

There is growing attention on integration as a critical strategy for increasing the effectiveness of multi-jurisdictional, multi-governmental enterprises such as the justice enterprise. As a result, the integration of information across traditional boundaries is growing in importance to the agendas of local, state, and Federal agencies. The emergence of enterprise architecture at the Federal and more and more at the state level is an example of the investments being made in infrastructures to support cross- boundary information sharing.

The justice community in particular is investing in the development of standards, as a form of infrastructure, to support data sharing. For example, an XML Technology Working Group, as part of the Justice Integration Information Technology Initiative of the US Department of Justice, Office of Justice Programs, is currently working to coordinate the efforts of federal and state agencies in the design of interoperable standards for criminal history and public safety records.

Selected examples of integrated justice are described in detail below. These examples build understanding of integration efforts by presenting the problems experienced, successful strategies employed, and the benefits obtained. This section describes three county-level and three state-level examples. The case presentations are organized by the following five elements:

1. Goals of the project
2. Brief description
3. Key players
4. Critical success factors (CSFs)
5. Challenges and future plans

Information integration at the county level

This section presents three cases of information integration at the County level. These cases provide exemplary strategies for achieving successful information integration in the criminal justice enterprise at the county level.

Harris County, Texas

Goals of the Project: The primary goal for establishing the Justice Information Management System (JIMS) was to establish a permanent operation with ongoing support, growth, and development. JIMS was not designed to be a single project with a limited development period, but instead was designed with future needs in mind.

Brief Description: Overall, JIMS is a large operation. It began in 1977 and currently has a staff of 43 and an annual budget of over \$3 million of County funds. The system contains over 180 million criminal justice records and over 85 million civil justice records. The user community consists of over 18,000 individuals from 144 county agencies, 111 other local agencies and governments, 11 state agencies, 15 Federal agencies, and over 800 subscribers. The system has grown to include civil justice information in addition to criminal justice information. JIMS includes jury management and payroll processing as well as an extensive civil justice component. JIMS also includes a GIS system adaptable to various agency needs.

Key Players: The Harris County Commissioner's Court and the District Clerks' Office were key champions to the establishment of JIMS.

CSFs and Results: Several factors converged to provide an opportunity for the creation of JIMS. A class action suit on jail overcrowding revealed a weakness in the county's information systems. The County had three information systems that were unable to interact with each other. Political and organizational factors opened the window of opportunity the County needed in order to act. The County's courts and law enforcement agencies, along with the data processing operations organization, completed an exhaustive analysis of information used by the criminal justice enterprise. It then produced recommendations for a data processing center that would replace the three disparate systems. The County ultimately chose to take an incremental approach to solving its information integration issues by developing components in smaller steps. The development decisions were based upon an understanding of information flows, business rules, and user needs.

Challenges and Future Plans: JIMS has been in place for over twenty years. Given its length of existence, the system faced problems of obsolescence. Harris County decided to stay with its grand-design architecture by migrating its legacy database to a more current technology. There are plans to enhance the system to include open warrants, address records, pawnshop data, gang information, and vehicle registration.

Hennepin County, Minnesota

Goals of the Project: The goal of the Criminal Justice System Information Integration Project (CJIISP) is to create an information network that allows agencies real time access to the information of other criminal justice agencies. The scope of this integration effort encompasses all law enforcement agencies within Hennepin County, city and county prosecutors, the courts, probation and parole, the local jail, and the local post-sentence incarceration facility. Similar integration efforts using the compatible integration middleware are being pursued in other counties within Minnesota. A statewide office called CriMNet is responsible for orchestrating these county-level efforts and for providing integration services to allow access to information between counties and from counties to state criminal justice agencies.

Brief Description: Hennepin's County Criminal Justice Coordinating Committee (CJCC) oversees the county's integration effort. CJCC was formally established in 1998, but had been in place informally for twelve years prior. CJIISP was a natural fit for this multi-agency committee. Currently CJCC is working under a memorandum of understanding. CJIISP began in 1999.

Key Players: Each of the local criminal justice agencies cited above are represented on the CJCC and provide high-level guidance for this information integration effort. In addition, representatives from Hennepin County serve in an advisory capacity on various state-level boards created to guide the CriMNet initiative. Funding for these integration initiatives comes from the U.S. Department of Justice, and the Minnesota State Legislature. Private industry in Minnesota has also played a major role in the initial success of the endeavor.

CSFs and Results: CJIISP was initially a county effort, but eventually grew into a statewide project. The executive director of Minnesota Business Partnership was able to explain to the State Legislature the complex process of integrating information systems and how applying corporate "best practices" could help the state to integrate its criminal justice information. The State Legislature was very supportive of the idea of establishing a statewide criminal justice information system. Within Hennepin County, real-time data exchanges have been implemented between arrest events (law enforcement) and pre-sentence detention (the Sheriff and pretrial evaluations performed by Community Corrections) and prosecution (County Attorney). Real-time data exchanges between prosecution and the courts have also been implemented.

Challenges: With a population of over 1.1 million, Hennepin County is the largest county in Minnesota. It is the most complex county in the State. At one time the system was too slow to keep up with the demands placed upon it. The CJIISP also lacked standard purchase order numbers across the systems.

Future Plans: CJIISP plans to conduct an analysis of city prosecution business functions to streamline their activities by leveraging information already captured by law enforcement. There are also plans to develop event-driven application adapters for the systems of records used by Adult and Juvenile Probation. CJIISP is also working on integration analysis and development for the introduction of a new statewide court system.

Marin County, California

Goals of the Project: The current goal of the Criminal Justice Information System (CJIS) is to incorporate new technology and new features into the system.

Brief Description: CJIS began in 1984 and was built over a seven-year period. Over time it grew into a five county effort. The consortium began when key justice officials from Kern, Marin, and San Joaquin counties pooled financial resources to develop a new information system. This cooperative approach has worked very well for the counties involved. Each member of the consortium was responsible for developing and working on the components that were most important to it. As a group, the counties agreed upon which standards to use. A contractor was then hired to develop the initial code. The District Attorney Case Management (DARWIN) phase 1 has been implemented and is considered successful. The system interfaces with the CJIS database and provides technology enhancements including MS Office, imaging, and Web interface.

Key Players: The Marin County Information Systems and Technology (IST) Department played a major role in the development of the Criminal Justice Information System.

CSFs and Results: CJIS has become a national model for cooperation in criminal justice information integration. It is an example of interorganizational cooperation and resource sharing.

Challenges: The Marin County justice community is being served by an increasing number of discrete systems. The system currently only provides access to adult criminal, civil, and juvenile justice information. Probation case management was added to the system in 2002.

Future Plans: Marin County and the other members of the consortium are in the process of developing a new integrated justice system – E-JUS. E-JUS will provide greater connectivity and enhance the ability to share and view data amongst the systems. The consortium has plans to add a system in 2003 – Law Enforcement Information (ALEIS). There are plans to add a new Statewide Information System for the Courts in 2004.

Table 4. County Overview

County	Integration Approach	Start Date	Levels of Government	Governance Structure	Funding
Harris County, Texas	Incremental / Systemic Capacity	1977	County	Yes	Funded by Harris County
Hennepin County, Minnesota	Comprehensive / Systemic Capacity	1999	Grew into Statewide Project	Yes	Funded through the State Legislature
Marin County, California	Incremental / Systemic Capacity	1984	Multi-County	Yes	Funded through resources provided by member counties

Information integration at the State Level

In this section, three state level information integration initiatives are presented. The three cases are exemplary examples of integration in the criminal justice enterprise at the state level. This section briefly describes each of these three initiatives.

Colorado

Goals of the Program: The Colorado Integrated Criminal Justice Information System (CICJIS) is a program that helps criminal justice agencies share information. The goal of criminal justice information sharing in Colorado is getting the right information to the right people at the right time and place. To that end, CICJIS has at least four related sub- goals: to improve public safety by making more timely, accurate, and complete information available statewide to all criminal justice decision makers; to improve productivity of staff (reducing redundant data entry, collection, and storage efforts, as well as related paper processing); to enhance access to and quality of information; and to provide statistically reliable information.

Brief Description: CICJIS is a seamless criminal justice information sharing program that incorporates several agencies as primary participants and federal and local government through the primary participants. CICJIS maximizes standardization of data and communications technology among law enforcement agencies, district attorneys, the courts, and state-funded corrections for adult and youth offenders. The initial program scope included all felony and juvenile cases, as well as all case types for warrants and restraining orders. The information integration initiative valued the existing autonomy and platforms of involved agencies; therefore each participant maintained its own legacy system and ownership of its information. CICJIS facilitates information sharing by electronically moving data from one agency to the next and by providing query access on other systems. The annual CICJIS budget line is approximately \$1 million and another \$200-400,000 comes from grants.

Key Players: A Statutory Commission of the Legislature appears to be the most important player in the initial successful development of CICJIS. Before expiring in 1994, the commission arranged for all agencies involved to testify before the legislature as to why integration still did not exist. This was the catalyst to start this comprehensive integration initiative. There were three additional relevant players involved in the initial development of CICJIS: the Information Management Committee, the Executive Policy Board, and the CICJIS Task Force. Now that the program has been in production for five years and is a success, expansion opportunities

are being considered. New key players are the Program Director/CIO, Task Force, Executive Policy Board, and the Business and Technical Teams.

CSFs and Results: CICJIS was developed in less than four years (from 1995 to 1998). Several performance measures were established by the Legislature. One of the initial success factors for Colorado was the state legislature's support and oversight. The primary success factor continues to be the State's disposition match rate that started at a mere 8-12% but is now 89% statewide. Ongoing success requires maintenance and support of the system and projects to further enhance information sharing opportunities. The initial CICJIS design was comprehensive but may no longer meet the scalability and reliability requirements of the program. While maintaining the business rules and standards, CICJIS is converting its solution to a Web services environment utilizing Justice XML.

Challenges and Future Plans: Future plans include enhancing existing queries, value add to query results, registering sex offenders earlier in the criminal justice process (at conviction), and expansion opportunities both inside and outside of the criminal justice enterprise. The CICJIS program is developing enhancement requirements to meet homeland security information sharing needs, while integrating additional agencies for both criminal justice and homeland security goals. The State is looking at using the CICJIS program information-sharing model as a statewide standard. Challenges include lack of funding and current system solution scalability and relative high maintenance costs. Previous data integrity challenges have been significantly reduced with a database design change and a complete rewrite of the data and referential integrity rules.

Delaware

Goals of the Project: The main goal of the Delaware Justice Information System (DELJIS) is to create an integrated information environment that will expand services to agencies and individual criminal justice professionals and workers by providing accurate and timely information that can be shared across participants.

Brief Description: In 1984, the Information Systems Plan of the Criminal Justice System of the State of Delaware was released for dissemination. The formal launching of DELJIS was dated in 1990, when the courts' Disposition Reporting System merged with the Computerized Criminal History. Currently, users are able to instantly determine the status of a case, thus enhancing the ability to process criminal cases in a more efficient way. Through the system, users can share criminal history, warrant, and case information. The system also considers extensive use of videophones for many purposes, and as a result users have gained some organizational efficiencies. DELJIS has had financial support from federal and state agencies. Creating and improving the system cost approximately \$10 million since 1982. Currently, the Delaware Criminal Justice Information System contains comprehensive information from law enforcement to courts and corrections.

Key Players: The State Legislature was the most important player in the development of DELJIS, the agency that oversees the criminal justice information system. In addition, the board of managers of DELJIS continues to offer suggestions for improvement and next steps for the system.

CSFs and Results: DELJIS can be described as using a well-planned incremental approach. One of the most important factors that helped Delaware to be successful in information integration was user involvement. Identification of users' needs was a difficult and time-consuming task for the DELJIS staff, but the results were very good. User involvement in the design phase of the system, followed by adequate user training seemed to be a successful strategy in this case. In addition, the relatively small geographic size and limited number of local agencies were also organizational characteristics that facilitated the integration effort. Another factor to take into consideration was the partnership with Troop Two of the Delaware State Police. Their support was essential in getting other law enforcement agencies to accept the Automated Warrant System. Currently, the board of managers conducts annual evaluations of the plan. Its initial firmly outlined scope and strategic vision helped to achieve results and continue selling the integration idea to more and more agencies.

Challenges: There are several challenges that the system has to overcome. Information quality is still a problem for DELJIS. Second, probably as a result of their incremental approach, not all important agencies are participating in the system. As a consequence, important information is not shared among the justice community. The composition of the board of managers is not homogeneous. Some of the members are technical staff that cannot fully represent the strategic view of their respective agencies. In addition, it is still necessary to create common standards and to enhance searching capabilities.

Future Plans: Delaware is converting several mainframe applications into client/server applications. They are also investing in applications to support credit card payments through the Internet (ticket fines). They are working with the Delaware State Police to electronically record accident reports, and to merge data from that report

directly into an electronic ticket which will be uploaded from the police vehicle to the appropriate court.

Pennsylvania

Goals of the Project: The Commonwealth of Pennsylvania Justice Network (JNET) has the goal of enhancing public safety by providing a common on-line environment whereby authorized state, county, and local officials can access offender records and other criminal justice information from participating agencies. A related objective is to increase staff productivity by promoting cost-effectiveness, and to reduce redundancy and errors.

Brief Description: In 1995, the Pennsylvania Improved Management Performance and Cost Control Task Force reported over 400 different ways to reduce costs, increase accountability, and improve service. One year later the IT Strategic Planning Initiative was announced. JNET started as a collective project between several state agencies, but it has since added counties, municipalities and local police departments. Currently, JNET is a statewide effort in which about 32 commonwealth agencies, 36 counties, and 250 municipal police departments are participating. In addition, 9 Federal agencies are also accessing Pennsylvania justice information. The JNET system uses a Web-browser interface that allows agencies to share different types of information. In using the system each agency has control of its own data, and it can decide its level of information sharing. JNET has received funding from sources such as the Governor's Administration Office and the U.S. Department of Justice. The estimated total budget for 2002 was \$12.5 million.

Key Players: The Governor's Office and each contributing agency have played a significant role in the development and improvements of the system. The JNET Executive Council is also an important player. It has members from each of the governing agencies and can be considered the governance structure of the state's information integration initiative.

CSFs and Results: In 2002, JNET won a national award from the Federation of Government Information Processing Councils. Ensuring agency independence was a key factor in enhancing cooperation among involved organizations. Another important factor was the use of private sector technical knowledge in the development of the integration initiative. Outsourcing technological support to companies such as BearingPoint (formerly KPMG Consulting) and Diverse Technologies Corporation helped avoid some technology-related problems. In addition, the JNET governance structure includes people from several agencies. The IT Strategic Planning Initiative was also a factor in the successful development of the endeavor.

Challenges: The main challenge to JNET's efforts is budget constraints. In addition, the JNET Executive Council has not finalized a structure for the necessary decision-making processes.

Future Plans: JNET is planned to be deployed statewide by 2004.

Table 4. State Overview

State	Integration Approach	Start Date	Levels of Government	Governance Structure	Funding
Colorado	Comprehensive / Systemic Capacity	1995	Statewide	Yes	Funded by State Legislature
Delaware	Incremental / Systemic Capacity	1990	Statewide	Yes	Received funding from federal and state agencies
Pennsylvania	Comprehensive / Systemic Capacity	1996	Not yet statewide, Counties, municipalities, and Federal agencies are participating	Yes	Received funding from the Governor's Office and the U.S. Department of Justice