

**Milwaukee Homicide Review Commission:
Information Sharing Needs Assessment
Final Report**

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Executive Summary

Through the Milwaukee Homicide Review Commission (MHRC) process, it became apparent that all criminal justice agencies would benefit greatly from enhanced information sharing, ideally electronically. Enhanced information sharing would aid in investigations, prevention/deterrent strategies and allocation of resources. One early recommendation of the MHRC was to develop a means to facilitate electronic information sharing between criminal justice agencies. The first step in facilitating electronic information sharing was to assess the current state of the information sharing environment of participating criminal justice agencies. This report outlines current approaches for sharing information to prevent and control crime on the national, state, and local levels. The information presented in this report was gathered through site visits and semi-structured interviews. The report concludes with the recommendation to adopt national standards for information sharing, fully support the Wisconsin Justice Information Sharing (WIJIS) Justice Gateway effort, and form an information sharing consortium to guide information sharing efforts in Milwaukee.

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Introduction

This report outlines the results of an information sharing needs assessment conducted by the Center for Urban Population Health in partnership with the Milwaukee Police Department. The Center for Urban Population Health is a collaboration among the University of Wisconsin School of Medical and Public Health, the University of Wisconsin–Milwaukee, and Aurora Health Care designed to address their missions to meet the health needs of Wisconsin and beyond through excellence in education, research, patient care, and service. The Center conducted an industry review, site visits, and semi-structured interviews to gather the information presented in this report. Possible opportunities and recommendations to improve information sharing among criminal justice agencies in Milwaukee are offered at the conclusion of the report.

Background

In keeping with emerging best practices in public health and criminal justice, leaders in Milwaukee - Mayor Tom Barrett, Police Chief Nannette Hegerty, and District Attorney E. Michael McCann assembled a working team of professionals charged with developing a multi-level, multi-disciplinary, and multi-agency homicide review process (Milwaukee Homicide Review Commission - MHRC) aimed at *reducing the occurrence of homicides* in Milwaukee County. The MHRC, which draws on both criminal justice and public health models of homicide review, has three goals: to better understand the nature of homicide through strategic problem analysis, to develop innovative responses to the problem of homicide, and to strategically focus limited enforcement and intervention activities on identifiable risks.

The Milwaukee Homicide Review Commission is the central component of an initiative aimed at reducing the occurrence of homicides in Milwaukee County by establishing an intensive assessment process of individual fatalities. A multidisciplinary homicide review process assumes that circumstances of untimely, violent deaths are likely to be repeated and that detailed examination can lead to important insights regarding health risks, intervention/prevention, evaluation, and ultimately homicide and violence reduction. This initiative is based upon the premise that in-depth analyses of cases can provide a window into problems with system and community response.

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Goals and Objectives

The overarching goal of the needs assessment was to develop an understanding of the current state of information sharing of Milwaukee criminal justice agencies and to identify opportunities and propose recommendations for improving information sharing among these agencies.

The objectives for the needs assessment were to:

- Conduct an industry review of information sharing in criminal justice
- Identify the interest level of agencies in sharing information
- Contact and conduct interviews with personnel from those agencies
- Perform a gap analysis that describes the current situation and desired situation
- Identify priorities and importance of information sharing
- Recommend possible solutions and opportunities
- Provide a summary of the needs assessment results (this report)

Participation

The following agencies participated in the needs assessment by providing personnel interviews, site visits, participation in a roundtable discussion, or other relevant information.

- Milwaukee Police Department
- Milwaukee County District Attorney's Office
- SEARCH – The National Consortium for Justice Information and Statistics
- High Intensity Drug Trafficking Area program
- Milwaukee Public Schools Public Safety Division
- Wisconsin Department of Corrections
- Wisconsin Office of Justice Assistance
- US Attorney's Office
- US Bureau of Alcohol, Tobacco, Firearms and Explosives
- US Federal Bureau of Investigation
- US Department of Justice – Office of Justice Programs
- Arizona Supreme Court

What is Information Sharing?

Criminal justice agencies can better cope with challenges when information is shared among agencies. In this context, the term “information sharing” is a strategic partnership among criminal justice agencies characterized by a willingness to be open and to share data as well as the benefits resulting from the information sharing. Parties in the partnership generally identify a need to share data to improve their respective operations and establish a data exchange as a means to that end. When information sharing is considered from this perspective, the idea opens new possibilities and can bring together non-traditional partners to improve the efficiency and effectiveness of the participating agencies.

Information sharing has a long history in criminal justice, especially within law enforcement. As society and information become more mobile, the importance of sharing data grows exponentially [101]. In the past, information sharing was accomplished using methods based on paper, telegraphs, telephone, and teletype. Technology available today can automate the exchange of data and provide powerful tools to search, link, and analyze criminal justice information such as incident reports, bookings, parole/probation data, and criminal history data to a greater extent. The beneficiaries of expanded information sharing capabilities include law enforcement, prosecutors, defense counsel, courts, probation, corrections, and the community.

Typical information sharing arrangements in the recent past have consisted of one-to-one exchanges between two agencies. These exchanges can be characterized by piecemeal interoperability between software applications that are designed to serve a single agency or a group of agencies. Usually, no regard was given for the need to share information across different computer platforms or across the entire criminal justice domain.

As explained later, a considerable movement of integration across the criminal justice domain has been initiated.

Challenges

Before information sharing can occur, several critical success factors must be present in the organizations involved. The organizations must demonstrate trust, candor, and must be receptive to information sharing with other agencies. Often mandated information sharing is a result of organizations rejecting attempts to initiate information sharing. Also, organizational and individual commitment to information sharing must exist since information sharing can be labor and time intensive. Finally, the correct mix of professionals is needed to implement data sharing. Leaving information sharing as the sole duty of the information technology departments can lead to disappointing

results since often the personnel requesting or utilizing the information have a much better sense of what data is needed to meet today's challenges.

Information sharing initiatives are typically complex, difficult, and prone to failure [103]. Successful information sharing depends to a large extent on the capabilities of the organizations involved. Each organization by itself does not need to have every resource required to implement information sharing, but the organizations *together* must be able to assemble the resources needed.

The readiness of an organization to collaborate on an information sharing initiative can be summarized by three major characteristics [103]:

1. Actively seek collaboration
2. Readily available resources
3. Supporting policies and practices

Beyond the organizational challenges, the data itself can be a source of consternation for successful information sharing. Often data has not been rigorously reviewed in terms of accuracy, reliability, or validity. In addition, the data itself may not be standardized in the same manner. Lack of standardization forces the potential users to expend resources mapping data from one agency to another. Development of standards is critical so that the data is not misused or misconstrued.

However, despite these challenges successful information sharing can lead to greater operational efficiencies, expand the capabilities of an agency, and provide a greater ability to gather and create intelligence.

Current State of Information Sharing

This section describes the current environment of information sharing at the national, state, and local levels.

National Environment

Today's environment of information sharing at the federal level is largely a result of the September 11, 2001 terrorist attack. Building on discussions at the 2001 International Association of Chiefs of Police (IACP) conference, experts at the IACP Criminal Intelligence Sharing Summit in the spring of 2002 recognized that local, state, tribal, and federal law enforcement agencies needed to coordinate collect, analyze, and appropriately disseminate criminal intelligence information to make our nation safer [102]. Also, the summit identified the top five barriers to information sharing as follows:

1. Absence of a nationally coordinated process for information sharing
2. Technology issues
3. Lack of intelligence standards and policies
4. Lack of intelligence analysis
5. Poor working relationships

The result of the proceedings of the conference was the formation of the Global Justice Information Sharing Initiative (Global) Intelligence Working Group (GIWG). The GIWG in turn formed Criminal Intelligence Coordinating Council (CICC) to oversee and evaluate the newly developed National Criminal Intelligence Sharing Plan (NCISP).

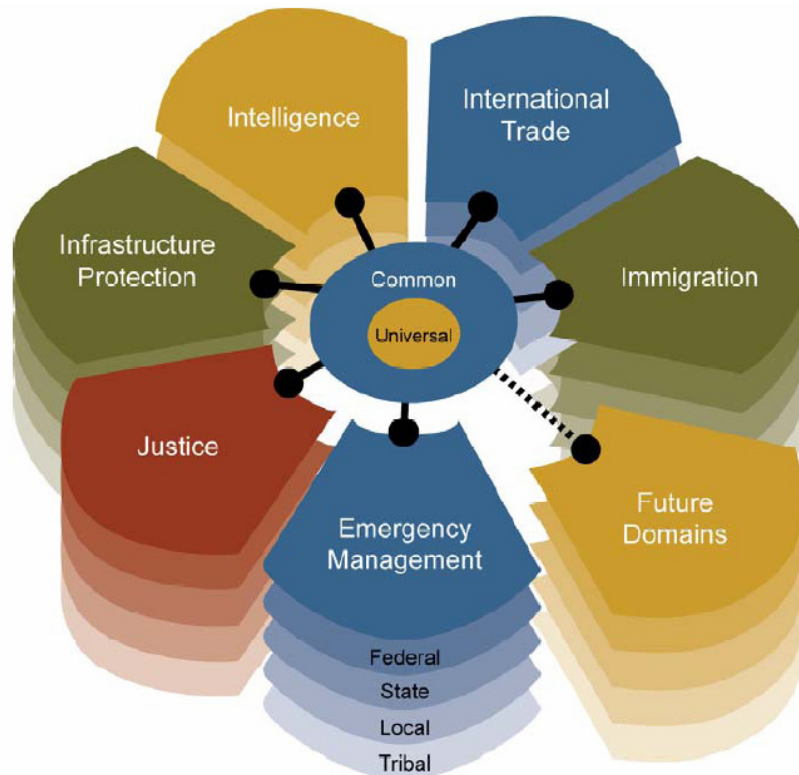
The National Criminal Intelligence Sharing Plan has the vision of providing a scalable model intelligence sharing plan that addresses the barriers identified above. With the plan providing the touchstone for advancing information sharing, the Department of Justice (DOJ) and the Department of Homeland Security (DHS) jointly procured resources for addressing the recognized needs contained in the NCISP. These needs range from developing technical standards for sharing data to developing privacy and security policies that protect rights and liberties of individuals.

The results of these efforts of DOJ, DHS, and the GIWG to implement the NCISP are toolkits that assist practitioners in implementing information sharing among criminal justice agencies.

In regards to technology, a major development was the introduction of the National Information Exchange Model (NIEM) and the Global Justice XML Data Model (Global JXDM). NIEM is a set of standards for exchanging data between government agencies and allows dissimilar systems to utilize the information in non-proprietary format. NIEM contains the Global JXDM as the primary standard for the justice community.

The primary goal of establishing these standards is to provide a mechanism for any justice system to be able to share, exchange, translate, and accept information in a standardized manner.

Figure 1. Areas Addressed by NIEM [100]



The Global Justice XML Data Model seeks to reap the benefits other industries, such as ebXML in business and HL7 in healthcare, have realized by adopting an Extensible Markup Language (XML) as a common means of communication between distinct systems. XML contains information as well-formed text enabling them to be computer-system independent. An XML document can include metadata (information about the structure of information being shared), routing information, and security and authorization information. Additionally, it provides validation and verification of the information being shared.

Some of the primary benefits of adopting XML (and thus the Global JXDM) include:

- On-demand real time data access
- Lower costs for standard products from vendors
- Leverage existing (legacy) information systems investment and data
- Gradual adoption of the standard
- Reduced project risk
- Reusable components for use in future information exchanges
- Creation of a labor pool with commonality of skills

In addition to the typical benefits of using XML, the Global JXDM provides a common vocabulary when exchanging information that is well-defined. This facilitates building interoperability between systems since the contents of exchanged information are not ambiguous. It also provides a language that is scalable in the sense that it facilitates multi-level information exchange (local to federal, federal to state, etc.). For instance, a person's information is defined the same way in the standard regardless of which agency produced the information and usually is human readable (see Figure 2).

Figure 2. Excerpt of the Person Information from a Criminal History Record (Rap Sheet)

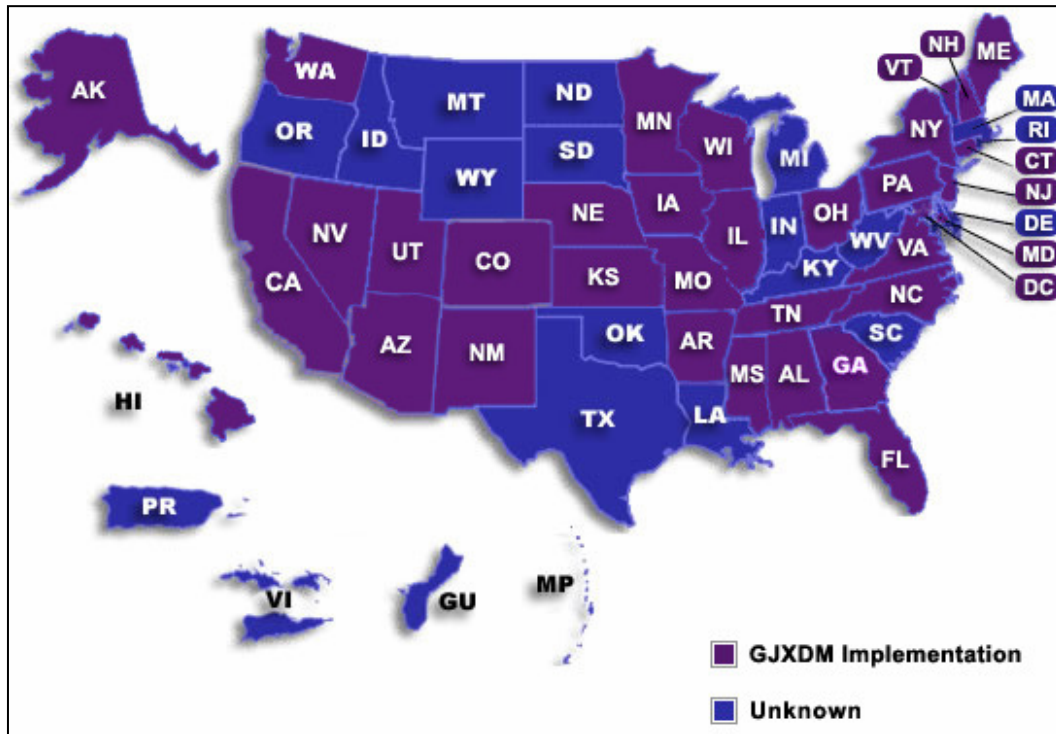
```
<Person>
  <PersonBirthDate>1953-02-12</PersonBirthDate>
  <PersonName type="Primary">
    <PersonPrefixName>Mr</PersonPrefixName>
    <PersonGivenName>John</PersonGivenName>
    <PersonMiddleName>P</PersonMiddleName>
    <PersonSurName>Jones</PersonSurName>
    <PersonSuffixName>Jr</PersonSuffixName>
  </PersonName>
  <PersonPhysicalFeature>
    <PhysicalFeatureDescriptionText>dragon tattoo on right forearm
  </PhysicalFeatureDescriptionText>
</PersonPhysicalFeature>
</Person>
```

In addition, justice agencies can share and publish their information sharing work as Information Exchange Package Documentation (IEPD). An IEPD is a standardized collection of the components that agencies have produced in establishing an information exchange. These documentation packages are posted to the IEPD Clearinghouse, <http://www.it.ojp.gov/iepd>, operated by the Office of Justice Programs. At this time, over 80 such packages have been published and range from an exchange for Amber Alerts to one for transmitting a court sentence to other systems. Thus, the open availability of such packages can reduce the resources needed to establish a similar exchange in another jurisdiction.

Beyond the IEPD Clearinghouse, the justice community has worked to create other resources for the adoption of NIEM and Global JXDM. Free tools are available for modeling processes within an agency and generating and validating information exchanges. Training is available as well as a national help desk sponsored by the Bureau of Justice Assistance (BJA). Events and conferences, such as the BJA Regional Information Sharing Conferences, are available to the community as well as professional networks such as JISPnet.org.

The adoption of Global JXDM has some associated implications. Since the 2005 fiscal year, DHS has required all grant applications to use Global JXDM as the backbone for their information exchanges. Also, as the standard is adopted, other agencies will expect information exchanges that utilize the standard.

Figure 3. Organizations Utilizing the Global JXDM [104]



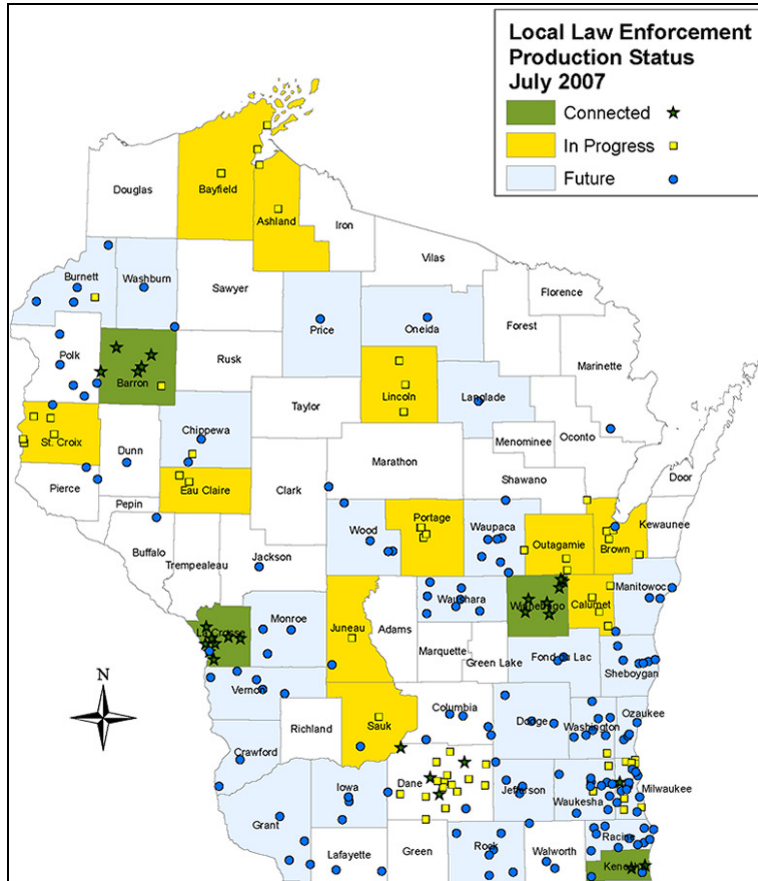
State Environment

The State of Wisconsin recently put into production its own Global JXDM project called Wisconsin Justice Information Sharing (WIJIS) Justice Gateway. The gateway has been in planning since 2001 and moved to production status in 2007 after piloting with agencies in La Crosse, Madison, Kenosha, Stevens Point, and Winnebago County. The goal of this initiative is to create a platform that allows any criminal justice agency to make its information available to any other agency in Wisconsin. This service is provided at no cost by the Office of Justice Assistance (OJA) and grants cover the costs of building the information exchange to connect the local system to the State gateway.

Currently, the Justice Gateway provides a point of access to search participating local police records systems for suspect and contact information. WIJIS uses the Global JXDM to automate and secure the sharing of data with no additional data entry by the participating agencies. Agencies choose what information will be shared and who can see it. Since the Justice Gateway is a platform for information sharing, it can be expanded beyond police records. In 2007, the Justice Gateway will be expanded to

include information from over 60 county district attorneys, the Department of Corrections, and the Division of Motor Vehicles.

Figure 4. WIJIS Justice Gateway Participating Agencies [105]



Other projects around the State have also implemented the Global JXDM in data exchanges. For example, the Transaction Information for the Management of Enforcement (TIME) system is Wisconsin’s law enforcement telecommunication network. It was recently updated and renamed to eTIME to signify its adoption of Internet technology and the new data exchange standards. eTIME connects police departments to the FBI for the CJIS interstate criminal record index and NCIC hot files, other state departments for state criminal records, hot files, driver and vehicle records, corrections, and the National Law Enforcement Telecommunication System (NLETS) for access to interstate data.

Local Environment

From what could be ascertained from interviews, most of the data exchanges currently utilized in Milwaukee are of an ad hoc nature. This characterization should not be

construed as a negative criticism of the agencies' efforts to share information, but rather a reflection of the environment in which these agencies operate. Local agencies have been steadily moving towards the adoption of enterprise-level systems that automate internal operations. As such, the focus of these systems is to facilitate information sharing within a particular agency, rarely focusing on cross-organizational data exchanges. This focus should be expected, since each agency has its own duties and priorities to discharge with constrained organizational resources. However, the implementation of such systems provides an opportunity to initiate a broader discussion of information sharing.

For example, several agencies are in various states of implementing enterprise systems that provide these agencies with the *capability* of pursuing information sharing.

Over the last several years, the Milwaukee Police Department has implemented comprehensive integrated systems that include Records Management System (RMS), Computer Aided Dispatch (CAD), mobile data, automatic vehicle location (AVL), and geographic information systems (GIS) to provide the law enforcement agency with the ability to meet new challenges and objectives.

In 2006, the Milwaukee County District Attorney's office began the process of adopting PROTECT, a case management system. PROTECT will enable prosecutors to share case information with their counterparts in over 65 of Wisconsin's counties and improve information sharing between law enforcement, prosecutors, the courts, and the State's criminal history database.

Local corrections offices are on the same path with the advent of the Wisconsin Integrated Corrections System (WICS). This system will replace a wide variety of individual systems:

- CIPIS (Corrections Integrated Program Information System)
- OATS (Offender Active Tracking System)
- CACU (Corrections Accounting Cashiers Unit)
- WITS (Wisconsin Inmate Trust System)
- JJIS (Juvenile Justice Information System)
- ICTS (Inmate Complaint Tracking System)

WICS is starting deployment in 2007, but full implementation and replacement of all the individual systems is not expected to be completed until 2009.

A common theme of these enterprise system examples is that information within an agency is integrated. A side-effect of these systems is that they provide a silo of information for a particular area of the criminal justice domain. Often these silos are viewed as a detriment since information sharing is usually constrained to the members of the individual agency, but rather should be considered as a prerequisite of building a larger information sharing environment.

Currently, information sharing does not appear to have prominence in strategic planning at the local level. Often information sharing is left as an activity for higher level government bodies to accomplish, usually through the provision and operation of enterprise systems by state or federal agencies. Also, local agencies have formed issue-specific task forces with personnel from each institution. However, the members of the team rely upon the individual from each agency to access their home institution's databases to collect, merge, and analyze the data needed to accomplish the work being performed. In addition, the activities of this needs assessment did not discover a local government body or consortium that coordinates information sharing between local Milwaukee agencies.

Recommendations

Overall, three major recommendations are presented to Milwaukee criminal justice agencies and are as follows:

1. Adopt national standards for information sharing
2. Support the WIJS Justice Gateway effort
3. Form an information sharing consortium for Milwaukee criminal justice agencies.

Adoption of National Standards

From the industry review, the direction of criminal justice information sharing clearly lies with the new standards of NIEM and Global JXDM. Given its relative youth, its adoption rate, and the continued investment of the federal agencies in the standards, NIEM and Global JXDM will continue to be the technical template for establishing information exchanges.

As the standards become entrenched in the criminal justice community, third-party vendors will start to enable their products with information exchange capabilities using Global JXDM. In the meantime, agencies can equip their legacy systems with Global JXDM capabilities as demonstrated with the eTIME system in Wisconsin. Agencies seeking to establish information exchanges should consult with agencies that have already experienced the development process. In addition, expectations that the process will immediately reduce resource needs are unfounded since the benefits will be realized on consecutive implementations as personnel become familiar with the technology.

The options of not using Global JXDM or using some proprietary protocol should be avoided. Not adopting the standards has the detriment of building one-use data exchanges that are not reusable. Adopting proprietary protocols is unfavorable since the organizational risk of having to implement the favored open standards would result in duplicate work and personnel would be required to understand multiple standards. Both options will also result in isolation from the rest of the justice community as they move forward with the standards.

Support the WIJS Justice Gateway Effort

Another recommendation is to fully support the Wisconsin Justice Information Sharing (WIJS) Justice Gateway. As briefly described above, the WIJS Justice Gateway is a platform that can enable widespread information sharing among criminal justice agencies. The architecture used to create the Justice Gateway is scalable and flexible and the platform can be extended to other domains of criminal justice.

The WIJIS Justice Gateway is known in the industry as a “pointer system” meaning that records are not warehoused in a central database, but rather enterprise systems are queried on demand. Thus, a search for Kenosha requests actually queries the computer systems in Kenosha, not a local copy held by the OJA. If the Milwaukee Police Department would participate in the Justice Gateway, they could query the records of all the other participating agencies and contribute their records for use by other law enforcement agencies. This contribution would give the project more momentum and likely increase the participation of other law enforcement agencies around the state. In the short-term, the impression may be that the Milwaukee Police Department is contributing more records than it utilizes from other police departments. That perspective is parochial, and the long-term goal of a comprehensive information sharing platform will never be accomplished if information is withheld.

Another argument for the Justice Gateway is that it will include more than law enforcement records. As mentioned previously, district attorney case management records, driver and vehicle information, and corrections data are already slated to be added to the system. The WIJIS Justice Gateway is a prime example of overcoming the organizational silos that the enterprise systems create. Also, if the local agency is already participating in an enterprise system operated at the state level such as PROTECT then the integration with the gateway is handled at that level. In this case, the local agency only needs to review what records can be appropriately made available since the technical details are handled by the state unit.

Given its resources and momentum, the WIJIS Justice Gateway provides the best opportunity at creating a true platform for integrating information into one source.

Creation of a Consortium

The final recommendation is to create a Milwaukee Information Sharing Consortium. The charge of the consortium would be to plan and coordinate information sharing activities among local agencies and offices. The primary purpose of forming the consortium would be to elevate information sharing into the strategic planning of the member institutions.

The consortium could consist of several different committees. For instance, an executive steering committee could be formed to include executive level members from participating agencies. This committee would provide a forum for executive level concerns, assist in developing organizational support, and provide a mechanism for the approval of proposed projects and information exchanges. Membership should be extended to include representatives of the enterprise systems that are run at the state level, since often they will be responsible for equipping the systems with information

sharing capabilities. Given that Milwaukee is the largest client of these systems, the owners of these systems should be amenable to participating.

Other workgroups could be formed to research other issue specific concerns. For instance, a policy committee would need to be formed to produce customized policies and procedures based on generalized federal templates. A privacy workgroup could review information sharing initiatives for potential privacy concerns. Other teams could be formed to handle issues such as security, handling of juvenile data, public policy recommendations to promote information sharing, etc.

The consortium should target small, concrete projects that can quickly show results. A demonstration project would be ideal, since many different non-trivial issues would have to be resolved. One opportunity for a demonstration project would be the elimination of duplicate bookings between the Milwaukee Police Department and the County Jail. As projects are successfully completed, the consortium would be in a better position to recruit reluctant agencies to participate.

The consortium would also provide a pre-built collaboration for grant proposals and resource pooling. If the federal agencies continue their emphasis on information sharing, significant funding sources should be available to support the information sharing efforts. However, organizations should not rely solely on grant funding to support information, but view grant funds as a mechanism to absorb the costs associated with the initial adoption of the new standards. The organizations should incrementally allocate or shift resources to these efforts to make them sustainable.

Overall the tools for information sharing are available and significant improvements can be made to the information sharing environment. The task is a significant endeavor, but resources are available to facilitate greater information sharing.

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