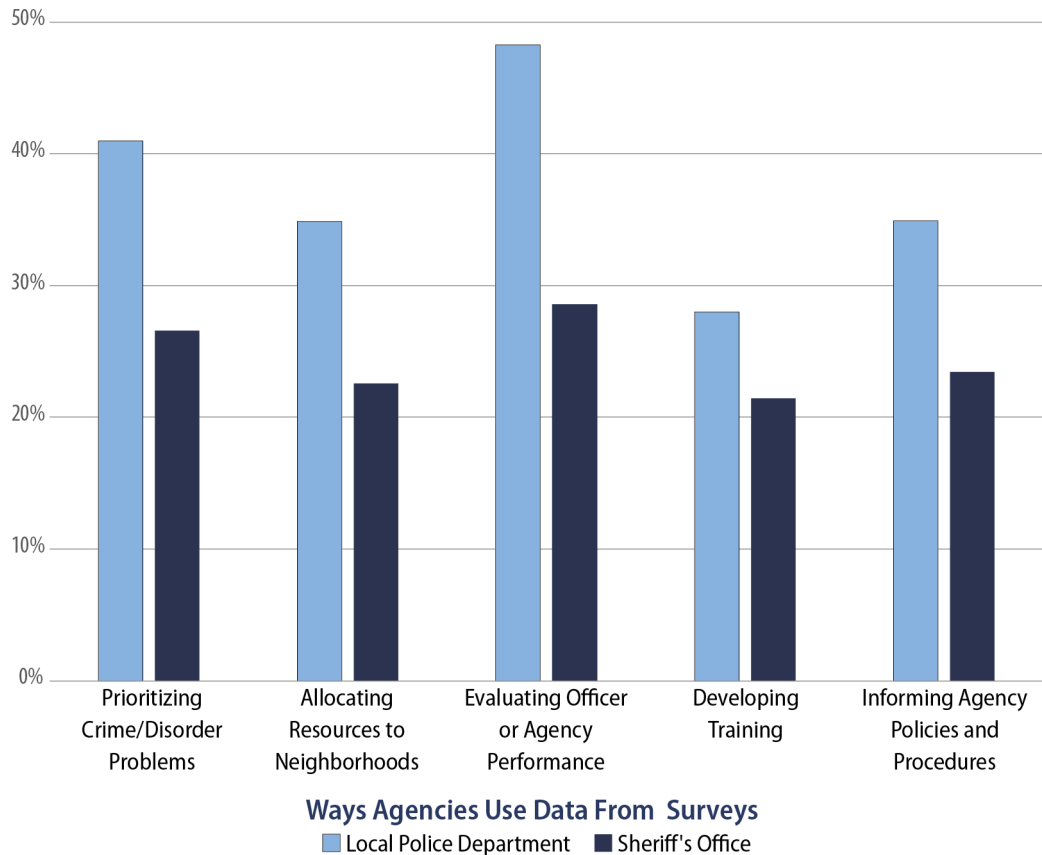
Figure 5: Agencies that conduct or sponsor surveys use the data for different objectives. Most often, agencies use the collected information to evaluate performance.[16]

> We wanted to know where our department stood culturally, in the eyes of our community, and what we needed to do [to] improve. We also really care about what the community has to say. The feedback we receive helps to inform our strategic goals moving forward with respect to crime-fighting initiatives and staffing needs.
>
> Brian Peete
> (Former) Chief of Police
> Montpelier (VT) Police Department
> (Current) Director
> Riley County (KS) Police Department

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16. Special tabulation generated by RTI using 2016 LEMAS data from the Bureau of Justice Statistics: https://bjs.ojp.gov/data-collection/law-enforcement-management-and-administrative-statistics-lemas.

What are the different ways to measure community perceptions?

Community sentiment and perceptions can be measured using three distinct approaches: **general population surveys, post-contact surveys, and leveraging of data from existing sources** (see **Figure 6**). Each approach has value, relative strengths and limitations, and the potential to address different measures and priorities.
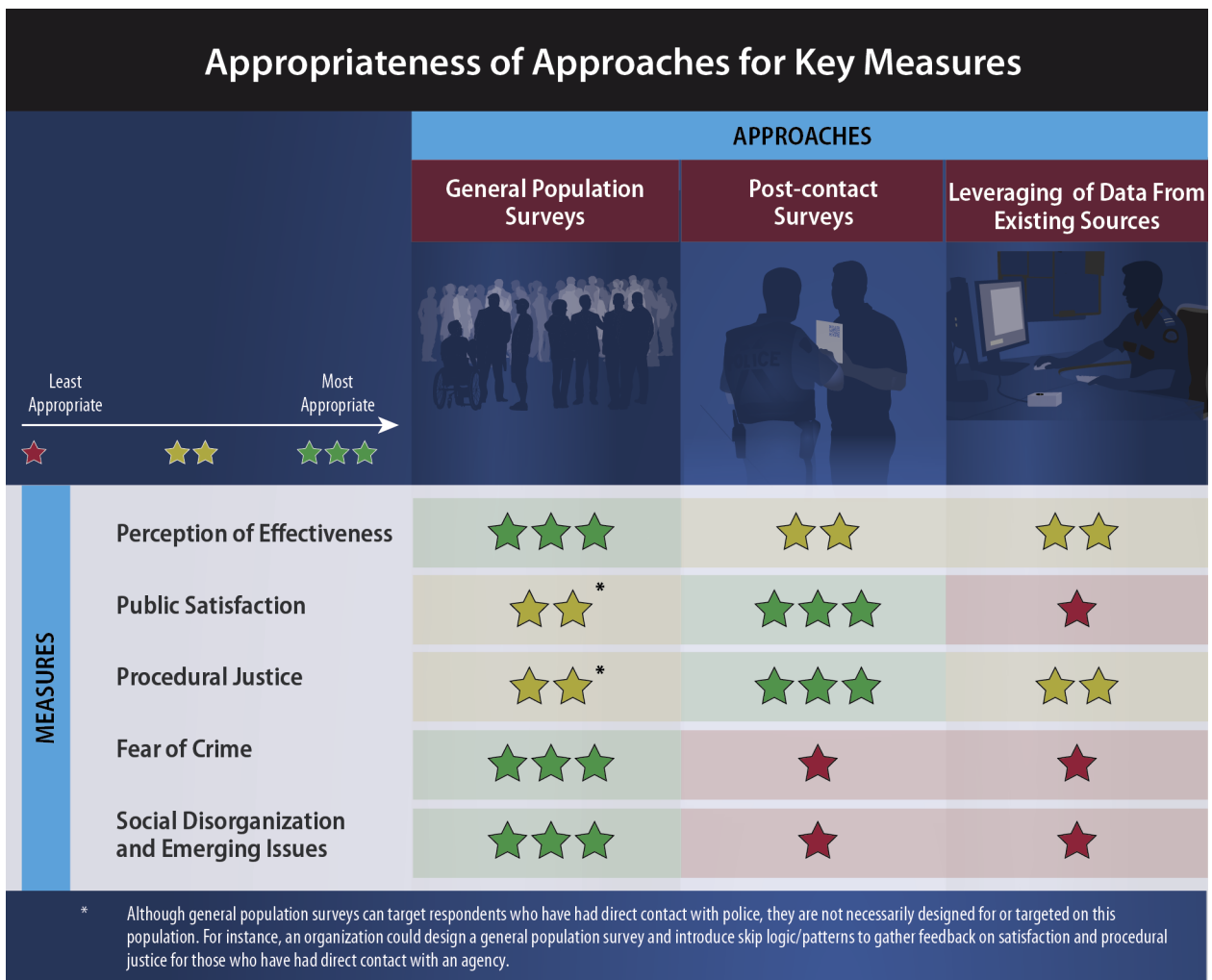
Approaches to Measuring Community Perceptions

General Population Surveys	Post-contact Surveys	Leveraging of Data From Existing Sources
Surveys that are sent to a sample of a particular community or jurisdiction to gather general perceptions about police performance and public safety	Surveys that are administered a few days or weeks after recent police contact that may have emanated from a resident-initiated 911 call, traffic stop, investigation, or other encounter	The use of tools such as sentiment analysis and natural language processing to derive community perceptions by aggregating disparate information sources, including social media and data from BWCs
Measures: Perception of effectiveness, social disorganization and emerging community issues, and public safety and fear of crime	**Measures:** Levels of satisfaction and perceptions of procedural justice and legitimacy	**Measures:** Perception of effectiveness and procedural justice and legitimacy
Strengths: • The voices of all residents can be heard. • A wide range of measures, including perceptions of policing, emerging problems in the community, issues with safety, and experiences with crime, can be collected. • General population surveys are often highly customizable instruments and can be specific to local issues. • Measures of post-contact experiences can be included.	**Strengths:** • Responses are based on persons who have had direct contact and experience with their agency and its officers. • Potential respondents and their contact information are known, which can facilitate recruitment and data collection. • Agencies can be reasonably confident that the survey responses will be based on or affiliated with actual events and interactions involving the police.	**Strengths:** • Unfiltered data may provide nuanced insights into how community members feel about an agency or officer interaction. • Trends in perceptions can be easily tracked over longer timelines.
Limitations: • Respondents will likely not have had any direct interactions with law enforcement; thus, their perceptions of law enforcement might be based on information and events that have nothing to do with the local agency. • Many individuals who have contact with the police do not live in the community, especially in urban areas, and may be excluded from surveys. • Residents may be reluctant to respond to surveys, especially those who have been most affected by crime and police activity and have the greatest distrust in policing.	**Limitations:** • Methods for these surveys are vulnerable to potential influence and bias. • Asking general questions about emerging problems in the community or general perceptions of safety can be severely skewed with post-contact surveys.	**Limitations:** • Social media, often used as a data source for products leveraging existing data, is influenced by national or sentinel events; therefore, perceptions may not reflect a specific agency or interaction with the police. • Social media could have unverified users from outside a community, potentially threatening the validity of the data. • Negative perceptions may arise concerning the use of the tool itself, should community members believe they are being "surveilled."

Figure 6: The three approaches for measuring community perceptions differ on the source of the data and what information they can effectively measure.

An organization's motivation for seeking information on community perceptions will inform the key performance measures they should assess.

An organization's priorities and goals will inform which approach an organization should pursue. For example, if an organization wants to better understand the community's satisfaction with police services, a post-contact survey is the most effective strategy because the respondents have had a confirmed interaction with the agency. However, if an organization would like to understand emerging issues or residents' perceptions of safety, solely relying on those who had contact with the police will not be representative of the community. Similarly, general population surveys provide the opportunity to ask very specific questions, whereas using tools that leverage data from existing sources is less direct than general population surveys and relies on deriving measures from existing data, such as social media. To determine the most appropriate approach to use, organizations should consider who they are trying to reach and how the measure is constructed (direct vs. derived). **Figure 7** highlights which approach is most appropriate for each key performance measure. To get a more comprehensive picture of community perceptions and assess multiple measures, using a multimodal approach is considered best practice.

Appropriateness of Approaches for Key Measures

MEASURES	General Population Surveys	Post-contact Surveys	Leveraging of Data From Existing Sources
Perception of Effectiveness	★★★	★★	★★
Public Satisfaction	★★ *	★★★	★
Procedural Justice	★★ *	★★★	★★
Fear of Crime	★★★	★	★
Social Disorganization and Emerging Issues	★★★	★	★

Least Appropriate ★ · ★★ · Most Appropriate ★★★

* Although general population surveys can target respondents who have had direct contact with police, they are not necessarily designed for or targeted on this population. For instance, an organization could design a general population survey and introduce skip logic/patterns to gather feedback on satisfaction and procedural justice for those who have had direct contact with an agency.

Figure 7: An organization's motivation for measuring community perceptions informs the key performance measures it should assess, which, in turn, determines which approach it should pursue.

What do organizations need to consider before measuring community perceptions?

Agencies and community stakeholders that are considering collecting community feedback need to define their purpose and desired outcomes.

Organizations have different reasons for measuring community perceptions, depending on their priorities and the constituents they serve. Some may want to assess officer performance, whereas others may want to inform strategic resource allocation. Choosing an approach is largely specific to the organization and depends on the intended goals. Articulating these goals up-front helps organizations determine the appropriate approach for each intended use case.

Many stakeholders have a vested interest in measuring community perceptions; establishing who will lead the survey at the front end can provide structure to reduce potential challenges.

The practice of measuring community perceptions of law enforcement can be conducted by many stakeholders, including law enforcement agencies, city or town leaders (e.g., mayor, city council, city manager), community organizations, and police oversight boards. For example, a city manager or mayor may want to gauge community sentiment with respect to law enforcement as part of a larger survey on city services. Determining up-front which stakeholder is leading the process is helpful for clarifying roles and responsibilities and establishing structure to reduce any instances of overstepping. Although one stakeholder should be the primary driver, other stakeholders should be involved in the process, such as through the convening of monthly update meetings.

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My recommendation for agencies that are considering adopting technology [to measure community perceptions] is to have a clear, detailed, and intentional internal plan at the front end on how command staff will use these data. Articulating a plan prior to implementation on how these data will be used is important for successful rollout of the technology.

Amanda Terrell-Orr
Administrator, Research and Development section
Colorado Springs (CO) Police Department

It is important for organizations to understand their available resources—personnel and financial—before measuring community perceptions.

Organizations need to inventory their available resources. Resources is a broad consideration that includes two critical elements:

- **Personnel resources**—The expertise and skills needed to measure community perceptions vary depending on who is managing the survey. Some organizations can use in-house resources to manage the survey internally; others will need to contract with or commission a university, research firm, or survey provider. Regardless of who is measuring community perceptions, organizational buy-in is critical to increase the likelihood that officers will be invested in the results.[17]

- **Financial resources**—Measuring community perceptions can involve a considerable financial investment for agencies and communities.

Involving the community throughout the process and keeping them updated are important for fostering trust and transparency.

The central tenet to success when measuring community perceptions is buy-in and participation from the community. Organizations should involve the community throughout the entire process of measuring the community's perceptions—from planning to disseminating results. For example, it is important to consider how the community can engage in the survey development process, ensuring the survey questions accurately measure its priorities and needs. Involving the community in the process may uncover nuances to the survey or problems that were previously unknown. For example, collaborating with non-English speakers or a community organization that represents non-English speakers may help ensure that the language used in the survey (e.g., using plain language, offering the survey in multiple languages) does not act as a barrier to some communities.

Engaging certain populations in the process can be challenging. Social media and public awareness campaigns may be able to heighten awareness and increase involvement. Leveraging existing relationships within a community, such as attending local civic association meetings and other community meetings, can help engage residents in places where they already feel comfortable.

> **As the community started to buy into SPIDR Tech,[18] we were able to put together a community panel to review the questions asked on the survey. What we learned from the panel was that even though the demographic questions were optional, it was extremely off-putting to have them at the beginning of the survey. We were able to restructure the survey based off our community's feedback and have since seen the response rates increase.**

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Retired Assistant Chief of Urban Police Department

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17. Organizational buy-in for QR code surveys is critical to increase the likelihood that surveys will be conducted consistently across the organization.

18. SPIDR Tech is a company that offers a post-contact survey product that connects to an agency's computer-aided dispatch (CAD)/record management system (RMS) to automate survey delivery. More information on SPIDR Tech is presented later in the report.

Understanding how data or results will be shared—both internally within the organization and externally with the community—is important for building trust.

Once the data have been cleaned and analyzed, organizations should have a plan for using and sharing the results externally with the broader community. To share results with the broader community, some organizations have published survey results online in a static PDF form, whereas other organizations have opted for an interactive results dashboard. For instance, the Chicago Police Department publishes monthly results of its surveys on the Chicago Police Department Sentiment Dashboard. Issuing a press release, employing local news channels, or sharing information on social media can increase outreach and access to a broader cross section of the community.

Case Study

The San Diego Police Department's (SDPD) public relations campaign sought to increase transparency with the community.

To understand community priorities and gauge trust of and sentiment toward police, SDPD began using Zencity's Blockwise,[19] a general population survey product, in November 2021 to measure community perceptions. The survey asks residents to respond anonymously to the four questions that come preloaded, including three Likert-scale questions on safety and trust and one open-ended question asking respondents to identify an issue or problem in their neighborhood.

To best reach a diverse group of respondents throughout the city for input on key public safety concerns, the survey is translated and available in eight different languages. The information gathered is meant to augment the significant community outreach and community meetings that the SDPD holds monthly by proactively soliciting feedback from individuals and collaborating with those who do not traditionally participate in these meetings. Responses are also used to identify trends, thus allowing the police department to shape future priorities and turn the data into actionable steps.

Before releasing Zencity to the public, SDPD published a press release[20] informing the public of their intentions and goals with the survey and educating them on the methodology Blockwise uses. The press release and media coverage aimed to help the community understand the why and the how of Blockwise, thereby empowering individuals to be more willing to collaborate and respond with feedback.

To continue public transparency, SDPD publishes their monthly aggregate reports on their department website.[21] These reports contain both the citywide survey results and breakdowns by police division for the four questions asked. As of June 2022, SDPD was continuing to work with Zencity to develop a public-facing dashboard of survey results that would allow individuals to interact directly with the gathered data.

Furthermore, organizations need a plan for sharing the survey data internally. The organization may be hesitant to measure community perceptions because of fear of retribution for negative feedback. Communicating how the organization will use—and how the organization will not use—these data is essential to creating a culture of trust and transparency. Collecting these data is not just meant to provide alerts of negative sentiment or interactions, but also to reinforce what the organization is doing well. Sharing positive and constructive feedback can help boost officer morale and address officers' fatigue and lack of trust in communities. Some agencies set up TV screens in their facilities to display positive comments that are received from the community.

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19. Zencity's Blockwise is a general population survey product that distributes surveys through digital advertisements. More information on Zencity's Blockwise is presented later in the report.

20. The City of San Diego Police Department. (2021, November 1). SDPD launches new survey tool to better understand community concerns. Retrieved from https://www.sandiego.gov/sites/default/files/110121_zencity.pdf

21. The City of San Diego. (n.d.). *Zencity trust and safety survey*. Retrieved from https://www.sandiego.gov/police/data-transparency/trust-safety-survey

To help facilitate internal buy-in for measuring community perceptions, agencies may consider using an internal team made up of officers with different rankings. These officers can "champion" the process of measuring community perceptions, address any concerns related to using the feedback, and help consider next steps to take with the data. For example, one Police Service in Canada partners with a research organization to help them conduct annual surveys. As part of that process, the research organization holds meetings throughout the year with a team of different representatives from the Police Service. At the beginning of the survey process, these meetings help prioritize the survey topics. After the survey is conducted, the team engages in insight discovery sessions to understand the data, aggregate key takeaways, and brainstorm next steps for the department. Meetings like these can help onboard officers in the survey process, increase morale related to measuring community perceptions, enable officers to brainstorm how to use the data, and empower officers to engage and partner with the community.

Figure 8 summarizes questions that organizations should think about for each consideration highlighted above.

Questions to Consider Before Measuring Community Perceptions	
Consideration	**Questions to Ask**
Determining Purpose	• Why are you measuring community perceptions? What are the purpose and desired outcomes? How will you use the information? • Whose perceptions do you want to measure? Are specific subgroups particularly important (e.g., geographic specificity at the community, district, or neighborhood level)?
Identifying Survey Leadership and Governance	• Who will lead and oversee the survey (law enforcement agency, city manager, community organization)?
Inventorying Resources	• What available budget do you have? • What types of survey skills, capabilities, and expertise do you have in-house? What research partners do you need to involve, if any? • Who will champion the survey within the agency?
Involving the Community	• How are you generating public awareness of the survey? • Which community stakeholders, organizations, or local leadership do you need buy-in from? • How can community stakeholders engage in the survey development process?
Sharing Data	• Does your organization have a plan for how you will use (or not use) the data? • What decisions will the data be used to inform? • Who is going to manage/operationalize the data? • Who owns and has access to the data? • Do you plan to share the results with the community? If so, what data will be shared and how will you share it? • How will you share the data internally?

Figure 8: Organizations should determine their purpose, identify leadership and governance, inventory resources, involve the community, and share data prior to measuring community perceptions.

Just as we spend time and effort trying to build trust and legitimacy with our communities, it's just as important for a chief to do that internally.

Michael Kochis
Chief of Police
Warrenton (VA) Police Department

Law Enforcement INSIGHT

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CHAPTER 2:

INTRODUCTION TO SURVEYS

Because two of the three approaches to measuring community perceptions discussed in this report involve surveys, this chapter provides a foundational overview of the general survey process, the traditional survey modes used for data collection, the limitations or concerns associated with traditional modes, and the cost drivers of a survey.

What is the survey process?

What are the traditional modes used to collect data on community perceptions?

What are the methodological limitations or concerns of traditional modes of data collection?

What factors influence the cost of conducting a survey?

What is the survey process?

The seven stages in the survey process are illustrated in **Figure 9**. **Figure 10** provides brief descriptions of each stage and some key questions that should be considered. Determining the ultimate purpose and goals of the survey often dictates the design that makes the most sense, which in turn affects the resulting quality.

During each stage of this process, organizations make decisions that will ultimately determine the quality, validity, and utility of the findings, as well as the cost. Conducting a survey is not simple or straightforward, and organizations often make trade-offs. For example, budget constraints may require the selection of certain survey modes or require restrictions on sample sizes. Concerns about the community responding may lead to asking fewer questions or offering survey incentives. Assessing whether individuals in the agency have the necessary expertise/talent can inform whether conducting the survey and managing its various stages will need to be contracted out.

Survey Process

Plan Survey › Design Instrument › Design Sample › Recruit Respondents › Collect Survey Data › Analyze Survey Data › Use and Disseminate Findings

Figure 9: The fundamental process for measuring community perceptions can be condensed to seven key stages.

Survey Process Stages		
Stage	**Description**	**Key Questions to Consider**
Plan Survey	Organizations must determine and understand their purpose and goals for conducting a survey, assess whether they will need external support, identify/define the concepts that will be measured, and determine the available funding and staffing resources.	• Why do you want to measure community perceptions? What are your desired outcomes? • Do you have any survey knowledge or capabilities in-house? • How quickly and how often do you want these data? • What kind of budget do you have, if any, to support this effort? • Who will conduct and manage the various stages of the survey?
Design Instrument	Organizations need to decide what topics the survey will cover and how the questions will be asked; how long the survey will be; and how the data will be used to develop a useful, efficient, and valid survey instrument. Salient, shorter, and easier surveys are more likely to engage participants and be completed.	• How long will the survey take to complete (length and complexity)? • Will the survey use close-ended or open-ended questions? • What mode will the survey use? • During cognitive testing, do respondents understand what is being asked and can they formulate valid responses? • Are the questions culturally appropriate and not biased? • Will the survey be offered in multiple languages or accommodate disabilities?
Design Sample	Organizations need to determine who they need or want information from, how many respondents are needed and how they should be selected, how they can be identified, and what options exist for contacting and communicating with them. Potential respondents may come from probability-based or nonprobability-based sources, which can affect the extent to which the results are generalizable to the population of interest.	• What is the population of interest (e.g., entire community, persons who had recent contact with the police)? • What type of precision is needed? Do we want to produce estimates for key subgroups (e.g., demographics such as sex, race, or age; geographic subgroups such as neighborhoods or police service areas)? • What is the sample design: census, probability, or nonprobability samples? • What sample sizes are needed?
Recruit Respondents	Organizations must determine who they want to survey, why, and how those potential respondents can be identified, accessed, and recruited to complete the survey.	• Whose perceptions do you want to measure? Are specific subgroups particularly important (e.g., geographic specificity, such as community, district, neighborhood, agency, division, officer, racial groups)? • How can we identify and contact these community members? • What can we offer in terms of messages or incentives that might encourage participation? • What populations might be particularly difficult to reach or recruit?
Collect Survey Data	The survey respondents complete the survey, thereby providing their data and perceptions of the law enforcement agency, using any number of methods, including paper and pencil, telephone, web, face-to-face, or some combination thereof.	• Which data collection mode is most appropriate to use? • Are existing platforms or products being used to collect the data? • What strategies will be used to maximize respondent cooperation, reduce low survey response, and minimize bias?
Analyze Survey Data	Once the survey data are collected, they need to be checked and cleaned, assessed for representativeness or nonresponse bias, and analyzed to produce findings that have utility for the law enforcement agency and the community.	• Are the results representative of the population of interest? Are data adjustments needed to correct for bias (e.g., survey weighting)? • Were all questions answered and completed? Are adjustments needed for questions with significant amounts of missing responses or nonresponse (e.g., imputation)? • Are there any other data sources with which these results can be credibly compared or combined to increase utility?
Use and Disseminate Findings	Once the results are created, law enforcement agencies determine how they can be used internally and if/how the findings will be shared publicly.	• How will you use the results? • Do you plan to share the findings with the public? • How will results be shared?

Figure 10: Organizations should consider several key questions throughout the survey process.

Sample Design Considerations

An important concern with surveys is who responds to them. If no one responds or only a certain part of the population responds, the survey results will be of little value because they do not represent the community of interest. Undertaking a survey effort involves two major considerations:

- Who **should respond** to your survey?

- Who **actually responds** to your survey?

A sampling plan is used to ensure that the relevant population is identified, the sample of respondents is representative of the community, and any adjustments made to the survey results are done with the proper statistical techniques. Probability sampling is the preferred method for selecting respondents because it involves a random selection process, which allows inferences to be made about the population of interest. A probability sample involves having a targeted list of individuals (e.g., a list of households in a neighborhood) that can be used to assess who responds and who does not to determine potential bias. For example, if the demographics of the community indicate residents are approximately 50% white and 50% Black, but the survey resulted in 70% white and 30% Black residents completing the survey, we know that white persons will be overrepresented and bias the findings. Typically, an adjustment can be made to the final estimates to correct for this selection by weighting each subgroup proportionate to their population size. A probability sample does not ensure that a survey will result in a representative sample, but it allows for potential bias to be addressed.

In contrast, nonprobability sampling involves nonrandom selection of respondents. Individuals are selected through different techniques that do not allow for proper statistical corrections. For example, posting a survey on Facebook allows anyone to respond (e.g., individuals who may not be residents of the community) and does not limit the number of times someone can respond, which could lead to individuals responding to the survey multiple times, skewing results. When using nonprobability sampling, it is difficult to know who responded to the survey and how representative the responses are of the community.

> *Convenience Surveys*
>
> Convenience sampling is a special form of nonprobability sampling where respondents are selected based on the ease of access to these individuals. For example, researchers might elect to leave survey pamphlets during a community meeting, provide a link to a survey on social media, or interview people on the street. Many agencies rely on these approaches because they are quick and easy to implement, saving time and money compared with probability sampling methods. However, not everyone in the community will attend a meeting, see a post on social media, or be on the street to be interviewed. Therefore, these surveys are not likely to be representative of the population, leading to a greater chance of response bias, skewing the results.

What are the traditional modes used to collect data on community perceptions?

Traditional modes for surveying the community about law enforcement agencies include mail/paper, telephone, in-person interviews, and web based. The mode used to collect data from community members can have important implications for coverage of the population of interest, questionnaire design and logistics, data quality, and cost (**Figure 11**). These modes can be used for general population or post-contact surveys.

Considerations for Different Data Collection Modes			
Data Collection Mode	**Mail**	**Telephone**	**In-Person**	**Web**
Administration	Self-administered	Interviewer administered or self-administered	Interviewer administered or self-administered	Self-administered
Coverage Issues	Depends on quality of sample frame and response	Groups overrepresented or missed if using mobile- or landline-only frames	Can provide highest coverage but costly and logistically difficult	Low access among seniors and people with low education and income
Questionnaire Design	Requires less complexity but allows for some visual aids	No visual aids, but if interviewer administered, then assistance is available and greater complexity is possible	Interviewer assistance available, and audio/visual aids allow for greatest complexity	Visual aids and preprogrammed routing allow for greater complexity but needs to be short and easy
Logistics	Longer turnaround time relative to telephone and web	Requires interviewer training and monitoring	Requires in-depth interviewer training, travel, larger supervisory staff	Specialized personnel needed to design, program, and administer the survey
Data Quality	No interviewer effects[22] but may encounter issues of satisficing or item nonresponse	Interviewer effects may occur but will be smaller relative to in-person	Interviewer effects can lead to socially desirable responding	No interviewer effects but may encounter issues of satisficing or item nonresponse
Cost	Costs vary based on contact protocols but relatively cheaper	Costs vary; not as expensive as in-person, but often more expensive than mail/web	Costs are higher relative to other modes primarily because of the need for interviewers in the community	Costs vary but often the cheapest method of data collection

Figure 11: Traditional data collection modes have different implications for coverage of the population of interest, questionnaire design, logistics, data quality, and cost.

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22. Interviewer effects are the bias that is introduced when the characteristics of the interviewer or their mere presence affects how a person responds.

Mail Surveys

Paper, or mail-out, surveys are a traditional approach in which respondents receive a paper questionnaire and fill it out using a pencil or pen. This type of survey can be handed out in-person or distributed through the mail with the expectation that the respondent will return the completed survey through the mail.

Coverage of the Population of Interest	Questionnaire Design and Logistics	Data Quality	Cost
Listed addresses of target population are available, and sometimes telephone numbers can be linked, but they are not necessary.	Mailed surveys typically take longer to administer than web and telephone surveys, but in-person interviewing usually takes even longer. Mail surveys lack the flexibility and interviewer support of in-person surveys, which limits the complexity of the questionnaire. However, visual stimuli, such as pictures or graphics, can be used.	Mail surveys are less intrusive than in-person interviews: respondents may answer at leisure in their own time, and there is no interviewer present who may inhibit free answers to more sensitive topics (i.e., lead to socially desirable responding).	Mail surveys are less costly than both in-person and telephone interview surveys and require a much smaller staff. Sometimes more cost-effective than web but contingent on sample size and recontact protocols (more mail contact = higher cost).

Example in Practice

The Fairfax County Police Department partnered with George Mason University to conduct a random-sample mail-out survey to solicit feedback on the police department.

In 2015, the Fairfax County Police Department partnered with the Center for Evidence-Based Crime Policy at George Mason University to conduct a random-sample mail-out survey to gather community feedback on the police, perceived crime, and safety levels. To ensure all households had an equal opportunity to receive the survey, George Mason used InfoUSA, a commercial entity, to obtain a random sample of 4,250 households, including rental units, to receive the survey. The paper survey and informational cover letter were sent, followed by two reminder postcards, over the period of 2 months. Of the 4,136 active households that received the survey, 626 were completed for a response rate of 15%.[23]

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23. Lum, C., & Johnson, D. (2016, April). *The Fairfax County community survey of the Fairfax County Police Department*. Fairfax County. Retrieved from https://www.fairfaxcounty.gov/police/sites/police/files/assets/images/chief/reports/surveyreportfinal.pdf

Telephone Surveys

Researchers conduct telephone surveys over a landline phone or cell phone. Interviewers may be working from a centralized call center, office, or a personal space such as their home. Telephone interviews are typically conducted through computer-assisted telephone interviewing (CATI) or interactive voice response (IVR) technology. The CATI option involves interviewers placing calls and documenting responses in real time using a computer or tablet. IVR uses prerecorded audio messages, and respondents enter responses on their own (without a live interviewer).

Coverage of the Population of Interest	Questionnaire Design and Logistics	Data Quality	Cost
Coverage may be suboptimal because households may not have telephones, may have unlisted numbers, or may use cell phones, which can limit geographic specificity. Telephone interviewing can be comparable to in-person interviewing in terms of coverage when/if lists of numbers are complete.	Telephone interviews limit the types of questions that can be asked compared with in-person interviews and web because there is no visual communication. Depending on the type of telephone survey, interviewers are available to assist the respondent, and more complex questionnaires may be used. Fewer questions can be asked to facilitate participation and deter break-offs.	Interviewer effects may be present, but to a lesser extent than with in-person interviewing. Quality control can be high because interviewers can be closely monitored and immediate feedback is possible.	Many interviews can be completed in a relatively short period of time using a smaller number of interviewers than in-person interviewing. Also, telephone interviews are less costly than in-person interviewing because costs associated with travel are avoided.

Example in Practice

The Calgary Police Commission (CPC) conducted telephone interviews to understand community members' concerns, expectations of police services, and perceived safety.

The CPC, an independent civilian oversight board associated with the Calgary Police Service (CPS), worked with Illumina Research Partners to conduct two surveys: an internal CPS employee satisfaction survey and a citizen satisfaction survey. Approximately 120,000 Canadian dollars is budgeted to conduct these surveys annually.

For the citizen research, Illumina Research Partners alternates on an annual basis between a quantitative survey and qualitative research on a topic of strategic importance to the commission. For example, in 2021, they conducted in-depth research with Indigenous and Black residents to better understand why these groups typically have lower levels of satisfaction with the police than the general population. In 2022, over the course of 8 weeks, CPC conducted a quantitative Citizen Satisfaction Survey[24] to understand citizen perceptions of the CPS and its overall performance.

A subcontracted partner of Illumina Research Partners conducted the Citizen Satisfaction Survey using CATI of 1,000 randomly selected Calgary residents 18 years and older. Random digit dialing was used, and up to eight callbacks were made to each selected listing, including both cell phones and landlines. If each of these eight callbacks went unanswered, an alternative phone number was used. To ensure a representative sample, quotas were set proportionate to sex, age, and the population in CPS districts. Beyond overseeing the entire survey process and data analysis, Illumina Research Partners works closely with both CPC and CPS to communicate and disseminate results, identify insights and key takeaways, and brainstorm actionable next steps based on the results of the survey.

24. Calgary Police Commission. (2022, September). Calgary Police Commission: Citizen satisfaction report. Retrieved from https://www.calgarypolicecommission.ca/wp-content/uploads/2022/09/2022-Calgary-Police-Commission-Citizen-Satisfaction-Survey-Results.pdf

In-Person Surveys

In-person, or face-to-face, interviews are typically conducted by having interviewers go door to door and visit persons in their residences. These can also be conducted at other centralized locations such as a community or cultural center. Similar to telephone surveys, interviewers often use a tablet or computer to document the responses, referred to as computer-assisted personal interviewing.

Coverage of the Population of Interest	Questionnaire Design and Logistics	Data Quality	Cost
This mode has the highest potential regarding coverage but can be costly. Cluster sampling may be needed, and if the sample is well dispersed, it can be logistically challenging to work with. This mode is, however, probably the most effective at collecting data from people who are most likely to be overpoliced, underserved, or negatively affected by policing.	Interviewer presence allows for the use of both aural and visual means to guide respondents through surveys and enables clarification of questions. • Can use more complex questions. • Can employ longer surveys because interviewers can build rapport, which results in increased participation rates and fewer break-offs. This mode requires in-depth interviewer training and a larger field staff to supervise interviewers.	Interviewers may influence the answers respondents give, especially when sensitive questions are asked, and they may contribute to the total survey error because of variance in interviewer skill. However, incorporating a self-administered mode, like audio computer-assisted self-interviewing, can help limit social desirability bias.	This mode needs well-trained interviewers, well-tested questionnaires, and a qualified field staff to handle the logistics. It is typically the most costly mode.

Example in Practice

The London Mayor's Office for Policing and Crime (MOPAC) commissions an independent practice to gather feedback on crime and safety issues, using in-person surveys.

MOPAC commissions Opinion Research Services, an independent social research practice, to conduct the Public Attitude Survey (PAS) to gather feedback on policing and crime, including views on local crime issues, neighborhood concerns and priorities, attitudes toward the police, and experiences or contacts that respondents may have had with the police. The PAS is a continuous survey based on a representative sample of Londoners and has been conducted annually since 1983, becoming robust in the early 2000s.

Traditionally, the PAS has been administered face-to-face; however, the COVID-19 pandemic and subsequent lockdown resulted in a shift to a telephone survey in spring 2020. In March 2022, face-to-face interviewing resumed but was undertaken in combination with a telephone survey. The 2022–2023 sample for the face-to-face survey is based on a random sample that is stratified by borough.[25] Key features of the sample design for the face-to-face survey include:

- A target sample of 17,600 interviews across the year with adults aged 16 and older who are residents in private households in greater London.[26,27]
- A target of 550 interviews per year in each of the 32 basic operational command units.
- A completely unclustered sample in each Basic Operational Command Unit over the year.

The 2022–2023 PAS survey script consists of five sections: 1) local areas and community, 2) fear of crime and local crime problems, 3) attitudes to policing, 4) victimizations, and 5) communication with police. The script is typically derived from historical content to enable MOPAC to track trends over time, although there is some flexibility to include content on a more reactive basis to allow information capture on key topical issues. The survey is administered through computer-assisted interviewing, and interviewers undergo training before conducting interviews.[28]

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[25] London is divided into 32 geographic subdivisions, or boroughs.

[26] The sampling population is based on the Royal Mail Postcode Address File.

[27] An additional 1,600 interviews were conducted over the telephone.

[28] Opinion Research Services. (2022, August). MOPAC public attitude survey 2022-2023. Unpublished technical report.

Web Surveys

Web, or online, surveys are those for which respondents access and complete the survey using a smartphone or access a webpage on the internet.

Coverage of the Population of Interest	Questionnaire Design and Logistics	Data Quality	Cost
Coverage and sampling can be suboptimal: access differs among socioeconomic groups, which can increase coverage error and decrease representativeness, leading to biased estimates of attitudes.	Complex questionnaires with routing and visual stimuli can be applied, but questionnaires must be relatively short to facilitate participation and deter break-offs. Web-based surveys must consider potential differences in computer systems, browsers, and mobile devices used.	The self-administered nature reduces socially desirable responding but may introduce issues of satisficing or other data quality issues related to inattention.	Large numbers of completed questionnaires can be collected in a very short period of time and at relatively low cost.

Example in Practice

The Hollis Police Department used a web survey to conduct their Community Survey on Public Safety and Law Enforcement to gather feedback on crime/safety issues and police performance.

In 2021, the Hollis (NH) Police Department conducted a community survey to gather feedback on the delivery of their police services and understand how their agency and officers were performing. The Hollis Police Department leveraged Survey Sparrow, a cloud-based solution that allows organizations to create feedback surveys, to collect and analyze data. The agency paid $177 for a 3-month subscription for the Survey Sparrow platform.

The survey was available online for 1 month; it was advertised to the community through various media, including Facebook, Twitter, Nextdoor, the police department's webpage, the Hollis Cable Television Channel, a press release to the area media outlets, and QR codes on social media and flyers that directed individuals to the online survey platform. The Hollis Police Department developed survey questions related to safety, procedural justice, performance, and satisfaction based on recommendations provided by the Department of Justice, Office of Community Oriented Policing Services. The survey had 150 respondents, a 1.8% response rate, which was estimated using the 2020 Census population data for the town.[29]

[29]. Hollis Police Department. (n.d.). *2021 community survey on public safety and law enforcement*. Retrieved from https://www.hollisnh.org/sites/g/files/vyhlif3271/f/uploads/final_report_on_2021_community_survey_nov_2021.pdf

Multi- or Mixed-Mode Surveys

Multi- or mixed-mode surveys use some combination of mail, telephone, in-person, and internet options. Surveys conducted in this way typically save costs, reduce coverage, and reduce nonresponse bias. For example, the organization hosting the survey might start with a cheaper mail-out paper survey and then follow up with a smaller subset of persons who do not respond with a more expensive telephone call or in-person interview. The primary concern with a mixed-mode approach is what is referred to as a mode effect. Simply put, people often provide a different response to the same question based on the mode used. This is especially true for sensitive or personal questions (e.g., self-administered modes tend to produce higher prevalence estimates of sensitive behaviors than interviewer-administered modes).

Example in Practice

Working with Texas State University, the Austin Police Department used a multimodal approach to gather residents' feedback to inform staffing.

The Austin Police Department collaborated with Texas State University to develop a survey that sought to inform staffing and gather residents' opinions on the department. This survey was available for community members to complete via a paper mail-out survey or online. A random sampling of 5,000 residential addresses was derived from the U.S. Postal Service's Computerized Delivery File. Households with an email address on file (~60%) were sent an introductory email with an option to complete the survey online. An invitation postcard was then mailed to the full random sample of 5,000 residential addresses a few days after the email was sent. The postcard had links and QR codes for an English and Spanish version of the survey. A full-length paper survey, with a business return envelope, was mailed to the full random sample of 5,000 residential households 2 weeks later, and a follow-up postcard was sent a month later. Overall, the survey yielded 482 responses for a 10% response rate.[30]

30. Greater Austin Crime Commission. (2022, January). *Staffing project: Patrol model and community survey*. Retrieved from https://www.kxan.com/wp-content/uploads/sites/40/2022/01/APD_Staffing_Project_final.pdf

What are the methodological limitations or concerns of traditional modes of data collection?

Any effort to collect data from community members will be scrutinized like any other research study or activity that is intended to describe what a population thinks about a given topic or institution. In this sense, efforts to measure and monitor community perceptions of law enforcement are only as good and useful as the quality and validity of the data collection process. Traditional survey modes of measuring and monitoring community perceptions of law enforcement can be negatively affected by methodological limitations or concerns. Some common methodological challenges, many of which have already been mentioned, are summarized below.

- **Lead organization, intent, and purpose**—One concern is whether the data collection process can be trusted or is legitimate. If agencies collect information from community members directly, this approach could be viewed with skepticism or as less legitimate than if an independent organization collects the data. Involving the community in the data collection design and implementation process can increase perceived legitimacy, participation, and resulting data quality.

- **Instrument design and measurement error**—The quality of a survey instrument (list of questions to be answered) can dramatically affect the validity, utility, and completeness of the data collected. Complicated survey designs, poorly worded questions, and lengthy surveys can lead to low participation rates, interview break-offs, and low-quality responses.

- **Geographic and subpopulation precision**—Often key stakeholders want detailed information about specific communities, precincts, and police service areas. The more specific the geographic area of interest, the smaller the population from which survey data can be collected. Small populations often yield small sample sizes, which can create concerns about the disclosure of respondents' identities and limit the ability to confidently describe estimates from the population of interest. Further, with small sample sizes, providing results for key subgroups, such as age, sex, race, and ethnicity categories, might not be possible.

- **Coverage and nonresponse issues**—Exacerbating the concern about small sample sizes and representativeness is the problem of coverage and nonresponse issues. Gathering information from persons who do not accurately or fully reflect the community leads to biased findings. Very often, the people who are most affected by crime and policing are less likely to participate in traditional surveys. The reason certain people or populations are not included in surveys is because they are 1) difficult to locate (e.g., someone who moves frequently or lives in a remote/rural area), 2) difficult to contact (e.g., someone who works long or odd hours or lives in a gated community or an access-controlled apartment building), 3) difficult to persuade or motivate to participate (e.g., someone who is distrustful or very busy), or 4) difficult to interview or survey (e.g., someone with low literacy or who does not speak the same language as the interviewer).[31,32,33] If methods do not effectively reach or systematically leave out certain populations, then the sample and the results will be biased. Further, community populations may vary greatly especially in urban areas that could experience large increases in day or night population due to commercial activity (e.g., persons involved in police traffic stops may not live in the community).

31. Chapin, M. M., Kim, J., Lopez, J., & Belton, J. (2018, November 1–2). 2020 Census: Counting everyone once, only once, and in the right place. Presented at the National Advisory Committee on Racial, Ethnic and Other Populations Fall 2018 Meeting, Suitland, MD. Retrieved from https://www2.census.gov/cac/nac/meetings/2018-11/chapin-hard-to-count.pdf

32. Tourangeau, R. (2014). Defining hard to survey populations. In R. Tourangeau, B. Edwards, T. Johnson, K. Wolter, & N. Bates (Eds.). *Hard-to-survey populations*. Cambridge University Press. https://doi.org/10.1017/CBO9781139381635

33. U.S. Census Bureau. (2019). *Counting the hard to count in a census*. U.S. Census Bureau. Retrieved from https://www.census.gov/content/dam/Census/library/working-papers/2019/demo/Hard-to-Count-Populations-Brief.pdf

- **Agency specificity**—Efforts to measure and monitor community perceptions are typically undertaken by a particular agency to collect data from the community members they serve, but community members are sometimes served by multiple agencies. For example, a person living in a city will be served by the municipal police department and the county sheriff's office. In addition, residents might have interactions with state police, other neighboring police agencies, federal agencies, and special purpose agencies like park police or fish and game. Any data collection must contend with the residents' ability to separate and sort out their perceptions of and experiences with a particular agency. Community members might find it difficult to confine their perceptions; further, most community members will have no direct exposure to or experience with law enforcement, so the data and information they contribute might reflect vicarious experiences—what they have heard from others, what they see on the news, or what they learn from movies and television programs.

- **Governance and data ownership**—Key concerns for any data collection are ownership, transparency, and use. Some contractors or vendors that collect and analyze data on community perceptions insist on owning the data and using it for a range of purposes. Agencies must be clear about data ownership and understand how the data will or will not be used.

- **Timeliness**—Considerable time could be required to complete survey tasks—designing the survey, recruiting respondents, collecting the data, analyzing and interpreting the results, and disseminating the findings. Stakeholders sometimes want the information more quickly than it can be obtained and processed. Certain approaches to data collection offer faster results than others.

- **Cost**—Collecting information from a representative public sample can be costly. Some agencies may not have or want to spend the money to support a robust effort to measure and monitor perceptions. When trying to save money, some methodological or operational consequences may result in the data or results not being meaningful or useful.

- **Analysis and dissemination**—As data are collected, specialized skills are often needed to prepare, analyze, and disseminate the data.

What factors influence the cost of conducting a survey?

Any effort to measure community perceptions of law enforcement will have some financial cost, but the cost associated with different approaches can vary dramatically and is a function of multiple factors. Collectively, all stakeholders have limited budgets and need to consider the trade-offs of key cost drivers: sample size, data collection mode, and incentives.

- **Sample size**—The more people an organization interviews, the more confidence it can have in the results produced. More sample also allows for subgroup estimates (results disaggregated by sex, race, neighborhood categories) to be produced with confidence.

- **Data collection mode**—The manner in which survey responses are collected (in-person, web, telephone, mail-out) varies widely in terms of cost and quality. For example, an in-person survey mode requires interview staff; often takes more time; and involves more effort than mail, telephone, and web survey approaches. However, in many cases, in-person interviewing produces the most representative samples of respondents and the highest quality data.

- **Incentives**—The use of incentives has been shown to improve survey response. Incentives often increase response rates and can reduce potential bias but can drive up survey costs significantly.

The quality and costs of some of the newer approaches to measuring community perceptions of law enforcement are not yet known, so how they compare with more traditional survey methods in terms of cost and quality has yet to be determined.

CHAPTER 3:

APPROACH 1—GENERAL POPULATION SURVEYS

What is a general population survey and what are the associated strengths and limitations?

What tools and products are available to support general population surveys?

What is a general population survey and what are the associated strengths and limitations?

General population surveys involve surveying everyone in the community or a random, representative sample of residents. As **Figure 12** shows, they are highly customizable and can be used to assess a wide range of measures but it is often difficult to get responses, especially from those most affected by crime and police activity.

General Population Surveys

General population surveys involve sending the survey to everyone in the community or to a random, representative sample of community members. This approach aims to understand how all community members perceive law enforcement activity and effectiveness, identify emerging problems in the community, and assess general perceptions of resident safety.

Strengths:
• The voices of all residents can be heard.

• A wide range of measures, including perceptions of policing, emerging problems in the community, issues with safety, and experiences with crime, can be collected.

• General population surveys are often highly customizable instruments and can be specific to local issues.

• Measures of post-contact experiences can be included.

Limitations:
• Respondents will likely not have had any direct interactions with law enforcement; thus, their perceptions of law enforcement might be based on information and events that have nothing to do with the local agency.

• Many individuals who have contact with the police do not live in the community, especially in urban areas, and may be excluded from surveys.

• Residents may be reluctant to respond to surveys, especially those who have been most affected by crime and police activity and have the greatest distrust in policing.

Figure 12: General population surveys enable the voice of all residents to be heard, but getting communities most affected by crime and police activity to participate can be difficult.

What tools and products are available to support general population surveys?

Traditional Data Collection Modes

The traditional modes of data collection discussed in the previous chapter can be used to conduct general population surveys. Mail, telephone, in-person, and web surveys are commonly used to measure community perceptions for general population surveys. Some law enforcement agencies may partner with a survey research group to conduct a robust mail survey that samples a representative population of the community. Other agencies may use a simple online survey builder and post the link on their social media account to recruit respondents. Each traditional data collection mode has different implications for coverage of the population of interest, questionnaire design and logistics, data quality, and cost. For further discussion on the strengths and limitations of traditional data collection modes and examples in practices, see Chapter 2.

Self-Service Tools

Numerous tools can be used to assist with the various stages of the survey process that support general population surveys. These tools can be used across a wide range of applications but are not specific to law enforcement or city government, which is why they are not covered in detail in this report. Hundreds of self-service tools can be used as plug-and-play options for the various stages of the survey process. For example, some sources of online survey respondents typically come in the form of panels from providers like NORC's AmeriSpeak, Ipsos, Mechanical Turk, and Qualtrics. The size and representativeness of these panels are often discussed nationally, and it is unknown whether any of them include enough potential respondents in specific metropolitan areas to yield a sample that would be sufficient to generate useful community perception information. In addition, some tools, like SurveyMonkey, Alchemer, and Qualtrics, help users program a survey instrument for web-based administration, collect data from respondents, perform limited data analyses, and create basic tables and graphics. Although these tools assist survey researchers with various tasks, they do not necessarily solve the critical challenge of reaching populations most affected by policing and crime. These tools are useful for handling single or multiple tasks associated with the survey process but may not address all tasks and often come with trade-offs associated with quality.

Digital Advertisement Networks

Digital advertisement networks are spaces on websites or applications that are programmatically "traded" and "purchased" on behalf of companies in real time. The publisher of the website or application leases the space to the third-party advertisement network that auctions off the space to companies. The company that bids the highest wins the advertisement space for their ad. Digital advertisement networks can be used to push general community surveys to residents, hereafter referred to as digital ad surveys. **Figure 13** highlights the benefits and limitations of digital ad surveys compared with traditional survey modes.

Benefits and Limitations of Digital Ad Surveys Compared With Traditional Survey Modes

Benefits of Digital Ad Surveys "*May lead to ...*"	Limitations of Digital Ad Surveys
Improved **geographic and subpopulation** precision by using Census Bureau data to send targeted digital ad surveys to representative samples of populations in a community.	Issues of **agency specificity** may persist because respondents may not know for which police agency (i.e., county vs. city) the survey is soliciting feedback.
Improved **coverage** by using digital advertisement networks to target specific populations via social media, news sites, and other mobile apps and websites to solicit survey responses from residents.	Issues of **nonresponsiveness** may persist because of self-selection bias, which could lead to biased or skewed responses that do not fully reflect the community. For example, individuals who have positive perceptions of police may be more apt to respond to the survey, whereas those with negative perceptions of the police may fear retribution for answering the survey.
Improved **timeliness** by providing a continuous measurement of community perceptions rather than capturing views at a specific moment in time.	
Improved **legitimacy** because data are not directly collected by a law enforcement agency.	Issues of **coverage** may persist because some individuals or groups may have limited cell phone access and are thus unable to access the survey (e.g., people who are incarcerated, individuals experiencing homelessness) or may not have or be willing to pay for data or Internet access on their phones.
Improved **agency specificity** by using Census Bureau data to send targeted digital ad surveys to individual cell phones in the area. Individuals are also asked to input their zip code of residency, allowing for a back-end analysis and removal of those responses not applicable to the agency's jurisdiction.	
Streamlined and simplified **analysis and dissemination**. Survey data are automatically analyzed and transferred to a database in the form of reports or a dashboard for viewing.	
Improved **accessibility** to the survey, given that an estimated 97% of Americans now have a cell phone (an estimated 85% have a smartphone). The high incidence of mobile phone use means individuals who previously were unreachable have access.[34]	

Figure 13: Digital ad surveys address many of the limitations of traditional surveys but may experience challenges with nonresponsiveness and coverage issues.

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34. Pew Research Center. (2021, April 7). *Mobile fact sheet*. Retrieved from https://www.pewresearch.org/internet/fact-sheet/mobile/

Zencity, within the context of and at the time of this report's publication, is the only profiled product that uses digital advertisement networks to recruit and disseminate general population surveys for law enforcement.

Using U.S. census data, aggregated from Census block groups to the relevant geographies, Zencity's Blockwise targets representative samples of the community. Because of the digital footprints individuals leave behind online, the third-party advertisement networks can be precise with the demographics they target with these ads. Respondents are asked to opt in to answer additional demographic questions when filling out the survey, allowing Zencity to confirm the demographics assumed by the digital advertisers. If a certain demographic quota is exceeded or not met, Zencity can adjust the targeting data for the following day. For example, if there is a low response rate for 18- to 24-year-old males, Zencity can purchase more advertisement on sites that 18- to 24-year-olds use (e.g., Instagram). For more information on Blockwise, see Zencity's company profile on page 73 in **Appendix C**.

Company	zencity
Associated Product	Blockwise
Description of Product	Zencity's Blockwise digitally distributes short, user-friendly surveys by using digital ads and dynamic population sampling

Before Zencity, we contracted out the data collection portion of a traditional community survey. The entity we worked with used random digit dialing. It was costly and wasn't nimble. Furthermore, it only measured community perceptions during a moment in time. Now, Zencity provides us with an ongoing assessment of community perceptions. It provides us with targeted information about specific areas of the city at the division and sector level. We use Zencity to identify residents' top concerns and assess how these line up with crime patterns, so we can focus resources on the types of crimes that matter to people in the community.

"

Law Enforcement INSIGHT

Amanda Terrell-Orr
Administrator, Research and Development Section
Colorado Springs (CO) Police Department

Product Table

Product Name	Blockwise
Associated Company	Zencity

<table>
<tr><td rowspan="4">Survey Recruitment and Delivery</td><td>Target Population</td><td>General community members</td></tr>
<tr><td>Outreach Mode</td><td>Digital ads</td></tr>
<tr><td>Feedback Target</td><td>Agency</td></tr>
<tr><td>Survey Mode</td><td>Web based</td></tr>
<tr><td rowspan="5">Configurability</td><td>Custom Questions</td><td>Yes</td></tr>
<tr><td>Collects Demographic Information</td><td>Yes—Optional for respondents. However, these questions are broad (e.g., a respondent may select the option of "age 18–24"). This information is used to verify the demographic representativeness of respondents.</td></tr>
<tr><td>Preset Questions Available</td><td>Yes—Optional</td></tr>
<tr><td>Preset Questions</td><td>

Overall Safety Perceptions
- When it comes to the threat of crime, how safe do you feel in your neighborhood? (Level of agreement from 0–10)

Fairness
- In general, the police in my area treat everyone fairly regardless of who they are. (Level of agreement from 0–10)
- The police in my area provide the same quality of service to all citizens. (Level of agreement from 0–10)

Respect
- The police in my area would treat you with respect if you had contact with them for any reason. (Level of agreement from 0–10)
- The police in my neighborhood treat local residents with respect. (Level of agreement from 0–10)

Voice
- The police in my neighborhood are approachable. (Level of agreement from 0–10)
- The police in my neighborhood listen to and take into account the concerns of local residents. (Level of agreement from 0–10)
- How willing would you be to contact the police department if you were a victim of crime or were worried about something? (Level of agreement from 0–10)

Transparency
- How much access to information does the police department make available to the public about crime and arrest patterns in the community? (Level of agreement from 0–10)

Residents' Main Concern
- Open ended: What is the number one issue or problem in your local area that you would like the police to deal with? Location information can be acted on (e.g., [your issue] near [road/park/station]).

</td></tr>
</table>

Product Table

Product Name	Blockwise		
Associated Company	Zencity		
Data Analysis and Reporting	Dashboard Included	Yes	
	Dashboard Features and Visualizations	The dashboard provides a geographical visualization user interface and navigation between areas of the city and a daily updated comment feed. It also includes a crosstabs module (provides an in-depth breakdown of survey responses) and a new "summary" screen for a high-level overview of monthly trends in the data.	
	Dashboard Update Frequency	Comment feed updated daily	
	Weighting	Yes	
	Data Reports Generated	Aggregated statistics sent in a monthly report	
	Exportable Data	Yes	
Technical Features	Integration with Other Systems	Yes—Can be integrated with Tableau and Microsoft PowerBI	
	Limit to One Survey Response per Person	Yes. Every survey response is appended to a unique, anonymous identifier, therefore preventing multiple responses from the same device. In the case where there are multiple responses from the same device, answers are filtered out.	
Pricing	Pricing Model	Tiered pricing model based on the number of geographic units, sample size, and level of precision desired. Annual subscription cost, all inclusive.	
	Maintenance/ Technical Support Costs	None	
Implementation	Multilingual Capabilities	Yes. By default, any language spoken by more than 2% of a population will be made available. Today, Blockwise customers survey in languages including but not limited to English, Spanish, Tagalog, Vietnamese, Chinese (Simplified), Ethiopian, Russian, and French Creole.	
	Data Governance	Data owned by the city where the agency is located	
	Data Sharing	Data are not shared with external parties, unless given permission by an agency. Many agencies decide to proactively share collected data with peer agencies for benchmarking purposes or with the public for transparency purposes.	
	Data Anonymization	No personally identifiable information is gathered when a respondent takes a survey. Survey responses are confidential and remain anonymous unless a respondent elects to share their email at the end of the survey for follow-up purposes.	
	Security	ISO-27017 compliant	

CHAPTER 4:

APPROACH 2—POST-CONTACT SURVEYS

What is a post-contact survey and what are the associated strengths and limitations?

What tools and products are available to support post-contact surveys?

What is a post-contact survey and what are the associated strengths and limitations?

As **Figure 14** shows, post-contact surveys involve surveying individuals who have come into contact with police and are thus effective at measuring satisfaction and procedural justice; however, methods for post-contact surveys can be vulnerable to influence and bias.

Post-contact Surveys

Post-contact surveys involve surveying individuals who have had contact with the police (e.g., during a traffic or street stop, crime investigation, 911 call response). Agencies might opt to conduct a post-contact survey if they are interested in measuring satisfaction or procedural justice related to these contacts, because the responses to survey questions can be linked directly to the agency, a particular incident or event, or a particular officer.

Strengths:
- Responses are based on persons who have had direct contact and experience with their agency and its officers.

- Potential respondents and their contact information are known, which can facilitate recruitment and data collection.

- Agencies can be reasonably confident that the survey responses will be based on or affiliated with actual events and interactions involving the police.

Limitations:
- Methods for these surveys are vulnerable to potential influence and bias.

- Asking general questions about emerging problems in the community or general perceptions of safety can be severely skewed with post-contact surveys.

Figure 14: Respondents to post-contact surveys have had direct contact with an agency and, thus, are appropriate for measuring satisfaction and procedural justice.

What tools and products are available to support post-contact surveys?

Traditional Data Collection Modes

The traditional modes of data collection discussed in Chapter 2 can be used to conduct post-contact surveys. Mail, telephone, in-person, and web surveys are commonly used to measure community perceptions for post-contact surveys. For example, some law enforcement agencies have new recruits or officers on limited duty follow-up (via telephone or in-person) with individuals who previously called 911 to gauge satisfaction levels. This approach can be time consuming and tedious for resource-constrained agencies. To address this issue, some vendors have developed text message and QR code survey solutions to automate the initiation of the survey.

Text Messages

Text messages are an electronic form of communication sent and received by mobile phones that can be used as a mode of outreach for surveys. Products using this method typically tie in with an agency's computer-aided dispatch (CAD) system or record management system (RMS) and are commonly used for post-contact surveys. **Figure 15** highlights the benefits and limitations of digital ad surveys compared with traditional survey modes.

Benefits and Limitations of Text Message Surveys Versus Traditional Survey Modes	
Benefits of Text Message Surveys "*May lead to ...*"	**Limitations of** **Text Message Surveys**
Improved **timeliness** because agencies constantly receive an influx of data points and can compare results over time.	Issues of **coverage** may persist because individuals who do not interact with the police will not have the opportunity to respond to a survey. Additionally, individuals responding to the survey may not live in the agency's jurisdiction.
Improved **analysis and dissemination** by automating survey dissemination through integration with an agency's CAD/RMS system. Reports and dashboards are automatically generated from collected and analyzed data—no manual processing.	**Agency specificity** issues may persist if respondents are influenced by external factors or previous interactions with the police or another agency.
Improvements in **agency specificity** because survey respondents provide feedback to a specific agency/officer they interacted with.	**Geographic and subpopulation precision** may continue because of a lack of response to the survey and small sample sizes, which can exacerbate coverage and nonresponsiveness.
Enhanced **lead organization, intent, and purpose** because survey data are collected, aggregated, and analyzed by a third party rather than an individual agency.	**Inadvertent response errors** may increase when responding to a survey within a text message (e.g., texting a 1 instead of 2 for ranking).
Bolstered response rates because text messages enable reminders and follow-ups.	Issues with **accessibility** may persist because some individuals may have limited cell phone access, others may have access to a cell phone but lack the knowledge on how to access the survey through their phone, and others may be unwilling to pay for data to complete the survey.
Improved **accessibility** by putting a short, mobile-friendly survey at the community's fingertips.	Texting survey questions and responses back and forth may be **limited by characters**, thus leading to wording constraints.

Figure 15: Text message surveys enable timely delivery and data collection and improved response rates; however, agencies using text message surveys may experience challenges with coverage and nonresponsiveness.

Of the profiled companies in this report, **PowerDMS**, **SPIDR Tech**, **Know Your Force (KYF)**, **Officer Survey**, and **Zencity** offer text message platforms as a survey recruitment and delivery method.

PowerEngage, previously CueHit, was acquired by NeoGov in January 2022 as part of the PowerDMS software platform. PowerEngage's platform connects to an agency's CAD and RMS system to send informational texts and surveys after an interaction. The PowerEngage platform has a rules-based engine, allowing

Company	**PowerDMS** by NEOGOV
Description of Product	PowerEngage includes a rules-based engine that ties into an agency's CAD/RMS system to automatically send text message surveys to individuals with recent law enforcement interactions.

individual agencies to configure the system to their own needs. Configurability options include customizing survey questions, targeting different surveys to different encounter types (i.e., 911 caller, witness, victim), tailoring when to trigger the survey, and setting quiet hours. Additionally, agencies can configure the surveys to be broad, specific to either an individual officer or dispatcher, or for a combination of both the officer and dispatcher in the same survey. PowerEngage's platform differs from some of the other text-based survey platforms in that the survey is sent in the form of a text message, and respondents answer each question with a text message reply. Survey questions are customizable and sent one at a time. Upon sending a response, the next survey question is texted to the respondent. Surveys typically include questions requiring a numerical rating response, as well as one free-form text response. These free-form text responses are fed through Amazon Comprehend, a sentiment analysis tool, to analyze and tag the free-form text feedback as "positive," "negative," or "neutral."

Company	**SPIDR TECH** A VERSATERM PUBLIC SAFETY COMPANY
Description of Product	SPIDR Engage Automated Customer Service Platform (ACSP) is a customer service platform that connects to an agency's CAD/RMS system, automating survey delivery through text messages.

SPIDR Tech's automated text messages, in comparison, include a hyperlink to a webpage, where the individual can respond to the survey. Each hyperlink is unique, allowing individuals to respond to the survey only once. The text message also includes the case ID, date, and time of the incident for the respondent's reference and to help tie survey responses back to individual cases and officers. Agencies may

configure the surveys to gather feedback on the individual officer, the dispatch call taker, or both in the same survey. Based on discussions with the company, agencies using SPIDR Tech average 10 questions per survey, including one free-text response. These questions can be customized by each agency or pulled from a bank of preset questions provided by SPIDR Tech. Agencies can enable a "follow-up" survey link reminder to be sent to individuals 24 hours after the initial text to increase the likelihood of a response.

Law Enforcement INSIGHT

Previously, we had a staff member manually comb through our RMS system to find resident contact information and mail out surveys. We then shifted towards putting a link to a survey on the back of officer business cards. Now we leverage PowerEngage, which allows for customization to automatically send surveys to certain incident types. We are consistently seeing over a 40% response rate because of the simple format and ease of use.

Candace Harris
Civilian Operations Manager
Arvada (CO) Police Department

KYF has a text message feature specifically focused on gathering feedback for the dispatcher handling the call for service and for incidents that generate a report or incident number. A scraping tool pulls specified information fields from an agency's CAD/RMS system for each incident, including the name/ID of the dispatcher who took the call, the associated call for service/incident ID, the name of the individual who called, and the individual's associated phone number. This information is sent to KYF in a reoccurring report, which is used to send a text message with a hyperlink to a web-based survey to the caller through Twilio.[35]

Company	**KYF**
Description of Product	KYF has a text message feature focused on gathering feedback for the dispatcher. This feature ties in with an agency's CAD/RMS to deliver a mobile friendly survey.

Company	⭐ **OFFICER SURVEY**
Description of Product	Officer Survey's text message surveys integrate with an agency's CAD/RMS to automate the delivery of a survey.

Officer Survey, owned by GovMetric.io, integrates with an agency's CAD/RMS system to send automated text messages via Twilio to individuals who have had a direct interaction with law enforcement. Individual agencies can customize who receives a survey based on the interaction type. All feedback is tied directly to individual officers, allowing agencies to create an "officer profile" and track the lifetime of feedback received. Officer Survey's platform has a unique "callback" feature. If a respondent indicates in the survey that they would like an agency supervisor to contact them, the response is flagged in the agency's dashboard. This allows a supervisor to easily connect with the respondent and provide additional clarification or answer any outstanding questions they may have by reaching out via phone or email.

Zencity's platform integrates with an agency's CAD/RMS system to send automated text messages or emails to individuals who have had a direct interaction with law enforcement or who file a police report. Individual agencies can work with Zencity to customize the prebuilt distribution mechanism to specify who receives a survey based on the interaction type and when

Company	**zencity**
Description of Product	Zencity's Community Experience Surveys (CX Surveys) measure the performance of services over time. They can tie to an agency's CAD/RMS system to enable survey delivery via text message or email.

a follow-up is sent. Feedback can be tied to individual officers and interactions, if agency policy allows. Survey questions are customizable; in addition, Zencity offers a set of preconfigured questions that will allow for benchmarking against other agencies.

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35. Twilio is a customer engagement and communications platform that enables users to send and receive text messages, phone calls, and email campaigns. Twilio is used by several vendors profiled in this report to send surveys via text messages.

QR Codes

A QR code is a two-dimensional barcode that can be read by a digital device, such as a cell phone, to provide easy access to online information. QR codes were heavily adopted during COVID-19 to reduce potential spread of the virus and can be a simple way for agencies to redirect community members to a survey after an interaction with law enforcement. Because of the digital nature of QR codes, they can be printed on any number of documents, including business cards and citations. Agencies using products that employ QR codes as a survey recruitment and delivery method may experience improved agency specificity, but challenges with coverage may persist. **Figure 16** highlights the benefits and limitations of QR code surveys compared with traditional survey modes.

Benefits and Limitations of QR Code Surveys Versus Traditional Survey Modes	
Benefits of QR Code Surveys *"May lead to ..."*	**Limitations of** **QR Code Surveys**
Improved **timeliness** because agencies constantly receive an influx of data points and can compare results over time.	Issues of **nonresponsiveness** may persist because of self-selection bias, which could lead to biased or skewed responses that do not fully reflect the community.
Streamlined and simplified **analysis and dissemination** by automatically generating reports and dashboards from collected and analyzed data—no manual processing.	**Coverage** issues may persist because individuals who do not interact with the police will not have the opportunity to respond to a survey. Additionally, individuals responding to the survey may not live in the agency's jurisdiction.
Improvements in **agency specificity** because survey respondents provide feedback to a specific agency/officer they recently interacted with.	**Accessibility** issues may persist because individuals may not have phones capable of scanning a QR code or be willing to pay for data used to access the survey online.
Enhanced **lead organization, intent, and purpose** because survey data are collected, aggregated, and analyzed by an external provider rather than an individual agency.	**Agency specificity** issues may persist if respondents are influenced by external factors or previous interactions with the police or another agency.
Improved **accessibility** because many mobile devices today have the capability to scan QR codes, allowing individuals to easily access and respond to a survey.	**Geographic and subpopulation imprecision** may continue because of a lack of response to the survey and small sample sizes, which can exacerbate coverage and nonresponse bias issues.

Figure 16: QR code surveys may improve some of the methodological limitations of traditional survey modes, but some challenges persist.

Of the profiled products in this report, **Guardian Score**, **KYF**, **Officer Survey**, **Police Smart Card**, **PowerEngage**, **SPIDR Tech**, **Zencity**, and **Axon's My90** offer QR codes as a survey recruitment and delivery method.

Company	GUARDIANSCORE
Description of Product	Guardian Score provides unique, onetime-use QR codes on business cards that officers can hand out. The QR code redirects community members to a digital survey.

Guardian Score is considered a stand-alone platform that does not tie into an agency's CAD/RMS system. Guardian Score's proprietary software generates a unique QR code for each interaction that can be used only once to respond to the survey, ensuring that residents do not manipulate results by submitting more than one survey. When officers hand out business cards with unique QR codes, survey responses can easily be tied back to each interaction and officer.

KYF's QR code surveys focus on gathering feedback at the officer level. QR codes are unique to each officer. Because the QR code is date and time stamped, survey responses can be tied back to specific incidents associated with certain officers. Agencies may also choose to create a general QR code to gather broad feedback across their department. KYF

Company	KYF
Description of Product	KYF provides business cards with QR codes directing individuals to a short, mobile-friendly survey that can be tied back to a specific incident associated with a specific officer.

allows agencies to choose from a variety of mediums on which they can print the QR codes, including business cards, resource papers, and citation tickets. For both the text message and QR code surveys, KYF has introduced dependent questions that are made visible based on how the respondent answers a controlling question. For example, if a respondent were to give a 1- or 2-star rating, an agency can configure the survey to allow for a follow-up question about the officer or incident. Agencies also can customize the webpages individuals are directed to after completing a survey. For example, if a respondent were to give 5-star ratings, they may be directed to an agency's Facebook page, while a respondent who gives 2-star ratings may be directed to an agency's webpage with resources to voice their concerns.

Law Enforcement INSIGHT

> **We had previously used other survey companies to conduct surveys, but it was much more difficult and costly. We had to manually go through each survey to correlate event numbers and officers. Now, since using Know Your Force, we encourage officers to hand out QR code survey cards after every interaction. The QR code records the date, time, and officer, allowing for feedback to be linked more easily. Since switching, we have found that residents have been more willing to leave feedback and appreciate our transparency.**

Jeff Pinnell
Lieutenant
Carthage (MO) Police Department

Officer Survey also offers agencies the option to hand out QR codes on business cards after each interaction. Both the QR code and text message survey responses are tied back directly to individual officers. This feature allows agencies to create profiles for each officer and track interactions and associated feedback over time.

Company	⭐ OFFICER SURVEY
Description of Product	Officer Survey provides business cards with QR codes that direct individuals to a mobile-friendly survey that ties feedback directly to individual officers.

Company	
Description of Product	The Police Smart Card enables community members to scan a QR card or tap their phone using NFC technology after an interaction to access a webpage that is customizable to each agency, with an option for a web-based survey.

Police Smart Card is a new product, released in June 2022, that offers agencies smart business cards. The Police Smart Card platform uses both QR code and near-field communication (NFC) technology. Each business card contains an NFC tag with microchips that, when tapped by a smart phone with NFC capabilities, automatically send data to the phone. After an interaction with law enforcement, residents can scan the QR code or tap the NFC tag in the officer's business card, delivering them to a webpage. This webpage is customizable to each agency and can support a number of features, including a web-based survey. The survey is customizable by each agency and collects feedback directly tied to the officer whose smart business card was scanned.

PowerEngage and **SPIDR Tech**, although primarily focused on text message surveys, also offer QR code survey options. PowerEngage offers QR codes that can be printed on business cards and linked to personalized surveys for individual officers. PowerEngage also has the capability to create an ad hoc QR code survey that can be used to collect feedback about a specific event (e.g., National Night Out) or general feedback from the community. SPIDR Tech offers QR codes to hand out after direct interactions or to place in agency precincts to measure public sentiment. Additionally, **Zencity** offers QR codes on the back of officer collateral (e.g., business cards) to be handed out after individual interactions or at events.

Company	Description of Product
PowerDMS by NEOGOV	PowerEngage is a platform that includes the option to print QR codes on officer business cards or ad hoc QR codes for events that direct individuals to a mobile-friendly survey.
SPIDR TECH A VERSATERM PUBLIC SAFETY COMPANY	SPIDR Engage ACSP offers the ability for agencies to create QR codes for officers to hand out to individuals after direct interactions with law enforcement.
zencity	Zencity's Community Experience Surveys (CX Surveys) measure the performance of services over time. Agencies can request QR codes for officer collateral that direct individuals to mobile-friendly surveys.

Company	AXON
Description of Product	My90 offers post-contact interaction surveys to measure procedural justice based on officer interactions.

Axon's My90 is a post-contact survey platform. When primary research was conducted for this report in early 2022, My90 offered post-contact interaction surveys through QR codes to measure procedural justice based on officer interactions. They indicated future plans to create an application programming interface (API) from CAD and RMS to automate text message survey delivery.

Product Table: Post-contact Survey

The landscape of companies providing post-contact surveys for law enforcement is rapidly evolving with new strategies, products, mergers, and acquisitions. This section offers descriptive information on post-contact survey products and vendors included in this landscape study. The table represents a comprehensive list of post-contact survey products as identified by CJTEC; however, others likely exist, especially when developed for use in countries other than the United States. For more detailed information, please also see **Appendix C**.

Product Name		My90	Guardian Score	Know Your Force	Officer Survey	Police Smart Card	PowerEngage	SPIDR Engage ACSP	Community Experience (CX) Survey
Associated Company		Axon	Guardian Score, LLC	Know Your Force	Officer Survey	Global Accountability Corp.	PowerDMS by NeoGov	SPIDR Tech, a Versaterm Public Safety Company	Zencity
Target Population(s)	Community Members With Verified Police Interactions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	911 Callers	Yes	No	Yes	No	No	Yes	Yes	Yes
	General Community Members	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Outreach Mode	QR Codes	Yes	Yes	Yes	Yes, for agencies with antiquated CAD/RMS systems that cannot integrate or budget restrictions	Yes	Yes	Yes	Yes
	Text Messages	Yes	No	Yes, only for dispatch	Yes	No	Yes	Yes	Yes, for 911 callers and community members with verified police interactions
Feedback Target	Agency	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Officer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Dispatcher	Yes	No	Yes	No	No	Yes	Yes	Yes
Survey Mode	Web-based	Information not provided by vendor	Yes	Yes	Yes	Yes	Yes — for QR code surveys	Yes	Yes
	Text Message	Information not provided by vendor	No	No	No	No	Yes	No	No

Product Name	My90	Guardian Score	Know Your Force	Officer Survey	Police Smart Card	PowerEngage	SPIDR Engage ACSP	Community Experience (CX) Survey
Associated Company	Axon	Guardian Score, LLC	Know Your Force	Officer Survey	Global Accountability Corp.	PowerDMS by NeoGov	SPIDR Tech, a Versaterm Public Safety Company	Zencity
Configurability — Custom Questions	Yes	This feature is under development.	Yes	Yes	Yes	Yes	Yes	Yes
Collects Demographics Information	Yes, optional for respondents	Yes, optional for respondents	Yes, at an agency's discretion; optional for respondents	Yes, optional for respondents	At an agency's discretion	Agencies can customize survey to ask demographic questions	Yes, optional for respondents	Yes, optional for respondents; responses can be matched to CAD/RMS data
Preset Questions Available	Yes, optional	Yes, optional	Yes, optional	Yes, optional	Yes, optional	Yes, optional	Yes, optional	Yes, optional but enables benchmarking
Preset Questions	Information not provided by vendor	Guardian Score's digital survey allows community members to rate their police interaction based on the following: officer's ability to explain "why," listening skills, fairness, professionalism, and ability to explain next steps. Visit https://guardianscores.com for more information.	Quantitative question for initial rating, between 1 and 5 (interval scale) Open-ended, qualitative question (e.g., "... how comfortable would you be with our officer providing service to a family member") Incident number field	Example questions include: Were you treated with respect? Was the officer courteous? Did the officer arrive in a timely manner? Would you like to provide us with your demographic information? Please reach out to the vendor for the full list of available questions.	Indicating the "report type" (i.e., reporting additional information or leaving comment/feedback for the officer) Selecting if the "report" is positive feedback, officer complaint, or other Free-form text box for the respondent's feedback First name, last name, email, and phone number of respondent	Please reach out to the vendor for details.	Please reach out to the vendor for the full list.	Did the police respond to your request in a timely manner? How would you regard the professionalism of the department in handling your concern? Based on your recent interaction, how do you view the [agency]? What would you most like the [agency] to do to improve safety in your community? (open ended)

Product Name	My90	Guardian Score	Know Your Force	Officer Survey	Police Smart Card	PowerEngage	SPIDR Engage ACSP	Community Experience (CX) Survey
Associated Company	Axon	Guardian Score, LLC	Know Your Force	Officer Survey	Global Accountability Corp.	PowerDMS by NeoGov	SPIDR Tech, a Versaterm Public Safety Company	Zencity
Data Analysis and Reporting — Dashboard Included	Yes	Yes	Yes	Yes	Yes ("Global Admin Panel")	Yes	Yes	Yes
Dashboard Features and Visualizations	Vendor did not provide information.	Performance analysis by squad, officer, and department is displayed across demographics.	Includes overall agency rating based on combined data points and individual responses, including ratings and written feedback. Data are filterable by customizable headers (e.g., department, individual). Community-level characteristics can be filtered based on department's goals. Public-facing widget/dashboard also available.	Includes zip code analytics and visualizations. It also contains historical data on each officer, behavior analysis, and an early intervention system indicating if an officer receives too much negative information. Each officer has access to their own dashboard where they can see their overall performance and how they can improve.	Dashboard is customizable. Metrics include number of times an officer's card has been accessed, how many people have downloaded an officer's vCard and the associated time stamps, and how many surveys have been completed per officer. Metrics are available on the department and aggregate levels within the dashboard. Visual metrics are also included.	Performance analysis at department, responder, and dispatcher levels. Highlights response rates and satisfaction scores. Data filterable by dimensions such as jurisdiction, incident type, etc. Data are presented in charts and graphs. Free-form answers are augmented with sentiment analysis to classify them as positive, negative, or neutral.	Multiple dashboards are available that provide charting, graphs, and scoring based on datasets within a time frame or location in the city/country.	All data are sortable and can be charted over time or visualized on a map.
Dashboard Update Frequency	Vendor did not provide information.	All data are uploaded instantly. Different roles within an agency have different levels of access.	All data are uploaded instantly. Agencies can opt in to receive realtime notifications.	All data are uploaded instantly.	All data are uploaded instantly.	All data are uploaded instantly.	All data are uploaded instantly.	All data are uploaded instantly.
Weighting	Vendor did not provide information.	N/A	No	No	No	No	Possible if an agency collects demographic information.	No
Data Reports Generated	Yes	Yes, on demand	Yes, a daily report includes the number of surveys completed and average rating.	Yes, agency-defined data generated in a PDF report are available instantly for download or viewing in browser.	Yes, all submissions are sent to agency immediately via email.	Yes, agencies can choose to subscribe to email reports at a desired specified time interval.	Data summary emailed every 24 hours. For larger agencies, data can be broken down by patrol area/division/precinct. A live feedback board is available via website for both internal and public use (optionally).	Yes, agencies receive weekly or monthly aggregated reports but they can be customized (e.g., supervisors can request daily reports).
Exportable Data	Yes	Yes	Yes	Yes	Currently developing this feature	Yes	Yes	Yes

Product Name	My90	Guardian Score	Know Your Force	Officer Survey	Police Smart Card	PowerEngage	SPIDR Engage ACSP	Community Experience (CX) Survey
Associated Company	Axon	Guardian Score, LLC	Know Your Force	Officer Survey	Global Accountability Corp.	PowerDMS by NeoGov	SPIDR Tech, a Versaterm Public Safety Company	Zencity

Technical Features		My90	Guardian Score	Know Your Force	Officer Survey	Police Smart Card	PowerEngage	SPIDR Engage ACSP	Community Experience (CX) Survey
	Integration With CAD/RMS Systems	Yes	No	Yes	Yes	No	Yes	Yes, please contact vendor for list of systems capable of integration.	Yes
	Integration With Other Systems	Yes	No	Yes, integrates with any system/platform that supports an open API. Agencies can pay to have data hosted in an AWS database to pull information into any business data visualization tool/database.	Yes, works with all systems, regardless of whether an agency uses an old or new CAD/RMS system.	Yes, provides a decentralized biometric ID system for law enforcement.	Yes, examples of 30+ possible integrations include 3-1-1 and electronic patient care reporting.	Yes	Yes, can integrate with nonemergency (e.g., 3-1-1) products to provide quality-of-life concerns follow-up that is not tracked by other systems.
	Limit to One Survey Response per Person	Vendor did not provide information.	Yes, patented process for onetime-use QR codes	Yes, feedback is time stamped to limit unique responses. After the first submission, the data can be manually marked as spam and removed from the dataset algorithm.	Yes, respondents can only access the feedback portal after an interaction.	Yes, platform provides access for a limited time before forcing user to rescan. Measures are in place to ensure there are no "fake responses," such as time allowed on platform and number of times user can access or leave survey responses.	Yes, users are only allowed to complete a survey if one is sent to them from the integration. "Spamming" is avoided by not sending the same phone number the same survey within a set time frame.	Yes, unique survey links can only be completed once.	Yes, users are limited to one response per device or the most recent response. For CAD/RMS, one response is allowed per incident/record.
	Survey Response Traced to Individual Officer	Vendor did not provide information.	Yes	Possible using unique identifiers included in the feedback form	Yes	Yes	Possible to trace surveys to the call taker and responding officer on the incident or case report, but customers can choose to not track that if they like	Yes	Yes, configured to individual customer's specifications, regulations, union contract specifications
	Survey Response Traced to Individual Incident	Vendor did not provide information.	Yes	Possible using unique identifiers included in the feedback form to identify manually	Yes	Possible using unique identifiers included in the feedback form to identify manually	Yes	Yes	Yes, configured to individual customer's specifications, regulations, union contract specifications

Product Name	My90	Guardian Score	Know Your Force	Officer Survey	Police Smart Card	PowerEngage	SPIDR Engage ACSP	Community Experience (CX) Survey
Associated Company	Axon	Guardian Score, LLC	Know Your Force	Officer Survey	Global Accountability Corp.	PowerDMS by NeoGov	SPIDR Tech, a Versaterm Public Safety Company	Zencity
Pricing and Procurement — Pricing Model	Vendor did not provide information.	Per-officer cost	Per-officer cost. Law enforcement agencies can add text message-based feedback, which is billed per text.	Tiered cost model based on number of officers	Annual per-officer subscriptions available	An implementation cost and an annual subscription fee are priced on a per-officer cost.	Pricing based off agency's sworn officer size and which modules they choose to deploy. Agencies pay an annual subscription fee that covers all costs, plus a onetime deployment fee at the beginning of their contract.	Per-officer cost. Integration costs depend on CAD/RMS system (e.g., system type, how many).
Maintenance and Technical Support Costs	Vendor did not provide information.	Included in the price	Included in the annual cost	Included in the price	Technical and customer support are included in the annual subscription price. Additional cards cost $50 each if lost or stolen.	Aside from the initial implementation fee, all other costs are included in price.	Included in annual subscription	Typical setup fee is about 20% of first-year contract costs.
Implementation — Multilingual Capabilities	Surveys are offered in additional languages (not specified by vendor).	Surveys are offered in English and Spanish with more languages coming.	Application supports Google Translate. Users can manually translate all fields and questions to include more accurate translations for most used languages.	Through ChatGPT, Officer Survey is available in 95 languages.	Surveys are offered in English and Spanish. The company is working on global language support.	Surveys can be localized and translated to another language. PowerEngage leverages AWS GovCloud Translate.	Messages and surveys can be sent in any language supported by UNICOM (can be converted to text via phone).	Surveys are offered in 133 languages.
Data Governance	Vendor did not provide information.	Data are owned by the agency.	Data are owned by KYF.	Data are owned by the agency. With agency permission, Officer Survey can retain data for research purposes only.	Data are owned by the agency.	Data are owned by the agency.	Data are owned by the agency and may not be accessed by SPIDR Tech without agency permission.	Data are owned by the agency.
Data Sharing	Vendor did not provide information.	Data are not shared with any external parties.	Cell phone data to send text messages are not stored within KYF. Access is granted to dedicated admins within each agency.	Data are not shared with external parties.	Can request access to the data from individual agencies for data analytics purposes. If agreed upon by an agency, data may be shared to bring positive attention to police officers.	Data are not shared with any external parties.	Not without the consent of the customer/agency. Any data comparisons would be between agencies.	With permission, agencies may benchmark against comparable agencies (by name or anonymously in aggregate). Must opt in to benchmarking.

A Landscape Report on Measuring Community Sentiment and Perceptions of Safety and Law Enforcement Performance

CHAPTER 5:

APPROACH 3—LEVERAGING OF DATA FROM EXISTING SOURCES

How do you leverage existing data sources to better understand community sentiment?

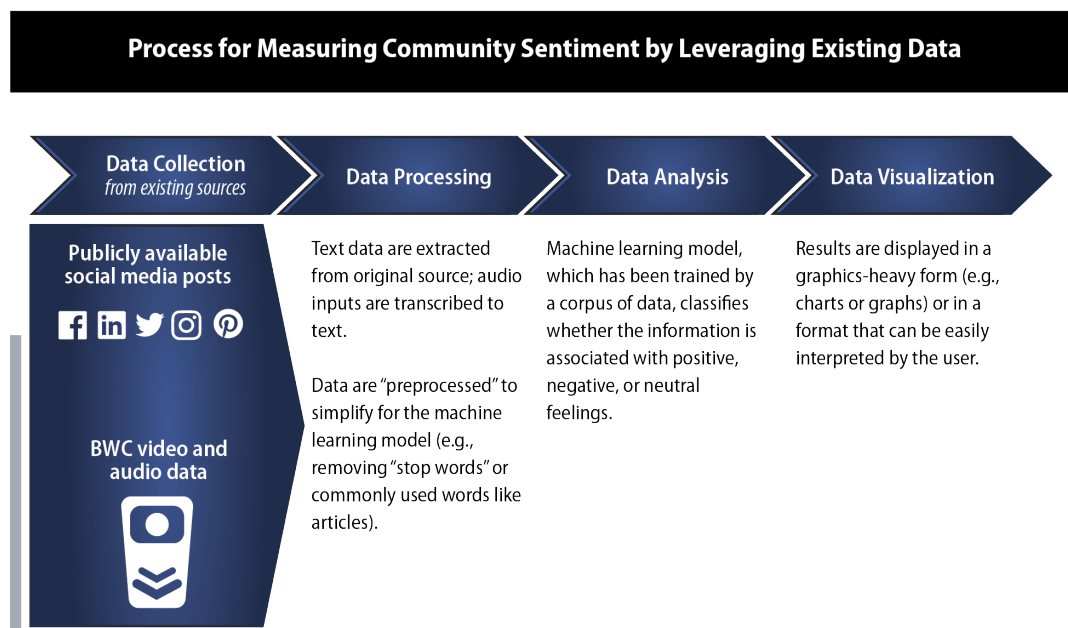What are the strengths and limitations of using existing data to measure community sentiment?

What products are available to understand community sentiment from existing data sources?

How do you leverage existing data sources to better understand community sentiment?

Although general population surveys and post-contact surveys collect primary data (i.e., data gathered directly by the law enforcement agency or municipality), the third approach to measuring community perceptions uses secondary data (i.e., data that already exist). Agencies or municipalities can leverage existing data sources to generate estimates of police performance or community sentiment. Using existing data may provide organic and unfiltered insights into how community members feel about a particular topic. For example, data from social media platforms can provide insights on how individuals think and feel about certain topics and organizations. Alternatively, audio transcriptions of BWC video footage may provide candid comments from individuals interacting with police officers or bystanders, offering insight into police performance and community sentiment. Although these data sources are valuable, they are also difficult and time intensive to aggregate, analyze, and interpret.

Emerging products offer solutions to some of these challenges. They derive meaningful information by aggregating disparate information sources into one platform. Many of these products employ natural language processing (NLP), a subset of artificial intelligence enabling computers to understand and analyze human language in text and spoken word.[36] More specifically, these tools use sentiment analysis, an NLP technique that classifies text as having positive, negative, or neutral sentiment or attitudes about a person or organization. Companies often use sentiment analysis to describe and understand the social sentiment toward their brand, product, or service. However, in recent years, sentiment analysis has been conducted on social media posts and BWC video and audio data to assess opinions of and attitudes toward law enforcement. Tools that use sentiment analysis and other NLP techniques follow a generic process to analyze inputs (**Figure 17**).

Process for Measuring Community Sentiment by Leveraging Existing Data

Data Collection *from existing sources* → **Data Processing** → **Data Analysis** → **Data Visualization**

Publicly available social media posts

BWC video and audio data

Text data are extracted from original source; audio inputs are transcribed to text.

Data are "preprocessed" to simplify for the machine learning model (e.g., removing "stop words" or commonly used words like articles).

Machine learning model, which has been trained by a corpus of data, classifies whether the information is associated with positive, negative, or neutral feelings.

Results are displayed in a graphics-heavy form (e.g., charts or graphs) or in a format that can be easily interpreted by the user.

Figure 17: Sentiment analysis, an NLP technique, can process and analyze data from social media[37] and video and audio data from BWCs to understand community perceptions.

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36. For more on artificial intelligence applications in law enforcement, see CJTEC's artificial intelligence series here: <u>Artificial Intelligence Reports – Criminal Justice Testing and Evaluation Consortium (CJTEC)</u>.

37. The social media platforms that the sentiment analysis tool analyzes may vary across different law enforcement agencies because agencies can select which platforms or websites they are most interested in gathering feedback from. Additionally, agencies can choose to include postings directly associated with their social media accounts (e.g., an agency's Facebook or Twitter page) or geographic-specific postings associated with their service area.

The development of a sentiment analysis model used to classify a social media posting as either positive, negative, or neutral is a significant task. First, a combination of NLP and manual tagging is used to classify a representative sample of text from a variety of social media platforms. A machine learning algorithm is then "trained" to create a model from this sample text. Once complete, this model is tested on a new set of social media text to determine its accuracy. A model's accuracy may vary across demographic groups, and care must be taken to identify and mitigate such biases.

What are the strengths and limitations of using existing data to measure community sentiment?

Unlike traditional surveys, which take months to complete and only capture a single point in time, sentiment analysis can collect and analyze data on a daily basis. This ability allows agencies to follow trends over the course of weeks or months.

Although sentiment analysis offers the added capability of following trends over time, it is important to be aware of the risks and limitations associated with products using this technique. Sentiment analysis provides one general indicator of policing: whether an agency is seen in a more positive or negative light. General population surveys, however, collect data across a variety of aspects to produce a more nuanced assessment of policing. Moreover, issues of coverage and representativeness may persist. Some social media platforms have differences in use by age group; younger generations are more likely than older generations to use certain platforms, such as Instagram.[38] Social media platforms are also often inundated with a significant portion of unverified users who may not live within a community, and persons can post as many messages as they please. Additionally, not all community members are active on social media. Those community members who are active on social media may not be inclined to post messages about their local law enforcement agencies. Further, social media posts are short, and people often use sarcastic language, humor, or slang in their social media posts, which the algorithm could misinterpret. Issues with agency specificity may persist because social media coverage is often driven by national or sentinel events, making it challenging to isolate a specific community's feelings.

In addition to posing limitations, using "black box" automation systems has inherent risks. For example, automated systems may not have transparent algorithms or may exhibit prejudice with respect to race or speech classifications.[39] In addition, negative perceptions may arise as a result of using these tools, should the community believe the tools are racially biased or are being used as a means for surveillance.

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[38]. Auxier, B., & Anderson, M. (2021, April 7). *Social media use in 2021*. Pew Research Center. Retrieved from https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/

[39]. Wiggers, K. (2021, October 29). AI weekly: The perils of AI analytics for police body cameras. *VentureBeat*. Retrieved from https://venturebeat.com/ai/ai-weekly-the-perils-of-ai-analytics-for-police-body-cameras/

What products are available to understand community sentiment from existing data sources?

The current landscape of products that use existing data to generate estimates of perceptions is vast; however, some products on the market cater specifically to municipalities and law enforcement agencies by analyzing **publicly available web data** and **BWC video and audio data**. The section below provides insights on these products that cater to law enforcement and municipal government markets; however, others likely exist, especially when developed for use in countries other than the United States. It is important to note that because these products are relatively new to the market, and, in some cases are still in testing, research on their efficacy or accuracy has been limited.

Using Data From Web Sources

An abundance of tools on the market use data from web sources such as social media and other websites to analyze sentiment. For example, Awario is a web-based tool that analyzes data from social media platforms, forums, blogs, and websites, estimating sentiment of the data in real time. In addition, this tool can be customized to monitor specific keywords. Brandwatch's Consumer Research tool is another example of an online data analysis tool that allows users to customize keywords to monitor and notify if a particular sentiment is identified (e.g., anger).[40] These products are not typically used to measure community perceptions of law enforcement because law enforcement and municipalities typically lack the resources and the technical skills to adapt these tools to their needs. Furthermore, determining how to use the data to understand general sentiment about an agency may be difficult. Zencity, however, offers a product specifically geared to law enforcement agencies and municipalities to generate estimates of community perceptions.

Zencity Organic is a service offered by Zencity to local governments, including law enforcement agencies. Zencity Organic uses data from public social media platforms, broadcast media, and web sources to identify trends related to and measure community sentiment toward government agencies and specific topics. Law enforcement agencies often use these identified trends and attitudes to coordinate communications and resources. For example, in February 2019, the City of Aurora, Illinois, relied on Zencity Organic to coordinate communications and necessary services in the aftermath of a mass shooting that left five dead and six injured. As news of the shooting immediately went viral, data from a variety of social media platforms were employed to understand the public's sentiments. The data from Zencity Organic helped inform Aurora's efforts to communicate with the community about the tragedy, set up needed services, and help the victims and their families.[41]

Law Enforcement INSIGHT

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Zencity Organic enables us to organically collect feedback from the community by scraping publicly available internet data from social media and comments on news articles, as well as internal channels, like complaints.

Management analyst at a large urban police department

40.   Bredava, A. (2022, May 19). *The top 10 best free and paid sentiment analysis tools*. Awario. Retrieved from https://awario.com/blog/sentiment-analysis-tools/

41.   Zencity. (n.d.). How Aurora, IL, leveraged data analytics to help manage a mass shooting. Retrieved from https://zencity.io/how-aurora-il-leveraged-data-analytics-to-help-manage-a-mass-shooting/

Using Data From BWCs

Given the widespread adoption of BWCs by many law enforcement agencies, agencies can analyze the audio recordings and video footage captured from these devices to assess the quality of police-community interactions. BWC data can be analyzed to gain insights into the demeanor, emotions, behaviors, and sentiment of both the law enforcement officers and community members. This information can be aggregated to provide both officer- and agency-level measures of police-community interactions. However, one challenge associated with BWCs is the overwhelming size and scope of the available data. Although thousands of hours of police-community interactions are recorded, systematically sorting and classifying footage with conventional processes are cost-prohibitive tasks. Because of these constraints, agencies often review only a small sample of incidents associated with particular complaints or events. However, some companies offer emerging solutions to automate this process.

Truleo provides BWC audio analysis technology for law enforcement. Their platform uses a combination of speech transcription and NLP to automatically analyze BWC recordings, classifying the audio to measure both risky and respectful police-community interactions. The Seattle Police Department was an early adopter and helped train Truleo's algorithm. Officers who were on desk duty, sick, or injured were given audio segments that had been transcribed by the system. These officers listened to the audio and confirmed the transcription was accurate, or they edited the transcription to ensure accuracy. In addition, officers could view the BWC video footage and tag the transcription with attribute labels (e.g., "use of force," "directed profanity") that may have occurred during the interaction. These manual labeling and transcription correction efforts were used to train the processing algorithm to become more accurate over time.

Polis Solutions and **GE Research**, under the direction of the **Police Foundation**, are developing multimodal techniques to automate the analysis of video and audio data of police-community interactions captured from BWCs. The techniques will combine BWC video and audio data and integrate the data into models of police-community interactions using computer vision and NLP tools. The models will aim to analyze language and behavior (e.g., facial expressions and verbal utterances) to understand and measure things like procedural justice, respect, and escalation/de-escalation. After the techniques are developed, researchers from the Police Foundation will validate them by comparing the automated ratings with ratings from human evaluators. Researchers doing the validation will use BWC data from a random sample of officers from the Dallas Police Department—half who have undergone training in procedural justice and half who have not. The validation efforts will not only evaluate the efficacy of the techniques, but they will also help assess whether the officers who received procedural justice training showed greater adherence to principles than those in the control group.[42,43]

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42. Polis Solutions. (2020, September 21). *Polis Solutions teaming with the National Police Foundation and GE Research on groundbreaking body-worn camera research project*. Retrieved from https://docs.wixstatic.com/ugd/d28efe_6b41bcff09a04be4be13b6f404fd67bf.pdf

43. National Institute of Justice. (2020, September 16). *Multi-modal analysis of body worn camera recordings: Evaluating novel methods for measuring police implementation of procedural justice*. Retrieved from https://nij.ojp.gov/funding/awards/2020-r2-cx-0010

CHAPTER 6:

BEST PRACTICES AND LESSONS LEARNED FROM CASE STUDIES

For communities that have decided to use a product to measure community perceptions, this section outlines best practices for adoption and implementation and offers case studies of agencies using these products.

These products are not meant to replace outreach and community-building initiatives but are designed to be used in conjunction with these efforts to improve relationships with the community.

Although products that measure community perceptions may help municipalities and law enforcement agencies gather feedback from community members who do not typically interact with law enforcement, these products should not be used in a silo. Many agencies currently make consistent efforts to connect with their community through town hall meetings, volunteering, and neighborhood events. Agencies should not let technology replace these efforts and should not rely solely on these products to paint a picture of community sentiment. Rather, these products are designed to be used in conjunction with other agency outreach efforts to better gather insights and feedback from community members who are underrepresented in traditional outreach efforts.

Law Enforcement INSIGHT

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Relying only on technology to tell you how you're doing can give you a false safety net. It can make you feel like you're doing better than what you really are and not give you the drive you need to make systemic changes. I think that the scary thing is that a technology like this can be weaponized against change because someone can pick it up and say, 'our scores reflect that we are doing great so there is no need to change.'

Mecole Jordan-McBride
Advocacy Director
New York University School of Law, Policing Project

We use Zencity not as a way to replace our significant outreach efforts, but to augment the outreach we already do and gather information in a different way.

Jeff Jordan
Captain of Legislative Affairs and Special Projects
San Diego (CA) Police Department

Leverage features of the products that enhance accessibility for diverse populations.

Receiving comprehensive feedback is contingent on accessing different perspectives from the community. Many community perception tools offer features or methods to reach a range of populations. The survey delivery mode can enable a larger reach by offering access to short mobile surveys, and community members can quickly provide feedback to law enforcement or engage at their convenience. Many products can translate the surveys into different languages, which can provide an accessible alternative for communities with large populations of non-English speakers. Using digital ads as part of a general survey of community perception can help target underrepresented demographic groups. Agencies should consider and leverage these features to help gather a comprehensive community viewpoint.

Case Study

The Tucson Police Department is exploring ways to increase the representativeness of feedback collected by SPIDR Tech.

Tucson, Arizona, is a diverse community with over 520,000 residents. As the Tucson Police Department rolls out their new RMS, they will begin offering the SPIDR Tech survey in Spanish. The hope is that increasing access to the tool for non-English speakers will increase the representativeness of survey responses.

The Tucson Police Department has also been deliberate in designing its survey to be conscious of any questions that may be off-putting to potential respondents. As such, they chose to make the demographic questions optional. Furthermore, when the Spanish version of the survey goes live, the police department will remove the question on citizenship to ensure that all residents feel comfortable answering the survey without causing fear of retribution for people with undocumented status.

Adopting multiple approaches can provide a more complete picture of police-community relations.

The products outlined in this landscape report are not a panacea; despite features to enhance accessibility and reach within a community, one approach does not paint a full picture of community perceptions. To gather a clearer picture of perceptions across the community, agencies would benefit from employing a combination of various products. Some communities are choosing to adopt multiple approaches to measure perceptions of the police that include a general community survey, a post-contact survey, and auditing of BWC data (video footage and audio recordings). Each approach provides a different perspective, and collectively they provide a more complete picture. BWCs, for example, allow for review of both the officer and citizen perspectives, providing clarity on interactions. Additionally, if a resident leaves a negative review or comment on a post-contact survey, a supervisor can review the officer's footage for any mishandling of the interaction and follow up with conversations or training to mitigate future negative outcomes.

We have found that for our officers to trust in the Guardian Score surveys, it is important that we also use body-worn cameras.

Michael Kochis
Chief of Police
Warrenton (VA) Police Department

Law Enforcement INSIGHT

These products, which offer significant flexibility, take time and resources to set up.

Products that measure community perceptions, while designed for ease of use, may require some setup for agencies to realize the full benefits. Most of the products that generate new data offer a "base" question list, and some allow the administrator to configure questions or question types to their needs. Some products can integrate with RMS or CAD systems, which streamlines post-contact communication with constituents. Agencies can configure privacy settings and set up regular automated reports to stakeholders. Although these features add value to the product, they can take time to configure for the agency's needs.
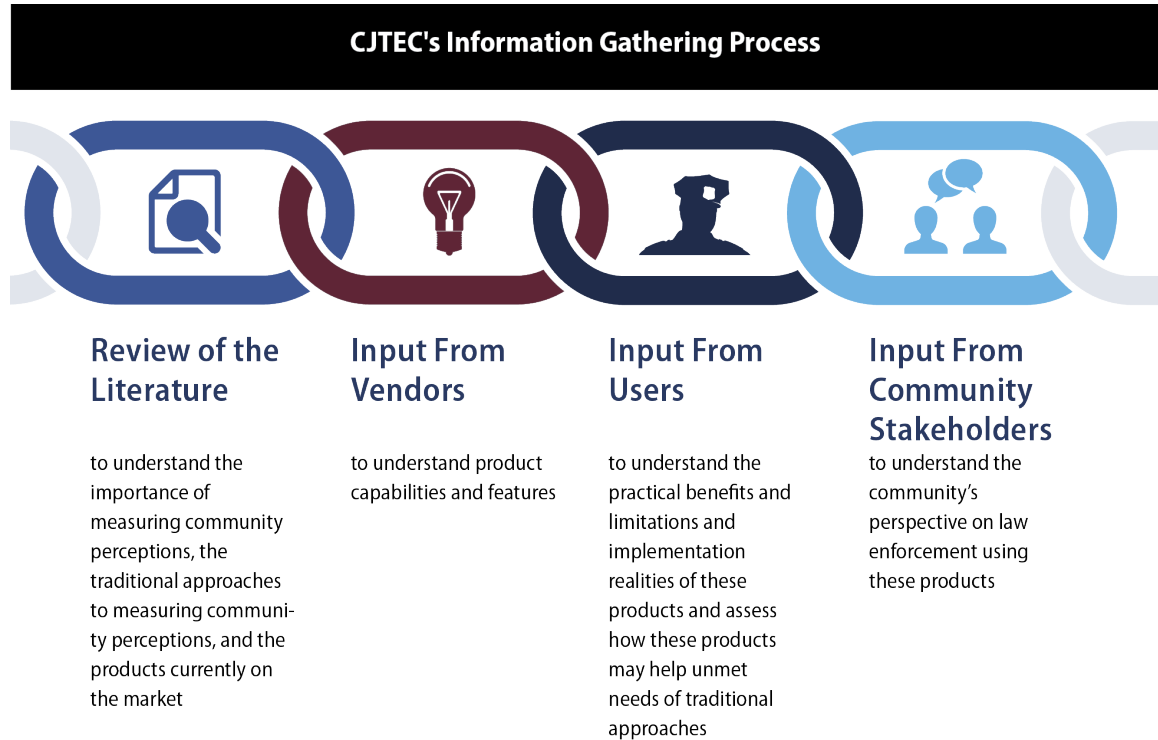
Training on effective use of the products is a significant investment.

Across an agency, law enforcement officers will interact with the product in different ways. Public information officers (PIOs) or agency leadership will likely lead implementation and monitor data and insights generated from the product. These individuals will need training to configure the product for their needs, to access and understand the dashboards and visualizations offered by the product, and to communicate this information effectively. In the case of QR code products, field officers will need training on when and how to distribute these codes and knowledge of procedures that help keep the officers accountable. In addition to training on how to use the product, agencies will need training on how to promote the use of their product to the broader community. PIOs may be a part of creating a public awareness campaign to ensure the public is aware not only of the agency's survey efforts, but also how the collected data will be used and disseminated.

APPENDIX A: Research Methodology

The Criminal Justice Testing and Evaluation Consortium (CJTEC) leveraged a fit-for-purpose and iterative information-gathering process using a variety of sources to develop the *Landscape Report on Measuring Community Sentiment and Perceptions of Safety and Law Enforcement Performance*, as shown in **Figure 18**.

CJTEC's Information Gathering Process

Review of the Literature

to understand the importance of measuring community perceptions, the traditional approaches to measuring community perceptions, and the products currently on the market

Input From Vendors

to understand product capabilities and features

Input From Users

to understand the practical benefits and limitations and implementation realities of these products and assess how these products may help unmet needs of traditional approaches

Input From Community Stakeholders

to understand the community's perspective on law enforcement using these products

Figure 18: CJTEC used a robust information-gathering process to understand the landscape of measuring community perceptions.

The research team consulted a variety of sources, including peer-reviewed journal articles, research reports, and traditional community surveys conducted by agencies. The fit-for-purpose goals of the secondary research were to understand:

- The need for and importance of measuring community perceptions.
- Traditional approaches to measuring community perceptions and their limitations.
- Vendors and available technologies currently on the market.

Using Wellspring, a cloud-based innovation database that compiles a variety of sources including patents, publications, research grants and funding, government data sources, regulatory filings, technology marketplaces, and information on startups, the team searched for sources and products.

Complemented by secondary research, the team also used a Request for Information (RFI) on the Federal Register to identify additional technology vendors and their associated products. Once products were identified through secondary research or through the RFI, CJTEC conducted interviews with vendors to understand product capabilities and features. To understand the practical benefits, limitations, and implementation realities of these products and assess how these products may help address unmet needs of traditional approaches, the team conducted interviews with law enforcement agencies that were using the products. The team used three methods to identify agencies using specific products: secondary searches using news articles and procurement documents, attributed testimonials on vendor websites, and referrals from vendors.

The team conducted interviews with community stakeholders to understand their perspectives on product use. Community stakeholders were identified through news articles or referrals from agencies.

Along with the scientific literature, the RFI, and vendor contacts, the team consulted professional associations and scanned several police department websites to determine what they were actually measuring in their surveys.

APPENDIX B: GLOSSARY

Artificial Intelligence (AI)
Uses computers and machines to mimic the problem-solving and decision-making capabilities of the human mind.[44]

Computer-Assisted Telephone Interviewing (CATI)
A surveying technique in which an interviewer carries out an interview via telephone call using one electronic device (computer/smartphone/tablet) to both read the survey script and enter the information collected.[45]

Configuration
The ability to make certain changes to a software platform as part of a commercial off-the-shelf solution without the need to change the software code.

Convenience Survey
A survey that uses nonprobability sampling to collect data from a convenient pool of respondents.

Coverage
How well the sampling units included in a particular sampling frame account for a survey's target population.[46]

Digital Advertisement Network
Connects businesses that want to run online ads with websites that want to host them.[47]

General Population Survey
A survey that is sent to everyone in the community or to a random, representative sample of community members.

Interactive Voice Response
Software that accepts caller input, either voice or touch-tone, in response to prerecorded prompts and provides programmed responses.[48]

Machine Learning
A branch of AI and computer science that focuses on using data and algorithms to imitate the way that humans learn, gradually improving its accuracy.[49]

Natural Language Processing (NLP)
Refers to the branch of computer science—and more specifically, the branch of AI—concerned with giving computers the ability to understand text and spoken words in much the same way human beings can.[50]

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50. IBM Cloud Education. (2020, July 2). *What is natural language processing (NLP)?* IBM Cloud Education. Retrieved from https://www.ibm.com/think/topics/natural-language-processing

Post-contact Survey

A survey that is sent to an individual after an interaction with an officer has occurred, such as after a traffic stop or call for service.

QR Code

Short for "quick response" code, a two-dimensional barcode that can be scanned by a mobile device to access more information about something.[51]

Representativeness

When survey results accurately represent or reflect the population that is being sampled. Often evaluations of representativeness compare demographic distributions (e.g., sex, age, race) of the survey respondents with the population of interest to identify differences that point to potential bias. If these characteristics are balanced across the two groups, it is assumed the findings reflect the larger population.

Self-Selection Bias

A potential result of survey design whereby survey respondents are allowed to decide for themselves whether they want to participate in a survey. This causes a biased sample that affects the ability of the survey to represent the entire target population.[52]

Sentiment Analysis

An NLP technique that classifies emotions extracted from textual data. Sentiment analysis organizes inputs into positive, negative, and neutral emotions.[53]

Skip Logic/Pattern

An alteration in the sequential flow of a survey based on answers to prior question(s) in the survey or other known information about the respondent, allowing respondents to either skip or be directed to specific questions/sections in the survey.[54]

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51. GovTech Singapore. (2020, September 24). *The QR code is everywhere, but where did it come from?* Retrieved from https://www.tech.gov.sg/media/technews/2020-09-24-the-qr-code-is-everywhere-but-where-did-it-come-from

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54. SurveyMonkey. (n.d.). *Using skip logic in a survey*. Retrieved from https://www.surveymonkey.com/product/features/survey-logic/

A Landscape Report on Measuring Community Sentiment and
Perceptions of Safety and Law Enforcement Performance

APPENDIX C: PRODUCT PROFILES

Each profile below provides information on the products reviewed in this landscape study for easy reference for decision-makers considering adopting these products. The profile provides a description that includes the following information:

- Company name and logo
- Associated product
- Website
- Company description
- Product description
- Pricing model

Please note that the descriptions were provided by representatives of the companies, and CJTEC did not independently vet the information contained within. The following table provides an exemplary list of community perceptions products profiled in this landscape. Others likely exist, especially when developed for use in countries besides the United States.

AXON

Axon

Product: My90
https://www.axon.com/products/my90/

Axon is focused on connected public safety technologies that protect life and increase transparency and accountability. Axon has expanded beyond their flagship TASER products to body cameras and software platforms that streamline and automate administrative tasks. Axon provides products and services for law enforcement, the federal government, corrections facilities, emergency medical professionals, private security, and commercial companies. Axon offers customer training for a variety of their products. Rick Smith founded the original company, TASER, in 1993 and since has expanded internationally with over 2,000 employees. Axon is headquartered in Scottsdale, Arizona.

Product Description and Application Capabilities:

My90 offers surveys for service calls, community members, and officers. Axon acquired My90 in August 2021 to further the company's commitment to community engagement.

Pricing Model:

The company provided no pricing information.

Guardian Score, LLC

Product: Guardian Score

https://guardianscore.com

Guardian Score, LLC offers a survey solution designed to help police administrations use real-time data analytics and insights to understand interactions between community members and police. Guardian Score aims to help police departments build legitimacy of law enforcement within their community, change the way agencies measure a "good officer," and provide new and meaningful performance metrics for policy performance evaluations and procedural justice skills. Guardian Score was founded in 2020 in Virginia by a former police officer with significant private-sector experience and an active police commander.

Product Description and Application Capabilities:

Guardian Score is a customer experience management solution designed to help police better understand how the community perceives their performance. Through proprietary software, the Guardian Score platform generates a unique, onetime-use QR code on officer business cards. Officers give these cards to residents after interactions. When scanned, the QR code redirects community members to a web-based digital survey, which includes optional demographic questions, numerical rating questions that measure officer listening skills, professionalism, fairness, explanations of the reason for the interaction and next steps, and a section for comments. The unique QR code ties survey responses back to both individual officers and interactions.

Guardian Score includes a web-based, internal dashboard that reports all feedback, the number of surveys completed, and comments left by residents in the survey. No specific hardware or software is required to view the dashboard. The numerical-rating questions are aggregated as the average response across all surveys and can be broken down based on interaction type, question type, race, and sex. The dashboard includes on-demand reports at the officer, squad, and department levels; in addition, the dashboard has different levels of access. For example, chiefs can see all comments, supervisors can see comments left for their squad members, and officers can see individual comments left for themselves. Compared with the dashboard, which is focused on officer performance over time, an "activity feed" page is dedicated to responses from recently completed surveys, including comments. The scope of an individual's view within the activity feed page is related to their assignment and role within the agency.

Guardian Score is developing a new product, Community Survey. This survey is a convenience survey and was designed to meet Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA) accreditation standards. Using the same approach as Guardian Score, unique data are collected via verified QR codes, allowing agencies to better understand how the community feels about topics that may include, but are not limited to, the agency, crimes in the community, and any other concerns residents may have. This product is being piloted with an agency and will be available for purchase in Q3 2023.

Pricing Model:

Guardian Score pricing is based on the number of officers with Guardian Score profiles. Updates, new features, and versions are included in the price.

KYF

Know Your Force

Product: Know Your Force

https://knowyourforce.com/

Know Your Force (KYF) is a Utah-based software development company whose mission is to bridge the gap between communities and their police forces through citizen feedback. KYF was founded in 2020 to communicate officer training statistics to the public. Since its founding, the team has developed a platform for agencies to gather feedback information to make informed decisions.

Product Description and Application Capabilities:

KYF helps connect police and their community with On-the-Stop survey cards and an on-demand data dashboard to analyze community sentiment and officer-citizen satisfaction. Business cards with QR codes, unique to each officer, direct individuals to a short, mobile-friendly survey about the individual officer and incident. Recently, KYF added a text message feature that is focused on gathering feedback for the dispatcher handling the call for service. Upon completion of the survey, respondents are rerouted to a webpage of the agency's choice (i.e., an agency's Facebook page, additional resources for victims, or resources to voice concerns with the agency). The chosen webpage redirects may be customized depending on a respondent's feedback. For example, an agency may choose to redirect lower ratings (1–2 stars) to an agency-owned resource page, while redirecting respondents who leave higher ratings (4–5 stars) to a recruitment page or the agency's Facebook page. For both the QR code and text message surveys, agencies may choose to use the dependent questions feature, prompting individuals to answer additional questions based on their numerical ratings for the officer and incident.

As individuals respond to surveys, agencies can view feedback in real time through a dashboard. Designated police department administrators are granted access to this dashboard with a single-sign-on login. Agencies can view aggregated data, such as the total number of surveys, the average rating per question across all responses, and the percentage of positive feedback. Agencies can choose additional filters to view the data, including filtering by the overall department or the individual officer level. Reviews and data may be manipulated and exported for third-party viewers; in addition, customers can pay for KYF to host collected data in an Amazon Web Service (AWS) database that allows information to be pulled into any business data visualization tool/dashboard. Recently, KYF has added a public-facing widget/dashboard. This dashboard allows the community to toggle between number of survey views, which includes information such as the total number of reviews, the average rating of the reviews, and the percentage of positive reviews; the second view is the program start view, which allows individuals to see the date the agency began using KYF, the average rating, and the percentage of positive reviews.

Pricing Model:

KYF is based on an annual per-officer cost with the option to add text-based feedback, billed per text message. Support and maintenance are included in the annual cost. KYF offers support for media outreach and public relations for an additional fee, dependent on the services requested.

OFFICER SURVEY

**Officer Survey
(owned by GovMetrics.io)**

Product: Officer Survey
https://officersurvey.com/

Officer Survey, owned by GovMetrics.io, delivers real-time data and insights to police leaders based on community feedback. These data can help police leaders build community trust and identify and correct problematic behaviors while boosting employee morale and increasing public transparency. Officer Survey offers the following tools: the Community Engagement Platform, the post-interaction Officer Survey, the Employee Engagement Platform, and the Campus Police Survey. Each of these tools allows for feedback on topics related to policing. Officer Survey is customizable and produces data that can be used to build community trust, reduce crime, improve public perception of the police force, gauge employee satisfaction, and prevent lawsuits. Officer Survey was founded in Washington, DC, in 2020.

Product Description and Application Capabilities:

Officer Survey is an online survey tool designed to help police agencies better understand how the community perceives their agency's performance. Officer Survey's methods include business cards with dynamic QR codes or text messages with hyperlinks that will direct individuals to a mobile-friendly survey. The QR code and text message survey responses are tied directly to individual officers, allowing agencies to build and track "officer profiles" over time. This profile follows the officer throughout their career as law enforcement officers regardless of which agency they work for. Integrating with an agency's computer-aided dispatch (CAD)/record management system (RMS) system, automated text messages are sent to individuals who have interacted directly with law enforcement. Individual agencies can customize who receives a survey based on the interaction type.

An internal dashboard publishes survey results and includes data analysis features such as heat mapping by pinpointing the zip codes of survey respondents. Agencies can determine if there are more negative or positive results from certain areas or neighborhoods. By correlating the heat maps and survey responses to individual officers, agencies may better understand if officers need additional training or if some zip codes need additional help.

Officer Survey includes a "callback" feature. For example, suppose the respondent requests a callback. In that case, the survey will be flagged, and a supervisor will be notified immediately. Officer Survey also includes behavior analysis of each officer so police leaders can see how each officer has been interacting with residents. Moreover, Officer Survey has a built-in Early Intervention tool that flags officers who receive multiple negative reviews and alerts officers' supervisors for further review. The platform also has a press generator to enable agencies to easily disseminate information.

Pricing Model:

Officer Survey operates under a tiered pricing model based on the number of officers. Large agencies can contact Officer Survey for discounted pricing.

Agencies with a low budget can purchase the unlimited online community survey plan or bundle it with unlimited employee surveys for an annual cost. In addition, Officer Survey offers a grant program that can help pay for some of the costs. To apply for the grant, interested parties can visit OfficerSurvey.com.

The aforementioned pricing excludes text message surveys.

Global Accountability Corp.

Product: Police Smart Card
https://policesmartcard.com/

Launched in June 2022, the **Police Smart Card** is a fully featured Police Smart ID Card platform. The Global Accountability Corp. team recently partnered with Sentry Enterprises to create a biometric-authenticated near-field communication (NFC) tag to provide absolute identity of law enforcement officers. The patent-pending technology helps bridge the gap between law enforcement and residents, while helping to retain law enforcement officers by providing positive validation through survey responses, helping de-escalate interactions with residents, and giving verified badge information from the card within a police or sheriff department and to the public with the tap of a smartphone.

Product Description and Application Capabilities:

The Police Smart Card platform uses both QR code and NFC technology and is completely web based. After an interaction with law enforcement, community members can scan the QR code or tap the NFC tag in the officer's business card, which will redirect the individual to a secure webpage. This webpage includes a number of features, including the law enforcement officer's identification information (i.e., their name, photo, badge ID, email, phone number, and assignment), a text box where the community member can input their assigned incident number, and agency-customizable tabs. Agencies commonly choose to use tabs that include a hyperlinked "call us" button, a survey button, and a hyperlinked "get help" button for the agency's FAQ page. The survey is customizable by each agency and collects feedback directly tied to the officer whose smart card was scanned. Community members have the option to download the officer's "vCard," containing all of the officer's identification information, as a contact to their phone. Police Smart Card is working to develop additional features to integrate with the platform. Current features offered include an officer recruitment feature, 211 search engine, and Officer Down Memorial Page (ODMP) to educate the public on those officers who have died in the line of duty.

Each agency has access to a customized, secure dashboard referred to as the "global admin panel." This dashboard allows agencies to view data analytics and reports on each officer, including survey results; the number of times the officer's profile has been accessed; and the number of times an officer's vCard has been downloaded, either via QR code or NFC. The dashboard also allows for remote disabling, both temporarily and permanently, of an officer's ID card, should it be misplaced or lost. This helps prevent any unauthorized uses of the ID card, ensuring officer verification with each scan. This agency-customizable dashboard has not yet been released. Finally, the Police Smart Card includes a "positive validation feed," which sends positive feedback from surveys directly to an individual officer via an assigned QR code. This positive feed also includes links to the ODMP and a friend's phone number to help boost morale and retain officers.

The Police Smart Card offers a new approach to providing a decentralized ID system and Identify Access Management (IAM) for law enforcement. Once a user's biometric data authenticate the credential, a microprocessor validates the user match and allows the individual to open a door to the station, log into a computer, or complete identify verification.

Pricing Model:

Police Smart Card offers an annual subscription cost model.

PowerDMS by NeoGov

Product: PowerEngage
https://www.powerdms.com/power-engage/

PowerDMS by NeoGov provides cloud-based solutions that help organizations reduce risk and liability through their comprehensive compliance and content management solutions. PowerDMS's platforms allow organizations to store current standards, create and link specific policies to these standards, train employees, create reports, and track due dates. PowerDMS is used by customers in both the public and private sectors, including law enforcement, healthcare, fire/emergency management, government, corrections, and corporations. PowerDMS offers software solutions in the following areas: policy management, accreditation management, community engagement, personnel scheduling, field training, and officer wellness. Law enforcement agencies use these platforms to keep officers informed of the latest policies and training, improve accountability, and promote transparency in their communities. PowerDMS was founded in 2001 in Orlando, Florida, and has about 115 employees.

Product Description and Application Capabilities:

NeoGov acquired CueHit, now PowerEngage, as part of their PowerDMS software platform in January 2022. PowerEngage is a platform for law enforcement to connect to and survey citizens, measure results, and improve officer morale and wellness. PowerEngage offers both text message and QR codes to recruit and delivery surveys. The system ties into an agency's CAD/RMS system, automatically sending text message surveys to individuals with recent law enforcement interactions. PowerEngage's rules-based engine allows agencies to configure the system to their own needs; for example, agencies can customize survey questions, target surveys to different encounter types (i.e., 911 caller, witness, victim), tailor how long after an interaction to send a survey, and set quiet hours in which no surveys will be sent. To increase response rates, PowerEngage's platform sends one survey question at a time in the form of a text message. Respondents will reply back to each question with a text. Survey questions are customizable within the system's survey builder and typically include a free-form response question and numerical rating response questions. The free-form text responses are fed through Amazon Comprehend, a sentiment analysis tool, to understand and tag the written feedback as a "positive," "negative," or "neutral' sentiment."

PowerEngage has an internal dashboard offering different levels of access permissions. For example, the chief's dashboard highlights all survey responses and breaks down survey responses based on instance/interaction type, while the officer's or dispatcher's dashboard highlights survey responses and comments for individual officers/dispatchers. Additionally, a positive feedback feature aggregates and sends positive feedback to individual officers/dispatchers.

Pricing Model:

PowerEngage users pay a low implementation cost and an annual subscription fee that is priced on a per-sworn-officer basis.

SPIDR Tech, a Versaterm Public Safety Company

Product: SPIDR Engage Automated Customer Service Platform (ACSP)

https://www.spidrtech.com/

SPIDR Tech, a Versaterm Public Safety company, is a technology company offering a comprehensive customer service infrastructure for law enforcement with the goal of improving communications and transparency between agencies and their communities. SPIDR Tech's software enables public safety agencies to automatically send one-to-one text messages, emails, and mobile-friendly surveys to their community members for the purposes of case updates from first response to closure, including victim follow-ups, community request follow-ups, and targeted surveys. Their three offerings are a Patrol Module, Investigation Module, and Insights Module. The Patrol Module automatically sends text messages to 911 callers and reporting parties, while the Investigation Module sends text messages and emails to crime victims. The Insights Module sends follow-up surveys on the topic of customer service to 911 callers, crime victims, and other community members who interact with the agency.

SPIDR Tech was founded by former law enforcement officers to help agencies leverage their own data to improve community perceptions and increase efficiency in excellent customer service. Versaterm Public Safety is a global public safety solutions company helping agencies transform their organizations by providing innovative solutions, expertise, and an unwavering dedication to customer service. Formed in 1977, the company is on a journey to build an ecosystem that will enhance community safety by creating purposeful integrations across the public safety spectrum by delivering intuitive tools developed for public safety agencies, forensic labs, court systems, schools, and other institutions. The company's selective growth strategy focuses on improving customer and user workflows for more efficient and effective operations, leading to better service and more just outcomes. For more information, visit versaterm.com.

Product Description and Application Capabilities:

SPIDR Tech is a customer service platform offering both automated text message and QR code surveys. The text message survey platform connects to an agency's CAD/RMS system with an automated text survey functionality. Automated text messages include variables such as the case ID; date and time of the incident; and a unique, onetime-use hyperlink directing individuals to a web-based survey. Agencies may configure the surveys to gather feedback on the individual officer, the dispatcher, or both in the same survey. Survey questions can be customized to fit an agency's needs or pulled from a bank of "base metric" questions used by other agencies. Agencies may also choose to enable a "follow-up" survey link reminder to be sent to individuals, 24 hours after the initial text, to increase likelihood of a response. The platform also sends automated text messages or email updates to crime victims and 911 callers, keeping them informed as their call or case proceeds.

An agency's regional command staff will receive a daily summarized report of all survey responses. This report can be broken down by patrol area/division/precinct level so that localized commands receive relevant data. Agencies also have access to a live feedback board available via a website internally and optionally available to the public.

Pricing Model:

Pricing is based off both the agency's sworn officer size and the modules an agency chooses to deploy. Agencies pay a yearly subscription fee that covers all costs, plus an additional onetime deployment fee at the beginning of their contract. Maintenance and technical support are covered in the annual subscription fee.

TRULEO

Truleo, Inc.

Product: Truleo
https://www.truleo.co/

Truleo is the developer of an automated body-worn camera (BWC) review and analysis platform. Their mission is to improve trust in the police through body camera analytics. By using natural language processing (NLP) models, Truleo can analyze 100% of an agency's BWC data and automatically detect areas for further human review and thus increase the efficiency and effectiveness of those reviews.

Product Description and Application Capabilities:

Truleo's automated review and analysis can classify events within an interaction (use of force, pursuit, arrest), identify officer and civilian risk (profanity, insults, threats), and highlight officer professionalism (formality, explanation, gratitude, politeness). Using Scope, Truleo's web-based application, law enforcement agencies can view dashboards showing engagement, professionalism, and risk across the organization and conduct comparisons of officer performance within their peer group. Agencies are also able to view all BWC videos within the Scope platform, alongside a speaker-separated transcript, for more in-depth reviews of specific incidents.

Truleo provides agencies the ability to benchmark professionalism, identify areas for improvement, train and coach officers, and improve and maintain high levels of professionalism.

Officer professionalism leads to community trust and legitimacy, which in turn leads to safer encounters between the police and the communities they serve.

Pricing Model:

Truleo uses a tiered pricing model based on the number of BWCs. Truleo does not charge for veterans or graduates of the FBI National Academy within the agency, and agencies with at least one active FBI National Academy graduate receive a 10% discount.

Zencity

Product: Blockwise, CX Surveys, and Organic

https://zencity.io/

Zencity is a technology company focused on helping public-sector agencies build trust with the communities they serve by being more responsive. The company offers community surveys, community experience surveys, trust and safety surveys, a digital engagement platform, an online discourse and sentiment analysis platform, and an "all-in-one" platform for community engagement (which includes all of the aforementioned offerings). Zencity's platforms aggregate and anonymize resident discourse data from a variety of sources and distill the information into insights. Their products can be used to better prioritize resources, more effectively track performance, and measure resident satisfaction over time. Zencity primarily offers tailored solutions for cities, counties, state agencies, and law enforcement. Headquartered in New York City and Tel Aviv, Israel, it has grown since its founding in 2015 to serve 300 cities and law enforcement agencies across the United States, Canada, United Kingdom, and Israel.

Product Description and Application Capabilities:

Relevant products include Zencity's Blockwise, Community Experience Surveys (CX Surveys), and Organic platforms.

Blockwise

In March 2021, Zencity acquired Elucd's Blockwise to deliver a more comprehensive community insights and analytics platform. Blockwise delivers short, confidential, and agency-customized surveys to community members through digital advertisements on popular webpages and mobile phone apps. Using U.S. census data, aggregated from Census block groups to the relevant geographies, Blockwise targets representative samples of the community. Because of the digital footprints individuals leave behind, the third-party advertisement networks can be extremely precise with the demographics they target with these advertisements. Respondents are asked to opt in to answer additional demographic questions when filling out the survey, allowing Blockwise to confirm the demographics assumed by the digital advertisers. If a certain demographic quota is exceeded or short, Blockwise can adjust the targeting data for the following day. Agencies have the option to add customized questions to their surveys, in addition to the "baseline" questions, provided by Zencity. The baseline questions measure six aspects: overall safety perceptions, fairness, respect, voice, transparency, and resident's main concern. For a list of the baseline questions, see the product table in Chapter 3.

The baseline questions enable agencies to benchmark against similar agencies. For the open-ended question, an artificial intelligence (AI) model categorizes residents' concerns into dozens of granular categories (e.g., comments related to homelessness are categorized into the subcategories encampments, individual's car/RV camping, squatting, aggressive panhandling).

Agencies have access to an interactive dashboard, where Blockwise survey results and analysis are published. The dashboard provides a geographical visualization user interface and navigation between areas of the city and a daily updated comment feed. In addition to the map and feed, Blockwise includes a crosstabs module (provides an in-depth breakdown of survey responses) and a new "summary" screen for a high-level overview of monthly trends in the data.

CX Surveys

CX Surveys help agencies evaluate their service performance through smart satisfaction surveys. These surveys can be accessed through QR codes on officer collateral or by automated text and email messages linked through the agency's CAD/RMS system. Zencity has a "smart distribution" mechanism that is adjusted to an individual agency's needs, sending the appropriate survey to individuals who have experienced specific service types. Agencies can also customize when the surveys are sent and when a follow-up is sent and can customize the survey questions. Zencity provides recommended questions that agencies can use for benchmarking purposes (see the product table in Chapter 4), but they are not mandatory. If agencies choose to use the recommended questions, they can request permission to benchmark against comparable agencies by name or anonymously based on agency size or region.

Survey results are updated in real time to a dashboard, allowing agencies to monitor aggregate scores and open-ended responses. The responses are automatically analyzed and categorized to help with quality tracking, operational optimization, and decision-making. The data can be charted over time and displayed on a map, and agencies receive customized reports on a regular basis (e.g., daily, weekly, monthly). The CX Surveys platform can be used in conjunction with other Zencity services, such as Blockwise, to gain a better understanding of how incident-level satisfaction relates to overall community perceptions of the agency. By correlating CX Surveys data with Blockwise data on trust, confidence, and perception, agencies can analyze the relationship between interactions and public perceptions.

Organic

Organic uses AI and machine learning to gather data from multiple online platforms and open-data sources, including social media, broadcast media, and web sources. These data are analyzed to understand resident sentiment and transform data into quantitative metrics to enable performance management and better understand community topics. These data may include comments, "likes," or other types of public interactions and top sources of conversation about policing.

The Zencity Organic dashboard displays trends of specific topics over time. Agencies may choose to create a "project" of a specific topic or event they want to monitor, for which Zencity can run analyses and publish reports on how that event or topic is influencing online conversations. For example, an agency may choose to create a project on a use-of-force incident, thus allowing them to monitor community perceptions related to the incident on a "mini" dashboard specific to that topic. Additionally, the dashboard displays the percentage of positive, negative, and neutral interactions residents have across online platforms.

Pricing Model:

Both Blockwise and Organic are priced based on the population of an agency's service area through an annual subscription. CX Surveys are priced per sworn officer with integration costs depending on the agency's CAD/RMS (which system, how many, etc.). Agencies using multiple products generally are priced less than either product is priced independently.