



Information Technology Strategic Plan

2013

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Judiciary Information Technology Strategic Plan

Introduction

The Judiciary's Information Technology Strategic Plan (ITSP) is designed to provide a prioritized framework for the implementation and development of technologies dedicated to modernizing the business aspects of our courts and improving the delivery of services to judges, staff, attorneys, litigants and the general public. This guidebook also includes a brief overview of previous technological initiatives and accomplishments in order to promote a better understanding of how the newly revised ITSP will continue to move our courts forward embracing the benefits of current and future technologies.

History

The year 1985 serves as the benchmark for the creation of the court's automated process (IDMS—Integrated Database Management System) which addressed the need to efficiently manage, store, protect and access data. That year marked the beginning of the ongoing initiative of moving from largely manual paper driven processes to those that will soon become paperless. Past efforts have resulted in time and cost savings by streamlining resources. The ability to achieve more accurate recordkeeping increased the reliability and integrity of data. Both of these achievements have enhanced the ability to meet constituent demand. Computer technology is now essential in almost all aspects of a functioning court system.

Since those early days, largely as a consequence of continuing advances in computer and communication technology, the world has changed and so has its impact on the court. Given the vastly different economic environment that existed a quarter century ago, the impatience and pressure to meet emerging technology demands on the court system must now be tempered with the constraints imposed by limited funding and resource availability. Research, staffing, development and all of the myriad processes and requirements that support the Judiciary's IT initiatives coexist within an environment of decreasing budgets, restrictive procurement processes and competitive IT recruiting challenges. These efforts demand a more lean approach. Whereas computer technology can automate practically any process, without first examining the need to automate the process and cost benefit, it may result in a less-than-effective use of funding. Governance has become the watch-word of the day--it speaks to the performance and risk management of the IT infrastructure. Governance must dictate the future direction IT development will take within the Judiciary. (See: Appendix 2 for the Principles of IT Governance.) Temptation to use new technology will emerge but must be tempered by its cost effective purpose. In doing so, Court mandated prioritized goals may be achieved thereby ensuring the integrity of ongoing court operations.

The first formal iteration of the ITSP was approved by the Supreme Court in 2001. That document addressed the information technology 'must haves' of the Court, at that time. The 2001 ITSP, more than a static document, laid the foundation for the Judiciary's

future approach to the design, development and implementation of emerging computer and web-based technologies. It described the need for modernizing our underlying database systems, the challenge to explore and exploit the new capabilities of the internet, the expansion of email services, the urgent priority to secure and protect court data, and the requisite need to upgrade the hardware, software and network environments which support it all.

In 2003, the ITSP was revised thereby illustrating the progress made in the completion of the goals set forth in the original plan. Moreover, ITSP 2003 spoke to the change in demand for Judiciary information systems and the shifting priorities of those demands.

The second major revision to the ITSP was approved and released in 2007 to present an updated view of the Judiciary's technology priorities and objectives through 2012.

Accomplishments

Key accomplishments to date include:

- Conversion of all Judiciary case management systems from IDMS to DB2 database technology. This fulfilled a complex ten-year planned effort to upgrade these systems to new, flexible, supportable and robust database architecture. The secondary phase of this large-scale effort continues today as we adapt and leverage emerging web-based technologies to ease and simplify access to Judiciary data.
- Integration of the Executive Branch's child support system and Judiciary's case management application was completed and implemented. This multi-year initiative resulted in the total overhaul of the Executive Branch's child support collection and tracking system (NJKiDS) and its successful integration with the Judiciary's child support case management system.
- Implementation of numerous improvements to legacy court application systems. Many of these changes were necessitated by legislative mandate, court decision or emergent operational need.
- Development and expansion of standardized local area networks (LANs) and desktop office automation services throughout the Judiciary. Upgrade of this hardware and software infrastructure is on a repeating four-year cycle.
- Development and expansion of the complex wide-area network (WAN) infrastructure supporting a unified state Judiciary through interconnection of all vicinages, municipal courts, appellate courts, administrative offices and external parties (prosecutors, public defenders, jails, law enforcement entities, other agencies, federal government, etc.).

- Support of a standard statewide email system throughout the Judiciary to facilitate efficient internal and external communication.
- Development and ongoing improvement of an enhanced security infrastructure to protect the integrity of Judiciary information systems and to prevent unauthorized access.
- Implementation and support of the tools, processes and training to facilitate efficient IT development, operations and user support.
- Development and implementation of an expanded Judiciary website that provides information about court decisions, the Judiciary and the AOC (Administrative Office of the Courts) to employees (through the Infonet which is the Judiciary's intranet) and to the public (through www.njcourtsonline.com, the Judiciary's public website).

Efficiencies

These efforts have yielded demonstrable cost savings and efficiencies since they have been introduced. Additionally, there have been other key IT-related initiatives that have delivered significant tangible benefits. The following points serve to illustrate them:

- In the area of Courtroom Automation, a video conferencing and instant messaging software application has been implemented at the central office and all vicinages. This has eliminated commuting issues for many court proceedings. Additionally, internal committees now regularly conduct video conferences. The benefits to the Judiciary have come in the form of time savings and enhanced flexibility for communications.
- The Core Infrastructure initiative has seen development through improvements to the Judiciary Data Network and Disaster/Recovery planning initiatives. Components of the Judiciary Data network have been redesigned to take advantage of new communication services available at a lower recurring cost. This implementation makes use of Ethernet Virtual Private Line (EVPL) technology. This enhanced network connectivity has yielded benefits to the Judiciary in the form of decreased downtime and costs.
- The Judiciary has continually improved the IT Disaster Recovery Plan, conducted regular testing and exercise scenarios, and deployed a more robust and recoverable infrastructure to rapidly address a data center emergency. The ability to fully recover and restore operations for all critical systems has been reduced from three days to about three hours and provides a tremendous benefit to the Judiciary by way of ensuring that judicial data is safe and always available.

- Since ITSP 2007, there have been a multitude of changes and enhancements in the area of Case Management for the Judiciary. For example, in the municipal courts the expanded deployment of red light cameras produced a significant increase in the volume of tickets issued. These tickets are issued, processed and may be paid electronically. This pays dividends to the municipal courts, local police and the Judiciary by eliminating much of the need for manual processing. Benefits to this program include the fact that all records are accurate, legible, complete and more easily stored/retrieved. The municipal courts' electronic ticketing (eTicketing) is widely used by the State Police and is currently being rolled-out to many municipalities throughout the state. This provides for rapid, secure, accurate and legible creation of tickets by the issuing officer as well as immediate entry into the court content management systems. Similar to the deployment of red light cameras in various municipalities, this significantly reduces manual entry and ticket processing and improves data quality.
- The NJMCdirect website is in operation in all of the state's 529 municipal courts and provides on-line ticket information of the scheduled court date, violation information, payable amount, location of offense as well as date of offense. In addition, links to Motor Vehicle Commission Point System and the Judiciary's Home Page are also included. NJMCdirect also provides drivers with an on-line payment option that is fully integrated with the municipal courts ATS system. This option allows drivers to pay their fines on-line and electronically update the courts records in real time. NJMCdirect has grown increasingly popular with drivers who receive tickets in New Jersey. In a twelve month period, 1,638,382 payment transactions have been processed using NJMCdirect.
- The Jury Online response system makes jury service easier and more convenient for those summoned to serve as representatives of the community. The online system helps the Judiciary improve the efficiency and accuracy of a jury system that issues approximately 1.3 million summonses each year. The program reduces the handling of paper documents, eliminates some data entry because juror's data are transferred electronically into the existing jury management system, and reduces costs associated with having to store paper.
- The development of an automated Judgment of Conviction application makes final judgments immediately available to the Department of Corrections and other concerned parties. The Judgment of Conviction applications ensures timely and accurate case documentation without the overhead created by paper records. Here, infrastructure costs related to the transport, storage and resultant data entry issues benefit the state Department of Corrections.
- Foreclosure electronic filing has been implemented to help mitigate filing backlogs created by the foreclosure crisis. Given the volume of foreclosures in the time since ITSP 2007, the benefit to the Judiciary has come in the form of a reduction in manual processing, storage and handling. Moreover, this has significantly reduced the backlog in foreclosure cases overall.

- Lastly, the implementation of the Judiciary Electronic Filing and Imaging System (JEFIS) has served to advance the Case Management initiative by replacing the paper mailing of notices to attorneys with electronic notification. This has eliminated printing, handling, postage, etc. Additionally, JEFIS eFiling has been implemented for the DC docket type. Automated eFiling and document processing eliminates the need for vicinage staff to handle, scan and file case documents. These two JEFIS-related implementations have provided a reduction in manual processing, storage and handling. As a result, issues regarding judicial timeliness have been greatly reduced.

Strategic Plan Process

This revised ITSP is a result of an extensive process of review and deliberations by the Strategic Planning subcommittee of the Judiciary’s Advisory Committee on Information Technology. Chaired by Hon. Frank A. Buczynski, this subcommittee was charged by the Advisory Committee to provide executive leadership in revising this important document. The Strategic Planning Subcommittee members work with the Information Technology Office (ITO) of the Administrative Office of the Courts, the Office of Trial Court Services (TCS) of the AOC and Judges, Managers and staff throughout the Judiciary to understand issues and problems. Under the direction of the Hon. Glen Grant, Acting Administrative Director of the Court, the Advisory and its subcommittee advise the Chief Justice and the Judicial Counsel concerning technological needs of the Judiciary and how these needs can be more fully met.

- To monitor implementation of the ITSP
- To propose updates/changes to that plan as necessary
- To monitor priorities and suggest resource allocations
- To address the training needs for IT on behalf of the judges, Court and administrative staff, as well as ongoing training for ITO employees
- To search for ways to fund our IT needs
- To consider new policy issues
- To report to the Administrative Director and the Judicial Council as often as necessary

The following were members of the Strategic Planning Subcommittee:

Hon. Frank A. Buczynski, General Equity Presiding Judge –Subcommittee Co-chair
 Lisa Mollica, Assistant Director – Subcommittee Co-chair
 Scott J. Etish, Esq.
 Collins Ijoma, Trial Court Administrator
 John P. McCarthy III, Chief
 Jennifer Scott, Division Manager
 Shelley R. Webster, Director

This subcommittee was chartered by the Judiciary's Advisory Committee on Information Technology with membership as follows:

Hon. Glenn A. Grant, J.A.D. – Chair
Abraham Akselrad, Esq.
Richard J. Badolato, Esq.
Steven D. Bonville, Esq., Chief of Staff
Hon. Frank A. Buczynski, General Equity Presiding Judge
Harry T. Cassidy, Assistant Director
Hon. Karen M. Cassidy, A.J.S.C.
Hon. Patrick DeAlmeida, Tax Court Presiding Judge
Thomas Dibble, Records Manager
Hon. Charles W. Dortch, Jr., J.S.C.
John C. Eastlack, Esq.
Scott J. Etish, Esq.
Marie Faber, Trial Court Administrator
Gerard J. Felt, Esq.
Lauren E. Handler, Esq.
Hon. Jamie D. Happas, Civil Division Presiding Judge
Paulyn Holandez, Esq., Civil Team Leader
Collins Ijoma, Trial Court Administrator
Hon. Marie E. Lihotz, J.A.D.
John P. McCarthy, III, Chief
Hon. F. Patrick McManimon, J.S.C
Lisa Mollica, Assistant Director
Steven Molyneax, Division Manager
Mark Neary, Esq., Supreme Court Clerk
Joseph Orlando, Esq., Appellate Division Clerk
Jennifer M. Perez, Esq., Superior Court Clerk
James R. Rebo, Director
Sue Regan, Trial Court Administrator
Jennifer Scott, Division Manager
Shari Seffer, Esq.
Rashad Shabaka-Burns, Trial Court Administrator
Robert W. Smith, Director
Shelley R. Webster, Director
Kevin M. Wolfe, Esq., Assistant Director

Staff

Mark Davies, Chief

The ITSP incorporates an integrated and interdependent set of initiatives that address both required updates and enhancements to existing Judiciary information systems. The revisions to the ITSP are driven by technological changes and requests for service from the public and judiciary staff. Often, this comes as a response to new legislative mandates

or court decisions. The Advisory Committee on Information Technology has also formally solicited input from judges and judiciary managers. The ITSP reflects the Committee's advice and recommendations in addition to decisions made by the Chief Justice, the Administrative Director and the Judicial Council. The planning horizon for this ITSP is FY 2012 through FY 2014.

Information technology is possibly the most valuable tool available to ensure Court functioning now, and in the future. Planning in the Judiciary requires that all concerned parties have a keen awareness as to the benefits this technology provides to areas such as case management, administrative support, records management and communication within and beyond the Judiciary. The ability for Court personnel and the public to access data through automated systems (assuming security measures are sufficient for ensuring the integrity of that data) is essential to the Court's existence.

The Judiciary's first IT Strategic Plan articulated the need for continued refinement of information technology on behalf of the Court and its customers by stating that the Judiciary must: "...continue to implement advances in technology and take advantage of the potential that technology offers to realize efficiencies and promote unification." Knowing that the courts do not have unlimited funds for the frequent updating of applications and hardware, the Judiciary's approach is to make use of widely available technologies whose specifications and features provide some assurance that they will be useful now and for the foreseeable future. The Judiciary's existing process for keeping the IT infrastructure current involves making selective upgrades to their computing and networking environments with security being a paramount focus. When newer technologies emerge that offer the potential for benefits to the Judiciary, careful evaluation will take place to determine how, if at all, these will be integrated. As information technology must serve the needs of the Judiciary and its constituents, only those devices and applications with a proven track record of reliability ease of use and, above all, security will be adopted and made available for use by the Court.

The initiatives proposed within the ITSP reflect the goals and priorities that will serve as a guide for IT development over the course of the next three to five years. Detailed scheduling and cost information will become available only when the particulars of specific projects are developed and funding is in place to advance one or more aspects of an initiative. Experience proves that funding rarely occurs as planned, or expected, in the ITSP. Costs and completion dates are subject to the vagaries and imponderables that come with new legislation, user demands, ever-changing technologies and the availability of technical staff and consultants. What this demands of the ITSP is that it promote a measure of flexibility as regards issues pertaining to timelines and budgets. Nevertheless, past editions of the ITSP document have proven invaluable as a means by which the Judiciary has determined which projects to fund and on what schedules they have pursued them.

The Advisory Committee on Information Technology will, as part of its oversight responsibility, monitor the implementation of all IT-related projects that are addressed in the ITSP. In order to do so, the membership has been charged with meeting on a quarterly

basis and more frequently, on an ad hoc basis, during each year covered by this revision of the ITSP. Reports authored by the membership will, when necessary, become available to all concerned parties as a source of information on the progress of one, or more, ITSP initiatives. As much of what the ITSP covers affects the Information Technology Office (ITO) of the Court, it will serve as a guide for the on-going efforts on the part of the ITO in its support of the Judiciary.

Strategic Plan Structure and Priorities

As is most often the case with any project, the initiatives of the ITSP frequently have complex interdependencies with one or more other efforts. The success or completion of one often depends upon the completion (or, near completion) of another. The intertwined nature of much of this work affects the funding needs and timelines of the various tasks that comprise the efforts necessary to achieve a goal. Consequently, the Advisory Committee on Information Technology has opted to include in the ITSP only those initiatives that have attained a major level of strategic importance in guiding the development of future IT-related technologies. There have been many proposals that have been deemed otherwise worthwhile but, have not risen to this pressing level of concern on the part of the Judiciary and, therefore, have not been included. The initiatives addressed herein constitute the Advisory Committee on Information Technology response to the ever-increasing capabilities of information technology and the concomitant demands to facilitate and streamline the processes utilized by the Judiciary. Toward this goal, the ITSP provides general guidance with respect to the areas of IT infrastructure, constituent services and court operations. It does not, however, seek to list details as pertain to the implementation of the various initiatives.

The Advisory Committee on Information Technology has assigned priorities to the various projects mentioned herein as a means of providing guidance to the ITO. As a consequence, the committee has adopted and applied the following terminology to the goals of the ITSP:

- **Top Priority** – an initiative thought to be of the highest strategic importance in meeting the Judiciary’s needs for improving operational capabilities or efficiencies. These often arise as a result of legislative mandates, advances in technology or to meet user requests for enhanced functionality.
- **High Priority** – an initiative whose value to the Judiciary, though worthy, is not seen to be of as great a strategic importance as those given Top Priority.
- **Priority** – an initiative that, while valuable to the Judiciary, is thought to carry less in the way of ‘demand response’ than those rated for High or Top Priority.

The following table lists the proposed 2012 priority initiatives:

Initiative	Description	Priority
Core Infrastructure	<p>Provide and maintain the core infrastructure required to support current and strategic operations. This on-going initiative will include the following from the FY 2007 ITSP:</p> <ul style="list-style-type: none"> • Refinement of the core infrastructure • WAN Infrastructure • LAN Infrastructure and Desktop Office Automation • Email 	Top Priority
E-Court	<p>Develop a digital model for electronic filing, case management and document storage and retrieval that support ready access to information for court staff and the public</p> <p>Sub-initiative: E-Filing Provide an infrastructure that enables electronic case filing to simplify the collection of case information eliminating manual entry and increasing data accessibility.</p> <p>Sub-initiative: Document Management Support the improved processing flow and enable the electronic recordation of case jackets. This initiative is focused on using technology in support of process improvements to gain internal operating efficiencies throughout the Judiciary</p> <p>Sub-initiative: Case Management / Processing Improvements Develop and implement web-based improvements to our case management system to increase operational efficiencies with specific focuses on the interaction with Attorney/Litigants and the general public.</p>	Top Priority
Financial Management Court Operations	Develop and implement an integrated financial management system.	Top Priority*
Security Infrastructure	Develop, deploy and maintain a comprehensive security infrastructure.	Top Priority

Courtroom Automation	Deploy digital technology to provide access to court records, including: transcripts, electronic documents, audio and video recordings, etc., as part of normal courtroom operations.	High Priority
Data Warehouse	Develop and implement an infrastructure that provides statistical reporting and sufficient performance capabilities to meet the current and foreseeable future demands of the public and Judiciary users.	High Priority
E-Administrative	<p>Implement comprehensive web based systems to improve the Human Resource management and administrative processes of the Judiciary.</p> <p>Sub-initiative: Human Resources Create and deploy an integrated human resources application that seamlessly interfaces with the Executive Branch.</p> <p>Sub-initiative: Employee Provisioning and Relationship Management Develop and implement an automated system for effecting changes related to employee movements.</p>	Priority
Integration Services	Develop streamlined technical interfaces and data exchanges for Judiciary applications—most especially those shared with government partners.	Priority

*Previously, Financial Management Court Operations was given the status of High Priority.

Core Infrastructure Initiative

Status: Top Priority

The ability for the Judiciary to meet its day-to-day operational and strategic obligations relies heavily on the reliability and supportability of a complex core IT infrastructure. This infrastructure is comprised of hardware, software and network elements that provide healthy support for the entirety of the Judiciary's automated information systems architecture. Work on this initiative is necessary to support our current infrastructure as well as to keep pace with technological improvements while addressing the ongoing business of the Courts. In order to retain the value of these components, continual monitoring, maintenance and upgrading processes are required. Funding for this initiative must always be given the highest priority by the Judiciary as the operational integrity of the infrastructure is intrinsic to the goals and functioning of the Court.

The Core Infrastructure initiative impacts work on numerous other initiatives. One example of this would be the software upgrades made under the Case Management initiative as a means of fundamentally supporting Court operations. The continual evaluation and refinement of existing Judiciary business processes is a highly important facet of this initiative as it is this that enables the Court to keep pace with the changing technological landscape.

This initiative is constantly evolving along with the business needs of the Judiciary and the emergence of new technology. However, the principle objectives remain constant: provide a reliable, robust and high volume IT environment providing the adaptability and expandability to support the strategic vision of the courts. For example, consolidation of obsolete, redundant, lesser performing and higher maintenance systems into new generation enterprise systems improves performance and availability while reducing our cost of ownership. Today, this initiative is an example of the need for constant assessment and realignment of infrastructure strategies and priorities. Such ongoing efforts work to decrease the number of technical platforms, the number of similar systems, the number of development environments and the resultant learning curve for both developers and end-users working with these systems.

Another aspect of this initiative is the maintenance and upgrading of the Judiciary's Wide Area Network (WAN). The Judiciary WAN provides access to the large-scale Data Center based applications used statewide by the courts, law enforcement, prosecutors, jails, external state and federal agencies, attorneys, litigants, and the general public. Work in this area addresses the growing data capacity requirements for web-based applications, graphics, multi-media presentations, Voice over Internet Protocol (VoIP) communications and video conferencing services.

The many Local Area Networks (LANs) operating statewide must also undergo ongoing assessment and enhancement by the Court's IT support staff. Here, all of the hardware and software associated with providing network functionality are maintained.

In an effort to provide the greatest flexibility to the Courts, there is a constant evaluation of the existing systems in place to supply information, research and general utility. These systems have, historically, been powered through the use of mainframe computers. Some of the technologies in use by the Court, such as E-Ticketing and Electronic Payments have shown us the need for more agile platforms. Consequently, there is continuing work being done to provide a distributed environment where the processing of data is handled in parallel, by several small, but powerful machines. This provides faster results when time is critical.

The advent and popularity of mobile device technologies has become another concern that is being addressed under the Core Initiative. These devices add considerable convenience to the population of users who have embraced them and, as such, their impact on business is considerable, to say the least. Mobile technologies have exposed the need for smaller applications (“apps”) to be run on these devices. Without question, support for mobile computing technologies must be undertaken as this likely represents the future of computing, as we know it.

The collaborative/communication infrastructure provides improvements to the Judiciary’s ability to communicate internally and with external parties. A parallel development concern is the means by which tools such as instant messaging, web conferencing and document sharing are made available to the Court. Security is the watch-word that guides the access to, and use of, these technologies and comes in the form of encryption, virus protection, spam blocking and content filtering. Additionally, the management of email, from the perspective of delivery, archiving and retrieval is a legal responsibility of the Judiciary. As this initiative progresses, it will involve the ongoing assessment of collaboration software alternatives.

E-Court

Status: Top Priority

The objective of the E-Court initiative is the development of a digital model for the filing, case management and retention of information associated with case processing and public interaction with the judiciary. Through creation of a web-based window into the courts, the judiciary will transform how the citizens of the State are served. This initiative provides increased transparent access to the court, streamlines how the court is able to manage, store and retain information and re-engineers the paper driven case processing models still in existence today which were formulated in the 1980’s and 90’s through our early adoption and development of statewide case management systems.

The E-Court initiative will integrate electronic case information, imaged court pleadings, and other relevant digital information into a single digital case file that will provide instant remote access to internal constituents and the public. Current case processing was developed before imaging technologies were available and as a necessity, relied on the paper document and paper case file. Digitizing these documents offers an opportunity to move new development away from the outmoded vertical approach of the past and into a

more innovative enterprise architecture wherein applications more readily share features and “communicate” effectively with others. Enhanced inquiry capabilities and data integration across all courts will improve communications and decision making and speed resolutions. An E-Court system will provide simple, timely and convenient web-based public access to releasable court records, calendars, and case information enhancing both customer service and accessibility to constituents.

The E-Court initiative will closely examine Judiciary business practices and leverage new technical resources to achieve greater efficiencies. Current limits found in existing case management system database structures and screens can be eliminated through redesign. Paper processing steps can be eliminated and streamlined through review and analysis during the development of new systems and processes. Three sub-initiatives will serve to focus and support the E-Court effort: E-Filing, Document Management, and Case Management/Process Improvements. E-Filing addresses how the court interacts with its constituents. Document management is the process by which documents are processed and stored. Case management / process improvements address the courts internal operations to ensure timely and accurate handling of court cases.

Governance for the development of a successful E-Court initiatives has been defined by Judge Glenn A. Grant, J.A.D. in his discussion on Judiciary Enterprise Architecture wherein he states: ‘Judiciary business, not technology, should guide organizational change, investment in technology and investment in resources’ Judge Grant goes on to indicate the Judiciary business drivers as being:

- Demand for improved public and constituent services.
- Demand for business process improvements.
- Limited funding and resources.
- Measurement of the outcome of process improvement against the investment in technology and resources.
- Minimizing the data collection burden.
- Securing information resources against unauthorized access.
- Capitalizing on common functions and services.
- Providing access to information.
- Implementing proven standards and supported technologies.

E-Court sub-initiative: E-Filing

Status: Top Priority

New Jersey's E-Filing is the comprehensive future vision for efficient information management supporting the operations of the New Jersey courts. To date, considerable effort has been dedicated to the expansion of the E-Filing initiative. In 2001, New Jersey successfully implemented the JEFIS electronic filing solution (Judiciary Electronic Filing Imaging System) for certain types of civil cases. Since the initial implementation of JEFIS, other implementations each based on a business required filing model have been implemented. These include e-ticketing, red-light tickets, automated complaints, restraining orders, and parking tickets. JEFIS presents the public with two filing models, bulk and individual, through an application downloaded by the filer at each filing. The E-ticketing and red-light ticket model allows a third party to build and support the application and permits the judiciary to focus on the creation of the interface to interact with these vendors. Automated complaints and restraining orders present law enforcement with a judiciary website. The parking authority model is device dependant. The judiciary builds specific applications for each device. Additionally, the Courts accept information sent in batch through numerous government agencies populating millions of data fields throughout the judiciary. While the Courts are striving to create a unified e-filing solution, the realization is that different models may have to be developed to meet the specific business requirements of the departments that will ultimately own these solutions. Providing a means that enables instantaneous case initiation and docketing, real-time updating, and simultaneous access to data by multiple users would offer significant savings to the Judiciary, its partners, and the public.

Parallels to many of the principles outlined in Judge Grant's Judiciary Enterprise Architecture can be seen in the description of the E-Filing initiative. The E-Filing initiative is a response to the demand for improved service by the public and Court constituents.

The E-Filing initiative will greatly minimize the data collection and maintenance burden on the Court. This will be accomplished by securing information, by making use of proven and supported web-based technologies, and by providing a streamlined interface that will incorporate ease-of-use features making the web portal clear, logical and navigable.

The E-Filing initiative will provide numerous real benefits to the Court, attorneys, litigants and the public. For lawyers, the key benefits to using the E-Filing system will come in the form of speed, convenience and efficiency. Litigants will likely share many of the same benefits as attorneys with convenience being perhaps the most pertinent. Having remote access to court services, information and guidance on a round-the-clock basis will greatly enhance the experience of all litigants. The public-at-large will also derive benefits from the E-Filing initiative in the form of increased transparency. By having the ability to better access court information, the public perception of the law "working for them" should increase dramatically. The Court itself will realize enormous benefits from the E-Filing initiative. Among these will be better coordination of justice

efforts with law enforcement. The efficiencies gained will translate into more timely case resolution, decreased document management costs, and better use of Court personnel.

In order to meet the objective of providing a helpful web portal that meets the needs of stakeholders, several concerns will have to be addressed as development proceeds:

- Identification of the specific audience that will benefit the most from this initiative.
- Determination of how best to serve that audience.
- Assessment of which forms and documentation would be the most helpful to the widest-possible audience at the earliest stage of development.
- Review and revision of court procedures to ensure efficient service within the court and for the customers of the court.
- Identification of electronic payment options.

The audience that would be served by the E-Filing initiative is extremely broad in terms of their capabilities and understanding of law and court procedures to say nothing of their ability to negotiate computer technology. Moreover, there is a substantial portion of that population that falls under the category of “otherwise enabled”. The people within this grouping may have physical disabilities or face language barriers. How these issues are addressed should be the subject of appropriate research and analysis of work done in support of this effort and suggestions for change moving forward.

From the outset of development, those forms and documentation seen as being most necessary to the Court and its customers should be implemented first. As time goes forward, more content can be made available. This strategy ensures that the web portal will be immediately useful to all concerned parties.

E-Court sub-initiative: Document Management

Status: Top Priority

Document management/process improvement involves the redesign of existing business procedures to achieve significant improvements in production across the courts. An initial step toward this goal is the close examination of present business practices with an eye toward streamlining those seen as being the most cumbersome. It is likely that some of these processes will be manual, and just as many may already be computer-enabled. Regardless, the objective is one of achieving greater efficiency to better meet the business requirements of Judiciary overall.

Document management is one of the easier needs to expose. Forms, photographs, tickets and myriad other types of documents are handled by the courts every day. By way of

process improvement for document management, project team members will examine the means by which all of these documents are generated, processed and stored as records. In any case, where the process involves paper, careful evaluation will be put into identifying how the process can be automated. As such, document management will be guided by the requirement for greater flexibility in terms of data entry, updating, maintenance, retrieval, access and archiving. In support of this, the development and gradual roll-out of a new ECM/ERM (Enterprise Content Management/Electronic Records Management) system will take place. Such a system will have to have the ability to capture and store information in any format—physical or digital.

The efficient movement, storage and retrieval of documents in coordination with the case management process is essential for efficient court operations. A comprehensive view of the case information that includes case management data in combination with relevant documents is essential.

An additional component of document management is the review and implementation of document retention timeframes. Revised timeframe must reflect the improvements technology has introduced in retaining digital copies of documents in readily accessible formats.

E-Court sub-initiative: Case Management / Process Improvements

Status: Top Priority

The Case Management/Process Improvements initiative is being driven by the imperative that the Judiciary must work to refine its case management systems (CMS). The objective is to redefine the existing mainframe databases and business rules built into those databases. While the mainframe systems are being maintained, newer, distributed systems are being implemented to provide greater flexibility to technologies used by the Judiciary. Consequently, a new architecture is being put into place that utilizes the strength of the Web to provide cross-platform efficiencies to the Courts and its partners.

The business processes used in Judges' chambers and case management offices were designed around the document, case file and interaction in the courtroom with the Judge and staff. All notations and information were written in books. These processes were used for over 100 years. Over time, technological advances introduced the ability to capture information to monitor and manage caseloads. Most technical systems were built to follow the existing business processes. Today, the latest advances can be employed to significantly streamline practices and focus the business processes to optimize the potential that information technology provides.

Development of new of business practices across the enterprise in areas such as party management, case initiation, disposition, calendaring and scheduling will attempt to provide a unified solution across the enterprise. Removal of siloed systems will allow reuse and leveraging of technologies across divisions and lead to a simplified approach for future support and maintenance.

Once it is determined which processes are appropriate for re-engineering, plans will be established that detail the phased refinement and implementation progression for each case. Criteria for deciding which process will serve as candidates for change include the consideration of what problem(s) may be solved by the refinement of a given process. The decision-makers addressing this concern should have a clear view as to what the future-state result(s) will look like and what efficiencies will be gained.

Financial Management Court Operations Initiative

Status: Top Priority

The objective of this initiative is to develop and implement a comprehensive and integrated financial management system, which includes cash management, budgeting, procurement, and facilities management to improve fiscal control.

Through this type of initiative, it is possible to better utilize resources available to the Judiciary and greatly increase financial management efficiencies to ensure that the Judiciary adequately meets all of its fiduciary responsibilities.

The Judiciary collects and manages an estimated \$1.3 billion in cash receipts, escrow and related accounts. It also manages a yearly budget of more than \$700 million, using a patchwork of internally developed financial management applications. In addition, it must separately access and manage information in the Executive Branch's Comprehensive Financial System (NJCFS). These current systems are cumbersome, disjointed, and incomplete, making synchronization of information across the organization difficult, time consuming, and at times nearly impossible.

A new comprehensive and integrated financial management system is critical to maintain continuity of operations in a secure environment for the protection of the assets and integrity of the Judiciary. This system should interface with the Executive Branch's Comprehensive Financial System (NJCFS) as well as our internal case management systems to provide the ability to consolidate daily cash and disbursement activities, eliminate dual system entry, and provide a means for the Judiciary to consolidate data from the vicinages.

This system will greatly improve the financial management processes of the Judiciary by reducing manual processes (improving efficiency and reducing human error); increasing the quality of financial transactions; improving customer service for both internal and external customers (purchasing processes, general ledger reconciliation, reporting, etc.); reducing audit findings; minimizing potential defalcation of funds and exposure to the Judiciary; and improving data monitoring and tracking.

Security Infrastructure

Status: Top Priority

The security landscape has changed dramatically in the last twenty years. It has become evident that in order to grant both our internal and external clients more access to our information, the Judiciary must continue to provide an effective and proactive enterprise-wide security program that is evaluated and enhanced on a continuous basis.

There is a fine line between access to public records and the securing of confidential information. The Judiciary must secure, protect privacy, ensure integrity and allow for the availability of the same information. To this end, the sophistication of the security measures should be in parity with the value of the information being protected—the more value certain information has, the more robust the security mechanisms that control its integrity and authorize its use need to be.

Security, when considered from an information technology perspective, is an overarching concern for any organization. As a result, the Judiciary formed a Security committee in order to review and discuss current technologies, security programs and develop policy in accordance with security best practices. Security policies govern the steps and procedures taken to protect assets and information from intrusion via the use of technological or physical intervention. The work of the committee has been successful in moving the Judiciary's security forward with the development and implementation of policy to better secure the organization and the confidentiality of its data. Examples include: PC Secure Client Architecture; Removable Storage Device and Information Disposal and Media Sanitization Policy.

The purpose and objective of the Judiciary's Security Infrastructure initiative is to continually refine the information security framework to maintain the confidentiality, integrity and availability of data with these goals in mind:

- Protect the Judiciary's information from all deliberate or unintentional, internal or external exposures such as threats, cyber-threats, breaches, malicious code, viruses and related vulnerabilities.
- Enable the availability of information in a secure manner to allow for the consistent and professional sharing of information.
- Protect the Judiciary and its customers from legal liability due to the inappropriate use of information.

Courtroom Automation

Status: High Priority

New Jersey Court Rule 1:2-2. Trial Courts: Verbatim Record of Proceedings states "In the trial divisions of the Superior Court and in the Tax Court, all proceedings in court shall be recorded verbatim except, unless the court otherwise orders...."

The technology for providing verbatim records of court proceedings has changed markedly in the last 50 years from paper-based steno machines to digital steno machines that store notes on a server for archiving and later retrieval. Moreover, the means for providing digital audio and video records have become less expensive, easier to use and of sufficiently high quality that they easily meet the requirements of the courts. Unlike older recording technologies, the newer digital formats offer numerous features and benefits not previously available: the records are easily stored on computer hard-drives, these same records are searchable and quickly accessed, and the records no longer require vast amounts of physical storage space. Previously given the status of ‘High Priority’ in past revisions of the ITSP, this initiative has risen significantly in its importance to the Courts.

Courtroom automation is not solely about providing the verbatim record specified in NJCR 1:2-2. Another aspect of this provision is the ability for the court to display evidence to everyone in the courtroom at the same time. Display technologies ensure that all parties to a case can view evidence and, at the same time, listen to testimony rather than having to resort to poring through lengthy documentation that may distract participants from hearing key facts in oral arguments. In this regard, technology serves the court to better aid communication while also providing judges, attorneys and witnesses the ability to clearly emphasize what, in many cases, is the minutiae of evidence before the court.

As the Judiciary incorporates new technologies into the courtroom, it makes sense to examine what the needs of each court are specific to the technologies required to satisfy NJCR 1:2-2. By determining the functional needs of each court, the Judiciary on the whole benefits by being better able to channel the monies slated for this purpose.

Data Warehouse

Status: High Priority

A data warehouse is a copy of the court databases specifically structured for inquiry and reporting. However, a data warehouse is not simply just data. A data warehouse also incorporates extremely robust tools that enable users to query, analyze and present information gleaned from what is contained within. The ultimate goal of a data warehouse is to ensure data consistency. By amassing data from disparate sources into a centralized repository, end-users receive a homogenized view of the Court’s data. What this homogenization yields to the panoply of users across the courts, is a singular and consistent view of the truth. In this, the paradigm of what a data warehouse is has shifted: no longer are data warehouses solely about storage and access. Their real *raison d’être* is about delivery and comprehension.

Unlike a common database application, which supports day-to-day operations for individual user transactions, a data warehouse offers enhanced capabilities for data mining (defined: the extraction of information from large data containers). In this sense, a data warehouse complements what database applications provide by being able to support

highly detailed analytical processing and elaborate report generation. One of the additional benefits of a data warehouse is its size: as more data is imported into the warehouse, it enables longer-term analyses by any user with a research need. When implemented on high performance client/server or parallel processing (mainframe) computers, the data mining tools offered by a data warehouse will help to deliver answers to analytical questions that, traditionally, have been too time consuming to resolve.

A Judiciary data warehouse facility with an appropriate set of programs and procedures for access to data will provide the justice community with a fast, flexible and efficient means by which it can retrieve information, develop specialized reports and perform deep statistical analyses. A data warehouse will provide a foundation for both management decision-making and ongoing operational support. Additionally, the data warehouse will have to include software to enable public website access in accordance with the Supreme Court's policies addressing the Judiciary's response to requests from the public and other external users of legal information. It is anticipated that such access will be part of the implementation of the Judiciary's policy on public access to court records.

As end-user requirements for judicial data manipulation have shifted to include the public, security has become a paramount concern. Data policy and integrity issues will have to be addressed before the data warehouse can be made available to end-users in any capacity or venue.

Given that the costs associated with the development and maintenance of a data warehouse facility is not inconsequential, an obvious strategy for making this initiative self-sustaining is to charge users a pro rata fee for the ability to connect to and use the system.

E-Administrative Services

Status: Priority

In addition to improvement in processing of court cases, technologies can serve to create efficiencies for the administrative and management functions of the Judiciary. Under this initiative fall two sub-initiatives to be guided by the administrative sector of the Courts. These are: Human Resources and Employee Provisioning and Relationship Management. In order to implement these initiatives, close examination of the existing processes will have to be undertaken to develop technological solutions that best serve the functions these solutions will be replacing.

E-Administrative sub-initiative: Human Resources

Status: Priority

The information technology needs for Human Resources fall into three key areas: the ability to provide a system that enables prospective job candidates to apply for positions with the Judiciary, a means by which people who work for the Judiciary can be tracked in

terms of their career progress and the development of a system that allows for the tracking of on-the-job employee illnesses and injuries.

The first objective, that of automating the application process for potential job candidates, could provide benefits to the Judiciary by saving time for all parties involved, increasing productivity and reducing costs. Those seeking work with the Judiciary would be given the opportunity to upload their résumé, a cover letter and any other documents (samples of writing, etc.) needed to satisfy the requirements of a position, online. By allowing applicants the ability to complete their application electronically, the database that contains their information could be utilized to populate required JHRIS fields and fields within the SharePoint system. As résumés are qualified, hiring managers would have the ability to view them immediately allowing for a shorter turnaround time in the hiring process.

The next objective would be to develop and implement an integrated human resources application that seamlessly interfaces to Executive Branch agency human resources applications (specifically PMIS). PMIS (Personnel Management Information System) is a legacy system and is the primary repository for employee records including salary history, position and title information for all state agencies, PMIS generates employee ID numbers and data related to an employee's eCATS account. The PMIS relies on NJFIS account numbers for fiscal reporting purposes. New hire data is entered into PMIS for every individual placed on the State payroll; every salary change is recorded in PMIS history. The Judiciary's HR Information System contains some basic information that is common to PMIS, but has been enhanced for specific Judiciary needs and data fields that are not available in PMIS. It is a multi-functional system that contains employee related data including title and salary history, supervisor's name, position detail, FIS and CFS account numbers associated with the employee, personal information such as home address and emergency contact information, plus career progression fields. A seamless interface with PMIS would mean that information in the two systems, PMIS and JHRIS, would match on a consistent basis, providing reliable data reporting and eliminating redundancies.

Lastly, Human Resources requires the implementation of the NSC Navigator System for tracking Health and Safety audit information as well as HR reporting of occupational injuries and illnesses. This powerful tool offers improvements to the various aspects of data reporting, tracking and trending from an occupational health perspective.

From the Human Resources perspective, such a system (NSC Navigator) would assist in the reporting and tracking of employee on-the-job injuries and illnesses, which can subsequently be linked to the annual OSHA survey of occupational injuries and illnesses. The process of collecting and reporting this data every year is labor intensive and currently yields no information that would permit the Judiciary to track or understand trends in employees' work related injuries or illnesses.

E-Administrative sub-initiative: Employee Provisioning and Relationship Management

Status: Priority

There are certain tasks that must be completed at each phase of an employee's career. For example, at the time of hire, new employees need to be provided building access, office space, phones, computers, e-mail accounts, etc. At separation, issues such as records retention, security access, and benefits continuation (where applicable) must be addressed. A leave of absence, suspension or reassignment would similarly require that various actions be taken. In order to accomplish these activities, numerous units within an appointing authority and, in some cases, across the Judiciary, need to be notified of the employee movement. Human Resources, Facilities Management, Court Access Services, Counsel's Office, and IT staff must all be involved.

Following are some of the desired capabilities of an automated process:

- Hiring managers and supervisors would be able to communicate to all necessary parties in one step that there is a change affecting an employee that requires actions to be taken.
- The various units required to take action to accommodate an employee movement would all have access to the automated system and would be able to indicate when their action is completed.
- The hiring manager and supervisor would receive notice in real time that the required activities have been completed.

In the absence of an automated system to provide the appropriate notifications of changes affecting employees, the Central Office has developed an interim notification process that requires the exchange of emails and phone calls to all of the parties involved. The process is cumbersome and labor intensive. The vicinages each have their own methods for handling these matters. The development of an automated system accessible to all of the units involved in employee movements would significantly streamline the process, help ensure that all necessary steps are taken to accommodate employee movements, and provide a consistent system across the Judiciary.

Integration Services

Status: Priority

The Integration Services initiative is an attempt by the Judiciary to provide an outward-facing means of marrying its information services with other agencies and business partners. Essentially, this means integrating judicial applications and services with disparate agencies so as to benefit all concerned parties as they interact, with not only the Courts but, any relevant entities, as well. This initiative builds on a model that has long

existed in New Jersey: Legal and related agencies voluntarily cooperating so as to achieve greater efficiency, save time (and money) and realize greater convenience for those making use of the mutually-provided services. The Integration Services initiative is technological extension of the informal collaboration that has well-served New Jersey throughout the years.

The word ‘integration’ when used in the context of the Courts, speaks to the technological effort by which the Judiciary is able to share information efficiently and in a timely manner with the vicinages and between agencies. A horizontal integration enables information sharing amongst criminal justice organizations within the same local jurisdiction. Vertical integration expands horizontal integration by including state and federal systems. The objective of the integration of Judiciary information services is to improve court processes, substantially reduce unnecessary duplication of effort and enhance customer service.

How the integration of information services will provide a real-time benefit is perhaps best illustrated by a simple example. Consider the fact that once Judiciary systems are integrated with the various business partners, the technology will allow for the ability to query criminal databases for information regarding a person’s pending criminal charges; determine if they are wanted in other jurisdictions; what, if any, criminal history exists for them and whether or not they are under any form of probationary supervision. As their case moves through the courts, all of the agencies whose business it is to maintain contact with and control of the defendant will be updated with information as to their case’s progress, the outcome of any verdict and their disposition vis-à-vis sentencing.

The Judiciary interfaces, on a daily basis, with partners such as: police and other public safety agencies, sheriff’s departments, corrections, prosecutors and attorneys, etc. Not only are these entities consumers of Court data, they provide the Courts with strategic data input, as well. Hence, the vision for the Integration Services initiative is to better provide for the two-way flow of information between the Judiciary and its business partners.

At this time, there is no mutually agreed upon process model or system architecture in-place to support this initiative. In order to advance this project, standards will have to be created for the implementation of a seamless business to business data interaction that will also ensure a secure environment of exchange. Additional work will have to be done to determine exactly what data is needed by each of the partners to capably function in their sphere of influence.

The Judiciary Information Technology Office (ITO) has the development assets in place to create the technological bridges necessary to make this initiative a reality. With the cooperation of all concerned parties that has worked so well to date, this initiative will not only become fully realized, it will be a success.

Implementation

The rationale for the existence of the ITSP is that it serves as a guide for the creation and execution of specific projects that support the goals of the Judiciary. Implementation of these goals is the continuing function of the ITO and Judiciary staff with oversight from the Advisory Committee on Information Technology. A project may be either strategic or tactical in nature, as defined below:

- A strategic project is created to implement a strategic initiative.
- In general, a strategic project carries the priority of the strategic initiative or sub-initiative under which it has been created. The ITO implements strategic projects to comply with these priority designations to the extent deemed feasible. Strategic projects reflect ‘top down’ guidance from the Supreme Court for major Judiciary information technology efforts.
- A tactical project is created to satisfy a request to modify an existing application so as to keep it current. Such a request often results from a legislative or Federal mandate, a court decision or a specific need to enhance operational performance. Tactical projects are addressed within a sub-initiative under the Core Infrastructure Initiative.
- Tactical project priorities are not detailed within the ITSP.

When a strategic project is planned, its related strategic initiative, business purpose and major functional requirements are identified. ITO estimates the resources (people, hardware, software, development time and associated costs) to successfully complete the project. The Advisory Committee on Information Technology periodically reviews the portfolio of active strategic projects and those that are awaiting developmental resources. In addition to monitoring overall ITSP implementation through review of the progress of active strategic initiatives, the Advisory Committee on Information Technology provides guidance to the ITO regarding the relative priority to be given those projects awaiting resources. Committee guidance also assists the ITO in maximizing the efficiency in which strategic projects are completed, within the constraints of available resources.

Conclusion

In the time since the advent of ITSP 2001, information technology has experienced phenomenal growth in terms of the devices used, the applications and features used on them and how deeply entrenched their use has become in routine, day-to-day functioning. The ITSP serves to acknowledge these issues and provide guidance for the evaluation, development and adoption of information technologies as they emerge.

The Courts, having made significant accomplishments in the development of technology that primarily serves the line of business is now working toward an “enterprise” solution that will focus on providing efficient work processes by supporting true interaction between departments and business partners.

Fiscal challenge always plays a hand in determining the course of development. Since budgets ultimately guide how a new technology should be implemented, if at all, constrained budgets can sometimes provide opportunities not previously considered. The almost clichéd phrase ‘lean and mean’ can be applied to how an application is fashioned and expected to run to say nothing of the resources used for development. The fiscal constraints facing the Courts often force development staff to think with greater clarity when considering the various paths to be taken in attempting to reach a given goal economically. New thinking and newer technologies may yield greater returns on investment than exists in the present day. Consequently, most of the initiatives spoken of within this document are expressed in broad terms for the reason that the approach to these solutions will likely change over time given changes in technology and the ever-present budgetary challenges faced by the Judiciary.

Appendix 1: Technical Discussion of Initiatives

Core Infrastructure

Initiative	Description	Priority
Core Infrastructure	Provide and maintain the core infrastructure required to support current and strategic operations. This on-going initiative will include the following from the FY 2007 ITSP: <ul style="list-style-type: none">• Refinement of the core infrastructure• WAN Infrastructure• LAN Infrastructure and Desktop Office Automation• Collaboration/Communication• Middleware• Application Enhancements• Disaster Recovery	Top Priority

The Core Infrastructure Initiative is very broad in scope as it is comprised of many interdependent components:

- The Judiciary Data Center in Trenton.
- The mainframe system.
- All of the local and wide-area servers.
- Storage and disaster recovery systems.
- Wired and wireless network hardware.
- Mobile devices.
- Collaboration/Communication.
- The desktops, laptops and software used at every location within the New Jersey Courts.
- The people who administer these systems.

Though the commitment of resources necessary for supporting this initiative has remained consistent, this infrastructure is challenged by a need for growth. In the meantime, funding has remained constant. While the demand for service has increased significantly, the allocation and support of new resources to meet it have been faced with budgetary constraint.

Some of the areas of concern within this initiative are listed here:

- The Judiciary Data Center requires continual upkeep of its physical facilities to ensure continuity of service. These facilities are physical plant sub-systems such as: HVAC, reliable electrical service, communications, fire prevention/suppression systems and lighting. While these items support the functions of the physical building containing the Data Center, they are also intrinsic to the purpose of the Data Center, itself. Loss of any of these components will have an immediate and significantly negative impact on the Data Center's ability to provide service to the Court. Additionally, many of the Judiciary's WAN servers reside here. Continual monitoring, maintenance and upgrading when needed, are all critical to consistent service.
- The current mainframe environment and all the implementation of a distributed infrastructure must be maintain and upgraded to ensure that the significant transactional volume required to support court operation continue to operate effectively.
- Mobil devises are pervasive and the court must support the effective use of these devises in the operation of the courts.
- Maintenance of the existing wired and wireless networks throughout the Judiciary is also imperative as these are the fundamental means for providing computer functionality including expansion of these services to our mobile devices.
- Maintenance and enhancements, including legislative mandates, must be made to the case management applications to ensure continued support of court operations.
- Software for System Development (aka. SDK/SDE: Software Development Kit/Software Development Environment) and Project Control need to be kept up-to-date so as to provide the ITO staff who use them with the tools necessary for the development of current and future technologies. Continued training for ITO staff with respect to best practices is essential to this sub-initiative.

Courtroom Automation

Initiative	Description	Priority
Courtroom Automation	Deploy digital technology to provide access to court records, including: transcripts, electronic documents, audio and video recordings, etc., as part of normal courtroom operations.	High Priority

Not all courts are equal in their needs for technology. Given considerations such as the nature of the cases presented in different courtrooms, the physical size of one courtroom relative to another, the caseload, etc. it is not difficult to comprehend that each courtroom presents limits to what it should have and what it can accommodate. As mentioned in the related executive summary, careful consideration must be given to each court's needs in regard to courtroom technology provisioning, as this is possibly the most economical route to achieving the result of having the proper technologies available to courts throughout the state.

Technologies for use by the courts can be categorized into three broad areas: access, display and recording. All of these technologies contribute to efficiency and add to the creation of the court record. In brief, these are explained below:

Access technologies are those made available for people who are 'otherwise enabled'. As such, these technologies may come in the form of enhanced display technologies for those with vision deficits or, hearing impairments. Headphone and speaker technologies fall within this category, as well. In addition, access technologies may come in the form of translation software for non-English speakers.

Computer monitors, LCD and Plasma TVs are display technologies that can also serve as access technologies. Added to this category are such devices as overhead projectors, DVD/BluRay players, VHS tape players, cameras (digital and film), whiteboards/easels and even computers running presentation software (Prezi, MS PowerPoint, Sanction, etc.). This category encompasses technologies capable of rendering everything from hand drawings to files generated using the most sophisticated graphics software.

Recording technologies exist in a huge variety of forms and formats. The two categories into which all of them fall are: digital and analog. Digital recording technologies enable the court record to be easily searched. Moreover, digital records are stored on computers, CDs or backup devices that are vastly smaller than the space required for paper records. The benefits to the Court come in the time saved when searching for specific records and the reduction in the resources needed to archive and maintain paper.

Before any technologies can be included in the courts, adequate planning must take place. This planning must account for the purpose, size and requisites of each court under consideration. As an example, a family court in a relatively small vicinage would not have the same requirements as the Superior Court does in Trenton. Guidelines will be created that take into account the disparities between courts and, more importantly, their specific automation requirements as a 'one size fits all' approach to technology provisioning would be wasteful on a massive scale.

Data Warehouse

Initiative	Description	Priority
Data Warehouse	Develop and implement an infrastructure that provides statistical reporting and sufficient performance capabilities to meet the current and foreseeable-future demands of the public and Judiciary users.	High Priority

The data warehouse will serve the Judiciary not only as a repository for all of its case-related data but, it will help meet the long-standing need for easy access to, and analysis of, data while maintaining integrity and security.

While ‘data warehouses’ do already exist within the Judiciary (ATS, ACS, etc.) these are little more than data repositories. A full-on data warehouse is actually much more than this and, as such, offers features that may require training for the staff and the public for whom this will likely be developed. Coincident to the development of a true data warehouse will be the need for robust training resources for end-users.

Knowing what the expectations are for a data warehouse in terms of what problems will be solved speaks to an assessment of the likely return-on-investment the Judiciary will receive from implementing a data warehouse. Evaluation of the issues not currently solved with the information technologies that exist at present will serve to provide guidance in the development and implementation of the data warehouse.

Maintaining a clear sense of who stands to benefit from the implementation of a data warehouse is important for determining such issues as user-interface development, data integrity/security and marketing. It is likely that an interview process will have to be created that asks what the specific needs of the end-user community are. Identifying end-user requirements will serve to guide much of the actual development and deployment throughout the lifetime of the initiative.

Knowing, in the planning stages, what resources will be available is crucial to moving forward. The timeframe for development, testing and deployment will serve to guide the project in terms of scope. For example: if there is a limited timeframe for development due to strong demand, a scaled-back version of the data warehouse may have to be created. A longer timeframe will provide for a more complete implementation that offers more features. The budget for the project is also a major determinant for development and shares similar issues to the timeframe (smaller budget = smaller implementation, etc.). However, budget also speaks to the amount of personnel whose time and talents can be committed to the initiative. With a larger budget in place, more in the way of

development resources can be utilized which could mean that the project is turned around faster and with more features than a sharply limited budget would provide.

Considering what the criteria will be for measuring the success of the data warehouse will serve to guide much of the development, pre-deployment. Without question, access to and use of the data warehouse should be easy for any user who requires what it affords. However, it is likely that such issues as user-interface creation, security, data integrity and the ability for any user to ably manipulate the data in such a way as to meet their informational needs, will change over time. Carefully evaluating how end-users are able to navigate the system and making changes to better meet their needs will supply many of the metrics for the success of the initiative.

Outsourcing of some, or all, of the data warehouse development may be a consideration worth examining. If the establishment of the data warehouse is critical to supporting Judiciary functioning and is unique to efforts that have taken place in the past, the answer to the question of outsourcing development may be “yes”. This is not meant to cast doubt on the capabilities of the resources already employed within the Judiciary. It’s about making certain that the data warehouse functions as it is envisioned from the beginning. If Judiciary ‘data warehouses’ already exist but, do not fully perform as they should (by acting solely as data repositories), then outsourcing development to experienced personnel may serve the best interests of the Court. If outsourcing some or the majority of the data warehouse development is considered viable, this creates additional concerns for the Judiciary. Careful consideration will have to be given to the choice of providers in such a case.

The question of what the data warehouse may be replacing, if anything, is critical in determining:

- How it will ultimately function.
- What the portal(s) used to access it will look like.
- How data will be handled (is some data too sensitive for certain end-users, etc.?).
- Who should have access to it and what rights should they have for data manipulation.

If the answer to the question of what the data warehouse is replacing points to an already-existing database, then a similar look and functionality may have to be retained so as to decrease the learning curve needed to work with the new system. If the answer is negative and the data warehouse initiative is directed toward something unique, implementation should consider development along lines that follow a similar feel to already-existing technologies. Providing familiarity in terms of look, functionality and feel will make use of the data warehouse attractive to end-users. Additionally, the

resources otherwise needed for support may be reduced if the end-user learning curve is similarly decreased.

The look of the portal used to access the data warehouse is crucial to making it popular among end-users. Having a data warehouse implementation that does not get used is wasteful in the extreme. Providing an easily navigable portal that offers powerful research tools to even the most technologically agnostic end-user would make it appealing and worthy of continued funding, going forward.

The issue of how best to serve information gotten from the data warehouse addresses the twin concerns of data integrity and security. How to adequately compartmentalize data for the different end-user communities is going to be a substantial question for development and implementation. Likely, the parameters for advancing in this area will shift over time and should be considered as being part of the cost(s) of development.

Metadata is data about data. The composition of good metadata is what makes a data warehouse successful with near-absolute surety. One of the major differences between a database and a data warehouse—outside of the analysis and reporting features provided by the latter—has to do with how data is defined within these constructs. In a database, data is segregated into containers that are linked to enable querying in such a way that is often too abstract for the typical end-user to consider. A data warehouse is built using business rules for things like naming conventions thus making data access more of an intuitive process. How these business rules are established and utilized throughout the data warehouse is through the creation of good metadata. Since this process is fundamental to the perceived utility of the data warehouse amongst end-users, many organizations will often defer to an outside consultant who specializes in metadata development. As this, once again, touches on the possible need for outsourcing, similar consideration should be given to the choice of providers attached to the project should the option for the use of an outside resource be exercised.

Lastly, the question of a fee schedule for use of the data warehouse will have to be given careful consideration. Making the determinations regarding for whom a fee should be charged, how much, how to handle the transfer of funds for payment and how to account for the income, all become issues of concern that need to be addressed at the outset. The impact of the answer to this question determines how this initiative will be funded in the future. At a minimum, the data warehouse initiative should be ‘revenue neutral’. If, in the end, it is well-conceived, contains easy-to-use and powerful features, an end-user fee schedule could possibly provide for the project becoming self-sustaining over time.

E-Administrative

Initiative	Description	Priority
E-Administrative	Implement automated solutions that enhance and operation of the Judiciary in human resources and employee provisioning areas. Sub-initiative: Human Resources Create and deploy an integrated human resources application that seamlessly interfaces with the Executive Branch. Sub-initiative: Employee Provisioning and Relationship Management Develop and implement an automated system for effecting changes related to employee movements.	Priority

The objective of this initiative is to implement management and administrative programs that bring the advantage of technology improvement to the Judiciary internal human resources operations. Such systems will enable the Judiciary to better utilize its available resources and greatly increase its management efficiencies to ensure that it adequately meets all of its fiduciary and human resource responsibilities.

Sub-initiative: Human Resources

Human Resources information systems presently relied upon by the Judiciary do not efficiently, effectively or fully meet its needs. Moreover, these systems are completely siloed in that they do not communicate with systems beyond the Judiciary's purview. Therefore, the first objective of this initiative is the development and implementation of a suite of Human Resources applications that will share Judiciary HR-related data with the Executive Branch. Doing so would increase efficiency and save time for the HR department. This part of the plan parallels much of the work to be done in the Integration Services initiative.

Another facet of this initiative that should be addressed is that of providing a web-based portal that would enable prospective job candidates to apply for positions with the Judiciary. Here, job-seekers would have the ability to upload their résumés and any related documents to a secure server for perusal by HR staff. This would save an enormous amount of time for HR personnel having to key in résumé data manually.

Lastly, Human Resources requires the implementation of the NSC Navigator System for tracking Health and Safety audit information as well as HR reporting of occupational

injuries and illnesses. This powerful tool offers improvements to the various aspects of data reporting, tracking and trending from an occupational health perspective. From the Court Access Services perspective, this functionality will assist in gathering and inputting essential information when Health & Safety personnel are in the field, will allow for the immediate downloading of the information to respective stakeholders, and finally will permit the accumulation of pertinent statistical data electronically instead of manually. This application can also be used to track Work Place Violence submissions and provide an aid in the creation of incident reports. The benefit of automating this process arrives in the form of reducing the overhead of manual data recordation.

Sub-initiative: Employee Provisioning and Relationship Management

A list of features for an automated work flow process monitoring solution has been proposed that would better enable hiring managers, Human Resources and supervisory staff to update and maintain employee records. These are:

- Hiring managers and supervisors should be able to communicate to all necessary parties in one step the fact that there is a change affecting an employee that requires action.
- The various units required to take action to accommodate an employee movement should have access to the automated system and should be able to indicate their action status.
- The hiring manager and supervisor should each receive a notice in real time that the required activities have been completed.

The options for providing this Human Resources Information System (HRIS) solution are such that either it can be built in-house or, a third-party application can be found. Another possibility is that the solution be web-based. If that option is taken, it can be rolled in with the E-Courts/E-Filing, Data Warehouse and Human Resources initiatives. During the design/configuration phase, input should be sought from the affected parties as pertains to the creation of the user-interface and feature-set.

E-Court

Initiative	Description	Priority
E-Court	<p>Develop and implement web-based systems to facilitate the filing, storage and management of cases for operational efficiencies with a focus on the interaction with Attorney/Litigants and the public.</p> <p>Sub-initiative: E-Filing Implement web-based systems that provide a simple and convenient means for the court to interact with its constituents.</p> <p>Sub-initiative: Document Management Improve on the means by which documents crucial to Court functioning are processed and maintained.</p> <p>Sub-initiative: Case Management/Process Improvements A means by which improvements are made to the movement of cases through the Courts.</p>	Top Priority

Sub-initiative: E-Filing

Building on the successes of the successful e-filing solutions such as JEFIS, e-ticketing, E-TRO and others, the E-Court initiative seeks to capitalize on the strengths of various e-filing models. The collection of data at the source, whether from an attorney office, police car or constituent at their home offers significant benefit to the court and the public.

By taking the E-Court initiative in the direction of a web-based system, access can be had by any machine capable of reaching the Internet. This creates what is known in the Information Technology sector as “platform independence”. Literally any computer, or intelligent device (phone, tablet, etc.), will have the ability to connect to the E-Court framework, with no prior configuration necessary. This removes any downtime associated with pre-configuration issues and provides a means for immediate access to all of the forms and documents needed by litigants, attorneys and, the Judiciary, itself.

To enable these efficiencies, the E-Court web framework will have to be constructed, tested and approved prior to release. By way of streamlining development and lowering

the overall costs associated with such an initiative, team members will make use of proven reusable components. The testing phase of the development will examine how users interact with the system, amongst other issues. The idea of testing, in this manner, is to determine how best to structure the interface so that it is viewed as being simple, efficient and capable by the widest possible user audience. Here, the intent is to provide a system that is so easy to navigate that it becomes intuitive to even the most technologically inexperienced end-user.

Sub-initiative: Document Management

Document management/process improvement involves the redesign of existing business procedures to achieve efficiencies in court operation. In short, this is a means of applying technological solutions to manual processes. In some rare cases, existing technologies will be refined under this sub-initiative so as to achieve greater efficiency.

The success of the Document Management/Process Improvement initiative will depend on several factors:

- Management support.
- Identification of key stakeholders.
- Determination of the actual goals to be realized through change.
- The outcome of the necessary due diligence this initiative requires.
- Input and feedback from all affected parties.
- The ability to remain flexible in the implementation of change.

One way to arrive at management support of process change is to have senior management regularly issue statements that explain the program and the status of the initiative as it progresses. By openly communicating intent and progress, anyone subject to the refinement process will be aware of and more accepting of the changes to come.

Defining the scope of a particular process improvement should clearly identify who will be involved and how they will benefit. Thus, the identity of key stakeholders is very closely tied to the scope of any changes made to existing processes.

By way of anticipating the goals that any planned process improvement should achieve, consideration will need to be given to what the changes are, the desired outcomes and the cultural changes that will result.

Research and analysis, before and during process improvement, will need to be performed in each case. This may come in the form of a review of the requirements for a

planned change, an examination of the efforts made by other development teams working with similar processes or, the evaluation of best practices from other entities. Communication with all of the key stakeholders in any process change is vital to the success of this initiative. Welcoming feedback from those whose workflow will be altered, involves them in the changes. In this way, they share in the ownership of the improvements and will more likely be committed to the achievement of the stated goals.

Flexibility dovetails with communication. By listening to the suggestions of those workers most closely involved in any planned improvements, change management team members may become aware of contingencies not previously realized. Being able to account for the unforeseen either while still in the planning or implementation phase makes it more likely that improvements will be better accepted and thus, succeed.

Sub-initiative: Case Management/Process Improvements

This sub-initiative targets the Case Management systems currently being used by the Judiciary. Here, incremental improvements are being made to these systems to make them considerably more flexible given the wide variety of web-enabled device technologies available to the Courts.

Financial Management Court Operations

Initiative	Description	Priority
Financial Management	Develop and implement an integrated financial management system, which includes budgeting, procurement, and facilities management	Top Priority

The objective of this initiative is to develop and implement a comprehensive and integrated financial management system, which includes cash management, budgeting, procurement, and facilities management to improve fiscal control. Such a system will enable the Judiciary to better utilize its available resources and greatly increase its financial management efficiencies to ensure that it adequately meets all of its fiduciary responsibilities.

The Judiciary collects and manages an estimated \$1.3 billion in cash receipts, escrow and related accounts. It also manages a yearly budget of more than \$700 million, using a patchwork of internally developed financial management applications. A new financial management system will help the Judiciary to automate and synchronize the entire money management chain as well as provide an improved accounting system. The new system will include the following functions: asset management, general ledger, procurement, billing, expenses, and payable and receivables.

This system will greatly improve the financial management processes of the Judiciary by reducing manual processes (improving efficiency and reducing human error); increasing quality of financial transactions; improving customer service for both internal and external customers (purchasing processes, general ledger reconciliation, reporting, etc.); reducing audit findings; minimizing potential defalcation of funds and exposure to the judiciary; and improving data monitoring and tracking. A comprehensive and integrated Financial Management system is critical to maintaining continuity of operations in a secure environment for the protection of the assets and integrity of the Judiciary.

This system should interface with the Executive Branch's Comprehensive Financial System (NJCFS) as well as our internal case management systems to provide the ability to consolidate daily cash and disbursement activities, eliminate dual system entry, and provide a means for the Judiciary to consolidate data from the vicinages.

Integration Services

Initiative	Description	Priority
Integration Services	Develop streamlined technical interfaces and data exchanges for Judiciary applications—most especially those shared with government partners.	Priority

The purpose of the integration of Judiciary information services is to improve court processes by enabling information sharing between the Court and its partner agencies. This will substantially reduce unnecessary duplication of effort and enhance customer service. The goal of this initiative is to create avenues by which the Judiciary's technologies can interface with those external partners who's relationship with the Court provides a mutual benefit (ex.: NJDOC, NJMVC, etc.). The easiest means for supplying this interface is via the Web. Due to the fact that the Web is largely platform-independent (one only needs a browser and an Internet connected device to access the Web), the need for specific technological adherence is bypassed. Information can flow securely between agencies without the need for partner agencies to replicate the same data infrastructures that the Judiciary already has in place. Data is made available and also collected via the Judiciary's infrastructure but, is supplied via the Internet.

This initiative has significant ties to the E-Courts/E-Filing, Data Warehouse and other initiatives and is therefore dependent on progress in those areas before work, beyond the planning stages, can begin here. The assets necessary for advancing this initiative are already in place with the Judiciary Information Technology Office (ITO). It would be useful to provide advance notice of work on the initiative to all concerned agencies as their input regarding interface design will be needed for guiding the work to be done.

Security Infrastructure

Initiative	Description	Priority
Information Security Infrastructure	Develop, deploy and maintain a comprehensive security infrastructure.	Top Priority

This initiative addresses the continuing need for an effective information security posture to protect Judiciary applications and data. The information security infrastructure supports both internal and external users. Comprehensive measures involving the monitoring, testing, and adaptation of systems within this infrastructure are undertaken on a daily basis. A very large part of this is guided by legal or regulatory requirements as stated within the Judiciary Security Policy.

In transitioning from older security frameworks to those more current, it would be wise to consider making use of readily available, easily maintained and cost-effective third-party applications. Such an approach greatly shortens the time and expense of in-house development. However, in order to properly satisfy the security infrastructure requirements of the Judiciary, third-party systems will need to be easily configured, updated and refined when necessary.

Understanding that the Judiciary has limited resources with which to protect itself, information security has become a risk-based activity wherein the costs of ensuring that threats are balanced against the overall mission of disseminating information. Careful consideration must be given to how the myriad threats can deliver harm and impede the business processes of the Courts. As new threats to the security of data used by the Judiciary emerge, the teams responsible for prevention, logging, tracking and ultimately, mitigating them, should have the means available to become conversant in the techniques and protocols that will protect data, going forward. A large component of designing and maintaining a capable security infrastructure is research. Research, in many cases, enables security teams the opportunity to become proactive as opposed to reactive. This markedly changes the security paradigm from one wherein the teams responsible for ensuring data integrity are faced with having to constantly clean up after an attack or, successfully fend off attacks before they happen. Having the ability to properly research new avenues for attack can save the Judiciary from potential down-time and lapses in privacy. Enabling such a scheme may involve having to deploy simulation environments for security infrastructure team members use in testing prevention scenarios.

Given that new device technologies arrive at the marketplace on a nearly perpetual basis, there are often liabilities associated with many of these. New hardware, frequently running software that is untested for vulnerabilities prior to launch, can represent a significant risk to security when these devices are used to access Judiciary web sites and applications. By providing team members with the means for researching and evaluating

new threat-defense systems, the Judiciary can greatly minimize if not, fully deter risks to the integrity of its data.

A robust and effective information security infrastructure will allow the Judiciary to gain greater control over and ensure the integrity of IT resources. It will also facilitate asset management, improve incident response, aid in disaster recovery, assist problem solving, guide application development, enable greater automation of processes and support overall compliance with the Court's data confidentiality mandates.

Appendix 2: Principles of IT Governance

Governance

As there has been considerable technological development for public consumption over the last several years, inevitably the acute awareness of these devices and their capabilities, on the part of the ITO, turns to thoughts of how they might be utilized by the Court. Certainly, intelligent phone and tablet technologies are popular but, should they—and the ‘apps’ they are capable of using—be incorporated into the overall development scheme? With this in mind, it would first be useful to examine the criteria used in making decisions regarding what should be considered appropriate for use by the Courts and staff.

To serve as a guide in making determinations, several principles are being adopted and applied as a means of standardizing the thinking in this regard. These come from the Principles for Business Operating Procedures (version of 12/02/11):

Principle 1: Modify, consolidate and simplify business practices and procedures prior to developing an IT solution.

The underlying message imparted herein is very simple: whenever possible, a detailed analysis of manual procedures should be undertaken to understand the efficiencies and risks associated with said processes. Also, while this examination is taking place, if there are modifications or improvements to the processes that can be implemented make them and evaluate the consequences. If these steps are taken, pre-development, the resulting technical solution will be more efficient and simple to use.

Principle 2: Do not restrict process improvements because of existing court rules or historical operating practices—pursue rule changes when needed.

This principle speaks to the need for the review of applicable court rules as they pertain to solution development. If existing rules are in place to support manual processes, changes may be called for that positively impact system design and function for development whose purpose is the replacement or enhancement of those processes.

Principle 3: View data as an electronic court record.

During the business analysis process, the data contained in the official judiciary case management systems should be viewed as an official record of the court. This supports down stream access and reliance on electronic court case information without the need to view or access manual or imaged copies of forms, orders, documents and other court actions.

Principle 4: Adhere to established standard judiciary-wide data definitions.

During the preliminary steps toward process specification and development, a review of existing data needs to be carried out so as to ensure that standard judiciary data definitions are employed. This avoids redundancies and permits the construction of solutions that are seamless in their interaction with present systems.

Principle 5: Develop judiciary-wide processes for common functions that foster standardized operating procedures and uniform state-wide usage.

Many operations and functions, in the various judicial divisions, have similar patterns and business rules. Efforts need to be made to insure that, whenever possible, future system development identifies opportunities for judiciary-wide functionality. Replacement of inconsistent processes and practices should be initiated by way of providing solutions that have the widest possible acceptance and use by the judiciary. This can only be made possible when it is seen that the integrity of the processes themselves is maintained through the use of these replacement solutions. An immediate benefit is realized when the burden of statewide training and support is thereby reduced.

Principle 6: Capture data and documents at the earliest stage of the process.

Whenever possible, system designs should include functionality that captures data at the point when the document or action occurs. This approach takes into consideration the idea that every process requires some form of data entry to get started (ex.: an officer writes a ticket). System development must account for that initial entry with an interface that a) makes the process possible; b) simplifies the process; c) ensures accuracy; and d) is compatible with existing systems.

Principle 7: Identify opportunities to eliminate judiciary data entry by developing and promoting open systems (web services, etc.) and Internet-based, self-service applications.

Each business sector embodied within the Judiciary should continue to identify and investigate those open systems that help to eliminate manual data entry. If there is an existing web-enabled technology/interface that can be regulated in such a way as to maintain the integrity of Court data and processes while at the same time, saving time and increasing accuracy, then further examination should take place so as to determine the possibility for acceptance.

Principle 8: Primary focus should always be on the end-user who will use the system. Essentially: every end-user has different needs when it comes to technology. Whenever possible, systems should be designed to incorporate the widest appeal and functionality by way of addressing those needs.

Principle 9: Avoid over-sophistication—not everything should become automated. Cost/benefit analysis should always be used to determine if a process should be automated before investment is undertaken so as to ensure that a significant return is gotten. Think of this as ROI for Information Technology. If the end result of the development or process change is such that a tangible increase in performance isn't gotten, why bother?

Principle 10: Analyze business processes to identify the most efficient eFiling options.

For the fact that the Judiciary uses numerous eFiling solutions, developers and project management should be familiar with all of them so as to make use of that which best fits an end-user's needs.

Principle 11: Eliminate manual review processes for all electronic filings and systems generated documents.

When and wherever appropriate, standard electronic forms should be used to eliminate the need to manually review and accept filings.

Principle 12: Identify and analyze outside systems that may be impacted by, or adversely affect Judiciary system development.

Herein, business analysis should critically examine and identify any functionalities or redundancies that adversely affect system rollout and user acceptance of a proposed new system. If conflicts exist, they should be considered, evaluated and removed at the earliest possible stage of development.

Principle 13: The storage, maintenance and purging of data and document images should be considered and planned for at the onset of system design.

During system development, business analysis must consider the Judiciary Records Management program as specified in Administrative Directive #3-01 to include a thorough review of the storage, retention and purging criteria of all records to ensure that future electronic storage requirements and search capabilities are as efficient as possible.

How these principles pertain to the possible implementation of new technologies has to do with the process of detailed examination. Before a new system is either developed or adopted, careful assessment must be undertaken so as to ensure that the new technology is dependable, secure, adaptable, easily understood and provides a sufficient increase in performance over existing systems/processes to deem it worthy, prior to rollout. While this approach may negate the use of some popular technologies and applications, the overall investigative doctrine exists to ensure the integrity of Court data and functions.