TECHNOLOGY ASSESSMENT
SUMMARY

National **Public Safety**
PARTNERSHIP

INTRODUCTION

The National Public Safety Partnership (PSP) program provides an innovative framework for the U.S. Department of Justice (DOJ) to enhance its support of state, local, and tribal law enforcement and prosecution authorities as they aggressively investigate and prosecute violent criminals, especially those involved in gun crime, drug trafficking, and gang violence. Through the PSP, DOJ provides effective assistance to American cities of different sizes and diverse needs to support and build their capacity to fight crime. PSP facilitates the development of data-driven, evidence-based strategies tailored to the unique needs of participating cities to address serious violent crime challenges.

Departments and agencies participating in the PSP Operations Sites program go through a series of assessments to develop a baseline understanding of their challenges and areas for growth. The technology assessment helps PSP sites plan and implement their future initiatives based on their existing technical resources and abilities. To evaluate a site's technical abilities and needs, a subject expert in technology conducts an on-site visit. Subject experts who have conducted this assessment in the past include Todd Maxwell, Michael Roosa, and Maggie Goodrich.

During the on-site visit, the subject expert assesses a site's technical capabilities according to the site's needs and identified priorities. Areas for analysis include dispatch software, records management systems (RMS), mobile environments, case management, crime analysis, IT support, and other related technologies and capabilities. The subject expert interviews local personnel, attends relevant department and agency meetings, and sees how the site uses technologies through tours and observations. The subject expert writes a technology assessment report for the site, which identifies technical gaps and needs. The report also provides recommendations to advance the site's technology-driven justice initiatives and identify future training and technical assistance (TTA) opportunities.

THIS ANALYSIS IDENTIFIES AND DISCUSSES THE COMMON THEMES, TECHNICAL GAPS, AND RECOMMENDATIONS THAT WE FOUND ACROSS THE TECHNOLOGY ASSESSMENT REPORTS FOR THE PSP SITES.

Thirteen of the nineteen PSP sites have completed the technology assessment as of August 2018, including Birmingham, Alabama; Camden, New Jersey; Compton, California; Detroit, Michigan; Flint, Michigan; Jackson, Mississippi; Little Rock, Arkansas; Milwaukee, Wisconsin; Nashville, Tennessee; Newark, New Jersey; New Orleans, Louisiana; Oakland/Richmond, California; and Wilmington, Delaware. The remaining six PSP sites which did not complete a technology assessment either chose not to undergo the assessment or will participate at a later date.

This analysis identifies and discusses the common themes, technical gaps, and recommendations that we found across the technology assessment reports for the PSP sites. Our analysis of the common themes involved coding the recommendations to pre-determined categories that aligned with PSP core outputs. We present our findings in both quantitative and qualitative formats. The following sections review our analytical methods and subsequent findings in detail.

PSP presents a summary of these findings and recommendations in the [PSP Technology Assessment Summary](#) one-pager. Some common findings and recommendations include:

- Gaps in training and data entry often create inconsistencies and issues in data reporting, including generating multiple rounds of review or reports not approved in an RMS. Increase RMS user training as needed or alter the way an RMS currently accepts reports, to make information more accessible for investigations.
- Current use of CCTV results in reactionary, not proactive, efforts to reduce crime and build community trust. Integrate cameras with other proactive monitoring systems, such as shot detection technologies and automatic license plate readers (LPRs).
- Agencies lack business experts/analysts who can justify and explain their need for new technology, and champion its acquisition to agency and city leadership. Task a group or individual with representing the department's technology needs to the local government and their IT organization.

FINDINGS

Using the 13 technology assessment reports, the PSP evaluation team coded 690 references to the 10 theme categories and the 67 themes individually (see Appendix B). Themes under the categories Data and Analysis, Interagency Partnerships, and Technology were the most common, and the PSP evaluation team coded 150, 104, and 236 references to these categories, respectively, in all 13 reports. Themes under the category Personnel were the next most common, and the PSP evaluation team coded 73 references in 12 reports. Themes under the category Community Stakeholders were the least common, and the PSP evaluation team only coded 3 references in 3 reports.

Of the individual themes, the theme Software and Hardware was the most common, and the PSP evaluation team coded 71 references in 12 assessment reports. Records Management was the second most common individual theme, and the PSP evaluation team coded it 50 times in 11

Table 1. Most common references at a glance

Theme	Number of References Coded (cumulative)
TECHNOLOGY	236
Software and Hardware	71
Records Management	50
Interoperability	44
DATA AND ANALYSIS	150
Processes and procedures	31
Data sharing	30
More analysis	26
Interagency Partnerships	104
Local partnerships	26
PEER AGENCIES	25
Personnel	73
Departmental Organization	23
Training Needed	22
Need to Hire and/or Promote	20

Table 2. Most common selected words at a glance

Word	Number of occurrences
Records Management System (RMS)	242
Computer-aided Dispatch (CAD)	107
Cameras	60
Closed-circuit Television (CCTV)	58

reports. Interoperability was the third most common theme, and the PSP evaluation team coded it 44 times in 12 reports. The PSP evaluation team coded the individual themes Program Evaluation and Research, Private and Foundation Funding, Witnesses, Gangs, Homicide, Cold Cases, Use of Force, New Partnerships (Community Stakeholders), Strengthen Partnerships (Community Stakeholders), and Procedural Justice the least, at zero occurrences across the technology assessment reports.

Table 3 documents the intersection of coding between two theme categories. The PSP evaluation team coded many of the references to more than two themes or theme categories, and Table 3 shows overlapping themes in coding references. Both the intersection of Technology and Data and Analysis and the intersection of Technology and Interagency partnerships contained 51 references coded to both theme categories. The intersection of Data and Analysis and Interagency Partnerships contained 30 references coded to the two theme groups. The high frequency of cross-references indicates the importance of focusing on data and analysis and interagency partnerships in improving technology use across PSP agencies. This analysis will further explore these topics in the following sections, which discuss common themes and recommendations across technology assessment reports.

Table 3. Intersection of themes among all reports

	Community stakeholders	Crime prevention	Data and analysis	Funding	Governance and policy	Interagency partnerships	Investigations	Personnel	Planning	Technology
Community stakeholders		1	0	0	1	2	1	0	0	1
Crime prevention			4	2	1	9	0	3	0	14
Data and analysis				3	3	30	9	12	4	51
Funding					1	5	2	4	1	17
Governance and policy						4	0	1	1	10
Interagency partnerships							8	6	2	51
Investigations								5	0	11
Personnel									1	22
Planning										9
Technology										

SOFTWARE: RECORDS MANAGEMENT SYSTEMS AND COMPUTER-AIDED DISPATCH

Records Management System (RMS) was mentioned 242 times in the 13 assessment reports, making it the most commonly addressed software or hardware. This indicates that RMS capabilities are essential to support PSP sites in their mission of reducing violent crime, and that PSP sites frequently need to improve their use of RMS. CAD (computer-aided dispatch) appeared 107 times in the 13 assessment reports, making it the second most commonly cited software or hardware. In the Birmingham assessment report, the subject expert noted that:

BIRMINGHAM ASSESSMENT REPORT: *A modern and reliable CAD system and an RMS are critical to the operation of a police department. CAD enables officers to be dispatched quickly to 9-1-1 calls for service and be provided with the necessary information to respond to the call. An RMS provides the ability to complete incident/crime/arrest reports, report crime to the public and the FBI/DOJ, produce copies of reports for those members of the community involved in an incident (e.g., traffic collision reports), manage the arrest/booking process, maintain the chain of custody of evidence, and provide the necessary documentation to file cases with the prosecutor. CAD and RMS platforms and infrastructure must be supported 24/7 and receive proper maintenance and support.*
Subject experts frequently recommended increasing RMS user training or altering the way an RMS currently accepts reports to make information more accessible for investigations.

Subject experts frequently recommended increasing RMS user training or altering the way an RMS currently accepts reports to make information more accessible for investigations.

BIRMINGHAM ASSESSMENT REPORT: Gaps in how users are trained, how reports are entered and approved, and how data is reported appear to exist as it pertains to the RMS specifically. BPD implemented its RMS and moved to NIBRS concurrently. However, limited training was provided to end users. ***Although training for new recruits and newly promoted Sergeants is being increased, many existing users require additional training in the RMS.*** As a result, many reports are stuck in a "loop" in the RMS, continually being kicked back (records clerks report seeing some cases change hands via the kickback process 50 to 100 times), and sometimes being stuck in limbo, thus never being approved in the system (and, therefore, not officially reported). It is estimated that, at times, more than 300 reports are in this state. Note: These gaps cause significant issues on all fronts. Family members of victims will call for an update, and detectives do not know about the case yet because it is stuck in this "loop." Detectives then have to pull an unfinished report to file a case. This causes problems for the

prosecution later because defense counsel will eventually receive the final/approved version later via discovery and will sometimes allege wrongdoing when two versions of the case file come to light.

ADDITIONAL ASSESSMENT RECOMMENDATION: The following is an additional recommendation provided to PSP sites related to use of records management systems:

Shell Records: ***The agency should export basic report data to the RMS system to create shell records once an officer submits a report for approval.*** These data should be able to be overwritten once the final approval data are completed by the Records Division. This would allow notification to investigations earlier, create another tracking system for missing reports, and allow others access to basic information while the report is being processed.

The technology assessment reports also identified data fields in the RMS that were inappropriate or led to "dirty" (unreliable) data. The subject experts recommended that the PSP sites review their business processes and methods of data entry to ensure the maximum reliability of data and improve subsequent analyses.

BIRMINGHAM ASSESSMENT REPORT: ***In general, the RMS allows (and sometimes requires) a user to enter inconsistent or "dirty" data due to the manner in which the RMS is configured.*** For example, certain fields are required for patrols that do not make sense in context of the particular incident. (e.g., age of victim is required when the victim is a business). Also, though not proven, users believe the configuration for the mobile RMS application installed on the MDCs is different than RMS configuration because of inconsistencies in the data.

MILWAUKEE ASSESSMENT REPORT: The crime analysis team makes the best of "dirty" data, which they force into the best possible analytic package. ***The RMS replacement and new business processes are crucial to improving the data components of the Comsat process.***

The subject experts also identified areas in which PSP sites need IT support to improve their use of RMS. The subject experts recommended allowing vendor access for trouble shooting, dedicating staff to user support, and enhancing the user interface to allow officers access to more information.

BIRMINGHAM ASSESSMENT REPORT: Recommendation: ***Obtain administrator access for BPD PTD to CAD/RMS so staff can provide the vendor access to the system for trouble-shooting, maintenance, and support.*** Note that City IMS is likely being cautious in providing system administrator access due to security concerns, as there is currently only one system administrator login/password. As such, BPD should work with NewWorld/Tyler to implement unique system administrator credentials, so that each user is identified when he or she logs in to the servers…Consider adding staff to perform system configuration and testing during upgrades and provide daily CAD/RMS user support. (e.g., password resets, user errors, etc.)

ADDITIONAL ASSESSMENT RECOMMENDATION: The following is an additional recommendation provided to PSP sites related to use of records management systems:

RMS Query: There is no mobile access to the RMS. Currently, the web portal tool queries information from the RMS for master name information, but the interviewed officers stated that there are gaps in the data returned. [*The department] should conduct a business process review to identify use cases and additional officers' needs for information that would allow IT to enhance the web portal to return this information in a parsed format.* Three examples from the RMS given by officers were: report narratives, which IT mentioned would be possible with .pdf attachments; citation/accident data; and BOLOs. BOLOs typically transfer from CAD to RMS, but the RMS also allows BOLOs and other types of notifications to be created. By querying the RMS for this information, it could be returned in a parsed format through the web portal versus the current unparsed data set that is showing in mobile CAD. IT should continue with investigating the attachment of .pdf narratives to the query returns on the RMS hits. This would allow for the lack of a mobile RMS to be minimized.

Finally, the subject experts recommended that PSP sites consider integration with other local and state law enforcement RMSs to improve information sharing capabilities, ease of access, and the efficiency of data dissemination.

BIRMINGHAM ASSESSMENT REPORT: Recommendation: *Consider discussing integration with the State so that citation data can also be fed into the BPD RMS.*

ADDITIONAL ASSESSMENT RECOMMENDATIONS: The following are additional recommendations provided to PSP sites related to technology integration:

It is crucial to ensure that any existing or new software like CAD/RMS, county [jail management software], citation software and State accident/domestic violence systems are integrated.

Jail Integration: *It is highly recommended to automate the RMS arrest data flow to the county Sheriff's new jail system.* This would allow officers to process arrests from the field or office and then electronically transfer them to the jail without printing additional paperwork. The jail would reduce data entry and improve data accuracy, which typically suffers from transcription errors. Updates to the jail record, mugshots, or identity issues should then flow back to the RMS with notifications to the officers. The Bureau of Justice Assistance (BJA) can provide training and technical assistance (TTA) to assist in specification documents and development along with procedural changes.

State databases: The agency should explore integrating with the state accident and domestic violence systems for data dumps into their RMS so they have one location for all of their activity and data. This would require collaboration with the state, city IT and [the police department]. The Bureau of Justice Assistance (BJA) can provide training and technical assistance (TTA) to assist in specification documents and development along with procedural changes.

Recommend seeking funding to update CAD/GIS/RMS systems and leverage shared systems, i.e. county hosted solution that would be centrally hosted. Economies of scale would benefit every agency, including [those who also need] a new system. PSP should identify TTA for RFP assistance.

Across technology assessment reports, the subject experts identified the need for access to reliable records from internal and external law enforcement sources in order to respond to and prevent incidences of violent crime. Officers, and especially investigators, benefit from the availability of accurate, timely crime data. PSP agencies cannot reap these benefits without identifying current data inconsistencies, areas of inaccessibility, and opportunities for further criminal justice partnerships. Our coding also highlighted the importance of reliable technology and relationships, with 104 references to Interagency Partnerships across the technology assessment reports.

HARDWARE: CAMERAS AND CCTV

Cameras and CCTV (closed-circuit television) were the third most commonly referenced software or hardware, appearing 60 times in 12 assessment reports and 58 times in 10 assessment reports, respectively. According to the subject experts, PSP sites need to better understand the scope of their existing fleet of cameras and software. The subject experts also recommended that sites integrate cameras with other proactive monitoring systems, such as shot detection technologies and automatic license plate readers (LPRs). The integration of cameras was a common hardware and software recommendation across the technology assessment reports.

BIRMINGHAM ASSESSMENT REPORT: Crime Scene Photos Officers are able to check out one of approximately five to eight pooled cameras in a station to capture photo evidence when the crime scene unit is not deployed to a scene. The SD Card from the camera is then submitted to the photo lab so the photos can be uploaded. The process by which photos are uploaded from the pooled cameras could be streamlined. Recommendation: *Provide officers with a platform to upload photos from the pooled cameras from the stations, or deploy a mobile application that allows photos to be uploaded from a mobile device to the cloud storage where body camera video is stored.*

LITTLE ROCK ASSESSMENT REPORT: CCTV/Shot Spotter/ALPR: *The PSP should encourage [a peer PSP agency] to act as a peer site to help LRPD better understand the force-multiplier potential of using CCTV for ALPR, shot detection, and other analytics.* The PSP should also leverage Stu Bruce on the mapping software analytics and integration. Shot detection could be placed in high target areas, while CCTV could be enhanced and used in high crime areas to help with aggravated assaults and robberies by identifying vehicles or people. LRPD should

investigate video analytics software offered by Milestone and work with Stu Bruce on an approach.

MILWAUKEE ASSESSMENT REPORT: Closed-Circuit Television (CCTV): Milwaukee has 41 citywide CCTV cameras along with about four mobile cameras. The dispatch center monitors the CCTV environment. NIJ awarded MPD a grant to evaluate video analytics. ***MPD will study the feasibility of applying analytics to the available ALPR and CCTV and the results should inform decisions to expand these programs.***

ADDITIONAL ASSESSMENT RECOMMENDATIONS: The following are additional recommendations provided to PSP sites related to cameras and CCTV:

Closed-circuit Television (CCTV): It was reported by [the department's] IT that it maintains or has access to 76 safety cameras, 16 legacy cameras, 20 mobile cameras, 148 metro housing authority cameras, and 76 private cameras (baseball, amphitheater, etc.). The internal cameras are stored decentralized for 20 days. Milestone is the video management system that offers access to [the department] for investigative and specialized units. Officers and precincts also have access for special events or on an as-needed basis. Dispatch does not have access to cameras. ***It is recommended that dispatch be allowed assess to cameras. It is further recommended that an interface to the CAD system be investigated for feasibility to allow dispatch visual confirmation of issues where cameras are available, along with providing an officer safety aspect.***

CCTV/Shot Spotter/ALPR: ***The PSP should encourage [a peer PSP agency] to act as a peer site to help [the department] better understand the force-multiplier potential of these systems.*** A review of the current cameras should be done to explore the ability to incorporate software video analytics like LPR and facial recognition technology into their existing CCTV system along with any new cameras purchased.

Closed-Circuit Television (CCTV): It was reported by city IT that they have 99 cameras placed throughout the city with the feeds going to the county EOC. [The department] did not seem to be aware of any working cameras systems in the city or at EOC. ***The reviewers recommend that the inventory [the department] plans to do on hardware and software include confirmation of cameras.***

[The department] has 50 CCTV cameras that are integrated and actively monitored by 8 retired offices. They also incorporate video analytics software…***Recommend working with TTA to identify best practices to monitor and do analytics on CCTV along with incorporating video data with BWC and LPR video.***

CCTV Infrastructure Review: A significant investment has been made by [the department] and the City to create and maintain the CCTV environment. While there are elements that are managed by the [department], much of the system is maintained by [a] quasi government

entity. The system has many legacy camera components that are seeing a standard increase in maintenance time and cost as they get older. Expectations need to be set for camera and infrastructure replacement so the system is maximized. The City pays for a significant data connection network for many of the cameras. The camera infrastructure should be reviewed and choices made for the best operation at the lowest possible costs. The cameras are not a significant portion of patrol and seem to provide post action support rather than preventative support… ***Recommend investigating camera integration systems.*** [A member of a fellow PSP site] may be available to give a review, demonstration, and recommend direction… ***Recommend evaluating CCTV analytic systems to reduce the staffing resources necessary to monitor all cameras at all times.***

The subject experts' recommendations about cameras and CCTV use were similar to their recommendations about RMS and CAD. Across technology assessment reports, the subject experts discussed the importance of access and highlighted the need for agencies to work with the appropriate IT groups to ensure their technology is current and responsive to their needs. In six assessment reports, the subject experts recommended that PSP sites look to a specific PSP agency as a model peer agency to better understand the force-multiplier effect of integrating CCTV with LPRs, shot detection systems, and other analytics. The subject experts stated that this agency is also a good model for the role of personnel in using and analyzing cameras. Using peer agencies as a form of TTA in this manner demonstrates the importance of collaborating with other agencies to promote information sharing and coordinated crime response.

PERSONNEL

The PSP evaluation team identified issues and recommendations related to the category Personnel across technology assessment reports, with 23 references to Departmental Organization in 9 assessments and 20 references to Need to Hire and/or Promote in 8 assessments. The subject experts commonly cited the need to have a dedicated technology group or individual in the department to consider and implement new or revised technologies and processes. They also recommended that departments task the group or individual with representing the department's technology needs to the local government and their IT organization.

BIRMINGHAM ASSESSMENT REPORT: Recommendation: *The City should consider identifying a dedicated police IT support group within IMS that will be on call 24/7 to support police operations and clearly define the difference between IMS and PTD roles and responsibilities.* Police technology needs should be considered for prioritization over other needs that may not directly impact public safety and mission-critical operations. As an alternative, PTD could take ownership of frontline support of most BPD systems but would need additional staffing and resources to do so. Recommendation: Consider requesting funding to staff a dedicated BPD IT helpdesk to support its users. Recommendation: Consider hiring a civilian IT professional to run BPD PTD post-October 2018.

LITTLE ROCK ASSESSMENT REPORT: NIBIN/eTrace: *The reviewers recommend that a dedicated person or team be assigned to handle NIBIN and eTrace entries and analysis.* Having a single point for both ATF tools would allow for enhanced use of the data and provide focused training sessions. LRPD should work with ATF to determine if a dedicated NIBIN machine would be beneficial. Additionally, the agency is seeking to procure a ballistics recovery tank.

MILWAUKEE ASSESSMENT REPORT: Recommendation: BJA's Information Technology for Information Sharing TTA provider, SEARCH, should be engaged to assist in the creation and evaluation of a RMS Implementation Program Team. *Assign a dedicated support staff with the needed knowledge to handle the administrative and operational requirements needed for program success.* Resources, often called dotted-line resources, are those components that own certain aspects of the program, such as IT. This manager, and the assigned group, act as a coordinator between the resources and the customer to ensure service level agreements are realistic and achievable. The agency should designate a program champion and manager that represents the law enforcement interest during the hardware and RMS implementation processes. This manager needs access to the authority to change organizational culture in every effected unit.

NEW ORLEANS ASSESSMENT REPORT: The lack of transparency between the different departments on IT projects was apparent during our visit. For example, the academy just purchased new software that the NOPD IT department did not know about. They were also not fully aware of the project the deputy chief and analysts were working on regarding software/servers for a new Compstat process. The agency vocalized several needs for technology, but demonstrated no documented plan on what, why, and how they wanted to implement. *A dedicated NOPD CIO type position would allow someone to represent NOPD's needs to the city in a clear and concise way.* This position would allow them to dedicate time to funding streams like grants outside the city also. It is recommended that the CIO type position report to the Superintendent to ensure his vision is clearly documented and implemented. Additionally, it is recommended that this person have a strong technology background in business analytics, implementation, and project management. Finally, it is recommended that the NOPD IT department fall under that position to align resources similar to the city. Once in place, best practices dictate that the CIO should conduct a full business process review and gap analysis to determine the top needs of the department. Considerations should be given as to how the data warehouse can be maximized to meet these needs.

ADDITIONAL ASSESSMENT RECOMMENDATIONS: The following are additional recommendations provided to PSP sites related to technology personnel:

It is recommended that [the department] assign a sworn project manager to new projects like the body-worn camera and in-car video projects who would be the default project owner and sworn liaison in collaboration with the IT Division. This would aid in business process, use case, and policy development. The IT Division relies on FTOs and the Patrol Committee for feedback. Those groups should work in collaboration with the sworn project manager to be technology champions to assist in the adoption of new technology and implementations, along with assisting in the development of business analytics.

With the IT services managed by the City with input from the PD. And **the fact that the PD representatives are mostly officers with double duty, indicates less than adequate input to IT decisions.**

A single technologist manages all aspects of the network and technology resources within [department] control. All HQ internal servers, switches, applications and databases are managed by a single person limits the 24/7 nature of the PD and means implementing changes are only as good as the available time provides. **More technology resources should be created and assigned to the unit as force multipliers for officers and administration.**

IT Resource Recommendations: Recommended staffing includes: IT Manager,...Network Engineer/Hardware Specialist,...Database Administrator/SQL Developer,...Applications Specialist/Trainer,...Help Desk Personnel based on call volume. Building these positions is difficult but I recommend leveraging the momentum available. But, if positions cannot be created I recommend at least an IT Manager and two support personnel with the same technical skills listed above. Possible consolidations include 1 and 4 or 2 and 3.

Assign staff responsible for implementation of new systems. These personnel should include Technology, Training, Records, Crime Analysis, Budget, Grants, Administrative Command, and affected Operations: command, middle management, and field representation. Meetings needs to be held regularly to keep all personnel on track and an extended communications plan should be developed to keep the entire agency's expectations managed.

The IT department and [the police department] both identified a need to have a business analyst to justify and explain [the police department's] IT needs. It is highly recommended that the department identify someone who can do true business analytics. A dedicated [law enforcement] business analyst position would allow someone to represent [the police department's] needs to IT and the city consistently.

A designated staff member in a law enforcement agency can manage and lead the implementation of new technology, represent technology interests both internally and externally, and conduct the necessary preparation to propose technological changes and additions. Across assessments, the subject experts found that PSP agencies did not have adequate processes in place to coordinate and maintain awareness of technology changes in the department, leading to duplicate efforts and missed opportunities to implement technology best practices. A dedicated technology group or individual, as recommended by the subject experts, would centralize information on new technologies and processes, promote efficiency and situational awareness in the departments, and ensure that the departments' technology needs are well understood and ultimately met.

WITH THESE FINDINGS, THE PSP TTA PROVIDERS CAN PROACTIVELY DEVELOP RESOURCES TO ASSIST PSP SITES WITH IMPLEMENTING SOFTWARE SUCH AS THOSE RELATED TO RECORDS MANAGEMENT SYSTEMS, COMPUTER-AIDED DISPATCH SOFTWARE, AND CAMERA INTEGRATION AND WITH INVESTING IN AGENCY TECHNOLOGY PERSONNEL.

CONCLUSION

The PSP evaluation team analyzed the 13 technology assessment reports from the technology assessments that PSP sites have undergone as of August 2018. This analysis uncovered the three most prevalent themes across all technology assessment reports. First, subject experts frequently identified the need for improved technology, training, IT support, and cross-agency integration in relation to records managements systems and computer-aided dispatch software. Second, subject experts identified the need for increased investment in and effective use of cameras, including body-worn cameras and closed-circuit televisions. Third, subject experts frequently noted that sites require more investment in personnel to support agency use of technology (including increased training opportunities and additional hiring and promotion) and champions to oversee technology concerns.

These thematic findings will better inform the execution of technology assessments in the future, the provision of TTA to PSP sites, and the work of the technology community of practice. With these findings, the PSP TTA providers can proactively develop resources to assist PSP sites with investing in agency technology personnel and with implementing software such as those related to records management systems, computer-aided dispatch software, and camera integration. These findings will also inform the work of the Technology Community of Practice within PSP. This community of practice will bring together technology personnel from PSP sites to network and engage in peer learning. The findings in this report suggest potential topics for training and workshops, as well as facilitated discussions on common challenges in PSP sites.
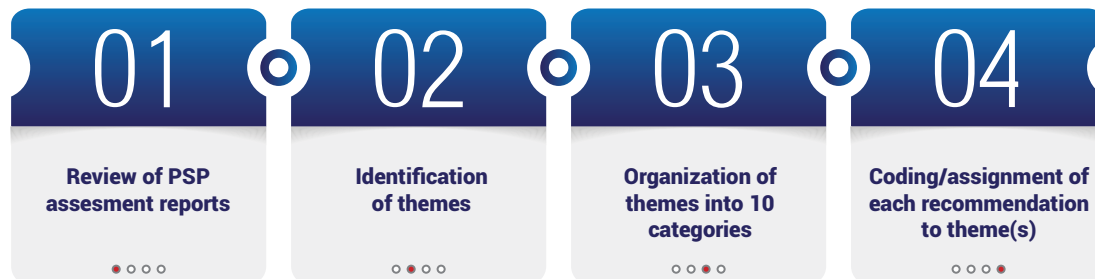
APPENDIX A: APPROACH AND METHODOLOGY

The PSP evaluation team initially reviewed the 13 technology assessment reports to identify common themes, such as "Records Management," "Data Sharing," and "Peer Agencies" (see Appendix A for a full list with definitions). We also included themes not identified in the technology assessment reports that we deemed relevant to PSP, resulting in 67 individual themes. We then organized these themes into 10 categories:

COMMUNITY STAKEHOLDERS	CRIME PREVENTION	DATA AND ANALYSIS	FUNDING	GOVERNANCE AND POLICY
INTERAGENCY PARTNERSHIP	INVESTIGATIONS	PERSONNEL	PLANNING	TECHNOLOGY

The PSP evaluation team used the qualitative analysis software NVivo to code the technology assessment report recommendations against the 77 themes (including both the individual themes and overarching theme categories) at the sentence level or higher, and we coded recommendations to multiple themes when appropriate. The same themes are used for each topical assessment type, so not all themes were used in the technology assessment analysis.

Figure 1. Recommendation coding process

01	02	03	04
Review of PSP assesment reports	Identification of themes	Organization of themes into 10 categories	Coding/assignment of each recommendation to theme(s)

Each appearance of a coded sentence or group of sentences in the technology assessment reports created a "reference." We were able to identify the most common of the 77 themes because they had the greatest number of references. The PSP evaluation team also conducted a query for the most common three-letter or larger words (such as "camera") across all assessment reports in order to identify common discussions of technologies or violent crime reduction approaches. The PSP evaluation team identified the most common words by their occurrences across the assessment reports.

APPENDIX B: THEME DEFINITIONS

Theme	Definition	Example sentence coded
Community stakeholders	Interacting with community members and groups	"The regional should be seeking regional policies to help citizens that move from one jurisdiction to the next can gain a clear understanding of the limitation and appropriate uses of LPRs. This would also help build standard FOIA responses and keep citizens making inappropriate requests."
New partnerships	Creating partnerships which did not previously exist with community members or organizations	None
Outreach	Engaging with the community to share information and promote relationships	"Ensure communications of expectations are transparently expressed to those most affected by the use of evidence in [the city], primarily the prosecution, defense, and the public."
Procedural justice	Maintaining internal and external procedural justice	None
Strengthen partnerships	Improving and strengthening relationships between the police agency and their community	None
Trust	Increasing citizen and community trust in the police agency	"The [MPD] has found success leveraging social services data and analytics to promote community relations. Outreach to create a peer discussion with the community is recommended. This could be facilitated and managed by SEARCH to ensure the effort is re-usable."
Crime prevention	Proactively reducing the incidence of crimes	"Body-Worn Cameras (BWCs): LRPD does not have BWCs but is actively developing policy and implementation processes. BWCs could provide a significant benefit in the domestic violence aggravated assault cases when dealing with issues of victim recanting of charges."
Drug crime prevention	Proactively reducing the incidence of crimes related to drugs and the drug market	"The reviewers suggest the [PSP site] look to other options such as HunchLab and/or PredPol for possible "predictive policing" solutions. In addition, the staff at headquarters could benefit from exploring advanced analytics tools and training, including near repeat offender tools, risk terrain modeling (RTM), and social network analysis (to address group violence, gang, and illicit drug-market activity). A separate and independent review by crime analysis subject matter experts (SMEs) available through PSP would be advisable. A more in-depth crime analysis review would help identify strengths and gaps in current crime analysis and mapping capacities and identify areas for progressing from a crime analysis unit that is mostly reactive and administrative to one that is more proactive and more focused on problem-solving strategies."
Gang crime prevention	Proactively reducing the incidence of gang-related crimes	"The reviewers suggest the [PSP site] look to other options such as HunchLab and/or PredPol for possible 'predictive policing' solutions. In addition, the staff at headquarters could benefit from exploring advanced analytics tools and training, including near repeat offender tools, risk terrain modeling (RTM), and social network analysis (to address group violence, gang, and illicit drug-market activity). A separate and independent review by crime analysis subject matter experts (SMEs) available through PSP would be advisable. A more in-depth crime analysis review would help identify strengths and gaps in current crime analysis and mapping capacities and identify areas for progressing from a crime analysis unit that is mostly reactive and administrative to one that is more proactive and more focused on problem-solving strategies."
Gun violence prevention	Proactively reducing the incidence of gun-related crimes	"Implement a NIBIN machine at [the Camden County Police Department (CCPD)] and get users trained and certified."
Treatment and social services	Working with local social service providers to deliver assistance to community members	"Neighborhood Strengthening: [MPD] has found success leveraging social services data and analytics to promote community relations. Outreach to create a peer discussion with the community is recommended. This could be facilitated and managed by SEARCH to ensure the effort is reusable."

APPENDIX B: THEME DEFINITIONS

Theme	Definition	Example sentence coded
Youth	Working to address youth-related community issues	"Agency is looking for a way to create a watch list for significant threats to the school environment, particularly persons with adjudicated restrictions from trespassing on school property. Recommend investigating the NCIC missing persons file as a notification method, as long as the individual falls into the guidelines required for entry."
Data and analysis	Collecting and using metrics and information	"[CCPD] is interested in the crime analysis training offerings by BJA's TTA providers on new staff training, best practices and new technologies/trends in crime analysis."
CompStat	Recommendations related to the CompStat process and/or data and accountability	"Given the status of the current reporting capabilities, the CompStat process suffers from an inability to set targeted, achievable goals with an expectation of measuring success and failure to meet them. Recommend TTA services for CompStat be deployed to assist in making the best of the reporting capabilities as is, and planning for the changes coming with the RMS replacement."
Crime mapping	Documenting and analyzing the geographical representation of crimes	"Site Visits to Other PSP Sites: Several PSP cities have established or improved their crime analysis and crime mapping capacities through PSP crime analysis assessments and PSP resources. [Many PSP sites] have significantly advanced their analytic capacities, particularly related to violent crime and group violence incidents. These could be potential sites for peer-to-peer visits."
Data dissemination	Methods to ensure data is sent to or consistently available to officers or agency partners	"Recommendation: Consider installing a dedicated PC in roll-call rooms to enable roll-call training and aid in the distribution of critical information during roll call."
Data sharing	Agreements or methods to view or transfer data between organizations	"Recommendation: Engage with other law enforcement agencies in the region to determine the possibility of establishing a regional information-sharing platform."
Interoperability	The ability to access data between organizations or pieces of equipment	"It is recommended the agency investigate the feasibility of creating a single sign-on, consolidated search engine that can return all the data in an easy-to-read, parsed format with images."
More analysis	The addition of specific forms of analysis to existing practices	"A national search system such as NDEX and LInX provide advanced query and link analysis opportunities at very low costs. This is often a low cost, standards based approach that allows for additional connection to other systems."
New metrics	Additional information or data to collect which is not currently being collected or documented	"Form Review: The agency should review all the existing forms in the current field reporting system for improvements. It was identified by the officers while the reviewers were questioning them that updating the Field Interview form to capture demographic information and alias information on associates so that master name records could be created or linked would be extremely helpful for information gathering and investigations."
Offender-based strategy	Analysis strategies which focus on the individual or individuals committing a disproportionate number of offenses	"The reviewers suggest the [PSP site] look to other options such as HunchLab and/or PredPol for possible "predictive policing" solutions. In addition, the staff at headquarters could benefit from exploring advanced analytics tools and training, including near repeat offender tools, risk terrain modeling (RTM), and social network analysis (to address group violence, gang, and illicit drug-market activity). A separate and independent review by crime analysis subject matter experts (SMEs) available through PSP would be advisable. A more in-depth crime analysis review would help identify strengths and gaps in current crime analysis and mapping capacities and identify areas for progressing from a crime analysis unit that is mostly reactive and administrative to one that is more proactive and more focused on problem-solving strategies."
Processes and procedures	Analysis practices in a department	"The crime analysis team makes the best of "dirty" data, which they force into the best possible analytic package. The RMS replacement and new business processes are crucial to improving the data components of the Comsat process."
Program evaluation and research	Assessing a departmental program	None

APPENDIX B: THEME DEFINITIONS

Theme	Definition	Example sentence coded
Report automation	Creating reports automatically using software rather than analytical personnel	"Integration: IT should investigate the feasibility of transferring data to the courts' systems once an arrest is completed in AFR that triggers the automatic generation of required documents like warrants, probable cause, and affidavits. The interface should pull in basic demographic information and narratives."
Social network analysis	Analysis strategies which map or explore connections between offenders	"Formal Social Network Analysis (SNA) Training: PSP formal training in SNA is available through the Naval Post Graduate School. [The department] should consider sending a team of detectives and crime/intelligence analysts to the next training made available to PSP sites."
Funding	Gathering and using financial resources	"Recommendation: Consider requesting funding to staff a dedicated BPD IT helpdesk to support its users."
Cost benefit analysis	Measuring the costs and benefits of a proposed technology to an agency	"It is recommended that a cost benefit analysis be completed to compare a query of the separate RMS, eCITE and State accident/domestic violence databases versus building data dumps form the disparate systems."
Diverse funding sources	Soliciting funding from a variety of sources	"Identify grant opportunities that are geared to innovative approaches to solve police efficiency and evidence-based processes."
Federal funding and grants	Seeking funding and grants from federal organizations	"The agency could utilize BJA's TTA provider on grants assistance to help them utilize grants from COPS (https://cops.usdoj.gov/Default.asp?Item=65) and BJA, like the Technology Innovation for Public Safety (TIPS) and Strategic Policing grants for 2017 that were just released by BJA (https://www.bja.gov/funding.aspx)."
Grant writing process and staff	An agency's grant writing procedures and the staff involved in writing and managing grants	"While there have been some grants awarded to the agency, there are many programs that could be supported by grant funding. It is also recommended that the agency look to collaborate [with a local university] to identify research and project grants that could be collaborative through BJA's SPI grant that was just released by BJA."
Local funding	Soliciting funding from local sources	"Recommendation: Conduct a full review of BPD's hardware, server, storage, and PC needs, and consider including a recurring budget line item to properly maintain critical hardware and systems infrastructure"
More funding	Pursuing and using additional funding beyond an agency's current level	"During the site visit and review, some deficiencies in the mobile environment were discussed. Overall, IT appears to be addressing some of these concerns, as evident by its plan to replace older mobile hardware and software. It is recommended that [the department] conduct a business process review to identify gaps in technologies as it goes through the process of replacing and modernizing the mobile environment for patrol officers. BJA has several training and technical assistance providers that can assist in providing recommendations or assistance in specification documentation, development, and procedural changes. It is further suggested that [the department] explore grant funding opportunities that might assist in procurement and implementation."
Private and foundation funding	Soliciting funding from private sources, including foundations	None
State funding	Soliciting funding from state sources	"It is recommended that the agency investigate funding options through state and federal means to assist with funding gaps. The COPS office and BJA offer many programs that could assist in this area including state JAG funding."
Governance and policy	Agency management, standards, and procedures	"The PSP should identify a TTA provider to assist [the department] in identifying a new direction forward and develop a plan for policy management."
Discipline	Disciplinary actions in the department	"Agency is under consent decree with federal judge...They built in an early warning system...to combat officer issues. Microsoft is taking over and moving to the cloud. Recommend: Investments like this can be leveraged for additional agencies if implementation is properly documented. I am not sure there is TTA for this type of work but it may be a SEARCH type effort."
Leadership	The training, structure, and role of leadership	"[The department] should provide supervisors with MDTs to familiarize managers with the mobile software systems, encourage the automation of the approval process, and reduce reliance on paper based methods. This would also allow more supervisor oversight to officers during shift work and improve higher levels of management with supervisory performance management analysis."

APPENDIX B: THEME DEFINITIONS

Theme	Definition	Example sentence coded
Morale	Officer morale and departmental cohesion	"The agency should adopt an internal transparency when dealing with the two major projects, RMS and hardware upgrades. Regular reporting and review will manage expectations and keep resources focused on the long-term goal while completing short-term tasks."
SOPs	Standard operating procedures, or established departmental procedures	"The operational units should ensure, once the new systems are in place, training to organizational SOPs be revisited to familiarize officers with the processes that have been bypassed, due to speed and reliability issues."
Use of force	Use of force policies, procedures, or practices.	None
Wellness	Officer safety and physical and mental health	"Agency is under consent decree with federal judge…They built in an early warning system…to combat officer issues. Microsoft is taking over and moving to the cloud. Recommend: Investments like this can be leveraged for additional agencies if implementation is properly documented. I am not sure there is TTA for this type of work but it may be a SEARCH type effort."
Interagency partnerships	Creating, strengthening, and sustaining relationships with other agencies	"Recommendation: Consider discussing integration with the State so that citation data can also be fed into the BPD RMS."
Criminal justice system	Developing partnerships among organizations across the justice system	"Recommendation: Work with prosecutors to develop a business process for formally accepting "share links" from BPD and storing the related video and metadata."
Federal partnerships	Developing or strengthening partnerships with regional federal partners	"The ATF has assisted the State and [the department] to include the NIBIN efforts into the new Public Safety Headquarters in a full Forensics Crime Laboratory. They are about one year from go-live so any assistance the ATF, FBI or OJP programs can offer to speed up this process would appreciated. Shell casing results are shared and integrated into investigations in a very promising collaborative process."
Local partnerships	Developing or strengthening partnerships with local partners	"Recommendation: Engage with other law enforcement agencies in the region to determine the possibility of establishing a regional information-sharing platform."
New partnerships	Creating partnerships that did not previously exist	"The PSP should establish a firm relationship with agents, such as IAPE, that promote best practices and provide resources to agencies such as the [the department]. If possible, it should bring training and technical assistance (TTA) to the [the department]."
Peer agencies	Learning from other law enforcement (peer) agencies	"The PSP should encourage [a peer PSP agency] to act as a peer site to help MPD better understand the force-multiplier potential of using CCTV for ALPR, shot detection, and other analytics. The PSP should involve NIJ as a collaborative effort to help MPD reduce violent crime."
State partnerships	Developing or strengthening partnerships with state partner organizations	"RMS Query: The agency should explore possibilities with CAPS above for integration and query opportunities of their current RMS system. This should include the ability to query the eCITE and state systems."
Strengthen partnerships	Further developing existing partnerships	"The PSP should coordinate for [CCPD] to present their model of success with the C4, a new version of task force that puts all of the resources in a common city location with a common strategic mission while maintaining disparate tactical environments."
Investigations	Conducting and managing investigations, including crime-specific approaches to investigations	"Recommend: As electronic case management systems with RMS and Mobile integrations is the best tool to apply an investigative force multiplier by enabling every officer to act as an extended investigator and data collector, it is recommended that the PSP identify regional case management successes and work with the [department] to implement such a system."
Case management	Managing the investigations process and associated materials	"Recommend: As electronic case management systems with RMS and Mobile integrations is the best tool to apply an investigative force multiplier by enabling every officer to act as an extended investigator and data collector, it is recommended that the PSP identify regional case management successes and work with the [department] to implement such a system."
Cold cases	Old and challenging cases	None

APPENDIX B: THEME DEFINITIONS

Theme	Definition	Example sentence coded
Evidence	Evidence practices in investigations	"Use existing resources, such as the SEARCH Information Sharing TTA, to provide data mapping for the legacy [department] evidence control systems."
Gangs	Gang-related crimes and activities	None
Homicide	Investigations of homicides	None
Procedures and policies	Investigation practices and standards	"The reviewers recommended the law enforcement tool from the National Motor Vehicle Title Information System (NMVTIS), the FBI's Network Data Exchange (NDex), and the Law Enforcement Information Exchange (LInX), and investigating water/sewer data bases (managed by the city) as useful investigative tools for [the department] to evaluate. The reviewers also recommended that the agency contact BJA's National Technical and Training Assistance Center (NTTAC) for investigative training that could help improve skillsets."
Social media	Using social media in investigations	"DA's office would like to increase their use of social media tools for investigations, enhance their social network analytics, and identify best practices training on analytics. "Recommend: Crime Analysis TTA resources be identified and aligned to serve the DA as well as the PD/Sheriff agencies."
Witnesses	Managing witnesses in investigations	None
Personnel	Staffing management and officer professional development	"The IT department and [the police department] both identified a need to have a business analyst to justify and explain [the police department's] IT needs. It is highly recommended that the department identify someone who can do true business analytics. A dedicated [law enforcement] business analyst position would allow someone to represent [the police department's] needs to IT and the city consistently."
Cross-unit collaboration	Collaboration among groups in a department	"Program development removed CAs from CRIMS project teams. A complaint by the IT Staff, this is a solid example of conflict between technology groups. Without interviewing the decision maker it seems to enhance the argument that the Sheriff staff, who are closest to the end user, are not being included in critical guidance discussions."
Departmental organization	Department units, hierarchy, and organizational relationships	"The City should consider identifying a dedicated police IT support group within IMS that will be on call 24/7 to support police operations and clearly define the difference between IMS and PTD roles and responsibilities. Police technology needs should be considered for prioritization over other needs that may not directly impact public safety and mission-critical operations. As an alternative, PTD could take ownership of frontline support of most BPD systems but would need additional staffing and resources to do so. Recommendation: Consider requesting funding to staff a dedicated BPD IT helpdesk to support its users. Recommendation: Consider hiring a civilian IT professional to run BPD PTD post-October 2018."
Need to hire and/or promote	The need to create and fill a specific position or unit	"Recommendation: Consider adding staff to perform system configuration and testing during upgrades and provide daily CAD/RMS user support. (e.g., password resets, user errors, etc.)"
Schedules and shifts	Departmental scheduling and shift practices	"City IT Support: The city stated that they are investigating 24/7 help desk services and online self-service for password assistance. The reviewers recommend that the city continue in that direction and roll out the online password assistance. It is also recommended that items that are mission critical to law enforcement be examined to ensure that any maintenance, upgrades, or patches are happening outside peak hours for law enforcement activity. The city should ensure that non-NOPD employees with access to law enforcement sensitive information are fully screened. Finally, since the city houses the servers for NOPD and maintains the network, it is recommended that someone be on-call 24/7 to address issues that arise."
Training needed	Training for department personnel	"Recommendation: Provide refresher training to existing RMS users in both how to use the system and how to record crime pursuant to NIBRS."

APPENDIX B: THEME DEFINITIONS

Theme	Definition	Example sentence coded
Planning	Developing and institutionalizing agency changes	"Station 28 should perform an inventory of spreadsheets and micro databases. This inventory should be maintained, reviewed, and shared with LASD to ensure compliance and reduce overlap of data systems. This can also be used to provide direction to future technical implementations."
Strategic planning	Creating a plan of direction and action for the department	"The reviewers recommend that the agency look to BJA's TTA provider list through the National Training and Technical Assistance Center (NTTAC) for resources to assist them in outlining and prioritizing a technology action plan."
Sustainability	Institutionalizing technology and procedural changes	"Work with City IMS to calculate and plan for long-term storage needs approximately 120 to 180 days after implementation"
Technology	Agency use of technology, including new equipment and procedural changes	"Agency is interested in ALPRS, also for school monitoring. There are parking ALPRS that are not tied to LE, this could be a cost saving gap that only requires a cooperative agreement and a reasonable practice change for how to handle stolen vehicles when identified."
Insufficient equipment	The need for additional equipment or replacement or repair of existing equipment	"Detectives require basic technology to assist in investigations. Further, detectives must sometimes compete for resources from the Forensics Unit, given the unit's limited resources. Detectives also expressed a need for cellular "hotspots" from a second carrier when there is no coverage in certain areas of the City for BPD's existing cellular carrier. Detectives also do not appear to have access to an information-sharing platform to be able to search regional data for an investigation."
Interoperability	The ability to access or use technology systems between organizations or pieces of equipment	"It is recommended that [the department] investigate the feasibility of expanding the interface between the courts and the RMS/new field reporting system, especially for transferring the arrest data."
IT support needed	Services or technology changes needed by the agency from the responsible IT organization	"Examples of issues identified: workstation profile lock down issues in car for officers (the city staff should do monthly ride-alongs to keep in touch with the end-user), help desk only available during regular business hours is a public and officer safety issue, legacy systems and training accessibility are points to be measured to evaluate the city commitment to PD services."
Privacy	Maintaining individual privacy as new technology and systems are introduced	"[CCPD] is implementing LPR, Body Cameras and other technologies that will need solid privacy policies. PSP BJA TA Task – Review current policy polices and advise on revisions based on BJA's global standard Privacy Program cycle taking into effect State required polices. PSP BJA TA Task – Work with [CCPD] to develop any new or missing privacy policies base on the Privacy Program Cycle."
Records management	RMS (records management systems) and the agency's ability to collect and store information	"Mobile RMS: The agency should examine reactivating the mobile RMS environment that was once offered by Cisco and IT. [The department] should ensure implementation and adoption by engaging its sworn IT champions."
Software and hardware	Necessary software or hardware technology needed by the agency	"[CCPD] is expanding the Facial Recognition software that is currently used with CCTV. The agency has a firm grasp of the technology and have policies in place that allow for effective process modification. If a resource is available with the requisite knowledge it would be beneficial to offer an independent review and evaluate their project for a promising practice example to other agencies."
Technology suggestion	Specific new technology or technology change recommended to be implemented	"It is recommended that the new handheld devices include a barcode-scanning capability to read driver's licenses and vehicle registrations that allows for quick information transfer to citation forms, NCIC for queries, and the AFR."
Training needed	Technology training needed or recommended	"The PSP should leverage the existing BJA TTA providers to offer training and support options for MPD's data conversion and interface discussions with the vendor and third party project manager, SysLogic."

APPENDIX B: THEME DEFINITIONS

Theme	Definition	Example sentence coded
User interface	The specific dashboard or form of presentation through which end-users (usually officers) engage with a software	"Recommendation: Provide officers with a platform to upload photos from the pooled cameras from the stations, or deploy a mobile application that allows photos to be uploaded from a mobile device to the cloud storage where body camera video is stored."

APPENDIX C: THEMES CODED BY EVALUATION TEAM

Theme	Number of Assessment Reports Coded In	Number of References Coded
TECHNOLOGY	13	236
Software and hardware	12	71
Records management	11	50
Interoperability	12	44
IT support needed	7	17
Insufficient equipment	8	13
Technology suggestion	5	11
Training needed	3	9
User interface	5	8
Privacy	2	3
DATA AND ANALYSIS	13	150
Processes and procedures	8	31
Data sharing	9	30
More analysis	10	26
Interoperability	7	18
Crime mapping	7	12
Report automation	6	8
New metrics	3	6
CompStat	4	6
Social network analysis	3	5
Data dissemination	2	2
Offender-based strategy	1	2
Program evaluation and research	0	0
INTERAGENCY PARTNERSHIPS	13	104
Local partnerships	9	26
Peer agencies	11	25
Criminal justice system	7	18
Federal partnerships	5	16
State partnerships	6	14
New partnerships	2	2
Strengthen partnerships	1	1
PERSONNEL	12	73
Departmental organization	9	23
Training needed	8	22
Need to hire and/or promote	8	20
Cross-unit collaboration	4	5
Schedules and shifts	2	3
FUNDING	9	39
Cost benefit analysis	4	13
More funding	4	7
Local funding	3	6
Federal funding and grants	3	6
Grant writing process and staff	1	2
Diverse funding sources	2	2
State funding	1	1

Private and foundation funding	0	0
INVESTIGATIONS	9	29
Evidence	3	9
Case management	5	8
Procedures and policies	5	6
Social media	2	2
Witnesses	0	0
Gangs	0	0
Homicide	0	0
Cold cases	0	0
CRIME PREVENTION	8	21
Gun violence prevention	6	12
Youth	1	2
Gang crime prevention	1	1
Treatment and social services	1	1
Drug crime prevention	1	1
GOVERNANCE AND POLICY	8	19
SOPs	4	5
Leadership	2	3
Morale	1	1
Wellness	1	1
Discipline	1	1
Use of force	0	0
PLANNING	7	16
Strategic planning	7	13
Sustainability	1	3
COMMUNITY STAKEHOLDERS	3	3
Outreach	1	1
Trust	1	1
New partnerships	0	0
Strengthen partnerships	0	0
Procedural justice	0	0

National Public Safety PARTNERSHIP

www.nationalpublicsafetypartnership.org

CNA
ANALYSIS & SOLUTIONS

cna.org