

## EXECUTIVE SUMMARY

This deliverable represents one of the key deliverables for the Focus Phase of the Dakota County Criminal Justice Information Integration Network (CJIN) Implementation Plan. This document describes, in general terms, the design principles of an integrated criminal justice environment and what functions an integrated criminal justice information environment in Dakota County might offer.

This deliverable identifies:

- I. **General Principles For Criminal Justice Integration In Dakota County:** The design principles that will guide the development of integration strategies.
- II. **Stakeholder Demand For Integrated Criminal Justice Information:** The demand-side information needs identified by Dakota County criminal justice stakeholders.
- III. **The Business Vision: Operational Scenarios:** Operational scenarios that illustrate the value of an integrated criminal justice environment and its potential impact upon current information exchange events.
- IV. **The Dakota County CJIN Technology Vision:** A concept for a general technology environment that will enable integration of criminal justice data within the County and with the remainder of the State.

### A. CLIENT VALUE

This deliverable is important because it provides Dakota County a vision for the integrated criminal justice enterprise of the future. It permits discussion, validation and refinement of that vision before the Project moves into its Design Phase. Once defined, CJIN's vision will, with the Current Process, Current Data and Current Technology Models, identify the gaps that must be bridged by the discrete business and technology initiatives that will be identified in the final Implementation Plan.

Validation of this document indicates that the Dakota County CJIN and KPMG Consulting share a common understanding of (1) the principles that will guide development of subsequent integration strategies; (2) the information needs of criminal justice stakeholders, and (3) the integration objectives of the CJIN.

### B. KEY FINDINGS

Development of this deliverable identified several key findings. These findings are summarized in each of the four major sections of this document.

### C. APPROACH

To gather the information for this report, KPMG Consulting:

- Interviewed key personnel in each major business process
- Researched best practices in other criminal justice and public and private organizations.
- Conducted discussions with criminal justice integration stakeholders from the State and the Hennepin County

## **I. GENERAL PRINCIPLES FOR CRIMINAL JUSTICE INTEGRATION IN DAKOTA COUNTY**

Integrating Dakota County's diverse sources of criminal justice information will require that county criminal justice agencies develop a shared vision of integration. Efforts that require voluntary compliance across numerous, largely autonomous public agencies, like the CJIN, must define a shared set of values that will serve as organizing principles for further work. By obtaining agency consensus around those principles, the CJIN will have a rationale for:

- defining common, shared business and technology initiatives that promote integration,
- encouraging individual agency efforts to make their criminal justice information available to the larger criminal justice enterprise, and
- holding all participants accountable for participation in the larger enterprise effort.

Development of these integration principles was guided by:

- The perceived values of the Dakota County criminal justice community.
- The business needs of Dakota County criminal justice workers.
- The evolving State Criminal Justice Architecture.
- Best practices in information system integration, both within and without the criminal justice community.

These integration principles have been organized into four main categories:

- A. Criminal Justice Workflow
- B. Statewide Criminal Justice Integration
- C. Criminal Justice Information Architecture
- D. Governance

### **A. CRIMINAL JUSTICE WORKFLOW**

#### **1. The Dakota County CJIN shall be designed to optimize the workflow of the County's criminal justice enterprise.**

The value of integration to Dakota County's citizens can only be realized if integration efforts are tightly linked to the operational needs of Dakota County criminal justice agencies. Integration efforts shall be evaluated and prioritized by their ability to:

- Enhance public safety
- Maximize the productivity of criminal justice workers

The CJIN will need to support horizontal business processes and workflows that span multiple agencies, with multiple information systems. These processes and workflows

will be designed to improve the efficiency and effectiveness of the County's overall criminal justice enterprise. The CJIN will be flexible and responsive enough to accommodate processes and workflows that will evolve due to changing public needs and agency responsibilities.

To support criminal justice workflow, the CJIN will enable participating agencies to share information using the following functionalities, identified by the Search Institute and mirrored in the State Technology Model:

1. Automated **query** of CJIN, statewide and federal databases. For example, CJIN could support query of individual information across multiple County law enforcement records management systems.
2. Automated **push** of information from CJIN databases to other agency databases in response to key information exchange events. For example, law enforcement agencies could push criminal complaint information to the County Attorney for prosecution.
3. Automated **pull** of information from other databases for inclusion into a participating agency's systems as a result of key information exchange events. For example, criminal history information could be pulled upon booking into the jail management system for reference purposes.
4. Automated **publication** of data regarding individuals, incidents and cases for use by other agencies. For example, law enforcement agencies could publish incident notes county or statewide for examination by other law enforcement personnel.
5. Automated **subscription** to data published by other agencies regarding individuals, incidents and cases. For example, a county issuing an arrest warrant could subscribe to be notified of any law enforcement contact with the individual.

## **2. Implementation of the Dakota County CJIN shall be phased and driven by practical operational needs.**

Creation of Dakota County's CJIN will not occur overnight. The final implementation plan shall include a mix of:

1. *Short-term* business and technology initiatives designed to put information quickly into the hands of those who need it and free resources for more productive tasks, and
2. *Long-term* business and technology initiatives designed to improve the workflow of Dakota County's criminal justice organizations and share information statewide.

Throughout the implementation, efforts will balance quick, short-term returns against longer-term investments. Short-term initiatives may be pursued even though they eventually will be replaced by long-term technology components. By pursuing a mix of short and long-term initiatives, the CJIN will prove the value of criminal justice

integration and create demand for further efforts among the County's criminal justice community and the public.

### **3. Criminal justice information shall be captured at the originating point and shared with subsequent criminal justice business processes**

CJIN business processes shall be designed to capture information at the point at which it first appears. That information shall be shared "downstream" with other organizations as they need it. By capturing information and sharing it with others, criminal justice agencies will enhance the integrity of data, reduce the effort to input and maintain multiple instances of the data, and make information available at the right time, concurrent with key business events in the criminal justice enterprise.

### **4. Manual workload shall be reduced wherever possible.**

CJIN's business and technology initiatives will be designed to eliminate manual entry and reentry of data wherever possible. Business processes that require mundane, time-intensive manual processing of information will be reengineered to take advantage of modern information technology and communications capabilities. This will free human resources currently engaged in those activities to focus on their missions of protecting the public and the rights of individuals.

### **5. Multiple storage of the same information shall be eliminated or radically reduced.**

Throughout the criminal justice enterprise, key information is stored in multiple locations. Criminal justice agencies spend considerable time and resources entering and synchronizing these multiple data sources. By reducing the number of multiple data instances, resources will be freed and data integrity enhanced.

## **B. STATEWIDE CRIMINAL JUSTICE INTEGRATION**

### **1. The Dakota County CJIN shall comply with the vertical information-sharing requirements defined in CriMNet's State Enterprise Architecture.**

The CJIN will be a vital contributor to CriMNet, the State's larger criminal justice integration effort. As outlined in the proposed CriMNet Architecture, the Dakota County CJIN will enable the creation and maintenance of integration data in CriMNet's future Integration Backbone, an information system that will provide pointers and indexes to information located in agency information systems throughout the State. Shared data shall be consistent with the State Data Model, and shall include:

1. ***Individual Integration Data*** will be a subset of data that identifies a unique individual. CJIN agencies will use an Automated Fingerprint Identification System (AFIS) to identify and register individuals with the State Computerized Criminal History (CCH). A CCH Subject Identification Number (SID) and select

- individual data will “point” to and index individual-level data residing in CJIN systems. Through this indexing, the Integration Backbone will permit sharing of individual subject data among all CriMNet participants.
2. ***Incident Integration Data*** will be a subset of data that identifies a unique incident once created by a law enforcement officer. A state-supplied Incident Identification Number (IID) and select incident data residing on the Integration Backbone will index any incident data residing in CJIN-compliant records management systems. This indexing will permit sharing of incident data among all CriMNet participants.
  3. ***Case Integration Data*** will be a subset of data that identifies a unique court case, once referred for prosecution by a prosecuting attorney. A state-supplied Case Identification Number (CID) and select case-related data will index unique case information located in CJIN-compliant systems, primarily those of the County Attorney, Public Defender, and the 1<sup>st</sup> District Court. This indexing will permit the sharing of case data among all CriMNet participants.

Data in CJIN information systems that corresponds to individuals, incidents, and cases shall be made available to participating CriMNet agencies, given demonstrated business needs and adequate provision for data security and authentication. The CJIN shall enable participating Dakota County agencies to obtain data from and supply data to each other and other participating CriMNet agencies using the query, push, pull, publication and subscription functions describe above.

## **C. CRIMINAL JUSTICE INFORMATION INFRASTRUCTURE**

### **1. The Dakota County CJIN technology infrastructure shall be component-based and use open standards consistent with the State Criminal Justice Architecture.**

A distributed information network like the CJIN must rely on the coupling of distinct information system components. Existing legacy systems and the management imperatives of multiple criminal justice agencies preclude the construction of a single, monolithic information system to link Dakota County’s criminal justice agencies. From an architectural design standpoint, a component-based focus permits greater flexibility and scalability in respond to transactional demands. Individual CJIN components can be replaced or upgraded without affecting the viability of the network as a whole.

Open systems standards are computing and/or communications standards whose specifications are widely available, accepted, and standardized. Open systems have many components, namely:

1. Open communication standards
2. Open operating system standards
3. Open user interface standards
4. Open Database Connectivity (ODBC) standards

A distributed computing environment such as the CJIN built with open systems compliant components will benefit from standardization. Some of the benefits of open systems architecture are:

- Many hardware and software vendors are building their new product lines around open standards.
- As new products appear on the market such as E-Mail, Network Management, Routers, File Transfer, and Data Management, they will be built on open standards making interoperability with legacy systems easier and more efficient.
- Open systems allow for distributed management.
- Open systems lend to enterprise and distributed computing.
- Open systems assist programmers from having to rewrite application software.

## **2. The Dakota County CJIN shall leverage existing technology investments where possible and economical.**

Implementation of the Dakota County CJIN will, wherever possible, leverage the considerable investments already made by the County's criminal justice organizations. Proposed technology components will be designed to work with existing systems, automating the exchange of data *between* those systems while maintaining their integrity. Where legacy systems need replacement, acquisition efforts will be guided by the integration principles of the CJIN.

## **3. The CJIN Technology Architecture shall be shared and, where possible, made available for other uses.**

CJIN technology components shall be designed for use both within and without the County's criminal justice community. For example, network investments in integration technologies like middleware could be leveraged to support integration needs in other business areas, provided adequate security for criminal justice data is maintained. Technology investments should be made in such a way as to leverage technical knowledge within the County and participating cities.

## **D. GOVERNANCE**

### **1. A County-wide Governance Body shall enforce CJIN policies, standards and guidelines.**

Effective administration of the CJIN will depend upon representation from all of the County's participating criminal justice agencies. These agencies shall be represented on a governance body that exists to create and enforce the policies, standards and guidelines that will define the CJIN.

### **2. The autonomy of each individual agency shall be respected.**

Each of Dakota County's criminal justice organizations has its own unique policies, procedures, structure, politics and information systems that it has devised over the years

to meet its own roles and responsibilities within Dakota County and the State. This individual autonomy is recognized in state statute and is critical to credibility and accountability of the organization to the public. This autonomy must be recognized, respected and maintained in order for any coordinated changes to successfully occur amongst agencies with regards to the CJIN or any other initiative.

By following state criminal justice standards, as well as any additional standards created by the CJIN, Dakota County's criminal justice agencies will maintain their autonomy while building their systems and business processes to contribute to the data sharing objectives of the CJIN and CrimNet.

## II. STAKEHOLDER DEMAND FOR INTEGRATED CRIMINAL JUSTICE INFORMATION

Workers in Dakota County's criminal justice organizations know how important information is to doing their work. In a series of interviews, key stakeholders discussed their unmet information needs, providing insight into potential business and technology initiatives. Common needs included:

- The ability to access data residing in other organization's information systems
- The need for timely data presented as part of a county-wide criminal justice workflow
- The need for additional information and system functionality

The results of these interviews are presented below according to the six main business processes identified in the CJIN Current Process Model.

### A. INCIDENT REPORTING

KPMG Consulting interviewed dispatch staff from the Eagan and Burnsville Police Departments and an officer and sergeant from the Burnsville Police Department.

#### 1. Better Organization of State and Federal Database Queries Would Assist Dispatchers

Currently, dispatchers responding to an information request from law enforcement query several different databases to collect information on an individual. Addition of Datamaxx, a menu-based query tool, has improved access to CJIS/NCIC data, but dispatchers would be aided by a tool that permits query of multiple databases on, for example, single entry of a name.

#### 2. Dispatchers Could Improve Response With Better Information About Patrol Car Location

While CAD systems have the ability to track and display the status of an individual patrol car (i.e. engaged in a call, free to respond, etc.), they do not display their location. Dispatchers rely on general knowledge of an officer's patrolling area to deploy resources in response to an incident. Better knowledge of the exact location of the patrol car would assist in reducing response times and would improve the deployment of law enforcement resources.

#### 3. Law Enforcement Needs Help Finding Incident Locations

For Dakota County's law enforcement officers, finding incident locations can be challenging. Suburban streets are winding and street names can be confusing, often being variations of a single name (i.e. Oak Street, Oak Lane, Oak Road, etc.). Officers responding to calls frequently refer to printed maps, which may not be current or reflect

recent road closings. Officers could respond more quickly if incident locations were pinpointed, and the quickest route mapped for them.

#### **4. Incident Reports Should Be Entered by Officers in the Field**

Dakota County's law enforcement officers spend significant time preparing incident reports. Officers complete these reports at agency headquarters during lunch breaks or at the conclusion of a shift, often relying upon hand written notes, dispatch information and memory. Depending on the incident, officers must also complete various departmental and state-required forms.

With the addition of mobile dispatch computers (MDCs), officers could complete entry of incident data in the field. Reports would be more accurate and timely, and officers would continue to serve a deterrent function while remaining on duty. The incident type could prompt the selection of electronic forms designed to meet the reporting needs of that particular type of incident. Once electronically captured, that incident report could be reviewed by records personnel or automatically entered into the corresponding RMS entry, making the report available to personnel "downstream" in the criminal justice enterprise.

### **B. INVESTIGATION:**

We interviewed investigators and records management personnel from the Eagan Police Department, the Dakota County Sheriffs Department and the Burnsville Police Department.

#### **1. Card Readers Would Help Officers Collect Subject Data**

Officers interviewed suggested that card reader technology would assist them in collecting subject data during investigations. These data could populate incident reporting forms available through an MDC.

#### **2. Storing Information Obtained During Response to an Incident Would Assist Investigators**

Information queried and obtained by dispatchers from state and federal databases (such as driving record data) during a call for service is not stored in Computer Assisted Dispatch (CAD) or Records Management Systems (RMS). Storing this information would assist investigators in building their case against a suspect and provide a complete record of the information investigators used to act upon an incident.

#### **3. Investigators Could Benefit From Personal Access to Criminal History and Hot File Databases**

Dakota County's investigators do not have personal access to CJIS/NCIC to query for criminal histories and other hot file data. They also do not have access to the driver's license and vehicle registration databases. Investigators are required to request this

information from dispatch personnel. Providing personal access to investigators would put information at their fingertips, easing access and improving investigations.

#### **4. Investigators Could Benefit From Subject Information Stored in Other Law Enforcement Databases**

Investigators do not have access to Community Corrections, Court and Jail databases or other law enforcement agency's Records Management Systems. Information is gathered by repeated phone calls. The ability to query these other systems would significantly enhance the information available to investigators and save time spent gathering that information.

#### **5. Records Management Entries Should Be Updated With Disposition Information**

When a law enforcement agency refers a case to a Prosecuting Attorney for prosecution, information about the outcome is rarely routed back for update of the records management system. Automated update of records management entries would provide investigators a more complete picture of suspect criminal history and improve information on the outcome of their investigations.

#### **6. Dakota County Sheriff's Office Investigators Could Benefit From A More User-Friendly Case Management System**

Personnel interviewed said using their records management system is time-consuming and cumbersome. They find it difficult to shift back and forth between cases as information flows in, often through the numerous phone calls that investigators receive throughout the day. Investigators currently choose to keep all their notes and reports on paper in the agency paper file. A clerk enters only basic information about the case into the system when the case is opened and closed.

#### **7. Ability to Electronically Transfer Investigative Case File Information to the County Attorney Would Increase Efficiency**

Currently, law enforcement agencies must copy the complete investigative paper files and transfer to the Prosecuting Attorney for charging. Imaging these documents would permit electronic transfer of the entire case file. Although Burnsville Police Department is imaging all of their investigative case files, they do not currently have the ability to electronically transfer them to the attorneys.

#### **8. Investigations Could Benefit From Electronic Evidence-Tracking Systems**

Maintaining a chain of possession for evidence is critical to evidence handling. Law enforcement agencies largely rely on paper files to maintain chain of possession. Where electronic evidence tracking is available, investigators have elected not to use it because they find it difficult to use. Dakota County Sheriff's investigators do not use the ENFORS evidence-tracking module.

Investigations would be improved by the ability to bar code and inventory physical evidence, digitize and store photographic, sound and video evidence, associate bar-coded evidence with incident entries in record management systems, and synchronize chain of possession data with the BCA Crime Lab.

### **9. Providing Investigators Access to Records Management Systems to Enter Investigative Data Would Increase Efficiency**

In some cases, only records management personnel within a law enforcement agency can enter information into an agency's RMS. If current RMS databases were used as the case file, investigators would need access privileges as well.

### **10. Investigations Would Benefit from Information on Active Investigations in Other Agencies**

Investigators are not able to access information on other active investigations throughout the state or even within Dakota County. Investigators often investigate a suspect who is being investigated simultaneously by other agencies. Investigators rely on ad hoc meetings with investigators from other agencies to exchange information. Access to additional investigative data could significantly improve the ability of law enforcement to pursue successful prosecutions.

## **C. ARREST**

We interviewed a police officer and sergeant at the Burnsville Police Department, a Captain at the Eagan Police Department and the Dakota County Warrant Clerk.

### **1. Electronic Approval, Delivery and Quashing of Warrants Would Save Time and Improve Accuracy**

The entire process of approving, delivering and quashing warrants in Dakota County is largely paper driven. Warrants, along with a copy of the complaint and a letter from the Dakota County warrant clerk, are currently mailed to other jurisdictions for execution. By electronically transferring requests, approvals, approved warrants and warrant cancellations, warrants would be executed more quickly and accurately.

### **2. Electronic Delivery of Weekly Warrant Reports Would Save Time and Ensure Accuracy**

Dakota County currently faxes weekly warrant reports to the Social Security Administration, the FBI Task Force and appropriate law enforcement agencies, a time consuming process. Electronic delivery would save time and improve accuracy.

### **3. Simplification of the Warrant Entry Process Would Increase the Timeliness of Entry By Dakota County Personnel**

Although the dispatch personnel are prompt in canceling executed warrants, entering new warrants is dependent on the Dakota County warrant clerk's availability. If she is on vacation for a week, new warrants often do not get entered. If an easier electronic system were available, dispatch staff would be more inclined to enter warrants when the warrant clerk is not available.

#### **4. Electronic Transfer of Citations Would Simplify the Distribution Process and Ensure Timely and Accurate Delivery**

Currently, citations are handwritten by officers and distributed to the Court and Prosecuting Attorney via carbon copies. This information is then entered into the agency RMS system and stored in the paper file. If citations were electronically entered into the agency RMS, they could be transferred electronically to the Court and the City or County Attorney for prosecution.

### **D. DETENTION**

We interviewed Dakota County Jail administrators, law enforcement personnel at the Eagan and Burnsville Police Departments, and administrators at the Juvenile Detention Center.

#### **1. Electronically Transferring Subject Data to the Jail for Booking Would Save Reentry of Data**

Currently, when transporting a subject to the County Jail, an officer completes an arrest report card and a one-page booking sheet. The information on these forms is similar, including the suspect's name, address, the applicable offence code(s). At the time, this information exists, or will exist, in the arresting agency's records management system. Pushing this subject data from the agency's RMS system to the Jail to prefill booking screens would eliminate the need for officers to fill out these forms and for jail personnel to reenter the information.

#### **2. Increasing the Use of Jail Management System By Jail Staff Would Eliminate the Need For Duplicative Paper in Jail Units**

The Roster Card and Prisoner Information Card stored in the Jail Sergeant's office and in the jail units contain information currently stored on ENFORS. Jail personnel interviewed believe that staff continues to use these cards because ENFORS, which has no graphical user interface, is difficult to use. Personnel interviewed believe that a more user-friendly system might permit elimination of these cards.

#### **3. A Reliable Automated System For Tracking Inmate Accounts Would Eliminate the Current Practice of Duplicate Computer Entry and Manual Tracking**

Information regarding inmate funds is currently monitored and balanced daily by staff using the ENFORS system as well as paper. To explain the duplicate effort, Jail personnel cited a system flaw in ENFORS that at times makes it almost impossible to balance the accounts. The flaw requires staff to duplicate their work by also using a paper tracking system.

#### **4. Additional System Training for Jail Personnel Would Reduce the Need for Phone Calls to Jail Administration**

Jail personnel often call the Jail administrative office to obtain information regarding an inmate, though ENFORS is available to them. Because they find ENFORS difficult to use and believe they are not adequately trained, they find making a phone call easier than querying the system. Training personnel, along with management's increased expectation that individuals query the system themselves, might reduce the number of calls to the administration office.

#### **5. Jail Reporting Should Be Electronic**

Every day, jail administration distributes eight ENFORS reports by fax and mail to over 60 individuals and agencies. This process requires a large amount of paper and takes considerable time. Distributing these reports electronically would free jail staff for more productive activities.

#### **6. Jail Staff Need Additional System Access Points**

There are currently no ENFORS terminals in the Jail units for deputies to enter reports. The addition of terminals in these units would allow deputies to input reports directly and avoid handwriting reports and requiring support personnel to enter the reports into ENFORS.

#### **7. Access to Court System Data Would Help Jail Personnel**

The Jail currently does not have access to the Court's systems to obtain information on inmate dispositions and future court hearings. They rely on the transport slips hand written by jail deputies and paper notification sent by the Court. Information recorded by jail deputies does not always match information sent by the Court. Access to TCIS data would assure Jail personnel that they are receiving correct disposition and hearing data information.

#### **8. Acquiring a New Juvenile Information System Would Assist the Center**

Personnel interviewed felt that the Juvenile Detention Center's current information system is not meeting their needs and is not compatible with other systems. After pricing new systems, they are considering the option of using the JUVIS system from Hennepin County. Staff believe JUVIS would require enhancements but would be considerably less expensive than purchasing a new system.

## **9. Increasing Access to CSTS Would Assist Detention and Probation Personnel**

The Juvenile Detention Center personnel have limited access to CSTS terminals to obtain information on inmates. For example, the four probation officers in the schools do not have access to CSTS.

## **10. Ability To Electronically Fingerprint Clients and Transfer Prints to the BCA Would Assist Detention Center Personnel**

The Juvenile Center received the Jail's old fingerprinting machine, which is currently not working. This requires the detention staff to perform ink prints and mail them to the BCA. They would like the electronic fingerprint machine to be fixed and the ability to electronically send prints to the BCA.

## **11. Access to Court System Data Would Assist Detention Center Personnel**

Like Dakota Jail personnel, Detention Center staff currently does not have access to Court data to obtain information on inmate dispositions and future court hearings. They rely on the transport slips hand written by Detention Center Deputies and paper notification sent by the court. Information recorded by Detention Center Deputies does not always match information sent by the Court. Access to TCIS would ensure personnel that they are receiving correct dispositional and hearing data information. In addition, access to TCIS would also enable Detention Center personnel to verify active warrants on a timely basis.

## **E. ADJUDICATION**

We interviewed an adult criminal court clerk, a supervisor in the juvenile court and the TCIS Systems Coordinator.

### **1. Access to Court Data for County Attorney, Jail and Sheriff's Office Would Improve Accuracy of Scheduling, Inmate Transfers**

Court calendar information is currently printed and sent to the County Attorney and to the Jail. Access to TCIS data would permit the County Attorney and Jail to query their own calendars, saving effort for Court clerks.

Staff reports that entering sentencing orders into TCIS and transferring information via a paper report over to the Jail in a timely manner has been a problem. If Court goes until 5 p.m., or if the orders are particularly complicated, completing a report and transferring it to the Jail can take an additional day. Meanwhile, the jail relies on notes taken by the Jail Deputy written on a paper transport slip. Direct access to TCIS would enable the Jail to obtain accurate information in a timely manner and save work for Court clerks as well. Court personnel receive numerous calls from the Sheriff's office requesting a TCIS check for gun permits. If the jail had access to TCIS, these calls could be avoided.

## **2. Electronic Transfer of the Detention Request Form Would Assist the Court**

The Detention Request Form that starts the clock on the 36-hour hold is currently completed by the arresting agency and faxed to the Juvenile Detention Center, the County Attorney and the Court. The information is then entered into TCIS. Electronic transfer of this information would be more timely and avoid duplicative entry.

## **3. Direct Entry of Findings and Orders Into Court Systems Would Assist Court Clerks**

The judge handwrites findings and Orders on dispositions during hearings. Court clerks then enter them into TCIS. If dispositions were entered in TCIS during hearings, duplicative effort would be avoided.

## **4. Electronic Transfer of Petition/Complaint Information From the County Attorney CAPs System Would Assist the Court**

Petitions/Complaints from the County Attorney to initiate a case are sent to the Court via paper. This requires clerks to manually enter into TCIS information already stored in CAPS. An electronic transfer of this information would avoid duplicative entry.

## **5. Electronic Transfer of Non-Appearance Review Report Information Would Assist the Court**

Non-appearance Review Reports from Community Corrections requesting an extension of probation are paper driven. This requires manual entry information into TCIS of information already stored in CSTS. An electronic transfer of this information would avoid duplicative entry.

## **6. Electronic Transfer of Discharge Report Information Would Assist the Court and the County Attorney**

Discharge reports from Community Corrections to the Courts, the County Attorney and the juvenile are paper driven. This requires manual entry of information into TCIS and CAPs already stored in CSTS. An electronic transfer of this information would avoid duplicative entry.

## **7. Electronic Transfer of Case Files in Transfer of Venue Situations Would Assist Courts**

Transferring a case from one Court jurisdiction to another requires copying and mailing the entire court case file. In addition, the case has to be closed out of the 1<sup>st</sup> District TCIS system and reopened with identical information being entered in TCIS in another Minnesota Court jurisdiction. Electronic transfer of the information stored in TCIS between jurisdictions would eliminate duplicate entry. Electronic transfer of scanned case file documents could reduce copying and mailing efforts.

## **F. DISPOSITION:**

We interviewed two Community Corrections supervisors.

### **1. Access to Court Systems Data Would Assist Probation Officers**

Limited access to TCIS terminals makes it difficult for probation officers to access information about previous dispositions as well as current information on client restitution payments. For probation officers with large caseloads, this is especially critical. If they cannot access current status of restitution payments during a client meeting, additional follow up is often needed requiring unnecessary expenditure of personnel time.

### **2. Timely Access to Archived Court System Records Would Assist Probation Officers For Bail Evaluations:**

Currently, it often takes two to three days to receive archived TCIS records. These delays can mean that probation officers do not have access to important information when doing bail evaluations, completion of which is often required in a matter of hours.

### **3. Access to Jail System Data Would Assist Probation Officers**

Probation Officers do not have access to ENFORS (with the exception of one terminal at the Probation Service Center, a pilot project). This requires that probation officers seeking inmate information communicate with jail personnel by paper or by phone. Access to ENFORS data would also permit probation officers to query if anyone on their caseload had been booked or is currently incarcerated.

### **4. Access To Other Counties' CSTS Systems Would Assist Probation Officers**

Community Corrections does not have access to other County CSTS data. Access to probation information on clients in other counties and the ability to exchange information with other probation officers would be valuable.

### **5. Merging of Welfare Fraud and Restitution Payment Data Would Assist Probation Officers**

The State Department of Human Services MAXIS system determines eligibility for state financial assistance. It also tracks payments on welfare fraud cases. The Court's TCIS system tracks restitution payments. Probation officers must check both databases to update the status of client probation conditions. If data from each system could be accessed with one query, probation officers could save time.

### **6. Access to County Attorney's System Would Help Probation Officers Track Charged Cases**

Probation Officers could benefit from access to the County Attorney's CAPS system to track the status of charged cases for their clients.

### **7. Timely Entry of Criminal History Data into BCA's Criminal History Records is Critical for Probation Evaluations**

Community Corrections staff expressed concern about the continuing size of the State's criminal history suspense file. Accuracy and timeliness of this information is critical when preparing bail evaluations and sentencing investigations.

### **8. Access to Misdemeanor Conviction Data Would Assist Probation Officers**

Community Corrections has extremely limited access to misdemeanor convictions. This information is especially important in domestic abuse cases. Although the BCA does not enter this information, access to the TCIS and CSTS systems in other counties as well as law enforcement agency records management systems would be very valuable in determining bail and making sentencing recommendations. Currently this information is collected by phoning multiple jurisdictions.

### III. THE BUSINESS VISION: OPERATIONAL SCENARIOS

This section illustrates how each of the County's six main criminal justice business processes might be transformed through the CJIN. First, a fictional criminal justice scenario illustrates how an integrated justice environment, aided by the five integration functions - query, push, pull, publish and subscribe, could meet several of the information needs identified during our interviews. Second, we illustrate how that integrated environment could transform each of the information exchange events identified in the Current Process Model

#### The Dakota County CJIN: A Future Operational Scenario

*At 2:30 a.m on a Saturday morning, Eagan Police Officer Steve Smith observes a taillight out on a car driving west on Pilot Knob Road. Officer Smith turns on his red lights and signals the car to pull over. Before exiting his vehicle, Officer Smith notifies Eagan dispatch regarding his stop and enters the vehicle license plate number into his MDC. This entry **queries** CriMNet, which provides the following information to the officer's MDC, **published** to CriMNet's Integration Backbone from various law enforcement agencies throughout the State. Data returned reveals that the owner of the vehicle, Sandra Doe, has a warrant out for her arrest from Rice County for fleeing a police officer, has applied for and been denied a gun permit by the Dakota County Sheriff's Department (a red flag for Officer Smith that she may be armed), is on probation for DUI related offenses in Ramsey County and has had her drivers' license revoked for multiple DUI convictions. A mug shot, physical description, and a criminal history indicating several arrests for manufacture of methamphetamines from the State's criminal history repository are also displayed on the MDC.*

*The Eagan dispatch officer receives the same information on her CAD screen and recognizes that this is a high-risk stop. A CAD screen displaying the location of all patrolling squad cars shows that another officer is nearby. She immediately assigns that unit to respond, and **pushes** the information collected thus far to the second officer's MDC, along with a GIS map displaying the quickest route to Officer Smith. Eagan Dispatch notifies Officer Smith that backup is on the way.*

*Officer Smith approaches the car with his gun drawn and requests the driver to step out of the car. She is taken into custody and asked to produce her license, which she cannot. She claims her name is Sandra Conner, but, confronted with her matching mug shot and criminal history on the squad car's MDC, admits that she is Sandra Doe.*

*The suspect is then arrested based on probable cause, fitting the description of Sandra Doe. Officer Smith's colleague searches the vehicle's trunk and finds a substance which appears to be methamphetamine, which is **bar-coded** and confiscated as evidence. Officer Smith completes his incident report via an online form on the MDC and, scanning the same bar codes used to tag the evidence, enters the evidence into another online form linked to the Department's evidence tracking system. When complete, the report **pushes** data collected during the stop into Eagan's RMS and **registers the incident** with the CriMNet Integration Backbone, which makes the data available to other jurisdictions. The suspect and evidence is transported to the Eagan Police Department for temporary holding.*

*Upon arrival at Eagan PD, officers begin the local booking process. Ms. Doe is digitally photographed and she supplies additional personal information. Eagan's digital mug shot application **pulls** the case number from RMS to permit matching of booking information with the incident record. Meanwhile, Eagan evidence technicians have evaluated the evidence and confirmed that it is methamphetamine. Eagan PD decides to prosecute Ms. Doe for felony possession of a controlled substance. Ms. Doe is detained in a holding cell while arrangements can be made for her transport to the Dakota County Jail.*

When Eagan Police decide to charge Ms. Doe, individual and incident data collected by the Department's systems are **pushed** to Dakota County Jail's system, where it waits for Ms. Doe's arrival. The same data, as well as case information, is **pushed** to the Dakota County Attorney's case management system. When Ms. Doe arrives at the Dakota County Jail, a jail deputy confirms the personal information collected by Eagan PD and takes electronic fingerprints and photographs. The electronic fingerprints confirm her identity and **pull** her criminal history file for use by the jail management system. The incident record in the CriMNet Integration Backbone is updated with her confirmed involvement in the incident.

Registration of Ms. Doe's arrest with the CriMNet Integration Backbone automatically notifies her Ramsey County probation officer, who has **subscribed** to be notified of any law enforcement contact with Ms. Doe. Because the Rice County Sheriff's Office, in issuing a warrant, had also **subscribed** to be notified of incidents with Ms. Doe, they are notified that Ms. Doe is in custody in Hastings. The status of the warrant is automatically changed in the court system as well as in CJIS and NCIC warrant files.

The next morning, Dakota County Attorney staff checks their case management system and notice that Eagan PD has electronically **pushed** to them a complaint against Ms. Doe. The attorney assigned to the case, wishing to view the arresting officer's case notes, clicks on a link that routes the request through the State CriMNet Integration Backbone. Because Eagan Police Department has elected to **publish** their incident case notes to the Backbone, the information is retrieved and displayed in a web browser. The attorney decides to file formal charges in the 1st District Court and **pushes** the case information as an electronic charging document to MNCIS, the State's court information system. The same information is **pushed** to Dakota County Community Corrections in the form of a request for bail evaluation.

1st District Court clerks receive notification within MNCIS that charges have been filed against Ms. Doe. A unique **case identification number is automatically assigned** by the CriMNet backbone, indexing the case and allowing other CriMNet participants to view the charges pending against Ms. Doe. At her first appearance, Ms. Doe requests a public defender and is found eligible. Her basic demographic and charge information is **pushed** by MNCIS to the Public Defender's case management system. Throughout the trial's hearings, critical documents, including motions and notifications of hearings are **pushed** to appropriate parties. Court requests for Community Corrections pre-plea and pre-sentence investigations are automatically **pushed** to the Community Corrections CSTS system. When complete, results are **pushed** back to MNCIS.

At the conclusion of the trial, case disposition information is **pushed** to Community Corrections and the Dakota County Jail for appropriate incarceration and monitoring of Ms. Doe. Information is also **pushed** to the Eagan PD to update their records management system and to the County Attorney's CAPS System. Due to the registration of the case with the CriMNet Integration Backbone, disposition information is also made available to the BCA and DOC.

After Ms. Doe is released from jail and Community Corrections is monitoring her probation, she is arrested by a Dakota County Sheriff for possession of materials used in the manufacture of methamphetamines. Because Community Corrections **subscribed** to notification of any arrests, they begin the probation violation process immediately, **pushing** a request for a probation violation hearing to the Court's MNCIS system.

The previous scenario represents just one possible example of the automated data sharing capabilities of an integrated criminal justice environment. Many additional information exchanges occur within Dakota County's criminal justice enterprise that were not portrayed here. Any similarity to real persons or events is strictly coincidental.

## POTENTIAL EFFECT OF THE DAKOTA COUNTY CJIN ON CRIMINAL JUSTICE INFORMATION EXCHANGE EVENTS

An integrated criminal justice environment, made possible by the Dakota County CJIN, could significantly improve the methods used to share information between local agencies. In the following analysis, we present the potential effect of the CJIN upon the information exchange events of the 6 major criminal justice business activities identified in the Current Process Model.

### A. INCIDENT REPORTING

#### Process Call For Service (P 1.2)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Incident Data	Verbal via Phone	Public or Law Enforcement, Other Agency		Dispatch Center	CAD
Incident Location Data	Electronic	N/A	ALI	Dispatch Center	CAD
<u>Incident Location Data</u>	<u>Electronic PUSH of GIS Map</u>	<u>Dispatch Center</u>	<u>CAD</u>	<u>Squad Car</u>	<u>MDC</u>
Warrant Information	<del>Phone Calls</del> <u>Electronic PULL via CriMNet</u>	Hennepin and Ramsey Counties	N/A	Dispatch Center	<del>N/A</del> <u>CAD/RMS MS</u>
Subject Criminal History	Electronic <del>to Paper</del> <u>PULL via CriMNet</u>	FBI/BCA	CCH Databases	Dispatch Center	<u>CAD/RMS</u> <del>N/A</del>
Driver and Motor Vehicle Data	Electronic <del>to Paper</del> <u>PULL via CriMNet</u>	Department of Public Safety	DVS Database	Dispatch Center	<u>CAD/RMS</u> <del>N/A</del>
Driver and Motor Vehicle Data (other states)	Electronic <del>to Paper</del> <u>QUERY, PULL via CriMNet</u>	NLETS National Law Enforcement Telecommunications System	NLETS	Dispatch Center	<u>CAD/RMS</u> <del>N/A</del>
Wanted Persons/Stolen Property/OFP	Electronic <u>QUERY, PULL via CriMNet</u> <del>to Paper</del>	FBI	NCIC Hot Files	Dispatch Center	<u>CAD/RMS</u> <del>N/A</del>
Wanted Persons/Impounded Vehicles/DNR/OFP	Electronic <u>QUERY, PULL via CriMNet</u> <del>to Paper</del>	BCA	CJIS Hot Files	Dispatch Center	<u>CAD/RMS</u> <del>N/A</del>
Incident Data generated from call	Electronic	Dispatch Center	CAD	Law Enforcement Agency	RMS
<u>Incident Information</u>	<u>Electronic REGISTRATION via CriMNet</u>	<u>Law Enforcement Agency</u>	<u>RMS</u>	<u>CriMNet</u>	<u>CriMNet Integration Backbone</u>
Direct Call Information	Verbal via Phone	Dispatch Center	N/A	Law Enforcement	RMS

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
				Agency	
Hot File Data generated from call	Electronic <a href="#">PUSH via CriMNet</a>	Dispatch Center	N/A	BCA /FBI	Hot Files
Statistical Crime Data	Electronic <a href="#">PUSH via CJIN</a>	Dispatch Center	CAD/_RMS	BCA	CJRS

### Assign Unit (P 1.3)

No change to information exchanges.

### Transmit Information To Emergency Unit (P 1.4)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Dispatch Data	<a href="#">Electronic PUSH via CJIN to MDT/MDC, Radio, Cell Phone, Pager</a>	Dispatch Center	CAD	Emergency Unit	N/A

### Respond To Call For Service (P 1.5)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Driver and Motor Vehicle, Hot File Data	Electronic <a href="#">PULL via CriMNet</a>	DVS/FBI/BCA/NL ETS	NCIC, CJIS, NLETS, DVS	Emergency Units	N/A

### Close Call for Service (P 1.6)

No change to information exchanges.

## B. INVESTIGATION AND ARREST

### Initiate Criminal Investigation (P 2.1)

No change to information exchanges.

### Open Case File (P 2.2)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Investigation Information	<a href="#">Electronic</a>	County	Paper File	Law	RMS Paper

	<a href="#">PUSH via CJIN Paper</a>	Attorney/Outside Agency		Enforcement	Case File
Incident Information	Electronic	Dispatch Center	CAD	Law Enforcement	RMS
Case Information	<del>Electronic to Paper</del> <a href="#">Electronic PUSH via CJIN</a>	Dispatch Center/County Attorney/Other Agencies	RMS County Attorney Agency <del>Paper Files</del> <a href="#">Electronic Document Repositories</a>	Law Enforcement	RMS <a href="#">Electronic Document Repositories</a> <del>Paper Case File</del>
Indictment	<del>Paper</del> <a href="#">Electronic PUSH via CJIN</a>	Court	Court <a href="#">Electronic Document Repositories</a> <del>Paper File</del>	Law Enforcement	RMS <a href="#">Electronic Document Repositories</a> <del>Paper Case File</del>

**Conduct Investigation (P 2.3)**

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Miscellaneous Data	Electronic	Various Agencies	Miscellaneous Databases (MJNO, APS, Other Agencies)	Law Enforcement	<del>Paper Case File</del> <a href="#">RMS</a>
Criminal History Data	<del>Electronic to Paper</del> <a href="#">Electronic PULL via CriMNet</a>	BCA/FBI	CCH Databases	Law Enforcement	<del>Paper Case File</del> <a href="#">RMS</a>
Driver's License/Registration Information	<a href="#">Electronic PULL via CriMNet</a> <del>Electronic to Paper</del>	Department of Public Safety/DVS	DVS Database	Law Enforcement	Paper Case File
Impounded Vehicles/Wanted Persons	<a href="#">Electronic PULL via CriMNet</a> <del>Electronic to Paper</del>	BCA	CJIS Hot Files	Law Enforcement	Paper Case File
Wanted Persons/Property	<a href="#">Electronic PULL via CriMNet</a> <del>Electronic to Paper</del>	FBI	NCIC Hot Files	Law Enforcement	Paper Case File
DVS Data (Other States)	<a href="#">Electronic PULL via CriMNet</a> <del>Electronic to Paper</del>	NLETS	NLETS	Law Enforcement	Paper Case File

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Mug Shots	<u>Electronic PUSH via CriMNetElectronic</u>	N/A	Detention Imaging System	<u>Law Enforcement DPS</u>	<u>Paper-Case File Statewide Mug Shot Repository</u>
Investigation Information	<u>Paper to Electronic</u>	<u>Law Enforcement Agency Investigators</u>	<u>Paper-Case File Electronic Case Notes</u>	Law Enforcement Agency	RMS

### Obtain Search Warrants (P 2.4)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Request for Search Warrant	<u>Paper Electronic PUSH via CJIN</u>	Law Enforcement Agency	<u>N/A RMS</u>	Court	<u>Law Enforcement Paper-Case File MNCIS</u>
Approve Search Warrant	<u>Electronic PUSH via CJIN Paper</u>	Court	<u>Court Paper Case File TCIS MNCIS</u>	Law Enforcement/ Investigative Agency	<u>Law Enforcement Paper-Case File RMS</u>

### Execute Search (P 2.5)

No change to information exchanges.

### Collect Evidence (P 2.6)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Evidence Information	Paper	N/A	N/A	Law Enforcement Agency	<u>Paper-Case File Evidence Tracking System</u>
Evidence Information/ Evidence Analysis Reports	<u>Paper Electronic PUSH via CriMNet</u>	Law Enforcement	<u>Paper-Case File Evidence Tracking System</u>	BCA/FBI	<u>BCA/FBI Repository Crime Laboratory Information System</u>
<u>Evidence Information</u>	<u>Paper</u>	<u>Law Enforcement Agency</u>	<u>Paper-Case File</u>	<u>Law Enforcement Agency</u>	<u>Computerized Evidence System</u>

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Evidence Information	Paper	Law Enforcement Agency	Paper Case File	Law Enforcement Agency	Chain of Evidence Paper File
Photos	<del>Paper</del> to Electronic	Law Enforcement Agency <u>Officers</u>	Paper Case File	Law Enforcement Agency	Photo Digital Retention Database

### Obtain Arrest Warrant (P 2.7)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Request Arrest Warrant	<del>Paper</del> <u>Electronic PUSH via CriMNet</u>	Law Enforcement Agency	<del>N/ARMS</del>	Court	<del>Court Paper File</del> <u>MNCIS</u>
Approved Arrest Warrant	<del>Paper</del> <u>Electronic PUSH via CriMNet</u>	Court	<del>TCIS Court Paper Case File</del> <u>MNCIS</u>	Law Enforcement Agency Sheriff's Department	<del>Law Enforcement Paper Case File</del> Law Enforcement Agency RMS ENFOR Warrant Module <del>Sheriff's Department Paper Warrant File</del>

### Law Enforcement Charging Decision (P 3.1)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Investigation Information	Paper	Law Enforcement Investigative Staff	RMS Investigative Case File	Arresting Officer	RMS/Law Enforcement Case File
Arrest Information	<del>Paper</del> <u>Electronic</u>	Arresting Officer	<del>N/ARMS/ Incident Report Module</del>	Arresting Law Enforcement Agency	RMS
Charging Information (Tab Charge/ etc.)	<del>Paper</del> <u>Electronic PUSH via CJIN</u> (Tab Charge/ Complaint and Summons/Citation)	Law Enforcement	RMS / <u>Incident Report Module Paper File</u>	Court	<del>TCIS</del> <u>MNCIS</u>

### Arrest Of Subject (P 3.2)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Arrest Warrant	<del>Paper</del> <u>Electronic PUBLICATION via CriMNet (Arrest Warrant)</u>	Court	<del>Court Paper Files</del> <u>MNCIS</u>	<del>Law Enforcement</del> <u>CriMNet</u>	<del>Paper File</del> <u>N/A</u>
<u>Arrest Warrant</u>	<u>Electronic PULL via CriMNet</u>	<u>CriMNet</u>		<u>Law Enforcement</u>	<u>N/A</u>
Arrest Information	<del>Paper (Arrest Report Card)</del> <u>Electronic PUSH via CJIN</u>	Arresting <del>Officer</del> <u>Law Enforcement Agency</u>	<del>N/ARMS</del>	County Jail	<del>Jail Paper Files,</del> <u>ENFORS Jail Management System</u>
Arrest Information	<del>Paper</del> <u>Electronic</u>	Arresting Officer	N/A	Arresting Law Enforcement Agency	<u>RMS / Incident Reporting Module</u>
Arrest Data	<del>Paper (DVI Forms)</del> <u>Electronic PUSH via CJIN (Electronic Forms)</u>	Law Enforcement	<u>RMS / Incident Reporting Module</u>	Department of Public Safety	DVS Database

### Open Prosecution File (P 3.3)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Charging Document and Case File	<del>Paper</del> <u>Electronic PUSH via CJIN</u>	Arresting <del>Officer</del> <u>Law Enforcement Agency</u>	RMS	County Attorney	<del>Paper File/</del> <u>CAPS PA Case Management System, Electronic Document Repository</u>
Criminal History Information	<del>Electronic to Paper</del> <u>Electronic PULL via CriMNet</u>	BCA CJIS	CCH Databases	County Attorney	<del>Paper</del> <u>PA Case Management System</u>

### Prosecution Charging Decision (P. 3.4)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Prosecution Charging Decision	<del>Paper</del> <u>Electronic PUSH via CJIN</u>	County Attorney	<del>CAPS/Paper File</del> <u>PA Case Management System</u>	Local Law Enforcement	RMS

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Prosecution Charging Decision	<del>Electronic PUSH via CJIN</del> <del>Verbal via phone call</del>	County Attorney	<del>PA Case Management System</del> <del>CAPS/Paper File</del>	Jail	<del>ENFORS/Jail Paper File</del> <del>Jail Management System</del>
Prosecution Charging Decision	<del>Paper (Offender Tracking Form)</del> <del>Electronic REGISTRATION with CriMNET</del>	County Attorney	<del>N/APA Case Management System</del>	<del>BCA</del> CriMNet	<del>CHS/BCA Paper File</del> <del>CriMNet Integration Backbone</del>

### Conduct Diversion Program (P. 3.5)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Diversion Results	Electronic	County Attorney	N/A	County Attorney	CAPS
Complaint Information	<del>Paper</del> <del>Electronic PUSH via CJIN</del>	County Attorney	<del>CAPS/Paper File</del> <del>PA Case Management System</del>	Court	<del>TCIS/Paper File</del> <del>MNCIS</del>

## C. DETENTION

### Book Subject (P 4.1)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Arrest Information	<del>Paper (Arrest Report Card)</del> <del>Electronic PUSH via CJIN</del>	Arresting Officer <del>Law Enforcement Agency</del>	<del>N/ARMS</del>	<del>Booking Officer</del> <del>Jail</del>	<del>ENFORS Jail Management System</del>
Disposition Information	<del>Paper (Warrant of Commitment)</del> <del>Electronic PUSH via CJIN</del>	Court (Sentencing)	<del>Court Paper File</del> <del>MNCIS</del>	<del>Booking Officer</del> <del>Jail</del>	<del>ENFORS Jail Management System</del>
Driver and Motor Vehicle Information	Electronic <del>to</del> <del>Paper PULL via CriMNet</del>	DPS/DVS	DPS/DVS Database	Jail	<del>ENFORS Jail Paper File</del> <del>Jail Management System</del>

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization / Individual	Repository	Organization / Individual	Repository
Previous Incarceration Information	Paper/Electronic	Jail	ENFORS	Jail	ENFORS Jail Paper File
Criminal History Information	Electronic PULL via CriMNet Paper	FBI/BCA	CCH Databases	Jail	ENFORS Jail Paper File Jail Management System
Warrant Information	Electronic Paper QUERY via CriMNet	FBI/BCA	Federal/State/County Warrant Databases NCIC/CJIS Hot Files	Jail	ENFORS Jail Paper File Jail Management System
Subject Booking Information	Paper	Booking Officer	ENFORS	Jail	Jail Paper File
Subject Booking Information	Paper	Booking Officer	ENFORS	Jail	Medical Paper File
Subject Booking Information	Paper	Booking Officer	N/A	Jail	ENFORS
Subject Booking Information	Paper	Booking Officer	ENFORS	Jail	Roster Card File
Subject Booking Information	Paper	Booking Officer	ENFORS	Jail	Prisoner Information File

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/ Individual	Repository	Organization/ Individual	Repository
Juvenile Subject Booking Information	Paper/Verbal Electronic PUSH via CJIN	Arresting Officer Law Enforcement Agency	N/A RMS	Juvenile Detention Center	Juvenile Information System
Subject Booking Information	Electronic	Jail	ENFORS	N/A	DBI
Subject Booking Information	Electronic	Jail	ENFORS	N/A	Imageware
Fingerprints	Electronic PUSH via CriMNet	Jail / Juvenile Detention Center	DBI	BCA	CJS Statewide Fingerprint Database
Mug Shot	Electronic PUSH via CriMNet	Jail	Imageware	BCA	CJS Statewide Mug Shot Repository
Subject Information	Electronic REGISTRATION via CriMNet	Jail	Jail Management System	CriMNet	CriMNet Integration Backbone

CCH Hits	Electronic <a href="#">PULL via CriMNet</a>	BCA	<a href="#">CJS Statewide Fingerprint Database</a>	Jail	<a href="#">DBI / Jail Management System</a>
Fingerprints	Electronic	BCA	CJIS	FBI	NCIC Hot Files
<a href="#">Subject Booking Information</a>	Electronic	<a href="#">Jail</a>	<a href="#">ENFORS</a>	<a href="#">BCA</a>	<a href="#">CJIS</a>
Subject Booking Information	Electronic <a href="#">PUSH via CriMNet</a>	Jail	<a href="#">ENFORS Jail Management System</a>	DOC	<a href="#">CMIS Statewide Supervision System (SSS)</a>
<a href="#">Juvenile Booking Information and Detention Status</a>	<a href="#">Electronic PUSH via CJIN</a>	<a href="#">Juvenile Detention Center</a>	<a href="#">Juvenile Information System</a>	<a href="#">Community Corrections</a>	<a href="#">CSTS</a>
<a href="#">Juvenile Booking Information and Detention Status</a>	<a href="#">Electronic PUSH via CJIN</a>	<a href="#">Juvenile Detention Center</a>	<a href="#">Juvenile Information System</a>	<a href="#">Minnesota Department of Human Services</a>	<a href="#">SSIS</a>

### Distribute Reports (P 4.2)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
<a href="#">Daily Jail Reports</a>	<a href="#">Electronic PUSH via CJIN</a>	<a href="#">Jail</a>	<a href="#">Jail Management System</a>	<a href="#">Organizations and Individuals</a>	<a href="#">N/A</a>

**Transport Subject to Court Appearance (P 4.3)**

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Detention Status Information	Paper (Transfer “Pink” Slip) and (Warrant of Commitment After Arrest and Before Trial) or paper notice from TCIS <u>Electronic PUSH via CJIN</u>	Court	<del>Court Paper File</del> TCIS <u>MNCIS</u>	Jail	<del>Jail Paper File</del> ENFORS <u>Jail Management System</u>

**Release or Detain Subject After First Appearance (P 4.4)**

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Detention Status Information	Paper (Transfer “Pink” Slip) and (Warrant of Commitment After Arrest and Before Trial) or paper notice from TCIS <u>Electronic PUSH via CJIN</u>	Court	<del>Court Paper File</del> TCIS <u>MNCIS</u>	Jail	<del>Jail Paper File</del> ENFORS <u>Jail Management System</u>

**Release or Detain Subject After Adjudication (P 4.5)**

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Detention or Release Information	<del>Paper</del> ( <del>Warrant of Commitment or Release Order</del> ) <u>Electronic PUSH via CJIN</u>	Court	<del>Court Paper File</del> <u>TCIS</u> <u>MNCIS</u>	Jail	<del>Jail Paper File</del> <u>ENFORS</u> <u>Jail Management System</u>



INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Bail Recommendation Information	<del>Paper</del> (Bail Evaluation Form) <u>Electronic PUSH via CJIN</u>	Community Corrections	<del>Community Corrections Paper File</del> <u>CSTS</u>	Court	<del>Court Paper File</del> <u>MNCIS</u>
Detain or Release Data	<del>Paper</del> (Warrant of Commitment After Arrest and Before Trial) TCIS Notice Transfer “Pink Slip”/ Release Order <u>Electronic PUSH via CJIN</u>	Court	<del>TCIS Case Paper File</del> <u>MNCIS</u>	Detention Facility	<del>Jail Paper File</del> <u>ENFORS Jail Management System</u> <u>Juvenile Information System</u>

### Conduct Hearings (P 5.3)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Pre-Plea Investigation Information	<del>Paper</del> <u>Electronic PUSH via CJIN</u>	Community Corrections	Community Corrections <del>Paper File</del> CSTS	Court	<del>Court Paper File</del> TCIS <u>MNCIS</u> <u>Electronic Document Repository</u>
Detain or Release Information	<del>Paper</del> (Warrant of Commitment After Arrest and Before Trial) TCIS Notice/Transfer “Pink Slip”/ Release Order <u>Electronic PUSH via CJIN</u>	Court	<del>TCIS Case Paper File</del> <u>MNCIS</u>	Detention Facility	<del>Jail Paper File</del> <u>ENFORS Jail Management System</u> <u>Juvenile Information System</u>
Pre-Plea Investigation Information	<del>Paper</del> <u>Electronic PUSH via CJIN</u>	Community Corrections	Community Corrections <del>Paper File</del> CSTS	Court	<del>Court Paper File</del> TCIS <u>MNCIS</u> <u>Electronic Document Repository</u>
Probation	<del>Paper</del> <u>Electronic</u>	Community Corrections	Community	Court	<del>Court Paper</del>

Violation Information	<u>PUSH via CJIN</u>		Corrections <del>Paper File</del> CSTS		<del>File</del> TCIS MNCIS
-----------------------	----------------------	--	--	--	----------------------------------

### Conduct Trial (P 5.4)

No information exchanges are identified.

### Sentence (P 5.5)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/ Individual	Repository	Organization/ Individual	Repository
Sentencing Information	<del>Paper</del> Electronic <u>PUSH via CriMNet</u>	Court	<del>Court Paper File</del> MNCIS	Public Safety – DVS Community Corrections	DVS Database CSTS
Sentencing Information	Electronic <u>PUSH via CriMNet</u>	Court	TCIS MNCIS	BCA	CCH Databases
Sentencing Information	<del>Paper (Warrant of Commitment);</del> <del>copy of original complaint;</del> <del>copy of Offender Tracking Form</del> Electronic <u>PUSH via CriMNet</u>	Court	<del>Court Paper File</del> TCIS MNCIS	Detention Facility	<del>Detention Facility Paper File</del> ENFORS Jail Management System  CMIS
Pre-Sentence Investigation Information	<del>Paper</del> Electronic <u>PUSH via CJIN</u>	Community Corrections	<del>Community Corrections Paper File</del> CSTS, Electronic Document Repository	Court	<del>Court Paper File</del> TCIS MNCIS, Electronic Document Repository

## E. DISPOSITION

### Open Case (P 6.1)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/ Individual	Repository	Organization/ Individual	Repository
Initiating Case Information	<del>Paper</del> (Handwritten Court Order, Request for Bail Evaluation, Pre-Sentencing Evaluation, Clerk's Notice) <u>Electronic PUSH via CJIN</u>	Court	<del>Court Paper File</del> <u>TCIS MNCIS</u>	Community Corrections	<del>Community Corrections</del> <u>Paper File</u> CSTS
Intake Information	<del>Paper</del> <u>Electronic PUSH via CJIN</u>	Court	<del>Court Paper File</del> <u>MNCIS</u>	Community Corrections	<del>Community Corrections</del> <u>Paper File</u> CSTS

### Evaluate Bail Risk (P 6.2) and Conduct Pre-Plea and Pre-Sentence Investigations (P 6.3)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/ Individual	Repository	Organization/ Individual	Repository
Criminal Information (Other States)	Electronic <del>to Paper</del> <u>PULL via CriMNet</u>	NLETS	NLETS	Community Corrections	<del>Community Corrections</del> <u>Paper File</u> CSTS, <u>Electronic Document Repository</u>
Welfare Fraud Information	Electronic <del>to Paper</del>	Minnesota Department of Human Services	MAXIS	Community Corrections	<del>Community Corrections</del> <u>Paper File</u> CSTS, <u>Electronic Document Repository</u>
Past County Jail Incarceration Information	Electronic <del>to Paper</del> <u>PULL via CJIN</u>	Dakota County Jail	<del>Jail Paper File</del> <u>ENFORS Jail Management System</u>	Community Corrections	<del>Community Corrections</del> <u>Paper File</u> /CSTS

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Wanted Persons/Property Information	Electronic <del>to Paper</del> <u>PULL via CriMNet</u>	FBI	NCIC Hot Files	Community Corrections	<del>Community Corrections Paper File</del> CSTS
Impounded Vehicles/Wanted Persons	Electronic <u>PULL via CriMNet</u> <del>o Paper</del>	BCA	CJIS Hot Files	Community Corrections	<del>Community Corrections Paper File</del> CSTS
Driver's License/Registration Information	Electronic <u>PULL via CriMNet</u> <del>o Paper</del>	Department of Public Safety/DVS	DVS Database	Community Corrections	<del>Community Corrections Paper File</del> CSTS
Complaint Information	Electronic <del>to Paper</del> <u>PUSH via CJIN</u>	Court	Court Paper File/TCIS	Community Corrections	<del>Community Corrections Paper</del> File/CSTS
Bail Recommendation	<del>Paper</del> <u>Electronic PUSH via CJIN</u>	Community Corrections	<del>Community Corrections Paper File</del> CSTS	Court	<del>Court Paper File</del> <u>TCIS MNCIS</u>
Sentencing Guidelines	Electronic <del>to Paper</del>	State of Minnesota	Minnesota Sentencing Guidelines Database	Community Corrections	<del>Community Corrections Paper File</del> CSTS, <u>Electronic Document Repository</u>

### Supervise Sentenced Subject (P 6.4)

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Risk Level Information	<del>Paper</del> <u>Electronic PULL via CJIN</u> (LSI Assessment)	Subject Community Corrections	Interview N/A	Community Corrections	Community Corrections <del>Paper File</del> CSTS
Subject's Progress Information	<del>Paper</del> <u>Electronic PUSH via CJIN</u> (Annual Progress Reports)	Community Corrections	Community Corrections <del>Paper File</del> CSTS	Court (Judge)	<del>Court Paper File</del> <u>Electronic Document Repository</u>

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Sentencing Information	<del>Paper</del> <u>Electronic</u> <u>PUSH via</u> <u>CJIN</u> (Sentencing Order Form)	Court	<del>N/A</del> <u>MNCIS</u>	Community Corrections	<del>Community Corrections</del> <del>Paper File</del> CSTS

**Close Case (P 6.5)**

INFORMATION		FROM		TO	
Description	Mode (Form)	Organization/Individual	Repository	Organization/Individual	Repository
Close Notice	<del>Paper</del> <u>Electronic</u> <u>PUSH via</u> <u>CJIN</u>	Community Corrections	<del>Community Corrections</del> <del>Paper File</del> CSTS	Court	<del>Court Paper File</del> <del>TCIS</del> <u>MNCIS</u>

## **IV. THE DAKOTA COUNTY CJIN TECHNOLOGY VISION**

This section provides a high-level blueprint for creation of the Dakota County CJIN. The first subsection provides an overview of the proposed State Technology Model recently submitted to the State by the Hennepin County Criminal Justice Systems Information Integration Project (CJSIIP). It identifies the role of local integration projects like the CJIN in the larger State criminal justice network, CriMNet. Based on that State Technology Model, and on the integration principles and information needs identified elsewhere in the document, we identify a Proposed Architectural Concept for a CJIN Hub, a model for how Dakota County might integrate its diverse criminal justice information platforms.

### **A. THE PROPOSED STATE TECHNOLOGY MODEL**

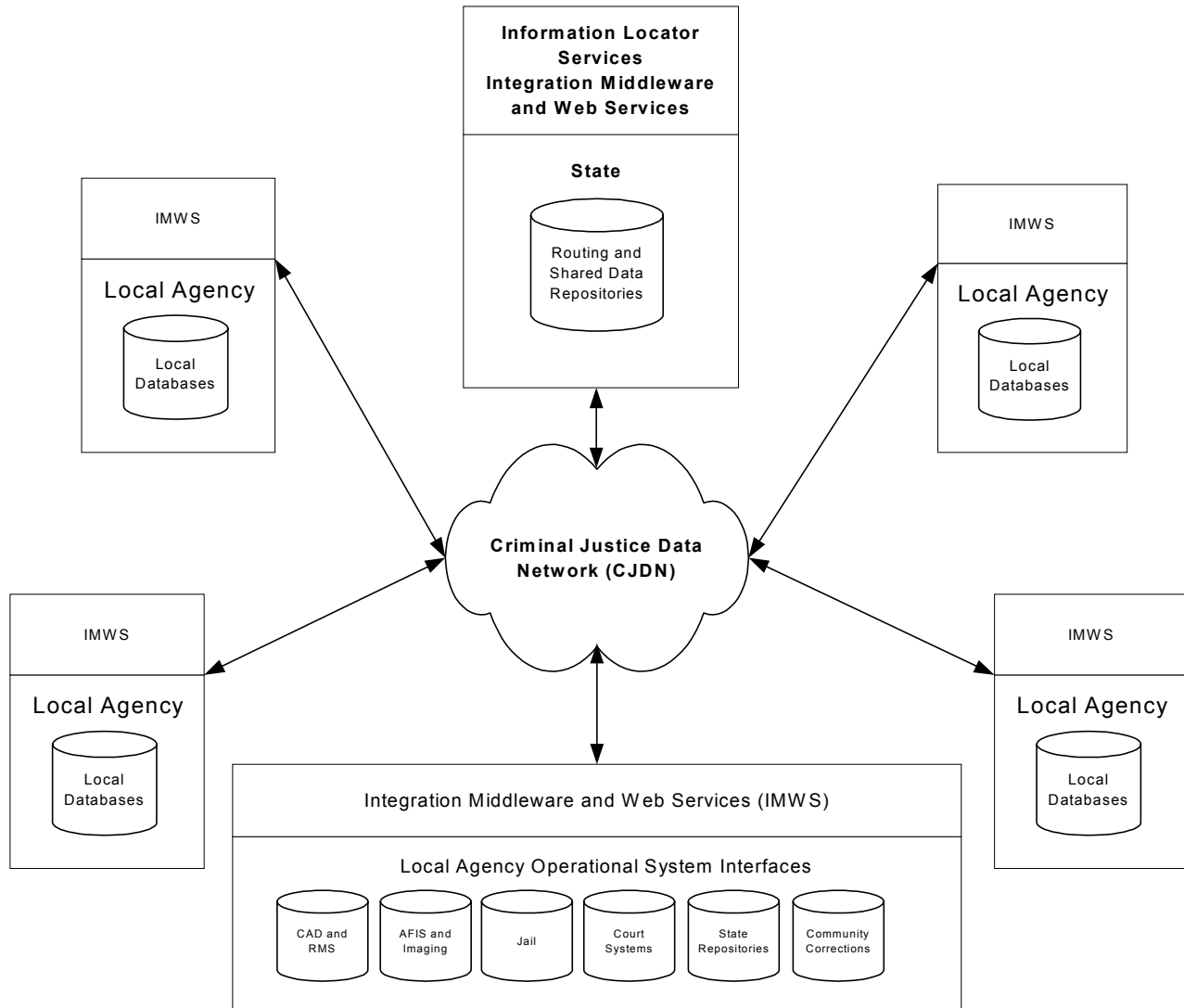
As currently envisioned, the State Technology Model consists of the following key components:

- Criminal Justice Data Network (CJDN)
- CriMNet Integration Backbone
- Local Agency Operational Interfaces

The relationship of these components is illustrated in Figure 1. Discussion of each component follows in the text.

Figure 1:

### CriMNet Technology Architecture Conceptual Network Model



Source: State of Minnesota CriMNet Project

### Criminal Justice Data Network (CJDN)

The *Criminal Justice Data Network* represents the communications “pipeline” through which CriMNet information exchange will be conducted. Built upon the existing state private leased-line network, MNet, it will replace the existing dial-up connections still used throughout much of the State criminal justice community. Communications standards will be modern, based on robust IP network protocols. Network bandwidth is

intended to be sufficient to support the transfer of the large amounts of data generated by an integrated criminal justice system.

This upgrade of the criminal justice network is driven in part by federal requirements that dictate transmission of digital images of fingerprints across routed networks. The State Technology Model also identifies the following benefits:

- Lays the foundation to move to a single criminal justice workstation from which data from many sources can be accessed
- Lays the foundation for interconnectivity to other agencies and their data
- Allows delivery of digitized fingerprint images from the field to the State and from the State to the field for improved individual identification
- Enables the use of digitized images e.g. DL photos, mug shots, scars, marks and tattoos, stolen vehicles, etc.
- Makes secure e-mail possible for criminal justice users statewide with the CJDN extranet and allows for secure electronic sharing of case files, crime scene photos, etc.
- Improves the speed of information flowing between agencies through the criminal justice network
- Allows network redundancy that will provide improved system stability

Within the CJIN, each of our participating jurisdictions - Burnsville, Eagan and Dakota County - are currently linked to the CJDN.

## **CriMNet Integration Backbone**

The *CriMNet Integration Backbone* is the State's central "hub" that will permit participating agencies to share and view each other's criminal justice data. The backbone will facilitate the "vertical" sharing of criminal justice information between the Dakota County CJIN and the State as well as other local integration projects. The Backbone will consist of a server(s) running software applications and databases that provide pointers to individual, incident and court case data located in the myriad of criminal justice information systems located throughout the State. These servers will also route and transform data among these participating systems, enabling them to "talk" to each other in a standard, statewide data "language," established in the State Data Model.

Currently, the State Integration Backbone does not exist. Planning efforts have begun at the Department of Administration's InterTechnologies Group. Substantial work, however, remains to move the Integration Backbone from a conceptual model to an operational one. The State needs to further define the type and nature of transactions that it will support, the data elements included in those transactions, and its interfaces with existing criminal justice information sources, state databases and repositories.

Two key functional components of the Integration Backbone will enable the sharing of information among CriMNet participants.

- Information Locator Services (ILS)
- Integration Middleware and Web Services

### Information Locator Services (ILS)

*Information Locator Services (ILS)* will consist of a database application containing subsets of data pertaining to:

- Individuals
- Incidents
- Court Cases

When a participating criminal justice agency creates a new individual, incident or court case record in their system, it will prompt the ILS to assign a unique state identification number to that record. That state identification number will reside in the ILS, along with a small subset of data pertaining to the record. Each of these records will be indexed to provide a pointer to the location of further information which will *remain within the information system of the originating criminal justice agency*. For example, an incident record in the ILS might only include an Incident ID, Data, Originating Agency and Statute. The ILS would, however, contain an indexed reference to the complete record in, for example, Burnsville Police Department's VISIONS record management system. Provided Burnsville grants them access, other CriMNet criminal justice agencies could view additional data on the incident located within the VISIONS system.

The ILS will provide the function of a search engine on the World-Wide Web. Just as web surfers query AltaVista or some other engine for references to, for example, mountain bikes, CriMNet participants could query each other's systems for references to Sandra Doe. The ILS has in fact been likened, colloquially, to a "Yahoo for scumbags".

### Integration Middleware and Web Services (IMWS)

The State Technology Model envisions the State Backbone providing Integration Middleware and Web Services (IMWS) to manage the actual transfer of data among participating criminal justice agencies. The IMWS functions would include:

- *Messaging* – the transfer of data between systems using a messaging format. Messages can be initiated by events in source or destination systems, can travel across routed networks, and can be queued for processing much like an e-mail message.
- *Transformation* – Because integration messages can originate from and be sent to a variety of different data sources and destinations, data must often be transformed to permit acceptance of the transaction, or to meet data standards such as those promulgated in the State Data Model.

The State Backbone will also likely include some type of web server working in conjunction with the ILS and Integration Middleware to permit query of criminal justice data across the entire CriMNet.

#### What is Middleware?

Today, a great deal of development activity centers on application integration and *middleware*—one of the fastest evolving areas driven by client/server computing, and by emerging Internet and Web-oriented development. Middleware—software that allows an application to interoperate with other software, while eliminating the need to understand and code the low-level operations of the various parts—is not new. Transaction processing middleware has been around for decades in the mainframe environment, and database access middleware -- software that facilitates data requests between applications and database management systems --has been around for at least a decade.

The growth of commercially available middleware gives the impression that the middleware market is chaotic or complicated. The impression of complexity can be overcome by first observing that there are different types of middleware to serve different purposes. An organization could use different kinds of middleware in the same system. For example, an application might include synchronous transaction processing middleware, object brokering middleware, and database access middleware. The State Technology Model includes a discussion of several types of middleware.

Message-Oriented Middleware (MOM) is an asynchronous technology in which applications send messages that are collected and stored in queues until they are acted upon. Meanwhile, the requesting application continues to go about its other business. Generally, MOM is used in extended processes, such as those found in a variety of workflow applications. The asynchronous approach is much in concert with the way the organizations in the CJIN conduct business—that is, by event-driven, directed workflow.

For example, once a field incident report is completed and “signed” by the initiating officer using a Field Incident Report Application, it could be **pushed** as a message to a Report Manager Application for continuity checking and approval. Once approved in a Report Manager Application, it could be **pushed** as a message to both the Document Management Application for publishing, and to the Records Management Application for storage in the Incident Data File.

## Local Agency Operational System Interfaces

The CriMNet Technology Model envisions that local integration projects like the Dakota County CJIN will interact with the CriMNet Integration Backbone through local integration “hubs”. These hubs would be composed of similar Integration Middleware and Web Services components used in the Backbone, and would:

- Manage the horizontal integration needs of criminal justice agencies participating in the local hub, and
- Serve as a node through which local systems would communicate vertically with the CriMNet Integration Backbone.

A local integration hub could provide additional flexibility to create data integration scenarios beyond those enabled by the State Integration Backbone.

The local integration hubs may or may not encompass all criminal justice agencies within a given political boundary, such as a county. Local integration hubs could be composed of multiple counties or like criminal justice agencies, such as local police departments.<sup>1</sup> Local integration projects designing an integration hub will need to consider the processing needs of their criminal justice environment, their desire for local control of the integration middleware components, their ability to support the maintenance demands of the local hub, and the willingness of participating criminal justice agencies to work together.

## **B. ARCHITECTURAL CONCEPT FOR THE DAKOTA COUNTY CJIN INTEGRATION HUB**

Based on the Integration Principles identified at the beginning of this document, the need for integrated criminal justice information identified in user interviews, the operational scenarios described above, and the functionality required by the State Architectural Models, we recommend that the CJIN pursue development of an *N-tier* technology architecture, centered around a Dakota County CJIN Integration Hub.

This concept description is not intended to provide a complete architecture for the CJIN. Additional work during subsequent phases of this project will address additional architectural components, such as security, system management, system migration and event-driven transaction processing. The following description merely provides a high-level proposal for purposes of envisioning, discussion and further examination.

### **The *N*-Tier Architecture**

*N*-tier technology architectures, where *N* is any number greater than 2, refer to component-based information systems where the client, application and database components all reside in separate, severable components. Generally speaking, *N*-tier architecture is designed to offer considerable advantages in:

- Processing power – separate components can be tuned to perform their unique duties quickly
- Scalability – separate components can be “swapped out” in response to increases in user load
- Flexibility – separate components allow systems to exist on multiple platforms, operating systems and databases
- Multiple User Interfaces – Users can access systems using a variety of end-user interfaces: web browsers, “dumb” terminals, mobile computing devices, phones, pagers, etc.
- Reusability of components – System components can be used for multiple applications

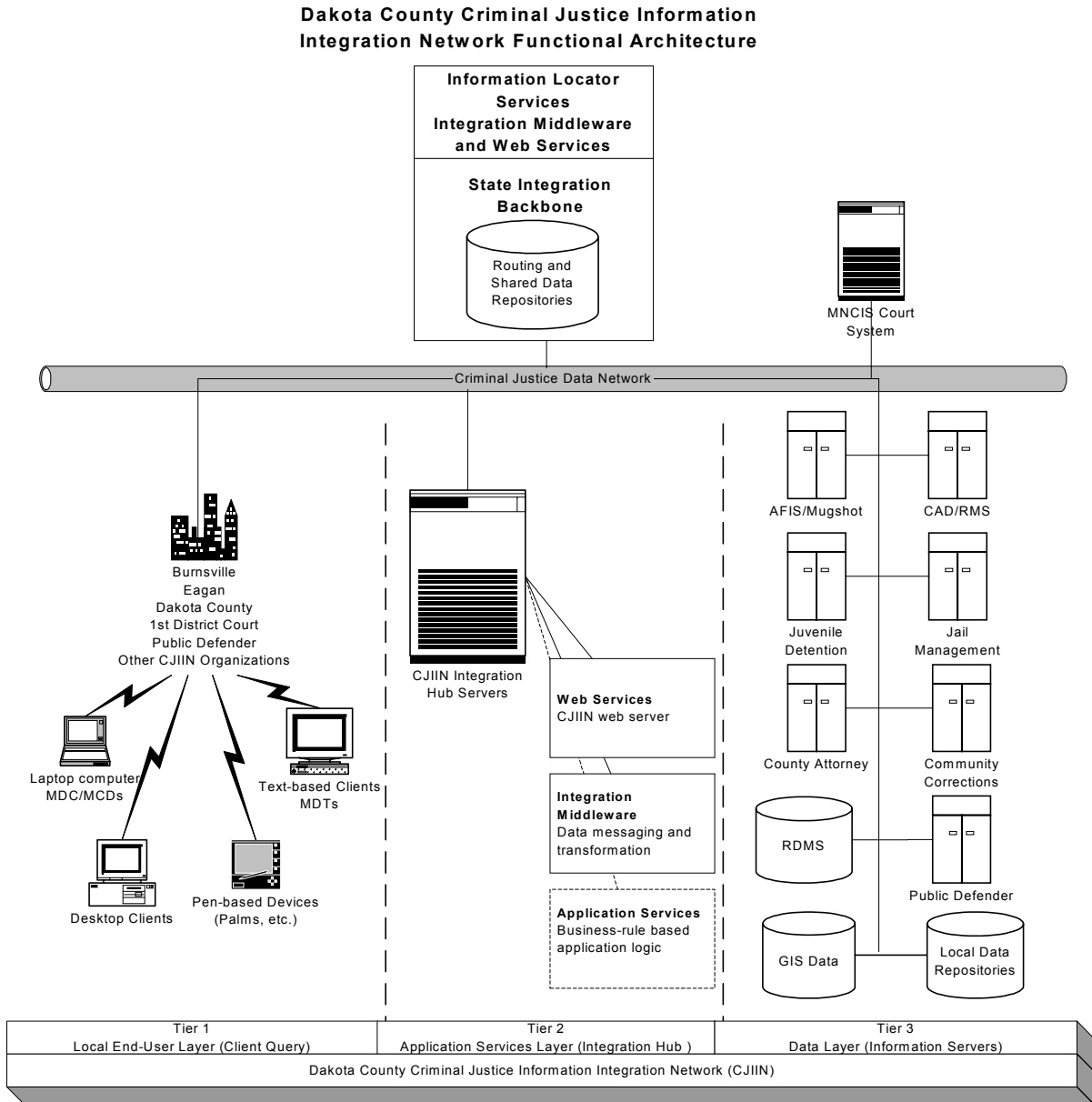
---

<sup>1</sup> Hennepin County’s tentative implementation plan envisions an integration hub centered around local police departments’ record management systems.

As envisioned here, the N-tier architecture also accommodates evolution. As members of the CJIN Steering Committee have discussed, initial pilot projects that seek merely to open legacy systems to web inquiry could comprise the first building block of an N-tier CJIN Hub. As integration demands grow, sophisticated middleware can be added to handle data flow among existing systems. Finally, the N-tier approach offers a modern architecture for development entirely new criminal justice applications.

A proposal for an N-tier CJIN Hub is illustrated in Figure 2..

Figure 2:



## Local End-User Layer

In an *N*-tier architecture, *clients* are those technology components that provide the interface to users. Clients can be web browsers, text-based “dumb” terminals, handheld, pen-based devices, or telephony devices. Clients generally do little processing, serving largely to pass data to the *application* layer.

One of the most popular clients today is the *internet browser*. It is widely deployed, platform independent, and offers a rich GUI environment. As Dakota County law enforcement upgrades squad cars to MDC units, the browser offers an attractive user interface option. Other clients can also be used, however, because processing of business logic is done at the application layer. Potential clients include legacy “dumb” terminals such as MDTs, handheld pen-based computing devices, and telephony devices such as pagers and cellular phones.

## Application Services Layer

*Application*-layer components process the data according to business rules – what happens to data in response to key business events. Applications are frequently referred to as *application services* because they are available to multiple clients and can be used to process data residing in multiple databases. Modern application services components frequently define business rules in an easily configurable table format.

In more traditional 2-tier architecture, applications are tightly coupled with data. Business logic is often hard-coded, making modifications in response to law and policy changes difficult. This tight coupling also makes it difficult to switch hardware platforms, operating systems or databases. By uncoupling this application layer, information systems are made more flexible and scalable, or capable of responding to growing demand for system resources.

Application services can also include middleware.

## Data Layer

Data Layer components are the multiple data sources which must be integrated in the CJIN. Components include existing systems in local police departments and the Sheriff’s office, the Jail and Juvenile Detention Center, the County Attorney, Public Defender’s office, Community Corrections and the 1<sup>st</sup> District Court. Tier 2, the application services layer, would manage data transfer among these systems while permitting continued autonomy.

Other data sources include County GIS data, data repositories and warehouses, and new Relation Database Management Systems (RDMS) that might be created to take advantage of the Application Services Tier.