JTC Resource Bulletin

Data Management Series - Part 1: Data as an Asset

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Abstract
Acknowledgments

This document is a product of the Joint Technology Committee (JTC) established by the Conference of State Court Administrators (COSCA), the National Association for Court Management (NACM) and the National Center for State Courts (NCSC).

JTC Mission:
To improve the administration of justice through technology

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Document History and Version Control

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Introduction

Even though data is the lifeblood of court operations, this asset is often undervalued, underused and sometimes even mismanaged. As with many organizations, the data that flows through a court is operational in nature but has significant value to not only the court, but also to court users and the general public. Many stakeholders throughout the judicial process utilize case-related data for their purpose at a single moment. It may then be passed along to subsequent users and made available to the general public, if not confidential in nature. As a result of the realization that court data is an asset, courts have witnessed a significant increase in requests for data from outside sources for general studies, legislative proposals, and court evaluation projects. These increasing requests and multiple uses of court data make it critical that courts institutionalize a data management program that does more than simply coordinate data processes. Courts must understand and manage data being provided to both internal and external users.

This paper focuses on the courts’ use of data to maximize its value through recognized data management practices. This is a high level overview of data management, and is not intended to be a guide to implementing specific policies or procedures. Keep in mind that data is raw in nature and can be assembled for numerous purposes to create additional information.

"Data Management is the development, execution and supervision of plans, policies, programs and practices that control, protect, deliver and enhance the value of data and information assets". ¹

The area of data management is extremely broad, and specific elements may not always appear to apply to public sector organizations such as the courts. However, there are best practices that can be mined from the study of data management and incorporated into the activities of the judicial system. Because of the breadth of topics within this area, this paper will be the first of several to address how the courts can approach data management more effectively, utilizing common methodologies to better manage their operations and minimize any negative consequences that come from mismanagement.

The workgroup will focus initially on the following areas of consideration:

1. Data as an Asset
2. Data Governance
3. Data in the Case Lifecycle

This paper addresses Consideration #1, Data as an Asset.

**The Value of Data**

What is the value of data? This is a difficult question to answer. Value may be determined by the extent of use the data has for a particular individual at a particular time. Some data has immediate value but its value is temporary and may not be needed again (e.g., data used to justify a funding for a special project). Other data must be stored over time and made available repeatedly as needed. The moment data is needed, decision makers find it invaluable and a lack of data can cripple operations. Inaccurate data can actually be more detrimental than having no data at all. The act of decision making, or governance, is based on information that is available to the stakeholders at the time they need to make a decision. What can be more valuable than that?

Courts, in general, are service organizations. A core function of the courts is to maintain the record (i.e., the information received and obtained throughout the life of a court case), in addition to providing a neutral place for conflict resolution. The courts are reliant on data provided by outside parties to quickly, efficiently, and effectively resolve disputes and carry out justice, so the data must be accurate, timely, and available. However, this information is not merely a case or data, but rather a person, whose livelihood or life is impacted by the judgments rendered by the court. The importance of managing data in a court goes beyond business operations and does have a significant impact on society in general. The bottom line is that data is not only a resource to the courts, but an asset as well, so it should be treated as such. Much like an organization would invest in and insure equipment, land, vehicles, and buildings, the data utilized by courts must have similar protections.

Can you identify what you should consider “data”? What data elements captured by your court would you consider of most value to the public and/or the work you do?

Most courts have at least some portion of their systems automated. While automation is a critical component of data management, automation does not in and of itself ensure that the system’s data will be valued, used, and used accurately. Therefore, it is incumbent upon court leadership to ensure that automation is available to capture
valuable data elements of the court record and to define expectations surrounding the management and application of that data for court staff.

If data is required or requested to justify the need for a new judicial district or any other operational resource, what should be considered by those compiling and communicating the data? Data can be elaborate, expansive, concealed, or maybe even unknown. Therefore, the individual compiling and communicating that data must understand what the data means and how it informs the policy request being made. In some instances, data can be used to make a compelling argument and in other instances, data can be used to show a more direct cause-effect relationship. Those involved in analyzing the data should know the difference. Most of the data available to the judiciary for management or justification purposes will help to make a compelling argument, providing further support for policy decisions.

Keep in mind that you need to understand this asset to determine how you need to invest in its maintenance, access, and security just as with any other asset.

**Data Management Practices**

Data management practices include identifying assets, categorizing and prioritizing them, and then classifying the pieces of information they contain.

**Identifying Assets**

Once courts embrace the value of data and acknowledge its usefulness in the management of core functions, it is necessary to identify and understand how data is accessed, used, and distributed. The functionality of the court’s case management system, including how data is captured and categorized, may ultimately impact the utility of the data. However, ensuring the ability to use the court’s data is not the sole responsibility of an Information Technology resource. It involves a variety of court staff, from those familiar with the business process to those sitting on the bench. It may be useful to begin with individuals familiar with the business process of a court. Having a diagram that details the business processes of the court may help to guide discussion about the important events or “touch points” within a case that are important to capture within the case manage system.

Recognize that courts are different organizations than private sector businesses. When identifying data assets, look beyond the obvious records the court maintains. For instance, a calendaring module within a case management system may be primarily responsible for determining and tracking the judicial resource needs for future court events, whereas the information captured by
clerks or judicial officers in a courtroom is primarily focused on documenting the activities/outcomes for a specific event for the court’s record. Another example is an alternative dispute resolution program that may be managed by the court but is not an activity tracked in the courtroom. The outcomes associated with this program are of interest to the court because they have an impact on the court’s case management efforts.

The National Center for State Courts has developed a Court Technology Framework, which clearly aligns “Data Management” with the other segments of court operations. When identifying data assets, keep in mind that most of the data elements of interest to court leaders are more detailed than the tracking of workload trends. While undoubtedly important, court leaders often require more specific information to inform policy and process decisions. Therefore, identifying how case information informs business processes is useful. The courts have financial requirements, human resources needs, and operational necessities just like any other business so information across the entire organization must be contemplated.

![Figure 1: Court Technology Framework](image)

This diagram is based on the assumption that the data that courts collect contains relevant information for their business decision-making. However, that may not be the case. So, then what? How do users/court staffs get the information they need?

**Categorizing and Prioritizing Data**

Now that you have identified your data assets, do not stop at just an inventory. As noted earlier, data assets are used in a variety of ways, and there are varying...
requirements based on considerations such as time in a case lifecycle, required reporting to other entities, and the application of rules or court procedures. (This lifecycle and case processing will be discussed further in Consideration #3 “Data in the Case Lifecycle”.)

Once categorizations are made, then the court can work on prioritizing the data. This prioritization is an important aspect of court culture because it underscores how important it is to align data utilization to the court’s mission. To the extent that the value of the data is not clearly communicated and understood by the organization, gaps are likely to exist in how the data is collected, stored, and reported. For example, identifying how data is used to support the court’s mission as it relates to public trust and confidence through being transparent and accountable is often overlooked.

The categorization process does not necessarily divide various data elements. It can classify or sort data relevant to where it is in a process. For example, when dealing with citation records, an assessment can be made as to how long the data needs to be maintained in a certain environment. While the case is active, all relevant and corresponding documents must be immediately accessible. Once the case is disposed, does this data require the same level of storage and access? Can the court consider a less expensive method of maintaining a record that will not require immediate access? What are the records retention and fiscal impacts that affect the level of storage and access?

Data storage methods include offsite storage or “cloud” solutions. Courts must determine their own level of tolerance for the limits and liabilities those options present. For more information on this topic, see the JTC Resource Bulletin Cloud Computing.

Data management is not necessarily the end, but part of a continuous evaluation. Reporting, which will be covered in a future paper, is an output and byproduct of data management processes and not always the “end” result for court information. An example for data classification is noted below; be aware that data classification like this one is useful when an organization has clear goals and has metrics to measure how it is doing in terms of achieving the goals, etc. Court leaders may need to tweak a bit to make it fit their court’s unique needs.

**Classifying Information**

Not all information is equally valuable to the courts, and there are many potential classification structures. Some organizations classify information based on how frequently it is accessed and used. This example, from an article by the
Technology Executives Club, addresses the need to prioritize information based on how frequently it is accessed in order to determine the most cost-effective way to store it while ensuring it is accessible when needed:

**Mission Critical**: Frequently used, immediate availability, significant and immediate financial impact, significant and immediate operational impact, eventual compliance impact.

**Business Critical**: Regularly used, reasonably available, significant long-term financial impact, significant operational impact over time, eventual compliance impact.

**Essential**: Periodically used, available within defined timeframe, potential long-term financial impact, and probable operational impact over time, probable compliance issues.

**Consequential**: Occasionally used, available within extended timeframe, possible but not likely financial impact, and possible operational impact over time, probable compliance issues.

**Non-Critical**: Rarely used, limited availability, unlikely financial impact, doubtful operational impact over time, potential compliance impact.

**Inconsequential**: Used only on request, limited availability, no financial impact, doubtful operational impact over time, potential compliance impact.

**Disposable**: Never used, no need for availability, no financial impact, no operational impact, no expected compliance impact.

There are a variety of ways to classify information. This is just one example. Even if you do not categorize, be aware that there are varying degrees of valuations to consider. In all instances, the court should regularly measure key metrics to assess its operations.

**Business Intelligence**

Business intelligence (BI) is an umbrella term that includes the applications, infrastructure and tools, and best practices that enable access to and analysis of information to improve and optimize decisions and performance.4

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The value of data has been emphasized in this paper. The data itself must be understood in order to be useful. It is important that users be confident in the accuracy of the data available, and be able to determine its benefit. Courts have limited resources; therefore, tools for transforming raw court data into meaningful information must provide a clear return on investment.

Every approach to gathering and presenting data will be dependent on not only specific court needs but also statutory requirements. However, key decisions related to any court’s data management process should include discussions about data quality, data analysis, and reporting, including how best to communicate/display the data compiled or analysis performed. Be careful with assumptions.

The High Performance Court Framework – Quality Cycle from the National Center for State Courts (NCSC) is a good reference model. The Quality Cycle is part of NCSC’s High Performance Court Framework (the Framework), which provides guidance for how courts can use data to improve court performance. A main theme of the Framework is that high performance builds upon established approaches to court administration and that improving performance can be achieved when data is used to guide the identification, implementation, and evaluation of creative and innovative strategies to solve problems

This theme is demonstrated in the Framework’s Quality Cycle. Using a Family-Law case example, Ostrom and colleagues (2011) describe the five flexible, iterative steps of the cycle: (1) problem identification, (2) data collection, (3) analysis of data to inform solutions to the identified problems, (4) implementation of a select course of action, and (5) evaluation of implemented solutions. The steps of the Framework’s Quality Cycle normally occur during a process of adaptation where a court determines how the performance results can be used to modify practices to better align with administrative principles, i.e., the values and behaviors expected. Even when a court has resources to produce performance results and the capacity to analyze and learn from them, the value in gathering the data that produced the results may be marginalized without a commitment by all court staff to use the results to inform court operations and adjust policies accordingly.

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10 Fox, D., H. Yamagata, and P. Harris. 2014. From Performance Measurement to Performance Management: Lessons from a Maryland Circuit Court. Justice System Journal, 35:1, 87-103
Figure 2: Quality Cycle

The effective management of data is fundamental to performance measurement and performance management. Courts need to recognize the value of information not only as it relates to the determination of just outcomes for parties in a case but also in the governance of administrative practices. Only through the collection of data are courts able to understand how effective and efficient they are at administering justice. Data quality and data analysis are also necessary components of performance measurement and management. If staff do not question or validate the data at the problem identification step of the Quality Cycle, for example, the problem may be defined incorrectly or focus may be placed on something that is functioning properly. If the data is not analyzed properly, the court may obtain inaccurate results leading to the selection of ineffective corrective actions that waste finite resources. As such, there is a level of responsibility and accountability in the use of data that makes the management of it that much more critical.
Reporting

Some courts are quick to comment about the reports that they have created to inform court management. Often, more than 200 reports may be stored within their case management systems and distributed to court staff for management purposes. Whether or not recipients use that information to inform their practices is a different matter. This underscores the need for responsibility and accountability when developing reports for management purposes. Are technical staff communicating with court managers to ensure they understand reporting requirements? Has leadership communicated to court managers the importance of tracking the identified information, and how that information translates or supports the court’s mission? These are fundamental questions that must be addressed prior to the development of data reports, then revisited on a regular basis to ensure that needs are still being met.

There are volumes of research, best practices, and methodologies related to court management reporting. Provided below are several basics to consider implementing or strengthening in your organization.

Establish display and sharing rules with the data providers

Nothing can be more discomforting to a data owner than having their data misused or misinterpreted. Before presenting data, create an unambiguous plan for:

- What data is to be used for the analysis?
- What message is to be communicated (as it relates to what the data tells us and what it doesn’t tell us)?
- How the data will be shared?
- Who will have access to the report?

Collaborate with Subject Matter Experts

Engaging subject matter experts (SME) prior to preparing the report will mitigate issues later, and will create new opportunities for appraising the data. This statement addresses two points relating to the importance of collaborating with SMEs. One reason for engaging SMEs at the front-end of the reporting process is to help to ensure that data requirements are appropriately defined. Consider any reporting initiative as a “Knowledge Transfer” from the SMEs, who better understand what they are showing and how to communicate the correct message. A manager does not draft an employee handbook or training manual without understanding the specific roles, responsibilities, and duties of a position. In that manner, an IT person or unconnected staff member should not publish
information regarding another person’s area of expertise without their involvement.

A second benefit is that often the initial report will not address the questions of greatest interest from a management perspective. Obtaining buy-in at step one of the reporting process will ideally build upon future reporting efforts that will require insight and direction from SMEs. Building this engagement between technical staff and administrative or clerk staff should strengthen the value of data for the organization.

Reports are not new, and may not be as intriguing as new technology, but can still have an impact. Reporting sensitive items such as case data or disposition facts can be extremely disruptive to an organization, so reports should be examined closely and rules for dissemination should be determined in advance.

Analysis

Even if the court understands what it wants to communicate with the data it has collection, there is no way to accurately predict how people on the receiving end will interpret what has been provided. Reporting rules should cover pertinent information about the data specifics, but it is difficult to address every scenario.

Don’t assume users know what they want or how to use it. Keep facts, figures, and other evidence simple enough to tell the story without creating more questions than answers. Many different tools that can be used for Business Intelligence (BI), but empowering users can sometimes have a negative effect if users create flawed queries. Don’t underestimate the power of information misunderstood or misrepresented.

Three simple ideas to help insure accurate analysis:

Know your audience

You cannot always control where information goes and how it is shared, but that person can make it known who the information is intended to reach. Confidential records are not the only records that need a heightened level of security are not considered here; instead document what the data should be offering and who it will impact. Using this “metadata” approach should assist in reducing distorted uses and misunderstandings based on unclear intent. Individuals may still misrepresent data. Do not spend excessive time trying to stop this issue.
Qualify Data

Notations and references are important and may slow some of the challenges you experience when delivering data or a report to a person or a group. Everyone will have a different background and understanding when they review data you provide. Some may attempt to interpret data to support a preconceived position on what they are interpreting. Orienting the consumer to the message being conveyed is a valid practice and should mitigate incorrect assumptions.

Be Flexible

Every consumer is going to have a different notion of what they are getting and how it is to be used. There is no way to ensure everyone interprets the same information in the same way. This is not a valid reason to stop disseminating data! Work with the consumers and coordinate acceptable formats, layouts, timing, figures, etc., to produce effective “data”. This can help build a reliance on and appetite for additional information.

Display

The actual presentation layer can and should be interesting and engaging. Dashboards, scorecards, trending graphs, and stoplights are all common widgets used to demonstrate data related to a system or process. Do not underestimate how much more effective it can be for users to see information displayed graphically, versus reading through page after page of text. A mix of text and graphics is generally the best delivery method because of the need for explanations and details. There are many tools that allow for significant drill down capabilities. Because courts are currently a paper-centric industry, reports need to be readily available.

This are two important considerations when displaying data:

**Always answer a business need.**

As noted, it can be helpful to display data in visually interesting ways, but it can be easy to become too focused on the tool than the data it displays. Don’t incorporate data elements of little or no value to the purpose of the display. Focus on what data should be shown, not how much.

**Measure what you plan on doing something about.**

Producing “actionable data” is the goal when creating visual representations. If the user cannot take the information and act on it, then it doesn’t make sense to utilize precious resources to produce that information.
Proactive View

One of the hardest things to do in many organizations is to have an effective, proactive approach to making decisions. This could be due to a lack of understanding or expertise on the part of management, or insufficient information to inform their decision-making process.

Court leaders are resources in determining how data can be used proactively, and they need to be comfortable with requesting and trusting data from all facets of the business. Court managers should not make a habit of relying on an Annual Report format for making operational decisions. Many operational decisions should be made with more frequent and additional information than what is published in an Annual Report.

The NCSC’s CourTools12 contain several data elements that can be combined into a dashboard display for active caseflow and other administrative management. Additionally, CourTools have recommendations for reports and surveys that can be completed at regular intervals to provide indicators of improved performance in those areas.

* Article related to Court Culture Classifications (see Ostrom and Hanson, 2010; http://cdm16501.contentdm.oclc.org/cdm/ref/collection/ctadmin/id/1611)

Culture

Court culture plays a significant role when it comes to the value placed on data. Understanding how an organization will incorporate data as part of its mission and principles of judicial administration is critical. Some organizations may quickly accept the concepts based on modest security concerns while others may need a full education and valuation model. There is no easy or single way to modify the judges’ and administrators’ attitudes toward being comfortable with sharing, reporting, and displaying their business data. Start by introducing these concepts:

- Without data, can our systems perform many valuable functions?
- What is the importance of IT and court leadership collaborating to produce quality data?
- Can inaccurate data undermine all efforts at reporting and decision making?
- What are the business demands for data from the public and staff?

In an article on court culture, Ostrom and Hanson (2010) note that modern court administration, including judges, will use court performance information as well as other data and technology to make better business decisions. They also noted that data can help answer questions about why judges are reluctant to embrace changes in case management to improve timeliness. The Court Culture Classifications chart below can help a court identify in which quadrant they typically function. Data is one of several options available to court managers to help move into the Networked quadrant.

![Court Culture Classifications Diagram](image)

**Figure 3: Court Culture Classifications**

**Conclusion**

Data management has multiple aspects including but not limited to its collection (e.g., manual, automated, or virtual), verification and quality control, utilization (internal/external), and purpose (management of internal operations, budget

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justifications, etc.). With increased emphasis on transparency and accountability, court leaders are quick to rely on data. However, often courts have not instituted the requisite resources (e.g., staff, infrastructure, policies, and procedures) to ensure that the data and the resulting analysis are valid.

Having access to data and displaying results does not equate to a commitment by the judiciary to view data as critical for achieving its mission. When court leaders see the value of data and data management, that must be communicated and demonstrated at all levels of the organization. For instance, front line court staff must understand how docketed case information impacts the calculation of case processing time. Judges must recognize how their words or the words used by other parties impact the docket entries made by courtroom clerks about the hearing, including findings made and judgments rendered.

The recognition of how the work of the court at the front counter and in the courtroom impacts service delivery and ultimately public trust and confidence is a critical component of an effective data management strategy. A court’s approach to managing data needs to be strategic, engaging, and practical. At its core, an effective data management strategy holds the possibility that a court can achieve an optimal level of performance in its service delivery and, more broadly, in its administration of justice.