Technical Assistance Report

Montana Integrated Justice Information Sharing Executive Committee and Montana Board of Crime Control

Montana Criminal Justice Information Sharing Strategic Assessment

Site Visit: March 1–3, 2011

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Contents

I. Executive Summary

This report is the result of a technical assistance (TA) request submitted to SEARCH, The National Consortium for Justice Information and Statistics,[1] by the Montana Board of Crime Control (MBCC). The purpose of this request was to assist the MBCC and the Montana Integrated Justice Information Sharing (IJIS) Executive Committee achieve the following objectives:

- o Conduct a strategic evaluation of the current justice information sharing landscape among key state agencies, emphasizing criminal history records and related business processes. The evaluation specifically focused on the following priority areas selected by Montana stakeholders:

  - ▪ Livescan usage

  - ▪ Montana Arrest Numbering System (MANS) usage

  - ▪ Electronic disposition reporting

  - ▪ Pre-sentence investigations

  - ▪ Protection orders

  - ▪ Crime victim notifications

- o Identify and provide the Montana IJIS Executive Committee with a comprehensive assessment of the current information sharing capabilities and gaps based on enterprise architecture concepts. These concepts include the strategic context of current business needs and processes, overarching goals and objectives, information-sharing capabilities, and supporting technology and infrastructure.

- o Provide observations and recommendations for utilizing standards-based approaches and industry best practices to drive subsequent strategic planning efforts among Montana stakeholders.

SEARCH assigned Mr. Mo West, Justice Information Systems Specialist, to work directly with MBCC staff and IJIS representatives for this engagement.[2] Mr. West spent three days on-site in Helena, Montana, from March 1–3, 2011, and met with criminal justice stakeholders from state and local justice agencies.

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[1] SEARCH provides no-cost technical assistance services to justice and public safety agencies through its National Technical Assistance Program. This project was supported by grant number 2009-SD-B9-K003 awarded by the Bureau of Justice Assistance to SEARCH. The Bureau of Justice Assistance is a component of the Office of Justice Programs, which also includes the Bureau of Justice Statistics, the National Institute of Justice, the Office of Juvenile Justice and Delinquency Prevention, the SMART Office, and the Office for Victims of Crime. Points of view or opinions in this document are those of the authors and do not represent the official position or policies of the United States Department of Justice.

[2] Background on SEARCH and Mr. West are included as Appendix A.

During these meetings, Mr. West facilitated discussions to formulate recommendations to meet the objectives of the TA request. Mr. West employed enterprise architecture concepts in the course of analyzing specific areas requested by MBCC.

The following points summarize SEARCH's observations and recommendations regarding the following areas addressed in this report:

- Montana justice stakeholders have a tremendous amount of business process and operational knowledge. However, SEARCH observed that information is "stove-piped" among justice agency systems, and that agencies lack an enterprise view of justice administration.

  To address this issue, SEARCH recommends that Montana stakeholders establish and reinforce policies that reflect the importance of each agency's role in information sharing initiatives.

- Current Montana information sharing efforts include a number of small-scale pilot projects focused on specific agency needs or technology concepts. Participating stakeholders made good faith efforts to complete these projects, and recognize that no single agency can resolve information sharing limitations. SEARCH observed that each priority area needs strong and consistent support among all stakeholders and a documented vision and strategy for enterprise-wide justice information sharing that builds upon these pilot projects.

  SEARCH recommends that Montana stakeholders collectively formalize the governance, strategy, and responsibilities of future integration efforts. Specifically, SEARCH recommends establishing a governance charter and strategic plan for Montana integrated justice. This process should include local law enforcement, prosecuting attorney, and court representatives.

- Montana stakeholders effectively use national data standards to create information exchange documentation. The previous pilot projects to automate disposition reporting and victim notifications reflect national best practices by identifying specific data requirements from business subject matter experts, translating those data elements to the Global Justice XML Data Model (GJXDM) and creating the required technical documentation in the form of an Information Exchange Package Document (IEPD). Adopting this process resulted in the implementation of several re-useable data exchanges that utilize open source technology that minimized costs of custom software development.

  Developing IEPDs is a significant effort and includes a steep learning curve. Having gone through this process, SEARCH recommends that Montana stakeholders continue using standards-based technical specifications for subsequent integration efforts.

- One important outcome of the data exchange pilot projects is that the Montana Department of Justice (DOJ) now supports technical infrastructure that acts as a message broker among numerous stakeholders. This capability has emerged as a national best practice and is recognized as a key component for statewide information sharing strategies. It maximizes the capabilities of the current partner systems and isolates many internal modifications one partner may make to their case or records management system. A broker complements the use of GJXDM and National Information Exchange Model (NIEM)-conformant IEPDs while supporting several integration profiles (e.g., web services).

  The disposition and victim notification exchange pilot projects successfully demonstrated the value of the Integrated Justice Information Sharing (IJIS) Broker, and SEARCH recommends stakeholders continue to refine and enhance the services offered through the broker. Specifically, stakeholders should enhance message reliability, message validation, and error reporting.

II. Technical Assistance Overview and Approach

The Montana Board of Crime Control (MBCC) requested technical assistance from SEARCH, The National Consortium for Justice Information and Statistics, as part of SEARCH's BJA-funded training and technical assistance program. The purpose of this TA engagement was to assist the Montana Integrated Justice Information Sharing (IJIS) partners to achieve the following objectives:

- o Evaluate the current justice information sharing environment. This evaluation would include discussions among key justice agencies that utilize criminal history records and related business processes. The evaluation specifically focused on the following priority areas selected by Montana stakeholders:

  - Livescan usage

  - MANS number usage

  - Electronic disposition reporting

  - Pre-sentence investigations

  - Protection orders

  - Crime victim notifications

- o Identify and provide the Montana IJIS Executive Committee with a comprehensive assessment of the current information sharing capabilities and gaps based on enterprise architecture concepts. These concepts include strategic context of current business needs and processes, overarching goals and objectives, information-sharing capabilities, and supporting technology and infrastructure.

- o Provide observations and recommendations for utilizing standards-based approaches and industry best practices to drive subsequent strategic planning efforts with the Montana stakeholders.

Mr. Mo West, Justice Information Systems Specialist with SEARCH, spent three days on-site in Helena, Montana, from March 1–3, 2011, meeting with MBCC staff and IJIS committee representatives. SEARCH developed the content of this report by evaluating information provided through stakeholder discussions of the priority areas above. **Section III** of this report provides a short description of each of these areas and establishes the context **for Sections IV** and **V**.

This report does not provide "project-specific" observations or recommendations per se, but rather it describes how the Montana justice community can leverage previous efforts in a more cohesive and strategic manner. Specifically, SEARCH organized the analysis and recommendations in accordance with an enterprise architecture framework that has proven useful for strategic planning in other jurisdictions. The basic tenets of this approach are as follows:

1. Understand the strategic context in which the Montana IJIS enterprise operates—the business needs of stakeholders, and key factors in the environmental context that will impact IJIS services going forward.

2. Identify strategic business intent—the collective mission, vision, goals, and objectives of the Montana IJIS enterprise.

3. Document current capabilities (in terms of business, information, and technology architectures) and the future capabilities necessary to address the strategic context and intent.

4. Determine gaps between the current and future capabilities.

An effective strategic plan should close each of the gaps identified in step 4. Typically, there are more gaps than the enterprise can address with available resources over the planning cycle. Stakeholders must establish policy-making and governance mechanisms to facilitate project prioritization, realizing that by choosing not to close some of the gaps, some of the strategic intent will go unfulfilled and some elements of strategic context will not be addressed.

The following figure provides a basic illustration of this concept:
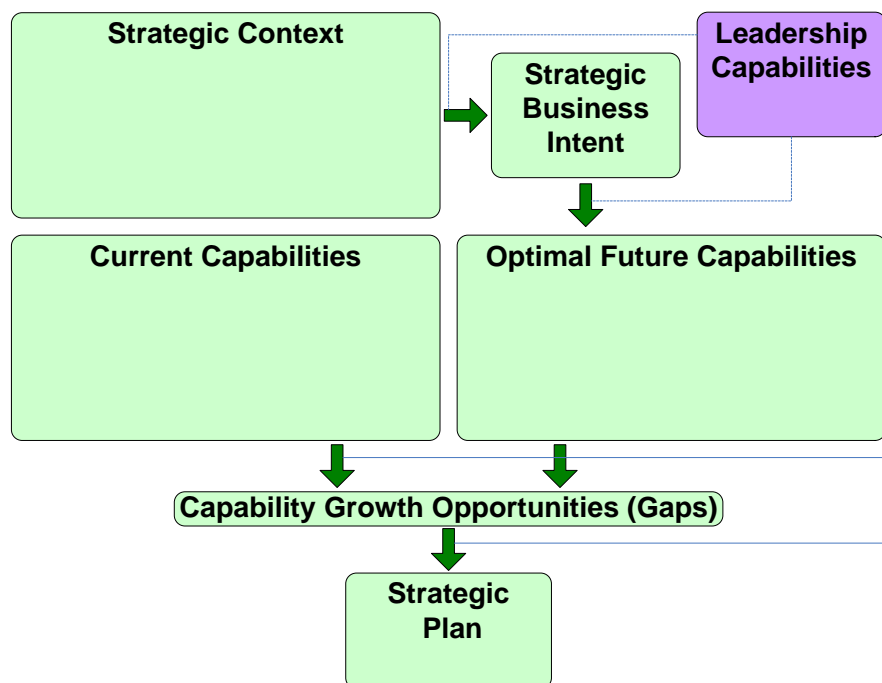
Strategic planning is a recognized best practice of integrated justice initiatives. It offers a number of benefits to the Montana IJIS stakeholder. Developing a strategic plan focuses Montana justice agencies on the services Montana IJIS *should* offer. Going through the planning process can stimulate creative and "out of the box" thinking by a group. Once a plan is finished, it serves as an excellent

tool for communicating with potential new users, funding agencies, and the public.

A strategic plan can also help Montana justice stakeholders understand the broader business context of the good work they do every day. This process also maintains explicit linkages between stakeholder needs and problems, by establishing common goals and objectives, and desired capabilities.

A strategic plan should be pragmatic, focused, and specific, thus avoiding the vagueness and usability problems that characterize many strategic plans. It should have a short- to mid-term time horizon of no more than 18 months.

Successfully developing and adopting a strategic plan requires strong leadership. Even where there is perfect agreement among the stakeholders as to where the enterprise should go, this approach will not work without a dedicated facilitator to lead participants through the planning process, and to keep the process from veering off course or bogging down in too much detail. In many cases, the process reveals differences of opinion among the stakeholders as to just what the strategic business intent is, or what capabilities are required to enable that intent. In these cases, the role of the leader becomes that of critical consensus-builder.

III. Background

1. Livescan

Livescan technology is the electronic means to capture offender fingerprints and record personal identification and arrest information. Livescans are an essential tool in the process of creating the initial and subsequent arrest records submitted to the Montana DOJ. Using an automated process, livescan devices significantly enhance the accuracy and timeliness of criminal information. Currently, 117 law enforcement agencies share 32 livescan devices throughout the state. Many of these devices are nearing the end of their support window, and replacement costs pose challenges to the Montana criminal justice community. A few agencies have procured and support their own livescan devices, but DOJ is the primary agency responsible to procure, install, and provide the necessary training to the agencies that utilize these devices. Several stakeholders advocated for the need of continued grant solicitations or state funding to replace the aging devices and increase the number of agencies that submit arrest records via livescan technology.

2. Montana Arrest Number

The Montana Arrest Numbering System (MANS) number is a state-assigned identifier that tracks an arrest throughout the criminal justice lifecycle. The MANS number is the key piece of information that ensures each arrest charge is appropriately disposed of as it passes from booking centers to prosecuting attorneys, courts, the criminal history repository, and eventually made available across the country via the Interstate Identification Index (III). The MANS number is assigned automatically via the livescan system or manually assigned on paper-and-ink fingerprint arrest records. When all stakeholders pass the MANS number on the appropriate form, the disposition reporting process works effectively. Due to a variety of reasons and under certain circumstances, described in **Section IV** of this report, agencies either do not, or cannot, provide the MANS number. When this occurs, DOJ staff expends significant resources to determine the outcome of an arrest (discussed in further detail in item 3).

3. Electronic Disposition Reporting

The Montana DOJ is required to maintain all felony (and some misdemeanor) arrests and subsequent dispositions across the state. Electronic disposition reporting is a complex and involved process, both from a policy and a technology perspective. It requires all criminal justice agencies to receive, contribute, and share accurate and timely information regarding an individual, violated statutes, charges filed with the court, and the outcomes of each original arrest charge (as opposed to cases). This requires a high level of coordination among the involved

agencies and a thorough understanding of how the information is used throughout the disposition reporting process.

An evaluation of this process highlighted several policy gaps among each of the stakeholder groups. The primary gap relates to missing fingerprint cards (and the MANS number they should contain). Without this information, DOJ has no arrest record. The remaining gaps relate to ineffective sharing of arrest records and MANS numbers by the jail, prosecuting attorney, and courts. Current local-level information sharing business practices vary widely across the state. A recent pilot project involving the Court Administrator's Office (CAO) and DOJ succeeded in automating the submission dispositions of court findings to the criminal history repository process. While this project successfully established the technical means to generate and receive electronic dispositions, this project highlighted several challenges related to the underlying business processes mentioned above and detailed technical issues related to error reporting and transaction validations.

4. Pre-Sentence Investigation Reporting

Upon a finding of guilt, a Pre-Sentence Investigation (PSI) report provides the judge with information regarding an offender's criminal background in order to determine an appropriate sentence. Typically, the Montana Department of Corrections (DOC) or local probation agencies complete this at the request of a judge. Stakeholders reported the PSI process includes an automated set of exchanges between DOC and CAO, and currently meets the majority of the business needs. DOC staff did raise an issue regarding their inability to receive electronic updates to the sentencing portion of the PSI. This can affect the placement and treatment decisions made by DOC staff.

5. Protection Order Reporting

Protection Order reporting also faces several policy and business process impediments. The content and form of these court-generated orders are subject to individual court discretion and are inconsistent across the state. Although the state has a standardized Protection Order form and supports electronic submission to DOJ, court stakeholders report that judges rely on paper-based orders for law enforcement service. The paper-based exchanges require duplicative data entry by court, law enforcement, and DOJ staff.

6. Crime Victim Notifications

Victim notification involves every stakeholder agency that participated in the SEARCH technical assistance engagement. Although each agency has a different role, all rely on sending or receiving crime victim information at some point in the business process. Individuals (or victim advocates on behalf of individuals) can petition a court to issue these orders. If granted, the court then sends the order to law enforcement for service and reporting to DOJ. Previous pilot projects in

Lewis and Clark and Missoula counties attempted to automate this process but were unsuccessful due to a number of technical and resource issues. While the pilot project did not successfully accomplish all the objectives, it did provide valuable information for addressing policy and technical gaps in this process.

7. Information Sharing Infrastructure and Capabilities

The Montana criminal justice community currently supports an information sharing "broker" that supports multiple business processes. These include routing citations from the Montana State Patrol to courts, victim notifications, disposition reports, and several other services internal to the DOJ. Many of these business processes leverage national data standards, such as the Global Justice XML Data Model (GJXDM) and the National Information Exchange Model (NIEM), and industry technologies, including web services. The previous efforts represent a good faith effort to leverage industry and justice standards in practical applications.

IV. Observations and Analysis

This section describes SEARCH's observations and analysis based on the site visit discussions and supplemental information provided by Montana stakeholders. These observations align with the enterprise strategic planning components described in **Section II**.

Leadership and Governance

Leadership and governance are critical elements of a successful integrated justice strategy. Leadership is the practice of understanding the vision of an enterprise or organizational initiative, articulating that vision to gain stakeholder commitment, and seeing the vision through to implementation. Leadership is also necessary to ensure that the strategic planning process maintains momentum and, in the end, produces a viable strategic plan. Governance is the practice of establishing an effective, efficient decision-making process that properly represents the interests of all stakeholders. These two elements go hand-in-hand, and one is not a replacement for the other.

The leadership of the Montana criminal justice community is a collection of individuals responsible for policy, operational, and technical decisions within their respective agencies. These capable individuals have demonstrated leadership through designing, implementing, and supporting a number of technology services for their constituents. These include the Court Administrator's Office (CAO) "Full Court" statewide case management system, the Department of Corrections' (DOC) Offender Management System, and the Department of Justice's (DOJ) livescan deployment project.

While this leadership has proven successful for *intra*-agency justice integration initiatives, the Montana criminal justice community—or "enterprise"—lacks an overall *inter*-agency leadership structure. In most instances, MBCC and DOJ led inter-agency integration initiatives in a project-specific manner by coordinating activities among the agencies participating in each project. Stakeholders reported that MBCC provided grant funds and oversight, and DOJ provided the project management and technical support. Similarly, the cross-agency governance approach tends to focus on specific initiatives, such as the disposition and victim notification exchange pilot projects. This informal governance approach was valuable during the course of each project, but lost its effectiveness after the limited goals were achieved or issues were encountered where there was no clear responsibility. Stakeholders reported that cross-agency coordination has proven difficult due to a combination of competing priorities and staff turnover. This has caused some projects to be less successful or not fully completed. The enterprise lacks the governance mechanism to address such issues and clear the barriers regarding ownership and support among stakeholders.

SEARCH observed that Montana's exclusive use of grant funds for individual projects further complicates a statewide governance and enterprise strategy. Without a collaborative and inclusive governance structure, the various grant objectives function independently rather than supporting an established state strategy. This scenario also leads to agencies competing for limited grant funding, as opposed to collaborating on a single grant request to satisfy a recognized need among partners.

SEARCH is aware that several Montana state justice agencies convened an IJIS Executive Committee in the recent past, but this committee had no formal authority or charter and no longer meets. Several stakeholders expressed an interest in re-forming this group to establish a strategic plan for statewide justice information sharing.

— Strategic Context

Strategic context establishes an overall understanding of the enterprise by describing the factors in the business environment that a successful enterprise will need to address. Strategic context consists of two main areas: *business drivers*, which are products, services, or capabilities required by customers, users, or stakeholders; and *environmental trends*, which identify economic, demographic, legal, and other "external" factors that affect enterprise operations. Together, business drivers and environmental trends justify and form the basis for the enterprise vision, goals, and objectives.

The strategic context represents external forces that may impact the ability of the initiative to set and achieve goals. It identifies opportunities and constraints that may impact the likelihood of program success. In criminal justice, the enterprise often spans multiple agencies and organizations, each with its own mission and responsibilities. The challenge in enterprise strategic planning is to imbue the stakeholders with a more holistic vision of the criminal justice process and their role within it.

Business Drivers

Business drivers represent stakeholder needs. Business drivers describe the business problems that Montana justice stakeholders will collectively solve through integrated information sharing. They answer questions such as:

- What are stakeholders' most pressing business issues that are affected by other agencies' information?

- How could Montana IJIS products or services allow customers to operate more effectively or efficiently?

- How could Montana IJIS services enable its stakeholders to provide *their* customers (e.g., crime victims, NCIC, or the public) with new or improved services?

Integrated justice business drivers generally "roll up" to two high-level drivers: efficiency and effectiveness. That is, most justice information sharing initiatives aim to provide practitioners with the ability to do their jobs cheaper, better, or both.

Through the course of this TA engagement, it was apparent the participants from each agency have considered these questions and made efforts to address them. For example, the victim notification exchange pilot project sought to enhance the effectiveness of victim advocate services by providing crime victims notices of court appearances, sentencing hearings, etc. This project also sought to increase notification efficiency by replacing paper-based transactions with electronic notices. As with other statewide projects, there was limited multiagency governance, and much of the functionality of this service was driven from each agency's perspective.

Without the perspective and investment of the Montana justice community as a whole, enterprise business drivers become the burden of a single agency or get lost in a collection of uncoordinated integration project activities. An example of this is DOJ's efforts to combine livescan devices, MANS number, and electronic disposition reporting to increase the effectiveness of tracking and reporting charges from arrest to disposition.

Montana was the first state to participate in the FBI Compact Council, which requires the DOJ to maintain all fingerprints and disposition records. All Montana justice stakeholders have information to contribute to this process. DOJ faces difficulties coordinating these stakeholders to efficiently manage charge dispositions across the state. DOJ provided technology and policy solutions to stakeholders, but ultimately without shared governance or a common vision, not all stakeholders recognize this as a significant business driver for the entire state.

Traditionally, the best way to document business drivers is to gather a representative group of stakeholders and facilitate a discussion about their business challenges and opportunities. The recommendations in **Section V** address this approach and further describe the need and process for documenting business drivers.

Environmental Factors

Environmental factors are potential impacts, external to the business, likely to affect business operations.

The following are examples (and potential factors) for Montana justice integration stakeholders to consider in determining unique environmental impacts:

- The economy will continue to impact state and local government finances for the next 18–24 months, at least, and probably considerably longer.

- The future of Federal grants for state and local justice information sharing is uncertain, both in the amount of available funding and priorities, which will impact the ability to implement new services.

- Legislative and gubernatorial policy priorities may dictate goals and objectives attached to funding requests or appropriations.

As with business drivers, an effective technique to identify environmental factors is to ask Montana stakeholders what factors they see affecting the business in the near future. Other resources, such as publications from SEARCH[3] and other national justice organizations, as well as guidance emerging from Global and BJA,[4] can assist in identifying environmental factors.

— Strategic Business Intent

The *strategic business intent* establishes a high-level description of the enterprise purpose and defines concrete and specific outcomes for a given amount of time. Strategic business intent is established by defining the mission, vision, goals, and objectives of the enterprise. Enterprise strategic business intent is often influenced by the business drivers and environmental factors defined as part of the strategic context.

Mission statements describe the general business of the enterprise and the reason it exists. Mission statements are usually supported by a *vision statement* that describes in clear and objective terms the initiative's "end-state." Another way to characterize the vision statement is to articulate the benefits to stakeholders (or the public) when the program achieves success.

Goals and objectives identify specific targets and timeframes and describe the means by which stakeholders will achieve the enterprise vision. Goals and objectives add granularity to the abstract concepts contained in the mission and vision statements, and establish near-term, quantifiable, and achievable outcomes. Through the course of the site visit, several stakeholders provided goals and objectives regarding specific projects:

Goal: Reduce manual entry of amended Pre-Sentence Investigation reports.

Objective: Create an electronic service for courts to report amended PSIs.

Goal: Increase crime victim notifications.

Objectives: Complete web service development activities among pilot agencies to enhance court appearance notifications.

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[3] See *Governance Structures, Roles and Responsibilities* at:
http://www.search.org/files/pdf/GovernanceStructures.pdf

[4] Department of Justice, Office of Justice Programs, Bureau of Justice Assistance:
http://www.ojp.usdoj.gov/BJA/

Goal: Enhance charge disposition tracking and reporting.

Objectives: Increase livescan use and secure funding for replacements; create error reporting processes and capabilities for the electronic reporting from courts; and reinforce MANS usage policies through training and education among law enforcement and prosecuting attorneys.

Lastly, strategic business intent includes establishing some form of *performance management*. Generally, performance management practices call for concrete indicators that ensure success of the objectives. This essential component validates that the enterprise activities produce positive changes and support the mission and vision in specific, quantifiable terms. These metrics often come in terms of outputs, outcomes, or efficiencies.

The Montana justice integration enterprise lacks a clearly defined strategic business intent. The IJIS Executive Committee can address this through an enterprise strategic planning process.

Business Architecture

Business architecture elaborates on the strategic context and business intent by defining what business(es) the enterprise is engaged in, what business processes enable the organization to fulfill its mission and achieve its goals, and how the organization structures itself to manage those business processes efficiently.

In essence, the DOJ supports and maintains applications that enable information sharing between Montana justice agencies. The current service portfolio includes a combination of mature data exchange services such as the e-Citation, traffic offense disposition reporting, and driver license and inmate photo query. With the support of several stakeholder agencies, DOJ also developed pilot services for victim notifications and criminal dispositions.

While the pilot services are not completely finished, they provide a strong foundation for valuable future statewide services. Development of these services also gave Montana stakeholders valuable experience with the process, and perhaps a greater appreciation of the detailed components, including business requirements identification, service modeling, specification development, testing, and implementation.

Through these efforts, Montana integration stakeholders gained a working proficiency with service development, operation, and support, but have yet to apply these techniques at an enterprise level. Consistent with the previous observations, these pilot projects served as a great method for "testing the waters" and will provide valuable experience as the enterprise looks to enhance these services and create new services for stakeholders.

Another key component to business architecture is funding. Montana stakeholders have demonstrated the ability to secure numerous grants to develop information sharing services. This excellent track record of leveraging Federal funds to establish new services highlights stakeholders' creative methods to off-set limited state funding. This will certainly need to continue for the near future as state funding sources become increasingly scarce and competitive.

Section V of this report contains specific recommendations to enhance the Montana business architecture capabilities.

Information Architecture

Information architecture is a critical component of strategic planning for the Montana IJIS committee, since it is ultimately about sharing information. In a justice information sharing initiative, the typical components of information architecture include:

- Following a standard methodology for discovering and documenting information exchange requirements at both the business process (information flow) level and the data structure (semantic) level.

- Standardizing on a national vocabulary, such as the GJXDM or NIEM, for specifying data exchange structure and semantics.

- Reusing national baseline (reference) specifications for exchanges, where appropriate.

- Standardizing an approach to the representation of attributes and rules for exchange interactions, security, and access controls.

- Publishing initiative standards, methodologies, and guidelines in a central location with configuration management so that all project stakeholders (including implementers) can access them easily.

Montana stakeholders utilize national data standards and recommended methodologies to create standards-based specifications. During the site visit, all participants expressed their support of national standards and demonstrated a clear understanding of the value in following a standardized process.

SEARCH observed that the electronic disposition and victim notification pilot projects appropriately followed the guidelines to create standards-based Information Exchange Package Documents (IEPD). This process consists of working with business subject matter experts and development staff to collaboratively identify and document business requirements, translate those to technical specifications, and finally publish a consolidated set of documentation for stakeholder consumption. In essence, this process creates electronic versions of hard copy documents.

Stakeholders reported that these specifications did, in fact, meet business needs, but these specifications solely focus on the content of a message—and do not account for message interactions; for example, response handling, error reporting, or confirmation notifications.

Technology Architecture

Technology architecture defines the technology capabilities—generally centered around computer hardware, software, and supporting infrastructure—on which an organization or initiative relies to enable the business and information architectures.

Typical elements of technology architecture for an integrated justice initiative are:

- Servers and system software (operating systems, databases, etc.) at a central location for the hosting of shared applications and services.

- "Middleware" software that manages the flow of information between systems on the network, and often enforces security, access control, and other policies.

- A shared data network, sufficient in bandwidth to handle data transmissions among participating partners, and with points of presence at each partner location; the network typically has fairly high levels of required reliability and security. "Network" as intended here generally means physical network circuits, routers, switches, and firewalls necessary to ensure transmission of data.

- Servers and system software at partner locations to provide access to partner systems.

Although the scope of this engagement did not include a full-scale inventory or detailed technology assessment of the entire Montana criminal justice community, SEARCH observed that the Montana justice agencies at the state level support many of these technology architecture components.

The three primary state agencies that provide or support services in Montana include the CAO, DOJ, and DOC. Representatives from each of these agencies reported that they support at least one (if not several) record or case management system(s). For example;

- CAO recently implemented the "Full Court" case management system that supports all courts within the state. CAO manages Full Court and supports web-service integration capabilities with court stakeholders.

- DOC supports the Offender Management Information System (OMIS) that manages all court and correctional information from intake to release. This

system is also capable of sharing information via web services and supports several interfaces with stakeholder agencies.

- DOJ supports the Criminal Justice Information Network (CJIN) and Criminal History Records System (CHRS). Each of these provides access to a variety of applications and services for law enforcement and Federal reporting agencies.

These systems provide a strong foundation for a statewide information sharing initiative, but each addresses the specific needs of their respective stakeholders. This resulted in two primary outcomes: each system provides strong "vertical" or intra-agency technology capabilities, but also isolates the information the systems contain. The unintended consequence of this approach limited the "horizontal" integration capabilities among these systems.

To address this situation, the DOJ collaborated with DOC and, subsequently, with CAO to establish the Integrated Justice Information Sharing (IJIS) Broker. Leveraging Federal grant funds via the NCHIP and SAVIN programs,[5] Montana stakeholders implemented the IJIS Broker to facilitate inter-agency information exchanges in a manner that maximized the capabilities of each of the state systems through a logical collection of web-based services.

The IJIS Broker supports two interagency data exchange services: victim notifications and court dispositions. Each service utilizes an Oracle-based Java platform to route, translate, and monitor messages among DOJ, DOC, and CAO. **Section III** describes these projects in more detail, and the IJIS Broker is an excellent example of how numerous stakeholders use shared infrastructure to automate business workflows. This reduces the need for an individual agency to establish multiple connections to all agencies that wish to participate in a business process.

This approach is rapidly emerging as a best practice for justice and public safety integration efforts, and SEARCH commends Montana's proactive embrace of this technology capability.

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[5] National Criminal History Improvement Program and Statewide Automated Victim Information and Notification Program.

V. Recommendations

Consistent with the scope of this TA engagement, SEARCH provides the following recommendations for the IJIS Executive Steering Committee. The recommendations provide specific actions that stakeholders can take on the issues raised in each of the background projects discussed in **Section III**. It is important to note each of these areas requires cross-agency collaboration—hence the strategic nature of the following recommendations.

Leadership and Governance

— Recommendation 1: Establish a formal enterprise governance structure

Montana stakeholders govern integration activities through ad-hoc and informal methods. This process can be successful in limited scope projects, but it lacks the inclusive environment for enterprise-wide stakeholder participation. To address this gap, Montana stakeholders should collectively establish a formal governance structure dedicated to statewide integration activities. The IJIS Executive committee is a logical choice for this structure, and it may consider acting in an official governing capacity. Other state or larger regional initiatives have done this by creating a charter or Memorandum of Understanding (MOU) that clearly defines the following items:

- Purpose of the governance committee
- Membership or representation from each partner
- Roles and responsibilities of each partner
- Meeting protocols and frequency
- Support structure—staffing, subcommittee identification
- Bylaws

An enterprise governance structure will provide Montana stakeholders with a forum in which agency executives can gain a broader perspective of current activities, shape policies and future priorities, oversee and monitor progress, and collaboratively resolve issues as they arise. During the site visit, several stakeholders expressed concerns that the victim notification project stalled without informing project participants or providing any rationale for halting the project. An operating governance structure can mitigate this frustrating situation by providing an environment to identify the underlying issues (perhaps even resolve them) and communicate the outcome to all interested stakeholders. Similarly, DOJ staff has determined that they do not receive all arrest dispositions. They described their efforts to provide stakeholders with tools (livescan devices, court reporting service) and policies related to the MANS number, along with reporting manuals to address this problem, yet still have a significant number of missing dispositions. Nearly every stakeholder involved in

this process had a different reason why DOJ is not receiving complete dispositions. This is a perfect scenario for a governing body to provide leadership and direction for a complex and multi-faceted policy and technical initiative.

SEARCH also recommends that any statewide integration governance structure include representatives from local justice agencies, including law enforcement, prosecuting attorneys, judges, and court clerks. Including these stakeholders will assist in establishing a comprehensive and representative perspective. These critical stakeholders can provide unique (and often very realistic) viewpoints that influence statewide integration.

Governance structures for integration activities are essential, but the governing entity must have the means and ability to establish the direction and priorities for the enterprise. SEARCH is happy to provide examples of governance charters upon request.

— Recommendation 2: Establish an enterprise strategic plan for statewide integration

If the governance charter or MOU is analogous to authorizing legislation, the strategic plan is the enabling legislation. These two components complement one another by providing participants the forum to establish the direction and priorities of the enterprise. Any statewide integration initiative must include a clear plan endorsed by all stakeholders involved in governance process.

By establishing a strategic plan, the Montana justice enterprise will benefit by collaboratively identifying *what* the enterprise will accomplish in the near term, and describe the specific steps *how* to complete these activities. Specifically, Montana stakeholders should follow these steps when creating a strategic plan:

1. **Document the key enterprise business drivers (needs) and environmental trends (limitations).** With a diverse group of stakeholders, identifying these two components sets the stage for what the enterprise should do, and establishes a balance of what the enterprise can and cannot do. The strategic planning participants need to anticipate these needs and limitations in order to set a feasible course of action. These components will provide the necessary context for the remainder of the plan.

2. **Establish a scope—mission, vision, values.** These related statements provide a more specific picture of enterprise activities. Too often, strategic plan developers treat these components as pro forma and lack the conviction or thought to be meaningful, but these serve a critical purpose by establishing an identity for the enterprise. The following definitions and guidelines will assist Montana stakeholders create these components.

   a. <u>Mission</u> – this is a concise declaration of the enterprise's purpose and responsibilities. It should describe what it does and who will benefit, and serves as an ongoing guide.

b. <u>Vision</u> – Vision statements complement the mission by describing the end-state or the ultimate outcome of the enterprise activities when they are successfully completed.

c. <u>Values/Guiding Principles</u> – These provide stakeholders with the parameters or guidelines that the enterprise activities will strive to align with.

3. **Define and prioritize specific goals and objectives.** These key strategic plan items transition from the general and sometimes abstract concepts contained in the mission, vision, and guiding principles to more concrete expectations and activities. Goals define expected achievements within the planning time horizon. Objectives are the more precise steps, milestones, or accomplishments needed to accomplish the goals. Objectives should be time-based, quantifiable, and ultimately achievable. The mission and goals of the initiative define "what" is to be accomplished; objectives lead to tactical plans, which detail "how" the goal will be achieved. Stakeholders will need to understand that every goal will not be accomplished at once, and will need to establish priorities accordingly. The strategic planning process is an ideal venue for collectively identifying these priority activities that will direct resources and energy into specific project plans.

4. **Specify performance measures and criteria.** Considering the current economic environment faced by all levels of government, a strategic plan (and subsequent project plans) must include performance measures. These should answer questions such as:

a. How do we know the objectives are complete and successful?

b. How effective are the results of our goals and objectives, or did we do the *right* activities?

c. How efficient were the enterprise activities, or did we do the *activities* right?

d. What is the return on investment? How much money are we saving, or what are we providing for the cost?

SEARCH appreciates the fact that Montana stakeholders may view strategic planning as an exercise with limited value. To overcome this perception, the plan should not be a static document. In fact, an effective strategic plan serves as an ongoing planning tool that should be reviewed and adjusted periodically. This allows executive-level stakeholders to monitor progress (were the objectives achieved and supported through the performance measures?), and identify new or adjust priority goals.

Through the strategic planning process, Montana stakeholders will have a clear purpose, plan, and justification for the activities they will pursue. The planning

process fosters collaboration while providing a communication tool among stakeholders, funding entities, and even the media and public. An effective strategic plan clearly defines what and how the enterprise will fulfill its mission. The illustration below is a simple yet effective tool that Montana stakeholders can use to communicate this concept. The logic model ties specific activities, objectives, and goals to the mission and vision. These same principles can easily extend to project specific activities. SEARCH is happy to provide examples of the above components upon request.

Example Montana Logic Model
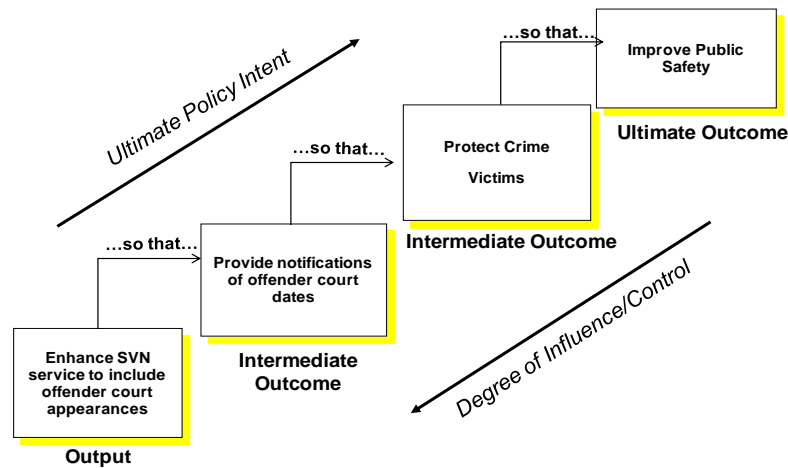
Business Architecture

— Recommendation 3: Ensure projects have sufficient "nontechnical" capabilities to achieve enterprise goals

These types of supporting capabilities include personnel, finances, and pertinent policies and procedures to support project objectives. This may seem obvious but can be difficult for executives to fully understand. Executive stakeholders need to recognize they are active participants whose main role is to provide the resources to meet project goals. Hypothetically, if the governance team identifies the goal of reporting all arrest dispositions in Missoula County by 2014, then it must ensure that all project stakeholders are prepared to commit sufficient resources until the project is complete. This recommendation emphasizes that *all* stakeholders must understand the scope and their role at the outset of the project.

Stakeholders indicated that the previous pilot projects lost momentum due to a combination of staff turnover, competing priorities, and technical challenges. These will be ongoing challenges. Montana stakeholders must establish a framework to respond and re-evaluate the scope, time, or resources necessary to accomplish project objectives.

— Recommendation 4: Establish an enterprise-wide policy for documenting stakeholder requirements

One effective method to gain consensus on specific enterprise goals is to adhere to a standard method of capturing and documenting the business and technical requirements. This allows stakeholders to anticipate the level of effort required to complete the key milestones for each goal. Requirements identification best practices include collaboration by the subject matter experts among all stakeholders to identify the context and content of information exchange. Specifically, these context and content requirements should define the specific agencies (or departments) involved, the events that trigger business process, and specific conditions or related policies.

As a result of site visit discussions, SEARCH is confident that the Montana stakeholders can easily provide this information for any of the initiatives described in **Section III**. They would benefit by using tools and supplemental documentation that facilitate the requirements development process. One of these is the Justice Information Exchange Modeling (JIEM) Tool,[6] which structures requirements in an easy-to-use manner and generates numerous types of reports.[7] The Global Justice Information Sharing initiative provides additional artifacts online that may be useful for business process analysis, referred to as behavior models in Service Specification Packages (SSPs).[8] Recommendation 6 provides additional suggestions how Montana stakeholders can utilize SSPs.

— Recommendation 5: Coordinate grant opportunities that meet enterprise goals

Through the support of stakeholders, the MBCC has a proven track record of securing alternative funding for Montana justice integration. SEARCH recommends stakeholders continue to aggressively pursue grant opportunities, and emphasize those that support the strategic plan's goals and objectives. This approach provides several advantages in that it leverages the priorities collaboratively identified by the executive stakeholders, meets a previously stated need, and promotes a cohesive statewide strategy.

Many initiatives of similar scale as Montana's revert to using grant opportunities to drive their strategy, and begin "chasing the money." This common scenario can further complicate enterprise-wide initiatives when grant funds are exhausted and stakeholders may not have completed the grant objectives, or are unable to sustain ongoing operations and maintenance.

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[6] www.search.jiem.org.

[7] To use the JIEM Tool, users must complete a free on-line certification training course prior to accessing the tool. Stakeholders can also leverage numerous reference models that document business workflows and process models for a number of common integration initiatives.

[8] http://www.it.ojp.gov/default.aspx?area=nationalInitiatives&page=1015

Information Architecture

— Recommendation 6: Formalize the use of national standards, IEPDs, and SSPs at the enterprise level.

Similar to Recommendation 4, establishing a policy that directs the use of standards-based specification development processes communicates strategic intent. This is a clear project benchmark that supports the enterprise goals and objectives, and assists stakeholders in understanding the expected deliverables for an integration project.

Through the victim notification, disposition reporting, and pre-sentence investigation projects, Montana stakeholders are well versed in using the Global Justice Data Model (GJXDM) and developing Information Exchange Package Documents. Proper use of national standards includes a learning curve, but is a wise investment at an enterprise level. Staff from DOC, DOJ, and CAO all gained valuable experience when developing these specifications, and SEARCH recommends Montana stakeholders continue to take advantage and further develop this expertise.

As mentioned in Recommendation 4, Montana stakeholders should enhance IEPDs by providing additional service context. An IEPD provides a useful way to specify a document's content, but generally needs supplemental documentation to describe the service—purpose, scope, expected system interactions, and additional business rules. The Service Description Document in the SSP provides this type of context. Although it is helpful, developing this document does not require extensive experience or special expertise. Using this documentation also begins to align Montana with the guidelines in the Global Reference Architecture (GRA). The GRA contains extensive information about service modeling that exceed the scope of this engagement, and this document will not describe it in detail. A significant body of GRA information is available online.[9]

— Recommendation 7: Use NIEM for future exchanges

SEARCH is aware that Montana stakeholders plan to use NIEM, the National Information Exchange Model, for future data exchange projects and certainly encourages this approach. From the justice perspective, NIEM is the next release of the GJXDM and includes a vast amount of additional information that stakeholders will likely find useful. NIEM also restructures the data model to support reusing common data elements in a more efficient manner than GJXDM.

Individuals interested in learning more about NIEM can view the NIEM website or complete an on-line NIEM training course.[10] NIEM recently updated this training to a more interactive platform.

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[9] http://www.it.ojp.gov/default.aspx?area=nationalInitiatives&page=1015

[10] http://www.niem.gov/training.php

— Recommendation 8: Enhance services to support message handling and error reporting

Stakeholders reported that the disposition reporting service lacked the ability to notify the courts if DOJ encountered processing errors. DOJ staff stated they currently have a manual process to review and resolve issues with CAO. This temporary solution will not be sustainable as the number of dispositions increase.

SEARCH recommends that stakeholders establish a consistent approach to send messages in an efficient and reliable manner. Specifically, stakeholders should investigate the use of Web Service (WS*) standards such as WS Addressing and Reliable Messaging to ensure that messages are exchanged appropriately. Also, Montana stakeholders must establish error messages and validation rules, and take advantage of XML schema's ability to enforce these business rules. Any rules that cannot be enforced through XML schema must be documented in a companion document (e.g., a Service Specification Document).

Technology Architecture

— Recommendation 9: Continue to use the IJIS Broker as the primary integration mechanism

Montana is well-positioned, from a technical infrastructure perspective, to implement a number of services via the IJIS Broker. Utilizing this technology will increase the return on the initial investment with each new service it supports. SEARCH strongly recommends that Montana stakeholders leverage this infrastructure and the staff experience gained through the previous projects to enhance the services offered to a wider range of stakeholders.

VI. Conclusion

After having worked with members of the Montana criminal justice community through the course of this TA engagement, SEARCH is confident that they will continue to find creative and collaborative solutions to the challenges they currently face. It is apparent that staff from all agencies involved in this effort are dedicated and committed to improving the quality of justice—this is an intangible asset (that never quite fits into a strategic assessment), and will serve the state and local communities into the foreseeable future and beyond.

SEARCH thanks all the technical assistance participants, who took to the time and made the effort to provide thoughtful and constructive comments during the site visit. The sheer number of participants is a testament to your collective dedication.

SEARCH also recognizes Tom Woodgerd, of the MBCC, for his extra efforts to coordinate so many participants and facilitating the excellent discussions.

**Appendix A:
About SEARCH,
the National Technical
Assistance Program,
and Project Staff**

SEARCH, The National Consortium for Justice Information and Statistics

SEARCH, The National Consortium for Justice Information and Statistics, is a nonprofit membership organization created by and for the states, dedicated to improving the quality of justice and public safety through the use, management, and exchange of information; application of new technologies; and responsible law and policy, while safeguarding security and privacy.

SEARCH's primary objective has been to identify and help solve the information management problems of justice and public safety agencies confronted with the need to automate and integrate their information systems and to exchange information with other local agencies, tribes, state agencies, agencies in other states, or with the Federal Government.

SEARCH is governed by a Membership Group comprised of one gubernatorial appointee from each of the 50 States, the District of Columbia, Puerto Rico, and the Virgin Islands. Members are primarily state-level justice officials responsible for operational decisions and policymaking concerning the management of criminal justice information.

A staff of professionals works from SEARCH headquarters in Sacramento, California, to implement solutions identified by the Membership Group. SEARCH provides justice and public safety agencies with diverse products, services, and resources through four focus areas: Systems and Technology, Criminal History Law and Policy, High-Technology Crime Investigation, and Public Safety.

SEARCH:

- Is the national provider of no-cost technical assistance to address the specific needs of operational state and local justice and public safety agencies in the process of acquiring, developing, upgrading, or integrating their computer and communications systems.

- Offers hands-on training to local, tribal, state, and Federal agencies on computer technology issues with criminal justice and homeland security applications. Courses are offered on such topics as investigating computer crime, cellular device investigations, network investigations, and online child exploitation investigation.

- Prepares police, fire, and EMS agencies for successful technology projects through the Public Safety Program.

- Sponsors national conferences, symposia, and workshops for local, tribal, state, and Federal justice practitioners.

- Prepares national research, analytical, and survey reports and bulletins on a range of timely issues in criminal justice information management, technology, and law and policy, which are published and disseminated by the U.S. Department of Justice and U.S. Department of Homeland Security.

- Provides a wide variety of information about justice information systems, related technologies, standards, research, and technology acquisition via the Internet. These resources are available via the SEARCH home page at www.search.org.

The National Technical Assistance Program

The National Technical Assistance Program, administered by SEARCH with funding from various agencies within the U.S. Department of Justice and U.S. Department of Homeland Security, provides no-cost assistance to all components of the state and local criminal justice system with respect to the development, operation, improvement, and/or integration of all types of criminal justice and public safety information systems (for example, records and case management, computer-aided dispatch, and criminal history record systems, etc.). The Technical Assistance Program includes both in-house and on-site technical assistance:

- In-house technical assistance includes consultation with agencies via telephone, mail, and Internet. These technical assistance projects can include consultations and information about automation, integration, communications interoperability, and planning issues, as well as review of agency automation/integration planning materials, needs assessments, data modeling, and requests for proposals.

- On-site assistance helps agencies in their efforts to effectively plan for, design, develop, procure, and implement computerized information systems, and can involve the following: conducting needs assessments, identifying system requirements, and developing or reviewing site-specific planning documents; planning projects to achieve integration of information systems across functional and/or political boundaries; assistance in writing technical proposals; providing technical consultations on a wide range of operational and policy issues; proposing solutions to system problems; locating expertise and information systems for transfer; and guiding the transfer and implementation of systems and techniques to improve information management.

Project Staff

Mr. Mo West is a Justice Information Systems Specialist for SEARCH, The National Consortium for Justice Information and Statistics, where he provides assistance on integrated justice systems project planning and implementation. He provides training, technical assistance, and research on automated systems development, automation planning, and justice information sharing to state, local, and tribal jurisdictions nationwide.

Prior to joining SEARCH in 2008, Mr. West served as the Program Manager for Washington State's Justice Information Network (JIN) and as a policy analyst for the Wisconsin Office of Justice Assistance In Washington, Mr. West oversaw the successful deployment of two key applications-a federated criminal history query and an electronic citations system-while securing $4.5 million in new funding for the JIN Program and leading the state's approach to justice information sharing. He also developed a policy regarding the use of the Global Justice Data Model (GJXDM) and the National Information Exchange Model (NIEM) as the basis for statewide information sharing. He also incorporated justice performance measures into the state's government accountability initiative. In Wisconsin, he monitored over $3.4 million in justice grants, served as a liaison to vendor and user communities for the Wisconsin Integrated Justice Information System (WIJIS) initiative, staffed key WIJIS governance committees, and developed privacy and security policies.

Mr. West has a bachelor's degree in History-American Law and Public Policy from Purdue University.

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│              Appendix B:              │
│               Montana                 │
│         Technical Assistance          │
│             Participants              │
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Montana Department of Justice
- **Joe Chapman** – Information Technology Services Division Administrator
- **Jack Marks –** Application Services Bureau Chief
- **Joe Wodnik** – Investigative Support Bureau Chief
- **Eleanor Cooperider** – Investigative Support Bureau, Criminal Records and Identification Services Section (CRIS) Supervisor
- **Jennifer Viets –** Investigative Support Bureau, Criminal Justice Information Network (CJIN) Services Section Supervisor
- **Bryan Costigan** – Montana All Threat Intelligence Center (MATIC) Section Supervisor

Montana Fish, Wildlife & Parks
- **JD Douglas** – Lead Investigator
- **Mike Korn –** Head of Investigations

Lewis and Clark County Detention Center
- **Laura Bulson –** Supervisor

Montana Department of Corrections
- **John Dougherty –** Information Technology Administrator
- **Anita Pisarsky –** Applications Development Bureau Chief
- **Kenny Kyler** – Database Administrator

Montana Administrative Office of the Courts
- **Lois Menzies** – Administrator
- **Lisa Mader** – Information Technology Manager

District and Limited Jurisdiction Court Representatives
- **Peg Allison**, Clerk of District Court, Flathead County
- **Judge Larry Carver**, Justice of the Peace, Judith Basin County
- **Shirley Faust**, Clerk of District Court, Missoula County
- **June Little**, Clerk of District Court, Park County
- **Judge Greg Mohr**, Justice of the Peace, Richland County
- **Jerry Newell**, Clerk of District Court, Fallon County
- **Sandi Peers**, Clerk of District Court, Toole County
- **Sharon Skaggs**, Clerk of Justice Court Supervisor, Yellowstone County
- **Karen Yarlott**, Clerk of District Court, Big Horn County