

**indra**



**MANAGEMENT & CONSULTANCY SERVICES  
FOR THE DEVELOPMENT OF THE PHIL.  
JUDICIARY'S ICT CAPABILITY**

**ENTERPRISE INFORMATION SYSTEMS PLAN  
EXECUTIVE SUMMARY  
(Final Report)**

*Prepared for:*

SUPREME COURT OF THE REPUBLIC OF THE PHILIPPINES

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## EISP EXECUTIVE SUMMARY

### Component 2: Development of the Enterprise Information Systems Plan (EISP)



#### REVISION HISTORY

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ACRONYMS

**PRIORITIZED SYSTEMS**

<b>CDTS</b>	Computerized Document Tracking System
<b>FAMS</b>	Financial Auditing and Management System
<b>FMS</b>	Finance Management System
<b>IHRMS</b>	Integrated Human Resource Management System
<b>JCMS</b>	Judiciary Case Management System
<b>LMS</b>	Logistics Management System
<b>LRMS</b>	Legal Resource Management System
<b>MEDICS</b>	Medical and Dental Information Court System
<b>PVS</b>	Personnel Viewing System
<b>SRIS</b>	Service Request Information System

**NON-SYSTEMS**

<b>EISP</b>	Enterprise Information Systems Plan
<b>HOJ</b>	Halls of Justice
<b>HW</b>	Hardware
<b>ICT</b>	Information and Communications Technology
<b>IS</b>	Information System
<b>IT</b>	Information Technology
<b>JIDIF</b>	Judiciary-wide ICT Development Integration Framework
<b>JRSP</b>	Judicial Reform Support Project
<b>MISO</b>	Management Information Systems Office Management Information Systems (referring to various MIS groups within the Judiciary)
<b>MIS</b>	
<b>MRDP</b>	MISO Re-engineering Development Plan
<b>SDLC</b>	Systems Development Life Cycle
<b>WB</b>	World Bank
<b>DSL</b>	Digital Subscriber Line



1. PREFACE

1.1 INTRODUCTION

In support of the comprehensive reform effort to enhance the Judiciary's efficiency and effectiveness, while ensuring wider and speedier public access to justice, the Judicial Reform Support Project (JRSP), which is being financed by the World Bank (WB), was conceived.

As part of the JRSP, INDRA was designated to provide the Management and Consultancy Services for the Development of the Judiciary's Information Communications Technology (ICT) Capability of the Judiciary which shall consist of several major components: (1) development of the Judiciary-wide ICT Development and Integration Framework (JIDIF) that provides an assessment of the current situation and the recommended application systems portfolio, (2) development of an Enterprise Information Systems Plan (EISP) based on the JIDIF, and the (3) formulation of the MISO Re-engineering Development Plan (MRDP).

This EISP is the first out of two (2) deliverables under Component 2 of this engagement which shall technically provide the Judiciary with the functional, technical and architectural specifications for the selected systems that will be part of the EISP based on the JIDIF. Thus, the EISP is the first step in the realization of the proposed reforms for the information technology of the Judiciary as documented in the accepted JIDIF under Component 1 of this project. The EISP shall be the basis then for the creation of bidding documents, the final deliverable under Component 2, for the evaluation and implementation of this plan. Needless to say, the ultimate realization of such reforms is the actual bidding and implementation of these systems in the Judiciary.

The EISP of 2010-2014 will serve as a framework of ICT initiatives of the Judiciary for the next five years. The EISP contains the present ICT needs of the Judiciary and proposed solutions vis-à-vis the organization's mandate, objectives, and programs through the development of new Information Systems (IS) and provision of additional state-of-the-art IT equipment.

There are three (3) main deliverables for the EISP. These deliverables are:

A. The EISP Executive Summary

This document serves as the presentation on major points of the EISP. This is intended for the officials of the Judiciary. Pertinent details of the executive summary shall be documented in the EISP.

B. The EISP (main document, in a separate document)

This document consolidates the strategic lines under which the prioritized systems fall. This also includes functional and technical requirements of the systems, cost estimates, and a discussion on the implementation plan and change management framework. It will contain the following:

1. Preface
 

The first part of the EISP presents an introduction, details the objectives and determinants, cost methodology used for the estimation and the general and system-specific assumptions that govern the estimation and creation of the 5-year roadmap.
2. Strategic Formulation



This section aims to align the strategies with the appropriate objectives and course/s of action. More importantly, this provides a summary of the required investment in order to guide the Judiciary in budget preparation and planning.

- 3. Technical Infrastructure
 

This section discusses two major components of the foundation that needs to be established upon which the information systems will be built:

  - A reliable yet cost-effective communications / network infrastructure
  - A set of system standards that will be used to provide a consistent development and operational environment
- 4. Systems Architecture
 

This section contains the description of each system, the features and functions and technical specifications of each system.
- 5. Implementing the Enterprise Information Systems Plan
 

This section presents the five (5)-year roadmap with priorities based on the strategic objectives and the IT opportunities of the Judiciary. This aims to present the recommended implementation plan and change management framework to ensure that the EISP is successfully executed.
- 6. Realizing the Plan
 

Factors that contribute to the realization of the EISP are discussed for action by the Judiciary.

C. Annex to the EISP

This document contains the details and supporting documentation of the EISP. Included in the annexes are assumptions for hardware and software estimates, a system roll-out guide, a comparison between custom-developed application and a packaged application, discussions on approaches to IT operations, and system descriptions and discussions on development and database platforms.

**Note:** This document is intended for the Judiciary audience familiar with the accepted Assessment and JIDIF reports.

1.2 OBJECTIVES AND DETERMINANTS

To realize the Judiciary's vision of effectiveness and efficiency, the following shall be the specific objectives to guide the implementation of the EISP:

- 1. Provide an enterprise-wide systems plan that contains a diagnosis of the needs of the Judiciary in relation to Software, Hardware and Personnel requirements and establish the **Strategy, Objective and Action Plan** that permits the development and implementation of the systems.
- 2. Develop a **5-Year Roadmap** that determines the sequence for implementing specific information systems, with the end goal of delivering the most valuable information system at the earliest time possible in the most cost-effective manner.
- 3. Develop a **Technology Architecture** (technical infrastructure and systems architecture) required for implementing the EISP, documented in a form that can be used to prepare bidding documents, as necessary.



4. Provide an **Implementation Plan** and framework to manage change that the Judiciary can adopt in ensuring the successful execution of the EIS Plan.

### 1.3 THE MAKING OF THE EISP

The steps that were undertaken to develop this EISP are documented below:

#### Step 1 – Assess

The consultants, together with the SC Project Team, assessed the current situation and defined the needs of the users as far as ICT initiatives are concerned. A model of the current operations was presented. This includes getting an inventory of the existing information systems and analyzing their effectiveness in meeting information needs. The assessment resulted in the Assessment Report documenting where the Judiciary is right now.

#### Step 2 – Recommend

Based on the assessment, the recommended ideal application system portfolio for the Judiciary was formulated and documented in the JIDIF. This step provides a validation of the work process and identification of areas where improvements are needed in delivering or processing information, both of which need to continue as on-going efforts.

#### Step 3 – Analyze and Define Benefits

An analysis of the various factors that contribute to a successful EISP was conducted to determine the viability of implementing the various systems proposed under the JIDIF. From the ideal system portfolio identified in the JIDIF, further study of these factors lead to the identification of priority systems to be included in the 5-year plan.

#### Step 4 – Estimate Timeline and Cost

After identifying the systems to be prioritized out of the ideal, the functional specifications describing what is needed by the system users as well as requested inputs and outputs were defined and validated with the SC Project Team and identified officials of the Judiciary.

These specifications are vital to the understanding of the effort required in developing or acquiring a system and is used in the estimation of cost and definition of timeline.

#### Step 5 - Create a Roadmap

This step involves the development of a written plan which describes the required projects, the integration needs and an implementation plan for meeting those needs, including the schedule, resource requirements and cost estimates for the 5-year plan.

## 2. PRIORITIZED SYSTEMS

Following the identification of required systems and ICT reforms as documented in the Judiciary-wide Information and Communications Technology Development and Integration Framework (JIDIF), this document explores the various information system recommendations and selects those that agree and balance well with the reform priorities and other factors discussed below. The EISP, which encompasses 5 years worth of ICT developments and contains hardware and implementation costing and planning activities, is intended mainly to guide the Judiciary in the procurement and installation of the recommended ICT systems and components. Due to the extensiveness of the plan, it is not feasible and practical to implement all of the recommended information systems under the JIDIF within a 5 year period. Consequently, the information systems are proposed to be implemented in phases. After an analysis, the phases and their sequence have been determined considering the following factors, among others:

1. Impact to the Judiciary and the Strategic Objectives
  - The prioritization of each system in the roadmap is largely based on the impact this will have on the real needs of the Judiciary. A closer look into the reform issues and possible solutions was made.
  - This also takes into consideration the IT opportunities and available technology now and in the future, plus the IT limitations to support the implementation.
  - An analysis of each system's impact proved helpful in ranking the systems accordingly, as follows:

Rank	Objective vis-à-vis Results
1	Improve case adjudication and access to justice → create efficient management of cases, address backlogs
2	Enhance the integrity infrastructure of the judiciary → gain public trust and confidence
3	Strengthen the management of the judiciary → establish employee confidence and strengthened management

A higher rank was given to the system that answers the major objectives of the Judiciary. Rank 1 is given to the systems that support the improvement of case adjudication and access to justice. Rank 2 is given to the systems that support the enhancement of integrity to gain public trust and confidence. It is not saying though that rank 2 is of less importance to the Judiciary, but rather the contribution of ICT in the enhancement of the integrity infrastructure is not as great as improving effectiveness and efficiency in case adjudication and increasing access to justice. Other systems in the portfolio that do not fall under ranking 1 to 3 above were de-prioritized.

2. Integration Points (dependencies of each system)
  - Also taken into consideration is the data flow and dependencies of each system. The flow of data through the systems was mapped out to identify the dependencies of each system. This establishes pre-requisite systems by ensuring that systems processing or storing data needed by another system is available before the dependent system is scheduled for development.
3. Realistic Timeframe and Budget
  - The cost and the timeline to develop and/or acquire a system and put the required technology to support this in place will greatly affect the





prioritization of systems because funding and budget are major determinants to having these systems.

- With no defined budget for the 5-year period, the cost to develop and/or acquire each system (with the required hardware, service and technology) was prepared based on the following:
  - i. Current cost of technology
  - ii. Number and complexity of business processes supported (system functions and features)
  - iii. Prevailing rates of equipment and personnel
  - iv. Inflationary and foreign exchange impact
  - v. Local taxes
  - vi. Internal cost to the Judiciary to do a joint implementation
  - vii. Estimated number of users (*refer to Annex O: Number of System Users per Judiciary Level and Annex P: Assumptions on the Number of Users at the Lower Courts*)
  - viii. Volume of transactions (*refer to Annex Q: Estimated Data Volume of System Processes*)
  - ix. Pilot sites
  - x. Server distribution (centralized vs. distributed architecture) refer to *Annex R: Server Deployment*
  - xi. Travel and lodging cost (for the implementation at the regional CA)
  - xii. Required training and implementation support

4. Personnel Requirements

- Taken into consideration is the reality that MIS only has so much staff (in number) that can be made part of the joint-implementation with the winning bidder. Its manpower complement will also handle in parallel the maintenance of its existing systems until such systems can be retired.

The analysis resulted in the identification of the information systems from the JIDIF that are to be included in the 5-year plan. This is recommendatory and will depend greatly on budget, financing options and readiness of the Judiciary. Without any defined budget at this point, the prioritization depends highly on what could be feasibly implemented in a 5-year period. The Judiciary may opt to de-prioritize other systems identified in the EISP when the factors are more defined and timing more exact. Further in the document, the cost to implement each Tier is summarized. The systems that are recommended to be implemented in Year 2010-2014 may be grouped as follows and are listed in Table 2.1:

**Tier 1 – Mission-Critical Front End Database and Information Systems**

These are the systems recommended to be developed first and started within the first 2 years of the roadmap. This tier includes the systems that support the Judiciary's main mission of providing justice, as well as the systems that run the major operations of the Judiciary as an organization, which are Finance, Human Resources and Logistics.

**Tier 2 – Supplementary Systems**

These systems build up on the capabilities of the mission-critical systems to enhance the overall delivery of existing information systems. Examples of systems included in this category are ePayment, which will automate the cashiering system of the Judiciary and support adjudication and financial processes and the Financial Auditing and Management System (FAMS), which will automate the auditing and counter-checking of financial entries and actual cash records at the courts.

**Tier 3 – Systems for Continuous Improvement**

Towards the end of the 5-year roadmap, systems to sustain improvements towards a better Judiciary are recommended. Systems to support the training of Judiciary

personnel and lawyers and the Service Request Information System (SRIS) are among the systems that fall under this category. Also, new systems such as the Notary Public System and the Personnel Viewing System are introduced at this point as the major systems such as the Judiciary Case Management System (JCMS) and the Integrated Human Resource Management System (IHRMS) stabilize.

**Table 2.1 Prioritized Systems**

<b>SYSTEM NAME</b>	<b>DESCRIPTION</b>
<b>Mission-Critical Information Systems</b>	
Judiciary Case Management System (JCMS)	JCMS is intended to manage the entire case flow from filing, payment of filing fees, through the case events and until disposal.
Financial Management System (FMS)	Financial Management System is an accounting and finance solution to help track and analyze financial information. With end-to-end integration, users can efficiently manage general ledger, payables, receivables, fixed assets, as well as perform bank reconciliation.
Logistics Management System (LMS)	The Logistics Management System records and monitors the procurement, allocation, inventory and disposal of supplies and equipment. It provides reports on stock inventory of office supplies as well as accountabilities.
Integrated Human Resource Management System (IHRMS)	The Human Resource system is an integrated system covering organizational management, personnel administration, benefits administration, recruitment, training and events management, performance management and handling of complaints.
Judiciary-wide Email	A store-and-forward method of writing, sending, receiving and saving messages over electronic communication for the use of the judiciary. This is to provide faster and reliable information exchange between offices and courts.
Computerized Document Tracking System (CDTS)	This is a system used for recording and monitoring all the incoming and outgoing documents of the offices in the different levels of the Judiciary.
<b>Supplementary Systems</b>	
ePayment	This is an enhanced version of the existing ePayment system. This will allow automatic assessment and computation of legal fees for all types of cases. This system will also accommodate other payments made to the courts, be it part of Judiciary operations or for revenue-generation.
Payroll System	The Payroll System handles processing of salaries, wages, bonuses, allowances and deductions of regular and casual employees and generates payroll reports.
Attendance and Leave Data Entry System	An application that records the attendance and leaves of the lower court employees for upload to IHRMS.
Biometric Timekeeping System (Biometrics)	A system that records the daily time in and time out of the court employees necessary for attendance monitoring.
Financial Auditing and	A computerized system that produces the details of



SYSTEM NAME	DESCRIPTION
Management System (FAMS)	all financial audits conducted on the book of accounts of all the accountable officers on the lower courts.
Legal Resource Management System (LRMS)	The Judiciary currently uses the E-Library, which contains Supreme Court and Appellate Court decisions, articles of law, legal journals and other significant resources such as the Manual for Clerks of Court. The system being recommended contains these functionalities and in addition, intends to be more comprehensive through a link with the JCMS for automatic transfer of all (promulgated) decisions from all levels of the Judiciary, to provide resource services to the public and lawyers and to be used as the basis for clearance issuances. To distinguish this more complex system from the existing E-Library, it shall be called the Legal Resource Management System (LRMS) in this document.
Archive Management System	This system accepts all closed case files and related documents from the Judiciary Case Management System (JCMS) for safekeeping and separate management (ad hoc) from working and pending cases.
Source Code Management System	Version control software that keeps track of all work and all changes in a set of files (usually program source codes), and allows several developers (potentially widely separated in space and/or time) to collaborate.
Intranet Portal	Made exclusively for court employees, an Intranet Portal would enable more ease in communication and coordination that is currently limited by the distances between offices. Through collaboration tools that could be provided through the intranet portal, transactions that usually take time because of personal appearances and postal mail (leave requests, permits and other administrative requirements), as well as to update employees on new policies and processes, etc. are better facilitated and supported. Other collaboration tools such as forums and "team room" capabilities could also support other processes and functions within the courts.
Intranet Content Management System	This system will serve as the front-end interface for all offices contributing to the content of the Intranet Portal. This will be used by the offices to upload news, documents, updates, and other information to the Intranet Portal.
<b>Systems for Continuous Improvement</b>	
Court Websites	The court websites will contain decisions, updates, news, procedures, vacancies and other information on the courts.
Judiciary Public Portal	A Judiciary Portal could establish constant and stable access to the Judiciary for any person anywhere, inside or outside the Judiciary as it could serve as the entry point to the court websites (for updates, specific procedures and rules, etc.) and



SYSTEM NAME	DESCRIPTION
	the venue for online transactions and services (i.e. inquiries, search engines). The Portal also includes a sub-Portal with the same features and services but specifically for lawyers.
Website Content Management System	This system will serve as the front-end interface for all offices contributing to the content of the Court Websites and Judiciary Portal. This will be used by the offices to upload news, documents, updates, and other information to the Court Websites and the Judiciary Portal.
Notary Public System	This system contains information on Notary Public lawyers and enables the courts to monitor the documents that the Notary Public lawyers are required to submit monthly.
Service Request Information System (SRIS)	A system designed to store, monitor and provide other information about requests for IT equipment repairs (hardware and software), network issues, application problems and enhancements, for general services requests such as building facilities and equipment maintenance and repairs as well as printing requests. The system can provide reports such as classification of problems, average response time for the requests, accomplishments of personnel or group, among others.
PHILJA Training System	The system manages information on the training curricula and training programs conducted by PHILJA, such as training/seminar synopsis, delegates' attendance, and lecturer information. It also supports pre-event processes and generation of extract files of training attendance records for MCLE & OAS. It also supports the management of mediators.
E-Learning Management System	This system maintains the catalog of the Computer-Based Training (CBT) materials acquired or developed by PHILJA. The system also stores the actual training material itself when possible and will also serve as the electronic publishing mechanism for these training materials. The system will also monitor which employees have successfully completed the available CBTs and which employees have received copies of the training materials (for CD-based training).
Personnel Viewing System (PVS)	An integrated inquiry tool for personnel information for SC, CA, SB, CTA and LC court employee inquiries. May bring together information from IHRMS, FMS, LMS and Payroll.
Medical and Dental Information of the Court System (MEDICS)	The system manages all the health benefit of the Judiciary comprehensively through the management of employee (and dependent) medical records and history and the active maintenance of the inventory of medicines and corresponding employee claims/disbursements.

Component 2: Development of the Enterprise Information Systems Plan (EISP)

3. YEAR 2010-2014 ROADMAP

3.1 ROADMAP

Figure 3.1.1 provides the proposed 5-year ROADMAP for the Judiciary, on a phased-implementation. This pre-supposes that the bidding as well as the creation of the software-development framework is concluded before start of Year 1. It is also highly proposed for the Judiciary to undertake a study to plan for the next 5 years by Year 4.

Figure 3.1.1 Year 2010-2014 ROADMAP

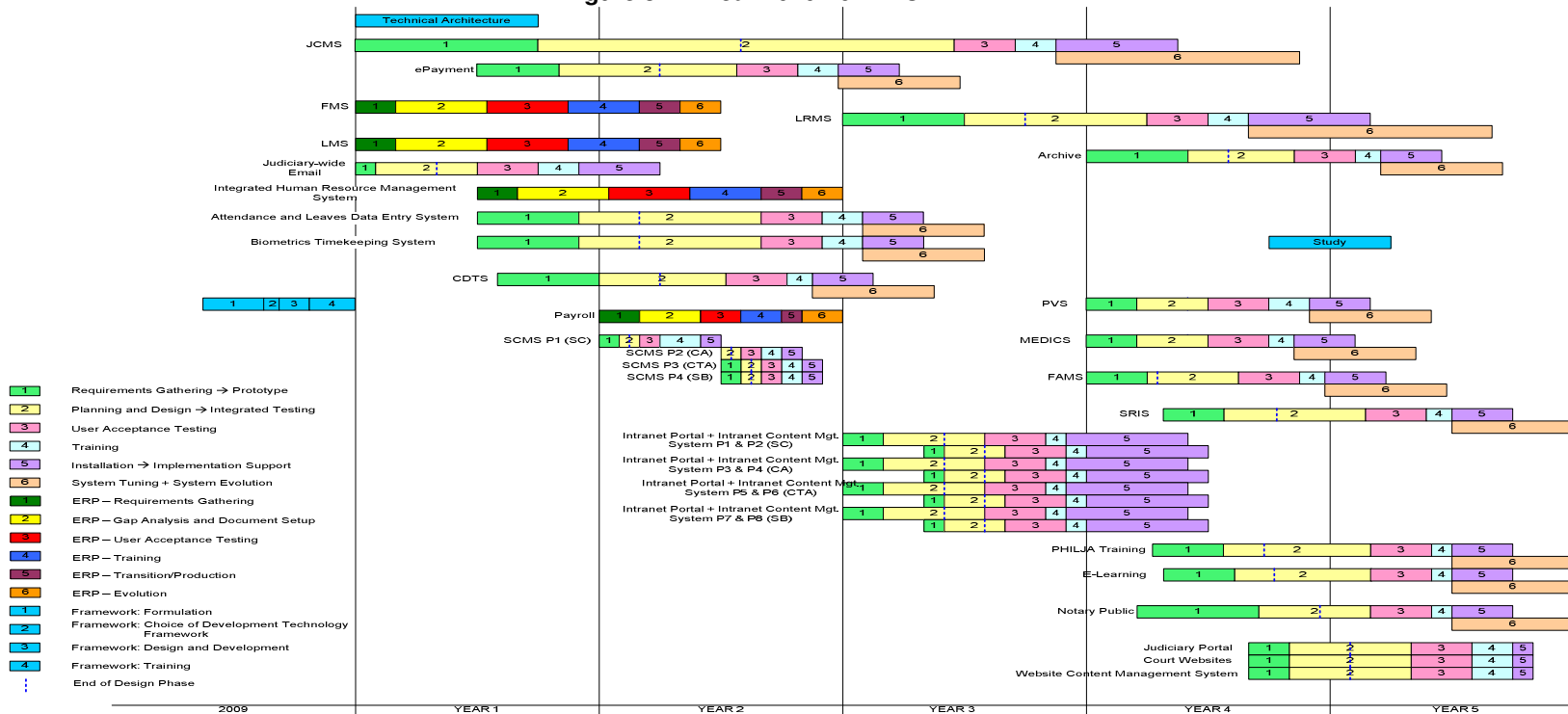


Table 3.1.1 provides the indicative costs for the implementation of priority EISP projects over a five-year horizon. The prioritization is aligned with strategic objectives of the Judiciary to ensure that priority is given to systems which will create greater impact and use to the organization. The Judiciary may use this as indicative cost for their planning and request for funding for the next 5 years in order to realize the reforms proposed under the EISP. Each strategic line redounds to objectives and specific information systems, as summarized below:

**Table 3.1.1 Indicative Cost for the Implementation of the EISP (per System)**

Strategic Line	Objective	Information System	Indicative Cost (in Million Pesos)
Effectiveness, efficiency and integrity in the administration and delivery of justice	To modernize and facilitate the administration of justice by the Judiciary in the SC, CA, SB, CTA and 3 selected Lower Courts in Manila	Judiciary Case Management System (JCMS)	442.1
		Archive Management System	73.3
	To standardize and provide a means to accurately assess, collect and record collections in the SC, CA, SB, CTA and 3 selected Lower Courts in Manila	e-Payment	62.4
	To serve as a comprehensive resource providing the Judiciary with information needed in adjudication and related research to support decision-making	Legal Resource Management System (LRMS)	133.3
Financial and administrative productivity, efficiency and integrity	To improve the budget and financial management of the Judiciary	Finance Management System	189.1
		Financial Auditing Management System	47.8
	To provide a mechanism of transparency and a means to efficiently accomplish daily operational tasks related to the logistics process in the Judiciary	Logistics Management System	225.6
	To modernize the payroll processes in SC, CA, SB and CTA	Payroll System	292.0
	For faster and cost-effective delivery of administrative services	Integrated Human Resource Management System	472.5

Strategic Line	Objective	Information System	Indicative Cost (in Million Pesos)
	for a timely and accurate personnel management in the SC, CA, SB, CTA	Attendance and Leave Data Entry System and Biometric Timekeeping System	67.5
		Personnel Viewing System	91.7
		MEDICS	43.4
Efficiency and effectiveness in communication and coordination between employees of the Judiciary for enhanced productivity	To facilitate the circulation of documents across the levels and offices of the Judiciary while maintaining data integrity and security	Computerized Document Tracking System	84.4
	To modernize and facilitate the circulation of information and make coordination more effective and efficient between members of the Judiciary while maintaining data integrity and security	Intranet Portal and Intranet Content Management System	121.5
	To provide a fast and reliable means of communication to disseminate information	Judiciary E-mail	36.6
On-time delivery of service requests and better management of application codes	To provide a better management of source codes of information systems used in the Judiciary	Source Code Management System	26.2
	To enable requests to be reliably submitted, routed, approved, monitored and delivered	Service Request Information System	74.1
Transparency and efficient communication with the Public	To make processes, requirements and other information on the Justice and related transactions accessible to the Public online. To make information generally available to the Public at all times online	Public Portal and Website Content Management System	21.8

Strategic Line	Objective	Information System	Indicative Cost (in Million Pesos)
Uphold and strengthen public trust and confidence in the Judiciary's services	To effectively and efficiently manage information on Notary Public lawyers and notarized documents	Notary Public System	95.1
Effective and efficient training administration for the continuous development of the bench and the bar	To facilitate the processes involved in the provision of training	PHILJA Training System	54.4
	Effective provision of computer-based training	E-Learning System	97.1
Knowledge and Technical Infrastructure to support its Information Technology (IT) Systems.	Create a Judiciary Network to support the implementation of the 5-year plan	Network Equipment	28.3
	To provide the necessary knowledge to support the 5-year plan information system's development and implementation	Software Development Framework (Study and Training)	9.7
Improvement of efficiency and effectiveness in the activities of the Judiciary	To be able to identify the functional, technical, labor and financial requirements for the remaining systems in the JIDIF that are not covered in the EISP	ICT Planning (Phase 2) for the next 5 years	8.7
<b>TOTAL ESTIMATED COST (in Million Pesos)</b>			<b>2,798.6</b>

The total cost of **Two Billion Seven Hundred Ninety Eight Million Pesos** is indicative of the cost of the whole 5-year EISP. Besides the initial investment required (for bidding) for projects, this estimate also includes the required maintenance costs for the 2<sup>nd</sup> to the 5<sup>th</sup> year (as applicable).





The following table presents the cost of the EISP by Tier (priorities). In the event that there will be any constraint (i.e. budgetary) in the fulfillment of the plans under the EISP, the Judiciary may opt to implement by Tier, thus putting priority on Tier 1. Another option is to de-prioritize and move the Tier 3 group of systems to commence after the 5-year period.

Tier	Information System	Total Cost (In Million Pesos)
Tier 1 – Mission Critical Systems	Judiciary Case Management System (JCMS)	1,478.6
	Financial Management System (FMS)	
	Logistics Management System (LMS)	
	Integrated Human Resource Management System	
	Computerized Document Tracking System (CDTS)	
	Judiciary email	
Tier 2 – Supplementary Systems	Technical Architecture (network)	824.0
	ePayment	
	Payroll	
	Legal Resource Management System (LRMS)	
	Attendance and Leave Data Entry System and Biometric Timekeeping System	
	Financial Auditing and Management System (FAMS)	
	Intranet Portal & Content Management System	
	Source Code Management System	
Tier 3 – Systems for Continuous Improvement	Archive Management System	477.6
	Judiciary Public Portal	
	Notary Public System	
	PhilJA Training System	
	PhilJA E-Learning	
	Service Request Information System	
	Personnel Viewing System (PVS)	
Others	Medical and Dental Information of the Court System (MEDICS)	18.4
	Training Framework	
	ICT Planning	
<b>Total</b>		<b>2,798.6</b>



3.2 ASSUMPTIONS

In designing the roadmap and the estimation of costs and timeline, certain assumptions and factors have been considered. The following major assumptions govern the EISP:

- The Judiciary’s main goal of attaining integrity and transparency, while ensuring effectiveness and efficiency, are the basic factors that lead to the prioritization of systems.
- The realization of the EISP is when this proposed roadmap is executed: that it is offered for bidding, awarded and implemented. Year 2010 is assumed to be Year 1 of the 5-year plan. Thus, the start date of January 2010 assumes that the bidding process for the systems is scheduled to happen in Year 2009.
- Bidding may be done per system or by group of systems. The proposed roadmap is to guide the Judiciary in deciding on the required resources for bidding.
- The EISP does not intend to recommend one specific approach to support the processes of the Judiciary. The Judiciary may opt to either: (1) implement a packaged (off-the-shelf) application (2) require systems development or (3) a mix of both. This would be decided based on the merits of the response to the Request for Proposal during the bidding process.
  - The EISP instead provides the System Architecture (recommended functions and features that the Judiciary needs and that an integrated system should provide). Then, in the future during the bidding process, perhaps some tool or solution (i.e. enterprise resource planning system) will be available in the market, developed under the required standard, covering all the functionalities, and fitting all the technical specifications/requirements that are requested into the bidding documents, then the Judiciary may decide to either develop or acquire an off-the-shelf solution.
  - The EISP also presents the following factors and arguments that aim to guide the Judiciary in its choice of systems approach (choice of option 1, 2, or 3).
    - For the adjudication-related processes, the critical factor is the uniqueness of the requirements. Based on INDRA’s experience, adjudication-related processes are supported by systems developed specifically for a Judiciary. Each Judiciary has its own set of ways of doing things, and there is not much mature packaged application available to support adjudication processes.
    - For the finance, logistics, human resources and payroll functional areas, several major factors would have to be considered. There are available mature packaged applications available in the market that offer best practices, tried and tested functionalities, short implementation time, assurance of integration between modules, global support and continuous Research and Development (thus assuring continuous improvement of features and provision of software upgrades). Thus, the choice to opt for the implementation of packaged applications for these areas is logical. The benefits that can be derived from such tried and tested packaged application systems that offer global best practices are usually high since the Judiciary will have an integrated system up and running in a shorter time. The only additional factors that would have to be considered by the Judiciary are the following:
      - *Readiness to conform to the packaged application’s design (and for gaps) ready to take the risk of customizing the packaged application?* The success of an implementation of packaged applications rests a lot on the percentage of fit between the Judiciary’s requirements vis-à-vis the functions and features offered by the packaged application. It may





accomplish since development standards would be in place. A software development framework can also help the IT developers focus more attention on the specific functionalities required of the system. With the software development framework in place, IS developers can make use of the customizable, pre-built programming libraries and templates for common functions such as database access, session management, user authentication, user authorization, and standard web services. This must be undertaken even before the bidding for the first information system. Together with the study and design of the software development framework, training is to be provided to the Judiciary's MIS personnel.

- All operational processes in the Judiciary have been established. The basis for the functional specifications per system is the current and proposed process flow within the Judiciary. No re-engineering of processes is planned before the EISP (as this is not part of the engagement's scope).
- The cost estimates were determined by considering the following factors (discussed in detail in the EISP main document): current cost of technology, number and complexity of business processes supported (system functions and features), prevailing rates of equipment and personnel, inflationary and foreign exchange impact, local taxes, internal cost to the Judiciary to do a joint implementation, estimated number of users, volume of transactions, pilot sites, server distribution (centralized vs. distributed architecture), travel and lodging expenses for the implementation at the Cebu and Cagayan de Oro Court of Appeals and the required training and implementation support.
- The information gathered and validated with the SC Project Team and identified Judiciary officials as of December 12, 2008 have been incorporated. The data have been estimated in cases where no sufficient information is available, or is not sufficiently validated to present approximated results (particularly on the number of system users, systems function and features, server distribution (centralized vs. distributed architecture per system), volume of transactions, pilot sites, training and implementation support).
- The scope considers implementation to the Supreme Court and the Appellate Courts (Court of Appeals- Manila, Cebu and Cagayan de Oro, Sandiganbayan, Court of Tax Appeals), plus three Lower Courts as pilot sites.
- The EISP estimation excludes the implementation services and hardware (servers and workstations for distributed type of architecture) for the roll-out sites. The internal team composed of MIS and key users may be tasked to do the roll out to the rest of the Judiciary. Please refer to *Annex C: System Roll-Out Guide* for a discussion on the roll out strategies that may be employed and the list of expenses that will be incurred for roll-out. This can guide the Judiciary in deploying the most suitable roll-out strategy.
- No recurring cost is computed for hardware (servers and workstations) as this is assumed to be covered by a 3 to 5 year warranty from the hardware vendor, as a standard for all server class hardware.
- For the data centers, it is also assumed that this is ready for use, thus no incidental costs (i.e. electricity, air conditioning cost) were considered.
- The EISP does not recommend a specific platform, but only for the purpose of systems development cost and time estimation, the following were used:

Database platform	Oracle (an enterprise grade Relational Database Management System (RDBMS) for mission-critical systems; MySQL (a lightweight but powerful database system) for smaller systems
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Operating System platform	Red Hat Linux (a 64-bit multi-user, multi-tasking, and multi-threaded operating system)
Development platform	JAVA (a web-based development platform)
Packaged Application (to cover FMS, HR, LMS and Payroll)	Oracle e-Business Suite (an Enterprise Resource Planning application)

The next section outlines the cost methodology specific to the software, hardware and implementation requirements of the EISP. They have been considered very carefully in estimating the scope and cost of the systems.

3.3 COST ESTIMATION METHODOLOGY

Various methods, combinations of proxy information and factors were used to arrive at the cost estimates. The indicative costs will be used by the Judiciary in defining the budget necessary to have these systems in place. The EISP estimation covers the following costs and the methodology and assumptions used for each are discussed in the next pages:

1. Software Development (where applicable) and Implementation Cost Estimates
2. Hardware and Software Cost Estimates

Software Development and Implementation Cost Estimates

The methodology used in estimating the cost to develop a particular information system is the "Estimation by Analogy". This involves the characterization of systems with information available at the point when estimation is required. Systems are characterized by the number of inputs and outputs, functionalities required, the number of screens and the programming language used to code it, among others. This method also means comparing the proposed system to previously completed similar systems. For the EISP, estimation on the needed resources and required schedules has been done by INDRA Information Systems experts in the field of software development and the specific functional area (i.e. adjudication). This way, they bring with them past experience and knowledge of related systems and then used the data provided (i.e. system description, list of functions and features, required outputs and inputs) in order to estimate the effort required to develop each of the proposed systems.

For the systems that are not proposed to be developed since there are available software applications in the market, a straight-costing methodology was used (please refer to the discussion on Hardware and Applications Cost Estimates, particularly on System Software below). This will apply to the following systems: Intranet Portal, Intranet Content Management System, Judiciary Email, Public Portal, Website Content Management System, Source Code Management System, Financial Management System, Integrated Human Resource Management System, Payroll and Logistics Management System.

For the following proposed undertakings, the following factors were considered:

1. Study and design of a software development framework and the trainings related to this framework
  - Project to be outsourced to external consultants
  - Training of 25 MIS personnel on the identified software development framework to be conducted outside the office (for cost estimation purposes only, JAVA was used)
  - 220 hours of training on various courses



- 3 months of actual study and design of the framework suitable for the Judiciary’s needs (composed of 1 consultant to work with MIS personnel)
2. Conduct of an ICT Planning to plan for the next 5 years – proposed to be scheduled on Year 4 of this EISP
    - Project to be outsourced to external consultants
    - 6 months of actual ICT planning and documentation (composed of 3 consultants)

**Hardware and Software Cost Estimates**

Pricing for the hardware was based on the 2008 standard list prices. This pricing excludes any form of discount or aggregation (group) licensing / site licensing adjustments. For the software licenses (for packaged applications) the licensing was based on the latest (March 2009) price list, and a discount of seventy percent (70%) has been imputed. For database application licenses, a standard discount of fifty percent (50%) has been imputed. If a product has a mandatory annual maintenance agreement requirement, this cost is included as part of its software acquisition cost when determining first-year software costs. Inflationary rate of 10% per year and the exchange rate of \$1=PHP50 were used. Applicable Value Added Tax of 12% was also imputed.

Indicative recurring costs (for maintenance of software applications) were also imputed in the cost estimation. This covers maintenance cost for the anti-virus applications for all servers and workstations, database applications, packaged software and network infrastructure. No recurring cost is computed for hardware as this is assumed to have at least a 3 to 5 year warranty from the hardware vendor, as a standard for all server class hardware. For the data centers, it is also assumed that this is ready for use, thus no incidental costs (i.e. electricity, air conditioning cost) were considered.

For the purpose of standardizing the cost estimation, the hardware and software components needed by the various proposed information systems’ deployment to the SC, Appellate Courts and the 3 Lower Courts (pilot sites) are taken from the following catalogs (discussed in detail in the EISP main document).



#### 4. TECHNOLOGY ARCHITECTURE

Technology architecture consists of two components:

1. Technical Infrastructure
  - These are the recommendations on infrastructure, network and system standards.
2. Systems Architecture
  - These are the general system functions and features, system-specific functional specifications, and technical requirements of each system proposed to be part of the 5-year Plan. After validation with the Judiciary, this was used as basis for cost estimation and timeline definition.

##### 4.1 TECHNICAL INFRASTRUCTURE

In order to properly support the Judiciary’s information systems, it is important that a good foundation be established upon which these information systems will be built.

This foundation consists of two major components:

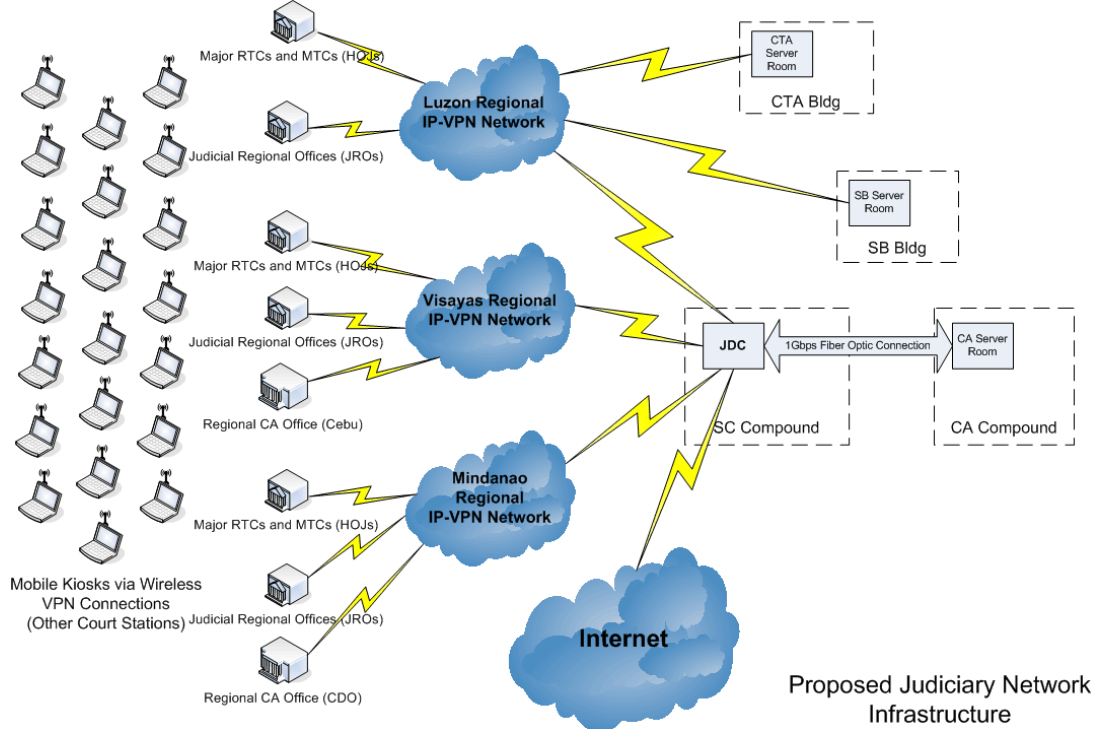
- A reliable yet cost-effective communications / network infrastructure.
- A set of system standards that will be used to provide a consistent development and operational environment.

The communications / network infrastructure would be needed to support the multiple office locations of the Judiciary, from the Supreme Court, to the various Appellate Courts, and to the various court stations spread throughout the country.

The system standards will serve as a guide to ensure that the information systems of the Judiciary will be developed using a common methodology and will use a common technological framework so that system integration and system maintenance would be easier to accomplish.



Figure 4.1 Proposed Judiciary Network Infrastructure



Proposed Judiciary Network Infrastructure

The Judiciary Network is comprised of the following parts:

- Supreme Court Compound Campus Network
- Court of Appeals (Manila) Compound Campus Network
- Sandiganbayan Local Area Network (LAN)
- Court of Tax Appeals Local Area Network (LAN)
- Judicial Regional Office LANs
- Hall of Justice (HOJ) LANs
- Judiciary Wide Area Network (WAN)
- Remote Access Facility for non-HOJ Court Stations
- Judiciary Internet Gateway

A set of system standards common to all the information systems of the Judiciary is recommended in order to obtain the following benefits:

- Ensures that the different information systems of the Judiciary can be easily integrated with one another since the underlying technology use would be the same.
- Ensures that the different information systems of the Judiciary can be easily maintained or enhanced.
- Allows the Judiciary to optimize its MIS human resources by minimizing the range of skill sets that need to be maintained across the different MIS groups.
- Allows the Judiciary to aggregate its hardware and software requirements in order to negotiate better pricing from vendors.

Thus, it is highly recommended that the Judiciary employ a single development platform (and a common software development framework) that will be used across the systems of the EISP.

The following table summarizes the general recommendations for the technical infrastructure of the Judiciary. Any system-specific technical requirements will be included in the technical specifications for each system (see Technical Specifications for each system in Section 4 of the EISP Main document).

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Table 4.1 General Recommendations for Technical Infrastructure

Component	Features/Capabilities
Development Platform	<ul style="list-style-type: none"> <li>Web-based application development platform</li> <li>Web application (software development) framework available</li> <li>Only one development platform to be used across all systems</li> </ul>
Server-side platform (Hardware and Operating System)	<ul style="list-style-type: none"> <li>Modern Multi-user, Multi-tasking, Multi-threading Operating System</li> <li>Support for 64-bit CPU/Memory architecture</li> <li>Support for multiple processors</li> <li>Support for commodity hardware (Intel x86 instruction set)</li> </ul>
Database System	<ul style="list-style-type: none"> <li>Enterprise-grade full-featured Relational Database Management System (RDBMS) for mission-critical applications</li> <li>Lightweight but powerful RDBMS for simpler or less-critical applications</li> <li>Support for Structured Query Language (SQL)</li> <li>Support for Stored Procedures and Database Triggers</li> <li>Support ACID properties for database transactions (Atomicity, Consistency, Isolation, Durability)</li> <li>Support for multiple hardware platforms</li> </ul>
End-user Computing Platform	<ul style="list-style-type: none"> <li>Intel x86 architecture desktop or notebook computer</li> <li>support for 32-bit and 64-bit operating systems</li> <li>CPU performance comparable or better than Intel Pentium IV 2.0GHz processor</li> <li>At least 1GB RAM</li> <li>At least 60GB hard drive</li> <li>100Mbps LAN</li> <li>Multiple USB 2.0 ports</li> <li>AVR and UPS recommended</li> </ul>
Data Center	<ul style="list-style-type: none"> <li>Air conditioning with humidity control</li> <li>Backup power</li> <li>Redundant electrical systems</li> <li>Raised-flooring or Anti-static tiles</li> <li>Fire detection / suppression systems</li> <li>Physical security</li> </ul>
Disaster Recovery Facility	<ul style="list-style-type: none"> <li>Prepare Disaster Recovery Plan once the major information systems are in place (it is noted that disaster recovery planning can only be done after EISP systems have been implemented)</li> <li>Determine the Judiciary's recovery point objective (RPO) and recovery time objective (RTO) for each functional (business) process</li> <li>Determine the most suitable recovery strategy for each system</li> <li>Determine the type of backup site to be set up</li> </ul>
Judiciary WAN	<ul style="list-style-type: none"> <li>The regional sites will be connected to the Judiciary WAN depending on their class: <ul style="list-style-type: none"> <li>Class A sites will have at least two 1Mbps connections to their respective Regional IP-VPN networks using different telecommunications carriers. Class A sites are major sites like the CTA and Sandiganbayan network as well as HOJs housing JROs.</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>○ Class B sites will have at least one 512Kbps connection to their respective Regional IP-VPN network. Class B sites would cover the HOJs that do not house JROs.</li> </ul>
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**4.2 SYSTEMS ARCHITECTURE**

Systems architecture is the second component to the technology architecture for the Judiciary. The general system features, system-specific functional specifications, as well as the technical requirements of each system proposed to be part of the 5-year Plan are detailed in Section 4 of the EISP document.



**5. IMPLEMENTING THE EISP**

The following discussion is aimed at presenting strategies in the implementation of the EISP and a framework for managing change to guide the Judiciary in ensuring that the new systems are accepted throughout all levels and to gain buy-in with minimal difficulty.

**Pre-Requisite Activities**

Even before the start of Year 1, it is critical to set-up policies that shall govern the budget, acquisition and the bidding process necessary for the systems development and/or systems acquisition projects that the Judiciary will undertake. The actual execution of the EISP depends greatly on budget, financing options and the readiness of the Judiciary.

To target a Year 2010 commencement on the execution of the EISP initiatives, the timeline for the procurement process would have to be noted by the Judiciary. The table below shows that the Judiciary will need approximately and conservatively 213 days or approximately 7 months (in calendar days) to have the EISP initiatives kick in for every system procurement.

ESTIMATED DURATION	ACTIVITY
<b>Funding and Approval (maximum of 69 days or 2.5 months)</b>	
30 days	Sourcing of Funds
11 days	Project ID and preparation <ul style="list-style-type: none"> <li>▪ Securing and Issuance of Certification of Availability of Funds (CAF)</li> <li>▪ Securing approval of procurement from approving authority</li> </ul>
28 days	Preparation and approval of Bidding Documents / Invitation for Bid
<b>Procurement (maximum of 89 days or 3 months)</b>	
14 days	Advertising and posting of Invitation to Apply for Eligibility and to Bid
45 days	Issuance of Bidding Documents (Within 30 calendar days from the last day of the period of advertising and/or posting)
30 days	Evaluation Process <ul style="list-style-type: none"> <li>▪ Eligibility Screening</li> <li>▪ Conduct of pre-bid conference</li> <li>▪ Opening of Bids</li> <li>▪ Bid evaluation</li> <li>▪ Post-qualification</li> </ul>
<b>Contracting (maximum of 55 days or 1.5 months)</b>	
55 days	Award of Contract <ul style="list-style-type: none"> <li>▪ Conduct of contract negotiation, if applicable</li> <li>▪ Contract agreement</li> <li>▪ Issuance of Notice of Award to winning bidder</li> </ul>
<b>213 days</b>	<b>Estimated Duration of Procurement Process for every System for Bidding</b>

❖ Based on the Procurement Process Flow (National and International Competitive Bidding) and the RA 9184 Implementing Rules and Regulations

Each project that would have to be offered for bidding would have to provide for 213 days lead time for the procurement process to ensure timely start of project and the achievement of the 5-year plan.

One crucial point established in the JIDIF is the need to implement integrated systems for the Judiciary as a whole. Just like the construction of a building, the foundation is critical to the initial set-up of the operating procedures shared by multiple applications and disciplines. Included in the foundation are such items as the software development methodology (such as the Systems Development Life Cycle) and coding standards. In order to properly support the Judiciary's information systems, it is important that a good foundation be established upon which these



information systems will be built. This foundation consists of two major components: (1) a reliable yet cost-effective communications / network infrastructure; (2) a set of system standards that will be used to provide a consistent development and operational environment. It is highly recommended that a study of a software development framework that best suits the Judiciary be taken. The use of a common software development framework would ensure that systems integration and systems maintenance would be easier to accomplish. A software development framework can also help the IT developers focus more attention on the specific functionalities required of the system. Developers can make use of the customizable, pre-built programming libraries and templates for common functions such as database access, session management, user authentication, user authorization, and standard web services which resulted from having a framework in place.

Other parts of the building shall follow. The walls, such as the network communications, databases and hardware platforms are built on top of the foundation and support all necessary controlling mechanisms for the application standards. The roof represents the application standards. By building on the well-designed foundation and walls, the roof will complete the integrated structure which will support the work processes required to execute the EISP.

The next discussions present the various proposed strategy that the Judiciary may take in the implementation of the systems under the EISP and the framework to manage change.

**Phased Implementation**

It is highly recommended that a phased approach be followed in the implementation of the EISP. This means that the systems will not be developed and/or acquired all at the same time, but following a strategically identified schedule, beginning with prioritized or core systems in order to meet primary goals and objectives, logically followed by the other systems or modules. This is recommended for the Judiciary because phased implementation considers the utmost priorities and needs of the Judiciary, balancing this with resource capabilities in order to obtain definite and tangible results while introducing change in increments. Adapting to change in increments is always recommended for huge organizations wherein change is not easily widely accepted. Aside from this, incremental change also allows adjustments to take a step at a time and this pace allows users to adapt with one major change after another as opposed to all changes happening at once.

In addition, there are information systems in the roadmap that are considered complex in terms of development and implementation. This poses a high degree of risk in completing the systems on time, on budget and in the quality desired. To reduce this risk, the phased implementation strategy is recommended as this entails the division of large systems into modular and scalable parts.

**Joint Implementation Approach**

It is also highly recommended that all projects that will be outsourced or offered for bidding to external resources be implemented (from the first stage of the project to the implementation to the pilot sites) using a joint implementation approach. This will require the creation of working teams from the Judiciary composed of personnel from the MIS group (composition detailed below) and key representatives from the user groups that will participate in the project implementation and work with the winning bidder. This approach will facilitate change management, knowledge transfer, and ownership of the system.

**Transition Strategy**

Aside from phasing the implementation of the systems under the EISP, it is also recommended that a strategy of transition from the old system to the new be employed.



The issue that can confront the implementation team is whether to run the new system in parallel with the existing one or perform a cut-over. The parallel approach will help the implementation team easily back out to the original system if the new one runs into problems during transition, but for the users, they may need to do double entry and operate two systems at a time. A cut-over approach requires the identification of a cut-over date to totally decommission the old system and start using the new system. A plan for downtime (for when the cut-over occurs) and a de-installation script (crucial steps are outlined, go and no-go checklist is updated) will have to be prepared. This is on a case-to-case basis, depending on the approach that may be suitably decided upon by the implementation team.

As a strategy, it is also advisable to phase the implementation in such a way that there will be pilot site implementation before a full system roll-out. Basically, it is recommended that the following procedure be employed as the Judiciary transitions from the old to the new system. The analysis of requirements, gap analysis, design and development of the system will cover the processes of both the pilot as well as the roll-out sites to get a complete picture of the needs of the Judiciary. In this way, all intricacies and even exceptions will be addressed by the system. Once the system has been accepted in the pilot sites, a time is spent on parallel transition (for processes supported by existing information systems such as finance, payroll, and portion of case management). Users in the pilot sites would have to use the old system as well as input to the new system. Results expected to be the same between the two systems may be further validated before final system acceptance. For those processes that are manually supported (i.e. case management processes, document delivery and tracking, records and book keeping), a cut-over strategy may be employed. Data from the old system would then be synchronized with the new system to avoid multiple migration and conversion of data. The roll out sites would continue using the old system (their inputs would not yet be transferred to the new system), until such time that the system is deployed to them. Thus, the new system will only be updated by the pilot sites first, then the cut-over will pursue for each roll-out site, accordingly.

The implementation team may also create an integration code that temporarily works behind the scene to synchronize data between the systems in the pilot site and the roll out sites.

Conversion of data is then phased. It may still be less risky to do a phased conversion of data instead of a big bang approach. To illustrate this, case numbering in the pilot sites will undergo conversion (in format) first. The pilot site users will then be using the new numbering scheme with the new system. The roll out sites will continue using the old number format until such time that the system is deployed to them.

A guide to roll-out the systems to the rest of the Judiciary is presented in detail under *Annex C of the EISP main document: System Roll-out Guide*.

**Aligning the EISP Initiatives with the Ongoing IT Projects and Planned Initiatives**

It is also important that the execution of the EISP be aligned with the ongoing efforts and planned undertakings of the SC-MISO. The discussion below aims to identify these and provide an assessment of the undertakings vis-à-vis the EISP.

SC-MISO is currently developing a hybrid of eCFM and SC-CMIS, incorporating functionality changes requested by the pilot site end-users as well as integrating features from eCFM, SC-CMIS and ePayment. This hybrid of eCFM and SC-CMIS, currently called JCMS, is being developed using Oracle Forms and Reports 6i with Oracle Database Express Edition (XE) as its database. This system uses a client-server architecture, and is meant as an interim upgrade to eCFM and SC-CMIS. The development of the Financial Management System (FMS) is also one of the planned undertakings that will also be developed using Oracle Forms and Reports 6i.

SC-MISO is undertaking these activities in order to continue the computerization of the Lower Courts and provide an interim solution, while the EISP is being implemented over the next five



years. These initiatives are dictated by the need to have the JCMS, FMS and ePayment in place quickly and deployed to limited sites soon.

The use of Oracle Forms and Reports as the development platform was motivated by the project’s time constraints as well as the availability of training resources. SC-MISO had determined that re-training its current pool of developers from the text-based FoxPRO programming language to a client-server-based Rapid Application Development (RAD) tool like Oracle Forms and Reports would be a less difficult path by which they can be introduced to more modern development technologies and skills like relational databases, SQL, and GUI-based event-driven programming. SC-MISO judged that going straight to current technologies like web-based application development and object-oriented design and programming would be too broad a leap given the project schedule.

The use of Oracle Database Express Edition (XE) was primarily dictated by the development platform, since Oracle Forms and Reports work optimally with an Oracle database as the back-end. Since Oracle XE is available at no charge, it was the logical choice for the development database, even though it has limitations such as the maximum number of processors and maximum database size.

The version of Oracle Forms and Reports that is being used to develop SC-MISO’s JCMS is already no longer being supported by Oracle. Even the newer web-based version of Forms and Reports will be de-supported soon by Oracle in favor of their Java-based JDeveloper platform.

The EISP recommends that the Judiciary use a single web-based application development platform as the foundation for its information systems. The resulting application, known as a web application, is an application that is accessed via web browser over a network such as the Internet or an Intranet. The use of the ubiquitous web browser as the interface allows system developers to update and maintain web applications without distributing and installing software (except for the web browser itself) on potentially thousands of client computers, making the system easier to maintain and enhance.

However, the effort SC-MISO has already put into this project need not go to waste. In the meantime, SC-MISO’s JCMS can be used to introduce the Lower Courts to the benefits of information systems and to refine the user requirements (which can later on be used in the development of the JCMS as defined in the JIDIF and EISP) since SC-MISO is already currently considering the functions and features specified in the EISP for JCMS in their on-going efforts. As an added benefit, as long as the functional requirements of SC-MISO’s JCMS are documented properly, these functional requirements can serve as the starting point for the analysis phase of the EISP JCMS, which would reduce the duration of data gathering (and its related cost) needed for Stage 1 by several months as reflected in the EISP.

In addition, for remote court station sites without adequate communications infrastructure, EISP JCMS implementation would not be practical or cost-effective. In these cases, SC-MISO’s JCMS can be deployed in these sites as part of the standard applications suite in the mobile kiosk solution described in the EISP in order to provide a stand-alone case management system for these sites. By consciously limiting the functionality of SC-MISO’s JCMS to the minimum feature set needed to operate small court stations and eliminating most of the bugs, the system can effectively be “productized”, making it essentially equivalent to a COTS (common off-the-shelf) package which would be easy to deploy and maintain.

By adding a data extraction utility and batch upload facility together with a central repository, SC-MISO’s JCMS can then be able to extract activity files at regular intervals, allowing remote court stations to upload these extracted files to a central repository (via wireless VPN, dial-up phone lines, or even via removable media sent via post or courier) for consolidation. This collection of stand-alone JCMS stations’ data with its consolidated repository can then become a complementary system to the EISP JCMS, handling the less-technologically-prepared sites initially, and then migrating these sites to the EISP JCMS once it becomes practical to do so. In



the meantime, the cases of these courts will now be electronically stored rather than just on paper. Even though the data stored is less comprehensive than that stored by EISP JCMS, it is useful nevertheless and certainly much better than having no electronic records at all.

**Training**

Also critical to the implementation plan and in managing change is the effective conduct of trainings. For every system in the roadmap, there is a stage for training (stage 4). This training is oriented towards two determined types of users and their different profiles -- End-Users and Technical Users.

The training for both the end-users and technical users will be provided using the "Train the Trainer" approach. This is recommended because of the large number of users and to avoid multiple training sessions that could delay system implementation. As such, training is to be given to identified users (representatives of each department) that will later on be tasked to train the rest of the end users of the system.

It is recommended that for every system, a training plan is to be developed to ensure an organized delivery of training. The training plan will present a comprehensive coverage of what is needed for users to appreciate the training and able to effectively use the system.

**Migration & Conversion**

Data found in existing systems will go through the process of data migration to transfer the data into the new systems and eliminate re-encoding of old data into the new system. This phase guarantees the availability and reliability of the information with which the new systems will work, ensuring correct implementation and operation. This is performed in parallel with the development phase of the system, involving the following activities:

- Development of the Conversion and Cutover Strategy and Plan
- Preparation for Conversion

A clear cut data conversion and migration plan must be prepared by the project teams to ensure the effective implementation of the systems.

**Change Management Framework**

Any project requires the design of a constructive implementation based on a solid strategy of awareness and change management to guarantee the acceptance and the commitment of all those concerned. As such, aside from the recommended roadmap and implementation strategies, a change management framework is presented in the EISP.

Change Management is the systematic process of applying knowledge, tools and resources to lead people through change with minimal distress. The process requires a balance between processes, human resources, structure and organizational culture.

This Change Management framework involves the following key aspects for the success of the project:

- 1) the involvement of the Judiciary's employees (representatives) with the working project teams who will develop the project; and
- 2) the smooth transfer of knowledge across the Judiciary through the design and the implementation of a solid dissemination/communication plan.

It has to be understood that change is a process that requires a continuous evaluation and monitoring of a project through each phase to ensure its success.



The framework begins with a foundation which is what the organization is currently composed of - the vision, values, experience, core processes and the structure. From this, an evaluation produces the need and rationale for change. When the organization decides to undergo the change, this change is slowly incorporated into the organization through leadership, communication and training. This may be delivered through various channels such as committees, seminars, presentations and workshops.

Generally, there are 3 stages that the organization will undergo throughout the process of change. The first stage is Preparation – this does not involve the entire organization yet, only the major stakeholders who are involved in the planning for the change to set the scenario for the change to occur. For the Judiciary, this will be the Project Management Office, MIS (if the change involves ICT), Justices and Judiciary officials championing the change. It is in this stage that most planning and conceptualizing of the change management plan is created. It is important that the objectives and goals for change are very clear and that facilitators and tools for change are identified. Aside from actually preparing for the change in terms of material and monetary resources, it is important for the people to be prepared as well. In this early stage, it is crucial for the expectations of the people to be managed. This could minimize surprises and misunderstanding of the changes to occur.

The second stage depends highly on the success in the Preparation stage. With people informed and expectations managed, the second major stage calls for Comprehension – wherein more people are involved and positively understand the reason for the change and the benefits this will bring to the organization.

The third stage is Commitment. Here, the change is barely recognized as something new but as something that is now part of the organization. Only when a change has been institutionalized can an organization be certain that change management is completely successful.

Throughout this process, it is essential that continuous evaluation, monitoring and measurement of the results are performed to ensure that the process is progressing smoothly, issues could be ironed out immediately and there will be minimal need to digress or repeat a step that has already been accomplished.

**Critical Success Factors**

When information systems come into the picture, a lot of changes (and resistance to it) would have to be anticipated. But, with the proper support from the officials of the Judiciary and communication to the people (especially those who will eventually use the systems), the whole process becomes easier and more manageable.

Critical success factors are key elements that need to be in place to facilitate successful achievement of project objectives. The following are factors that the Judiciary could undertake to manage and minimize resistance to change:

1. Establishment of clear and measurable project objectives, scope, and functional/technical/process requirements
2. Implementation and execution of project scope control procedures
3. Commitment of the officials of the Judiciary
4. Acceptance of ownership and accountability for the success and implementation of the system (involve your people early, openly and as fully as possible)
5. Emphasis on team approach
6. Establishment and implementation of a risk and issue management plan
7. Provision of ongoing progress monitoring and post evaluation





6. REALIZING THE PLAN

The focus of the EISP is not just one information system, but the entire suite of information systems that may be realistically implemented in a five-year period. Once implemented, each identified information system is seen in context with all other information systems within the Judiciary. The attainment of these objectives shall be realized with a clear cut sponsorship at the highest level of authority, responsibility and accountability. This is not only an IT group initiative, but the realization of the implementation of this EISP lies on the championing of the users and major players of the Judiciary, as well. Commitments of budgetary support and financing are also necessary to ensure realization of this EISP.

A reflection, known but not less important, has to do with the role that technology plays in the process of institutional improvement and modernization in general, and in the Philippine Judiciary in particular. We must acknowledge and appreciate the fact that technology has moved from being a mere instrumental component that serves an organization, to become and constitute into a strategic reform element. So without the presence and collaboration of technology, it would not be possible, nowadays, to offer new and improved services to the people.

In addition, considering the pace (which is usually dynamic) that the market shows in the range of product offerings and technical tools, both in the field of the equipment (hardware) and programs that make it work (software), all of these oblige us to consider as very important, among others, the following points:

- The direction and the management of the technological function.
  - The strategic vision and the technology policy of the organization are of greater relevance, which, coherently, require an adequate assignment level of responsibility inside the Judiciary
- The grade of self-sufficiency that the institution should reserve, in the knowledge of the techniques and its application.
  - As part of the cited technology management, proper balance between the organization's human resources and the outsourced services/external consultants should be observed, to cover the needs of high technological specialization or, as current circumstances dictate, to execute projects that exceed the capacity of the organization.
- The unavoidable need of a permanent and continuous training of the MIS technical personnel.

Another factor to consider in the assignment of resources is the phasing in the implementation of the information systems included within the EISP. It is going to represent the existence of transition periods (predictably long) during which probably new and old systems will co-exist in parallel. The parallel use of the systems will require simultaneous attention to two different technological scenarios and the MIS group for the maintenance of the systems. This would define the quantification, qualification and training needs of the Judiciary personnel.

The EISP is a document that is characterized by its timeliness, usability, maintainability and quality. It is written with the intention that the Judiciary will utilize it for planning and actually executing the proposed ICT plans. Changes to technology, user requirements, emergence of new opportunities all affect the EISP. Thus, estimates may not be relevant if the timing of the execution of the EISP is delayed. It is then critical that the EISP be implemented on a timely basis and sustained accordingly.

The roadmap is presented in phases to guide the Judiciary in further prioritizing the systems for implementation. In the event that the Judiciary will find the plan too costly (once budget is defined) or too ambitious (if the MISO reengineering is not executed on time), then the Judiciary is able to further pace the systems so that systems of high priority can be offered for bidding and put in place.