

# **Integrated Information Sharing in Juvenile Justice Systems: Issues, Challenges and Pitfalls**

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## INTRODUCTION

With expanding use of the Internet, and the growth of digital communication at all levels of government, integration of juvenile justice information systems is now a technological possibility. The Federal government now provides funding for integration in electronic recordkeeping through such programs as the Byrne Formula Grants, the National Criminal History Improvement Program (NCHIP), the National Sex Offender Registry (NSOR) Identification Assistance Program, the Statewide Identification Systems (SIS) Formula Grant Program, the Local Law Enforcement Block Grants (LLEBG) Program, the Community Oriented Policing Services (COPS) Technology Program, and the Crime Identification Technology Program (CITA). More recently, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) has developed training and technical assistance initiatives through the JAIBG Program (provided by Development Services Group, Inc. (DSG), and the Information Sharing Training and Technical Assistance Grant initiated in 2000. These OJJDP programs and initiatives build on the work of the Department of Justice (DOJ) Information Technology Initiative, begun in 1997, which has sought to provide national leadership in integrating justice data systems nationwide. The DOJ Integrated Justice Information Initiative is working collaboratively with SEARCH, the National Conference of State Legislatures, and the Center for Technology in Government at the State University of New York at Albany (CTG/SUNY-Albany), as well as with the broad-based membership of the Industry Working Group (IWG) to develop a National Integration Resource Center, basic training documents and national standards for integration that would permit the seamless sharing of information at all levels of government. The DOJ project provides Federal assistance and leadership in the area of information technology (IT), which, compared to other projects, poses unique challenges for States, local, and tribal governments in planning and IT project development and management.

Juvenile justice has traditionally been separated from adult, criminal justice systems. While juvenile justice systems and practice have been reformed at State and Federal levels to more closely link the two over the past two decades in response to concerns about rising juvenile crime rates, integration of juvenile justice systems continues to represent a distinct set of issues and challenges. Compared to adult systems where tracking of offenders is the predominant goal, the ends of juvenile justice encompass includes both sanctions and rehabilitation of offending youth, as well as delinquency prevention. Yet, like adult criminal justice systems, integration of juvenile justice systems at the Federal, State and local levels must work within existing models of integrated justice, incorporate evolving technological advances and challenges and changing public expectations, and provide efficient and effective government services while planning under the unique constraints of IT projects.

### **Defining Integration**

Integration is a new approach to information. Of course, in juvenile and criminal justice, the police, probation, prosecution, defense, and the courts have always shared information formally and informally. But, traditionally, information in many local systems has been primarily gained through an *ad hoc* approach. It is "often a matter of literally knocking on doors. Asking around. Collaring people who might know — or might know who might know...[a process based on] randomness, of labor-intensive casting about" (Griffin, 2000:5). This is information limited by the possession of paper, and by who you know. In contrast, integrated information provides for the seamless access and input of electronic data, and can occur instantly based on pre-defined electronic access and security safeguards among individuals widely separated by time and space rather than locally controlled interpersonal connections, which too often depends on the happenstance of who knows who.

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### **The Technological Imperative**

The speed at which the digital revolution is transforming communication is a separate impetus. What is new about integrated justice is the new technologically-driven ability for seamless sharing of information. According to a report by the President's Information Technology Advisory Committee (PITAC), "as we approach the new millennium, it is clear that the 'information infrastructure' — the interconnected networks of computers, devices, and software — may have a greater impact on worldwide social and economic structures than all networks that have preceded them" (PITAC, 1). It is expected that the new technologies will transform the way we communicate, deal with information, the way we learn, the way we work, and the way we do research. This will, in turn, restructure expectations for government. For example, PITAC projects the following vision:

*Government services and information are easily accessible to citizens, regardless of their physical location, level of computer literacy, or physical incapacity. Intelligent systems guide citizens by providing a one-stop shopping experience for locating requested information. Documents and forms can be accessed, completed, and submitted electronically. Automated business processes allow nearly instantaneous response to citizens' requests. In times of national emergencies, emergency crews have instant access to three-dimensional building models, risk analysis and assessment, high-resolution local weather predictions, stress analyses of damaged structures, rapid evacuation planning tools, and emergency agency coordination (PITAC, 9).*

### **Other Impetuses to Integrate**

Beyond the technological imperative, a number of other external factors came to fruition in the 1990s which have accelerated the impetus to integrate, including a new approach to public management, a new focus on children, advanced in prevention science, new participants, juvenile justice system reform, and new programs and sources of funding for IT development.

**New Approach to Public Management.** Beginning in the early 1980s, a new approach to public management developed that stressed efficiency and accountability over "the traditional administrative approach where greater priority has been given to ensuring rectitude and the proper discharge of duties even where the maintenance of these values has cost more" (Raine and Wilson, 1995:35). Known as "reinventing government" (Osborne and Gaebler, 1993), this new approach utilizes metrics to measure performance to ensure public accountability. Reinvented government has a citizen focus, and provides for service integration based on outcomes, not traditional bureaucratic organization. While some (e.g., Raine and Wilson, 1995) have maintained that performance measurement and service integration is not as compatible with the judicial branch as it is in executive branch agencies, increasingly, the notion that "you are what you count" is included in management of juvenile justice agencies (Loughran, 1998). In 1993, the Government Performance and Results Act of 1993 (GPRA or the Results Act) was enacted, officially inaugurating a new era in Federal public management based on performance and outcomes at the Federal level. Since then, a number of States and localities have adopted performance-based measurement, in addition to responding to Federal reporting requirements increasingly based on performance measurement of State outcomes. The International City/County Managers Association (ICMA) now has over 130 partner cities participating in its comparative performance measurement program. In November, 1999, the National Association of Counties held a summit on information technology in cooperation with the National League of Cities (NLC) and the ICMA in Cook County, Illinois. Priorities that emerged for action included seamless service delivery based upon the Internet, Geographic Information Systems, and performance measurement.

As part of reinventing government (Osborne and Gaebler, 1993), cross-system service integration is a key mechanism for ensuring improved service delivery. Service integration, defined as "the process by which a range of educational, health, and social services are delivered in a coordinated way to improve outcomes for individuals and families," *requires* the sharing of information. Information sharing helps those receiving services by enhancing the provision of coordinated and comprehensive rather than fragmented services, allowing "family-focused" services, and facilitating the monitoring of services. It also serves the broader community by providing information about the effectiveness of programs and by promoting public safety (Soler and Peters, 1993:7-8).

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Integration of services also is an emphasis of juvenile courts, including child welfare as well as delinquency services in the community and in the juvenile justice system (Shephard, 1999). Ironically, this has increased the challenges in integration because the number of private providers involved in juvenile justice administration and provision of services has increased with the trend toward privatization and community placement.

According to Peak (2001:452), “advances in computer technology have revolutionized many organizational and operational aspects of administration... that allow justice administrators to engage in *planning* at a level never before possible” (emphasis in original). Technology also has the opportunity to make data more relevant to policy and program planning. For example, currently, as David Roush points out, one gap in addressing real juvenile crime versus the perception of crime is that official data is out-of-date when it is published because “by the time official data are collected, analyzed, and published, they may be three years old” (Roush, 1998:166).

**New Focus on Children.** Beginning in the 1990s, a new focus on children became evident in American society, as marked by the development of new organizations, new approaches, and new initiatives focused on children using prevention, statistical indicators and outcome measures. For example, The Children’s Defense Fund (CDF), an advocacy organization for children organized in 1973, and Child Trends, a nonprofit, nonpartisan research organization dedicated to studying children, youth, and families established in 1979, became well-respected national voices for children in the 1990s. As a measure of the new focus on children, CDF organized a national march in Washington and promotes political activity on behalf of children, and both CDF and Child Trends produce statistics and indicators of children’s well-being. Increasingly, foundations like the Robert Wood Johnson Foundation, the Annie E. Casey Foundation and the Stewart Mott Foundation are seeking to affect public policy through funding initiatives on children and producing national statistics on child welfare in the States.

The Child Welfare League of American (CWLA ), founded in 1920 and the oldest organization dealing exclusively with vulnerable children and families, has expanded its efforts on children and integrated information technology. CWLA is an association of more than 1,100 public and private nonprofit agencies that assist over 3.5 million abused and neglected children and their families each year with a wide range of services. In 2000, the CWLA has adopted a new strategic plan for 2000-2010 based on *Making Children a National Priority*. As part of this plan, the CWLA has created The National Resource Center for Information Technology in Child Welfare (NRC-ITCW) and the National Data Analysis System (NDAS). NDAS, provided as a free online system by the Child Welfare League of America since 1999, provides statistical child welfare data for all 50 States and the District of Columbia (Walsh, 1999). The NRC-ITCW, funded by the Children’s Bureau of the U.S. Department of Health and Human Services (DHHS), is designed to help state, tribal, and local child welfare agencies and courts improve outcomes for children and families by optimizing their use of information technology and data through training and technical assistance, and through sponsorship of an annual Child Welfare Data Conference.

**Advances in Prevention Science and the OJJDP Comprehensive Strategy Approach.** Advances in prevention science (Pransky, 1991; Hawkins, Catalano and Miller, 1992; Catalano and Hawkins, 1995; Benson, Galbraith, & Espeland, 1994; Benard, 1991) have also spurred a new focus on children by stressing interventions earlier and more comprehensively across the domains of family, youth, peer, schools to more effectively prevent delinquency and other problem behaviors and promote pro-social development. This approach is the basis of the Title V Community Prevention Grants, established in the 1992 reauthorization of the Juvenile Justice and Delinquency Prevention Act, and the OJJDP Comprehensive Strategy, a research-based framework for strategic responses to juvenile crime at the community, city, State and national levels. The Comprehensive Strategy (Wilson and Howell, 1994; Howell, 1995) and the Title V (OJJDP, 1995) frameworks embody a community planning and public health-based approach, with an emphasis on identifying factors related to juvenile crime and delinquency, implementing a range of programs and services to address those factors (the prevention continuum (Loeber & Farrington, 1998), and intervening in response to occurrences of delinquency through graduated sanctions. The concept of the continuum of care in prevention provides programmatic reasons for the variety of child-serving systems to collaborate and share data on children involved in multiple systems to avoid duplication, and provide services earlier and more comprehensively.

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**New Participants.** There are a number of new constituencies in juvenile justice systems, which have expanded the number of actors, and made public accountability a higher priority in traditionally private, closed juvenile justice proceedings. This includes prosecutors, probation, state agencies, and other external constituencies, such as civil rights groups, the women's movement, and victim's rights movements. As Ted Rubin (1998:213-214) explains, "In the aftermath of the *In re Gault* decision, which gave juveniles constitutional due process protection, prosecutors entered juvenile court at the trial stage... and have [now] increased their control of front-end decision making using various approaches." And in recent years, many States have "moved the administration of juvenile probation from the judicial to the executive branch in a number of states, such as Delaware, Florida, Maine, Maryland, and New Mexico" (Rubin, 1998:216). Other external constituencies have become apparent with the rise of new advocacy groups interested in issues such as disproportionate minority confinement (DMC), a core requirement of the JJDP Act since 1992, gender specific services for girls and women in the justice system (Conway, Ahern and Steuernagel, 1999), and the rights of victims in juvenile proceedings (Seymour, 2000). In 1996, for example, the Center for Women's Policy Research sponsored a conference on girls, delinquency and violence for advocates. Finally, the balanced and restorative justice model, increasingly adopted by a number of States (e.g., Vermont, Kansas) specifically provide for defining new customers — the public and the community — who are new, increasingly official actors in the juvenile justice system of sanctions and accountability (Bazemore and Umbreit, 1998).

**Reform of the Juvenile Justice System.** The juvenile justice system has undergone substantial reforms in recent years. Responding in part to the rise in juvenile crime during the 1980s, and increased public concern over violence in the schools, the traditional role of juvenile justice has been dramatically transformed. The growth of waiver to adult court, blended sentences, increased accountability in juvenile dispositions, and lowered age for criminal responsibility, and the opening of juvenile court proceedings, as well as the application of sex offender registries to youth has dramatically altered juvenile justice systems (Feld, 1998). These changes, consistent with the emphasis on public accountability from the reinventing government movement, have provided greater access of external constituencies to juvenile justice systems.

**New Programs and Sources of Funding.** There are a wide variety of Federal programs and initiatives which encourage information sharing, and others which support greater use of information technology to develop electronic information sharing. In addition to the DOJ Justice Integration Initiative begun in 1997, these have developed primarily within the last 5-7 years. An early program, the Serious Habitual Offender Comprehensive Action Program (SHOCAP), initiated in 1983, provided funds to selected localities to use information to identify and provide services to rehabilitate serious habitual offenders. However, it is only during the 1990s that comprehensive Federal programs sought to develop State and local capacity to utilize integrated information for overall program efficiency and effectiveness. Two such recent efforts which address children include welfare reform in 1996 (Temporary Assistance to Needy Families (TANF)) and the children's health insurance program (CHIP) enacted in 1997. Both of these programs require the States to evaluate and report to the Federal government on State accomplishments using these funds.

Other justice programs, in addition to JAIBG (enacted in 1997), which support integration of justice data, include the Violence Against Women Act (VAWA), enacted in 1994, and Megan's Law providing for sex offender registration, as well as initiatives to support the development of drug courts.

The JAIBG Program, which provides block grant funds, asks the States to certify that they are considering establishing a system of recordkeeping on juvenile delinquents, and establishes twelve purpose areas for which funding can be used. Purpose area 10 provides funding to the States and localities for:

*Establishing and maintaining interagency information-sharing programs that enable the juvenile and criminal justice system, schools, and social services agencies to make more informed decisions regarding the early identification, control, supervision, and treatment of juveniles who repeatedly commit serious delinquent or criminal acts.*

While JAIBG Purpose Area #10 refers to "programs," which may include in-person, document and on-paper information sharing in addition to computerized management information systems (MIS). According to the

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JAIBG Guidance Manual, the juvenile recordkeeping requirement asks the States to consider establishing records that they could make available to the Federal Bureau of Investigation (FBI) that relate:

*to any adjudication of a juvenile who has a prior delinquency adjudication and who is adjudicated delinquent for conduct that, if committed by an adult, would constitute a felony under Federal or State law, which is a system equivalent to that maintained for adults who commit felonies under Federal or State law. States must also consider making such records available to the Federal Bureau of Investigation (FBI) in a manner equivalent to adult records.*

*Maintaining delinquency records in a system “equivalent” to the criminal system would mean, for purposes of meeting the minimum statutory requirement: (1) providing a delinquency data base that captures adjudications of juveniles for delinquent acts (acts that would be crimes if committed by an adult); (2) matching delinquency adjudication information for felony offenses with that delinquency data base in order to identify repeat offenders; and (3) for those juveniles identified under (2), above, compiling the basic identifying information that the State criminal history record system compiles on convicted criminal offenders (e.g., name, alias(es), date of birth, address, charge(s), place of adjudication, offense(s) for which adjudicated, and disposition). The juvenile record may also maintain information specific to juvenile records, such as names of parents or guardians and name of school attending. If a State uniquely identifies its criminal offenders, e.g., by fingerprint or photograph, an equivalent system would be required for delinquent offenders subject to this requirement.*

*The expanded recordkeeping requirement is triggered if a second or subsequent delinquency adjudication is for conduct that, if committed by an adult, would constitute a felony under Federal or State law. This provision does not require States to identify and include conduct that constitutes a felony only under Federal law.*

*States would make the applicable juvenile delinquency records available to the FBI in a manner equivalent to the way they make adult records available; e.g., by conveying the records to a central repository that then submits them to the FBI data base or by direct submissions from individual units of local government. (This provision is not intended to require that juvenile records be maintained in the same central State repository that maintains criminal history records).*

*Pertinent delinquent history information should be accessible to law enforcement and other authorized parties under the same circumstances as adult criminal history record information is accessible under State law. (OJJDP, 2000: 7-8)*

The Drug Court Program Office, established in 1995 to administer Drug Court Program Grants, works to assist drug courts with MIS development. It has produced the *Drug Court Monitoring, Evaluation, and Management Information Systems (MIS)*(1998) monograph. In specialized drug courts, there is a need for increased information to manage case loads that is not met by existing systems in most courts and criminal justice systems. Specialized MIS systems have been developed to provide tracking and case management: Jacksonville and Buffalo Drug Court MIS, Brooklyn Treatment Court MIS, Washington, D.C. Pre-Trial Real-time Information System Manager(PRISM), and the Washington/Baltimore High Intensity Drug Trafficking Area (HIDTA) Treatment Tracking System.

What is significant is that most of these various impetuses to information integration have come from sources external to the juvenile justice system. Rather than being spurred by advances in practice arising out of professional norms, juvenile justice systems are instead reacting to a variety of external changes and new pressures to provide more services, better outcomes and public accountability to a variety of new constituencies using a model of public management that stresses efficiency and effectiveness over traditional juvenile justice norms of practice.

### ISSUES IN INTEGRATING JUVENILE JUSTICE SYSTEMS

States and local governments with juvenile justice responsibilities are now being asked to integrate a set of processes that are in flux and undergoing substantial reform. Some of these demands reflect new approaches and some reflect new constituencies and new issues. When placed within the traditional rehabilitative juvenile justice framework, conflicting values can undermine the integration of effective practice — a necessary precondition to the integration of information. As in child welfare, conflicting values can create “the equivalent of a value tornado... [where] values that arise from different traditions, time periods, and assumptions are whirling together to create a practice environment where equitable and efficient practice is at risk” (DHHS, 1999:8). This raises the importance of relying on some formal model or plan for information integration to ensure consistency and the development of workable operational requirements.

#### **Distinctive Nature of Juvenile Justice**

Juvenile justice systems differ considerably from adult or criminal justice system models in ways that impact and structure the limits and possibilities for juvenile justice integration. These differences include mission, goals, the role of the family, confidentiality issues, the role of detention, case management needs, the process of diversion, the existence of national standards for data definition, the number of systems involved, the degree of collaboration required for successful integration, and the breadth of systems involved (summarized in Table 1).

Juvenile justice is organized separate from adult, criminal justice. While the separation of children is rooted historically, the present day American state-level juvenile court system dates back to 1899 when the state of Illinois passed the *Illinois Juvenile Court Act* (Fox 1972). This statute separated the juvenile court system from the adult criminal system. It labeled minors who violated the law as “delinquents” rather than criminals, and required that juvenile court judges determine what “is in the best interests of the minor” in rendering their decision. The current juvenile court system is guided by five basic principles:

1. The state is the ultimate parent of all children within its jurisdiction (the doctrine of *parens patriae*) and has the power to step into the parental role *in loco parentis*.
2. Children are worth saving and the state should utilize non-punitive measures to do so.
3. Children should be nurtured and not stigmatized by the court process.
4. Each child is different and justice should be tailored to meet individual needs and requirements.
5. The use of noncriminal sanctions are necessary to give primary consideration to the needs of the child (Cadwell 1966, 358).

As Shepherd put it, the mission remains much as it was at its founding because youth “are developmentally and socially different from adults, they are more likely to be rehabilitated by carefully designed and tested treatment programs than by a purely punishment-based sanction system” which requires more emphasis on the “child protection focus of the court” (1999:2). Rehabilitation is done through working with the child’s family and making extensive use of community resources. As such, it is a more organized system with judges playing a pivotal community and often an administrative one. For example, intake, probation services youth treatment services and detention centers may all be under the same administrative umbrella. In many juvenile justice systems, the ties to local systems, departments of social services and other youth serving community agencies are often strong and necessary since many youth who come to juvenile courts may have had extensive contact with these other agencies at earlier times or they or their families may concurrently be involved with them. To be effective, there has traditionally been mutual involvement of other systems. While this is the goal of an integrated system, such involvement has traditionally been a paper-based enterprise

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used at the “backend” for identified serious and repeating offenders, and intensive prevention services are then targeted at younger siblings in these identified at-risk families.

Juvenile justice systems deal predominately with less serious offenders, such as property offenses or other matters that may relate to their well being such as dependency or custody. More serious or repeating offenders may be waived to the adult criminal justice system. Federal and state IT initiatives are focused on youthful offenders with the expectation that they can be diverted from becoming more serious adult offenders. There is use of short-term detention and a variety of in-home and out of home placements and treatment alternatives frequently involving the participation of the youth's parents in the process. Finally,

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<b>Table 1</b>		
<b>LIMITS OF ADULT/CRIMINAL MODELS FOR JUVENILE JUSTICE INTEGRATION</b>		
<b>JUVENILE JUSTICE AND CRIMINAL JUSTICE SYSTEMS COMPARED</b>		
<b>CATEGORY</b>	<b>JUSTICE SYSTEM</b>	
	<b>Juvenile Justice</b>	<b>Criminal Justice</b>
<b>Mission</b>	Prevention Rehabilitation Reduced Recidivism Public Safety Sanctions & Accountability	– – Reduced Recidivism Public Safety Sanctions & Accountability
<b>Primary Goal</b>	Rehabilitate Offender	Punish Offender
<b>Involvement of Family</b>	Yes – essential/critical	No – optional/noncritical
<b>Confidentiality – public information</b>	Complicated – limited by state and federal statutes	Not usually complicated – few limits
<b>Confidentiality – information sharing issues</b>	Complicated – widely varying by state and locality; requires cooperation across systems	Not usually complicated – usually managed by each system for own needs
<b>Expungement of Records</b>	Yes, an option – depends on the offense, or re-offending patterns, usually possible after the age of 21 – varies according to Federal and State law, and local practice	No – while the executive pardon process may restore civic rights after conviction, and immunize individuals from prosecution before a conviction, it does not erase any existing record.
<b>Intake &amp; Assessment</b>	Critical step in process	N/A
<b>Detention</b>	Optional step depending upon assessment and risk management	Judicial determination
<b>Case Management Needs</b>	Managed throughout processing	An issue usually only during probation or parole
<b>Diversion</b>	Alternative available at all points	Not usually an option except through court disposition
<b>National Standards</b>	Professional organizational guidelines (NCJFCJ)	FBI reporting standards
<b>Number of Systems Involved</b>	High	Minimal
<b>Degree of Collaboration Required</b>	High	Minimal
<b>Breadth of Systems Involved</b>	Broad – beyond juvenile court, dependency court, domestic violence, child welfare, substance abuse, schools, etc.	Narrow – usually limited to criminal justice; other system professionals usually acting in an auxiliary role only.

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<b>CATEGORY</b>	<b>JUSTICE SYSTEM</b>	
	<b>Juvenile Justice</b>	<b>Criminal Justice</b>
<b>Role of Management – need for research and planning</b>	Critical – requires greater informational needs because of more decision points and the relationship of primary prevention to secondary prevention and rehabilitation	Less critical, based primarily on adequate numbers of prison cells and parole issues.
<b>Current Potential for Systems Integration</b>	Potentially high, because juvenile detention, corrections, and courts are often managed by one entity (e.g., the courts, but sometimes by different state and local government entities). However, the inclusion of different systems (e.g., schools, human services, mental and health services) may be more difficult.	Potentially low, because detention, corrections, and courts are often split among different branches of government, and administered by both elected and appointed officials. However, there are fewer barriers across systems in terms of confidentiality.

many Federal programs, such as the OJJDP Formula Grants, Community Prevention Grants, and the Comprehensive Strategy mandate citizen involvement through use of formal advisory groups to ensure that youth handled by the system are dealt with appropriately, and to ensure budgetary support.

The breadth of systems involved with youth in juvenile justice is much broader than in criminal justice, yet in terms of governance, the juvenile system is potentially more unified. Adults systems include courts (a separate system of government), while the executive branch can include constitutionally independent executives (Cressell and Connolly, 1999). Juvenile courts often administer most functions associated with detention and incarceration, as well as probation. However, juvenile justice works with a broader array of systems on a regular basis. These systems have radically different orientations to youth — “some that serve youth and some that simply *arrest* youth” (Griffin, 2000:2, emphasis in original). These differences include different professions (e.g., education, psychology, social work, medicine, law enforcement, education) which operate in different organizational cultures (e.g., schools, mental health, child welfare, health, public safety and law ), identify their clients and the role of the family differently, and often consider different outcomes a success. All of these systems structure their approach to “hard” and “soft” information differently.

Adult criminal justice systems have quite different goals. The focus is on the individual and their responsibility for the acts he or she committed. It is a fragmented system with judges playing a minor, if any, role in its administration. Adult detention centers may be run by Sheriffs, probation is a state responsibility as part of the executive branch of government and judges part of the judicial branch. Punishment and incapacitation rather than rehabilitation are more likely its aim. It deals with more hardened, serious offenders and for longer periods of time. In adult justice systems, the role of citizen’s groups is usually outside of the system. Although neither the juvenile justice system nor the adult criminal justice system enjoys any great measure of public support, concern for the conditions under which adults are cared for in the adult system is far less.

There are also differences in terms of central state repositories of criminal data. Traditionally, these state repositories include fingerprint records, criminal history, pretrial release information and felony violation information. Most states, however, have not customarily maintained juvenile justice information, and those that do, have not linked it with the adult record (Blair, 1999:60).

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The juvenile justice and adult criminal justice systems are different and unique. While the lines are increasingly blurred and youth at younger ages are now subject to adult sanctions, these distinctions are not highly likely to ever completely disappear. Developers of integrated systems for juvenile justice must understand these differences, build them into their designs and not seek to emulate adult systems.

### **Selecting Appropriate Models for Juvenile Justice Integration.**

Information sharing and integration using information technology (IT) is not an end in itself. While many attempt to make the case that IT can improve efficiency by reducing duplicate data entry, in reality, what IT does is to allow agencies to do new things as well as to stay current with public expectations about ways to do business with the government (e.g., digital access). Adoption of IT should have as its goal improvement of the organization's ability to carry out its mission. "An IT organization that becomes enamored of a database or office automation project without understanding how real people use information to accomplish real work is setting itself up for failure" (Center for Technology in Government, 1996:11). This means that selecting appropriate frameworks for integration becomes centrally important in juvenile justice. There are several efforts currently underway to develop appropriate models. Yet, in juvenile justice, a review of the state-of-the-art in juvenile justice decision-making finds few models. According to Gottfredson and Niles (2000:197) (1) there is little available research; (2) what research is available is focused on abstract concepts such as conflict, power and sociological considerations rather than legal issues or decision process issues; (3) there is considerable variability on frameworks suggesting a lack of existing or inherent policy bases for juvenile decisionmaking; (4) an emphasis on prior record and offense seriousness; and (5) little attention to decision-makers and their processes.. While the JOLTS (Juvenile On-Line Tracking System) in Maricopa County, Arizona, begun in 1977, is considered a national model (Gottfredson, 2000), this process has not been widely repeated widely throughout the country. This suggests that data integration in juvenile justice remains at "square one" with regard to moving beyond single agency issues to multi-agency coordination. This is even more important given the "values tornado" in juvenile justice systems. Models for juvenile justice integration are in the development stages; and State and local juvenile justice systems lack "best practices" or customized "off-the-shelf" software programs to address these needs. There are a variety of efforts underway to build this support.

**National Center for State Courts.** The National Center for State Courts (NCSC), an independent, nonprofit organization founded in 1971, has a Technology Center which provides support such as: integrated justice systems, case management systems, video conferencing, imaging, personal computers, voice technologies, kiosks, distance learning and web-based training. A new and ongoing project is to develop standards for functional development of State court information technology systems done in a court-by-court fashion (e.g., civil court, family court, criminal court, juvenile court, probate court, and traffic court case processing standards). NCSC is associated with the Forum on the Advancement of Court Technology (FACT), which has produced *A Non-Technical Guide to Information Technology in Courts* (1998); the *Court Technology Vendors List*, and the *Draft Civil Functional Standards*, (September 29, 1999; available on the NCSC website). The anticipated completion date for juvenile court functional standards (May, 2001), a project initiated in September, 2000. Once completed, NCSC will expand these standards to include other systems which interact with the courts. These standards will help provide for common definitions of data, an essential precursor to seamless sharing of relational databases across systems and jurisdictions.

**National Center for Juvenile Justice.** One effort is the National Center for Juvenile Justice work in the area of improving national statistics, improving the quality and utility of information available to decision makers at the local level, and to disseminate statistical information. Though development of *Design Principles for Juvenile Court Information Systems* (Torbet, 1991), and publication of the *Juvenile Probation Administrator's Desktop Guide* (Thomas and Torbet, 1997), NCJJ has emphasized automation within single agencies. In recent years, NCJJ has sought to address more broadly the roles and functions of state-of-the-art juvenile justice management information systems through publication of *Juvenile Justice with Eyes Open* (Gottfredson, 2000). *Juvenile Justice with Eyes Open* seeks to address integration of data by focusing on rational decision making in juvenile justice system that makes explicit decisions by use of flow charts and determinations of information needs at different stages in the process.

**The Industry Working Group.** The IWG is an organization of information technology experts and firms who have collaborated with the DOJ to provide guidance, develop white papers, assistance in short-term training and

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technical assistance, and guidance on interoperability standards. One area where collaboration is ongoing is in the development of eXtensible Markup Language (XML) standards for justice agencies, which will permit the sharing of information regardless of platform and of software utilized.

**SEARCH.** Information sharing and integration models in criminal justice systems have been developed by SEARCH, the National Consortium for Justice Information and Statistics, through “key decision points” which is based on the fact that there is “significant consistency in justice ‘conversations’” (2000:6). However, in juvenile justice, the content, context, and protocols are not so clearly defined by established “business rules.” For example, SEARCH defines the functional components of integration as including 5 processes:

- Automatic queries of local, regional, statewide, and regional databases to assess criminal justice status,
- Automatic pushing of information to another agency for use in a defined process,
- Automatic pulling of information from other systems for use in your database,
- Automatic publishing of information (e.g., people, cases, events, and agency actions); and
- Automatic notification of involvement of clients in the justice system (SEARCH, 2000:2-3).

This model emphasizes the case management approach and interactions (“a series of conversations”) among agencies as the trigger for sharing information. As will be discussed below, to develop this approach in juvenile justice will require some overarching resolution of the horizontal relationships among specific agencies at the local levels (which will vary by State), and vertically, from local systems to State systems, to the Federal levels, and some agreement on data standards. In addition, there are some distinctive issues in integrating juvenile justice systems that affect the process and potential for justice integration.

### **The Challenges of Cross-System Integration**

In information sharing, another factor is cross-system integration, which requires the development of common interests and common goals. However, in juvenile justice, there is an imbalance because while juvenile justice professionals often seek considerable information from human services, human services agencies often feel little need for information from juvenile justice (Griffin, 2000). Development Services Group, Inc., has found that in training, state and local juvenile justice specialists state that the biggest obstacle is cross-system issues. Among those attending regional training, 77% identify cross-system conflicts over intergovernmental or other conflicts as major obstacles to sharing data (DSG, 2000).

The degree to which different agencies and different systems have cross-system conflicts is only recently becoming recognized. A number of efforts are currently seeking to address the integration of practice. For example, the DHHS publication ***Changing Paradigms of Child Welfare Practice*** (1999a) stresses the importance of cross-professional and cross-systems training to build partnerships including “education, community health, social development programs, law enforcement and legal professionals” as well as child welfare professionals (1999:69). Two recent projects, the DHHS ***Blending Perspectives*** (1999b) ***Report to Congress on Substance Abuse and Child Protection***, and the National Council of Juvenile and Family Court Judges February, 1999, recommendations on ***Effective Intervention in Domestic Violence and Child Maltreatment Cases: Guidelines for Policy and Practice*** both address the difficulties and challenges of working cross-system. What is noteworthy is that both the Blending Perspectives and the Effective Intervention approaches stress the importance of developing joint service models, integration of procedures, policy and curricula, and the use of cross-training to ensure that different systems avoid the problems of differing definitions of who is the client, different treatment approaches and decision criteria, and different understandings of confidentiality.

Differing systems have different missions, and may even have differing definitions of basic terms. For example, some school administrators understand violence to mean anything that disrupts the learning process, while in juvenile courts, legal definitions of violence will predominate, and psychologists and mental health professionals may view the same behavior quite differently depending on the developmental age of the child and the context in which it occurs. While most information sharing thus far has concentrated on the courts, understanding and working with integrated systems that include all appropriate child and youth-serving agencies must learn how to

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work with different systems with different understandings, practices, and who come from different disciplinary backgrounds and approaches.

The central problem with integrating information systems in advance of the development of such joint service models and cross-training, is that electronic information may be shared with other systems, and used for ends not appropriate or acceptable to the originating agency, or that some notes or comments may be used in contexts no longer appropriate (Pardo, Dawes and Cresswell, 2000:6).

### **Juvenile Justice Records: Confidentiality and Expungement Issues**

The right to privacy and confidentiality comes from a wide variety of sources: the U.S. Constitution, state constitutions, Federal and State statutes, agency regulations and practices, professional practice standards, and ethical standards. There is considerable variety — some states treat juvenile court records as public information, some limit access only to the juveniles and agencies directly involved, while others permit conditional release (DSG, 2000). Information may be shared by legal exception, by court order, by consent of the parties, and by development of memoranda of understanding (Slayton, 1999).

According to Soler and Peters (1993:6), the purposes of confidentiality are to

- protect embarrassing personal information from disclosure;
- prevent improper dissemination of information that might increase the likelihood of discrimination;
- protect personal security; (e.g., in cases of domestic violence)
- protect family security; (e.g., in immigration issues)
- protect job security;
- avoid differential treatment based on the information; (e.g., the “pygmalion effect”) and to
- encourage individuals to take advantages of services.

The complexity of these standards, and their variable expression in different States, and in different professions, agencies and systems has created many barriers to information sharing. In ad hoc situations, agency personnel may not be familiar with the legal ramifications. This can result in laws being regularly violated due to agency practice, and in misunderstandings of the legal requirements preventing appropriate inter-agency information sharing (Griffin, 2000:7-8). The Federal Educational Rights and Privacy Act addresses educational records and the limits and exceptions to privacy of educational records. (OJJDP, 1997).

State-level initiatives are moving to open records and proceedings, changing the nature of confidentiality. In 1998, changes were made in California, Georgia, Ohio, Pennsylvania, Kentucky, Maryland, Oklahoma, Utah, and West Virginia regarding records and proceedings. Other changes were enacted in Connecticut, Florida, and Wisconsin which increased information sharing among agencies (Yee, 1998).

One issue that has received little discussion is the question of expungement of juvenile records. There is a variety of methods throughout the country. Some local jurisdictions a practice of routinely destroying the record once a juvenile becomes 21, while others require a request to the juvenile court for expungement (BJA, 1997). The issue for juvenile justice is that once information is legally imported from one system into the records of another system, it may be difficult to expunge juvenile records. For example, since 1993, the Federal Bureau of Investigation (FBI) has accepted, maintained and disseminated arrest fingerprint cards for juveniles who have been tried or adjudicated in juvenile proceedings from the States. FBI policy is that “once a fingerprint card is submitted...and is in our domain, it becomes ours... and we will disseminate the juvenile records whenever a legitimate request is received, whether it is a criminal justice check, or an application for employment, license or bond, etc.” (BJS, 1997:25). And any records, once disseminated to the public (e.g., through an FBI records check or a public sex offender registry), cannot be erased.

### **Multi-Agency Collaboration: The Juvenile Justice Challenge**

As indicated earlier, juvenile justice agencies have a more extensive set of diverse systems and agencies with which they interact with on an ongoing basis. Therefore, the issue of multi-agency collaboration can also be a

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pitfall as well as an asset. In a multi-agency arena, issues that are “straightforward in a single agency system become more complex” (Leuba, 1999:54). Enterprise level issues are additional issues that

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must be confronted directly for success in a multi-agency integrated system environment. According to Leuba (1999:54), some of these additional issues include:

1. Development of program plans for the integrated system;
2. Coordination of multi-agency budget requests and priorities;
3. Information quality assurance and security;
4. Selection of operational priorities;
5. Determination of the integrated systems' functions;
6. Determination of data exchange standards and protocols; and
7. Utilization of compatible computer systems and software between agencies.

These are policy-level issues that juvenile justice has not yet confronted, at a level of complexity that exceeds those facing the criminal justice system.

## **DISTINCTIVE CHALLENGES IN INTEGRATING JUVENILE JUSTICE SYSTEMS**

There are several challenges distinctive to efforts to integrating juvenile justice systems. These include the ability to meet the needs of users compared to the expectations of the public for integrated justice systems, and the ability of juvenile justice databases to predict juvenile delinquency and serious and violent offending. While adjudicated delinquents, by definition, are already known to juvenile justice systems, the distinctive nature of juvenile justice is that its focus is on prevention and rehabilitation, not punishment. This means that juvenile justice has as its aim more than simply providing accountability for children and youth who offend -- it is to provide services and programs that span the entire continuum of care from prevention to accountability and rehabilitation. Thus, there are two questions one must ask of integrated justice:

1. Is it possible, using currently available data, to identify children and youth at risk for delinquency and serious and violent offending?
2. Can the limits of integrated juvenile justice systems encompass the whole range of the continuum of care in juvenile justice?

The ability of integrated information sharing to provide for comprehensive prevention will be limited by the ability of existing lists of children and youth to uniquely identify individuals at risk for delinquency or serious and violent offending. Prevention is best understood when viewed as distinct interventions categorized into three levels of risk: primary, secondary and tertiary prevention. This can be further separated into delinquency prevention (i.e., prior to the first offense) and serious and violent offending (i.e., after the first offense). (See Table 2).

Table 2 follows the division of delinquency prevention into three levels of activity similar to those found in public health models (Brantingham and Faust, 1976). Primary prevention is directed at the entire population (i.e., is universal) and focuses on elements of society or community that may lead to crime (e.g, social disorganization, poverty, and situational opportunities). Secondary prevention targets those identified as at-risk for delinquency based upon statistical risk factors. This would include targeted interventions for those at-risk for problem behaviors, such as school failure, child abuse, teen pregnancy, substance abuse, or delinquency. Tertiary prevention is targeted at individuals who have an indication of services based upon an

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adverse event that they have already experienced, for example, failure in school, suicide attempt, incarceration of parent, or children victims and witnesses of violence.

Secondary prevention, particularly in terms of juvenile justice, includes those who have a variety of risk factors. There are a variety of statistical risk factors (e.g., family conflict, academic failure, substance abuse) that have been identified by researchers (Lipsey and Derzon, 1998; Howell and Hawkins, 1998; Kelly et al., 1997). There are differences between risk factors associated with “adolescent-limited offending” and those that are linked with “life-course-persistent” offending (Howell and Hawkins, 1998). At present, comprehensive prevention planning means comprehensively targeting risk factors, and is not used to predict

**Table 2**  
**USING INTEGRATED JUVENILE JUSTICE INFORMATION SYSTEMS FOR PREVENTION AND REHABILITATION:**  
**Types of Data Needed Using a Continuum of Care Model Typology**

Approach	Types of Intervention	How Population Targeted	DELINQUENCY PREVENTION (Title V)	IDENTIFYING SERIOUS & VIOLENT OFFENDERS (JAIBG; COMPREHENSIVE STRATEGY)
Primary	Universal	<p><b>All or nearly all</b></p> <p><i>Services offered or provided universally, usually in public settings or on request.</i></p>	<p><b><u>Can Population Be Identified Electronically?</u></b>  <b>Not currently.</b> Among adults, driver’s licenses and voter registration are the most widely available near universal listings. For children or youth under the age of 16, there are no such universal common databases. The closest near universal listing would include birth and school records, but these are not currently linked or available as public databases, and these would exclude children born or schooled at home.</p>	<p><b><u>Can Population Be Identified Electronically?</u></b>  <b>Not currently,</b> although the Juvenile Incentive Block Grant (JAIBG) Program encourages States to consider establishing a system of records relating to any adjudication of a juvenile who has a prior delinquency adjudication and who is adjudicated delinquent for conduct that, if committed by an adult, would constitute a felony under Federal or State law, and making such records available to the Federal Bureau of Investigation (FBI) in a manner equivalent to adult records.</p>
Secondary	Selective	<p><b>At-Risk</b></p> <p><i>Targeted interventions for those at-risk for delinquency or serious and violent offending.</i></p>	<p><b><u>Can Population Be Identified Electronically?</u></b>  <b>Not currently.</b> This would require scanning a universal or near universal general population database for presence of delinquency risk factors, and would require shared data from multiple systems for identification of individuals at risk.</p> <p><b><u>Possible Indicators for Delinquency Risk Factors</u></b></p> <p><i>Families:</i></p> <ul style="list-style-type: none"> <li>· Family History of the Problem Behavior</li> <li>· Family Conflict and/or Management Problems</li> <li>· Child Victimization and Maltreatment</li> </ul> <p><i>Individuals:</i></p> <ul style="list-style-type: none"> <li>· Anti-Social Behavior &amp; Alienation</li> <li>· Gun Possession</li> <li>· Teen Parenthood and Sexual Activity</li> <li>· Favorable Attitudes Toward Drug Use</li> <li>· Early Onset of Violence</li> <li>· Early Onset of Alcohol and Drug Use</li> <li>· Cognitive and Neurological Deficits</li> </ul>	<p><b><u>Can Population Be Identified Electronically?</u></b>  <b>Not currently.</b> This would require scanning a universal or near universal delinquency database for presence of serious and violent offending risk factors, and would require shared data from multiple systems for identification of individuals at-risk.</p> <p><b><u>Possible Indicators for Serious Offending Risk Factors</u></b></p> <ul style="list-style-type: none"> <li>· Multiple problem-based involvement in human service/school systems</li> <li>· Age of first involvement in juvenile justice systems.</li> </ul>
Tertiary	Indicated	<p><b>After Adverse Event</b></p> <p><i>Indicated interventions or treatment following</i></p>	<p><b><u>Can Population Be Identified Electronically?</u></b>  <b>Yes, depending on the jurisdiction.</b> This could be based on case management systems, and required reporting to responsible authorities.</p> <p><b><u>Possible Indications for Intervention:</u></b></p> <ul style="list-style-type: none"> <li>· Victim of child abuse or neglect</li> <li>· Witness violence</li> </ul>	<p><b><u>Can Population Be Identified Electronically?</u></b>  <b>Yes, depending on the jurisdiction.</b> This could be based on adjudication and status tracking of youth under supervision.</p> <p><b><u>Possible Indications for Intervention:</u></b></p> <ul style="list-style-type: none"> <li>· Adjudicated delinquent for an offense that would constitute a</li> </ul>

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		<i>experiencing an adverse event.</i>	<ul style="list-style-type: none"><li>· Victim of violence</li><li>· Suicide attempt</li></ul>	<ul style="list-style-type: none"><li>· felony if committed by an adult</li><li>· Two or more Adjudications</li></ul>
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individual level probabilities for delinquency or serious and violent offending. That is, communities assess their “unique profile of risk and protection s a foundation for selecting and designing preventive interventions that address the factors most in need of attention in that community” (Howell and Hawkins, 1998:301). Most notably, recent research has found that use of these statistical risk factors for predicting individual delinquency produces a high number of “false positives” (Lipsey and Derzon, 1998). This means that many more individuals will be predicted to become deviant, when in fact, they will not.

Because new research has increasingly found a link between witnessing and being a victim of violence and the risk for delinquency, tertiary prevention can be applied to both risk for delinquency and for continued offending. While “the majority of tertiary prevention rests within the workings of the criminal justice system” (Lab, 2000:22), in juvenile justice, tertiary prevention involves rehabilitation and treatment for children and youth who have come to the attention of authorities as a victim of violence or a witness to violence, or who have become delinquent and are at risk for serious and violent offending. From a data standpoint, it is these individuals who are easiest to identify and target because they have already come to the attention of authorities.

As noted earlier, increasingly the public is concerned about youth violence, particularly in the schools. Public expectations have raised the issue of seeking to identify potentially violent youth. However, it may be that integrated juvenile justice is not able to provide such identification. This is true for two reasons discussed earlier: (1) the lack of precision of current risk assessment instruments; and (2) the current use of risk and protective factor models to develop community profiles rather than to predict future behavior of individuals. Another reason is that -- from a data standpoint — we do not at present have the capability to scan electronic lists of the entire population of children and youth. This issue came up, for example, in the 2000 election, when it was discovered that a number of convicted felons who were not legally permitted to vote, did in fact vote in the State of Florida. While the State of Florida had a statewide list of voters, and a list of convicted felons, it did not have the capability to combines the two lists and remove from the voter registration lists those ineligible because of a criminal conviction. Once data are made electronic, increasingly the public may have expectations that do not fit the original development of the data for use in case processing systems.

## **POTENTIAL PITFALLS IN JUVENILE JUSTICE IT PROJECT MANAGEMENT**

The sharing of information among stakeholders across different platforms presents a challenge to systems designers. Legacy mainframe systems, incompatible platforms, differing standards and data definitions, and professional standards are among those that present a challenge and present pitfalls for those planning integrated information sharing systems. At the Federal level, the Clinger-Cohen Act, passed in 1996, requires Federal agencies to use investment and capital planning processes to manage their information management and technology portfolios and that agencies modernize inefficient administrative and mission-related work processes before making significant technology investments to support them. According to the General Accounting Office, “We have issued several hundred reports during this decade that document (1) billions of dollars in wasted IT expenditures for computer systems that failed to deliver expected results, (2) poorly defined management processes that fostered suboptimal solutions to agency business needs” (GAO, 1999:70).

According to one survey conducted by the Standish Group, some 33% of all software projects fail, and 40% of all software projects come in late or over budget. While computing calamities can provide valuable lessons learned (Glass, 1999), Federal, State and local governments in an era of tight budgets and increased accountability cannot afford to take an experimental approach to IT project development. Increasingly, it is becoming recognized that IT projects must include professional project management to successfully bring projects to completion. There are a variety of issues to be considered — intergovernmental coordination, considering the role of information vs. data, working with vendors, understanding the nature of technology, funding, and change management.

## Information Sharing in Juvenile Justice Systems

### Intergovernmental Issues

There are three governmental levels involved in juvenile justice: local and tribal systems, State systems, and Federal systems. Systems that are developed need to meet the needs of users at the local level, which are predominately for case specific information while at the state level, the need is for workload and aggregated case trend data. The development of systems that meet both of these needs present challenge to administrators, planners and users. The variety of how juvenile justice systems operate influences how such systems develop. In some states, such in California, probation, detention and other justice services are county based. In some states such as Florida, the state assumes complete responsibility for juvenile justice services while in others, states assumes responsibility for judges and the court while probation and other services are jointly funded by states and cities or counties. The task, therefore, of putting together a coherent system of automated information sharing systems must be tailored to specific administrative and legal structures.

Not only are these systems operating at different levels of data and justice processes, there is a gap in the ability of these systems to communicate. This gap is not one of technology, but rather, one of coordination. At the State level, there is an increasing ability to enforce state-level inter-agency coordination, with half of the states currently possessing this legislative authority, a number expected to rise to 36 States which contains two-thirds of the population in five years (NASIRE, 2000). However, this is not true at the local levels. Currently, only 5 states have such legislative authority over local inter-agency information sharing, a figure expected to rise to 13 States (and 19% of the population) in five years. According to NASIRE, “coercion from the state level does not have a sufficient legislative backing to succeed” on a national level (2000:19).

Integration remains a patchwork, and the efforts require considerable coordination that takes prolonged periods. For example, the Bureau of Justice Statistics, found as of 1994, after “over 25 years of effort at the Federal, State, and local level... to establish, network and develop adult records systems, ...only about one-quarter of the nation’s adult criminal records were both complete with dispositions and available in response to a national inquiry” (Chaiken, 1997:12). In some states, there are statewide coordinating bodies for adult justice integration. This is true, for example, in Colorado, Kansas, Kentucky, New Jersey, and Pennsylvania (Creswell and Connolly, 1999). Many local units of government are currently working on integrating local systems through JAIBG, some individually, and some through a consortium of local units of government. Some states, e.g., Vermont, Kansas, and Florida, have developed or are in the process of developing statewide juvenile justice IT systems. Leadership is important in this patchwork structure. According to Creswell and Connolly, leadership can overcome “the resistance of separate, independent jurisdictions and agencies to accept coordination and standardization” (1999:14).

### Information vs. Data

The critical issue is information for what? Is it for research, for case processing, and workload indicators? At the state level, data reporting on youth usually is a mandate. At the case level, the sharing of information among stakeholders in the juvenile justice system is critical to its success with its clientele. The sharing of history information is critical at the intake level where initial assessments are made as to how best to handle a youth brought by police or others. Past court actions or a pending actions or court orders and police contacts are critical to determining a course of action. Probation departments, in conducting social investigations need to know of past contacts the youth or his family may have had with social services agencies, mental health agencies, or drug treatment services to give them a complete picture of the youth and his or her situation so that recommendations can be made to the court as to how to best dispose of the a case. Detention centers need to have as much social, medical and legal information they can so that the can deal with detained youth properly and be aware any conditions that might affect the stay in detention.

In development of integrated data systems, it is felt that meeting the needs of the users is paramount. Many failed systems are ones that fail to either meet basic needs, or fail to allow the generation of new types of reports as management needs change.

**Table 3  
TYPES OF DATA STRUCTURES AND APPROPRIATE FOR JUVENILE JUSTICE INTEGRATION**

TYPE OF DATA SYSTEM	PURPOSE OF DATA COLLECTION	UNIT OF ANALYSIS	WHO USES DATA	GEOGRAPHIC BASIS	RELEVANT POPULATION	TIMEFRAME FOR DATA REPORTING	SYSTEMS COVERED	DATA PRODUCED
<b>Aggregate Databases</b>	<b>FEDERAL REPORTING</b>	Governmental Units and Programs	Federal Government Public	States Counties Cities Metro Areas	Geographic Program Funding Streams	Predetermined	N/A	<i>Primarily Summary Counts of Discrete Events or Characteristics</i>
	<b>STATE REPORTING</b>	Governmental Units and Programs	States Public	Counties Cities	Geographic	Static Data for Trend Comparison	N/A	
	<b>LOCAL REPORTING</b>	Agencies and Programs	Local Government Public	Areas Cities	Geographic		N/A	
<b>Relational Databases</b>	<b>POLICY EVALUATION</b>	<b>Policies</b> — a policy may be within one agency or across agencies	Legislators	May be State or Local	May be Geographic	Variable Time Frames	Multiple	Multiple Studies Meta-Analysis
	<b>PROGRAM EVALUATION</b>	<b>Programs</b> — there may be many programs employing the same policy approach	Program Managers	May be State or Local	May be Geographic	May Reflect Project Periods or As-Needed Evaluations	Usually 1 System Sponsors and Maintains Data even if multiple systems involved	Characteristics of Program Program Outcomes by Program  <i>Primarily Outcomes, Performance Goals, and Program Processes</i>
<b>MIS</b>	<b>PROGRAM PROVIDERS PERFORMANCE INDICATORS</b>	Service Providers	Program Managers	May be State or Local	Need Full Population Served by @ Provider	Predetermined	Usually 1 System	Characteristics of Providers Aggregate Provider Outcomes by Provider
	<b>STAFF PERFORMANCE INDICATORS</b>	Individual Staff	Supervisors Administrators	N/A	Need Full Caseload Served by @ Caseworker or Judge	Static for Trend, Staff or Provider Comparisons	Only 1 System Divided into Management Units	Characteristics of Staff Average Staff Case Outcomes by Staff
<b>MIS DSS</b>	<b>CASE MANAGEMENT</b>  for Youth Needing Services	Individual Youth	Probation Courts Providers	N/A	Tertiary Individual	Variable Timeframes  Dynamic, providing time and event-based tracking	Usually 1 System Has Involvement at any one time: Multiple Systems	Tracking Progress of Youth; Whereabouts; Status; Obtaining Information from Other Systems. Also used to systematically assess risk and predict outcomes

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<p><b>Relational Databases</b></p> <p><b>DSS</b></p>	<p><b>PRIMARY and SECONDARY PREVENTION</b></p>	<p>Targeted Population</p>	<p>Program Providers and Managers</p>	<p>States Counties Cities Metro Areas</p>	<p><i>Primary--</i> Universal</p> <p><i>Secondary—</i> At-Risk</p>	<p><i>Primary and Secondary Prevention –</i> Periodic</p>	<p>DMV School Birth CPS Juvenile Justice</p>	<p>Scanning Databases and Registries for Multiple Risk Factors</p>
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## Information Sharing in Juvenile Justice Systems

There are three basic needs for juvenile justice information (see Table 3): case management of individuals, research and evaluation of the effectiveness of programs and management, and reporting. For projects defined within one system (e.g., within the courts), the National Task Force on Court Automation and Integration found that “successful projects focus on the day-to-day information sharing between courts and other justice agencies,” while statistical and dispositional data are generated “as by-products of these systems” (BJA, 1999:xiv). Yet, with reinventing government, privatization, and the new focus on performance and outcome-based data, the units of analysis and the populations covered have become more complex.

In addition, some types of data functions require relational databases, while others include only reporting data. While the goal of integrated information systems is to enter data only once, it may be difficult to obtain data from one system for seamless use in another data structure designed for different purposes. This is a complex issue. While the development of XML standards in the justice system will address the technological barriers preventing the cross-platform sharing of data from different software and different forms, it will not resolve several methodological problems inherent in creating relational databases. One methodological issue is how the data values are defined. If data values are collapsed, then for a specific case, then it will be impossible to analyze data together in the same database regardless of the technological interoperability. Second, the time period covered by the data may vary radically. Finally, another methodological problem is known as the “ecological fallacy” where relationships found at the aggregate level are nonsense at the individual level (Blalock, 1964:95-99). More recently, Sampson and Wilson (1995) have raised the issue of the “individualist fallacy” where individual factors are confounded with community-level factors. Thus, additional data will need to be appropriately defined and incorporated to switch levels of analysis. What these points suggest is considerable caution in entertaining the possibilities of developing seamless relational databases that can do all things to produce any type of answer.

### **IT Management Issues**

At the local level of government, there continue to be three levels of staff who need to cooperate in IT and information sharing: decision makers, program staff, and IT staff. Increasingly, at the State levels, the need for continuous attention to IT as a management function has meant the creation of a new position — Chief Information Officer (CIO). CIOs combine managerial and technical expertise. The CIO, as described at the 1999 National Governors Association, has been developed under four different models — as a cabinet-level position, a subcabinet position, a bureau position, or as a confederation of agencies acting as an IT board (Rubel, 1999). This is less common at the local levels. IT projects take considerable time to develop, and their expense is immediate, while their results occur much later. While reasons for developing an IT system may vary according to local needs, “no matter how improved or elegant the new system may be, it must compete with projects whose benefits are more tangible and whose success is easier to measure” (Center for Technology in Government, 1997:49). Thus, at local levels of government, there is less likely to be the ongoing commitment to IT costs and needs.

A critical piece in the development of an integrated information system at the local levels is the identification of an individual who can serve as a champion for the system (DSG, 2000). The OJJDP/JAIBG Information Technology/Information Sharing Focus Group recommended that systems developing integrated information systems include four stages: a planning or advisory group to develop the strategic plan; an in-house project management component for design and implementation; an authorized governance body that includes stakeholders and customers; and a management team to enhance inter-agency coordination (DSG, 2000). Ideally, the champion should be someone who has the political clout and legitimacy to advocate for the system and be able to get participation and buy-in from heads of youth serving agencies. When dealing with juvenile courts, judicial leadership is essential (Dobbins and Gatowski, 1998). The champion must ensure that there are sufficient resources to fund the system, that it has a clear mission and scope, agreed upon by all, and that all confidentiality issues are discussed and resolved. Yet, to deal effectively with technology, planners and the champion must also have an understanding of the technological possibilities, the challenges, and the pitfalls of working with vendors.

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**Allowing Technology Vendors to Define Your Needs.** One of the key pitfalls is misunderstanding the process as technology-driven. Certainly, advances in technology do impact on what systems are chosen.

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According to Dobbins and Gatowski, “technology alone will not facilitate effective information management” (1998:28). Yet, when State or local professional staff seek to utilize technology to integrate, they are often prey to vendors who are unfamiliar with the needs of local case processing and system-wide data needs. As Dussault put it, “in the procurement of government systems, vendors have always had the edge” (2000:1). While all levels of government are increasingly outsourcing IT, a lack of flexibility in the process can leave government agencies trapped with a failed system (Dorris, 1998).

**Misunderstanding the Nature of Technology.** The juvenile justice community, as in the adult criminal justice community, needs to make the leap to understanding technology. Integrating in the justice community, many argue, requires a new approach to technology, not just hiring IT experts to layer on technical solutions to existing processes. Rather than viewing technology as a technical subject, it requires a different understanding. Many in the IT community refer to this as “paving the cowpath.” Instead, IT-based methods of information sharing can revolutionize the ways that agencies interact. According to Kolodney and Taylor, “the old model, under which justice information systems evolved separately with little concern about duplication of efforts or thoughts of sharing information with other members of the justice enterprise, was antithetical to the emerging demands for efficiency and responsiveness” (1999:32). The stovepipe mentality has long been criticized as a major barrier to data integration. Instead, Kolodney and Taylor (1999) recommend creating communities of value over information integration, structuring every transaction as a joint venture, treating these partners as customers, start from scratch and change the “stovepipe” approach. Yet, technology does not inform the process side of multi-agency interactions. As Marx points out, “the first step in implementation is not to select technology, but to articulate *objectives*” (1999:39). This means documenting the operational processes that increased efficiency is designed to support, how often these processes recur, what participants are involved, what is done in a step-by-step process — information which provides an “investigative lead” in what and how the business process should be re-engineered to meet the objectives. Yet, this is something that is problematic in juvenile justice, which has been substantially reformed to meet political needs and goals.

A related issue is the role of immature technologies. According to Khafre Systems International (KSI), this means “technologies which do not have a public track record of being applied to the specific task at hand.” At the planning level, this can create problems when the requirements are changed. As KSI explains in an online technical report,

*This track record may not exist because (a) the technology in question has recently been invented or (b) the technology is itself mature, but no one has thought to apply it to a particular class of problems yet. ...If the technology is immature, then there will be few people who understand the technology well enough to create a stable architecture. Thus, as new requirements are added or existing requirements are changed, the system architecture becomes more “brittle.” That is, the architecture begins to incorporate components that do not have well defined behaviors. During runtime, as other components interact with these “ill-defined” components, errors begin to occur (i.e., the brittle system “breaks”). This causes the entire system to fall short of requirements, especially in the area of performance, reliability, and robustness. If the system falls short with regard to strategic requirements, then the project becomes a total failure. (KSI, 2001:3).*

Thus, the requirements analysis is critical to planning, and good project management is especially important to ensure that what is asked of the system does not overreach the available technology.

**Funding.** IT development is costly. What is problematic is that funding “is inextricably linked to issues of governance and collaboration” (Newcomb, 1998:11). While the goal of a paperless system may held by different agencies, in reality, “different agencies receive funding from different sources for different programs” (Newcomb, 1998:11). Solutions require developing a new approach to funding IT, which may include a centralized source and a comprehensive approach. Some States are moving toward full-time grant coordinators for IT (Newcomb, 1999b)

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**Change Management.** Successful integrated information sharing is not just technological. It also involves considerable organizational change, both in terms of structure and in terms of human resources and personnel, such as job redesign, staff training, and reorganization of the flow of work (teams), and staff morale and buy in. According to Zaffarano, “60 percent of failed technology projects” fail by ignoring the needs of the users of the systems (Zaffarano, 1999:3). One of the biggest barriers to change is fear and resistance to change. This resistance occurs naturally, but is magnified when “new programs arrive with too little advance information, weak leadership support, inadequate use participation, too little funding, and less than comprehensive training and orientation” (Center for Technology in Government, 1997:23). In some cases, change management can also address “turf” issues where not agencies and organizations not only fear change, but also view change in a competitive or adversarial manner and seek to protect their autonomy and position (Creswell and Connolly, 1999). With the introduction of IT in an organization comes the acceptance and training issues associated with it. Change management, staff training, system maintenance, and system enhancements are additional issues that should be addressed initially.

## CONCLUSION

Integrated information sharing in juvenile justice systems is now a technological possibility, and juvenile courts are now facing diverse impetuses to integrate (Belair, 1999). In part, the impetus stems from the “technology imperative” which has had two key effects. First, technology offers the possibility of new tools for fighting crime, such a geographic information systems, instant identification, videoconferencing. And second, the digital revolution has fundamentally changed the nature of communication in the broader society — a change which produces an expectation that governments will be “on-line” and make information available digitally. Another impetus includes the demand for more efficient government. The “business case” for integration promises increased efficiency in government because shared information is more accurate, timely, complete, and less expensive (NASIRE, 2000). Pressure to develop information sharing systems comes from a variety of diverse sources — new actors in the criminal and juvenile justice systems, as well as legislators and policy makers at federal, state and local levels who view the juvenile justice system as a system with components that should communicate with each other, share data and information on a particular youth, and provide optimal data for planning, management and decisionmaking .

At the same time, upon the one-hundredth anniversary of the juvenile court in the United States, questions are raised among many regarding the goals and purposes of the juvenile court system and its effectiveness in coping with the problems of delinquent youth. In the past decade, the juvenile justice system has undergone substantial reforms that complicate the process of automation. The revolution in “high-tech crime fighting,” along with the move toward accountability in juvenile justice raises unique issues, challenges and pitfalls in the integration of juvenile justice.

Communication and information sharing can now occur directly 24x7 without having to go through intermediaries. Juvenile justice agencies have been slow in adopting new technologies for variety of organizational and professional reasons, but are now expressing interest in computerizing their operations with varying levels of success.

We know from successful systems at the adult criminal justice system level that they have been developed when there has been a clear articulation of the goals and purposes of such systems, there is commitment and involvement from upper administrative management and policy makers, and there is a champion who has the ability and the legitimacy to lead in their development. Within juvenile justice systems, the comparatively easy part is to integrate components such as probation, courts, detention and ancillary correctional services. If the system is to be truly effective, however, it must reach beyond those components and see to mutually share information with other youth serving agencies. The task of doing that is part technical because of the differing platforms used by other agencies but, more importantly, of getting consensus on what is to be shared and by whom. Agencies such as schools, human services departments, and mental health agencies may be anxious to receive information from justice agencies but reluctant to share their information out of concern for the

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confidentiality they feel they owe their clientele. If an integrated automated information sharing system is to be established it is critical that these issues be addressed. Juvenile justice systems are only at the beginning stages of accomplishing this preliminary tasks.

Juvenile justice managers and policy managers must take control of the process of system development to insure that it meets the case management needs of the workers who must use the system so that their operational requirements are met. The pace of technology development is increasing rapidly. These same managers must beware of these developments and seek to creatively use them in their organization.

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