

## EXECUTIVE SUMMARY

The challenge of moving from the current state of criminal justice information sharing within Dakota County and the State to the integrated vision of CriMNet requires a clear picture of where we are now and where we want to be. Based on those findings, an analysis of the gaps that exist in business practices, technology and data can provide the underpinnings for discrete initiatives designed to bridge those gaps and achieve the integration goals of the Dakota County CJIN.

The findings in this document identify gaps in the CriMNet project as well as Dakota County that must be addressed to achieve criminal justice integration.

## CLIENT VALUE

This deliverable is important because it provides Dakota County an analysis of the gaps that exist between current technology, data, and business practices and what the County's End-State Criminal Justice Vision would require. It permits discussion, validation and refinement of the gaps before the Project moves into developing the Redesign Model for the Dakota County CJIN.

Validation of this document indicates that the Dakota County CJIN and KPMG Consulting share a common understanding of the gaps and barriers that will form the basis for the major business and technology initiatives that will define the CJIN plan.

## KEY FINDINGS

Development of this deliverable identified several key findings. These findings are summarized below organized by gaps in technology, business practices and data within both CriMNet and CJIN integration projects. Gaps identified include:

### CriMNet Gaps

#### Technology

- CriMNet Integration Backbone Not Yet Specified
- Statewide AFIS and Mug Shot Implementation Not Yet Refined
- CriMNet Protocol Not Yet Defined to Know if Multiple Queries of Databases is Possible.

#### Business Practice

- No CriMNet Project Plan Yet Defined
- CriMNet Transactions Need Additional Clarification
- No Statewide Identifiers for Individual, Incident, and Case
- Implementation of Statewide CriMNet Services Not Yet Defined
- Implementation of CriMNet Security Architecture Not Yet Defined

#### Data

- State Data Model Incomplete at this Time

- Implementation of Data Model Should Be Simplified and Phased Around Key Criminal Justice Business Processes

## Dakota County CJIN Gaps

### Technology

- System Integration Components, Middleware and Web Services, Not Currently Deployed
- Major County Criminal Justice Systems Not Well-Suited for Integrated Environment
- County Wide Area Network (WAN) May Not Support 24X7 Operations to Some County Locations
- Most Dakota County Squads Not Equipped With MDCs
- CAD and MDC Systems Currently in Place in Dakota County Do Not Interface with GIS Data
- Global Positioning Technology Not Installed in Dakota County Squads or Dispatch Centers
- There is No Ability at this Time for Officers to Enter Incident Data Into Their MDC and Have it Electronically Transferred to the Agency RMS Case Management Module
- Squad Cars Not Equipped with Card Readers
- Queries to State and Federal Databases are Not Processed Through the CAD Systems Currently in Place in Dakota County
- Law Enforcement Agencies Make Only Very Limited Use of the Evidence Tracking Modules in their Records Management Systems
- Use of Document Imaging Technology Not Widespread
- Limited Number of Electronic Fingerprint Machines Available In Dakota County

### Business Practice

- Electronic Signatures by Arresting Officers Would Need to be Deemed Acceptable For Certifying Legal Detention
- Dakota County Law Enforcement Investigators Do Not Use RMS Case Management Modules as Their Primary Case File
- Legality of Electronic Signatures by Judges for Search Warrants Unknown at This Time
- Access to State and Federal Computerized Criminal History Databases Limited to Dispatch Personnel
- There is Currently No Approved Method to Request and Approve Arrest and Bench Warrants in an Electronic Environment
- Current Dakota County Process for Initiating and Canceling Arrest Warrants Would Require Significant Business Practice Changes
- Dispositional Information Would Need to be Entered into TCIS/MNCIS by Court Personnel for a Timely Electronic Transfer to Detention Facilities

### Data

- Some Data Gaps Exist Relative to the Proposed Data Model

## APPROACH

To gather information for this report, KPMG Consulting evaluated the current business practices, technology components and data repositories and definitions in place in the County, compared those to the End-State Vision scenarios proposed in the End-State Vision Deliverable, and identified the gaps to be overcome in moving from current practice to the Vision. KPMG also evaluated the documentation available regarding the State's CriMNet Architecture and analyzed the gaps in that architecture that will need to be addressed in order for the Dakota County CJIN to integrate CriMNet.

## **CRIMNET IMPLEMENTATION GAPS**

One of the guiding principles of the Dakota County CJIN is compliance with CriMNet, the State's vision for integrated criminal justice. The State has made considerable progress by funding the development of draft statewide architecture models. These models provide a starting point for defining the data, process and technology components that will comprise CriMNet.

The State needs, however, to move aggressively to further define the projects and timelines for development of the State portion of CriMNet. Minnesota Counties like Dakota need to be confident that key components of CriMNet will be in place as they work on their own development plans. A lack of clarity regarding State direction places Counties in the position of defining integration projects that may be redundant, or in conflict with, other State or County integration projects.

We believe that local integration plans will benefit by the State further clarifying resolution of the following gaps.

### **CRIMNET TECHNOLOGY GAPS**

#### **CriMNet Integration Backbone Not Yet Specified**

The key to CriMNet's ability to integrate multiple sources of criminal justice data will be the State Integration Backbone. While the proposed Technology Model included high-level concepts describing the function of the backbone, and a very general discussion of integration tools such as middleware; it does not provide a level of specificity sufficient to help Dakota County determine the specific technology components necessary for communication with the Backbone. The Message-Oriented Middleware (MOM) components that will enable communication between diverse databases are currently proprietary, meaning that both the State and local integration partners like Dakota County must use the same middleware components. Additional work will be necessary to specify middleware standards across CriMNet before Dakota County can focus in on specific integration components in its implementation plan.

#### **Statewide AFIS and Mug Shot Implementation Not Yet Refined**

The State's Automated Fingerprint Identification System will be central to the maintenance of accurate information about individuals in CriMNet, and, when fully implemented, should be fully utilized in any criminal justice business process, not merely the booking process, requiring positive identification of an individual. While select local law enforcement agencies are submitting electronic fingerprints, and queries are returning "hits" associating individuals with latent prints captured at crime scenes, significant work remains to streamline and improve the local/state interface. The interface needs to evolve to permit real-time return of CCH records and references to incidents associated with latent prints. Currently, AFIS only returns an identifier, which requires additional work to cross-match with the CCH statewide identification number before a separate query returns the CCH.

Mug Shot repositories remain local or regional. The State needs to clarify when a statewide repository will be implemented and require statewide participation by all CriMNet participants.

### **CriMNet Protocol Not Yet Defined to Know if Multiple Queries of Databases Possible.**

There is currently no central query mechanism to access multiple state and federal databases simultaneously. This might be possible once CriMNet is operational, however until CriMNet's protocol is defined, this possibility is unknown.

## **CRIMNET BUSINESS PRACTICE GAPS**

### **No CriMNet Project Plan Yet Defined**

One of the principles in the Dakota County CJIN End-State Vision is full integration with the State's CriMNet project. As the CJIN moves forward with defining its implementation plan, however, it is struggling to define its role in relationship to a CriMNet project still in its infancy. While the proposed CriMNet Architecture provides a useful conceptual model for statewide integration, translation of those concepts into an overall state plan is necessary to ensure that Minnesota's local integration projects know when key state integration components are likely to be in place, and how they are to be defined.

Without further definition of the Project, the County would be wise to move cautiously in making investments that might be influenced by subsequent State decisions. For example, the middleware technology components described in the End-State Vision that will permit different criminal justice systems to communicate with each other are all proprietary, or specific to vendors. The County would be wise to stage its implementation plan to delay specific middleware choices until the State has finalized a standard, or risk building a local integration solution that will not communicate with the State.

### **CriMNet Transactions Need Additional Clarification**

While the State Data Model provides the essential data entities and elements that will constitute the data shared by CriMNet participants, additional work is needed to clearly define the CriMNet transactions and electronic documents that will flow between CriMNet participants in response to business events. The Search Institute is currently helping further clarify these documents through its Exchange Point Project.

### **No Statewide Identifiers for Individual, Incident, and Case**

The proposed CriMNet Technology Model calls for an Integration Backbone that assigns unique identification numbers to incidents, individuals and cases. Currently, these identifiers do not exist.

The State's Computerized Criminal History (CCH) files do feature a statewide identification number. The model, however, calls for individuals other than convicted criminals such as victims, witnesses, plaintiffs, etc. to be assigned unique identifiers as well. That identification number has not yet been established, nor have the policy issues attendant with its creation been fully explored.

While limited incident information is collected via the State Criminal Justice Record System (CJRS), no unique identification number has been designed or implemented. A Unique Judicial Case Number likewise does not exist, though the development of MNCIS, the coming statewide Court Information System, holds promise in that regard.

### **Implementation of Statewide CriMNet Services Not Yet Defined**

The State Technology Model also envisions a number of *Web Services* that will presumably provide a number of functions enabled by the Integration Backbone, such as statewide queries for individuals, incidents, property, and pending court cases. These services should be designed to be accessed by a number of different user interfaces, including internet browsers, client/server applications, mobile display computers (MDC), etc. The State may also elect to build a standard internet browser interface for some of these functions.

The State needs to clarify the nature and timeline of these services so that grantee counties can avoid duplication of effort locally.

### **Implementation of CriMNet Security Architecture Not Yet Defined**

The State needs to move quickly to define a security architecture that can be shared by all CriMNet participants. This security architecture should be role-based and define access privileges statewide, yet permit enough flexibility to permit local integration projects to define additional local security profiles. A CriMNet user directory based on the X.509 standards defined in the Proposed Technology Model will provide the maintenance facility for user access.

There will be a need for digital signatures in CriMNet. Current laws and agency policies require signatures for key transactions. The State should select a digital signature authority for all transactions and provide mechanisms for purchase and maintenance of those certificates.

## **CRIMNET DATA GAPS**

### **State Data Model Incomplete at this Time**

There are a number of areas in which work needs to be completed in order for the State to finalize the State Data Model. Until this happens local jurisdiction criminal justice agencies cannot redefine their data collection and processing and be confident that they will be in compliance with new State standards.

The national standards set by the National Incident-Based Reporting System (NIBRS) for offense reporting have changed since the Minnesota Criminal Justice Data Model was initially constructed. New statewide standards have yet to be defined and published.

There are currently insufficient definitions for statutes to be incorporated into a new data model. Additional work by groups including the Minnesota Sentencing Guidelines Commission needs to be completed to update these definitions.

The current criminal justice data model identifies property using an NCIC number. This system will be insufficient for the new data model. An identification system that identifies property according to “type” such as Gun, Boat etc. will need to be created and incorporated into the new data model.

The State Supreme Court is in the process of contracting for a new State Court Information System (MNCIS) to be operational within two years. This process will include new data standards for the system. Until these data standards are defined for the new system, validation of appropriate court data for the State Data Model will be postponed.

The State Data Model will need to include XML standards currently being developed by the State of Minnesota. When they are finalized, they will be incorporated into the New State Data Model.

### **Implementation of Data Model Should Be Simplified and Phased Around Key Criminal Justice Business Processes**

The proposed State Data Model includes several hundred data elements that are designed to be shared between criminal justice entities. Some of these data elements are more important than others, in that they support key business processes. The State should simplify the implementation of the Data Model by identifying those key business practices it wishes to transition to the State Data Model, and the data elements necessary to support them.

## **DAKOTA COUNTY CJIN GAPS**

Implementation gaps in Dakota County are both general and specific to the six major criminal justice business processes defined in the Current Process Model. This section of the document highlights some of these major gaps.

### **DAKOTA COUNTY CJIN TECHNOLOGY GAPS**

#### **System Integration Components, Middleware and Web Services, Not Currently Deployed**

The ability to *push, pull, publish, and subscribe* to move documents or data from one agency to another within the County could be possible through the CJIN Hub.

The technology components required to support this Technology Vision outlined in the End-State Vision are not currently in place. To date, the County has not standardized on any of the types of middleware components necessary to support the CJIN Hub. Due to the proprietary nature of current middleware offerings, choice of middleware components will be determined largely by State standards.

### **Major County Criminal Justice Systems Not Well-Suited for Integrated Environment**

Current middleware technology is developed with interfaces to a variety of different databases, operating systems and platforms. Several of the criminal justice systems in use in Dakota County, however, are not supported by modern middleware. These systems include:

- Sheriff's Department ENFORS System, including CAD/RMS, Jail Management, and Warrants modules
- Dakota County Attorney CAPS case management system
- State Court's TCIS court information system

In some cases, custom interfaces to middleware components can be designed and built, but replacement of existing systems is likely more cost-effective in the long run.

### **County Wide Area Network (WAN) May Not Support 24X7 Operations to Some County Locations**

Currently, nightly backup routines consume nearly all of available bandwidth on the T-1 circuits between the Government Services Complex, the Western Service Center and the Northern Service Center. To ensure access to CJIN services, the County may need to upgrade these circuits sufficient to accommodate CJIN and backup data traffic.

### **Several Dakota County Squads Not Equipped With MDCs**

Under the End-State Vision, the ability of officers to enter incident reports directly into MDCs to initiate an electronic case file in the agency's Records Management System for further investigation would increase officer's time in the field and eliminate duplicative recording of incident data.

Although Egan, Rosemount, Farmington, Apple Valley, West St. Paul, and Mendota Heights are all equipped with MDCs, many of the smaller cities in Dakota County, including the Dakota County Sheriff's Department are not equipped with MDCs. Burnsville plans to have squads equipped in the spring of 2001.

### **CAD and MDC Systems Currently in Place in Dakota County Do Not Interface with GIS Data**

Under the End-State Vision, dispatchers could electronically *pull* a GIS generated map into the CAD screen to direct responding officers to the incident address. If squad cars

were equipped with Mobile Data Computers (MDCs), officers could *pull* incident location maps up on their terminal as well.

Although GIS mapping technology is currently available in Dakota County, the CAD systems and MDCs currently in place are not programmed to query GIS data and map data visually. In addition, most squads are not currently equipped with MDCs that would enable the display of mapped data to patrolling officers.

### **Global Positioning Technology Not Installed in Dakota County Squads or Dispatch Centers**

Under the End-State Vision, Global Positioning Devices would be installed in squads; dispatchers would know the exact location of all officers on duty. This information could help them determine the squad closest to the incident location and decrease response time.

The global positioning technology to track the location of squad cars is currently available, but would have to be purchased and installed in Dakota County squads as well as in all of the County Dispatch centers.

### **There is No Ability at this Time for Officers to Enter Incident Data Into Their MDC and Have it Electronically Transferred to the Agency RMS Case Management Module**

Under the End-State Vision, an officer could enter arrest information into their MDCs or directly into the agency RMS. Any information entered into a MDC would be electronically transferred to the agency RMS to open a new case file.

Even in the City of Eagan, where squads are fully equipped with MDCs, there is no electronic transfer of information to the agency RMS. This might not even be a practical practice until law enforcement agencies increase use of their records management modules.

### **Squad Cars Not Equipped with Card Readers**

Installation of Card Readers in squads that would read a suspect's driver's license and electronically transfer personal data into the MDC screen would save the officer significant time when responding to a call and writing up an incident report.

Although Minnesota Driver's Licenses currently have a limited amount of information stored with the ability to be read by a card reader, Dakota County squads would not only have to be equipped with MDCs, but with card reader software installed as well. The MDCs currently being purchased in Dakota County do not have this technology component.

### **Queries to State and Federal Databases are Not Processed Through the CAD Systems Currently in Place in Dakota County**

Under the End-State Vision scenario, Dakota County dispatchers would have the ability to query multiple state and federal databases to access information on a suspect with a single entry. That information would be received and stored in the CAD system and if appropriate, electronically transferred to a new agency RMS case file. This would eliminate the need for investigators to re-query these databases during their investigations.

Currently, CAD systems used in Dakota County are not equipped to query, store or transfer data received from an outside source. Any information coming into the Dispatch Center is manually entered into CAD systems. Only minimal information collected during a call for service can be transferred from CAD to an RMS case file.

### **Law Enforcement Agencies Make Only Very Limited Use of the Evidence Tracking Modules in their Records Management Systems**

Under the End-State Vision Scenario, investigations would be improved by the ability to bar code and inventory physical evidence, digitize and store photographic, sound and video evidence, associate bar-code evidence with incident entries in records management systems, and synchronize chain of possession data with the BCA Crime Lab.

Under current practice, the evidence tracking modules in law enforcement agency's Records Management Systems are not being utilized. The majority of the tracking is documented on paper. To move to an automated system would likely require installation of improved evidence tracking systems coupled with investigators willingness to use an automated system.

### **Use of Document Imaging Technology Not Widespread**

The ability to *push* evidentiary documents from one agency to another within the County could be possible if document imaging technology was widely deployed and standardized.

### **Limited Number of Electronic Fingerprint Machines Available In Dakota County**

The limited number of electronic fingerprint machines currently in the County and the cost of purchase will limit the ability to electronically transfer suspect prints to the State Repository.

## **DAKOTA COUNTY CJIN BUSINESS PROCESS GAPS**

### **Electronic Signatures by Arresting Officers Would Need to be Deemed Acceptable For Certifying Legal Detention**

If Arrest Report Cards are eliminated at the time of booking into Dakota County Jail, an electronic signature by the arresting officer could be substituted for the required signature on the Card.

### **Dakota County Law Enforcement Investigators Do Not Use RMS Case Management Modules as Their Primary Case File**

Under the End-State-Vision, the ability to share law enforcement investigative information electronically with other criminal justice agencies via CJIN would be possible. However, law enforcement investigators do not currently use their agency's RMS case management module as their primary case file. A significant shift in business practices would be necessary for this additional information transferred and stored in an agency RMS to be used.

### **Legality of Electronic Signatures by Judges for Search Warrants Unknown at This Time**

The possibility of instituting an electronic signature process for approving search warrants has not been researched or approved by the Court. The ability to print a "certified" warrant upon request would need to be in place as well. A system for either electronic document transfer or paper based communications would also need to be in place for warrants affecting other Minnesota counties.

### **Access to State and Federal Computerized Criminal History Databases Limited to Dispatch Personnel**

Access to state and federal computerized criminal history data (CCH) is currently limited to Dakota County dispatch personnel and has not been extended to law enforcement officers and investigators. Extending the required certification to law enforcement officers would save time for dispatch personnel and investigators.

### **There is Currently No Approved Method to Request and Approve Arrest and Bench Warrants in an Electronic Environment**

Under the End-State Vision scenario, requests for and approval of arrest and bench warrants could be paperless. Data necessary for an arrest warrant approval could be sent from a law enforcement agency's records management system to the County Attorney and then onto the Court for consideration. A Judge's electronic signature could be attached to an electronic arrest warrant document with the ability of the document to be printed when served. Electronic warrant documents would be stored in the law

enforcement agency's RMS, the County Attorney's Electronic Case File, and the Court's TCIS/MNCIS Arrest Warrant files.

The possibility of instituting an electronic signature process for approving arrest and bench warrants has not been researched or approved by the Court. The ability to print a "certified" warrant upon request would need to be in place as well. A system for either electronic document transfer or paper based communications would also need to be in place for warrants being served in other Minnesota counties or in other states.

### **Current Dakota County Process for Initiating and Canceling Arrest Warrants Would Require Significant Business Practice Changes**

The current process for initiating and canceling arrest warrants in Dakota County is both paper and labor intensive. The opportunity for a more efficient, automated process is promising, however, a more thorough study of the numerous steps currently involved is necessary before recommending any major changes to the current business practice. If errors are made during this process, the consequences are so significant that any changes that rely on automation without human oversight should be carefully evaluated.

### **Dispositional Information Would Need to be Entered into TCIS/MNCIS by Court Personnel for a Timely Electronic Transfer to Detention Facilities**

Consensus among Dakota County criminal justice officials that the need for more timely and accurate transfer of dispositional information from the Court to County detention facilities and Community Corrections is needed. However, even if the technology for electronic transfer of dispositional information were in place, the information would have to be entered into TCIS/MNCIS by a court clerk or the judge in a timely manner. Computer terminals in the Courtroom would likely become necessary to accomplish this.

## **DAKOTA COUNTY CJIN DATA GAPS**

### **Some Data Gaps Exist Relative to the Proposed State Model**

KPMG Consulting completed an initial data mapping exercise that sought to identify gaps between the current version of the Proposed Data Model and the data dictionaries of CJIN criminal justice systems. To do so, we examined a subset of data defined by the Exchange Point Project of the SEARCH Institute, a national clearinghouse for criminal justice integration information.

The Exchange Point Project links the Proposed Process Model and Data Models together, identifying specific documents, data sets and data elements that would be exchanged in an integrated CriMNet environment. In doing so, it identified the 300 key data elements out of the nearly 1,500 elements currently in the Proposed Data Model. The initial mapping of Dakota County Systems was conducted using a database application constructed around the exchange points identified by the project.

We gapped the 300 key data elements contained in the Exchange Point data against the following Dakota County criminal justice agencies:

- CAPS
- Court Services Tracking System (CSTS)
- ENFORS
- Fox Pro Juvenile Information System
- Hastings Justice Information System
- Jail Imageware System
- LOGIS
- TCIS
- VISIONS

Preliminary summarized findings are as follows:

- Key person data elements (Name, Date of Birth, Supporting Demographics, etc.) are available in most systems
- Key Incident data elements (Description, Date and Time of Incident etc.) are available in law enforcement RMS.
- Key Case Information (Case Number, Defendant) is available in TCIS.
- While Dakota County's criminal justice systems are designed to *send* data around which they were designed, they are not well-equipped to *receive* data for which they were not designed. For example, the Exchange Point Model envisions the Court receiving detailed complaint information electronically. It appears TCIS is not designed to store and retain extensive incident data. Similarly, the model depicts law enforcement receiving court calendar information, though the LOGIS RMS used by the City of Eagan contains no data elements for court case activities and hearings.
- The Proposed Data Model defines certain data elements with a higher degree of specificity than Dakota County systems. For example, the Proposed Data Model includes separate data elements for right eye color and left eye color. Dakota County's systems only include a single element for eye color.

An Access database containing the results of this data mapping exercise will be submitted to the CJIN as part of the Final Implementation Plan. It should be used to provide input to the State as it finalizes the CrimNet data model and as source information during CJIN implementation.