PROSECUTOR DATA
WHERE IS IT NOW AND WHERE IS IT GOING?

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KARPEL FOUNDATION

PROSECUTORS' CENTER FOR EXCELLENCE

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INTRODUCTION

Prosecutors are called a black box from which data cannot be extracted or seen. This implies that prosecutors are hiding data. The more accurate assessment, from the research of this paper, is that the unavailability of prosecutor data is due to inadequate case management systems, insufficient funding, and a lack of focus on data.

A modern prosecutor embraces and uses data. Data is central to a prosecutor's work as it can inform policy decisions, guide management, provide transparency and allow for research. The vision has yet to be fully realized, but it is encouraging that there is a growing awareness both inside and outside of prosecutor offices of the critical need for data.

This paper gives an overview of the current state of prosecution data, summarizes the data challenges faced by prosecutors, identifies new trends that are springing up in prosecutor offices, and poses questions for the future.

RESEARCH METHODOLOGY

PCE's based its research on three areas of study:

- **BJA Survey**: A 2018 survey of 527 prosecutor offices originally funded by the Bureau of Justice Assistance (BJA survey)[1] asked representatives of prosecutor offices to answer a variety of questions including, the office's jurisdiction, staff, programs, and technological capabilities. Of the questions on the survey, PCE selected for analysis those that dealt with the staff and technological capabilities of the office.[2]

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[1] The 2018 survey was part of the National Prosecutor Consortium project that was supported by Award No. 2015-DP-BX-KOO4 awarded to Justice & Security Strategies, Inc. by the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice. PCE participated in this 2018 survey.

[2] The states represented in the 2018 survey were: Alaska, Arizona, California, Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, Oklahoma, Pennsylvania, South Carolina, Tennessee, Utah, Virginia, and Washington. Of these, we included in our analysis offices in the twenty-two states where 33% of the prosecutor offices responded. This provided a cross-section of prosecutor offices in each represented state. These states were: Alaska, Arizona, Colorado, Connecticut, Delaware, Indiana, Iowa, Kentucky, Louisiana, Michigan, Minnesota, Missouri, Montana, Nevada, New Jersey, New Mexico, New York, South Carolina, Tennessee, Utah, Virginia, Washington.

Table 1 – Office Sizes in BJA Survey

Office Size

Office Size Category	Value
Extra-Large (100+ Full-time Prosecutors)	~2
Large (21-100 Full-time Prosecutors)	~17
Medium (6-20 Full-time Prosecutors)	~29
Small (<5 Full-time Prosecutors)	~43
Part-time Only	~6
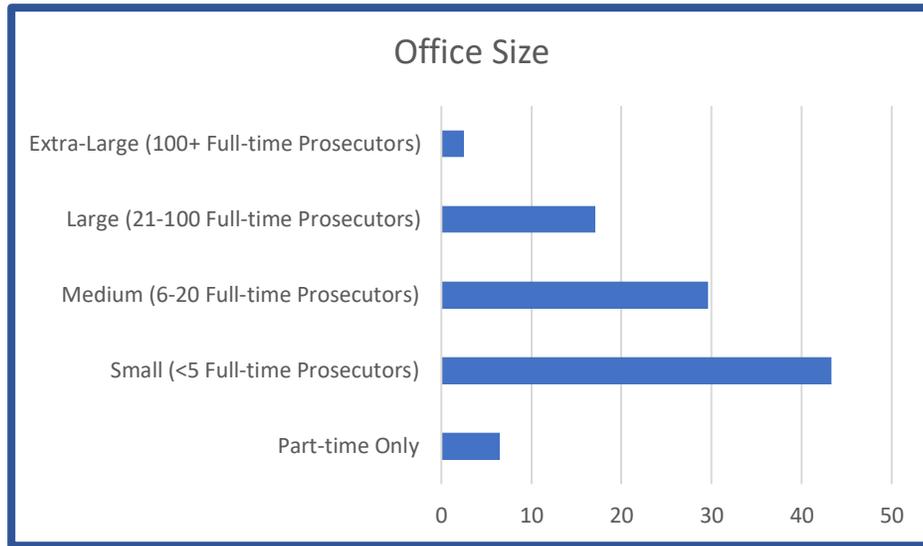
- **Interviews**: PCE conducted twenty-four interviews with prosecutors, prosecution coordinators, IT staff, and a software architect.[3] The interviews were based on a standard set of questions, which included, for example: What CMS do you use and what are its capabilities? How is data collected and audited? What reports can you run on your data? Do you use data to regularly guide management decisions? This report synthesizes the information received from these interviews. See Appendix for a copy of the interview questions and a list of the interviewees.
- **Literature Review**: A literature review of publications on addressing prosecutor data was undertaken. PCE collected non-profit reports, presentation recordings, and law review articles. These sources cover a range of topics including the best practices in data collection and management, data ethics, and areas of improvement. See Appendix for the Literature Review and a Bibliography of the articles cited in this paper.

Prosecutor Demographics

To put the information in this paper in context, it is important to understand the breakdown of the 2,330 local prosecutors in the United States, who are the focus of this research.

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[3] Notes and recordings of these interviews are on file with PCE.

Table 2 – Local Prosecutor Offices by Population Served

Local Prosecutor Offices by Population Served (2007)[4]		
Population	**Number of Offices**	**Percent**
1,000,000 or more	43	1.8%
250,000 to 999,999	211	9.1%
100,000 to 249,999	341	14.6%
99,999 or less	1,389	59.6%
Part-time offices	346	14.8%
Total	2,330	100%

In 2007 there were 2,330 local prosecutors; 25.5% of those offices served populations of 100,000 or more.[5] These large to medium sized offices employ 87.2% of the nation's prosecutors.[6] The remaining 74.4% of prosecutor offices serve jurisdictions with less than a population of 100,000 and employ 12.8% of prosecutors.

Using the number of full-time prosecutors to determine the size of the office, as shown in Table 1, the BJA Survey includes offices of all sizes, including offices with only part-time prosecutors, and thus provides a good sampling of the nation's local prosecutors. The 2021 interviews, as well as other conversations with prosecutors, have not raised any issues that led PCE to believe that the information gathered in 2018 has changed substantially.

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[4] Prosecutors in State Courts, Bureau of Justice Statistics (2007) https://bjs.ojp.gov/content/pub/pdf/psc07st.pdf (last viewed 12/21/2021)

[5] Prosecutors in State Courts, Bureau of Justice Statistics (2007) https://bjs.ojp.gov/content/pub/pdf/psc07st.pdf (last viewed 12/21/2021)

[6] Prosecutors in State Courts, Bureau of Justice Statistics (2007), Table 2, https://bjs.ojp.gov/content/pub/pdf/psc07st.pdf (last viewed 12/21/2021)

EXECUTIVE SUMMARY

OVERVIEW OF PROSECUTOR RESOURCES

There are 2,330 local prosecutors in the United States; 75% of those offices serve populations of 100,000 or less. PCE's research based on a 2018 BJA survey of 527 prosecutor offices, 25 interviews with prosecutors and their staff, and a literature review, provides basic information about the current state of prosecution data. It is as follows:

- **Case Management System**: Most prosecutor offices, regardless of size, have a case management system (CMS) (81%).
- **Type of CMS**: 65% of the CMS are off-the shelf products, while the remaining 35% are home-grown, either developed internally or by a state prosecutor association. The extra-large prosecutor offices with more than 100 prosecutors are the most likely to have internally developed systems.
- **IT Support**: 50% of offices rely on county IT, while a quarter of offices have their own in-house IT staff. The remaining offices use a third-party contractor, a staff member who plays the role of IT support, or the statewide prosecutor association.
- **Crime Analyst**: 8.4% of prosecutors have a full-time crime analyst.
- **Data Entry**: A common area of difficulty for prosecutors is lack of dedicated staff for data entry and auditing. Inconsistent data entry by staff was a regular concern.
- **Integration of Data**: 66.6% of prosecutor offices receive data from one or more other agencies, such as police, courts, statewide databases, or corrections. However, even when data is received it is often limited.

Though most prosecutor offices have some form of a case management system (CMS) that collects data, many are far from having the benefit of reliable data. PCE's research has found that the data deficit is driven by two main factors: lack of funding and an insufficient data culture.

Funding

Many prosecutors do not have the funding to purchase or create a high-quality CMS, and they are relegated to using old and inadequate systems, some of which are no longer supported by the original developer.[7] A modern off-the shelf CMS can have an initial cost of over $250,000, in addition to annual maintenance fees that range from $50,000 to over $150,000 depending on the size of the office and the services purchased.[8] Creating an in-house CMS can be equally expensive, as developers and IT staff must be hired and paid to create and maintain the CMS.[9]

Prosecutors also lack funding to pay for needed IT support, data entry, analysts, computers, Wi-Fi, and storage. Thus, even prosecutors who have a modern CMS, may not have the resources to use it to its full advantage.

Data Culture

The culture of a prosecutor's office impacts its access to data. Prosecutors, as with all lawyers, are trained in legal issues and not on data collection. An appreciation and commitment to good data collection has only recently become a focus for prosecutors. Even prosecutors who value the importance of data, may not have the skill set to help them lead the office towards improved data. Without leadership and without resources, a CMS can be a repository of inaccurate or incomplete data.

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[7] In North Carolina, the prosecutor budget is controlled by the courts, and they do not have independent control of their funding and thus cannot purchase a CMS without additional funding from the courts. Interviews with District Attorney Spencer Merriweather, 26th Prosecutorial District, North Carolina (10/22/2021) and Director Kimberly Spahos, North Carolina Conference of District Attorneys (12/10/2021). Notes and recordings on file with PCE.

[8] These costs can vary widely depending on the size of the office and the products purchased. The costs listed are from an interview with Solicitor Kevin Brackett, 16th Judicial Circuit Solicitor's Office, South Carolina (10/13/2021) and an email from Management Analyst Sandy Theilen, Ramsey County Attorney's Office, Minnesota (11/5/2021). Notes, recording and email on file with PCE.

[9] Interview with District Attorney Jeff Reisig, Yolo County District Attorney's Office, California (10/15/2021). Notes and recording on file with PCE.

Though many prosecutors struggle with their data, improvements are emerging. Once an office can gather reliable data, the question arises: "How to do justice in an era of data"[10]? Prosecutors of all sizes are exploring this question in a variety of ways. Here are a few.

- **Data Dashboards**: As part of the movement toward greater transparency, some prosecutor offices have published data dashboards, which consist of online repositories of data that showcase trends. While data can help prosecutors in myriad ways within the office, dashboards have been used to turn the data outward and can be useful as a method of promoting a greater trust among the community.[11] Some prosecutors have created dashboards using internal resources and while others have partnered with outside organizations for assistance.[12]

- **Data Projects on Race and Equity**: Recently, there has been an increasing interest in the intersection of prosecution, race, and equity. Several non-profit groups are working with prosecutors to analyze their data and develop new policy initiatives to reduce racial disparities in the justice system.

- **Intelligence Driven Prosecution**: Intelligence-driven prosecution captures a new problem-solving mindset using data.[13] The goal of intelligence-driven prosecution is to holistically improve public safety rather than just to prove individual cases. This approach calls for data collaboration where prosecutors work with law enforcement and community partners to track crime, gather information on individuals driving crime, and make data-driven decisions. Crime Strategy Units in prosecutor offices are often the vehicle for implementing intelligence driven prosecution.[14]

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[10] Interview with Chief Information Officer Kenn Kern, New York County District Attorney's Office, New York (11/19/2021). Notes and recording on file with PCE.

[11] *National Prosecutor Dashboards: Lessons Learned, Themes and Categories for Consideration*, Association of Prosecuting Attorneys (2021). https://www.apainc.org/national-prosecutorial-dashboards-lessons-learned-themes-and-categories-for-consideration/; for examples of dashboards, see "Did You Know? Prosecutor Dashboards", Prosecutors Center for Excellence, https://pceinc.org/prosecutor-data-dashboards/

[12] *See*, PCE's Did You Know on Data Dashboards: https://pceinc.org/prosecutor-data-dashboards/

[13] *See,* Kristine Hamann and Andrew Faisman, *The Problem-Solving Prosecutor: Modern Variations on the Crime Strategies Unit,* Prosecutors' Center for Excellence (2021), https://pceinc.org/the-problem-solving-prosecutor-modern-variations-on-the-crime-strategies-unit/

[14] *See* Andrew Warshawer. *La persecución penal inteligente y la Unidad de Estrategias Penales: el modelo de Nueva York* [*Intelligence-Driven Prosecution and the Crime Strategies Unit: The New York Model*], 23 SISTEMAS JUDICIALES 104, 05/2020. English version on file with PCE.

- **Data for Scholarly Research**: Researchers have increasingly taken an interest in prosecutorial processes and decision-making. While only 18% of the offices in the BJA Survey engaged in prosecutorial research, this is a growing area.
- **Prosecutor Performance Indicators**: CMS data has been used to evaluate prosecutor's performance; traditionally the focus was on case volume or rate of conviction. Moving beyond this framework, researchers from Loyola University Chicago and Florida International University developed Prosecutorial Performance Indicators (PPIs) after conducting a large-scale research project involving multiple prosecutors' offices.[15]

QUESTIONS FOR THE FUTURE

As the capabilities of prosecution data grows, some questions remain. The answers will evolve and blossom from much discussion, trial and error and the advancement of technology. Just some of these questions include:

- What is the role of government vs. private companies in developing CMS?
- Who owns the data?
- Who stores the data and how?
- Should there be data standards and requirements?
- How far should data integration go?
- How can a CMS integrate with other technologies?
- What are the ethics of data collection and dissemination?

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[15] *See*, PPI webinar series, Association of Prosecuting Attorneys, 2021, https://www.youtube.com/watch?v=8uGpjzj4CHY&t=303s

THE UNEVEN LANDSCAPE OF PROSECUTION DATA

PCE's review has uncovered a gulf of disparity in the range of data capabilities in prosecutor offices across the country. It extends from offices that collect little to no data, to those who are creatively and effectively embracing data.

The primary method for a prosecutor office to collect data is through a Case Management System (CMS). A modern CMS fulfills a wide variety of functions[16], including collecting data, creating an electronic case file, tracking court matters, organizing discovery, preparing legal documents, notifying witnesses, storing digital evidence, implementing efficiencies, supporting dashboards and more. Though most prosecutor offices have some form of a CMS, they do not necessarily have reliable and detailed data. Prosecutor access to dependable data varies greatly depending on the capabilities of the CMS, available funding, ability to integrate with other data systems and the commitment of the office to collect data. Even with a strong devotion to data, many prosecutors are thwarted by antiquated, inadequate or obsolete CMS that are not designed for today's data needs.

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[16] *See,* SEARCH *Prosecutor Case Management System Functional Requirements*, National District Attorney's Association (Sept. 2018); Daniel S. Lawrence, Camille Gourdet, Duren Banks, Michael G. Planty, Dulani Woods, Brian A. Jackson, *Prosecutor Priorities, Challenges, and Solutions, RAND Corporation* (2019)

Offices with a CMS

Most prosecutor offices have a CMS (81%), but not all. As Table 3 reveals, the smallest offices are the least likely to have a CMS. The type of system reported in the survey ranges from a sophisticated CMS to tracking cases through Excel spreadsheets or on paper.

Table 3 – Offices with a CMS

Prosecutors in the Office	Does Not Have a CMS	Has a CMS
Part-Time Only	46.9%	53.1%
Small Office (5 or less)	19.8%	80.2%
Medium Office (6-20)	11.8%	88.2%
Large Office (21-100)	3.4%	96.6%
Extra-Large Office (100 or more)	0%	100%

Not surprisingly, the larger offices are more likely to have a CMS. However, as PCE's study reveals, merely having a CMS does not guarantee that the office can gather reliable, robust data.

Types of Case Management Systems

CMS fall into two basic categories: systems that are built by a for-profit company (off-the-shelf CMS) and those built by prosecutors or prosecution associations (home-grown CMS). The BJA survey revealed the breakdown of systems used by prosecutors who have a CMS.

Table 4 – Type of CMS System 2018[17]

Prosecutors in the Office	Off-the-Shelf Systems			Home-Grown Systems		
	Prosecutor by Karpel	Justware & InfoShare	Various Other Companies	State Program	In-house Program	Total
Part-Time Only	62.5%	0%	25%	6.2%	6.3%	100%
Small Office (5 or less)	23.1%	4.6%	31.2%	39.9%	1.2%	100%
Medium Office (6-20)	16.0%	26.7%	19.8%	35.9%	1.5%	100%
Large Office (21-100)	20.7%	29.3%	23.2%	24.4%	2.4%	100%
Extra-Large Office (100 or more)	7.7%	30.8%	15.4%	15.4%	30.8%	100%

From the BJA survey, 81% of prosecutors have some sort of CMS. Of the prosecutors with a CMS, approximately 35% have a home-grown system and approximately 65% have an off-the-shelf system.

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[17] The market share of the various systems, particularly for the off-the-shelf systems, may have changed since 2018.

Off-the-Shelf Systems

Off-the-shelf systems are built by for-profit companies and provide a standard CMS solution for all prosecutor offices that buy their product. The systems afford some flexibility in what elements of their systems to purchase or use. However, while some customization is allowed, that ability is limited and often requires approval from company headquarters. Customization of a system may depend on an analysis of whether the update will benefit other prosecutor offices.

The Missouri statewide prosecutor association received a grant to purchase an off-the-shelf CMS for all prosecutors in the state.[18] This allows for uniformity of systems in the state and provides regular updates to the CMS as they are created by the developer.

Home-Grown Systems

Home-grown systems come in two varieties, one where the prosecutor office has built the system themselves for the sole benefit of that office. The other type of home-made system is where the state's prosecution coordinator office has built a system that is available to all prosecutors in the state.

Built for One Office

The largest prosecutor offices have tended to build their own CMS. These systems are the most customizable and address the specific needs and traditions of the office. The system can be nimble and be amended to suit the changing issues of the office. These offices need robust internal IT and programing support for improvements, maintenance, and training.

In small offices, a home-grown case management system may simply be a spreadsheet.

Statewide Systems

Some statewide prosecutor associations, such as in New York, Colorado, and Michigan, have created CMS for prosecutors in their states. This is especially helpful for the smaller offices in the state that do not have the ability to buy an off-the-shelf system or to build their own. As with the individual offices who have built their own systems, the prosecutor association needs internal IT and programing support for improvements, maintenance, and training. The benefit of a statewide system is that

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[18] Interview with General Counsel Steven Sokoloff, Missouri Association of Prosecuting Attorneys (10/25/2021). Notes and recording on file with PCE.

they can create standard charging language and standard definitions for data fields that can make document and data collection across the state much easier. However, gathering statewide data is dependent on accurate data collection by individual prosecutor offices and this is a challenge.

Statewide systems can be customized. However, there is a difficult balance between too much customization for individual offices and only allowing updates that will benefit all offices. Too much individual customization can gradually result in an office's data being so unique that it becomes obsolete as the functionality is no longer understood by the central staff and the ability to provide statewide reports is eroded.[19]

Staffing and Support

By embracing data, prosecutors will inevitably need staff that can support data collection through effective maintenance, data entry, customization, and analysis. As the public demand for data grows, a prosecutor's staff will have to expand to include IT support, crime analysts and data auditors. PCE's research has shown that most prosecutors do not have adequate support for IT upkeep of a CMS or for gathering and analyzing data.

IT Staff
IT staff is essential for prosecutors with a CMS. IT staff commonly perform these functions:

- Maintenance of the CMS
- Troubleshooting problems with the CMS
- Navigating connections with other systems, such as police and the courts
- Running standard reports
- Developing and running ad hoc reports
- Customizing the CMS
- Staffing a Help Desk
- Providing CMS training

Though data collection is part of the duties of modern prosecutors, lawyers and the traditional support staff are not trained in managing a CMS or analyzing data. Many offices do not have the resources to hire the IT and analytical staff needed to support

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[19] Interview with Director Cheri Bruinsma, Prosecuting Attorneys Association of Michigan (12/17/2021). Notes and recording on file with PCE.

a successful CMS. Thus, they must rely on external IT staff, or in-house "super users" who by happy coincidence have the ability and inclination to work with a CMS.

Table 5 – IT Support Available to Prosecutors
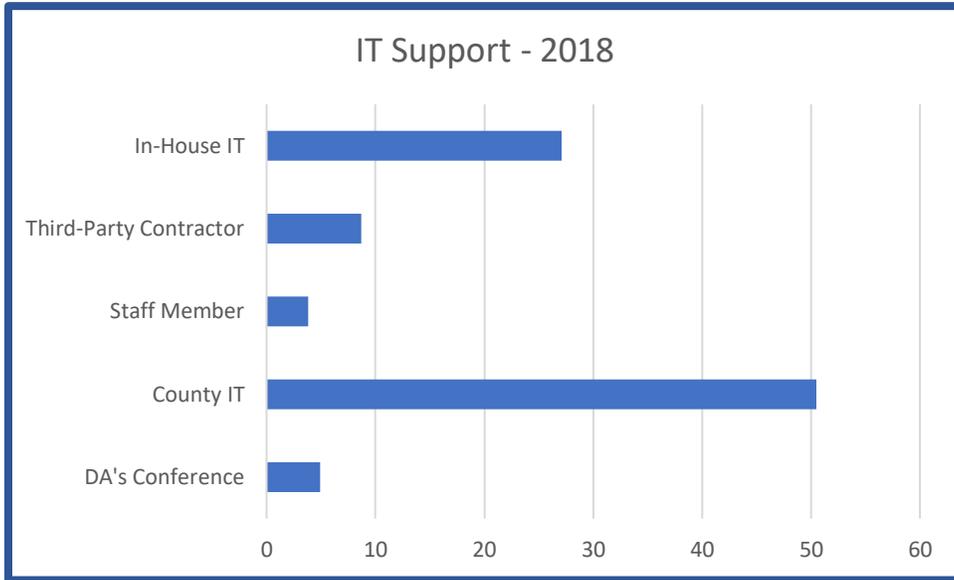
As shown in Table 5, a little over 50% of offices rely on county IT, while just about a quarter of offices have their own in-house IT staff. The remaining offices rely on a third-party contractor, a staff member who plays the role of IT support, or the statewide prosecutor association.

Table 6 – Access to Internal IT Unit

Prosecutors in the Office	No Internal IT Unit	Has IT Unit
Part-Time Only	80.6%	19.4%
Small Office (5 or less)	86.8%	13.2%
Medium Office (6-20)	75.2%	24.8%
Large Office (21-100)	34.1%	65.9%
Extra-Large Office, (100 or more)	7.7%	92.3%

Not surprisingly, as Table 6 reveals, the larger prosecutor offices are more likely to have an in-house IT department. The offices without their own IT department depend on the county IT department, or in-house "super-users" for support. They can also get some technical support from the off-the-shelf company or the state prosecutor association, depending on the system used. However, off-site support can be slow, and the external IT staff may not be familiar with the issues facing a particular prosecutor office.

In-house IT staff yield countless benefits. Solicitor Kevin Brackett, of South Carolina's 16th Circuit Solicitor's Office, hired a Director of Information Technology with whom he works hand in hand to guide his policies. Recently they customized their data collection to pinpoint where types of drugs are used and by whom. This information is shared with the countywide drug unit, so they can quickly respond to upticks in drug use and sales. Solicitor Brackett's driving principle is first to decide what is relevant for his work, then commence capture of the data and then wait for the data to accumulate. Once this is done, data driven decisions can be made.[20]

Crime Analysts

One of a crime analyst's multiple functions is to extract data from internal and external sources and present it in a format useful to prosecutors and others. The sophisticated data analysis required for a modern prosecutor cannot be accomplished without someone with this skill set. Of the offices in the BJA survey, 44 (8.4%) had at least one full-time crime analyst, and 9 offices (1.7%) had at least one part-time crime analyst. Thus, crime analysts are still far from being regular members of a prosecutor's staff.

Prosecuting Attorney Jean Peters Baker, of the Jackson County Prosecuting Attorney's Office in Missouri, hired an experienced crime analyst who has served multiple purposes in her office. He pulls data from the CMS, analyzes it, and displays it in a readable format. He has done this for a variety of needs including community meetings, research on racial disparity in arrests, and creating a data dashboard. This is

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[20] Interview with Solicitor Kevin Brackett and Director of Information Technology David Sanders, 16th Circuit Solicitor's Office, South Carolina (10/12/20212). Notes and recording on file with PCE.

a skillset that standard prosecution staff does not have, but soon will become essential to a modern prosecutor.[21]

Data-Entry and Auditing

In addition to having competent IT and analytic support, a commitment to reliable data requires a prosecutor office to designate staff to enter and audit data. Usually existing staff, legal and non-legal, will enter data into the CMS. However, they must be trained so that data is entered regularly and accurately. Some of the larger prosecutor offices have dedicated data entry and auditing staff. The New York County District Attorney's Office has data entry staff in the courtrooms and regularly audits data received from other agencies.[22]

One common area of difficulty for prosecutors is inconsistent data entry by staff and lack of auditing of data. Offices do not always understand the need for defining the data fields and creating a standardized method of data entry. Without standards similar data may be entered various ways or not at all, thus rendering the information unreliable.

The issue of inconsistent data is compounded when there is a change of leadership in a prosecutor office. Prosecutors have reported that even though they are using the same CMS as the former prosecutor, they have different data priorities and different methods of entering data. Thus, historical data may be unreliable as some needed data was not previously captured or the earlier data was not entered in a consistent or reliable way.

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[21] Interview with Prosecuting Attorney Jean Peters Baker, Jackson County Prosecuting Attorney's Office, Missouri (10/15/2021). Notes and recording on file with PCE.

[22] Interview with Chief Assistant District Attorney Nitin Savur, New York County District Attorney's Office, New York (10/29/2021). Notes and recording on file with PCE.

Receiving Data from Other Agencies

When prosecutors are integrated with other criminal justice agencies, the most common flow of data moves arrest data from the police to the prosecutor, then charging data from the prosecutor to the courts, and then disposition data from the courts back to the prosecutor. Ideally, this should be a seamless operation saving all agencies time and effort and allowing for one coordinated set of data.

However, the BJA survey revealed that 33.4% of prosecutor offices are not integrated with other criminal justice agencies and receive no electronic data from an external source, such as the courts, the police, state databases, or corrections.

Of the 66.6% of prosecutor offices who do receive electronic data, some receive it from only one source and not all. Even when data is received from another agency, the BJA survey revealed that the data is often limited. This is not surprising as other government agencies are also struggling with creating accurate and timely systems to track their data, rendering integration difficult. Integration can also be impeded by differences in technology, inconsistent data terminology and inaccurate data collection. These issues must be resolved to have effective connectivity between data systems.

Table 7 – Receipt of Data from Other Agencies
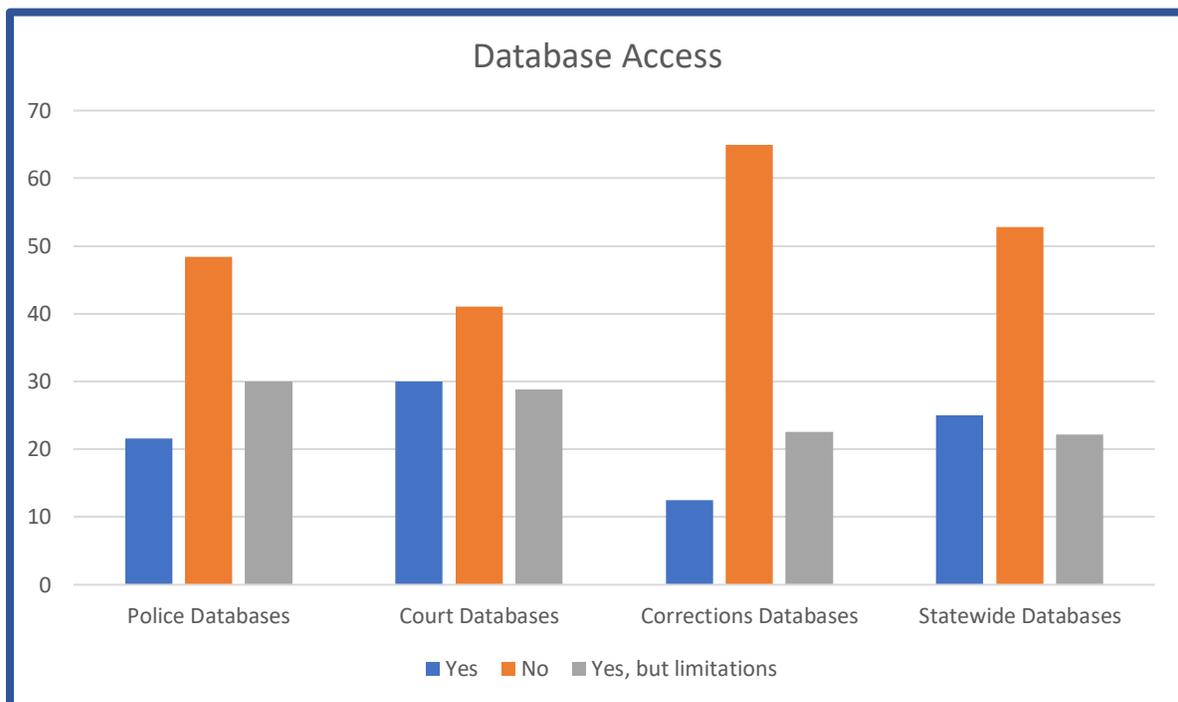
Common complaints about police data included:

- **Inability to Share Data**: In jurisdictions with multiple police departments, some smaller departments do not have a records management system or the capability to share data.
- **Limited Data Sharing**: Even when prosecutors are integrated with the police, the data shared is limited and still requires manual entry of some data and the scanning of documents that are hand-delivered by the police. Often these hand-delivered documents reside electronically in the police records management system but are printed out only to be scanned back into the prosecutor's CMS.
- **Inaccurate Data**: Some data received from police departments is inaccurate, or not properly coordinated with data fields in the prosecutor's CMS.

Frequently mentioned concerns about court data included:

- **Inadequate Data Entry**: The court data entry is often delayed, or fields of data are omitted. Data entry is usually performed by court clerks, and they may not be properly trained or supervised in data entry.
- **Inconsistent Data**: Prosecutors complain that data received from the courts can be inconsistent with their own data, often for reasons that are not fully understood.

CHALLENGES FOR PROSECUTOR DATA

Though most prosecutor offices have some form of a CMS, many are far from having the benefit of rich, reliable data. PCE's research has found that the robust use of CMS by prosecutors is thwarted by two main factors: lack of funding and an insufficient data culture.

Funding

Many prosecutors do not have the funding to purchase or create a high-quality CMS, and they are relegated to using old and inadequate systems, some of which are no longer supported by the original developer. A modern off-the shelf CMS can have an initial cost of approximately $250,000, in addition to annual maintenance fees of approximately $50,000 to over $150,000, depending on the size of the office and the

services purchased.[23] Creating an in-house CMS can be equally expensive, as developers and IT staff must be hired and paid to create and maintain the CMS.[24]

Some prosecutors have relied on their prosecution association to create a statewide CMS. This approach has met with mixed success. Some states, such as New York and Colorado, have recently developed a CMS that serves the needs of the prosecutors. However, other prosecution associations are struggling to upgrade their CMS but have not been able to complete the project. In these states prosecutors are left with an inadequate CMS and have poor ability to run reliable reports.

Prosecutors also lack funding to pay for needed IT support, data entry, analysts, computers, Wi-Fi, and storage. Thus, even prosecutors who have a modern CMS, may not have the resources to use it to its full advantage.

Data Culture

The culture of a prosecutor's office impacts its access to data. Prosecutors, as with all lawyers, are trained in legal issues and not on data collection. An appreciation and commitment to good data collection has only recently become a focus for prosecutors. Even prosecutors who understand the importance of data, may not have the skill set to help them lead the office towards improved data. Without leadership and without resources, a CMS can quickly become a repository of inaccurate or incomplete data.

The collection of usable, rich data requires the participation of the entire prosecutor staff. Data issues cannot be relegated to clerical support staff. Leadership must emphasize the importance of accurate data collection and explain what data to collect, why and how. Amy Fite, the Prosecuting Attorney of Christian County Missouri, which has eight prosecutors, required all staff to enter data and documents from older cases into their new CMS every Friday afternoon until it was done. This emphasized the importance of using the CMS and provided an opportunity for uniform training of staff. The Friday CMS work created a data culture, that clearly emphasized that good data is an office priority. Prosecuting Attorney Fite noted "[the CMS we have] is like a…Cadillac, it's got lots of bells and whistles, you can use it as the Chevy truck,

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[23] These costs can vary widely depending on the size of the office and the products purchased. The costs listed are from an interview with Solicitor Kevin Brackett, 16th Judicial Circuit Solicitor's Office, South Carolina (10/13/2021) and an email from Management Analyst Sandy Theilen, Ramsey County Attorney's Office, Minnesota (11/5/2021). Notes, recording and email on file with PCE.

[24] Interview with District Attorney Jeff Reisig, Yolo County District Attorney's Office, California (10/15/2021). Notes and recording on file with PCE.

or you can use it like the Cadillac". The office's data culture and commitment to accurate data has resulted in good data and efficiencies that provide relief to a busy office.[25]

DOING JUSTICE IN AN ERA OF DATA

Though many prosecutors struggle with their data, improvements are emerging. Once an office can gather reliable data, the question arises: "How to do justice in an era of data"[26]? Prosecutors of all sizes are exploring this question in a variety of ways. It is now well-known that data can used to improve public safety and community relations and at the same time it can be used to improve the management of a prosecutor's office. Over the past several years, prosecutors are more engaged with data and new and interesting initiatives have sprung up in their offices. A few are highlighted here.

DATA DASHBOARDS

As part of the movement toward greater transparency, some prosecutor offices have published data dashboards, which consist of online repositories of data that showcase trends. While data can help prosecutors in myriad ways within the office, dashboards have been used to turn the data outward and can be useful as a method of promoting a greater trust among the community.[27]

Data dashboards are developed in different ways by prosecutor offices and have varying levels of sophistication. Some prosecutors have created dashboards using

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[25] Prosecuting Attorney Amy Fite, Christian County Prosecuting Attorney's Office, Missouri (10/27/2021). Her office uses Prosecutors by Karpel, an off-the shelf CMS. Notes and recording on file with PCE. The interview with District Attorney Jason Carusone, Warren County, New York (3/11/2022), who has an office of nine attorneys, described an equally positive data culture using the statewide CMS system developed by the New York State Prosecutor Training Institute. Notes and recording on file with PCE.

[26] Interview with Chief Information Officer Kenn Kern, New York County District Attorney's Office, New York (11/19/2021). Notes and recording on file with PCE.

[27] *National Prosecutor Dashboards: Lessons Learned, Themes and Categories for Consideration*, Association of Prosecuting Attorneys (2021). https://www.apainc.org/national-prosecutorial-dashboards-lessons-learned-themes-and-categories-for-consideration/; for examples of dashboards, see "Did You Know? Prosecutor Dashboards", Prosecutors Center for Excellence at https://pceinc.org/prosecutor-data-dashboards/ (last viewed 2/6/2022).

internal resources and while others have partnered with outside organizations for assistance. Designing a dashboard triggers the need to review available data. This often reveals problems with inaccurate or incomplete data which must be resolved before the dashboard is completed.

The most straightforward data dashboards synthesize selected prosecutor data and present it to the public. For example, the Lake County State's Attorney in Illinois published a dashboard that shows trends in three areas: employee diversity in the office, arrests and charges, and criminal case filings. For each, the data is available for download, but no context is provided for interpreting the data.[28]

In another approach, the Yolo County, California's District Attorney's Office shared their data with a Measures for Justice (MFJ), a non-profit that created a dashboard called Commons. MFJ helped with cleaning the data and presentation of the data. The goals of the dashboard were shaped by meetings with the Yolo County District Attorney's Multi-Cultural Community Council, a community partner. This collaboration has been instrumental in promoting trust among the community. The dashboard has been the foundation for a data centric office culture and changes in procedure, such as a race neutral charging process and expanded diversion opportunities.[29]

Data dashboards are a growing trend that will focus prosecutors on the need for accurate data and the many benefits that good data can bring to the office and the community.

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[28] Lake County State's Attorney's Dashboard at https://data.lcsao.org/ (last viewed 2/6/2022).
[29] Measures for Justice Yolo Commons Launch Event: https://www.youtube.com/watch?v=BHpkt1gEQLI, (4/7/2021)

DATA PROJECTS ON RACE AND EQUITY

Recently, there has been an increasing interest in the intersection of prosecution, race, and equity. The importance of this nexus has been highlighted, for example, by an initiative focused on race and equity called Reshaping Prosecution by the Vera Institute of Justice.[30] Using insights from prosecution data, Vera Institute is working with prosecutors in multiple jurisdictions to study their data and implement new policies and programs that reduce racial disparities in the justice system.[31]

Private philanthropy, such as Arnold Ventures,[32] is providing funding to study racial disparities in prosecutorial decision making. Funding such as this will increase the use of data to study race and equity in prosecutor offices. In one similar project, Solicitor Wilson of South Carolina worked with a non-profit to study her data and create a set of reports, the first of which is titled Disparity and Prosecution in Charleston, SC. In this report, five years' worth of prosecution data was examined, to determine whether racial disparities existed in how cases were prosecuted. The report concluded disparities originated at the point of arrest, but that, regardless of race, individuals with comparable criminal histories and charges were prosecuted similarly.[33]

INTELLIGENCE-DRIVEN PROSECUTION

Intelligence-driven prosecution, a framework developed by the New York County District Attorney's Office in 2010, captures a new problem-solving mindset using data.[34] The goal of intelligence-driven prosecution is to holistically improve public

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[30] Vera Institute of Justice, Reshaping Prosecution, https://www.vera.org/projects/reshaping-prosecution-program (last viewed 2/3/2022)

[31] In an earlier project, Vera studied data from the New York County District Attorney's Office. See Race and Prosecution in Manhattan, Vera Prosecution and Racial Justice Program, Kutateladze, Tymas and Crowley, at https://www.vera.org/downloads/Publications/race-and-prosecution-in-manhattan/legacy_downloads/race-and-prosecution-manhattan-summary.pdf (last viewed 2/3/2022).

[32] In 2021 Arnold Ventures released a solicitation for prosecutor research on racial disparities in various prosecutorial decision points, https://www.arnoldventures.org/stories/arnold-ventures-and-the-national-partnership-for-pretrial-justice-are-accepting-proposals-for-prosecution-research (last viewed 2/3/2022).

[33] *Solicitor Scarlett Wilson Announces Release of First Report from Unprecedented Project Studying Prosecution Impact*, State of South Carolina, https://scsolicitor9.org/news/2021/press-release-first-report-release-dismissals-prosecution-impact-92921.pdf (Sept. 29, 2021) (last viewed 2/3/2022).

[34] *See*, Kristine Hamann and Andrew Faisman, The Problem-Solving Prosecutor: Modern Variations on the Crime Strategies Unit (2021), https://pceinc.org/the-problem-solving-prosecutor-modern-variations-on-the-crime-strategies-unit/

safety rather than just to prove individual cases.[35] This approach calls for data collaboration where prosecutors work with law enforcement and community partners to track crime, gather information on individuals driving crime, and make data-driven decisions.

As a corollary of knowing which individuals are driving crime trends, an intelligence-driven office knows which individuals are *not* driving crime trends. Thus, an intelligence-driven office can also determine that many individuals are not priority defendants, and therefore can be treated less harshly and more therapeutically. This allows for a targeted approach to prosecution, which can positively impact the relationship between prosecutors and communities where crime is prevalent.

In some prosecutor offices, a Crime Strategies Unit (CSU) is the vehicle for implementing intelligence-driven prosecution. They are staffed by crime analysts who collect data and intelligence on crime trends and individuals driving crime and gather input from the community on public safety issues. The CSU data and intelligence informs prosecutorial policy, improves the flow of information into the prosecutor office and the community, and provides support for individual prosecutions and investigations.

DATA FOR SCHOLARLY RESEARCH

Exploring academic partnerships is one avenue to help prosecutors make sense of their data and result in a mutually beneficial relationship. Prosecutor offices can benefit from the analytic knowledge that researchers bring to data, and researchers can gain access to data of importance to their studies.[36]

The BJA survey, however, suggests that these partnerships rarely take place. Just 18% of prosecutors' offices in the sample reported partnering with researchers. Though PCE's interviews confirmed that research partnerships are still uncommon, some larger offices have recently hired in-house researchers. The prosecutors who engage with researchers observed that the research provided useful insight into the efficacy of their programs and policies and inform policy debates. For example, County Attorney

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[35] *See* Andrew Warshawer. *La persecución penal inteligente y la Unidad de Estrategias Penales: el modelo de Nueva York* [*Intelligence-Driven Prosecution and the Crime Strategies Unit: The New York Model*], 23 SISTEMAS JUDICIALES 104, 05/2020. English version on file with PCE.

[36] *See* Daniel S. Lawrence, Camille Gourdet, Duren Banks, Michael G. Planty, Dulani Woods, Brian A. Jackson, *Prosecutor Priorities, Challenges, and Solutions,* RAND Corporation

John Choi of Ramsey County, Minnesota spearheaded a project called "Reimagine Justice for Youth" and is relying on an in-house researcher and researchers at the University of Minnesota to use data to guide him in developing proposals for improving the youth justice system.[37]

Table 8 – Number of Offices Engaged in Research and Analysis
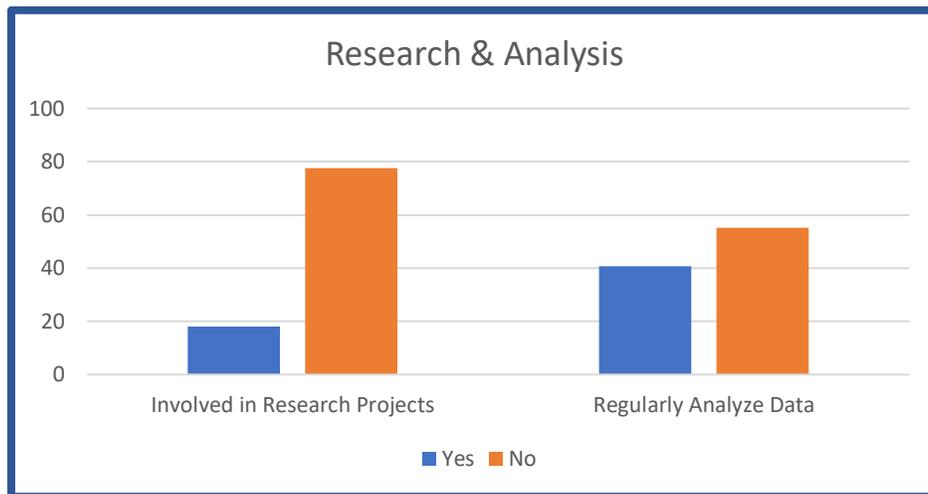
Researchers have increasingly taken an interest in prosecutorial processes and decision-making. For example, researchers have focused on plea bargaining, and the consequences of extended time to charging.[38] Another area of research includes the range of studies examining the factors underlying prosecutors' initial charging decisions in different types of cases including sexual assault, child abuse, and homicides.[39] Answering these questions necessitates access to prosecutorial data.

While accessing CMS data and reports can be helpful, there are important aspects of prosecutorial decision-making and case processing that CMS data cannot provide yet are crucial to understanding how prosecutors function. For example, strength of the

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[37] Interview with County Attorney John Choi, Ramsey County, Minnesota. Notes and recording on file with PCE.
[38] Besiki Luka Kutateladze, Nancy R. Andiloro and Brian D. Johnson, *Opening Pandora's Box: How does Defendant Race Influence Plea Bargaining?* Justice Quarterly, 33(3), 398-426 https://doi.org/10.1080/07418825.2014.915340 (2016); Shi Yan and Sean D. Bushway, *Plea Discounts or Trial Penalties? Making Sense of the Trial-Plea Sentence Disparity*, Justice Quarterly, 35(7), 1226-1249https://doi.org/10.1080/07418825.2018.1552715 (2018).
[39] Cassia Spohn and Katharine Tellis, *Sexual Assault Case Outcomes: Disentangling the Overlapping Decisions of Police and Prosecutors*, Justice Quarterly, 36(3), 383-411 https://doi.org/10.1080/07418825.2018.1429645 (2001); Theodore P. Cross, Wendy A. Walsh, Monique Simone, Lisa M. Jones, *Prosecution of Child Abuse: A Meta-analysis of Rates of Criminal Justice Decisions*. Trauma, Violence, & Abuse, 4(4), 323-340, https://doi.org/10.1177/1524838003256561 (2003); David C. Pyrooz, Scott E. Wolfe, Cassia Spohn, *Gang-Related Homicide Charging Decisions: The Implementation of a Specialized Prosecution Unit in Los Angeles*, Criminal Justice Policy Review, 22(1), 3-26, https://doi.org/10.1177/0887403410361626 (2011).

available evidence, witness credibility, and office priorities may play a central role in prosecutor's decision-making processes yet are difficult or impossible to capture in a CMS. Researchers should, therefore, be sure to employ qualitative methods, such as interviews, focus groups, and case studies, in examining prosecutors' discretionary decision-making patterns.

MANAGEMENT

Management of an office of any size is enhanced by using data. Data can be used in the evaluation of staff by tracking, among other things, productivity, allocation of work, and speed of disposition. A CMS containing the case file allows supervisors to easily review the written work for a substantive evaluation of staff skills. Management reports can be developed that notify supervisors of potential problems such as delayed cases, failure to enter data, backlogs and dismissed indictments. Flags in the CMS associated with people or cases can alert staff to priority matters or to the need to contact others. These alerts have been used for a wide variety of purposes from identifying high risk defendants to notification of potential police Giglio material.

The King County Attorney's Office in Washington State has used their CMS to develop a detailed internal dashboard that tracks multiple factors of interest to management.[40] Their data was effectively used to demonstrate the growing backlog of

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[40] Interview with Chief Deputy Criminal County Attorney Daniel Clark, King County Attorney's Office, Washington (1/24/20220. Notes and recording on file with PCE.

serious cases due to the pandemic and they were able to obtain additional funding for the office.[41]

Enhancing efficiency is another management benefit of a CMS. When a new CMS is installed, management can review its current work processes and use the CMS to improve and simplify the flow of work. Efficiencies can quickly spring from a CMS by allowing staff to be redeployed from manually keeping records to other tasks. The 12th Judicial District Attorney's Office in Colorado, which has 6 prosecutors, used their CMS to eliminate the clerical work of an entire staff member, allowing the staff to be redeployed to more substantive responsibilities.[42]

Prosecutorial Performance Indicators

Prosecutor performance measures have traditionally focused on case volume or rate of conviction. Moving beyond this framework, researchers from Loyola University Chicago and Florida International University developed Prosecutorial Performance Indicators (PPIs) after conducting a large-scale research project involving multiple prosecutors' offices.[43]

PPIs are measures that allow prosecutors to track their effectiveness across three primary goals: capacity and efficiency, community safety and well-being, and fairness and justice. Each outcome is further broken down into more specific, measurable indicators that each office can track, with a total of 55 indicators.[44] Importantly, the PPIs are flexible; offices might choose to prioritize the measurement of some indicators over others based on the local criminal justice context.

The challenge for the PPIs is to capture data that accurately reflects the issues being studied. The State Attorney's Office of the 4th Judicial Circuit of Florida (Jacksonville) has participated in the PPI project. They can track some of the PPI with their current data and are exploring ways to enhance their data to include even

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[41] *See*, Backlog of Pending Criminal Cases in King County Mount Amid Coronavirus Pandemic, KOMO News, (2/13/2021), https://komonews.com/news/local/backlog-of-criminal-cases-in-king-county-mount-amid-coronavirus-pandemic (last viewed 2/6/2022).

[42] Interview with staff at the 12th Judicial District Attorney's Office, Colorado (July 2020). Notes on file with PCE

[43] *See* PPI webinar series, Association of Prosecuting Attorneys, 2021. https://www.youtube.com/watch?v=8uGpjzj4CHY&t=303s

[44] *See*, PPI Indicator Brochure (2020), https://ppibuild.wpengine.com/wp-content/uploads/2020/09/PPI-Brochure-Inside-Sept-2020.pdf and Implementation Guide, https://safetyandjusticechallenge.org/wp-content/uploads/2021/06/Implementation-Guide-for-Prosecutorial-Performance-Indicators.pdf.

more.[45] Activities such as community outreach and engagement are rarely captured in a CMS, yet this data is needed for some of the indicators. Thus, the PPIs can serve as excellent goals for expanded data collection and a broader use of a CMS

QUESTIONS FOR THE FUTURE

As the capabilities of prosecution data grows, some questions remain. The answers will evolve and blossom from much discussion, trial and error and the advancement of technology. Just some of these questions include:

- **What is the Role of Government vs. Private Companies in Developing CMS?** Prosecutors are split on whether they use IT developed by government or by private industry. To what extent should government be involved in the development of CMS and the coordination of data collection amongst government agencies? Is this a task that can be outsourced to private industry, and, if so, how?
- **Who Owns the Data?** If a CMS is developed by a private vendor, who owns the data? Can that vendor use the data for purposes unrelated to the individual prosecutor office? If the vendor stops supporting the CMS, can they return the data to the prosecutor office? Can the vendor keep a copy of the data?
- **Who Stores the Data and How**? Should government create and control its own Cloud for the storage of data, or should prosecutors pay private companies to store their data? What rules should apply to the archiving of digital data?
- **Should There be Data Standards and Requirements?** Should there be statewide or national data standards and requirements for data collection? If so, who should create the standards and performance metrics?
- **How far should Data integration go?** Should there be greater coordination between government agencies including probation, parole, department of corrections, social services, child protection agencies, schools, and treatment providers? How can additional information assist prosecutors to make more informed decisions that benefit both defendants and victims?
- **Should CMS be Integrated with Other Technologies**? Should CMS be integrated with other technologies such as facial recognition, social media searches and GPS tracking?

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[45] Interview with First Assistant State Attorney Stephen Seigel, 4th Judicial Circuit State Attorney's Office, Florida (1/24/2022). Notes on file with PCE.

- **What are the Ethics of Data Collection and Dissemination**? What are the ethical responsibilities of prosecutors regarding the collection of individual-level data and the sharing this information with outside agencies? How can prosecutor offices maintain individual's privacy, while achieving other goals? What are ethical and unethical uses of the data?
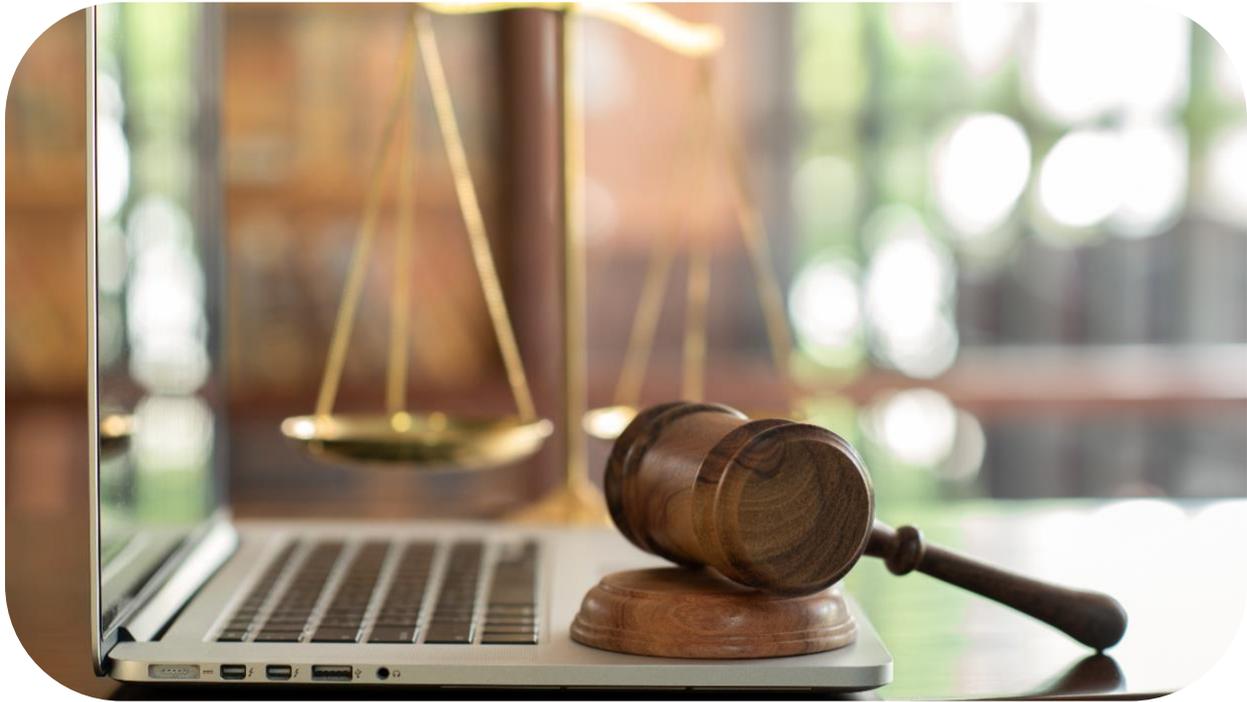
CONCLUSION

The vision of a modern prosecutor is to have robust, reliable data, supported by internal IT and analytic staff, and fully integrated with other criminal justice agencies. In this ideal world, a modern prosecutor uses data to manage their offices, inform policy decisions, and collaborate with their communities. For some prosecutors this vision is a reality, while for others it seems like an impossible reach. However, there are grounds for optimism that all prosecutors can attain this vision. The growing demand for prosecutor data has spurred new funding from private and public sources. The demand is also encouraging prosecutors to foster a data-centric culture in their offices, so they can achieve the transparency and accountability that their communities demand. The road forward will take time and effort, but the result will significantly enhance justice for all.

APPENDIX

Prosecutorial data can be utilized in many ways, including by scholars who use sophisticated statistical methods to answer pressing research questions. Below are provided a selection of peer-reviewed publications that use prosecutorial data.

Alderden, M. A., & Ullman, S. E. (2012). Creating a more complete and current picture: Examining police and prosecutor decision-making when processing sexual assault cases. *Violence against women, 18*(5), 525-551. https://doi.org/10.1177/1077801212453867

Abstract: "This study sought to identify factors that predicted outcomes for sexual assault cases involving female victims across several decision-making points and compare these findings to prior studies. The results indicate that there continues to be a high attrition rate in the handling of sexual assault cases. Only 9.7% of cases examined resulted in charges. In regards to processing decisions, most of the factors that predicted whether cases were founded, resulted in arrest, presented to the prosecution, or resulted in felony charges were extralegal factors. One factor appeared to influence several decision-making points: whether officers noted discrepancies in victim statements."

Baker, D. B., & Hassan, S. (2021). Gender and prosecutorial discretion: An empirical assessment. *Journal of Public Administration Research and Theory, 31*(1), 73-90. https://doi.org/10.1093/jopart/muaa017

Abstract: "This paper contributes to our understanding of the role of gender in the exercise of prosecutorial discretion. We use administrative data from a prosecutor's office in a large urban county to estimate the direct and interactive effects of defendant and prosecutor gender on accepting initial charges brought by law enforcement officials. After implementing coarsened exact matching, Probit regression results suggest that prosecutors, on average, are more likely to accept charges against male defendants. In scenarios where gender is salient to decision-making (i.e., in domestic violence and sexual assault cases), we find mixed evidence regarding whether female prosecutors make decisions differently than male prosecutors, as predicted by the theory of representative bureaucracy. Finally, we find that female prosecutors with higher levels of prosecutorial experience are more likely to accept domestic violence and sexual assault charges against male defendants than both their male counterparts and

female prosecutors with limited experience. Our results suggest that female prosecutors reserve their discretion for complex scenarios where organizational routines are less set in stone. Furthermore, female prosecutors with more experience may be more able to identify these scenarios, and are thus more likely to actively represent."

Cross, T. P., Walsh, W. A., Simone, M., & Jones, L. M. (2003). Prosecution of child abuse: A meta-analysis of rates of criminal justice decisions. *Trauma, Violence, & Abuse*, *4*(4),323-340. https://doi.org/10.1177/1524838003256561

Abstract: "This study meta-analyzed rates of criminal justice decisions in 21 studies of prosecution of child abuse. Rates of referral to prosecution, filing charges, and incarceration varied considerably. Rates of carrying cases forward without dismissal were consistently 72% or greater. For cases carried forward, plea rates averaged 82% and conviction rates 94%. Compared to national data, child abuse was less likely to lead to filing charges and incarceration than most other felonies but more likely to be carried forward without dismissal. Diversion, guilty plea, and trial and conviction rates were about the same for child abuse and all violent crimes. Thus, prosecuting child abuse is generally neither feckless nor reckless. Rates can be misleading and cannot be the sole measure of prosecution success."

Kutateladze, B. L., Andiloro, N. R., & Johnson, B. D. (2016). Opening Pandora's box: How does defendant race influence plea bargaining? *Justice Quarterly, 33*(3), 398-426.
https://doi.org/10.1080/07418825.2014.915340

Abstract: "Minority overrepresentation in the criminal justice system has long been an important topic of research and policy debate. In New York City, recent changes in the Rockefeller Drug Laws and the controversy around police stop-and-frisk practices have placed an even greater emphasis on the need for studying the possible impact of defendants' race and ethnicity on criminal justice outcomes. Relatively little contemporary research, though, examines plea-bargaining outcomes. Using unique data on misdemeanor marijuana cases, this study examines the impact of defendants' race on prosecutors' decisions to make (a) plea offers for a lesser charge and (b) sentence offers for non-custodial punishments. Preliminary findings indicated that black defendants were less likely to receive reduced charge offers, and both black and Latino defendants were more likely to receive custodial sentence offers. However, these disparities were largely explained by legal factors,

evidence, arrest circumstances, and court actor characteristics, though black defendants were still more likely to receive custodial sentence offers after including these controls. No differences were found between white and Asian defendants. Implications for research and prosecutorial practices are discussed."

Liu, L., Dunlea, R. R., & Kutateladze, B. L. (2021). Time for time: Uncovering case processing duration as a source of punitiveness. *Crime & Delinquency*, https://doi.org/10.1177/00111287211007745

Abstract: "The literature on sentencing has devoted ample consideration to how prosecutors and judges incorporate priorities such as retribution and public safety into their decision making, typically using legal and extralegal characteristics as analytic proxies. In contrast, the role of case processing efficiency in determining punishment outcomes has garnered little attention. Using recent data from a large Florida jurisdiction, we examine the influence of case screening and disposition timeliness on sentence outcomes in felony cases. We find that lengthier case processing time is highly and positively associated with punitive outcomes at sentencing. The more time prosecutors spend on a case post-filing, the more likely defendants are to receive custodial sentences and longer sentences. Case screening time, although not affecting the imposition of custodial sentences, is also positively associated with sentence length. These findings are discussed through the lens of instrumental and expressive functions of punishment."

Pyrooz, D. C., Wolfe, S. E., & Spohn, C. (2011). Gang-related homicide charging decisions: The implementation of a specialized prosecution unit in Los Angeles. *Criminal Justice Policy Review*, *22*(1), 3-26. https://doi.org/10.1177/0887403410361626

Abstract: "This study examines prosecutorial decisions to reject gang-related homicide charges. Focusing on a large, "traditional" gang jurisdiction—Los Angeles—the authors investigate the effect of victim, suspect, and incident characteristics on the likelihood of case rejection for 614 homicide suspects. The data were collected by the Los Angeles District Attorney's Office to evaluate *Operation Hardcore*, a specialized prosecution unit initiated to address the complexities of prosecuting violent gang-related crimes. These data, which captured decisions made in one of the nation's largest district attorney's offices, provide a unique glimpse into how a jurisdiction addressed the growing

problem of gang violence. Overall, the results of this study shed light on how prosecutors charge gang-related homicides and how multiple victim cases—which potentially attract more public attention—may influence such decisions. Moreover, the findings also have implications for specialized prosecution units, as they were found to reduce the likelihood of case rejection. Policy implications and directions for future research are offered."

Spohn, C., & Tellis, K. (2019). Sexual assault case outcomes: Disentangling the overlapping decisions of police and prosecutors. *Justice Quarterly*, *36*(3), 383-411. https://doi.org/10.1080/07418825.2018.1429645

Abstract: "The rape reform movement of the 1970s and 1980s was designed to improve the likelihood of prosecution and conviction in sexual assault cases. However, there is evidence that the attrition rate for sexual assaults reported to the police remains high, and that the locus of case attrition is arresting and charging decisions. In this paper, we analyze police and prosecutorial decision-making in sexual assault cases using quantitative data on sexual assaults reported to the Los Angeles Police Department and the Los Angeles County Sheriff's Department in 2008. We argue that decisions made by police and prosecutors should not be examined in isolation from one another and that researchers who analyze arrest decisions by examining only cases that are formally cleared by arrest or who focus only on charging decisions that follow the arrest of a suspect may be ignoring important aspects of police and prosecutorial decision-making. This is confirmed by the results of our study, which reveal that a significant proportion of cases in which the police appear to have probable cause to make an arrest do not result in the arrest of the suspect and that a substantial number of cases are rejected for prosecution by the district attorney *before* an arrest is made. Moreover, the factors that predict arrest and charging vary depending upon the way in which the outcome is operationally defined. These results have a number of important policy implications for police and prosecutors handling sexual assault cases."

Yan, S. & Bushway, S. D. (2018). Plea discounts or trial penalties? Making sense of the trial-plea sentence disparity. *Justice Quarterly*, *35*(7), 1226-1249. https://doi.org/10.1080/07418825.2018.1552715

Abstract: "There is a consensus that defendants who plead guilty generally receive less harsh sentences than similarly-situated defendants convicted at trial. However, there is less consensus on how to characterize this disparity in the sentence. Some researchers refer to the disparities as "trial penalties," whereas

others refer to them as "plea discounts." We contend that the two terms have different theoretical backgrounds and underlying assumptions. As a result, the theories require different modeling strategies, and can lead to different predictions on the relationship between the disparity and some key case characteristics. We start by differentiating the two perspectives theoretically. We then present an empirical analysis on defendants in New York State to substantiate our theoretical arguments. We demonstrate that the estimates of the trial-plea disparities depend on the assumption of the default, as estimates of the trial penalties differed considerably from the estimates of the plea discounts."

- **Arnold Ventures (2021). Campaign for criminal justice data modernization. Retrieved from https://craftmediabucket.s3.amazonaws.com/uploads/AV-CJ-Data-Report-v7-1.pdf**
  This report lays out the challenges of today's criminal justice system, as well as recommendations for improving its data. These recommendations include using data to increase accountability, making data more accessible to the public, and among others.
- **Association of Prosecuting Attorneys (2020). Prosecutorial performance indicators and dashboards. https://www.youtube.com/watch?v=cSh_1_z2ha0&t=773s**
  Presentations by Melba Pearson and Besiki Kutateladze of Florida Atlantic University as well as State Attorney Melissa Nelson provide an overview of Prosecutorial Performance Indicators, their uses, and how they can be adopted by prosecutors' offices.
- **Association of Prosecuting Attorneys (2021). Engaging your community using performance indicators and dashboards. https://www.youtube.com/watch?v=_6mbzrc6hDs**
  Prosecutorial Performance Indicators and dashboards can be harnessed in increasing community engagement. In this discussion, Milwaukee County District Attorney John Chisholm and Milwaukee Community Justice Council Director Mandy Potapenko provide insight and recommendations for this use of prosecutorial data.
- **Association of Prosecuting Attorneys (2021). Implementing prosecutorial performance indicators: Anticipating challenges and findings solutions. https://www.youtube.com/watch?v=v7uWUHXFewk**
  Professor Besiki Kutateladze of Florida International University and State Attorney Andrew Warren discuss the adoption of Prosecutorial Performance Indicators in prosecutors' offices and strategies for implementation.
- **Association of Prosecuting Attorneys (2021). PPI webinar series: Assessing and building staff and data capacity. https://www.youtube.com/watch?v=8uGpjzj4CHY&t=283s**
  An important element of adopting Prosecutorial Performance Indicators is having the staff capacity to collect and present the resulting data. Rebecca Dunlea of

Florida Atlantic University and Caroline Wong of the Multnomah County, Oregon's District Attorney's Office provide insight into this issue.

- **Association of Prosecuting Attorneys (2021). Prosecutorial performance indicators: Office-wide engagement.** **https://www.youtube.com/watch?v=dcmFz3UpI4I**
  Professor Besiki Kutateladze of Florida International University and District Attorney Jason Williams discuss data culture among prosecutors' offices and strategies for increasing office-wide engagement with Prosecutorial Performance Indicators.

- **Ferguson, A. G. (2020). Big data prosecution and *Brady*. UCLA Law Review *67*, 180-256. Retrieved from https://www.uclalawreview.org/big-data-prosecution-and-brady/**
  Professor Ferguson argues that as prosecutors' offices increasingly turn to large databases in their daily work, they must take into consideration that this data may make exculpatory and impeaching material under *Brady v. Maryland* more difficult to identify.

- **Implementation guide for Prosecutorial Performance Indicators. (6/2020). https://safetyandjusticechallenge.org/wp-content/uploads/2021/06/Implementation-Guide-for-Prosecutorial-Performance-Indicators.pdf**
  This publication lays out a plan for adopting Prosecutorial Performance Indicators in three phases: planning, testing, and application. For each stage, the guide provides practical advice for implementation and troubleshooting.

- **Lawrence, D. S., Gourdet, C., Banks, D., Planty, M. G., Woods, D., Jackson, B. A. (2019). Prosecutor priorities, challenges, and solutions. RAND Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR2892.html**
  This report synthesizes the results of an expert panel convened by RTI International and the RAND Corporation to discuss challenges in prosecution. The panel's discussion centered on staffing and resources, digital information, organizational data, litigation strategies, accountability, and partnerships and collaboration with researchers and academics.

- **Measures for Justice (2021). Florida criminal justice data transparency standard operating procedure. Retrieved from https://measuresforjustice.org/about/docs/Florida_Criminal_Justice_Data_Transparency_Standard_Operating_Procedure.pdf**

In 2018, Florida passed a Criminal Justice Data Transparency (CJDT) bill that tasked agencies in all Florida counties with standardizing their data collection and reporting. Based on an early attempt at implementation in partnership with Measures for Justice, this publication describes best practices for reporting data as required by the CJDT bill.

- **Measures for Justice (2021). The power and problem of criminal justice data: A twenty-state review. Retrieved from https://measuresforjustice.org/about/docs/The_Power_And_Problem_Of_Criminal_Justice_Data.pdf**
  Measures for Justice describes the landscape of criminal justice data based on examining data from twenty states. In doing so, this publication describes limitations in criminal justice data, the consequences of these gaps, and the potential for data to speak to policy debates.

- **National prosecutor dashboards: Lessons learned, themes and categories for consideration. https://www.apainc.org/national-prosecutorial-dashboards-lessons-learned-themes-and-categories-for-consideration/**
  Data dashboards are increasingly the subject of attention. The National Prosecutorial Dashboards Advisory Group suggests principles that should drive prosecutors' offices in establishing dashboards, as well as best practices for composing data dashboards.

- **Olsen, R., Courtney, L. Warnberg, C., Samuels, J. (2018). Collecting and using data for prosecutorial decision making. Urban Institute. Retrieved from https://www.urban.org/research/publication/collecting-and-using-data-prosecutorial-decisionmaking**
  This publication reports the results of a survey of 158 prosecutors' offices covering the type of data they collect, how this data is used, and challenges in data usage.

- **Richards, N. M., & King, J. H. (2014). Big data ethics. *Wake Forest Law Review*, *49*, 393. Retrieved from https://www.rd-alliance.org/system/files/documents/Richards%20%26%20King%20%282014%29%20Big%20data%20ethics.pdf**
  The authors discuss the phenomenon of big data generally, including a history of large-scale datasets, ethical considerations in the use of data, and privacy considerations in the use of data by corporations and government agencies in today's society.

- **Russo, M., Jannetta, J., Duane, M. (2018). Developing data dashboards to drive criminal justice decisions. Urban Institute Retrieved from**

https://www.urban.org/sites/default/files/publication/99171/developing-data-dashboards-to-drive-criminal-justice-decisions.pdf
Researchers from the Urban Institute interviewed individuals involved in the development and use of data dashboards in information sharing between agencies. Synthesizing these interviews with other materials and office reports, the researchers share the step-by-step process of developing data dashboards as well as lesson learned.

- **SEARCH National Consortium for Justice Information and Statistics (2018). Prosecutor case management system functional requirements. National District Attorneys Association. Retrieved from** https://ndaa.org/wp-content/uploads/PCMS-Functional-Specifications.pdf
This document outlines functional requirements of a case management system and considerations for prosecutors' offices in communicating their needs as they acquire a case management system.

- **Slowes, R. (2016). Benefits of a modern court case management system. Retrieved from** https://static.legalsolutions.thomsonreuters.com/index/pdf/benefits-of-a-modern-court-case-management-system-whitepaper.pdf
Case management systems provide many benefits to the functionality and efficiency of the courts. These benefits, including automated document production, e-notification, and access case processing statistics are described here.

LIST OF INTERVIEWEES

Name	Title	Office	State	# of Criminal Prosecutors
Clint Curry	District Attorney	Yuba County District Attorney's Office	California	8
Frank Jackson	Chief Deputy	San Diego District Attorney's Office	California	320
Jeff Reisig	District Attorney	Yolo County District Attorney's Office	California	30

Stephen Siegel	First Assistant State Attorney	4th Judicial Circuit (Jacksonville)	Florida	120
Cheri Bruinsma	Prosecution Coordinator	Michigan Association of Prosecuting Attorneys	Michigan	N/A
Erika Brenton	Discovery Coordinator	Ingham County Prosecuting Attorney's Office	Michigan	35
Michael Cheltenham	Chief Assistant District Attorney	Ingham County Prosecuting Attorney's Office	Michigan	35
John Choi	County Attorney	Ramsey County Attorney's Office	Minnesota	50
Amy Fite	Prosecuting Attorney	Christian County Prosecuting Attorney's Office	Missouri	8
Eric Zahnd	Prosecuting Attorney	Platte County Prosecuting Attorney's Office	Missouri	12
Jean Peters Baker	Prosecuting Attorney	Jackson County Prosecuting Attorney's Office	Missouri	75
Jeff Karpel	Software Architect and Owner of Prosecutor by Karpel	N/A	Missouri	N/A
Steve Sokoloff	Prosecution Coordinator	Missouri Office of Prosecution Services	Missouri	N/A
Danielle Mindess	Director of Policy and Strategy	New York County District Attorney's Office	New York	Approx. 500
Kenn Kern	Chief Information Officer	New York County District Attorney's Office	New York	Approx. 500

Nitin Savur	Chief Assistant District Attorney	New York County District Attorney's Office	New York	Approx. 500
Jason Carusone	District Attorney	Warren County	New York	9
Kimberly Spahos	Director	North Carolina Conference of District Attorneys	North Carolina	N/A
Spencer Merriweather	District Attorney	Mecklenburg County District Attorney's Office	North Carolina	85
Michael Hollander	Director of Analytics	Philadelphia District Attorney's Office	Pennsylvania	Approx. 300
Oren Gur	Director of Research and DATA Lab	Philadelphia District Attorney's Office	Pennsylvania	Approx. 300
Wes Weaver	Assistant Supervisor of Analytics	Philadelphia District Attorney's Office	Pennsylvania	Approx. 300
Charlie Young	IT Chief	9th Judicial Circuit Solicitor's Office	South Carolina	
Kevin Brackett	Solicitor	16th Judicial Circuit Solicitor's Office	South Carolina	30
David Baker	Senior Prosecuting Attorney	King County Prosecuting Attorney's Office	Washington State	185
Daniel Clark	Chief Criminal Deputy Prosecuting Attorney	King County Prosecuting Attorney's Office	Washington State	185

General Information

- Number of staff. How many prosecutors and how many support staff?
- Size of population served
- Jurisdiction of the office
- Average number of cases handled by the office annually
- Annual budget

Case Management Capabilities

- Do you have a case management system?
  - Which case management system do you use?
  - How long have you used this system?
  - How much does this system cost?
- Do you have dedicated IT staff?
- How is data collected and audited?
- Do you correct your data? What types of errors have you noticed?
- Do you receive data from other sources such as police, courts, other?
  - How do you use this data?
  - Are there any limitations to this data?
- What reports can you run on your data?
  - Are these reports accurate?
  - Do these reports leave out any relevant information?
  - What data reports would you like to have that you currently do not have?
- What types of challenges have you noticed when it comes to case management software?
- Was there staff resistance to use of the data?
- Do staff use the case management system?

Data Usage

- Do you use data to regularly guide management decisions?
  - To allocate time or resources?
  - To schedule cases?
  - To assess staff performance?

- To assess consistency in charging and sentencing?
- Have you used your data to research the efficacy of your programs?
- Have you used your data to inform budget requests?
- Have you used your data for crime strategies decisions?

Access to Data

- Is anonymized prosecution data available to the public?
  - If yes – in what format? Any data you do not make public?
  - If no – why not? Do you have plans to make this available in the future?
  - Have you received any feedback from the community about data availability?
- Is anonymized prosecution data available to researchers (upon request)?
  - If yes – in what format? Any data you would not share?
  - If no – why not? Do you have plans to make this available in the future?
  - Have you received any feedback from researchers about data availability?