Integrated Justice Information Systems Planning and Implementation: Organizing for Change

By David J. Roberts
Deputy Executive Director
SEARCH, The National Consortium for Justice Information and Statistics

Introduction

Justice agencies throughout the nation increasingly recognize the importance of integrating their information systems in order to share critical data, documents, images and key transactions. The need to electronically share accurate and complete information in a timely, secure and efficient manner is driven by the operational requirements of agencies at the local, state and federal levels, as well as a host of state and federal legislative mandates that have been enacted in recent years. In recognition of this need to share critical data, state and local jurisdictions are actively developing plans and programs for comprehensive integrated justice information systems.

Integrated systems improve the quality of information, and thereby the quality of decisions, by eliminating error-prone redundant data entry. In addition, by sharing data between systems, integration typically improves the timely access to information — a critical factor at many criminal justice decision points (for example, setting bail). Moreover, integration enables the sharing of crucial information without regard to time or space; multiple users can access the same record simultaneously from remote locations around the clock.

Successful integration of information systems requires careful planning and effective organization. Jurisdictions must articulate a vision, define the scope and objectives of their project, establish an effective organizational structure, recruit initiative sponsors, secure funding, develop comprehensive and detailed strategic plans, and address a host of technical and policy issues to enable the sharing of information within and between agencies. This paper will address fundamental issues associated with integrated systems planning and implementation at the local, regional and state levels.

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Defining Integration

It should be acknowledged that “integrated justice information systems” means different things to different people in different contexts. Law enforcement agencies need to share information between divisions within their own department (for example, patrol, crime analysis, detectives, etc.), as well as with other law enforcement agencies in the region, state and nation. Prosecuting attorneys need much of the same information already captured by the police in order to make informed charging decisions. In turn, this same information is needed by the local court, jail, public defender and pretrial services office. Additionally, each of these agencies makes decisions regarding the persons/cases involved, the consequences of which should be shared with others. In fact, these decisions may trigger actions by other agencies and/or jurisdictions (for example, scheduling an appearance in court, filing a motion, initiating a pre-sentence investigation, etc.) which, in turn, are recorded in individually identifiable longitudinal files known as criminal history records.

Integration encompasses a variety of functions designed to enable the timely and efficient sharing of information within and between agencies. Within agencies, the primary objective of integration is to eliminate duplicate data entry, enable access to information that is not otherwise available, and ensure the timely sharing of critical data. Often, systems have been developed in isolation of one another or on incompatible technologies, resulting in independent systems that may share many common data concepts, but that cannot communicate. Duplicate data entry hinders agency operations, consumes precious resources, retards timely access and undermines data quality. Additionally, however, agencies seek to achieve new synergies by integrating, collating and combining information in new and innovative ways. Police departments, for example, are better able to target crime and intervene proactively when their dispatch, records management, detective case management and crime analysis systems share online information that is immediately and broadly accessible.

Beyond improving the internal operations of justice agencies, integration is more expansively viewed as enabling the sharing of critical information between agencies. Integration efforts are often referred to as horizontal (for example, among different divisions of the same court system, or between the local police department, prosecutor and court) or vertical (for example, from limited to general jurisdiction courts, from trial to appellate and state supreme courts, and from local agencies to state and national/federal systems).3

2 The term “information” is used here in its broadest sense to incorporate data, images (photograph, document and fingerprint), case records, calendar events and electronic messages.


Functional Components of Integration

Interagency integration, whether horizontal or vertical, generally refers to the ability to access and share critical information at key decision points throughout the justice process. The functions we normally consider in integration efforts between agencies include the ability to:

1. Automatically query local, regional, statewide and national databases to assess the criminal justice status of a person (for example, determining whether a person is currently wanted by another jurisdiction, has charges pending in another jurisdiction, is currently under some form of correctional supervision, or has a criminal history at the state or national level);

2. Automatically push information to another agency, based on actions taken within the originating agency (for example, reporting of arrest information, together with supporting fingerprints and mugshot, to the state and national criminal history repositories based on new information in the local database; when a law enforcement agency makes an arrest and enters this information in its records management system, it should “push” information to the prosecuting attorney’s office for use in the prosecutor case intake process);
3. Automatically pull information from other systems for incorporation into the recipient agency system (for example, populating a correctional information system with offender information captured in the pre-sentence investigation, together with court sentencing information);

4. Publish information regarding people, cases, events and agency actions (for example, both electronic and paper publishing of information regarding scheduled court events, crime mapping, availability of community resources, criminal history records, sex offender registries, etc.); and

5. Subscribe to a notification service (for example, probation agencies and perhaps individual probation officers should be able to formally subscribe to a notification service that will enable them to be automatically notified whenever one of their clients is arrested or otherwise involved in the justice system, as should prosecutors with cases pending against a defendant, judges who have suspended sentencing or otherwise suspended proceedings regarding a defendant, and other actors in the justice process).

Justice agencies throughout the nation already share considerable information. It is important to recognize that regional, statewide and national systems currently exist to facilitate access to and sharing of key information among many of the actors in the justice enterprise. In addition, some of the information exchange contemplated in these five basic functions is currently accomplished with existing technology or is being developed in new systems, but much is also still done by hand through the ceaseless efforts of dedicated local practitioners. Integration efforts are designed to automate many of these operations, reengineer systems and processes, and achieve new capabilities with greater efficiency and effectiveness.

Foundation Principles of Integration

There are several principles that should be incorporated into the overall integration effort:

1. Data should be captured at the originating point, rather than trying to reconstruct it down line or have others capture it;

2. Data should be captured once and used many times, leveraging existing resources and improving data quality;

3. The integrated system should be driven by the operational systems of participating agencies, not separate from the systems supporting the agencies; and

4. The capabilities for generalized automatic query, push, pull, publish and subscription should be constructed as general capabilities of the system, so that, for example, additional automatic reporting can easily be implemented as additional requirements are identified.

Interagency Information Exchange

It is important to recognize that building integrated justice information systems does not mean that all information between agencies is shared, without regard to the event, the agencies involved or the sensitivity of the information available. Agencies need to share key information at critical decision points throughout the justice process.

At arrest, for example, the arresting agency typically transmits certain information regarding the arrestee to the state criminal history records repository (for example, name, age, sex, race, driver’s license number, electronic image of the arrestee’s fingerprints, etc.) to record the arrest transaction in the instant case, but also to verify the arrested person’s identity and determine whether the arrestee has a criminal history record in the resident state, or in other jurisdictions around the nation. In addition, the local agency will also query other state and national systems to determine whether there are any outstanding warrants, detainers, or other holds on the arrestee. For these transactions, the local arresting agency does not need to share all information regarding the arrestee or the event which led to the arrest, but only that information necessary for the discrete transaction check for “outstanding warrants” or “verify identity and report arrest transaction to the criminal history repository.” These same transactions are completed by law
enforcement agencies throughout the nation whenever they secure an arrest.

These transactions, and many other routine information exchanges and queries, might be characterized as conversations, that is, discrete exchanges of information between two or more agencies (or units within a single agency). These conversations occur at regular events (for example, at arrest, charging, initial appearance, trial, adjudication, disposition, etc.) and the transactions are remarkably consistent in justice agencies throughout the nation.

Some of the conversations are very terse: “Here is information you need,” followed by “Thank you, I have successfully received your information.” Other conversations affect the receiver system more directly: “Here is a question I want to ask you,” followed by “Here is the answer you requested.” Some conversations affect the recipient’s database: “Here is a disposition report to append to your history record,” followed by “Thank you, I have done so.” Some conversations can be complex: “Based on the enclosed identification data, search your master index and if you find a match, tell the other systems holding data on this person to send it to me,” followed by “I have carried out your request and you can expect data from the systems named here.”

Many of the primary events that trigger conversations between agencies in the criminal justice process were generally identified in the excellent schematic of the criminal justice process created in 1967 for the President’s Commission on Law Enforcement and Administration of Justice,4 recently updated by the Bureau of Justice Statistics.5 From this historical research, and from the ongoing work of several jurisdictions in integrated systems implementation, we know many of the key events that trigger the conversations, the agencies involved, and the general nature and content of information exchanged in the conversations. It is important to note, however, that this schematic represents the general life cycle of criminal justice case processing, not the systematic processing of information throughout the entirety of the justice enterprise.

Documenting the key information transaction points and the conversations that occur at each of these events (that is, creating an accurate model of the justice information system processing, which includes identifying common events that trigger conversations, the agencies involved, and the nature and content of these conversations) will greatly facilitate integrated systems planning and design. SEARCH is working closely with the Bureau of Justice Assistance and the Office of Justice Programs in undertaking a project to complete this important research and, in doing so, to lay the foundation for integrated systems planning and implementation at the local, regional, state and federal levels.

Understanding Local, State and Federal Responsibilities

It is important to differentiate responsibilities at the local, state and federal levels regarding integrated systems planning, implementation and support. Local justice agencies are responsible for acquiring, creating and maintaining information systems that meet their internal operational needs. In addition, they have an interest and responsibility to share information with other agencies within and outside their immediate jurisdiction, and a continuing need to access and report information to regional, statewide and national systems.

The state has responsibility for creating a statewide infrastructure that will enable agencies to share information with other local jurisdictions throughout the state in a common format, and to share information with statewide systems. In this way, local agencies will have access to statewide systems, and the ability to share information with other states and localities. The state, therefore, is largely responsible for building the infrastructure necessary to support horizontal integration initiatives, and has primary responsibility for creating, adopting and maintaining state information systems and serving as the gateway to national and federal systems.6 It should not be the state’s responsibility to ensure that local justice agencies

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5 See revised schematic at http://www.ojp.usdoj.gov/bjs/flowchart.htm

6 It should be noted, however, that in some jurisdictions, the state has opted to create and maintain information systems that meet the operational needs of local users as a method of enabling integration. This distributed approach means that the state has assumed a significant data processing support strategy.
electronically share person, event, case or process data within the local unit of government.

In a similar vein, the federal responsibility is primarily for building and maintaining the national information infrastructure necessary to enable sharing of key information between states, to serve as a gateway for state and local agencies to various national and federal information systems, and to work with state and local jurisdictions to create, support and maintain new and emerging systems with national/interstate jurisdiction, such as the Integrated Automated Fingerprint Identification System (IAFIS), the Combined DNA Index System (CODIS) and the National Crime Information Center (NCIC) programs. Additionally, it is a legitimate federal responsibility to ensure that national and federal systems are integrated, non-redundant and responsive to the needs of state and local users.

The federal government also has responsibility to serve as a gateway to selected international systems. These objectives are accomplished through collaborative work with state and local agencies in the development and adoption of standards, the building of national and federal systems, and support in assisting local agencies in upgrading their general information technology capabilities.

**Establishing the Scope and Defining the Vision of the Integrated System**

In the early stages of integrated systems planning, whether at the local, state or federal levels, fundamental decisions need to be made regarding the nature, scope and objectives of the initiative. Although it is often common perception among decisionmakers that what is needed is an integrated criminal justice system, these boundaries are artificially narrow if the expectation is that it incorporates only law enforcement, prosecution, courts and corrections. Indeed, each of these constituent agencies has myriad other responsibilities, and their inter-relationships and need to exchange information with others represents the protean structure of the justice information enterprise.

In the earliest stages of integrated systems planning and implementation, it is crucial that a jurisdiction define a vision for the integrated system. That vision may be fairly broad in initial construction, provided it is translated into specific objectives that are attainable in the foreseeable future. The objectives will define what agencies and processes are to be included within the integration initiative, and they can be sufficiently narrow from a practical standpoint to enable successful completion and demonstrative benefits.

For example, the mission of the Pennsylvania Justice Network (JNET) is defined as:

To enhance public safety through the integration of criminal justice information throughout the Commonwealth of Pennsylvania by adopting business practices which promote cost effectiveness, information sharing and timely and appropriate access to information while recognizing the independence of each agency.  

In Colorado, the mission of the integrated systems planning effort was stated as follows:

Colorado Integrated Criminal Justice Information System (CICJIS) will establish an integrated computer information system which standardizes data and communications technology throughout the primary criminal justice community of interest: law enforcement, district attorneys, state funded courts, and state funded adult and youth corrections. It will facilitate tracking the complete life cycle of a criminal case through its various stages involving all criminal justice agencies. The case tracking will be accomplished without unnecessary duplication of data entry and data storage.

Certainly, building the capacity to share information in an automated manner between the local police and/or sheriff’s department, prosecutor, court, correctional institution and probation agency is an important accomplishment. Nevertheless, it must ultimately extend beyond these institutions to such agencies as public defense, pretrial services, substance abuse treatment brokers, and potentially to city/county social services, education and other service providers.

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7 See [http://www.state.pa.us/Technology_Initiatives/jnet.home.htm](http://www.state.pa.us/Technology_Initiatives/jnet.home.htm)

8 See [http://www.state.co.us/gov_dir/cicjis](http://www.state.co.us/gov_dir/cicjis)
agencies, if we are actually to realize the benefits of integrated information systems.

The mission defined for the Kansas Criminal Justice Information System Project is arguably broader:

To create and maintain an accessible, and appropriately secured, criminal justice information repository with accurate, complete, and timely data on individuals and events for criminal justice and noncriminal justice users that supports effective administration of the criminal justice system, public and officer safety, and public policy management in a cost-effective manner within the state of Kansas.9

Although these mission statements are fairly broad, the objectives articulated by the jurisdictions are more narrowly focused.

In Colorado, for example, “CICJIS, once implemented, will improve:

- Public safety by making more timely, accurate, and complete information concerning offenders available statewide to all criminal justice agencies and to individual decisionmakers in the system, including police officers, judges, and corrections officers;
- Decisionmaking by increasing the availability of statistical measures for evaluating public policy;
- Productivity of existing staff by reducing redundant data collection and input efforts among the agencies and by reducing or eliminating paper-based processing; and,
- Access to timely, accurate, and complete information by both criminal justice agency staff and the public.”10

In Kansas, the objectives are defined as:

1. Develop and maintain the systems necessary to ensure an accurate, timely and comprehensive collection of criminal history information that meets local, state and federal standards for data quality and timeliness;
2. Develop and maintain the system in such a way to ensure that it is compatible with the emerging national criminal justice information environment;
3. Increase utilization of the system by providing on-line access to the appropriate information for the system’s primary and secondary customers;
4. Ensure the system’s ability to migrate over time with technology advancements;
5. Increase cost effectiveness of the system by reducing the manpower associated with the inputs and outputs of the system at both the state and local level;
6. Ensure the state’s ability to manage and continue to expand the functionality of the system;
7. Increase public safety by developing and implementing a centralized criminal justice information repository;
8. Maintain an information resource that seamlessly supports the operation of the criminal justice system by providing operational, statistical and policy data to all authorized members of the criminal justice community; and
9. Maintain a CJIS that respects the privacy rights of every citizen in Kansas.

The contemporary move to community-based policing has been extended in many venues to a broader call for community-based government, and this move portends an important shift in information processing — toward more open systems. Community-based courts, such as the Midtown Manhattan Community Court, have demonstrated the importance of developing a comprehensive and integrated information system that is capable of incorporating criminal justice information (for example, state criminal history record, complaint), substance involvement information (for example, nature and severity of involvement), and treatment information (for example, treatment program options, performance, etc.) into a system that supports judicial decisionmaking and treatment programming, while reporting disposition data to both local law enforcement and the state criminal history records repository.

9 See http://www.kbi.state.ks.us
10 See http://www.state.co.us/gov_dir/cicjis
Governance Structure

One of the first steps in successful integrated systems planning is the establishment of appropriate governance bodies to provide vision, strategy and policy approval, and to provide oversight for implementation actions, such as acquisitions, major projects and studies. Governing bodies must identify key stakeholders and integration issues, break down barriers pertaining to access, privacy and technology, and stop turf battles before they begin. Key stakeholders must be engaged in the early stages of integrated systems planning so that they help define the effort, invest in its development, and recognize their continuing responsibility for its success.

Additionally, integration leaders should identify a champion — an Executive Sponsor — for the initiative who has sufficient voice within the community, clarity of vision, and the necessary organizational currency to bring leaders together and to press for commitments, decisions and support when necessary. Judges, state legislators, governors, mayors, council members, city managers and agency directors can make great champions. Champions must be visionary and charismatic leaders, as, in many cases, they form an essential bridge to the legislature, budget officials, agency heads, etc. Champions deal primarily with priority and funding issues, but they are also responsible for removing barriers encountered by implementation teams.

Governing Committees

The governing body should develop a strategic plan for the initiative. Planning should involve an intergovernmental representation of local, state and regional representatives who recognize the strategic importance of planning at the state and local levels, and understand and are knowledgeable about federal and national systems and requirements that must be linked to state and local programs. Federally supported integration initiatives can play an important role in developing strategies and standards that will greatly facilitate integration of local, regional and state systems to national and federal systems, and can lay the foundation for development of additional regional systems.

The experiences of various states regarding the creation of steering committees may be instructive. Some committees have been established through state statutes (for example, Colorado, Delaware, Kansas, North Carolina and Oregon), while others were created through executive orders (for example, Indiana and Michigan), or have come together without the need for legislative mandates (for example, Ohio and Pennsylvania). There is no single or correct way to form a statewide steering committee, and no two states have precisely the same committees in place, though there are common themes in general structure and issues addressed.

All jurisdictions recognize the importance of creating a governing body representing each of the agencies that are central players in the scope of the integrated system as conceived. Agency directors are typically appointed, though their designees are often, as a practical matter, allowed to serve as their proxy. Oregon’s statute, for example, creates a Criminal Justice Information System Advisory Board, with the following members (or their designees):

- The State Court Administrator,
- The Director of the Department of Corrections,
- The Superintendent of State Police,
- The Executive Director of the Oregon Criminal Justice Commission,
- The Director of Transportation,
- The Chairperson of the State Board of Parole and Post-Prison Supervision,
- The Executive Director of the Board on Public Safety Standards and Training,
- A chief of police designated by the Oregon Association of Chiefs of Police,
- A sheriff designated by the Oregon Sheriffs Association,
- A jail manager designated by the Oregon Jail Managers Association, and
- The Administrator of the Information Resource Management Division of the Oregon Department of Administrative Services.11

Similarly, legislation in Kansas creates a statewide steering committee (the Criminal Justice

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11 Oregon Statutes §181.725(1).
Coordinating Council), representing the Governor, Attorney General, Director of the Kansas Bureau of Investigation, Secretary of Corrections, Chief Justice of the Supreme Court, Secretary of Social and Rehabilitation Services, and the Commissioner of Juvenile Justice.12

In Colorado, the integrated system was designed to link the information systems of five state agencies through use of a central index,13 consequently, the legislation created a task force that was “comprised of the executive directors of the department of public safety, department of corrections, department of human services, the Colorado district attorneys’ council and the state court administrator or their respective designees.”14

Interestingly, the representatives described in the legislation deemed themselves an Executive Policy Board and maintained overall business authority of the system. They appointed a task force with the following members, since these individuals had a better feel for the day-to-day operations of each agency and would be in a better position to supervise systems development: Information System (IS) Director, Judicial Department; IS Director, Colorado District Attorneys’ Council; IS Director, Department of Corrections; ITS Manager, Department of Youth Corrections; Systems Manager, Colorado Bureau of Investigations; and the CICJIS Chief Information Officer.

Even jurisdictions that do not rely on legislative authorization have incorporated a similar governing structure. In Pennsylvania, the integrated systems effort is guided by the JNET Steering Committee, a governor-appointed committee comprised of representatives of the following Commonwealth agencies:

- Administrative Office of the Pennsylvania Courts,
- Board of Pardons,
- Department of Corrections,
- Department of Public Welfare,
- Juvenile Court Judges’ Commission,
- Office of the Attorney General,
- Pennsylvania Board of Probation and Parole,
- Pennsylvania Commission on Crime and Delinquency,
- Pennsylvania Department of Transportation, and the
- Pennsylvania State Police.15

These 10 Commonwealth agencies “will become the first users and will provide the initial content [for the integrated system] from their existing information systems. Other state, county, and local organizations will be encouraged to join as the capacity of the JNET System grows.”16

A similar governance structure is warranted in local integration efforts where the directors of each of the principal participating agencies serve on the policy-level governing board. The critical point is that the governing board must represent the constituent agencies, and must include representatives who have the authority to commit and engage agency resources and priorities.

Subcommittees

Regardless whether the policy-level governance committee is legislatively appointed or convened at the request of the governor or the agency directors themselves, this committee is designed to address broad policy issues, secure sufficient resources to support the effort, and provide guidance and support to the overall effort. Operational and technical issues should be addressed by subcommittees appointed for the specific purposes of addressing these issues. Although the specific subcommittee structure varies by jurisdiction, there are again many common trends across jurisdictions.

Kansas has implemented a series of subcommittees to address technical and policy issues associated with their comprehensive integrated systems initiative. In addition to their CJIS Advisory Board, they have created the following subcommittees:17

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12 Article 95 — Kansas Criminal Justice Coordinating Council §74-9501(b).
13 Those five state agencies are: Department of Human Services (Division of Youth Corrections), Department of Public Safety, Department of Corrections, State Court Administrator’s Office, and the Colorado District Attorneys’ Council.
14 C.R.S. §16-20.5-103(1).
15 See http://www.state.pa.us/Technology_Initiatives/jnet/home.htm
16 Ibid.
17 See http://www.kbi.state.ks.us/governance/default.asp
- Standards/Technology Task Force,
- AFIS Subcommittee,
- ASTRA Board (law enforcement telecommunications),
- Juvenile Justice Subcommittee,
- Incident-Based Reporting Subcommittee,
- Law Enforcement System Task Force,
- Prosecution System Task Force, and the
- Supervision System Task Force.

These subcommittees and task forces are organized to address specific technical, operational and policy issues associated with the integrated systems planning and implementation efforts, and they include both state and local agency representatives.

Similarly, the Florida Criminal and Juvenile Justice Information System Council formed five workgroups to address comparable issues:

- **Policies and Standards Work Group**, which developed a set of guiding principles for the efficient and effective sharing of criminal and juvenile justice information among users and providers throughout the state. The guiding principles were codified into law by the 1996 legislature;\(^{18}\)

- **Juvenile Data Sharing Work Group**, which is focused on the requirements for mandatory reporting of juvenile disposition data;

- **Telecommunications Work Group**, which is planning, developing and installing a statewide telecommunications network for Florida criminal and juvenile justice agencies, known as the Criminal Justice Network (CJNet);

- **Federal Funding Work Group**, to evaluate federal funding opportunities and make recommendations to the Council regarding the most advantageous ways to use those funds for the benefit of the criminal justice community; and the

- **Sentencing Forms and Process Work Group**, which reviews the sentencing process and associated data and forms, and recommends to the Council any appropriate changes for improving the accuracy of data and information sharing, and reducing redundancy in records.\(^{19}\)

The Colorado CICJIS task force created the following subcommittees to address specific issues associated with their integrated systems planning initiative:

- **Technical Work Group** (Data Dictionary Team), which is comprised of technical analyst/programming staff from each of the five participating agencies, Sybase and the technical analyst staff member from the CICJIS project. This group is responsible for designing and implementing the CICJIS data dictionary, programming all transfers and applications, and building the system’s Central Index.

- **Tactical Business Group**, which is comprised of on-line users from each of the five state agencies, local law enforcement, other involved agencies, and the business analyst staff member from the CICJIS project. This group is responsible for determining the processes, screens and programs that are viable solutions for on-line users. This group also tests applications upon completion and educates the CICJIS project staff on current procedures within their respective agencies and departments.

In addition, other entities support CICJIS development:

- **DCSIP (Drug Control System Improvement Program) Board**, which oversees the federal grant money administered by the Department of Criminal Justice (DCJ).

- **Strategic Business Work Group**, which is staffed by DCJ and also includes members of the CICJIS Task Force. This group looks at long-term strategic issues regarding CICJIS.

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(Photocopy of original document on file at SEARCH offices.)
The subcommittees will vary by jurisdiction, depending on the technical solutions embraced, the policy environment within which they work, and unique needs of the jurisdiction. Clearly, however, key technical and operational subcommittees must be established to address important technical issues, operational practices and policies, and business re-engineering. The shift to integrated systems means that we are doing business differently, and these technical and operational committees/task forces/working groups — which are comprised of the operational users, managers and technicians — are needed to define the way we are going to do it differently.

**Conclusion**

In organizing for integrated systems planning and implementation, jurisdictions must develop comprehensive plans for change and technology. The plans must begin with an understanding and defensible description of what integration of justice information means (from a functional and organizational standpoint), and an articulate vision of the goals and objectives of integration. In defining the nature and scope of integration, key stakeholders, users, contributors and technical support personnel of systems must invest in the project and participate in both policy and technical committees.

Beyond the fundamental organization and structural issues addressed, however, it is important to realize that organizing for change encompasses only the critical first steps in integrated systems planning and implementation. Once organized, the initiative must continue and address other issues, such as change management, long-term funding, inter-organizational working relationships, and emerging privacy, confidentiality and security issues.