

Integrated Justice Information Systems Guidelines for Procurement

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FORWARD

The unfathomable change in the capabilities of technology in the last 50 years has led our nation to contemplate the ultimate potential of a 'truly' integrated justice information systems that provide for the fulfillment of justice as we know it while protecting society in ways that could never have been achieved a few short years ago. We are engaged in making information available throughout the law enforcement and criminal justice community that will facilitate revolutionary changes in the administration of justice by way of vastly improved productivity and effectiveness.

The contrast between the incredible changes in technology in the last half century and the changes in the way technology is procured at least in the law enforcement and administration of justice organizations is rather remarkable. The procurement guidelines, methods, instruments, and rules used by the vast majority of political jurisdictions throughout this country still treat technology procurements in the same way as contract services are procured for paving the dirt road or building a bridge. Request for Proposals (RFP) contain procurement language in many cases, that is arcane and therefore, it is hard to determine the original purpose of the language.

The responsible companies that are in the business of providing information technology to law enforcement and justice agencies are convinced that there is a better way to manage the procurement process. This document is our prescription for change, incorporating our ideas for improving the relationship between the providers and consumers of information technology in the IJIS field.

It is too frequently the case that agencies embark on a procurement path with such fear and trembling that they create an adversarial process from the beginning that is filled with hostility and doubt that the project is doomed from its inception. The authors of this report suggest that a climate of partnership is more likely to succeed than one where mutual distrust hangs on every phrase.

Responsible companies in this industry want exactly the same outcomes from projects as the agencies making the acquisition. Both the supplying company and the customer want project success on time and within budget, and to the full satisfaction of the end users. The

responsible company is committed to this objective as the only way to stay in business and satisfy its stakeholders. The customer in the end, wants the same result, and also has a stake in seeing that the company stays in business so that future support is available. The vendors and the consumers, therefore, have exactly the same goals for every project because of this mutuality of interest. We should then be mutually committed to improving the quality and effectiveness of the procurement process every bit as much as we strive to improve the technology we bring to bear on these important issues in our society.

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Note: This report has been prepared by representatives of companies engaged in providing information technology to the justice community; however, the members of the IJIS Industry Working Group have contributed to this report out of their own experiences and do not necessarily reflect official positions of their companies, the Department of Justice, or any other corporate organization or entity.

ACKNOWLEDGMENT

This white paper on the topic of procurement and acquisition of integrated justice information systems (IJIS) is the product of the IJIS Industry Working Group (IWG). The IWG is composed of individuals from major companies who participate in the design and implementation of IJIS systems, but also whose background includes specific experience in this specialized field. The comments in this document are the views of the individuals and not their companies, and are intended to make a positive contribution to this important national objective.

The paper was drafted by a subcommittee of the IWG, which sought input from all members. We welcome comments and a continuing dialog in this important topic of how to improve these processes.

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1.0 EXECUTIVE SUMMARY - IJIS CHALLENGES

Integrated Justice Information Systems (IJIS) has, since the days of the inception of the Law Enforcement Assistance Administration (LEAA) circa 1970, been a stated objective for agencies of both the Executive and Judicial Branches of government. This includes law enforcement, court and corrections agencies and functions of local and state government, as well as specific Federal programs which are implemented in part at the state and local levels. The national Computerized Criminal History (CCH) System “program” being a case in point. In support of the IJIS objective, the US Department of Justice has, over the past 30 years, funded numerous programs at the state and local levels to promote the development of IJIS, and is currently sponsoring a new national IJIS initiative in this area.

In implementing IJIS, jurisdictions seek to implement processes and supporting technologies in support of the electronic exchange of data, information and documents in: 1) compliance with Federal and state laws, and Federal and state court rules and procedures; 2) conformance with locally established information exchange rules; and 3) in a timely and accurate manner. These processes are a dimension of IJIS information exchange that goes far beyond that mandated by the traditional forms-based processes; those currently driven by “discovery”, rules of evidence, local court rules, and “due process” under the law. The electronic exchange of information seeks to add value to the exchange of information, in at least two ways, by improving:

Productivity and Accuracy - eliminating the redundant entry of data and scanning of documents [by each agency in the workflow], thereby: 1) reducing errors [due to redundant data entry] and increasing data accuracy; and 2) increasing productivity by eliminating costly, repetitive, work processes that do not add value to the information exchange and management processes.

Timeliness - ensuring that data, information and documents can be exchanged [transported] point-to-point and point-to-multi-point in a matter of seconds, rather than hours, days or weeks. An IJIS also ensures that information is available where it needs to be at or before the time it is needed.

State and local jurisdictions have faced least four basic challenges in their efforts to define, design, acquire/engineer, integrate, deploy and implement IJIS:

Challenge 1: Adversarial Process and Local Legal Culture. While all jurisdictions within a state operate under the structure of a constitution, codified laws, and some level of formal public policy, their roles [be it based in criminal, civil or juvenile law] are basically “adversarial”. For example, the role of the prosecution agency and that of public defense agency are obviously adversarial. However, the role of law enforcement in bringing charges based upon probable cause may be, at times, at odds with the role of the prosecutor responsible for proving charges beyond a reasonable doubt in a court of law. This conflict exists even when the mission and objectives of both agencies would appear to be common. Further, the role of the courts may be at odds with these goals since the court exists to provide an objective forum for the resolution of issues, and protection of the rights of the individual against arbitrary misuse of government power. In addition, local legal culture and politics further impact upon and dictate the level of cooperation between agencies within a state, and within and between local units of state governments, with regard to the electronic exchange of documents and information. To address this challenge, agencies and stakeholders of state and local jurisdictions have worked diligently to establish policies, procedures, and “rules” for the electronic exchange of electronic data, information and documents. Some states, such as Florida, have taken the process to a critical final stage: the codification of electronic information exchange in the form of uniform “court rules” and statutory law. This is the critical, essential and fundamental first step in the resolution of the challenges to the implementation of IJIS in a jurisdiction.

Challenge 2: Lack of a Uniform Definition of an IJIS. While most state and local stakeholders will agree that IJIS involves the electronic exchange of information, there is little consensus and agreement about the definition or concept of an IJIS beyond that point. In fact, the definition of IJIS will, in all likelihood, vary from state to state. The establishment of consensus regarding the concept of IJIS within a given state or local jurisdiction is the critical, essential and fundamental second step in the resolution of the challenges to the implementation

of IJIS in a jurisdiction. The IJIS Industry Working Group is preparing additional “white papers” and other reference materials about this critical second challenge.

Challenge 3: Enabling Technology. For the greater part of the last 30 years, the implementation of IJIS data, information and document exchange process [whatever the concept] has been constrained by the proprietary aspects of the information technology industry. During the last ten years, the move to “open system”, e-Commerce and web-based applications have opened the door to a whole new set of enabling technologies, and new ways of thinking about a technical solution to the IJIS challenge. The deployment of enabling technology is the critical, essential and fundamental third step in the resolution of the challenges to the implementation of IJIS in a jurisdiction.

Challenge 4: Procurement Process. The state and local procurement processes, and the inherent variances in specific rules and guidelines, are the fourth challenge to state and local efforts to define, procure, design, integrate, deploy and implement IJIS. This process is critical, essential and fundamental, and the IJIS Industry Working Group offers this “white paper” as an input to the resolution of this challenge.

The purpose of this white paper is to provide keys, or guidelines, to acquire a useful and functional integrated justice information system for courts and justice agencies. These guidelines include discussions on scope of project, timeframes, budgets, technology expertise, evaluation criteria, partnerships, requirement definition and proposal content. It is important to note that the designers of this document have incorporated their experiences of responding to requests for proposals in the justice field that have been developed by criminal justice agencies. This information is valuable in that it crosses decades of expertise in the design of criminal justice systems as well as years of experience in the areas of court and justice management. It is through this expertise that a well-developed methodology is presented to the criminal justice community for the acquisition of integrated justice information systems.

2.0 WHAT IS INTEGRATION

What is integration and why is it important to the justice community? It requires that we, in a collaborative effort, pool our resources of information, budgets, staff and expertise to develop a system that shares information instead of storing data.

Far too often, the definition of integration is left up to the vendor to define **for** the agency that is requesting it as a solution to its information system needs. **Information integration** is a complicated concept with many components and levels. One single definition, therefore, may not be adequate for the diverse agencies within the justice community. Simply stated, **information sharing is the transfer of information from one individual or agency to another. An integrated information system then crosses all areas of service for the safety of our communities.** Through integration and cooperation, the justice system can develop a knowledge-base of information that can be used to serve the public more efficiently.

3.0 BENEFITS OF AN INTEGRATED JUSTICE SYSTEM

The major benefits of an integrated system are significant. An integrated system:

- promotes information sharing across all justice agencies;
- eliminates redundant data entry;
- minimizes erroneous data;
- supports a workflow automation process to maximize efficiency and improve the management and allocation of resources;
- provides an efficient and effective system for retrieval of critical justice information;
- allows for data verification by a supervisor before the information is released for access by other agencies; and
- permits implementation of an agency/user notification process to proactively alert all users when an event requires their attention or action (e.g., prisoner movement, case scheduling, etc.).

The following sections discuss a multi-step approach to assist agencies in planning and procuring an IJIS system.

4.0 PLANNING FOR IJIS PROCUREMENT

The planning phase for IJIS procurement is extremely important to the overall success of the project. It is during this stage that all members of the criminal justice enterprise within an organization should join forces to define and commit to a justice solution that benefits the enterprise and individual agencies. This section of the white paper provides suggestions and observations on steps and activities that an organization might consider as it begins to think about integrated justice and procurement.

The planning phase of this complicated process is critical to the success of the proper procurement of a system. It is in this phase that a vision should be established; goals and objectives should be agreed upon by the justice community and where organizational issues and concerns are discussed. The complexity and political sensitivity of the planning process and the commitment of time by senior agency personnel required for the effort should not be underestimated. Additional issues that need to be brought to the forefront of this phase is the initial discussions of how an IJIS may change the processes within each organization, what information should be made available to which agencies, security concerns, and possible organizational changes.

4.1 BUILDING CONSENSUS

The decision to embark on the implementation of an IJIS cannot be taken lightly. The technical solution, in many senses, is the easy part of the process. The more difficult challenge is identifying a series of generally independent agencies, examining each agency's business rules and procedures, and transforming the rules and procedures into a cooperative and dependent set of processes that support and, more importantly, improve the entire justice system. More often than not, the Clerk of Court or the court records department may find that their workload will increase somewhat to meet the automated information needs of the Sheriff's office or corrections management, such as the status of warrants and case disposition data entry. In other organizations, manual, paper-based processes will have to be automated to support a workflow methodology – an activity that may not be easily accepted by the impacted

workforce. Notwithstanding, the familiarity of the Internet and the common usage of PCs in most workplaces today, employees may not readily accept change or welcome the introduction of technology – particularly in areas that potentially impact job assignments, promotions, and job satisfaction. These issues are important, and the senior members of each justice agency must understand the challenges involved in moving to a truly integrated system.

A proven method for minimizing impacts and achieving consensus is to form an IJIS Policy Board, with senior membership from each agency, including the Information Systems (IS) Department. The Board should establish a formal charter and vision for the future, set regular meetings, and carefully establish rules, policies and procedures. The IJIS Board is a long-term commitment that will likely span several years from pre-procurement through system operation. The selection of members with the authority to commit their organizations to Board decisions is very important to future success. The mission of the Board should be to begin the development of a collaborative effort among the agencies to develop an integrated system. This should include informing staff members, as well as the public, of the project, i.e. project status and efforts. It is here where processes should be discussed, workflow analyzed and potential information bottlenecks identified. The decision-makers will be the means for the success of the system. Therefore, the IJIS Board is a focal point in the process.

The IJIS Board's decisions, formal charter and vision, along with the establishment of policies and procedures, are key components of the procurement process. The procedures developed by the IJIS Board will form the business rules for the new system, and will begin to provide the agencies of the jurisdiction with initial functional requirements for the procurement document. This is where we begin to identify what the system should look like, how it should behave, who should be able to access the information and how the system should function within an integrated environment. All of this information combined provides the vendor a 'look' at what the agencies within the community want to see, or what their vision is for their integrated system.

4.2 DEFINING A VISION

It is important that those agencies involved in the planning process of developing an IJIS, develop a common vision of what this integrated system will look like; how it will benefit the justice community and public; and what each must do to achieve this goal. Part of this process is determining a shared vision. Understanding the status quo of their systems, and identifying the shortcomings of their current systems can assist in determining where they want to be in the future. This vision will serve as a foundational building block for the IJIS.

4.3 ESTABLISHING BUSINESS RULES AND MULTI-AGENCY WORKFLOW

Once the IJIS Board's vision of integrated justice is determined and documented, and the scope of the system is defined, the next step is to identify the business processes and dependencies that exist within the justice agencies. Particular notice should be paid to data sources, data ownership and any confidentiality issues around the data. Correctly identifying current and desired workflow activities for an IJIS will be time consuming. A number of firms specialize in providing these analytical services and their use may be desired to help facilitate the collection and presentation of the information. Once completed, the business rules and workflow will form the basis for system functional requirements that can be issued in a Request for Information (RFI) and later a Request for Proposal (RFP).

During this stage of the process, it is vital to communicate the findings and results of the workflow analysis to the senior and mid-level managers in each agency. Hopefully, these same individuals participated in the data collection and analysis activities and are positively motivated to pass on the features and benefits of the new integrated system to the support staff in the organization. This phase can also become the moving force for agencies to review their current workflow procedures and policies and identify areas of inefficiencies and problem areas. These can directly impact an IJIS. The need to improve manual procedures prior to the implementation of a new IJIS is sometimes overlooked by agencies, and can have a negative impact on the development as well as the implementation of the new system. It is, therefore, imperative that this step be included in the process to ensure success of the IJIS procurement.

4.4 CREATING A STRATEGIC PLAN

Developing a strategic plan for implementation of an IJIS is an important part of the process for the procurement of an IJIS. Without a clear strategy as to how the agencies involved in this process envision the implementation and installation of an IJIS, responding vendors will have a much more difficult time determining the needs and wants of the justice agencies. Though the strategic plan will be more conceptual, the plan itself will provide the agencies and vendors with general models and typologies of current systems and a vision of the future systems. These will serve as guides for the justice system community in understanding the desired future of the IJIS.

4.5 SECURING FUNDING

After the functional requirements and business rules have been defined and workflow agreed upon, it is important for the agencies to have an understanding of what the newly defined IJIS will cost. A simple process in identifying system costs is to develop a listing of similarly sized organizations based on users, population and caseload within the justice agencies. Telephone calls or surveying these sites can provide the organization attempting to procure a new IJIS with a baseline cost assessment. Knowing approximately what an endeavor may cost upfront can assist the organization in securing funding for the procurement. Many organizations that do not perform this step can be unprepared for the actual cost of an integrated system. This lack of preparation can stall the procurement or put the entire project on hold for years until the funds to successfully implement a system have been appropriated.

5.0 OPENING UP THE PROCUREMENT PROCESS

For years, state and local governments have followed a basic procurement process that is designed to ensure selection of the best proposed solution at the lowest price to the taxpayer. The process has essentially been for the jurisdiction to issue a “tomb” or RFP, detailing its request, and for the vendor to respond with its own “tomb” or proposal. Then, a lot of very dedicated and earnest people sit in a room, read and interpret the responses, and make a final judgment and selection based only upon a comparison of the two “tombs”. What is needed is

the opening of the procurement process, allowing more opportunities for dialog between the jurisdictions and vendors during the procurement process. This will increase the probability that the final proposed solutions are based on a real understanding of the needs and constraints of the requesting jurisdictions. Many states, such as Pennsylvania, have modified their procurement processes more along the line of the Federal system thereby providing a staged process with continuous and open discussions. In the end, the jurisdictions receive proposals that are competitive and offer better, cost-effective solutions.

6.0 ESTABLISHING A BUDGET

It is understandable that many agencies will not have a strong understanding of what an IJIS will cost because of the extensive number of variables. Experience provides only one rule of thumb - the system will cost more than you think. Cost is really comprised of two components: the price of the initial system development, and the agency's cost to plan, procure, implement, and operate the system. From the agency's perspective, one needs to budget for a fair amount of overtime of existing resources or temporary resources, extensive meetings, site visits to other counties or states, vendor or association trade show visits, and use of consultants and contractors. No matter how well the RFP requirements are defined, it is very likely that user's will identify many "must-have" requirements that are beyond the scope on the vendors contract.

7.0 DEFINING THE SCOPE AND COMPONENTS OF A PROPOSAL

The IJIS Vision and Strategic Plan are very important documents that set the goals, benefits, guidelines and constraints that will influence the overall IJIS procurement. However, before the IJIS Board can begin to define general and detailed system requirements that can be documented in a Request for Information (RFI) or Request for Proposal (RFP), the IJIS Board must properly determine the scope of the project.

The scope provides the planners and developers with an understanding of what has to be done to create the system. In a concrete fashion, it defines the components of the system as well as the limits to be imposed on the system functionality.

In addition to the functional objectives to be met by the new system, other important requirements impacting both the IJIS Board and the vendor community must be understood and addressed in the procurement documents. The IJIS Board should consider the following points when stating the project scope in an RFI or RFP:

- Is data conversion of existing databases required and what role will IJIS agencies play in the conversion?
- Which legacy information systems are impacted by the new IJIS project? Will any existing systems be replaced by the new system?
- What information security procedures apply to this procurement?
- How will system access be controlled?
- What hardware or software architectural guidelines, preferences or standards apply?
- What is the County's or organization's training concept planned for the procurement: Vendor supplied, Train-the-Trainer, etc.?
- What is the system maintenance concept: customer or vendor supplied resources?
- Are there any system implementation priorities or external dependencies that may impact the procurement or the vendor's technical approach or schedule?
- What criteria will the County use to determine systems acceptance: Response time, system reliability, testing of functional requirements, etc.?

In the following paragraphs, each of these issues is discussed in more detail.

8.0 DATABASES

Probably the two most important elements in the functioning of an IJIS are database communications.

Welding multiple databases into a coherent and useable shared resource has unique challenges. Timelines, content specs and quality must all be considered carefully. Data types vary, field minimum and maximum sizes vary, code specifications may differ, coding itself may vary considerably for a given field. The necessity for a field may be incompatible between

different agencies. Data issues have dissuaded integration efforts where the commitment to integrate was not deeply held at an upper management level.

The creation of a database concept meeting the objectives of the IJIS is probably the most important step in the design process. It should be considered a critical first step in the plan and it should be carefully defined in the RFI/RFP. As an early step in the project, attention to design detail should be heightened, and will lead to resolution of challenges quickly and thoroughly.

9.0 DATA CONVERSION

Data conversion is the process of converting data records, existing on the systems to be replaced by the new IJIS system, to conform to the database structure provided on the new system. Data conversion can be a major cost driver for both the vendor and the customer. A determination of data quality is absolutely required. Data can be examined by inspection using various query tools or reports to check consistency and validity of data formats and the occurrence of what would be considered “mandatory” data such as charge codes, event dates and names. A review of similar data on multiple systems must also be considered. This way, one data format can be created for a common database structure, and multiple records on the same individual can be physically or logically “collapsed” into one record. A harder problem to identify and resolve is situations where the data is old, inaccurate, or unreliable, and the vendor has no way to determine a course of appropriate action. An example would be an old warrants database containing warrants that still have an active status, when they have already been served or recalled. In this case, a suspect or prisoner scheduled for jail release might have to be detained if that inaccurate data, although converted correctly in the new integrated database, is not quickly researched and modified in the new system.

In cases like the warrants example, the cognizant justice agency must take responsibility for conflict resolution. The best time for that analysis and “repair” is before the procurement takes place, and not later, when a whole host of other issues will consume the agency’s time. The vendor will appreciate seeing as many file layouts and database record formats as are

available, so that the structures can be understood, and a more effective (and less expensive) database conversion strategy can be formulated.

The perpetuation of inaccurate and outdated data is not in anyone’s best interest. If the data cannot be certified as reasonably accurate, current and useful, it may be wise to avoid conversion of the data to the new system.

10.0 DEFINE LEGACY INTERFACES

Most justice organizations will have to maintain interfaces to existing systems such as state Automated Fingerprint Identification System (AFIS), Computerized Criminal History (CCH) repository, or a public safety network, Federal systems such as National Crime Information Center (NCIC) or the Integrated Automated Fingerprint Identification System (IAFIS) system. In some cases, local systems that have been recently upgraded, such as a Computer Aided Dispatch (CAD) or jail management system, must be retained and integrated “as-is” into the new approach. These requirements are to be expected, and the IJIS vendor community needs complete information on the legacy systems (hardware, software, database management system, network, etc.) so that appropriate or preferred interfaces can be designed into the vendor’s solution.

Companies that write proposals to these agencies would generally like to find an accurate way of pricing the cost of any given interface. It is quite often the case that the RFP does not give the vendor enough detail to make an accurate estimate. For every such interface, there are several levels of information required in order to estimate total cost:

- (1) the exact functionality of the interface, e.g., is the intent just to provide query access, or is there to be some database interaction for storing or acting on information and replicating data from one system to another;
- (2) the physical environment to be implemented (how the systems will actually be connected such as on a LAN, dial-up, etc.);
- (3) the protocol for communicating between systems; and
- (4) if data is to be transformed in any fashion, what format is the data in.

Where this level of detail is provided to the bidders, the likelihood of the bidders providing a valid and reasonable estimate is much higher.

11.0 DATA SECURITY REQUIREMENTS AND PRIVACY

As long as databases, whether automated or manual, are maintained within individual agencies, access control and unauthorized use issues are generally not high on the priority list. With a common database and consolidated data records, access will definitely be an issue that could impact system security requirements. These issues should come out during the workflow analysis and the IJIS Board should address security very early in the discussions of an operations concept for an integrated system. Security requirements and expectations of operation must be clearly defined in the RFI or RFP. If the IJIS Board waits until the vendor has been selected to discuss these issues, it can greatly impact the scheduling of the project, as well as the cost of the project.

At the same time, there is a tendency to overstate the requisite level of security when contemplating systems suitable to the needs of the customer. It is valuable at this point in the project development to have a realistic understanding of just what the security risks and objectives really are, and how these objectives must realistically be applied.

Consideration of information privacy is key to the success of integrated justice from a governmental and public perspective. Even the most well designed and efficient integrated system can be brought to a halt by concern over the collection, use, and dissemination of personal information within the system. It is imperative that the following be considered:

- Jurisdictionally specific privacy laws and regulations should be examined in the planning phase of any integrated justice system;
- Privacy policy must be agreed to by all agencies participating in the integrated justice system; and
- Technology decisions should reflect the desire to implement legislative requirements and agreed upon privacy policy¹.

¹ Resources are available to assist agencies in forming their jurisdiction's privacy policy:

- 1) Privacy Design Principles for an Integrated Justice System,
- 2) Privacy Impact Assessment for Developing and Implementing Integrated Justice Systems,

12.0 PREFERENCES FOR EXISTING HARDWARE, SOFTWARE, AND NETWORK RESOURCES

With the threat of Year 2000 disruption of Information Technology (IT) systems, most agencies have completed some level of equipment inventory, checkout, and equipment replacement. It is likely that a new IJIS will reuse some existing resources. Customers need to inform the vendor of existing peripherals that are under consideration for incorporation into the new system. Vendors will pay attention to this information and respond with an architecture that meets the needs of the IJIS, or, with appropriate upgrades that will help obtain the desired IJIS solution.

12.1 Establish Architecture Guidelines

Some procurement organizations are loathe to specify any particular vendor product or de facto standard such as Oracle™, NT®, TCP/IP, or HP OpenView™, because they feel it restricts competition or may result in protest. Most vendors can work with multiple products to design a compliant and responsive system. If a particular technology is important, agencies will save a great deal of time and money by first informing the potential vendors of the desired technical environment and architecture. The IJIS Board should be concerned about the system architecture because it impacts a number of important operational factors in the procurement, in terms of system administration, training, system scalability, and legacy interfaces. If the IJIS Board has strong preferences for a particular architecture or system component, then it is best to place this information in the RFI or RFP, and advise the vendor community up front. This information will enable the vendors to provide a desirable solution and remove the ever-present guesswork that usually shadows these types of endeavors. Nothing should stop the vendor from submitting an alternate approach, if the vendor can justify why the differences are in the agency's best interests.

3) Justice Information: Public Access Guideline (available Jan. 1, 2001).

12.2 Define the Training Concept

Experience in implementing IJIS has taught us that **training** is by far one of the most important determinants of system success. Training is also the area that is usually **underfunded** by the customer or scaled back by the vendor to reduce the cost. Training on an integrated system is more than just learning the applications. It requires understanding of the new business rules and workflow, inter-agency dependencies and how they relate to data and procedures. All of this information is extremely important and vital to the success of a system. To reduce costs, a Train-the-Trainer approach is often mandated by the RFP or suggested by the vendor. If the Train-the-Trainer concept is accepted or preferred, it is recommended that a training certification process be instituted to ensure that each agency trainer is capable of “successfully” delivering the material to the end-users of the system.

If this approach is not possible, it is recommended that the vendor provide all user training both before and after system acceptance. While this will increase the vendor’s price, the result will be well worth the investment and sustainability of system quality.

12.3 Define Maintenance Needs, Roles, and Responsibilities

In organizations where “mainframe” solutions have been used for years, migration to new technology is both exciting and risky. The traditional IS shop must learn new technologies rather quickly, and still perform their existing duties until the new system goes on-line. Depending on the skills, initiative and motivation of the current staff, this dual responsibility may not be practical. Agencies may have to add engineers or temporary staff to the current IS organization so that the responsible staff will have the time to prepare for the new system or to provide hands-on support during equipment and network installation, testing, and implementation.

Another issue facing local government on a daily basis is the rising salaries for experienced IT professionals in today’s market. It is unavoidable that once IS staff gain new experience in current technologies, market demand for their skills will cause some to leave government service for better paying jobs in industry. This issue should be considered by the IJIS Board and appropriate personnel agencies before the problem impacts system implementation.

In many organizations, the traditional “help desk” has mainly concentrated on the communications network and physical movement of devices or upgrades to computers. With an IJIS, nearly every user will be touched by the new system, and the “help” in help desk takes on new meaning. Depending on the availability of trained “super-users” within the individual agencies, help desk personnel may be called repeatedly for assistance on IJIS applications. It is imperative that the help desk staff be well trained on the applications, and in fact, should conduct some of the training. Equally important will be the help desk functions supporting software problem reports during the warranty and maintenance phases of the project. If it is unlikely that existing IS or help desk staff can support these requirements, the RFP should specify vendor obligations during the system warranty and maintenance phases to make sure that the system and end-users have the support they need for daily operations.

12.4 Define System Implementation Priorities

Building information systems is a business, and successful vendors will be always balancing current projects with the demands of new clients. Vendors can generally meet all reasonable schedule milestones if requirements are clearly understood and appropriate staff resources are available. Therefore, it is very helpful to the vendor community if RFPs provide needed insight into schedule dependencies and mandatory deadlines. If the vendor can propose different phases of system integration, such as a core system implementation followed by a customization phase, include this information in the RFP. If all mandatory requirements do not need to be operational on day one, this information should also be included in the RFP. The bottom line is that if the RFP offers some schedule and milestone flexibility, the agency may receive more responses to their RFP, resulting in more options to choose from, and therefore, more competitive responses.

In addition, the IJIS agencies need to build into their schedule a contingency plan to accommodate unanticipated delay factors. This allowance is to accommodate probable program delays resulting from the agency, vendor, or a combination of both. Occurrences of Murphy’s Law (if something can go wrong, it will) seem to happen more often with integrated information systems projects for a number of reasons. Commercially available technology is

almost routinely sold and shipped with known bugs or without rigorous testing. Risk is compounded by the integration of products from multiple vendors for hardware, operating system, Relational Database Management System (RDBMS), communications software, and the IJIS application. Vendor personnel changes are also inevitable, as is changeover in existing customer key staff, as market demands for skilled IT professionals is intense and staff turnover may be high.

12.5 Establish System Acceptance Criteria

System acceptance criteria are very difficult to quantify. This explains why many RFPs for IJIS specify that acceptance criterion will be established after contract award or after a system design review. Correspondingly, it is difficult for a vendor to sign up to a firm fixed price contract when system acceptance criteria are undefined or vague. Some vendors will submit a bid, but most will add a sizable reserve to cover the implied risk of additional resources to meet an unknown acceptance target.

The recommended general approach is to base system acceptance upon whether system requirements have been satisfied by the technical solution, as defined in both the vendor's proposal AND in a requirements specification submitted after award, agreed to by both the agency and the vendor. It's important that the IJIS Board discuss and agree upon the definition of systems acceptance, because it governs the certification of system requirements and generally determines when final vendor payments are authorized.

13.0 DEFINE RESPONSIBILITIES OF THE IJIS BOARD AND THE VENDOR

If the failed attempts to implement integrated justice information systems were closely examined, it is likely that the failures were attributable to a lack of project management skills on the part of the customer, lack of communication and corresponding lack of common understanding or expectations. Successful projects are ones in which everyone knows clearly what is expected of them, and where all parties are kept informed as problems arise.

It is critically important for the IJIS Board and the vendor to understand what each is expected to contribute to the project, what authorities and responsibilities are assigned to each

party, and what decisions might require consensus. These issues are best handled before the vendor is selected, and later reviewed and discussed so that there will be no misunderstanding of what each party expects from the project.

The IJIS Board should require periodic reports, briefings, and notifications of any aspect of the project where a deviation from expected performance or schedule is even remotely possible.

The vendor should also expect that the IJIS Board will manage all contractual, political, and financial issues, and ensure that these issues will not get in the way of project successful implementation.

14.0 FINDING POSSIBLE PARTNERS - WHERE TO LOOK

One of the basic concerns of any jurisdiction seeking to implement an IJIS should be the issue of finding a vendor with which to form a partnership. The first step in this process is figuring out who the right candidates are. There are hundreds, if not thousands, of companies offering information technology, and the choice of a partner is not an easy one. Smaller jurisdictions have the problem of attracting industry interest, and having enough companies interested in bidding to have some true competition. Part of the answer to this problem lies in improved procurement practices.

The best source of information for finding candidate companies is other jurisdictions that have experienced similar implementations. However, this is only a start. The companies that may be making new solutions available may not have been involved in these projects.

The Internet is a valid tool for identifying companies. Most have web sites, and if they don't have one in today's world, they are probably not a serious contender as a partner. Further, sites maintained by Search Group, Inc., the IACP Clearinghouse, and other links will lead to the identification of many potential candidate companies. The IJIS Industry Working Group and the Center for Integrated Justice Information² can also provide lists of candidate companies active in the field.

² Center for Integrated Justice Information is part of the Office Justice Program's Integrated Justice Initiative.

15.0 RFP RESPONSE TIME - HOW MUCH TIME DO YOU NEED?

System vendors often interpret a short response time to an RFP as a sign that the customer has already selected the company for the project and consequently, most companies may not respond to the RFP. The general rule is that the greater the time that can be given to a vendor to respond to an RFP, the higher the likelihood that companies will bid, and the stronger the probability of the customer receiving a set of good proposals. For a system that is to be a fully integrated justice information system, 60 days is a reasonable time period from the time the potential bidders receive the RFP until a proposal is due.

16.0 USE THE INTERNET IN THE PROCUREMENT PROCESS

With the widespread availability and use of the Internet, IJIS procurement agencies are strongly recommended to deploy RFIs and RFPs on the Web. An IJIS project web page, linked to the agency homepage, could be used not only to deploy the requests, but also any related and pertinent documents such as a strategic plan, architecture plan, or vision statement. Use of the Internet could significantly reduce the time and cost factors associated with creating and mailing hard copies of RFIs and RFPs to multiple vendors, as well as assuring the widest possible exposure for the requests. Specific vendor solicitations can be requested via email to notify them of the website.

Web conferences linking both the agency and prospective vendors could replace “in person” mandatory bidder’s conferences. Because this approach reduces the expenditures of both time and money, a greater number of vendors may participate than would otherwise be automatically eliminated by the “in person” requirement of the Agency. Web conferences, would also eliminate or reduce the need for the Agency to spend time on some of the logistical issues associated with hosting an “in person” bidder’s conference, such as scheduling location or providing hardcopies of the RFI or RFP at the meeting.

Questions from vendors, related to the RFI or RFP, could be submitted to a common email address. The questions and the answers should then be shared via the Internet for all vendors to review. Vendor responses to the RFI or RFP could also be submitted to a common email address with a return receipt. Electronic submission of vendor responses does not

preclude the need or desire of the procurement agency from specifying a specific date and time for responses to be submitted, nor does it preclude the submittal of separate technical and cost proposals. The date/time stamp and return receipt features of email systems guarantees that proposal deadline requests can be determined. Separate technical and cost proposals can be submitted as separate emails. Email systems easily show when an email is opened, thereby determining whether a cost proposal is opened and read prior to reading all technical proposals.

Electronic submission of proposals saves time and money for both the procurement agency and the vendors. Procurement agency staff no longer has to “man” a room; waiting for vendor proposals, and vendors no longer have to pay additional money to guarantee mail delivery of multiple hard copies of a proposal. The only limiting factor in utilizing technology to submit “soft copy”, or electronic RFIs, RFPs and their responses, is document size. Both procurement agencies and vendors should be cognizant of email limitations related to document size when utilizing this approach.

The IJIS Industry Working Group suggests that if agencies re-engineered their procurement processes to take advantage of the internet and other technologies, the total cost of marketing would be reduced significantly. In turn, this would translate into lowering the total cost of system implementations.

17.0 SELECTION OF AN IJIS PARTNER

The selection of a corporate partner is often made using evaluation or decision-making factors that have little to do with the likelihood that the company will indeed contribute to a successful project. When the selection process is based on emotions or personal relationships, the customer is indeed risking project success.

It is a good rule to start the selection process by weeding out the companies who will not contribute to the success and completion of the project. Start with the obvious: companies who cannot work with the platform or environment that is important to the agency. Those who remain should be evaluated on clear numerical scales, weighing evaluation factors and assigning scores among the candidates.

Some of the conventional wisdom that keeps appearing in RFPs is not necessarily useful for making appropriate selection of an IJIS vendor. The size of the company is no predictor of company stability in the IJIS field, nor is the financial statement.

In the final analysis, it is the people who will be assigned to the project that will make the difference. It is their experience, skill and knowledge-base that will make the project succeed. Defining the number of systems built as a criteria is less important than the nature of the project team's experience in the desired technology.

The best approach is to establish actual, specific and measurable criteria, and then assign a weight to each factor.

18.0 RECIPES FOR FAILURE

Why do IJIS projects sometimes fail to meet expectations? There are many reasons that contribute to a project's failure. The Industry Working Group members have reviewed their own experiences, and have come to some conclusions about the causes of failure that might be avoided by the right decisions and attitudes on the part of both the vendor and the customer. Some of the key reasons for failure may be:

1. Ineffective project management. Justice agencies are often faced with a lack of staff who has either professional training or experience in project management. The ability to control resources, manage the expectations of the users, and adhere to project plans are skills needed both by the vendor's project manager and the customer's project manager.
2. Expectations mismatch. Agencies often have a vision of what is expected of the ultimate system that differs from the vision of the vendor. Sometimes agencies get involved in projects without a clearly articulated vision. This is a sure predictor of project failure. Early insistence on the part of both the vendor and the customer to make absolutely sure that there is a clear vision, and that everyone understands the vision in terms of clearly stated written expectations can go a long way to eliminate this potential conflict. Once the vision is established, it should not be changed unilaterally. The difficulty in

completing projects can be attributed to this one single factor above all others.

Changing the expectations after the project is moving forward demands a fresh look at the project plan, schedule, cost, and resources on both sides.

3. **Communication Failure.** If there is another major factor leading to project failure, it almost always is expressed in a failure to communicate. Software technicians are notorious for their general lack of communication skills. Customers sometimes fail to ask questions for fear of appearing to be uninformed. People are naturally reluctant to raise issues that may appear to be in conflict with the vision. The general attitude on the part of the vendor and the customer must be to overcome any and all reluctance to communicate with each other at all levels. Frequent use of e-mail, telephone status calls, monthly review meetings, independent review teams, and all other possible ways to encourage communication will do much to assure project success.
4. **Distrust.** Too many projects start with an attitude of distrust. Agencies that have had a bad project experience bring that background to a project, and such an attitude sets up the project for potential failure from the beginning. Some companies bring a similar attitude of distrust to the table. We are convinced that a complicated project, such as an IJIS project, can succeed if both sides do not start with an expectation that each will perform as promised. This principle does not in any way diminish the need for measurable controls in project management, however, a measure of trust in one another will make negotiations over changes and expectations much more likely to succeed.
5. **Lack of executive management commitment and involvement.** There has been a long history in law enforcement and justice agency projects which show very clearly that when the chief executive is not actively engaged with the project, there is a high likelihood of failure. In the integrated justice world, this situation is complicated by the number of agencies involved. Customers who have established an executive level steering committee that meets regularly, sets policy and resolves high level issues are much more likely to succeed.

19.0 CONTRACT FRAMEWORK

The contract framework that has often been used in IJIS procurement can also be a major influence in the likelihood of success of the project. The contract negotiation that is done in a purely adversarial setting will invariably result in conditions that constrain both vendor performance and customer flexibility. All too often, the procurement office is single-mindedly focused on tying the hands of the vendor with various punitive measures and conditions. This is the wrong way to start the process of developing a contract.

The best way to begin defining a contractual relationship is to understand how to make it a win-win situation. This means that the contract negotiators on both sides of the table must understand what winning means in the larger sense. In the end, there are many common objectives that constitute a winning situation for both the customer and the vendor. Both sides want a project done in a way that meets customer expectations, is accomplished within the expected schedule, and at the expected cost. Deviations from any of these components are a cause for concern for both the vendor and the customer, yet most contracts do very little to effectively handle the almost certain deviations that occur in a project as complicated as building an IJIS.

Many public contracts still retain the concept of negative incentives to contract performance rather than effecting a win-win definition. The use of conditions such as liquidated damages and performance bonds are frequently proposed by customer procurement agencies. These antiquated tools are nothing more than legacy provisions of construction contracts, and are not appropriate incentives for information technology contracts. Particularly in the IJIS world, when customers insist on including liquidated damages, and when the proposer knows full well that uncertainty in the project is inevitable, most companies have no choice but to raise the price by an amount equal to the liquidated damages and assume that they will pay such damages.

The use of performance bonds is also inappropriate to information technology contracts, and serves primarily to increase the price of the contract. The use of performance bonds can severely limit the choice of companies that can bid on any given project. Smaller companies, who have traditionally been nimble and responsive providers of information technology,

generally cannot obtain performance bonds, and are thereby precluded from bidding. The customer agency then suffers by precluding possible vendors that may be able to provide technology solutions at a lower cost than the larger companies who are able to obtain performance bonds. Further, this particular negative incentive is not an incentive at all, even to the larger customers, because it is generally assumed that even if such a bond is called, the insurance company pays and not the vendor. While such a scenario may impact a company's ability to acquire such bonds in the future, it rarely plays into any incentive concept that the vendor holds in mind regarding project performance.

The use of such legacy negative incentives can have a crippling effect on the way companies approach bidding and project performance, forcing decisions that may actually be counterproductive. These provisions also constrain the customer in making decisions that may be in their own best interest.

This is not to suggest that incentive contracting should not be considered a useful tool. However, the incentives should be defined in a way that is meaningful to both the customer and the vendor.

Because of the normal uncertainty about the content of systems, contracts often spend an inordinate amount of space dealing with the scheduling issues, and impose punitive consequences for delays. In IJIS projects, it is nearly impossible in many situations to define a realistic schedule before the project begins and until the exact requirements are defined. Yet, many contracts start from exactly the opposite premise and refuse to acknowledge this absolute certainty. Contracts that make provisions for schedule revisions, as more information becomes known about the prospective work, would assist the project participants in making adjustments without leading to negative consequences.

Another failing of many contracts is to make clear the authorities and responsibilities of the participants in the project. The definition of exact roles and decision-making authority should be a part of any IJIS contract. This is particularly important when it comes to defining the authority and responsibility of the customer project manager, and the boundaries for decision-making that can be made without external approvals. If the project manager is not

empowered to make timely decisions, the project cost and time parameters can lead to major impacts on project completion.

The change order process is an essential ingredient of any good contract. The details of how, when, and under what circumstances either the customer or the vendor can initiate and should initiate a change order are best defined well in advance of the occasion when one is required.

The contract is also the right place to carefully define the communications between the vendor and the customer, specifying the means and frequency of reporting and the content of status reports. There should be clear, mutual understanding of how impediments to progress will be made known to both parties, and methods defined for the resolution of such obstacles.

Payment schedules offer another opportunity for customers to save money and promote a win-win relationship. Procurement officers sometimes fail to realize that the vendors (particularly smaller companies) are ideally seeking a cash-neutral kind of contractual relationship, where the cash outlay (actual salaries and expenses) is reimbursed as quickly as possible. Where the payment schedule does not provide for such reimbursement, the vendor is forced to add the cost of borrowing to the contract price, and perhaps an additional amount of “risk” factor in the price. Where a customer can set up a payment schedule, tied to deliverables, that ensures the contractor will cover out of pocket costs as the project proceeds, the price will be lower and the contractor will feel more inclined to commit the resources as quickly as possible. There can still be room for final hold-back until acceptance for at least some of the profit portion of the project price.

Developing a clear project closure definition is also a critical part of the contract process. Many companies have found that the difficulty in bringing a project to closure and gaining final acceptance is the biggest risk and therefore the biggest unanticipated cost in a project. The contract should articulate the specific nature of the acceptance testing and process, limiting times in a way that companies can calculate their exposure. Customers that drag out final approval because they are unwilling to let go of the company do more to inflate project costs than they do to get projects completed.

20.0 CONCLUSION

Rethinking the procurement process to involve the selection and development of a partnership with vendors can lead to many beneficial consequences for justice consumers. The ways of acquiring construction projects do not lend themselves to information technology, and it is time to plan a new approach. Keeping the objective of forming a partnership, as opposed to an adversarial process, will have many benefits such as:

1. Lower costs for systems. As procurement takes into account the impact of legacy provisions and approaches, and replaces current processes with more technological informed approaches, the overall costs of marketing will decrease and system acquisition costs will be less. As justice agencies participate in defining contracts in such a way as to take into account what makes the company, as well as the agency, a winner, the cost of individual systems will be less.
2. Better systems. There is no doubt that partners working in concert can build a better system than adversaries. Better solutions, functionality, and higher expectations can be provided if the flexibility in the contracting process and its management is a part of the process.
3. Fewer project failures. If the partners in a project would work together to share mutual expectations, institute processes for changing expectations, and work together toward ensuring that all expectations of both parties are met, projects will be much more likely to succeed.
4. Creative solutions. Partners in a venture, structured such that both parties share risks and rewards, are much more likely to invent better solutions than a more rigid procurement and management process.
5. Faster implementation. Procurements that use electronic means to accelerate communication with potential bidders can be completed faster and cheaper. When such reforms are coupled with more intelligent partnering solutions, systems will be completed faster than in historical scenarios.

These conclusions are the result of members of the IJIS Industry Working Group's analysis of how projects are started and completed. These are just a sampling of some of the innovative ways that procurement and acquisition processes can be improved to enhance the potential benefits of a partnership approach to building advanced integrated justice information systems.