California Department of Insurance
Paperless Workflow Project Bidder's Library

Feasibility Study Report
02-24-2009

State of California
Department of Insurance

Paperless Workflow
Feasibility Study Report (FSR)

December 12, 2007

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1.0 Project Approval Transmittal

Information Technology Project Request

Feasibility Study Report
Executive Approval Transmittal

Department Name

Department of Insurance

Project Title (maximum of 75 characters)

Paperless Workflow

Project Acronym	Department Priority	Agency Priority
PW	1	

APPROVAL SIGNATURES

I am submitting the attached Feasibility Study Report (FSR) in support of our request for the Department of Finance's approval to undertake this project.

I certify that the FSR was prepared in accordance with State Administrative Manual Sections 4920-4930.1 and that the proposed project is consistent with our information technology strategy as expressed in our current Agency Information Management Strategy (AIMS).

I have reviewed and agree with the information in the attached Feasibility Study Report.

Chief Information Officer		Date Signed
Printed name:	Roy Simpson	
Budget Officer		**Date Signed**
Printed name:	Julia Cross	
Department Director		**Date Signed**
Printed name:	Steve Poizner / Dennis Ward	
Agency Secretary		**Date Signed**
Printed name:	N/A	

2.0 IT Project Summary Package

INFORMATION TECHNOLOGY PROJECT SUMMARY PACKAGE
SECTION A: EXECUTIVE SUMMARY

1.	Submittal Date	December 12, 2007

		FSR	SPR	PSP Only	Other:
2.	Type of Document	X			
	Project Number				

			Estimated Project Dates	
3.	Project Title	Paperless Workflow	Start	End
	Project Acronym	PW	07/01/2008	06/30/2011

4.	Submitting Department	Department of Insurance
5.	Reporting Agency	Department of Insurance

6. Project Objectives
-Provide online access to the operational documents received by the CDI. -Improve customer service by providing on-demand access to public files. -Reduce document processing and storage costs. -Increase the ability to share documents and files across the Department electronically. -Increase the CDI's ability to recover from a disaster.

8.	Major Milestones	Est Complete Date
	FSR Requirements Validation	08/31/2008
	Release Request for Offer	10/01/2008
	Vendor Selection	02/15/2009
	Phase 1 – Requirements Analysis	09/30/2009
	Phase 1 – Configuration/Development	02/15/2010
	Phase 1 – User Acceptance Testing	04/30/2010
	Phase 1 – Deployment	07/31/2010
	Phase 2 – Requirements Analysis	11/30/2010
	Phase 2 – Configuration/Development	01/31/2011
	Phase 2 – User Acceptance Testing	04/30/2011
	Phase 2 – Deployment	05/30/2011
	Project Closeout	06/30/2011
	PIER	07/31/2012
	Key Deliverables	
	Request for Offer	10/01/2008
	Phase 1- Requirements Specification & Business Process Analysis Document	09/30/2009
	Phase 1 – Design Document	12/15/2009
	Phase 1 – Training Materials	04/01/2010
	Phase 2- Requirements Specification & Business Process Analysis Document	11/30/2010
	Phase 2 – Design Document	12/15/2010

7.	Proposed Solution

The scope of the Paperless Workflow project is to implement a new document management system with regional scanning centers (in the Sacramento, San Francisco and Los Angeles regional offices), automated workflow, and electronic-based forms (eforms) to transform its business operations.

The following software features are required:

- ■ Document management software, including
- ✓ Repository for managing the electronic documents and files
- ✓ Indexing and searching features
- ✓ Version control and check-in/check-out features
- ✓ User and document security features
- ✓ File import and export features
- ✓ Web portal features for remote and public access
- ✓ Document manipulation features (e.g., highlighting, notes, redaction)
- ✓ Basic reporting features (for reporting on the contents of the repository and workflows)
- ✓ Retention and archiving features
- ✓ Workflow and routing features, including approvals and notifications
- ✓ eforms software and features
- ■ Scanning and quality verification software, including
- ✓ Scan and rescan features
- ✓ File conversion features (e.g., TIFF to PDF, JPG to PDF)
- ✓ Data capture/Optical Character Recognition (OCR) features

The project will be conducted in two phases. The first phase implements the document management system repository and the internal eforms and workflows (e.g., administration forms). The second phase of the project implements the scanning centers and data capture features of the solution, public access via the Internet, and any remaining eforms and workflows. The data conversion from three existing systems and interface development efforts are split across the two phases to balance the workload.

Project #	**N/A**
Doc. Type	**FSR**

Executive Contacts								
	First Name	**Last Name**	**Area Code**	**Phone #**	**Ext.**	**Area Code**	**Fax #**	**E-mail**
Agency Secretary	N/A							
Dept. Director	Steve	Poizner	916	492-3500		916	445-5280	
Budget Officer	Julia	Cross	916	492-3264		916	445-6544	crossj@insurance.ca.gov
CIO	Roy	Simpson	916	492-3475		916	327-3481	simpsonr@insurance.ca.gov
Proj. Sponsor	Roy	Simpson	916	492-3475		916	327-3481	simpsonr@insurance.ca.gov

Direct Contacts								
	First Name	**Last Name**	**Area Code**	**Phone #**	**Ext.**	**Area Code**	**Fax #**	**E-mail**
Doc. prepared by		Visionary Integration Professionals, Inc.	916	985-9625		916	985-9632	
Primary contact	Roy	Simpson	916	492-3475				simpsonr@insurance.ca.gov
Project Manager	Michelle	Leach	916	492-3362				leachm@insurance.ca.gov

SECTION C: PROJECT RELEVANCE TO STATE AND/OR DEPARTMENTAL PLANS

1.	What is the date of your current Operational Recovery Plan (ORP)?	Date	04/11/07
2.	What is the date of your current Agency Information Management Strategy (AIMS)?	Date	08/31/06
3.	For the proposed project, provide the page reference in your current AIMS and/or strategic business plan.	Doc.	AIMS
		Page #	Page 13, §3.1, Page 34, §5.1.3, Page 39, §7.1,

Project #	N/A
Doc. Type	FSR

		Yes	No
4.	Is the project reportable to control agencies?	X	

If YES, CHECK all that apply:

X	a) The project involves a budget action.
	b) A new system development or acquisition that is specifically required by legislative mandate or is subject to special legislative review as specified in budget control language or other legislation.
X	c) The estimated total development and acquisition cost exceeds the departmental cost threshold and the project does not meet the criteria of a desktop and mobile computing commodity expenditure (see SAM 4989 – 4989.3).
	d) The project meets a condition previously imposed by Finance.

Project #	N/A
Doc. Type	FSR

Budget Augmentation Required?		
No		
Yes	X	If YES, indicate fiscal year(s) and associated amount:

FY	08/09	FY	09/10	FY	10/11	FY	11/12	FY	
	$2,787,205		$2,526,267		$2,823,704		$791,609	$	

PROJECT COSTS

1.	Fiscal Year	2008-2009	2009-2010	2010-2011	2011-2012		TOTAL
2.	One-Time Cost	$2,979,345	$2,909,911	$2,932,124	$100,000		$8,921,380
3.	Continuing Costs	$0	$0	$678,138	$1,186,047		$1,864,185
4.	TOTAL PROJECT BUDGET	$2,979,345	$2,909,911	$3,610,262	$1,286,047		$10,785,565

SOURCES OF FUNDING

5.	General Fund						$
6.	Redirection	$192,140	$383,644	$786,558	$494,438		$1,856,780
7.	Reimbursements						$
8.	Federal Funds						$
9.	Special Funds	$2,787,205	$2,526,267	$2,823,704	$791,609		$8,928,785
10.	Grant Funds						$
11.	Other Funds						$
12.	PROJECT BUDGET	$2,979,345	$2,909,911	$3,610,262	$1,286,047		$10,785,565

PROJECT FINANCIAL BENEFITS

13.	Cost Savings/Avoidances	$ 0	$ 0	$ 0	$ 97,928	$	$ 97,928
14.	Revenue Increase	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

Note: The totals in Item 4 and Item 12 must have the same cost estimate.

Project #	N/A
Doc. Type	FSR

Vendor Cost for FSR Development (if applicable)	$284,148
Vendor Name	Visionary Integration Professionals, LLC

VENDOR PROJECT BUDGET

1.	Fiscal Year	2008-2009	2009-2010	2010-2011	2011-2012		TOTAL
2.	Primary Vendor Budget	$1,544,818	$1,898,733	$1,716,855	$100,000		$5,497,686
3.	Independent Oversight Budget	$23,760	$71,280	$71,280			$166,320
4.	IV&V Budget	$27,000	$108,000	$104,940			$239,940
5.	Other Budget–Project Manager	$74,700	$179,280	$179,280			$433,260
6.	TOTAL VENDOR BUDGET	$1,670,278	$2,257,293	$2,072,355	$100,000		$6,337,206

----------(Applies to SPR only)----------

PRIMARY VENDOR HISTORY SPECIFIC TO THIS PROJECT

7.	Primary Vendor	
8.	Contract Start Date	
9.	Contract End Date (projected)	
10.	Amount	$

PRIMARY VENDOR CONTACTS

	Vendor	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
11.									
12.									
13.									

Project #	**N/A**
Doc. Type	**FSR**

RISK ASSESSMENT

	Yes	No
Has a Risk Management Plan been developed for this project?	**X**	

General Comment(s)
The Risk Management Plan is contained in Section 7 of this document.

3.0 BUSINESS CASE

3.1 Business Program Background

The Office of the Insurance Commissioner has the responsibility to enforce the insurance laws found in the California Insurance Code (CIC), California Code of Regulations (CCR), and other related laws. The role of the Insurance Commissioner is to regulate the insurance industry, thereby protecting California consumers from abusive insurance practices.

The California Department of Insurance (CDI) regulates the largest insurance market in the United States and the fourth largest insurance market in the world with over $118 billion in annual premiums written in the state. In fulfilling its responsibility to protect California's insurance policyholders, the Department conducts examinations of over 1,500 insurance companies and producers to ensure that operations are consistent with the requirements of the Insurance Code and those insurance companies are financially viable and able to meet their obligations to policyholders and claimants. The Department also investigates complaints and responds to consumer inquiries; administers the conservation and liquidation of insolvent and delinquent insurance companies; reviews and approves insurance rates; and is a major contributor in combating insurance fraud.

The CDI is mandated by legislation to regulate California's insurance industry, ensuring that the business of insurance is conducted lawfully and in an open and fair manner. The agency fulfills this mission through six key interlinked regulatory functions:

- **Financial solvency oversight** – A fundamental responsibility of the CDI involves overseeing the financial integrity of the insurance industry to ensure that it can provide the benefits and protections promised to policyholders. The unique nature of insurance requires that the CDI use financial and analytical expertise to determine the adequacy of capital and reserves necessary for insurers to fulfill their obligations to policyholders. The financial health of companies is monitored through regular examinations and audits of financial records, investments, management and claims practices. Combined with an Early Warning System that relies on data from all parts of the agency, this expertise provides the agency with advanced warning of insurers heading toward financial failure. When the agency detects financially distressed companies, it directs corrective measures or, when insolvency is imminent, undertakes regulatory actions through the courts to rehabilitate, conserve, or liquidate the affected insurer.
- **Licensing and certification of companies and their agents and brokers** – Companies seeking to do business in California must document their financial solvency and demonstrate in their applications for licensure the ability to operate in accordance with California law. The CDI has the responsibility to examine initial company applications for these two critical requirements and to continue to oversee these requirements for all companies continuing to conduct business in

California. The CDI also reviews allegations and violations of the California Insurance Code (CIC) by agents and brokers, and performs enforcement actions, as appropriate. Enforcement actions include cease and desist orders, license revocations, and fines for non-compliance.

Once a company is licensed to operate in California, sales of insurance products are usually transacted by licensed brokers and agents. Licensure of these persons provides assurance that they have proper training and expertise, and meet satisfactory ethical and personal standards. Licensure also helps to protect consumers from deceptive and illegal sales because it identifies individual brokers and agents whose practices may be investigated and the brokers and/or agents are disciplined if wrongdoing is found.

License applications have continued to grow and increased by 14% during 2006 with more than 71,000 new applications being processed and more than 116,000 licenses renewed.

- **Premium rate and insurance product examination** – Strongly linked to financial solvency, the examination of rate and product filings assures that premiums charged are reasonable in comparison to the products and benefits offered. Through this function, the CDI determines that premiums are adequate to support the products and benefits offered, but not excessive. The inadequacy of premiums charged is a key factor in many insolvencies. The Department also examines the claims handling and general business practices of companies to assure compliance with California laws. During 2006, more than 7,500 rate filings were received.
- **Consumer services** – Consumer education, mediation of complaints against insurers, and investigation of violation of insurance laws and regulations, and the associated enforcement directly support the consumer protection mission of the CDI. This function provides a direct link to consumers throughout the state and addresses more than 276,000 consumer complaints annually. Consumer complaints are a part of the Early Warning System, providing an alert to problematic and unlawful insurer business practices and financial problems. For 2006, more than $46 million dollars were recovered or returned to consumers and more than $1.2 million in penalties were assessed.
- **Enforcement of insurance laws** – The interlinking regulatory functions of the Department are described above. When potential violations of insurance laws or regulations are discovered through these activities, the CDI undertakes investigations that may result in administrative, civil and criminal proceedings. Currently, more than 300 peace officers and investigators are actively engaged in investigations of alleged wrongdoing by the industry, policyholders and claimants in all lines of insurance. For FY 2005-06, the CDI received more than 26,000 reports of suspected fraudulent claims, 1,770 complaints from consumers, and more than 1,500 inquiries about individuals and entities transacting insurance.

- **Premium tax collection** – The agency administers the Premium Tax program that generates $2.2 billion for the General Fund annually. Auditing insurer revenues is part of this activity that was anticipated to recover an estimated $16 million in 2006 for principal and interest late assessments and tax deficiency assessments.

The Department performs a broad variety of activities as part of regulating the insurance industry, most of which involve detailed analysis and audit of large amounts of data. Currently, most of this data is received in paper format. It is not unusual for the Department to receive multiple boxes of data for a single audit or analysis. With the steady growth in the insurance industry over the past few years, the amount of paper being received has become burdensome and difficult to manage. The amount of effort required to handle, intake, process and manage the paper has also grown, and has affected staff at all levels of the organization. The CDI seeks to transform its infrastructure and business processes to move away from paper and take advantage of electronic methods for managing its data and documents.

3.1.1 Impacted Programs

The CDI is organized into 11 Branches of business spread across 15 locations throughout California. Each branch consists of multiple divisions, offices, or bureaus. This section describes, at a high level, the overall purpose of each program area. An organizational chart showing the Department's branches, divisions, and bureaus is on the next page. Each of the organizational units is described below.

The Department consists of the following branches:

- Administration and Licensing Services Branch
- Rate Regulation Branch
- Consumer Services and Market Conduct Branch
- Financial Surveillance Branch
- Enforcement Branch
- Communications and Press Relations
- Legal Branch
- Policy and Regulations Branch
- Community Relations Branch
- Legislative Branch
- Executive Operations Branch

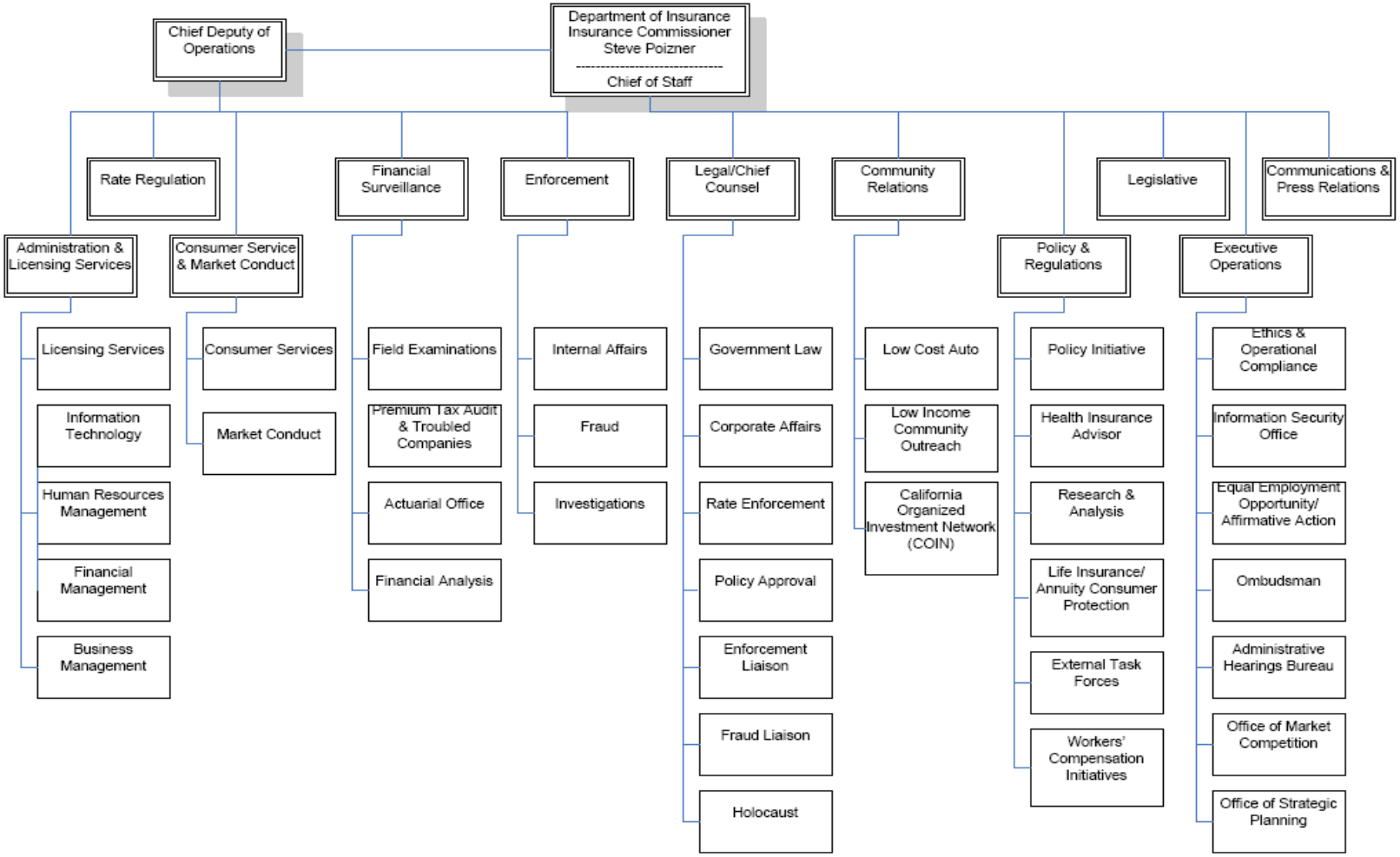

Figure 1. CDI High-Level Organization

Administration and Licensing Services Branch

The mission of the Administration and Licensing Services Branch is to assist with the implementation and enforcement of insurance licensing laws and to provide professional, quality support services to each of the Department's programs. The Branch consists of the Financial Management Division, Human Resources Management Division, Information Technology Division, and the Business Management Bureau, which combine to provide the Department's business support services.

The Administration and Licensing Services Branch also includes the Licensing Services Division, which determines the qualifications and eligibility of applicants to act as insurance agents, bail bond agents and insurance adjusters as specified within the California Insurance Code. Further, the Licensing Services Division performs the producer and insurance company licensing background-screening functions for the Department.

Rate Regulation Branch

The Rate Regulation Branch regulates the insurance rates and rating plans of companies selling property and casualty insurance in California. In general, Rate Regulation's function is to carry out the prior approval provisions of Proposition 103 and to ensure that insurance companies' rates are not excessive, inadequate, or unfairly discriminatory, as required by California law. As such, the Branch reviews and approves rating plans and forms with a rate impact. The Branch provides technical advice to the Commissioner and other Executive level staff, evaluates crucial financial and statistical data, and generates detailed reports of the insurance industry for use by the Branch and executive management.

Consumer Services and Market Conduct Branch

The Consumer Services and Market Conduct Branch (CSMCB) is responsible for handling consumer complaints, rating/underwriting and claims issues on different lines of insurance, providing education to the public about CDI insurance services, and conducting examinations of insurers to monitor compliance with the law. The CSMCB enforces applicable insurance laws during the investigation of individual consumer complaints against insurers through on-site examinations of insurer claims and underwriting files. As part of these consumer contacts and examinations, CSMCB mediates with the insurers on issues where the Department has criticized an insurer for its practices in an attempt to recover money for consumers and/or to correct unfair practices. CSMCB also prepares cases that are referred to the Legal Branch for enforcement action.

Financial Surveillance Branch

The Financial Surveillance Branch monitors insurers licensed to do business in California to ensure that they maintain the financial stability and viability necessary to provide the benefits and protection they have promised to California policyholders. The Branch analyzes and maintains ongoing surveillance of admitted insurers in order to identify companies in or approaching hazardous financial condition.

The Branch examines the business and affairs of every admitted insurer to determine their financial condition according to certain legal guidelines required by the California Insurance Code and prescribed accounting practices as promulgated by the National Association of Insurance Commissioners (NAIC). Unless financial or other conditions warrant an immediate examination, domestic insurers are usually examined every three to five years. While the Branch has the authority to examine foreign insurers, they are rarely examined due to resource limitations. The Branch includes the Field Examination Division, Financial Analysis Division, the Actuarial Office, and the Premium Tax Audit and Troubled Companies Bureau.

Enforcement Branch

The Enforcement Branch consists of two divisions: the Fraud Division and the Investigations Division. The mission of the Fraud Division is to protect the public from economic loss and distress by actively investigating and arresting those who commit insurance fraud and to reduce the overall incidence of insurance fraud through anti-fraud outreach to the public, private and governmental sectors. The Fraud Division provides all investigative and supporting services necessary to implement and manage the Automobile, Workers' Compensation, and Property and Casualty Fraud Programs. The Fraud Division's investigators are peace officers with the primary responsibility of enforcing insurance fraud laws. The Fraud Division is specifically authorized to conduct undercover investigations.

The mission of the Investigations Division is to protect insurance consumers from economic loss due to fraud and misconduct by persons and entities in the insurance industry, and to regulate the conduct of insurance companies, producers and others according to California law. The types of frauds and abuses investigated by the Division include: premium theft, bogus insurance companies, senior citizen financial abuse, anti-consumer practices by substandard auto insurance producers, misconduct by insurance adjusters, and insider fraud. The Investigations Division has law enforcement powers, such as the ability to arrest and serve search warrants.

Communications and Press Relations Branch

The Communications and Press Relations Branch coordinates and disseminates the Commissioner's message to consumers, the industry, media, and CDI staff. The Branch examines the current state of the industry, the insurance marketplace, protection of consumers and businesses, and all relevant information to assist in developing the proper message to support and move forward the agenda of the Department and Commissioner. The effective delivery of this information, through a variety of tools and methods, ensures that all Department efforts contribute to the ultimate goal of creating the best consumer protection agency in the nation.

Legal Branch

The Legal Branch supports the entire Department by providing legal services and advice to the other Branches. The Branch's mission is (1) to be an efficient and responsive service provider for regulated entities who have business before the Department as well as for the client units within the Department, and (2) to develop with other Department units a system of prioritizing current and future enforcement actions to achieve maximum impact.

The Branch ensures that insurance producers and insurers comply with the Insurance Code and other laws and regulations that apply to the business of insurance. The Branch also ensures that insurers' property/casualty rates, rating, and underwriting practices comply with Proposition 103 and other statutory requirements. The Branch reviews and approves life and disability insurance products for fairness and suitability.

The Branch works with insurers to ensure that they remain solvent and conduct their affairs in accordance with the law. In the event that insurers become financially troubled, the Branch assists in conserving and thereafter rehabilitating or liquidating the companies. The ultimate mission throughout this process is to protect policyholders, creditors, and the public and, in the case of liquidation, maximize return to policyholders and creditors.

In addition, the Branch coordinates and responds to all of the Public Records Act (PRA) requests for the Department. The department receives between 100 and 150 PRA requests each month.

Policy and Regulations Branch

The Policy and Regulations Branch operates to identify trends and develop policy to help solve the significant problems faced by consumers and the industry. The work of the Branch targets issues such as lack of access to insurance and the rising rates of workers' compensation, health and homeowners coverage. The Branch researches public policy and its impacts, gathers data from the industry, performs detailed analyses and research, and participates in various task forces to address special projects and initiatives at the request of the Commissioner and Legislature. The framework that is

provided by this Branch allows all elements of the Department to address major issues in a coordinated, efficient fashion. This Branch includes the Policy Initiatives Office, the Policy Research Bureau, the Statistical Analysis Division, the Rate Specialist Branch, and various task forces.

Community Relations Branch

The Community Relations Branch recognizes the diverse interests of the State and works to engage regional stakeholders in issues of mutual interest. Task forces, community forums and town hall meetings are used to gather information from California consumers and insurance companies. The Branch also delivers educational programs and services to consumers and the insurance marketplace through educational outreach. It consists of the California Organized Investment Network (COIN) program, Consumer & Industry Outreach/Education program, and the Low Cost Auto program.

Legislative Office

The Legislative Office provides policy advice and direction to the Commissioner and the Department on state and federal legislative issues.

Executive Operations Branch

The Executive Operations Branch works collaboratively with all CDI staff to develop and target the Department's activities from an executive perspective. Consisting of the Ombudsman Office, Ethics & Operational Compliance Office, the Information Security Office, the Equal Employment Opportunity/Affirmative Action Office, the Administrative Hearings Bureau, and the Commissioner's Executive Offices, the Executive Operations Branch works to focus Department outreach efforts with the goal of building the best consumer protection agency in the nation.

3.1.2 Information Systems Overview

The CDI's current data computing environment is made up of multiple client/server systems, web-based systems, and commercial-off-the-shelf (COTS) systems. Approximately eighty-five percent of the CDI's data is located and maintained in one Oracle database and one Oracle data warehouse that are located at the Department of Technology Services' Data Center (DTS) in Rancho Cordova. These data sources comprise the Department's Integrated Database (IDB) and the Enterprise Information Portal (EIP). As the name implies, the IDB is a collection of software applications and data stores that reside in a common, enterprise-wide technical architecture. The EIP is a business intelligence solution that provides CDI executive management with information on operational status, metrics, industry health and potential problem areas, as well as providing an environment to better share data across the Department. Staff, management and executive personnel across geographically dispersed organizational units utilize the IDB and EIP to support core business functions. The other data sources

include a variety of systems, such as the CalSTARS financial system, the NAIC's systems, and various CDI business area Microsoft Access databases, among others.

In compliance with the CIC, each CDI Branch maintains documentation (records) pertaining to its regulatory activities. Furthermore, the CDI must properly maintain records in accordance with the State Records Management Act contained in California Government Code Sections 14740-14774. The Department of General Services (DGS) administers a State of California Records Management Program and requires the CDI to adhere to certain policies and guidelines for maintaining records[1].

Within the Department, the primary repository for information is the IDB. This repository contains important information to allow the divisions and bureaus to monitor and track the companies and individuals participating in the insurance business within California. The repository contains summary information derived from documents, forms and contacts relating to the insurance companies and individuals, with the received paper files constituting the official files for the Department.

The CDI processes a great deal of paper, due to the amount of materials received and the need to share files and documents with other bureaus. These paper-based processes are inefficient and costly. The Department spent over $242,000 last year for printer/copier paper and toner cartridges, and approximately $139,369 in forms and stationery costs. In addition, the paper-based processes limit the CDI's ability to extend services to their constituents through the use of technology. In order to provide more innovative services, the CDI must redesign its business processes and methods.

There have been four program areas that have initiated the use of electronic-based document management and scanning systems. These programs are the Rate Filing Bureau (using the ParaDocs system), the Producer Licensing Bureau (using the Psigen Scan HQ system) and the Legal Branch and Market Conduct Division (using the Hummingbird DM system). Internal feasibility studies were completed in support of these systems, and the projects have resulted in successful systems that have accomplished the benefits outlined in their associated FSRs. However, these systems are difficult to expand and support since they are not integrated and require individualized maintenance and support. All of these systems were developed with the long-term idea that the Department would install an enterprise document management/workflow system.

[1] State Administrative Manual, Section 1600

3.2 Business Problem/Opportunity (BPO)

The Department is charged with protecting consumers and regulating the insurance industry. In order to achieve this mission, the Department must make effective and efficient use of every resource at its disposal. While the CDI has established processes and databases to ensure sharing of information across the Department, the nature of its processes has remained paper-based. This has caused several problems.

1. **Insufficient Access to Documents Across Business Areas (BPO1) –** Because documents and files are kept in paper format, only one area of the organization is able to work with the documents at a time. If another area of the Department needs to access the files, the bureau who manages the file must physically ship the file to the requestor. An example of this would be when the Enforcement Branch is researching an enforcement action against an insurance agent. Enforcement would request the producer licensing file from the Producer Licensing Bureau (PLB) to review the insurance agent's past history. PLB staff would retrieve the file from off-site storage and send the file to the Enforcement staff via inter-office mail.

   If Enforcement decides an enforcement action is warranted, they would develop the case and then forward their case materials along with the licensing file to the Legal Branch for review and further action. During this time, the PLB would not have access to the file and would be unable to respond to questions or public requests to view the file. Nor would the PLB have access to the status of the file, since both the Enforcement and Legal Branches consider their work to be confidential and privileged. Depending on the outcome of the enforcement action, the file might remain with the Enforcement or Legal Branch, or might be returned to the PLB if no action is taken. There have been instances where the file has been lost and never returned.

   Although CDI staff could, and sometimes do, make copies of files (depending on the size of the file) for use while other areas are using the original file, this adds to the proliferation of paper, associated storage problems, and version control issues.

2. **Public Access to Documents Could be More Timely (BPO2) –** The CDI is required to provide public access to many types of documents per the CIC, including rate filing and licensing files. The CDI currently requires the public to make an appointment to view a file in order to provide the CDI time to find and retrieve the requested file. Depending on where the file has been stored, it may take anywhere from two to ten days to retrieve a file. The rate filings are in the process of being converted to electronic format for easier access via the ParaDocs system, but currently there are a mix of paper and electronic files.

   Similarly, when a Public Records Act request is received, it may be necessary to access documents stored off-site. While on-site records generally can be

reviewed and their status (i.e., public vs. confidential) determined within the mandated ten day deadline, records stored off-site require additional time and frequently cause the CDI to submit waivers for additional time to respond to the request.

3. **Files Stored Off-Site are Not Always Found (BPO3) –** Due to space constraints, many documents are stored off-site and require time to retrieve. PLB files are stored in a warehouse in West Sacramento that is managed by CDI staff. Some Licensing Background Bureau files are stored at DGS' State Records Center (SRC). In addition, the CDI contracted with a private storage firm, Multiplex, for off-site storage during the period of time when the SRC was closed. In some cases, staff must check two or more locations when searching for older files. The SRC storage costs are cheaper on an annual basis than Multiplex. However, the CDI did an analysis and determined it would cost more money to move the files from Multiplex to the SRC than to leave the files where they are and let them reach their destruction date. Also, staff have indicated that at least 50% of the time the requested file cannot be found when requested from the SRC.

4. **Volume of Documents and Workload is Increasing (BPO4) -** There has been a steady increase in the CDI's workload across nearly all of the branches. This is partially due to growth in the industry (e.g., long-term care insurance has developed in the past ten years), more emphasis on accessibility of insurance products (e.g., workers' compensation, disability, and low-cost auto insurance), and a greater emphasis on tracking and pursuing fraud and insurance abuse. This additional workload has generated a corresponding amount of paper files. While many areas of the Department have started to accept electronic files in lieu of paper files, many areas and industry partners still require paper documents due to regulations or legislation that currently require physical signatures and certified or notarized copies.

5. **Costs for Document Storage are Increasing (BPO5) –** In a survey conducted to investigate current business problems associated with paper within the Department, 77% of those responding indicated a problem with storage space or having too many documents to be stored. Over half (54%) indicated a problem keeping up with the growing volumes of documents and experiencing problems with documents being delayed due to physical routing of the paper.

   The growing volume of paper has resulted in an increased need for storage space. Several of the units are using offices, cubicles, conference rooms, and hallways for temporary storage of in-work files, because all other onsite storage areas are full. It is estimated that between 10 to 15% of CDI office space is currently used for storing paper files. While there will always be a need for some on-site paper document storage, clearly a reduction in on-site storage space will be a great benefit. Moving to electronic-based business processes provides the

CDI the opportunity to appropriately size its office space and maximize the use of its high rent office locations for more appropriate purposes than storing paper.

The CDI recently obtained additional storage space for the PLB files in the West Sacramento warehouse and reorganized the space to accommodate additional shelving. However at the current rate of growth, the warehouse will be full within five years and the CDI will be forced to obtain additional storage. Similarly, the central legal files in the San Francisco office are nearly full and the CDI is beginning to investigate its options to address this problem. The current legal files are stored on a specially reinforced floor due to the considerable weight of the files. It is likely that any new storage area will also need to be reinforced to support the weight of the paper files.

6. **High Risk of Loss or Damage to Paper Documents (BPO6) –** The CDI is required to maintain and protect various types of files relating to insurance agents, enforcement actions, rule making, and litigation. Currently, these files are maintained in hardcopy at various CDI locations, including the various off-site storage facilities. The CDI's Operational Recovery Plan (ORP), dated April 2007, identified flooding as a high severity impact for the Department. In most cases, these documents would be non-recoverable in the event of a disaster.

   While the tendency is to believe that a disaster is a remote possibility, CDI's San Francisco office, Sacramento office, Los Angeles office, and the West Sacramento warehouse are in areas which are at high risk of a natural disaster (i.e., earthquake and flooding). The West Sacramento warehouse has had two instances of water damage (due to a water pipe leak) at the location and approximately 250 boxes of Accounting Office and Licensing Background Bureau files were damaged and/or destroyed as a result. While mitigation measures have been taken to the extent possible, the situation remains a high risk.

   Several of the producer licensing files contain documents from the 1940s and 1950s that are becoming fragile and difficult to read. Similarly, several of the rule-making files date to the 1950s. In both of these cases, the CDI is required to make these files available for public viewing. Although CDI staff monitor the requestor while they are viewing the file, there is a high risk of damage to the file each time it is accessed.

7. **Need to Maintain Currency with Technology (BPO7) –** Around the globe, more and more business is being transacted electronically. The public is increasingly asking for and expecting services to be provided via the Internet, 24 hours a day. Many believe it is no longer reasonable to require the public to physically travel to a CDI location during business hours in order to view paper files. Good customer service requires information to be available when the consumer needs it, and not just when it is convenient for the business to make it available. By converting to electronic records, the CDI will be able to make more

information available to the public and increase the public's access to the information by providing the information via the Internet.

More and more legal and enforcement cases are starting to use electronic versions of documents for discovery purposes. Some district attorneys now prefer to receive the electronic versions instead of paper due to storage and handling issues. In one recent case, approximately one million pages of documents needed to be scanned to support a district attorney's request. The copy service contract for this case totaled $275,000. As more and more jurisdictions move to electronic processing, it is highly likely that these requests for electronic versions will increase. By positioning itself to process and scan documents upon receipt, the CDI can spread the scanning of these documents over a greater span of time instead of having to scan all items at once. The burden of the scanning process will be reduced and the need to rely on copy services may be eliminated.

Many of the CDI's industry partners and the insurance community are moving or have already converted to electronic methods over paper. In some cases, CDI's partners are not accepting paper at all. Louisiana's Department of Insurance no longer accepts paper requests for public records. Arizona's Department of Insurance is no longer issuing paper licenses, and is making the license information available on its website. If the CDI continues to use paper as its primary data format, it will be unable to meet the needs of the public and its industry partners.

8. **Maintaining Separate Stand-alone Repositories is Not Cost Effective (BPO8) –** As described previously, the Department has three separate document management and scanning systems. Many of the features needed or provided by these systems are common between the systems. Rather than continuing to maintain and support three separate systems, it may be more cost-effective to consolidate these efforts to a single, standard document management system that would allow the Department to take advantage of software volume licensing, centralized support, and integration with other Department applications, such as the IDB and EIP. By integrating with the Department's existing case management and reporting systems, the CDI will greatly enhance its data management and data analysis capabilities.

9. **Use of eForms and Workflow Features Can Improve Timeliness and Processing (BPO9) –** By using electronic-based forms (eForms) and workflow technology for routing documents, the CDI can improve how quickly a document is shared with other units and thus improve the timeliness of response (such as for consumer complaint investigations and ombudsman investigations). With eForms, the data can be entered into on-screen fields (which simulate a paper-based form), saved and used to route the form automatically and, where appropriate, to multiple areas simultaneously. The workflow features also allow

tracking of responses and status of the workflow, and will provide management with better information for monitoring and managing staff workload and adherence to mandated deadlines, such as for Public Records Act requests. eForms and workflow will also provide benefit in the Administrative area by allowing automated routing and recording of approvals, and by allowing CDI staff to monitor the status of their requests, without having to call or ask administrative staff to check on the request.

10. **Allows CDI Staff to Telecommute (BPO10) -** The use of an electronic-based system will allow CDI staff to work from any location that provides Internet/VPN access. This protects the Department from the impacts of natural disasters, social disturbances, and pandemics at any of its offices. It also provides benefits for CDI staff by allowing staff to telecommute for work. Telecommuting helps to reduce traffic and parking congestion, and supports flexible working hours for CDI staff while still allowing the CDI to perform its business functions and operations. By allowing more staff to telecommute, the CDI will be able to appropriately size its office space and maximize the use of its resources.

The Commissioner recognizes the risk and costs of paper-based business processes and has stated as one of his objectives the desire to transform the Department's operations towards a paperless workflow environment. The Commissioner believes that moving away from paper to an electronic solution will provide better access to documents for both the public and CDI staff, and will position the Department to leverage new technologies that enable the CDI to increase efficiency and improve the quality of service to the industry and the people of California.

3.3 Business Objectives

In order to address the problems and opportunities cited above, the CDI seeks to improve its operations and capacity by implementing an enterprise document management, imaging and workflow system. The objectives in the table below outline what the CDI intends to achieve as a result of this project.

Table 3-1. Business Objectives

Objective	Business Problems/Opportunities (BPOs)
1. Provide online access to the operational documents received by the CDI.	- Insufficient access to documents across the business areas. (BPO1) - Public access to documents could be more timely.(BPO2) - Files stored off-site are not always found. (BPO3) - Volume of documents and workload is increasing (BPO4). - Costs for document storage are increasing. (BPO5) - Need to maintain currency with technology. (BPO7) - Maintaining separate stand-alone repositories is not cost effective. (BPO8) - Use of eForms and workflow features can improve timeliness and processing. (BPO9) - Allows CDI staff to telecommute. (BPO10)
2. Improve customer service by providing on-demand access to public files.	- Public access to documents could be more timely.(BPO2) - Files stored off-site are not always found. (BPO3) - Need to maintain currency with technology. (BPO7)
3. Reduce document processing and storage costs.	- Volume of documents and workload is increasing. (BPO4) - Costs for document storage are increasing. (BPO5) - Maintaining separate stand-alone repositories is not cost effective. (BPO8) - Use of eForms and workflow features can improve timeliness and processing. (BPO9)
4. Increase the ability to share documents and files across the Department electronically.	- Insufficient access to documents across the business areas. (BPO1) - Files stored off-site are not always found. (BPO3) - Need to maintain currency with technology. (BPO7) - Maintaining separate stand-alone repositories is not cost effective. (BPO8) - Use of eForms and workflow features can improve timeliness and processing. (BPO9)
5. Increase the CDI's ability to recover from a disaster.	- Files stored off-site are not always found. (BPO3) - High risk of loss or damage to paper documents. (BPO6)

The details associated with each of the objectives, including measurements for success, are described below.

1. Provide online access to the operational documents received by the CDI.

- ✓ Reduce internally generated paper through use of eForms for administrative requests.
- ✓ Improve efficiency of analyst time by providing electronic search, collaboration and workflow tools.
- ✓ Improve the accuracy of research and responses to information searches, such as for e-discovery, PRA requests, and subpoenas for records through centralized, searchable storage.

- ✓ Improve the ability to identify the status and volumes of documents in the work process and who is working the item.
- ✓ Improve the status, statistical and workload reports available to CDI management through the use of electronic workflow and tracking.
- ✓ Increase the protection of sensitive and confidential documents through application of system controls and user access controls.
- ✓ Improve version control and distribution of documents to interested units.

Measurements:

- Provide CDI staff access to incoming documents within 24 hours of receipt.

2. Improve customer service by providing on-demand access to public files.

- ✓ Increase the types of files available electronically in the public viewing rooms and via the Internet.
- ✓ Improve the accuracy and timeliness of responses to public viewing requests, as well as to subpoenas and Public Records Act requests.
- ✓ Eliminate the need for members of the public to travel to a physical CDI location to access or submit information

Measurements:

- Provide access to newly filed documents via the public viewing rooms within 10 days of document/filing approval.
- Provide access to historical public files via the public viewing rooms within three years of implementation.
- Provide access to historical public files via the Internet within six years of implementation.

3. Reduce document processing and storage costs.

- ✓ Avoid costs for additional on-site and off-site storage space and storage equipment.
- ✓ Improve the enforcement of records retention schedules.
- ✓ Reduce or eliminate lost and misrouted mail through use of workflow for distribution.
- ✓ Allow staff to focus on analytical tasks instead of managing and processing incoming paper.
- ✓ Reduce the amount of incoming paper that needs to be processed by allowing electronic submittal of documents and forms by CDI partners (e.g., district attorneys, insurers).

- ✓ Reduce costs for industry partners by eliminating the requirement to submit multiple paper copies of filings, and allowing more items to be submitted electronically reducing the partners' transportation and shipping costs
- ✓ Maximize value for contract dollars by standardizing on a single product, instead of maintaining three separate systems.

Measurements:

Cost Savings Estimates:

- Reduce the cost of paper supplies by 30% within four years of implementation for a savings of $59,400 ($6,600 per year).
- Reduce the cost of toner and ink cartridges by 30% within four years of implementation for a savings of $159,907 ($17,656 per year).
- Reduce the cost of forms and stationery by 15% within four years of implementation for a savings of $62,716 ($6,968 per year).
- Reduce the cost of filing supplies by 30% within four years of implementation for a savings of $49,160 ($5,462 per year).
- Reduce contracted off-site storage costs by 50% within four years of implementation for a savings of $10,000.
- Reduce State Records Center storage costs by 25% within five years of implementation for a savings of $6,000.

Cost Avoidance Estimates:

- Avoid additional facility space costs at West Sacramento warehouse of $144,810 over the next seven years (estimated as a 20% increase every five years).
- Avoid additional facility space costs at San Francisco office of $1,104,520 over the next seven years (estimated as a three percent increase every five years).
- Avoid additional facility upgrade costs of $160,000 associated with storing paper for San Francisco legal (assuming two space increases).
- Avoid additional facility space costs at remaining CDI offices of an estimated $1,692,390 over the next seven years files (estimated as a two percent increase every five years).
- Avoid additional storage equipment costs of $113,400 over the next seven years.
- Avoid additional State Records Center storage fees of $2,632 over seven years.

4. Increase the ability to share documents and files across the Department electronically.

- ✓ Eliminate "islands of technology" in favor of a consolidated system.
- ✓ Allow multiple areas of the Department to access the same files simultaneously.
- ✓ Reduce the cost of sending physical files to other locations.
- ✓ Reduce or eliminate lost and misrouted mail through use of workflow for distribution.
- ✓ Reduce or eliminate delays associated with physical routing of files and documents to satellite offices.
- ✓ Integrate with other Department databases (e.g., IDB, EIP) to provide a more complete view of the insurer community and insurance trends.

Measurements:

- Licensing files are accessible online to all areas of the Department within five years.
- Rate filings, annual and quarterly statements are accessible online to all areas of the Department within three years.
- CDI staff working in the field are able to securely access documents and files within three years.

5. Increase the CDI's ability to recover from a disaster.

- ✓ Eliminate the risk associated with loss or damage to paper files by scanning the files thus creating a backup version.
- ✓ Protect the CDI from geographically-based disturbances or incidents by allowing CDI to perform business functions from any location via the Internet/VPN.

Measurements:

- Critical files (e.g., licensing files, legal files) have been converted to electronic format within five years.

3.4 Business Functional Requirements

The following categories of business functional requirements have been identified by the CDI subject matter experts. The detailed business functional requirements are contained in Appendix B. The proposed solution must address these functional areas in order to resolve the business problems and achieve the objectives described above. These requirements categories address only the features required of the product(s); implementation and support services will be described in Section 6, Project Management Plan.

Table 3-2. Business Functional Requirements Categories

Requirement Category	Types of Features
Document Intake	- Scanning resolution, speed and throughput - Document size, color, paper weight and capacity - Data capture/Optical Character Recognition (OCR) and accuracy - Barcodes, separators and batches - Date and time stamping - Electronic-based forms - Quality assurance features - Inserting and removing pages of a document - Document profiling/indexing - Document relationships and identifiers - Identification of duplicates
Document Processing	- Document manipulation (zoom, scroll, rotate, copy, paste) - Annotations and markup features - Redaction features - Document comparison features - Document list searching, sorting and filtering
Document Workflow and Approvals	- Workflow routing - Approval routing - Task status - Notifications and reminders - Electronic signatures/approvals - Workflow creation and update features
Document Retrieval	- Check-in and check-out features - Concurrent access to documents - Document search features (index and full-text)
Document Storage	- Electronic and imaged paper - Version control features - Document import and export - File format and compatibility - Archive and retrieval from archived state - Purging
Remote Access	- Electronic forms submission and workflow - Access via the web
Reporting and Statistics	- System reports - Document type reports - Workflow reports - Archive reports
Technical	- Department standards and compatibility - Americans with Disabilities Act (ADA) compliance - System administration and management features - Backup and recovery - Redundancy/Hot Site failover - Help facilities and online documentation
Performance	- Workflow/document retrieval response time - Workflow/document storage response time - Document search response time - Storage capacity and growth - Concurrent user capacity - System availability

Requirement Category	Types of Features
System and User Security	- User role and access controls - Remote access and controls - System logon and security controls - System monitoring logs and features - Confidential document protection features - Encryption features - Audit trail of access and changes
Interfaces	- Integration with Microsoft Office - Integration with email and/or fax - Interfaces with existing CDI systems (e.g., IDB, EIP)

4.0 BASELINE ANALYSIS

The purpose of this section is to provide an understanding of the business and technical environment and infrastructure that currently supports the CDI's business functions. This section builds upon the Business Case provided in Section 3, further highlighting the need to implement the proposed solution articulated in Section 5.

4.1 Current Processes

The CDI's business processes are, in general, either of a transactional nature, litigation related or a project-based nature. Although all business processes within the CDI will benefit from an enterprise document management/workflow solution, the transactional processes are the ones that would benefit the most from an imaging and workflow system.

Transactional processes are those that are initiated by the receipt of a contact or document and conclude with a response back to the submitter and/or an update to the Department's databases. Examples of transactional processes include the processing of license applications and renewals, processing of rate filings, researching consumer complaints, and many of the administrative processes. The challenges with these types of processes is tracking who is working on the transaction, the status of the transaction, recording the contacts and interactions with the submitter, and, in some cases, tracking the deadlines for processing the transaction.

The litigation-related processes are those that involve developing and managing a legal case, responding to a legal case, or hearing and deciding a legal case. These processes involve the Department's Legal Branch and the Administrative Hearings Bureau under the Executive Operations Branch. These processes frequently span several years and involve numerous boxes of documents and files for the proceedings and evidence of the case. The challenge with these documents is in tracking, organizing, and storing the large volume of data so that documents can be easily identified and retrieved when needed.

The project-based processes are those tasks that require analyses, research or work efforts designed to achieve a specific goal. Examples of investigative processes include processing reports of suspected fraud, conducting desk and field audits, and development of studies, policies, legislation and regulations. These processes require accessing and accumulating various types of reference, historical and supporting materials, and organizing the resulting materials into a final product. Automated tools to assist with organizing, searching, and tracking of documents would greatly benefit these processes.

4.1.1 Current Method

The majority of CDI users perform manual methods to manage their documents and files. This involves physical processing, storage in file cabinets and off-site warehouses, and routing or shipping boxes of paper documents between various offices. As described in the Business Case, this has lead to delays, duplication, lost files, and rising storage costs.

Most mail is received at the Sacramento office, couriered to the regional offices (Los Angeles and San Francisco), and then couriered to the satellite offices from the regional offices. Some mail is also received directly at the satellite and regional offices. Generally, the mailroom opens the mail, unless it is specifically marked as private or confidential, or if it is a payment. Checks and payments are stored unopened in locked tubs and then delivered directly to Accounting for opening and processing. The remaining mail is then sent to the specific bureau or unit for processing.

Some areas, such as Fraud, Investigations and Legal, have intake units that ensure received items are tracked in a consistent matter and routed to the correct unit or location. The intake units receive the mail, validate the mail item is correct and complete, log the mail item into a tracking database, and distribute the mail to the appropriate satellite office for assignment. For some of these bureaus, there can be a several day delay between when the mail is received by the Department and when the mail item actually begins to be processed at the appropriate unit or satellite office, due to the physical routing of documents and files. This causes problems for several satellite offices, because for some types of documents the CDI is required to respond to the document within a fixed number of days. Faxing can be used in some cases to allow processing to begin before receipt of the physical document, but in other cases, the amount of attachments or sensitivity of the document prevents use of faxes.

Most of the documents received by the Department are complex, multi-page documents with various types of attached supporting material, such as:

- Applications for licenses or renewals, and supporting paperwork
- Producer licensing materials specific to education training providers and courses
- Insurance policies or products (e.g., annuities), rates or financial information, annual/quarterly statements and tax returns
- Insurance claims and underwriting information
- Complaints, reports of suspected fraud, reports of suspected violations, and referrals for investigation (such as from district attorneys, legislators, or advocacy groups)
- Public records requests, subpoenas and legal case matters
- Ad-hoc correspondence

These items may come in via mail (as paper documents), faxes, email, or, in some cases, via electronic systems, such as the Department's website or the NAIC's System for Electronic Rate and Form Filing (SERFF). Many of these documents initiate further investigation and may involve detailed analysis and follow-up with the submitter and/or the insurer, and may require analysis and input from multiple areas of the Department. If the items are received electronically, CDI staff route these items via email. However, in many cases, the documents consist of several attachments or very large volumes of materials. It is not an exaggeration that for some types of documents, the supporting materials span several (five to ten) boxes of paper documents. Routing of these documents is cumbersome, expensive, and involves risk of damage or loss to the documents. Use of a courier also introduces the risk of improper disclosure or loss of sensitive and/or confidential documents. This could expose the CDI to potential legal liability and civil action, as well as disrupting the chain of custody for legal and enforcement documents.

Most of the Department's records are stored for a minimum of five years and often the files are stored for much longer. Licensing files are kept for five years after the license has become inactive. In enforcement cases, the files are kept onsite at least until the case is settled which may take several years. Enforcement and Legal cases are notable for requiring numerous boxes of materials due to the amount of evidence seized and the paperwork involved in prosecuting a case. Several of the program areas refer back to prior year's work as part of processing incoming work. For instance, the Financial Analysis Division refers to prior year reports as part of their analysis of the insurer's current financial viability.

Thus, several Department areas have extensive on-site libraries or storage areas for these working files and reference materials. Some of the offices have installed facility upgrades to support the paper storage areas. The San Francisco office has reinforced the floor under the Legal central files and has installed power-assisted rolling shelving units in order to maximize the amount of storage space within the room. The Sacramento Tech Center office recently installed rolling shelves to maximize their storage, but some areas have already indicated they will need more storage space. The West Sacramento warehouse which stores the producer licensing files recently expanded and reorganized their space. However at the current growth rate, the warehouse will be full within five years, even with active purging of files. (The warehouse actively purges files based on defined retention criteria.)

The following table summarizes the current types of files and average volumes of the typical documents received by the CDI, and the wide range of documents processed. While some of documents are periodic (such as the tax returns and license renewals), many are ad hoc with volumes that vary depending on the state of the industry and the economy.

Table 4-1 Current Volumes

Item	Volume	Program Area
Total Number of Active Companies	1,400 (average)	Legal – Corporate Affairs Bureau
Total Number of Active Insurance Providers	290,000 (average)	Producer Licensing Bureau
New Broker-Agent License Applications	70,000 yearly	Producer Licensing Bureau
Broker-Agent License Renewal Applications	110,000 – 120,000 annually	Producer Licensing Bureau
New License Background Checks Opened	300-350 monthly	Licensing Background Bureau
New License Background Checks Referred from Other Areas	800 – 1,000 monthly	Licensing Background Bureau
License Background Checks Referred to Legal	70 monthly	Licensing Background Bureau
Approved Licensing Educational Providers	760	Producer Licensing Bureau
Approved Licensing Educational Courses	13,000	Producer Licensing Bureau
Adjusters and Bail Bonds Files	4,376	Producer Licensing Bureau Warehouse
Producer License Files Stored at the Warehouse	1,000,000 (average)	Producer Licensing Bureau Warehouse
New Producer License Files Sent to the Warehouse to be Stored	200-300 daily	Producer Licensing Bureau Warehouse
Producer License Files Currently Checked Out from the Warehouse (at any given time)	1,700-2,000 (average)	Producer Licensing Bureau Warehouse
Consumer Complaints Filed	35,000 yearly	Consumer Services
Number of Companies with Complaints	800 (average)	Consumer Services
Number of Complaints Disputed by Company	10%	Consumer Services
Number of Phone Calls Received by Consumer Services	300,000 yearly	Consumer Services
Number of Electronic Contacts Received from Consumers	30-50 monthly	Consumer Services
Public Records Act Requests Received	100-150 monthly	Custodian of Records
Subpoenas Received	200 year-to-date (2007)	Custodian of Records
Fraud Referrals Received	25,000 yearly	Enforcement – Fraud
Percentage of Referrals that become Cases	20-25%	Enforcement – Fraud
Percentage of Cases that are Presented for Prosecution	90%	Enforcement – Fraud
Suspected Violation Complaints Received	100-200 monthly	Enforcement - Investigations
Cost Recovery Due to Investigations (FY06-07)	$370,000	Enforcement - Investigations
Contacts Received by Ombudsman	1,500-2,000 yearly	Ombudsman
Statistical Data Calls Performed	33 yearly	Statistical Analysis
Rate Specialist Data Calls Performed	10 yearly	Rate Specialist
Rate Filings Received	6,000 – 8,000 yearly	Rate Regulation
Tax Returns Processed (CY 2006)	3,300	Accounting
Value of Tax Returns Processed	$2.1 Billion	Accounting
Total Insurer Securities/Collateral Maintained (FY06-07)	$23 Billion	Accounting

Gartner estimates that between 20 and 30% of working hours are spent managing document-based information outside of an automated system[2]. Coopers & Lybrand estimated that professionals spend up to 50% of their time searching for desired information while spending only 10-15% of their time actually reviewing and reading the information[3]. While there will always be some time spent handling documents, an electronic system will help to enforce standardization in naming, classifying, routing and managing documents, thereby freeing staff to focus on more analytical tasks rather than administrative tracking and manual searching.

Four areas have piloted the use of scanning and electronic document management to better manage and process their documents. The three systems are Producer Licensing Bureau (PLB's) Psigen Scan HQ Scanning system, Rate Regulation Bureau's ParaDocs system, and the Hummingbird DM system used by the Legal Branch and the Market Conduct Division.

4.1.2 Objectives of Current Systems

Each of the existing systems is described below.

Psigen Scan HQ/Image HQ system

The purpose of PLB's Psigen Scan HQ scanning system was to automate the processing of producer license renewals, by using scanning and data capture to automatically read data from the form. The PLB sends out renewal notices with an attached coupon that contains appropriate encoding to aid in the scanning. The licensee returns the coupon with a check for the renewal fees.

PLB staff receive the renewals, scan the coupons or form using a high-speed Kodak scanner, verify the scan passes quality checks using the Scan HQ product, and indexes the images with appropriate information to allow retrieval later. The system uses Scan HQ to perform zone Optical Character Recognition (OCR) to capture the license number and last name of the licensee from the renewal coupons. For non-coupon forms, the scanning operator must key enter the number and last name from the image. The image data is retained on the scanning system. The Image HQ product is used to retrieve and view stored images. The images are indexed by license number and last name. The PLB processes approximately 10,000 renewals per month about 40% of which are received in paper for scanning.

[2] Debra Logan, "Document Management: Assessing Costs and Benefits", ID Number SPA-11-9200, Gartner Inc., 27 September 2000.
[3] Sandy Schiele and Betsy Delfosse, "Return on Investment Sells Document Management to Executives", OpenArchive Systems, Inc.

Hummingbird DM System

The purpose of the Hummingbird DM product is to manage the documents generated by the Legal Branch. DM is integrated with the eCounsel legal case/matter management system that is used for tracking the CDI's legal matters and assignments. The DM product may be accessed from within eCounsel, Microsoft Outlook (to store email), Word, and Excel. It is also used to store PDF files and some scanned images. The CDI originally purchased the product in the 1990s when it was named DocsOpen. It was renamed to Hummingbird DM in 2002 and the CDI upgraded the product in that year.

When storing a document to DM, the user is prompted to complete an index/profile for the document based on key fields and identifying information, such as document name, document type, owner, matter, document date, etc. The file is then stored to the repository. DM allows the user to set security rights for the document and to establish different versions of the document. There is also a feature that allows users to mark documents for posting to the web and an automated process then performs the posting to the CDI Internet site.

The DM product also is used by the Market Conduct Division to publish their examination reports of insurers to the web. Market Conduct has implemented a simulated workflow review and approval process through DM to speed and track the approvals of the examination reports. Once the examiner completes the development of the report, it is saved to DM and then an email is created to route the report to the appropriate supervisors and managers for approval. Upon approval, the report is marked for publishing and posted to the web. Market Conduct does not use DM as a repository for all of their documents due to a current lack of licenses.

ParaDocs System

The Rate Regulation Branch (RRB) uses the ParaDocs system to scan, store, process, and provide public access to the rate filings from insurers. The staff are scanning incoming rate filings, as well as working to scan the historical filings. They expect to complete the historical file scanning by the end of 2008. Members of the public may view the rate filings via a PC in the public viewing rooms at the Los Angeles and San Francisco offices. A second phase of the project is being pursued to allow public access to the filings via the Internet.

RRB staff receive the filings, verify the filings are complete, and insert bar-coded separator sheets to assist with indexing the documents. The rate filing package is scanned using a high speed Canon scanner. The scan operator performs a quality check of the images for readability and completeness. Information from the IDB is downloaded to assist with the indexing and profiling step. In most cases, the scan operator must only key enter one to two fields of data for the index/profile. It is only on the very large documents that the scan operator has to key enter all of the index information (large rate filings may have up to 18 exhibits and attachments). Once the

index information is entered, the images are stored and made available for analysts and the public.

The RRB receives between 6,000 – 8,000 filings per year, with about half of the filings being submitted via SERFF. In these cases, they scan a coversheet into ParaDocs to indicate the data is available from SERFF (the SERFF filing is not imported into ParaDocs). Thus, rate filing data may be present in paper (with a synopsis in IDB), ParaDocs and SERFF; there is no single repository of rate filing information.

4.1.3 Abilities of Current Systems to Meet Current Requirements

The Psigen Scan HQ system is sufficient to meet current needs, but it is not integrated with PLB's Cosmos system. In order to access the image data, staff must logon to the stand-alone scanning system to view the image. This is inconvenient, but has minimal impact to business operations.

The Hummingbird DM system is meeting business needs as a repository for the Legal Division. Market Conduct would like to expand its use of the system, but does not have sufficient licenses to do so. Both areas would like to perform more scanning of incoming documents, but do not have the staff or equipment to do so. Market Conduct uses email to simulate workflow features, but the system does not provide true automated workflow and tracking.

The ParaDocs system is currently in Phase II of its implementation. Phase II involves the implementation of public access features and resolution of some response time issues, particularly those involving larger files. There are no management reports, metrics or log reports currently defined. The scanning portion of the product works well, but the profiling/indexing and saving functions have encountered problems. A planned Phase III would implement workflow features, but there is no current schedule for Phase III implementation.

4.1.4 Level of User and Technical Staff Satisfaction

4.1.4.1 User Satisfaction

The majority of users are satisfied with the Psigen Scan HQ and Hummingbird DM systems. The primary complaint is with the ParaDocs system. As the number of documents has grown, the response time has degraded and the vendor has not been very supportive or responsive. Users are satisfied with the results after scanning, but are not pleased with the amount of effort to achieve the results.

4.1.4.2 Technical Staff Satisfaction

The Psigen Scan HQ system (scanners and database) is maintained by program staff within the PLB. The Hummingbird DM system is primarily supported by General Networks Corporation, with three CDI staff providing part-time onsite support. The

ParaDocs system is maintained by the system vendor, Dayspring Systems Inc., with CDI IT staff providing support only for the infrastructure. IT staff have not had many problems with the three systems.

4.1.5 Data Input, Processing and Outputs

For the Psigen Scan HQ system, the scan operators prepare the batches, scan the documents, verify the quality and completeness of the scan, and then zone OCR captures data for the license number and licensee last name for the coupon documents. For non-coupon (i.e., full-sized documents), the scan operator will key enter the two fields. The image data is retained on the scanning station.

The Hummingbird DM product is used primarily for storing documents generated by the Legal Branch and the Market Conduct Division. Staff create documents in Microsoft Word, Excel, or Outlook and store the document in the DM product (using the Save As feature). Market Conduct staff use the email features to simulate workflow to automate the review and approval of the examination reports and the web publishing feature to post these reports to the web. The Legal staff also may use the web publishing feature, but do not use any simulated workflow features.

The ParaDocs system is used to scan and store rate filing documents. Separator sheets with barcodes are inserted into the documents and information is downloaded from IDB to assist with profiling the documents. In most cases, the scan operator only needs to enter or verify one to two fields and the rest of the index information is populated by the system. In the case of large rate filings, scan operators currently key enter all the index information, due to delays in response time when downloading and matching data from IDB to the ParaDocs system. The web publishing and workflow features are not currently enabled for ParaDocs (these are planned to be implemented in Phase II and Phase III of the system).

4.1.6 Data Characteristics

The Psigen Scan HQ system scans documents to the Tagged Image File Format (TIFF) file format. The image files are stored on a stand-alone workstation that is backed up to the network. The data obtained from OCR of the documents is stored in a Microsoft Access database. Documents are received and scanned on a daily basis.

The Hummingbird DM system is implemented as an Oracle Data Base (DB). Files generated by the Department are stored in their native formats (e.g., Microsoft Word, Excel). On occasion, received documents are scanned to PDF and then imported to the repository.

The ParaDocs system is an open source system written in Java and PHP, and using a Postgre SQL database. Documents are batched and bar-code separator sheets are used to assist with profiling and indexing the documents. The documents are stored in the database as TIFF or PDF files.

4.1.7 Provisions for Security, Privacy and Confidentiality

There are five staff that have access to the Psigen Scan HQ system, including two staff that serve as the main scan operators. The system and data is only accessible via the single scanning workstation.

The CDI's network logins are passed through to the Hummingbird system for Market Conduct staff. Legal staff using the system through eCounsel must logon directly. When a document is entered in the system, the user establishes the appropriate security for the document and may mark the document as "secured" (confidential or sensitive). If another user is not authorized for the document, that user will not see the document or be able to search for the document. Documents may be associated to a legal matter (case) in the eCounsel system.

ParaDocs users have a logon and password that is separate from the network login. Scanning separator sheets are used to identify sections of rate filings that are public or confidential and each document's index indicates if it is public or confidential.

4.1.8 Equipment Requirements for the Current Systems

The Psigen Scan HQ system utilizes a Kodak 2500D scanner with a barcode reader which will be replaced shortly with a Kodak i280 scanner. There is one scanning workstation running Microsoft Windows XP. Scanning and profiling can only be performed on this scanning workstation.

The Hummingbird DM product runs on Microsoft Server 2003 network platform. The server is maintained in San Francisco. The CDI does not have a dedicated scanning station for the DM system. Staff may scan documents via a flatbed scanner or a copier/printer/scanner and then import the document into the database. Files are stored in their native format or in PDF. The database server is located at the Department of Technology Services (DTS) in Rancho Cordova.

ParaDocs runs under Red Hat Enterprise Linux network platform and uses a high-speed Canon scanner. The server is located at the Los Angeles office. There is a scanning station at both the Los Angeles and San Francisco offices. The scanning workstations run Microsoft Windows XP. Scanning and profiling can only be performed on these designated scanning workstations.

4.1.9 Software Characteristics

The Psigen Scan HQ system is comprised of Psigen's Scan HQ and Image HQ software products (version 2.21) and a Microsoft Access DB running under Microsoft Windows XP.

The Hummingbird DM product is version 5.1.0.5 SR5 MR3 and Hummingbird Web Publishing 5.1.0.5 SR1, running with an Oracle DB. It is integrated with the Bridgeway eCounsel product, Microsoft Outlook, Word and Excel.

The ParaDocs system is an open source application running under Microsoft Windows 2000. The product modules include WebExplorer version 4.2, PDImaging version 3.1.55 and PD Batch Scanning Module version 3.1.83. The product is written in Java and PHP with a Postgre SQL DB.

4.1.10 Internal and External Interfaces

The Hummingbird DM product interfaces to the IDB to obtain index information for validation purposes (company name, company data). DM also exports documents for posting to the CDI public website.

The ParaDocs system interfaces to the IDB to obtain index information for validation purposes.

4.1.11 Personnel Requirements

The PLB has the equivalent of 0.5 PYs that perform scanning tasks. The scan operators also maintain the scanning equipment.

The Hummingbird DM system has one IT administrator at the San Francisco office, and two part-time IT support staff at the Los Angeles office. There are 156 users licensed for the system. The product is supported by General Networks Corporation.

There are four program staff trained to perform intake and scanning for the ParaDocs system. These staff spend approximately two hours per day scanning, profiling and indexing the newly received documents. There are approximately eight support staff who spend two hours per day scanning, profiling and indexing the historical files at the Los Angeles and San Francisco offices. There are 120 licenses for the ParaDocs system, not all of which are being used. The product is supported by Dayspring Systems, Inc., and Phase II of the project is in process.

4.1.12 System Documentation

The Psigen Scan HQ system documentation is approximately five years out of date, and is geared toward technical staff not program staff.

The Hummingbird DM system has system design information, and an administration and user guide, which is current.

User guides are available for ParaDocs, but the guides are not current. There is minimal technical system documentation which is also not current. Phase II documentation has not been received yet.

4.1.13 Failures of the Current System to Meet Objectives and Requirements

The Psigen Scan HQ system is meeting its requirements, but is limited in use since it is a stand-alone system. The PLB now is accepting renewals for some types of licenses via the Internet, and hopes to encourage more electronic processing of applications and renewals via the Internet.

The Hummingbird DM product is meeting its requirements. The Legal Branch is pursuing additional customizations to the eCounsel product, thus Hummingbird is a lower priority currently. The Market Conduct Division has not had sufficient resources to purchase additional licenses. The Hummingbird DM product was last upgraded in 2002, and is approaching its renewal and end of support period.

The ParaDocs system is still being implemented and is currently encountering problems with response times and vendor support. The CDI is reviewing its options and the future of this system, in light of this FSR.

4.2 Technical Environment

The CDI maintains an extensive technical environment to support its complex business operations. Various legacy and contemporary technologies are currently used, including a range of tools, applications and databases. This section provides an overview of those technologies.

4.2.1 Expected Operational Life of Proposed Solution

The CDI has established the Information Technology Refresh Program (ITRP) to ensure technology within the Department is kept current. The ITRP provides for replacement of desktop and mobile computing workstations every four (4) years, printers every six (6) years, and upgrade of local area network servers every four (4) years. The CDI has just completed the annual refresh of its user-based computing systems.

The proposed solution is expected to have a useful life of at least five (5) years. There is no fixed end date for when the document management system would be retired. With patches and software upgrades, the system can expected to have a longer operational life. Typically, the CDI evaluates software application life span and usefulness when new patches, upgrades and versions are released. The IT staff work with the program areas, and where appropriate, the software/support vendor, to determine the benefits and risks with new upgrades and versions to determine the best course of action for the business. The proposed solution will be flexible enough to allow for changes in technology and program structure, by requiring the solution to use industry-standard formats and platforms.

4.2.2 Interactions with Other Organizations and Systems

The proposed solution would interface to the CDI's existing systems, including the IDB, the EIP, and other applicable CDI systems, to allow direct access to the source documents referenced in those tracking systems.

The proposed solution also would need to interact with the NAIC's SERFF system in order to access documents filed directly with the NAIC by California insurers. The NAIC has proposed changing how it sends and receives data with states, to eliminate the dedicated connection that is currently maintained. The NAIC would like to change to an Internet-based file exchange method. No definite timeline has been identified for these proposed changes, as of this report.

4.2.3 State-Level Information Processing Policies

The proposed solution will comply with applicable State information processing policies including the following:

- Statewide Information Management Manual (SIMM)
- State Administrative Manual (SAM), Section 4833, IT Accessibility Policy
- SAM, Section 4840, Security and Risk Management

4.2.4 Financial Constraints

This project requires a Spring Finance Letter to authorize the funding for the project. The proposed system and the associated development and implementation costs must fit within the constraints of the approved funding.

4.2.5 Legal and Public Policy Impacts

The document management, workflow and imaging system may contain documents with personal or financial information. These documents will be protected appropriately and redaction tools will be included in the system to allow redaction of sensitive or confidential information prior to providing the document to the requestor or the public (e.g., in response to a Public Records Act request).

4.2.6 Agency Policies and Procedures for Information Management

The CDI's Information Security Officer (ISO) and Chief Information Officer (CIO) work together to establish the IT policies for the Department and to ensure the policies align with the Department's Agency Information Management Strategy (AIMS). All IT policies are available on the CDI's intranet. The following are the primary types of IT policies.

4.2.6.1 IT Circulars

The CIO issues department-wide policies for the use of network equipment and services by CDI employees. The ISO establishes new and updated security policies, gains approval from the Information Technology Executive Council (ITEC), and then release the policies to CDI staff. The CIO and ISO collaborate on the implementation of IT security and the CIO publishes IT Circulars to provide guidance to CDI staff. The IT Circulars are announced to all employees via email, and are published on the CDI's Intranet. The policies support the CDI's need to maintain control of information technology activities and ensure that the use of IT is justified as appropriate to support the CDI's mission. There are processes in place to take appropriate actions if IT policies are violated.

4.2.6.2 Standard Desktop and Mobile Computing Configurations

The CDI administers a Desktop and Mobile Computing (DMC) Policy which defines the procedures for acquisition and use of standard hardware/software that are used for desktop and mobile computing in compliance with policy defined in the SAM. The CDI's DMC Policy includes a list of hardware/software that has been approved as the CDI's standard equipment in support of desktop and mobile computing.

4.2.7 Anticipated Changes in Operating Environment

The new components required by the proposed solution are described in Section 5, Proposed Solution. There are no other planned changes in the operating environment.

4.2.8 Availability of Personnel

The IT staff provides primary support for the CDI applications, databases and technical environment. Services include application development and maintenance, testing, database support and maintenance, troubleshooting and security. There are approximately 69 positions dedicated to the support of CDI IT applications and technical infrastructure.

The CDI will require additional staff to assist with the operations and maintenance of the document management, workflow and imaging system. These staff will be trained by the solution vendor to allow the CDI to maintain and operate the system. The CDI will request two (2) three-year limited term positions for IT support for the new system. The project staff and remaining support staff needs will be met through redirection of existing staff resources. Refer to Section 6, Project Management Plan for more information on the staffing needs.

4.3 Existing Infrastructure

The existing CDI technical infrastructure is described below.

4.3.1 Network Infrastructure

4.3.1.1 Data Network

The CDI data network supports 164 Intel-based servers and fourteen (14) Sun/Solaris systems, 1600 desktop PCs, and 550 notebook PCs, distributed across the three (3) main offices, 11 satellite offices and one warehouse location. The CDI's primary applications are hosted on the application servers at the CDI and the database is hosted by the DTS Data Center.

4.3.1.2 Wide Area Network (WAN) Architecture

The WAN architecture for the CDI is shown in Figure 2. The Sacramento office provides the main connectivity to the DTS via a DS3 data link (up to 45 Mbps) to the Department of Motor Vehicles (DMV) Point of Presence (POP) together with a backup route of two T1 data links to the Department of Finance (DOF) POP. The DTS also provides the Internet access for the CDI via a DS3 data link.

The Los Angeles office is connected to the Sacramento office over one DS3 data link, the San Francisco office is connected to Sacramento over one DS3 data link, and there is one DS3 data link between the Los Angeles and San Francisco offices. Any individual DS3 data link outage shifts the traffic to the remaining data links allowing uninterrupted access to the DTS applications. Further, the ring architecture between the three offices provides an alternative route in case the entire data link group fails.

The satellite offices are connected to one of the main offices over T1 data links, though there is no backup provision for these data links. The total number of T1 data links for the WAN data network is 19. The Sacramento office is also connected over a T1 data link to the NAIC POP.

The DTS is responsible for the operation and management of the CDI WAN including the routers and the data links. The routers in the three main offices for the CDI intranet are all Cisco 7509 routers. The external router connecting the CDI intranet to the DTS and the Internet is the Cisco 7204. The satellite offices are connected to the main offices by Cisco 2651 routers.

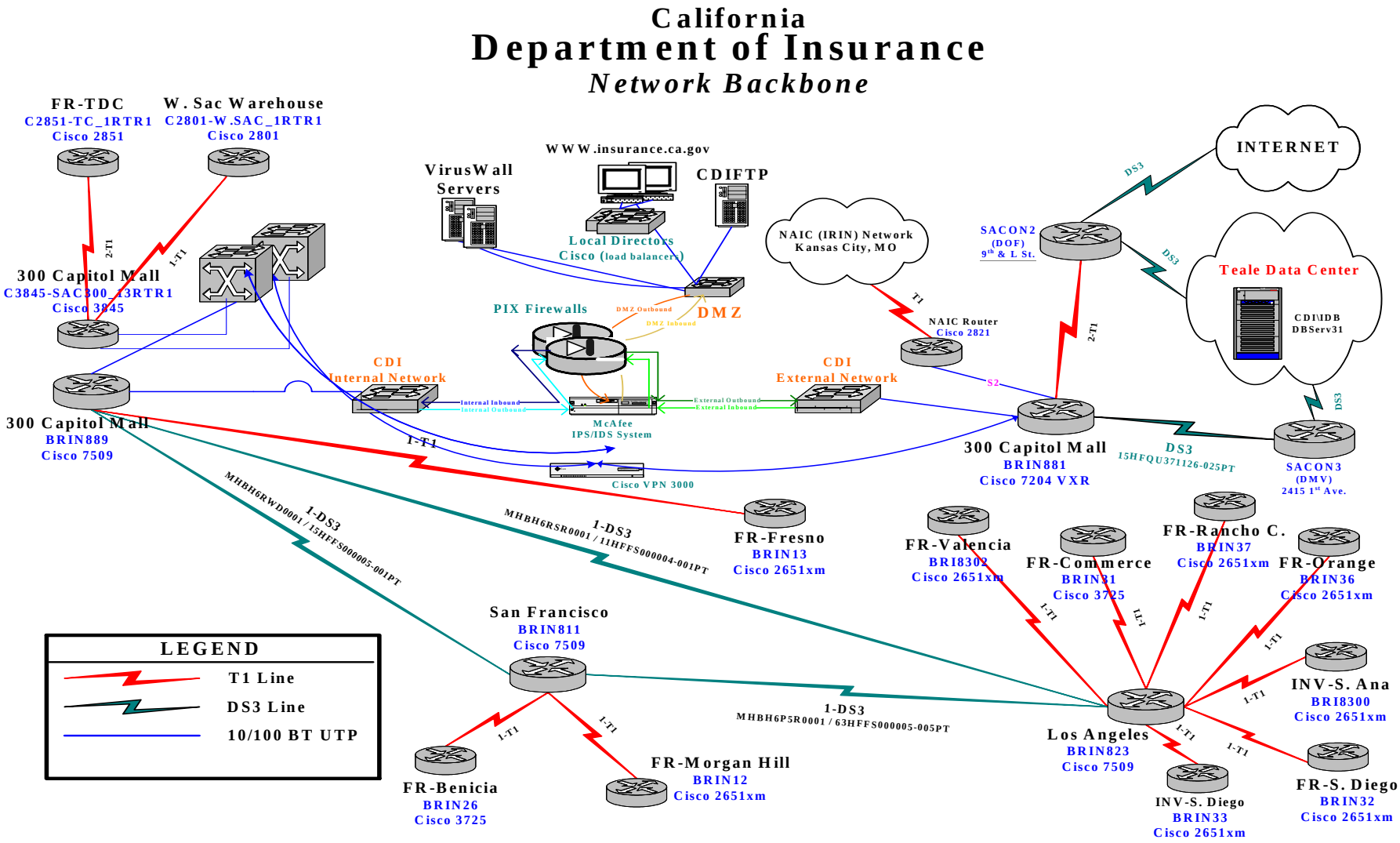

Figure 2. CDI Network Backbone

4.3.1.3 Local Area Network (LAN) Architecture

The 3 main CDI offices in Sacramento, Los Angeles, and San Francisco follow a two-tier switched LAN architecture. The core switches are Catalyst 6509s with dual supervisory modules. The access layer switches are stacked layer 3 Cisco Catalyst 3750s in the wiring closet. There is 1 Gbps fiber data links connecting the core switches to the access layer switches. There are 100 Mbps data links connecting the distribution switches to the desktops and servers.

4.3.1.4 Network Security

The main security for the CDI intranet is provided by dual PIX firewalls, arranged in a hot standby failover configuration. Websense™ is used to control applications that can traverse the firewall. Currently, the CDI uses Intrushield for network-based intrusion protection and HIPS as the host-based intrusion protection.

The Demilitarized Zone (DMZ) hosts the load-balanced servers for the CDI website and the external File Transfer Protocol (FTP) server. The Virtual Private Network (VPN) server for remote login stands alone. By hosting these publicly accessible resources in the DMZ, the firewall protects the CDI intranet from potential threats.

The CDI intranet uses TrendMicro's product line for virus and Internet security. Functionality in the implemented software includes:

- Antivirus scanning for servers, detecting and removing viruses from files and compressed files in real time before they reach the end user
- Real-time detection and removal of viruses from email and attachments before they reach the desktop
- Protection against the daily threats of file-based and network viruses as well as secure access from intruders, spyware, and other threats
- Internet gateway protection against viruses and malicious code

Any attacks (e.g., Denial-of-Service) must not be able to penetrate the firewall and compromise the intranet. Thus far, the CDI intranet has not experienced any external security breach.

4.3.1.5 Video Conferencing

The CDI video conferencing WAN network consists of single T1 data link between the three main offices at Sacramento, Los Angeles, and San Francisco in a ring configuration. Each office has a video conferencing facility served by the

Polycom FX™ IP-based video conferencing system and a dual port Cisco 2610 router.

The CDI video WAN and LAN network are physically separate from the data WAN and LAN networks. The video streams require bandwidth of 384 Kbps. Hence the T1 data links are only 25% utilized. Further, the WAN data links are used for video conferences only for short periods during the day.

4.3.1.6 Voice Over Internet Protocol (VOIP)

The CDI has recently completed applying new technologies that will provide the CDI an opportunity to reduce costs and increase reliability by using a single network to distribute data, process telephone calls, and provide for call center modernization. The CDI has implemented VOIP as the replacement of its full telecommunications infrastructure. It uses the CDI's existing LAN/WAN as the primary transport system until a call must be moved to the Public Switched Telephone Network (PSTN). This combining of voice and data over the same transport network is known as a converged network and is currently being deployed in many enterprise networks.

4.3.2 LAN/WAN Servers

There are a number of servers connected to the LAN in each CDI location. These servers support general data processing functions, such as file and print services, and support specific applications such as Microsoft Exchange and Microsoft SQL Server.

The CDI's IT network infrastructure includes the following components:

Network Servers – The CDI has 164 network servers installed throughout 15 physical sites. The current network servers have, at a minimum, XEON processors.

Database Server (Enterprise) - The CDI leases two SunFire V880 servers with eight processors to support the development, test, and production database environments, and a SunFire V890 to support CDI's data warehouse. These servers are housed at the DTS.

Web Servers – The CDI's Internet/intranet websites are supported on Windows 2003 Servers. The CDI's Oracle Internet Application Server also runs Apache Web Server version 2.24 (UNIX). There are six web servers running Microsoft Internet Information Server (IIS) version 6, and three web application servers (for the Content Management System) running Microsoft IIS 6 and ColdFusion 7. The CDI uses the Microsoft FTP protocol on a Windows 2000 server with IIS enabled.

Application Servers – The CDI currently has fourteen (14) application servers that support the Internet/intranet web-based applications. Five of these servers also support the Development and Testing staff. The fourteen application servers are running a mixture of Sun Solaris v.8 with Oracle's Application Server (OAS) 9.0.4.3 and Sun Solaris v.10g with an OAS of 10.1.2.2 utilizing Apache's Web Server software version 2.2.4.

- Two production servers: One Internet and one intranet application server (connecting to production DB): SUN V480R; dual 1.593 MHz processors; 4 GB RAM; 4-72 GB internal disk drives.
- Two production servers: One Internet and one intranet application server (connecting to production DB): SUN V440R; dual 1.593 MHz processors; 4 GB RAM; 4-72 GB internal disk drives.
- Six Internet application servers: Two production, two test, and two development (connecting to production, test and development DBs, respectively): SUN V240; dual 1.5 GHz processors; one 6 GB, three 4 GB, and two 2 GB RAM; 12-72 GB and 12-146 GB internal disk drives.
- Two test servers (connect to development, test and production DB): SUN 480R; dual 900 MHz processors; 4GB RAM; 2-36 GB internal disk drives.
- Two servers: One production financials application, one test and development financials application: SUN v480R; dual 900 MHz processors; 2-36 GB internal disk drives.

Video Servers - There are eight servers: seven Xserve Quad Xeon servers and one Xserve RAID server.

Network Protocols – The CDI uses TCP/IP for network protocols.

Office Cabling – All CDI offices are wired using CAT5e cabling as the standard for network connectivity.

Anti-virus - The CDI uses TrendMicro Office Suite anti-virus software, which includes OfficeScan for the desktop, ServerProtect for servers, ScanMail for Microsoft Exchange environment, and VirusWall for Internet protection. The CDI is in the process of replacing VirusWall with Brightmail using Symantec Anti-virus, and ServerProtect is being replaced by OfficeScan for the servers.

Backup Software - The CDI uses CommVault Galaxy enterprise-wide backup software, and the DTS uses Legato NetBackup for the SunFire V880 database server.

Backup Tape Libraries - The CDI uses ADIC backup tape library products in support of backup processes. There are three total libraries – one at each regional location, and there is a Gateway (Quantum) superloader at the Sacramento Tech Center location.

Failover – Standby units are installed for the CDI's firewall and Microsoft Exchange, and are ready to take control should the active unit fail to perform its functionality.

Sniffers – The CDI has deployed Sniffer Distributed appliances to analyze and troubleshoot the network.

Storage Area Network (SAN) / Network Attached Storage (NAS) - The CDI has installed EMC CLARiiON CX700 Networked Storage System, and Cisco NS500 Network Attached Storage (NAS). The CDI uses EMC Snapview as a backup and recovery accelerator, EMC Celerra Filemover and anti-virus products, and EMC Celerra Network Attached Storage Software. There are 67 drives at 146GB per drive, with SAN currently using approximately 680 MB, and the NAS using approximately 651,399 GB. Additional slots are still available, should expansion be necessary.

Search Engine Appliance – The CDI uses two Google Search Engine Appliances as a tool for searching the CDI's enterprise content from various sources.

Virtual Private Network (VPN) – The CDI uses the Cisco VPN 3000 concentrator appliance to provide secure network access to remote users. Notebooks that connect to the CDI's internal network are configured with VPN Dialer to provide a secure encrypted data connection.

Desktop PCs – The CDI's network consists of approximately 1600 desktop PCs.

Notebook PCs – The CDI's network consists of approximately 550 notebook PCs.

Printers/Scanners – In addition to the scanners for the Psigen Scan HQ and ParaDocs systems, the CDI's network includes 385 networked printers and 190 scanners (portable, flatbed and/or high-speed scanners).

4.3.3 Application Development Software

The following are the Department's standard development tools:

Application Development Tools – The Oracle Development Suite of applications is used and includes: Oracle Forms, Reports, Designer,

Discoverer, JDeveloper; Balanced Score Card (BSC), Warehouse Builder, Workflow; TOAD (Tool for Oracle Application Development); SQL Navigator; Oracle Portal; Crystal Reports, WebPL/SQL; PL/SQL; Oracle Enterprise Manager, iText; Java; JavaScript, Visual Basic (VB) Script; FrontPage; CommonSpot; Cold Fusion; HTML; Macromedia Dream Weaver MX; and, for version control, Concurrent Versions System (CVS).

Monitoring/Content Management Tools – NetTracker is used to track web statistics, LinkScan is used for website analysis, and WebSense is used for Internet filtering. Commonspot by Paperthin is the CDI's standard for Content Management, and Google is used as the CDI's search engine standard.

Middle Ware – Includes Oracle Internet Application Server.

4.3.4 Personal Productivity Software

All CDI PC workstations and notebooks include a standard set of personal productivity software which may include the following:

Microsoft Office Applications – The standard application suite installed on the CDI's desktops and notebooks is Microsoft Office 2003 Professional Suite which includes Word, Excel, PowerPoint, and Access.

E-Mail/Calendaring Software – Microsoft Outlook 2003 is used for e-mail and calendaring functions.

Web Browser Software – Microsoft Internet Explorer is the CDI's primary web browser.

Project Management Software – Microsoft Project is used for creating and tracking project plans.

Flowcharting and Diagram Software – Microsoft Visio is used to prepare flowcharts and diagrams.

Portable Document Format (PDF) Read and Write Software – Adobe products are used in support of PDF files.

Encryption – The CDI uses GuardianEdge Encryption Plus Hard Disk Version 7.1.3 for encryption of data on mobile computers.

Other applications that may be available to users, based on their job duties, include, but are not limited to:

- Enterprise Information Portal (EIP)

- eCounsel Legal Case/Matter Management System
- Integrated Database (IDB)
- Cosmos Licensing System
- Fraud Integrated Database (FIDB)
- Time Activity Reporting System (TARS)
- Oracle Financials
- Budget Information Tracking System (BITS)
- CALSTARS
- Personnel Information Exchange (PIE)
- Controller's Payroll System

4.3.5 Operating System Software

The CDI's IT network infrastructure includes the following operating system software:

Network Operating System (NOS) – Network servers are currently running Microsoft Windows Server 2003 as its NOS.

Authentication - The CDI uses AAA server for Authentication, Authorization, and Accounting services. The devices and applications communicate with AAA server through the Remote Authentication Dial-In User Service (RADIUS). The CDI also uses Microsoft Active Directory.

Desktop Operating System (OS) – Network desktops and notebooks are running Microsoft Windows XP Professional.

Web Server Operating System – Web servers in support of the CDI's public website are running Apache Web Server version 1.3.19 and the Sun Solaris operating system, version 2.8. Microsoft IIS runs on web servers in support of the CDI's intranet, and on the web development servers.

Application Operating System/Software – The CDI's application servers operate on Sun Solaris v.8 and v.19 utilizing the Oracle's application 10g software.

4.3.6 Database Management Software

The primary database management system in use at the CDI is Oracle. The CDI currently has versions 9i and 10g of the database software in use. The primary databases are the EIP data warehouse and the IDB which are located at DTS on

Sun servers. The NAIC database is an Oracle database version 10g, and is located at the NAIC in Kansas City, Missouri. The protocol for accessing the NAIC Oracle database is TCP/IP.

4.3.7 Other Infrastructure Software

The following are the other software components that make up the CDI environment:

Helpdesk Tracking Software – Track-It! is used for automated tracking of Helpdesk support requests.

Credit Authorization System Software – The CDI has contracted with ViaKlix (a service provider) to perform e-commerce transactions.

4.3.8 Application Development Methodology

The IT staff are skilled and knowledgeable to support the existing systems development platform (Oracle) and have expertise in Java Programming to support other Department applications.

The CDI has standardized on the Oracle Internet Development Tool Suite as the development software of choice. The IT Division has several development standards that include, but are not limited to, the following:

- CDI Content Style Guide v2.2
- CDI Web Application Style Guide v1.2
- CDI J2EE Design Guidelines
- CDI Java Coding Standards
- CDI Application Template

4.3.9 Project Management Methodology

The CDI has developed guidelines for project management based on the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK), and on industry best practices. The CDI's Project Management Methodology includes detailed written procedures and standard templates to be used for project management documentation.

The CDI administers a project management oversight program which ensures that IT Projects comply with minimum requirements for IT project management, project risk management, project oversight and project reporting activities at the agency and control agency levels as outlined in the SAM, and the SIMM's IT Project Oversight Framework.

5.0 PROPOSED SOLUTION

5.1 Solution Description – Implement a New Document Repository with Regional Scanning

The proposed solution addresses the CDI's business objectives and requirements by implementing a new document management system and regional scanning centers for processing mail received by the Department. All of the incoming documents will be accessible across the Department and, where appropriate, will be indexed to the specific company, source, case/matter, and/or work item. Documents will be available to appropriate areas of the Department within moments of being verified and stored, instead of having to wait for copies to be made and routed via mail.

This solution allows the Department to use technology to convert most incoming paper to electronic format at the point of receipt and to move to an electronic workflow-based system to streamline its processes. Business process analysis and re-engineering will be performed to emphasize electronic methods and reduce the amount of paper handling. The system will implement eforms and workflows to streamline the Department's internal administrative processes, and reduce the amount of internally generated paper. Use of electronic workflow and eforms will provide automated tracking and routing of workflow tasks and approvals, allowing the CDI to reduce the costs of document handling and storage and to better manage its work processes. The tracking data from the electronic workflow processes will allow the CDI to produce enhanced workload reports and will help the CDI to identify areas of growth or problem areas in need of process refinement or staffing adjustments. CDI staff working in the field will benefit from being able to access and submit administrative forms via the Internet/VPN, and more CDI staff will be able to take advantage of telecommuting, while still allowing CDI to meet its legislated mandates.

By moving its critical records to an electronic format in a centralized repository, the CDI improves its ability to manage and make use of the data for industry analysis, management reporting, and enhanced monitoring of company health and solvency thereby improving the quality and reliability of its actions and decisions. The repository can be linked to the CDI's existing case management and matter tracking systems to allow received documents to be associated with specific cases, files, matters, and organizations. Better management of its information assets also improves the ability for staff to collaborate on analyses and investigations, both within the Department and with its industry partners, including district attorneys and other states' insurance departments. Finally, the use of electronic records also allows the CDI to analyze and respond to user requests for services more efficiently and to propose new products and extend services to the public which take advantage of the Internet and electronic data transmissions.

Description of the Proposed Solution

A scanning center would be established in each of the mailrooms at the regional offices (Sacramento, San Francisco, and Los Angeles). Mail items would be scanned upon receipt, and verified to meet quality checks for readability and completeness. Checks and accounting items would be handled separately to ensure compliance with financial and audit regulations. Where appropriate, data capture and/or OCR would be performed to convert image data to usable text data. Scanning staff would index and route the scanned images of the documents electronically via rules-based workflow to the appropriate bureau.

In cases where a satellite office receives mail directly at the location, low volume scanning equipment would be provided to allow staff at the satellite office to scan and index the received items. When items need to be routed to other bureaus for assistance or coordination, the document could be routed either via email (with a link to the appropriate document in the repository) or via a workflow item. Additionally, an alert or notification could be sent to appropriate bureaus or staff via email or as a workflow reminder when a new document has been received.

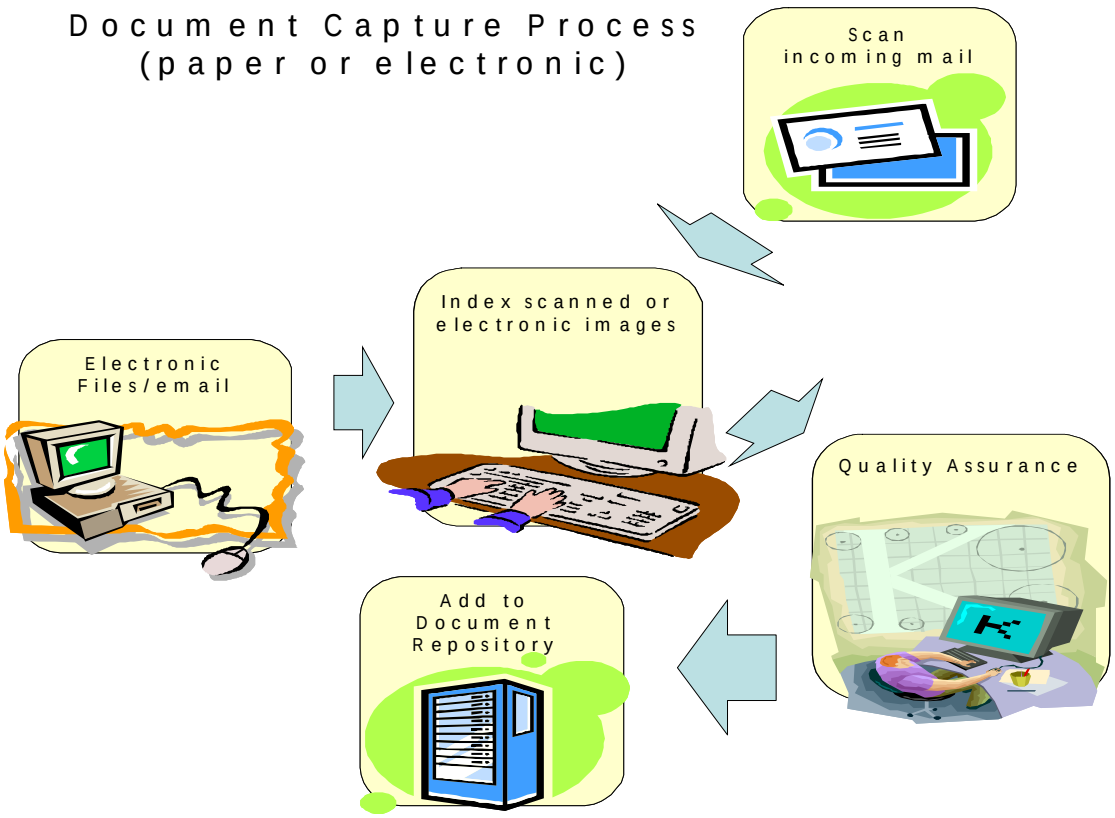

Figure 3. Document Capture Process

All scanned images, any documents received electronically (e.g., as an email attachment), and all documents generated by the Department would be stored

and indexed in the repository. The repository also would accommodate email, faxes, voicemail messages, photographs, and video. The document management repository would be integrated with the Microsoft Office suite of programs so that users could access the repository directly from within Microsoft Word, Excel, etc. The repository would automatically manage check-in and check-out of documents and would manage the versioning of documents. Document manipulation features would be provided that would allow users, where appropriate and permitted, to make annotations, highlights and, if appropriate, redactions to a scanned image or PDF document. Annotations to non-image documents (e.g., Microsoft Word, Excel) would be handled by the native application. Users would access the documents in the repository either directly, if the name is known, or through searching features based on the document's index information. Full text searching would be available for text-based documents.

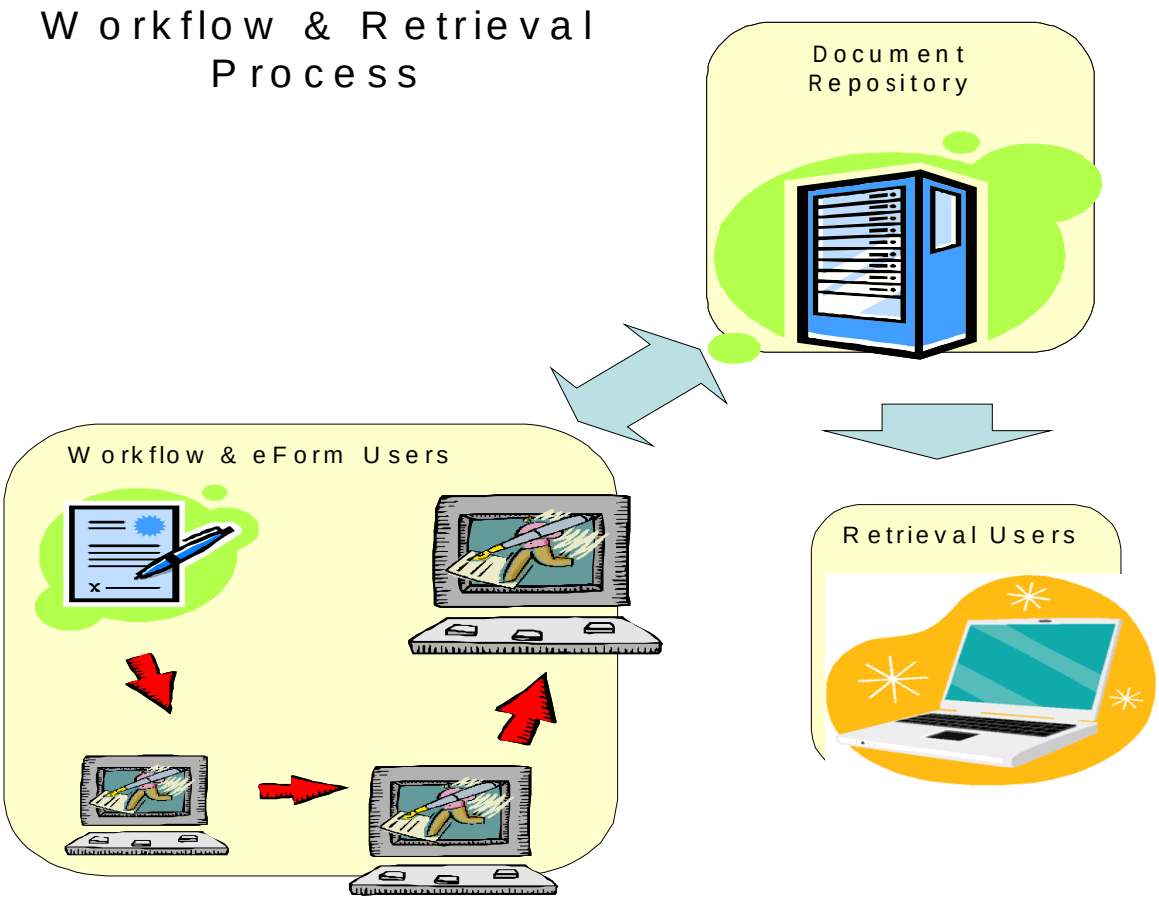

Figure 4. Workflow and Retrieval Process

The solution vendor will assist the CDI to perform business process analysis and re-engineering to streamline their intake and internal processes. Existing internal forms, such as administration forms, would be converted to eforms, and workflow

processes would be implemented to route the eforms and documents to the appropriate role or bureau for processing and approval. Users would access the current version of the eform from the repository and enter the appropriate information into the eforms data fields. They would then route it via workflow to the appropriate role for approval. Managers and supervisors would use electronic features to signify approval or disapproval of eforms or workflow items. The requestor would be notified of the approval or disapproval via a notification (if approved) or workflow (if corrections or changes are required). The approvals would be tracked and stored to ensure an audit trail is maintained. Where required, the eform could be printed to paper format. Because all of the information on the eform is electronic, the CDI will benefit from automated tracking, searching and enhanced reporting features.

The proposed solution would replace the current ParaDocs, Hummingbird DM, and Scan HQ systems, and the existing data (both the images and index data) from those systems would be converted into the new repository. Other data files, such as from the online licensing application, may also be converted to the system.

The proposed solution would enhance the CDI's existing case management systems (i.e., IDB, eCounsel, etc.) by linking the source documentation to the data elements within the case management systems. The solution would receive data from the IDB to assist with the indexing of the documents by validating or populating some of the index fields. The solution would interface with the IDB, EIP and to Legal's eCounsel system to allow users to link to and access documents stored within the document repository. Import and export features would be provided to allow authorized users to load files from other systems, or to export files to other systems or other media to respond to requests for information or reporting requirements. The solution would replace the existing e-publishing features of Hummingbird DM that allow authorized users to publish appropriate public documents to the CDI public website.

CDI staff working offsite would be able to access the repository remotely via the Internet/VPN and would be able to complete eforms and perform workflow tasks just as if they were working in the office. The proposed solution would expand the current web interface with the CDI's public website to allow members of the public to access appropriate documents via the Internet. Thus, the public could access appropriate documents either from the public viewing rooms in San Francisco and Los Angeles, or via their home computer.

The proposed solution would manage access to documents based on user role and organization. Documents which are sensitive or confidential would be marked as such and would be protected from unauthorized access. If the user is not authorized to access the document, the document would not be presented in search lists or index listings.

The solution would also allow the user to identify the appropriate retention period in the document's index information. The system would then monitor and manage the retention. When a document reached the end of its retention period, an alert or report would be generated to allow a manager to confirm the archiving or deletion of the document. Where appropriate, electronic files could be archived to external storage media (e.g., tape, CD, DVD) for long-term storage.

Refer to Section 6, Project Management Plan, for a full description of the products and services that will be procured for the proposed solution.

5.1.1 Hardware

The hardware for the proposed solution will be determined by the solution vendor. The vendor will be required to comply with the CDI's technical standards and security requirements. The proposed solution will reside at the CDI's Sacramento location, in keeping with the CDI's current initiative to consolidate its infrastructure and reduce costs of server hosting. Scanning centers will be implemented at the three regional offices (Sacramento, San Francisco, and Los Angeles) and low volume scanners will be provided for satellite offices that receive mail directly.

Because the proposed solution meets the definition of a critical system, a secondary "hot site" would be setup and located at the Los Angeles office to allow the CDI to shift computer operations to a separate facility in the event of a disaster at the main site.

Network Configuration

The proposed solution must operate within the existing network configuration. Current monitoring of network load indicates there is excess capacity available, so there is no anticipated impact to the network. The current CDI network environment is described in Section 4, Baseline Analysis.

The proposed solution will add an estimated seven servers to the current network and will add to the network a Centera Write Once Read Many (WORM) storage device to ensure the integrity of the scanned images for legal and enforcement purposes.

Scanners and Indexing Workstations

An estimated 300 square feet will be used in each regional office for the scanning centers. Each scanning center will include two medium volume scanners and three workstations to support scanning and indexing.

Four low volume scanners and indexing workstations will be located in satellite offices that receive mail directly and at the West Sacramento warehouse to assist

with converting historical files. Scanning can be performed at any of the scanning centers, providing the CDI with redundancy in the event of a problem or disaster.

Workstation Configuration

The proposed solution should not require any changes to the standard workstation configuration. However for those users who perform complex analytical tasks, a second monitor or larger monitor will be provided to facilitate comparison of multiple documents and analysis of several reference documents simultaneously. Users will be given the option to select either a second monitor or a single larger monitor, depending on their type of work and current workstation configuration[4].

5.1.2 Software

The application software for the proposed solution has not been selected, in order to allow multiple vendor-proposed solutions to be considered. The vendor solutions must satisfy the CDI's business and functional requirements, and will be evaluated on their ability to do so.

The following software features are required:

- Document management software, including
  - Repository for managing the contents
  - Indexing and Searching features
  - Version control and check-in/check-out features
  - User and document security features
  - File import and export features
  - Web portal features for remote and public access
  - Document manipulation features (e.g., highlighting, notes, redaction)
  - Basic reporting features (for reporting on the contents of the repository)
  - Retention and archiving features
  - Workflow and routing features, including approvals and notifications
  - eforms software and features

[4] Some users have a laptop with docking station instead of a desktop. For these users, a larger monitor may be more appropriate than dual monitors.

- Scanning and quality verification software
  - Scan and rescan features
  - File conversion features (e.g., TIFF to PDF, JPG to PDF)
  - Data capture/OCR features

5.1.3 Technical Platform

The technical platform will be proposed by the solution vendor, but will be required to comply with the CDI's technical and security standards. The proposed solution must reside on either Windows or Sun Solaris servers and will be required to use an Oracle database to comply with the CDI's technical standards. The system must also support virtualization in keeping with the CDI's efforts to streamline its infrastructure.

5.1.4 Development Approach

The CDI will hire a consultant Project Manager to manage the Paperless Workflow (PW) project. The solution vendor will work with the PW Project Manager to manage the project. The PW Project Manager will have the primary responsibility for managing the schedule, issues, risks, and changes to the project, as well as managing the solution vendor's progress. The solution vendor will focus on managing the day-to-day project activities and the technical implementation of the system.

The project will be implemented in a phased approach. The first phase will consist of establishing the document repository, establishing appropriate document security and user access roles, performing business process analysis, and developing eforms and workflows for selected divisions. Phase 1 of the project focuses on the administrative forms and processes. This allows the CDI to focus on internal forms and processes, so that CDI staff may begin to benefit from the searching and sharing features.

A pilot phase will be included to allow the CDI to test and verify the correct operation of the system with a small number of offices, prior to deploying the full system. The second phase will implement the scanning centers, Internet access, e-publishing, and remaining eforms and workflows for the rest of the Department. The data conversion and interface efforts would be split across the phases based on functional area.

The solution vendor will be responsible for installing and configuring the hardware and software to meet CDI's requirements, and for training and knowledge transfer to CDI staff.

5.1.5 Integration Issues

The CDI currently has a dedicated link to the NAIC's SERFF system to allow access to documents that the insurers file directly with the NAIC. The NAIC has recently proposed changes to eliminate this dedicated link and to move instead to an Internet-based data exchange method. The proposed solution may need to interact with the SERFF system, but the exact method of interaction cannot be determined until a decision is made on the proposed changes to the SERFF system.

5.1.6 Procurement Approach

The CDI intends to use the IT Master Services Agreement (MSA) for Imaging, Workflow and Document Management to obtain the scanning hardware, document management software and services necessary to implement the project. The CDI will solicit at least three (3) vendors from the MSA to ensure the best value solution is obtained. Because this procurement is estimated to exceed the $1,500,000 MSA limit, the CDI will submit a Leveraged Procurement Agreement Exemption Request (LPAER) to obtain approval for the procurement prior to releasing the Request for Offer (RFO).

The CDI believes that approximately 85% of the business and functional requirements, contained in Appendix B, can be met "out of the box" by the COTS products. The remaining requirements, including the interfaces to existing systems, can be met through custom development or specialized third-party tools. Thus, the CDI believes that several vendors are capable of successfully implementing the proposed solution. The majority of the effort will involve the analysis of current business processes, the design of the eforms and workflows, development of interfaces, and the data conversion from the legacy systems.

The solution vendor will propose the specific hardware configuration that best meets CDI's needs and the specific product configuration. The value of the hardware is estimated to exceed the Department's delegation authority. The CDI will work with the DGS to procure the necessary hardware through the competitive procurement process. In addition to the procurement for the solution vendor and hardware, the CDI will acquire the services of a consultant to provide Project Management services, and a consultant to provide both Independent Verification and Validation (IV&V) and Independent Project Oversight Consultant (IPOC) services for the project. The CDI will use the MSA for IT Consulting Services or the California Multiple Award Schedule (CMAS) to obtain these vendors.

The estimated procurement schedule is described in Section 6, Project Management Plan.

5.1.7 Technical Interfaces

The system will interface to the IDB to assist with indexing documents (e.g., for populating or validating data fields). The system will also be accessible from the IDB, EIP and eCounsel to allow users of those systems to access documents within the repository. The proposed solution will expand the current web portal to allow public access to more types of documents, and will provide secure access to CDI staff working offsite. The system must be compatible with the CDI's content management system, CommonSpot, for managing web content.

5.1.8 Testing Plan

The solution vendor will be responsible for testing for the system, and assisting the CDI in performing user acceptance testing of the system. The vendor will be required to develop test plans, test scripts, test data, and a test summary report for each phase of testing. The vendor will be responsible for the following test phases:

- **Unit Testing** – Testing of individual hardware and software units to ensure correctness. Because the proposed solution is a Commercial Off the Shelf (COTS) product, the units will consist of the scanning equipment, eforms, workflow steps, and specific system customizations for the interfaces.
- **Integration Testing** – Testing of combinations of hardware and software units to ensure correct interactions and data transmission/sharing (e.g., complete workflows).
- **System Testing** – Testing of the complete integrated system, including interfaces, to ensure compliance with the system's requirements.
- **Performance Testing** – Testing of the complete integrated system to evaluate compliance with performance requirements (e.g., scanning resolution and speed, document access response times, document search response times) under typical and peak processing loads.

The solution vendor will also be responsible for assisting the CDI to conduct user acceptance testing. CDI project staff will prepare the test scripts and test data for this phase, and CDI users will execute the test scripts. The solution vendor will assist with testing, as needed, and will analyze and correct any errors or anomalies detected. The IV&V vendor will validate that all requirements have been tested and satisfied prior to the CDI accepting the system.

5.1.9 Resource Requirements

CDI staff will work with the solution vendor to implement the system and develop the workflows, eforms, and document indices/profiles. The solution vendor will be

responsible for providing the software and services to implement and customize the system for the CDI, including business process analysis, data conversion, testing, training, and knowledge transfer to CDI staff.

The following resources will be needed for the project:

Table 5-1. CDI Project Resource Requirements

Type of Resource	Average Participation per Staff	Number of Staff	Comment
Project Sponsor	2%	1	
CDI IT Project Contract Manager	25%	1	PMO representative
CDI Information Security Officer (ISO)	2%	1	
CDI Legal Advisor/Privacy Officer	2%	1	To advise on legal and privacy issues
CDI IT Network Staff	10%	1	
CDI IT Applications Staff	50% 100%	2	1 Senior Programmer Analyst 1 Staff Programmer Analyst; CDI will request a three-year limited term position for the Staff Programmer Analyst
CDI IT Database Administrator/-Repository Administrator	100%	1	Senior Programmer Analyst; CDI will request a three-year limited term position.
CDI IT Web Services Staff	5%	1	
CDI IT Help Desk Staff	10%	10	Approximately 2 months of participation during testing and pilot phases to gain experience with the system
CDI Repository Librarian	50%	1	
CDI Scanning Staff	50%	5	During Phase 2 only
CDI Program Subject Matter Experts (SMEs)	10%	20	1 Division level staff member from all divisions (20 divisions)

The proposed solution also will require CDI staff to perform maintenance and operations. The current IT and mailroom resources are insufficient to absorb these new duties, so the CDI will require the following additional staff resources.

Table 5-2. Ongoing Resource Requirements

Type of Resource	Quantity or Amount of Time	Comment
IT Server Support Staff	1 PY	
IT Applications Staff	1 PY	Limited term position
IT Help Desk Staff	1 PY	

Type of Resource	Quantity or Amount of Time	Comment
IT Database Administrator/-Repository Administrator	1 PY	Limited term position
IT Web Services Staff	0.1 PY	
Repository Librarian	0.5 PY	
Scanning Staff	5 PY	1 staff at each Sacramento and San Francisco regional scanning center, and 3 staff at Los Angeles regional scanning center to perform scanning and indexing activities

Although the proposed solution is anticipated to improve overall staff efficiencies, it is not anticipated to reduce the number of PYs. The efficiencies will allow CDI staff to focus on more analytical tasks, including more detailed audits of submitted files and claims, pursuing more compliance and enforcement actions, and expanding the types of services available to the public.

5.1.10 Training Plan

The solution vendor will be responsible for developing the training materials and for end user training. A highly customized and repeatable training program will be needed to ensure user acceptance of the new system and revised business processes. Specific requirements for the training program and training materials will be developed during the procurement phase.

The solution vendor will also be responsible for training CDI technical staff on the operation and maintenance of the system, including creation and management of workflows and eforms. During the project implementation phase, the solution vendor will be required to provide technical training to the CDI IT staff, including both formal classroom training and knowledge transfer sessions, to ensure CDI IT staff are prepared to manage the delivered system.

5.1.11 Ongoing Maintenance

The CDI will be responsible for the maintenance and operation of the system, including maintenance of the workflows and eforms. The solution vendor will be responsible for software licensing and product upgrades, and will provide one year of additional maintenance support and consulting services after system deployment. The selected vendor will also be required to deliver a maintenance plan for the system to document important tasks and considerations for operations and management of the system and to assist with updating the Department's Operational Recovery Plan.

5.1.12 Information Security and Confidentiality

The new system must comply with the CDI's information security policies and State policies that are currently in place. Because some of the documents that the CDI receives contain financial or personal information, access to the documents will be controlled based on business needs. The system also will have audit features to log who accessed a document and the date and time of access.

Each document within the repository will have appropriate security established, as part of completing the document index information. Access to documents will be controlled based on user roles and organizational area which will be determined upon login to the system. Documents which are considered part of the public record will be marked specifically as being appropriate to the public. Documents which are considered sensitive or confidential will be specifically marked as such, and will be protected from unauthorized access based on user role. To ensure documents are appropriately classified, the CDI project team will include the ISO and Legal staff as advisors.

A Centera WORM storage device will be used to ensure the integrity of the image data received by the CDI. As indicated by the name, WORM storage prevents alteration of image data that has been stored in the repository.

5.1.13 Impact on End Users

The solution vendor will be responsible for business process analysis as part of the development of new eforms and workflows. End users will use the new system in place of the current network share drives as the primary repository of documents generated and received by the Department. Upon creating or importing a document to the repository, users will be prompted to complete an index of information that describes the document to assist with searching and reporting. Where appropriate, workflows will be used to route the document for assignment, processing, review and approval, and will allow tracking of the progress through the workflow. Users will be trained on the use and features of the system, and will be trained on the specific workflows that will be used in their job duties.

The solution vendor will also design and implement eforms and workflows to address the processing and approvals of internal forms to streamline the administrative processes. The vendor will be responsible for developing appropriate workflow reports and reminder notifications to allow CDI managers to monitor workload and ensure that work items are being addressed in a timely manner.

The solution vendor and CDI project staff will develop communication plans to ensure users are informed of the business process changes and current status of

the project. User representatives from each business area will be included in requirements, design, testing, data conversion, training and acceptance activities, and will be provided opportunities to provide feedback and to submit questions.

5.1.14 Impact on Existing System

The new system will replace the PLB's current Scan HQ/Image HQ system, the Hummingbird DM system, and the RRB's ParaDocs system. The images and index data from these systems will be converted to the new repository.

The existing interface with IDB will be used to assist with validation of the index information. An interface will be developed to the IDB and EIP to allow users to "drill-down" into specific source documents or more detailed reports contained within the document repository. The new system will integrate with Legal's eCounsel product to allow documents to be associated with specific legal matters, as is currently provided by Hummingbird DM.

The new system replace the current Hummingbird DM e-publishing functionality and will interact with the CDI's content management system, CommonSpot, to publish documents to the CDI public website.

5.1.15 Consistency with Overall Strategies

The new system is consistent with CDI's AIMS, Strategic Plan and the Commissioner's goal of moving to a paperless workflow operation. The new system will move the Department's critical records to an electronic format and will allow the Department to more effectively share and manage these records. Automated workflow processes and eforms will be used to streamline the CDI's internal processes. By encouraging or requiring their partners to exchange data electronically, the CDI will reduce the amount of effort to intake and process documents and will allow the CDI to share more information with the public in a more timely manner.

5.1.16 Impact on Current Infrastructure

There is no anticipated impact to the network since there is current extra capacity available.

Additional and/or larger monitors will be needed for staff performing analytical tasks, so that they may view multiple files from the repository at the same time. If additional monitors are not provided, analytical staff will need to print the documents from the repository to facilitate analysis of multiple documents, thus negating some of the savings in document processing and storage costs.

5.1.17 Impact on Data Center(s)

There is no anticipated impact to the DTS as a result of this project. The existing network lines have sufficient capacity to absorb the increased traffic.

5.1.18 Backup and Operational Recovery

The CDI will continue to use their existing backup processes, and will update their operational recovery processes to incorporate the new system. Additional licenses for the backup software will be purchased for the new hardware.

5.1.19 Public Access

The proposed solution expands on the existing capabilities to search for and access documents via CDI's public viewing rooms and public website. Documents which are appropriate to the public will be marked as such and made available via the website. Documents which are confidential or still in work will not be made available to the public. Providing access via the Internet will allow the CDI to more fully comply with CIC Section 12921.2 which requires the CDI to make available all public records of the Department via the public viewing rooms.

5.1.20 Costs and Benefits

The proposed solution has an estimated one-time cost of $8,921,380 and an estimated continuing cost of $1,186,047. All one-time and ongoing costs for the proposed solution are detailed in Section 8, Economic Analysis Worksheets (EAWs).

The proposed solution resolves the business problems outlined in Section 3 of this FSR. In addition, the following benefits will be achieved:

- Establishes a single standard document repository for all documents received or generated by the Department.
  - Avoids additional storage costs both on-site and at offsite storage by moving to electronic storage of received documents.
  - Avoids costs for facility upgrades and additional storage units and furniture.
  - Reduces the costs for paper and paper handling supplies and services.
  - Provides remote access to documents for CDI staff working offsite, including access to eforms and workflows.
- Eliminates routing of received paper by converting to an electronic format at the point of receipt or directly receiving electronic files.

  - Provides improved tracking of received items entered electronically at the point of receipt.
  - Reduces the amount of time spent handling, tracking, and managing paper documents, allowing CDI staff to focus on analytical work.
  - Increases staff efficiency and improves the CDI's workload management and reporting capabilities.
  - Reduces paper, copying and mailing costs for CDI's industry partners by eliminating the need to submit multiple copies of each filing.
- Provides standardized methods for indexing and retrieving documents.
  - Enforces standards in naming, storage and retention allowing the CDI to more effectively manage its information.
  - Provides the ability to search for and identify documents by several parameters, including keywords, dates, and company, which will provide improved timeliness and accuracy of research and reporting.
  - Improves the quality of research and response to public records act requests and subpoenas by allowing searches of online documents.
- Protects against disasters by providing electronic backup of critical CDI records and files.
  - Protects the CDI from geographically-based disturbances or incidents by allowing CDI to perform business functions from any location via the Internet/VPN.
- Allows the CDI to expand public access to documents via its public website, providing greater compliance with CIC 12921.2.
- Allows the CDI to accept and process documents electronically, in keeping with current industry trends.
- Allows the CDI to propose and develop Internet-based services and products for the public.

5.1.21 Sources of Funding

The funding for the Paperless Workflow (PW) project will come from the CDI's Insurance Fund that is funded by the insurance industry through fees and assessments. A Spring Finance Letter (SFL) will be submitted to increase the Department's spending authority.

5.2 Rationale for the Selection

The proposed solution was selected because it addresses the CDI's requirements and objectives at a reasonable level of risk. This alternative also positions the Department to take greater advantage of electronic processing and web-based services by implementing a more current document management product. The proposed solution:

- Addresses the objectives described in Section 3
- Meets all business and functional requirements
- Allows the CDI to consider a larger vendor pool during the procurement process

The proposed solution will allow the CDI to transform its business operations and position itself to provide better access to services and to implement new services to meet the needs of the public. The solution also provides benefits to CDI's industry partners by eliminating the need to submit multiple paper copies of filings and documents, and reducing the amount of time required to intake and begin processing the document submissions.

CDI staff will benefit from the eforms and workflow features, index and searching of a centralized location, and improved retention and archiving features. Use of the eforms and workflows with eliminate much of the internally generated paper and provide better tracking and reporting mechanisms. By using workflows and workflow reports, the CDI managers will be better able to monitor and manage staff workload, even if staff are working remotely or telecommuting. Expanding the use of telecommuting will also allow the CDI to maximize its resources and reduce environmental impacts of travel and resource consumption, while still meeting its legislated mandates.

It is estimated to take at least one year after implementation to begin to see a reduction in paper handling-related supplies, while the paper-based documents and submissions currently in process are completed. It is also estimated that it will take approximately five years to eliminate the eligible historical paper files[5] through backscanning as timer permits.

Document management systems typically are characterized as infrastructure upgrade projects because of the significant impact to business processes and hardware and software costs. Because of this delay in cost savings, the CDI proposes to submit to the DOF periodic project progress reports detailing the planned vs. actual cost savings, cost avoidances and increases in staff efficiencies. The CDI proposes to submit these reports every two years, beginning with the completion of the first phase of the project.

[5] Eligible historical files are those files for which there is no legal requirement for retention in paper or "original" format. Some items, such as rule-making files, are required to be kept in their original formats.

The following additional alternatives were considered in developing the proposed solution. Each solution is described in more detail in subsequent sections.

- Alternative 1 – Upgrade Hummingbird DM and Implement Regional Scanning Centers
- Alternative 2 – Implement a New Document Repository with Scanning in Each Office
- Alternative 3 – Extend use of Hummingbird DM to the Remainder of the Department with Scanning in Each Office
- Alternative 4 – Continue Current Methods

Rejection of Alternative 1

Although the CDI considered extending the current Hummingbird DM solution (Alternative 1), there were several concerns with the alternative.

The CDI's prior Hummingbird projects experienced several problems during implementation with anomalies and errors that were difficult to diagnose. This led to project delays and user frustration. Although most users now are satisfied with the Hummingbird repository, there was user concern that the current product would not be able to meet the needs of an enterprise implementation.

In August 2006, Hummingbird was acquired by Open Text. Open Text is a provider of enterprise content management software and was a competitor to Hummingbird. The Gartner September 2007 Magic Quadrant for Enterprise Content Management[6], lists Open Text as a leader in the field, comparable to IBM (with FileNet), EMC/Documentum and Oracle. The report also noted, however, the need for Open Text to consolidate its overlapping (and somewhat competing) products. The CDI is concerned about the long-term support options for the Hummingbird product. In addition, there are fewer Open Text support vendors and implementation partners compared to other products.

Because the current Hummingbird product would require an upgrade (the current version is approaching the end of its support) and an additional module to address the CDI's workflow requirements, the complexity and risk of Alternative 1 approaches the same level as implementing an entirely new product.

To mitigate these risks and concerns, the CDI has selected the proposed solution (implementation of a new document management system with regional scanning centers) as the most appropriate option. Although the proposed solution is the most costly, the CDI believes that it also provides the most benefit at an acceptable level of risk. The proposed solution allows multiple vendors to

[6] Karen M. Shegda et al, "Magic Quadrant for Enterprise Content Management", ID Number: G00150426, Gartner, Inc., 21 September 2007.

propose a solution to the CDI, enabling the CDI to obtain the best solution at the most reasonable price.

Rejection of Alternatives 2 and 3

Alternatives 2 and 3 were rejected because they did not entirely address the business objectives and because of the level of risk they presented. Though these alternatives offered a lower implementation cost, they also posed a risk to standardization, continued costs for couriering to each satellite office and the delays associated with routing, and would require additional staff in most offices to handle the scanning workload. In addition, Alternative 3 does not address all of the CDI's business and functional workflow requirements. Though some of the CDI's workflows could be simulated using the current Hummingbird DM product, it does not provide true workload routing and tracking.

Rejection of Alternative 4

Alternative 4 was rejected because it continues the current problems and requires continued costs to address the handling and storage of paper. The problems include a lack of standardization, several standalone repositories of information, and manual tracking and routing of information, as well as delays in routing and loss of documents. Several areas have expressed problems with lack of storage space and additional space will need to be procured at least for the West Sacramento warehouse and San Francisco's central legal files within three years, and on a continual cycle thereafter, if the current workload continues to grow. In addition, the paper-based processes make it difficult to share information within the Department, as well as with its partners and public. In order to remain current with and take advantage of new technologies, the CDI must re-engineer its processes and data management capabilities.

The following table summarizes the criteria used to evaluate the alternatives and the results of the evaluation.

Table 5-3 Summary of the Solution Evaluation

Criteria	Proposed Solution – Implement New Document Repository and Regional Scanning Centers	Alternative 1 –Upgrade Hummingbird DM and Implement Regional Scanning Centers	Alternative 2 – Implement New Document Repository with Scanning in Each Office	Alternative 3 – Extend use of Hummingbird DM to the Remainder of the Department with Scanning in Each Office	Alternative 4 – Continue Current Methods
Business Objectives					
Objective 1 – Provide online access to operational documents received	Meets Received documents will be scanned at a regional center and stored in the repository	Meets Received documents will be scanned at a regional center and stored in the repository	Meets Each area would scan items as they are received in their bureau Concern: access to documents will be delayed due to the need to courier documents to each bureau	Meets Each area would scan items as they are received in their bureau Concern: access to documents will be delayed due to the need to courier documents to each bureau	Does not Meet
Objective 2 – Improve customer service by providing on-demand access to public files.	Meets Received documents and CDI-generated documents available via the web, in Phase 2 of the project	Meets Received documents and CDI-generated documents are available via the web	Meets Received documents and CDI-generated documents are available via the web in Phase 2 of the project	Meets Received documents and CDI-generated documents are available via the web	Does not Meet
Objective 3 – Reduce document processing and storage costs.	Meets Received documents will be scanned on receipt; paper will be destroyed unless there is a legal reason to keep it	Meets Received documents will be scanned on receipt; paper will be destroyed unless there is a legal reason to keep it	Partially Meets Received documents will be scanned at the satellite offices; Continues use and costs of couriering mail to each location which delays	Partially Meets Received documents will be scanned at the satellite offices; Continues use and costs of couriering mail to each location	Does not Meet

Criteria	Proposed Solution – Implement New Document Repository and Regional Scanning Centers	Alternative 1 –Upgrade Hummingbird DM and Implement Regional Scanning Centers	Alternative 2 – Implement New Document Repository with Scanning in Each Office	Alternative 3 – Extend use of Hummingbird DM to the Remainder of the Department with Scanning in Each Office	Alternative 4 – Continue Current Methods
			processing and introduces risk of loss during transport	which delays processing and introduces risk of loss during transport	
Objective 4 – Increase the ability to share documents and files across the Department electronically.	Meets Received and generated documents can be routed via workflow	Meets Received and generated documents can be routed via workflow	Meets Received and generated documents can be routed via workflow Concern: decentralized scanning makes it difficult to enforce standards	Partially Meets Received and generated documents can be routed via email Concern: decentralized scanning makes it difficult to enforce standards	Does not Meet
Objective 5 – Increase the CDI's ability to recover from a disaster	Meets Received and generated documents preserved electronically	Meets Received and generated documents preserved electronically	Meets Received and generated documents preserved electronically	Meets Received and generated documents preserved electronically	Does not Meet
Business/Functional Requirements	Meets	Meets	Meets	Partially Meets Not all workflow requirements are satisfied	Does not Meet
Estimated Project Costs	$10,785,565	$9,800,931	N/A, does not meet objectives	N/A, does not meet objectives	No project costs, but additional continuing program costs

Criteria	Proposed Solution – Implement New Document Repository and Regional Scanning Centers	Alternative 1 –Upgrade Hummingbird DM and Implement Regional Scanning Centers	Alternative 2 – Implement New Document Repository with Scanning in Each Office	Alternative 3 – Extend use of Hummingbird DM to the Remainder of the Department with Scanning in Each Office	Alternative 4 – Continue Current Methods
Estimated Project Time (Assumes a 2-phase approach; does not include time for vendor procurements)	28 months	24 months	27 months	23 months	None
Procurement Approach	Imaging, Workflow and Document Management MSA Exemption request to exceed $1,500,000 required	Non-Competitive Bid (NCB) or Request for Proposal (RFP) (No Hummingbird vendors on the Imaging MSA)	Imaging, Workflow and Document Management MSA Exemption request to exceed $1,500,000 required	Non-Competitive Bid (NCB) or Request for Proposal (RFP) (No Hummingbird vendors on the Imaging MSA)	N/A
Project Risk	Medium - Introducing a new product, including the scanning centers, poses moderate risk	Medium-High - Product is already proven to work, but scanning centers introduce additional implementation risk; - Prior Hummingbird projects were difficult - New workflow module would require changes to existing Legal and Market Conduct repositories	Medium - Introducing a new product poses moderate risk; - Existing scanners in each office would be used	Medium - Product is already proven to work; - Existing scanners in each office would be used; - Prior Hummingbird projects were difficult	N/A

Criteria	Proposed Solution – Implement New Document Repository and Regional Scanning Centers	Alternative 1 –Upgrade Hummingbird DM and Implement Regional Scanning Centers	Alternative 2 – Implement New Document Repository with Scanning in Each Office	Alternative 3 – Extend use of Hummingbird DM to the Remainder of the Department with Scanning in Each Office	Alternative 4 – Continue Current Methods
Operational Risk	Medium - Unknown level of maintenance and support (depending on the product)	Medium-High - Support needs are known for the repository; - Level of scanner and workflow support are unknown; - With Open Text's acquisition of Hummingbird last year, the future of the product suite is unclear.	Medium-High - Unknown level of maintenance and support (depending on the product); - Decentralized scanning makes it harder to enforce standards in scanning and indexing; - Routing of mail to bureaus for scanning is less efficient and delays processing of the items	Medium-High - Support needs are known; - Decentralized scanning makes it harder to enforce standards in scanning and indexing; - Routing of mail to bureaus for scanning is less efficient and delays processing of the items; - With Open Text's acquisition of Hummingbird last year, the future of the product suite is unclear.	High - Disaster recovery, multiple products and repositories, and a mix of paper and electronic records lead to higher operational risk.

5.3 Other Alternatives Considered

The following additional alternatives were considered in developing the proposed solution, and are described below.

- Alternative 1 – Upgrade Hummingbird DM and Implement Regional Scanning Centers
- Alternative 2 – Implement a New Document Repository with Scanning in Each Office
- Alternative 3 – Extend use of Hummingbird DM to the Remainder of the Department with Scanning in Each Office
- Alternative 4 – Continue Current Methods

In addition, the CDI considered the costs and benefits of scanning and converting all critical paper documents to electronic format (aka “backscanning”) but rejected this option due to a minimal return on investment. Backscanning tends to be expensive due to the manual intervention required to prepare and quality check and index the documents. Staples must be removed from documents, post-it notes and tape flags must be removed, and odd sized or fragile documents (e.g., onion skin paper, mimeograph pages, older fax paper) must be manually scanned. Backscanning is easiest with documents that are a consistent size and quality, and a fixed format or fixed number of pages.

Backscanning of the CDI’s historical files would provide the most benefit to the PLB’s licensing files and Legal’s central files due to the large number of documents and retention requirements. In both these cases, the format of the files and documents vary. Some of the PLB’s files also contain odd-sized and fragile documents (some files date back to the 1940s). Although having these files online and eliminating the paper would save costs associated with storage and processing, because these files are accessed infrequently (once or twice a year at most), it is difficult to justify the effort and costs required to scan all of these documents as part of the proposed project.

The proposed solution takes a less costly, but also slower approach to scanning the historical files. The proposed solution would implement scanning and indexing workstations in the locations which experience the greatest volume of incoming or stored documents. The CDI would allow each area to determine which items to scan and when. Typically, the most critical items would be scanned first. Then historical files would be scanned either when someone asked for the file or document (either by scanning the item and providing the electronic copy in lieu of paper, or by scanning the item once it was returned), or as time and resources permit. After a historical file was scanned and verified to meet quality measures, the paper file would be destroyed. Files which are approaching the end of their retention period would not be scanned.

5.3.1 Rejected Alternative #1 – Upgrade Hummingbird DM and Implement Regional Scanning

Description

In this alternative, the CDI would upgrade the existing Hummingbird DM product, extend it to the rest of the Department, and implement a scanning center in each of the mailrooms at the regional offices (Sacramento, San Francisco, and Los Angeles). Mail items would be scanned upon receipt and staff would index and route the scanned images of the documents electronically via rules-based workflow to the appropriate bureau. In cases where a satellite office receives mail directly at the location, low volume scanning equipment would be provided to allow staff at the satellite office to scan and index the received items.

All scanned images, any documents received electronically, and all documents generated by the Department would be stored and indexed in the repository. The repository also would accommodate email, faxes, voicemail messages, photographs, and video.

An enhanced workflow module would be purchased and implemented to provide more robust workflow capabilities. Existing internal forms would be converted to eforms, and workflow processes would be implemented to route the eforms and documents to the appropriate role or bureau for processing and approval. The new system would replace the current ParaDocs and Scan HQ/Image HQ systems, and convert the existing data from these systems into the new Hummingbird DM repository.

CDI staff working offsite would be able to access the repository remotely via the Internet/ VPN, and members of the public would have access to appropriate documents via the Internet.

Assumptions

- Scanning equipment would be purchased for the regional mailrooms, the West Sacramento warehouse, and satellite offices that receive mail directly. Other satellite offices and bureaus could also scan ad hoc items via current scanning equipment and import the scanned images into the repository.
- Additional staff would be needed to support the scanning and indexing in the regional offices. These staff would need specific training to be able to recognize, correctly index, and route the mail for each bureau.
- The regional scanning centers would be implemented using a “day forward” approach (i.e., only newly received items would be scanned by the mailroom staff).
- The Hummingbird DM product would be upgraded and a new workflow module installed. The existing Legal and Market Conduct repositories would be converted or migrated to the new system.

- Checks and accounting transactions would receive priority and would be processed in accordance with financial and audit regulations.
- Each area would determine and perform scanning of historical documents if and when they saw fit.
- Where necessary, the received paper would be stored for legal purposes; otherwise, the mail would be destroyed after verification of scanning quality.
- Additional and/or larger monitors would be needed for staff performing analytical tasks, so that they could view multiple documents from the repository at the same time.
- Only those documents specifically marked as appropriate to the public would be accessible via the public viewing rooms and Internet.
- To procure the system, either a non-competitive bid (NCB) or an RFP would be used to obtain the software and services. There are four Open Text vendors in California, including the current vendor.

Costs

This alternative has a total project cost of $9,800,931. The one-time and ongoing costs for the proposed solution are detailed in Section 8, EAWs.

Benefits

The benefits for this alternative are:

- It addresses the business objectives documented in Section 3.
- The CDI would leverage its existing investment, technical knowledge of the Hummingbird DM product, and lessons learned from prior implementations.
- The infrastructure to allow items to be posted to the Internet for public viewing is already in place.

Advantages

The advantages for this alternative are:

- Standardizes on an existing document management system and reduces the number of vendor contracts required.
- CDI IT staff are already familiar with the Hummingbird DM product.
- Avoids or reduces costs for additional facility storage space, facility upgrades and storage furniture by eliminating the majority[7] of incoming paper.

[7] Some paper may still be needed to support legal and enforcement actions.

- Regional scanning provides a more consistent approach to scanning and indexing quality, while balancing knowledge of the regional areas' work items.
- Improves customer service and ensures compliance with mandated reporting requirements by providing public access via the Internet to mandated documents (CIC 12921.2).
- Requires less data conversion and interface development than other alternatives.

Disadvantages
The disadvantages for this alternative are that it:

- Requires additional staff and facility space for the scanning centers at each regional office.
- There are additional ongoing costs due to support and maintenance for the regional scanning equipment and storage repository.
- The product upgrade and new workflow module will impact the existing Market Conduct and Legal repositories.
- Prior Hummingbird DM projects have been difficult and encountered several problems.
- Future support for the Hummingbird suite is unclear.

5.3.2 Rejected Alternative #2 – Implement and New Document Repository with Scanning in Each Office

Description
In this alternative, a new document management system would be procured and installed for use by the entire Department. The repository would accommodate email, faxes, voicemail messages, photographs, video and internally generated documents. All documents stored in the repository would be indexed in the repository to allow for searching and retrieval. No centralized scanning would be implemented. Mail items would continue to be routed to each office via interoffice mail courier. Each area would leverage existing scanners to scan paper documents as they received them. Any scanned images, documents received electronically, and all documents generated by the Department would be stored and indexed in the repository.

Existing internal forms would be converted to eforms, and workflow processes would be implemented to route the eforms and documents to the appropriate role or bureau for processing and approval. The new system would replace the current ParaDocs and Hummingbird DM systems, and would interface with the PLB's Scan HQ/Image HQ

system to store and index the renewal images and information[8] and with Legal's eCounsel system (replacing the current interface to Hummingbird DM). The data from the Scan HQ, ParaDocs and Hummingbird DM systems would be converted to the new repository.

CDI staff working offsite would be able to access the repository remotely via the Internet/VPN. In the first phase of the project, members of the public would be able to access appropriate documents via the public viewing rooms. A second phase of the project would allow public access via the Internet.

Assumptions

- No new scanning equipment would be purchased.
- Each area would perform scanning of received and historical documents.

Costs

The estimated cost for this alternative is approximately $10 million. However, because this alternative does not address all of the objectives in Section 3, no alternative worksheet was included in the Economic Analysis Workbook.

Benefits

The benefits for this alternative are:

- Implements a new, standard document management repository to manage CDI's documents.
- Allows each area to scan their received documents themselves, where staff have detailed knowledge of the documents and minimizing the risk of any improper access to sensitive or confidential materials.

Advantages

The advantages for this alternative are:

- Improves public access to documents by allowing access to appropriate, newly received/generated documents in a more timely manner via the public viewing rooms.
- Avoids a central scanning facility and scanning staff by allowing the knowledge workers in each area to perform scanning and indexing functions.

[8] The Scan HQ system does not have a centralized repository for the scanned images, so an interface would be created to allow the scanned images to be stored in the new repository.

Disadvantages
The disadvantages for this alternative are:

- Does not address all of the objectives stated in Section 3.
- Does not address the delays due to having to courier mail to satellite offices, and the risk of loss or damage during transport.
- It is more difficult to enforce standards for indexing and naming of documents when scanning is performed in a decentralized manner.
- Would likely require additional staff in each location to address the workload for scanning and indexing.

5.3.3 Rejected Alternative #3 – Extend Use of Hummingbird DM to the Remainder of the Department with Scanning in Each Office

Description
In this alternative, the CDI would implement the existing Hummingbird DM product to the rest of the Department. The repository would accommodate email, faxes, voicemail messages, photographs, video and internally generated documents. All documents stored in the repository would be indexed in the repository to allow for searching and retrieval. No centralized scanning would be implemented. Mail items would continue to be routed to each office via interoffice mail courier. Each area would leverage existing scanners to scan paper documents as they received them. Any scanned images, documents received electronically, and all documents generated by the Department would be stored and indexed in the repository.

Existing internal forms would be converted to eforms, and workflow processes would be implemented to route the eforms and documents to the appropriate role or bureau for processing and approval. The new system would replace the current ParaDocs system, and the existing data would be converted to the new repository. The new system would interface with PLB's Scan HQ/Image HQ system to store and index the renewal images and information, and existing data would be converted to the new repository.

CDI staff working offsite would be able to access the repository remotely via the Internet/ VPN, and members of the public would have access to appropriate documents via the Internet.

Assumptions
- No new scanning equipment will be purchased.
- Each area would perform scanning of their own received and historical documents
- There would be little to no impact to the Legal and Market Conduct repositories, since the existing product and version would be used.

- To procure the system, either a non-competitive bid (NCB) or an RFP would be used to obtain the additional software and services. There are four Open Text vendors in California, including the current vendor.

Costs
The estimated cost for this alternative is approximately $9 million. However, because this alternative does not address all of the objectives in Section 3, no alternative worksheet was included in the Economic Analysis Workbook.

Benefits
The benefits for this alternative are:

- The CDI would leverage its existing investment, technical knowledge of the Hummingbird DM product, and lessons learned from prior implementations.
- The infrastructure to allow items to be posted to the Internet for public viewing is already in place.
- Allows each area to scan their received documents themselves, where staff have detailed knowledge of the documents and minimizing the risk of any improper access to sensitive or confidential materials.

Advantages
The advantages for this alternative are:

- Standardizes on an existing document management system and reduces the number of vendor contracts required.
- CDI IT staff are already familiar with the Hummingbird DM product.
- Avoids a central scanning facility and dedicated staff by allowing the knowledge workers in each bureau to perform scanning and indexing functions.
- Requires less data conversion and interface development than other alternatives.
- Requires less time to implement than other alternatives, since two areas are already using the software.

Disadvantages
The disadvantages for this alternative are:

- Does not address all of the objectives stated in Section 3.
- Does not address the delays due to having to courier mail to satellite offices, and the risk of loss or damage during transport.

- It is more difficult to enforce standards for indexing and naming of documents when scanning is performed in a decentralized manner.
- Would likely require additional staff in each location to address the workload for scanning and indexing.
- The current product does not address all of the workflow requirements.
- Prior Hummingbird DM projects have been difficult and encountered several problems.
- Future support for the Hummingbird suite is unclear.

5.3.4 Rejected Alternative #4 – Continue Current Methods

Description
In this alternative, the CDI would not invest in any new hardware or software to manage their documents. The CDI would continue to accept and process items in paper, but would encourage clients and partners to submit items electronically where possible. The current network share drives would continue to be used as the primary repositories, but new policies and procedures for management of the share drives and electronic files would be implemented.

Costs
This alternative would not require procurement of any additional hardware or software. However, due to the continuing use of paper, additional facilities costs would be incurred to support storage of the increasing volume of paper documents, within the next two years. If the current growth rate continues, the CDI will likely need to obtain additional space at a rate of every five to six years, due to record retention requirements.

A separate alternative worksheet was not developed for this alternative. The costs for continuing business using the current methods are reflected in the Existing cost worksheets of the EAWs.

Benefits
The benefits for this alternative are:

- No new computing hardware or software would be purchased.

Advantages
The advantages for this alternative are:

- There are no immediate costs associated with the implementation of this alternative.

Disadvantages
The disadvantages for this alternative are:

- It does not address the objectives documented in Section 3.
- Each area of the Department would pursue their own approach to scanning and/or electronic document management and processing as they saw fit (if at all), providing little if any consistency within the Department.
- It perpetuates current document and process problems, including several document repositories, duplicative manual tracking, and document version control issues.
- The CDI would need to procure additional storage space for San Francisco and West Sacramento, at a minimum, within the next three years and for other areas of the Department within five years. Additional equipment and storage space for paper would continue to be needed on a continuing basis into the future, depending on the growth rate in the industry.
- May require the CDI to request additional staffing to address the growing workload, if current growth trends continue.
- Impedes the ability of the Department to implement services via the Internet since the majority of the Department's records are in paper format.

6.0 PROJECT MANAGEMENT PLAN

The CDI recognizes the importance of using industry best practices for project management. This section describes how this project will be managed.

6.1 Project Manager Qualifications

The CDI will seek a highly qualified consultant to serve as the Paperless Workflow (PW) Project Manager (PM) for this project. The consultant shall manage the project on behalf of the CDI and will manage the solution vendor and coordinate the overall project effort. The PW Project Manager must possess the following knowledge, skills and experience in order to successfully manage the project:

- Demonstrated experience using structured project management techniques and practices, including State of California project management experience.
- At least five (5) years experience managing IT development and implementation projects similar in size and complexity to the Paperless Workflow project. Two of those years must have included managing State government projects.
- Experience managing IT projects having similar organizational and technical complexity as that of the Paperless Workflow project.
- Demonstrated experience in effectively managing vendor relationships, including deliverable monitoring and assessment.
- Experience coordinating project teams consisting of both State and vendor staff to accomplish IT and business process change goals.
- Experience with document management, scanning, electronic workflow and eforms is desirable.
- Project Management Professional (PMP) certification from the Project Management Institute (PMI), or certification from a recognized institution (such as the UC Davis Project Management Certificate Program) is desirable.

6.2 Project Management Methodology

This project will employ the CDI's project management framework as a general project management methodology, as documented in its PMO Procedures/Methodology Handbook, dated 10/17/2003. This framework is based on the PMI's PMBOK® and is compatible with the SIMM, Section 200.

The project management activities required by the CDI PM methodology include:

- Development of a project plan, defining the project, scope, and roles and responsibilities.
- Defining the activities required to implement the project and the sequence.
- Development of a project schedule and budget.

- Development of communication, resource, quality and configuration management plans.
- Development of business and technical requirements.
- Development and execution of risk and change management plans.
- Ongoing performance reviews, corrective actions, and project plan updates.
- Monitoring of planned versus actual performance, schedule and budget.
- Ongoing quality assurance and documentation reviews.
- Coordination of user reviews and acceptance testing activities.
- Coordination of lessons learned sessions from the project.
- Development of a Post Implementation Evaluation Report (PIER).

6.3 Project Organization

The project team will incorporate staff from several areas of the organization to ensure adequate communication and participation in requirements, design, quality, testing and acceptance activities. The PW Project Manager will be responsible for managing the project on behalf of the CDI and will report to the CDI Project Contract Manager. The following table summarizes the roles and anticipated participation for the CDI project team. The roles and responsibilities for the project team are discussed in Section 6.5.4.

Table 6-1. CDI Project Team Members

Project Team Role	Level of Participation Anticipated	Employee Classification
CDI Project Sponsor	2%	Chief Deputy of Operations, Dennis Ward
CDI IT Project Contract Manager	25%	PMO representative
CDI Information Security Officer	2%	
CDI Legal Advisor/Privacy Officer	2%	Assistant Chief Counsel, Bob Hagedorn
CDI IT Network	10%	System Software Specialist III
CDI IT Applications Developers	50% 100%	Senior Programmer Analyst Staff Programmer Analyst; CDI will request a three-year limited term position for the Staff Programmer Analyst
CDI IT Database Administrator/ Repository Administrator	100%	Senior Programmer Analyst; CDI will request a three-year limited term position.
CDI IT Web Services Staff	5%	Staff Information Systems Analyst
CDI IT Help Desk Staff	10%	5 – Staff Information Systems Analysts 5 – Associate Information Systems Analysts Approximately 2 months of participation during testing and pilot phases to gain experience with the system

Project Team Role	Level of Participation Anticipated	Employee Classification
CDI Repository Librarian	50%	Associate Governmental Program Analyst
CDI Scanning Staff	50%	5 – Office Technicians; During Phase 2 only
CDI Subject Matter Experts (Program Areas)	10%	1 Division level staff member from all divisions (20 divisions)
Consultant Team Members		
Paperless Workflow PM	50%	Consultant
Project Oversight and Verification and Validation (V&V) Consultant	50%	Consultant

The following table summarizes the anticipated solution vendor roles that will be needed to ensure a successful implementation of the project.

Table 6-2. Solution Vendor Team Members

Solution Vendor Team Role	Level of Participation Anticipated
Vendor Project Manager	50%
Business Analyst/Test Lead	1 staff
Business Analysts/Testers	3 staff
Application Developers	2 staff
Database Administrator/Data Conversion Lead	1 staff
Scanning Lead	1 staff during Phase 2 only
End User Trainers	2 staff during Testing, Training and Deployment for each Phase
Technical Trainer	1 staff during Testing and Training for each Phase

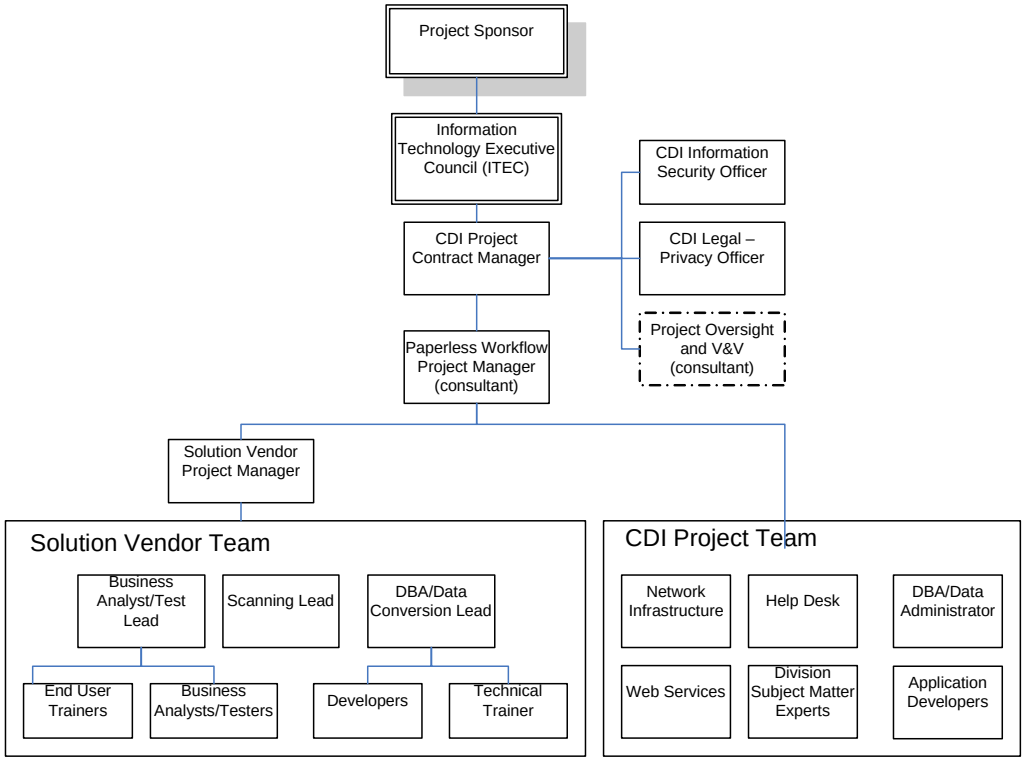

Figure 5. Paperless Workflow Project Organization

6.4 Project Priorities

The following table summarizes the project's priorities.

Table 6-3. Project Priorities Trade-off Matrix

Factor	Resources	Schedule	Scope
Constrained (Cannot Change)		X	
Accepted (Could be Changed)	X		
Improved (Can be Changed)			X

- The project **schedule** is **constrained**. The project must adhere to the defined project schedule in order to meet its objectives.
- The project **resources** are **accepted**. Additional resources may be acquired if necessary to ensure the schedule is maintained.
- The project **scope** can be **improved**. The CDI has determined that the scope of the project may be adjusted to ensure the project completes on time.

6.5 Project Plan

6.5.1 Project Scope

The scope of the Paperless Workflow project is to implement a new document management system with regional scanning centers, automated workflow, and eforms to transform its business operations.

The following software features are required:

- Document management software, including
  - Repository for managing the contents
  - Indexing and searching features
  - Version control and check-in/check-out features
  - User and document security features
  - File import and export features
  - Web portal features for remote and public access
  - Document manipulation features (e.g., highlighting, notes, redaction)
  - Basic reporting features (for reporting on the contents of the repository)
  - Retention and archiving features
  - Workflow and routing features, including approvals and notifications
  - eforms software and features
- Scanning and quality verification software, including
  - Scan and rescan features
  - File conversion features (e.g., TIFF to PDF, JPG to PDF)
  - Data capture/ OCR features

The project will be implemented in a phased approach. The first phase will consist of establishing the document repository, establishing appropriate document security and user access roles, performing business process analysis, and developing eforms and workflows for selected divisions. Phase 1 of the project focuses on converting the administrative forms and processes to eforms and workflows to reduce or eliminate the internally generated paper. A pilot phase will be included to allow the CDI to test and verify the correct operation of the system with a small number of offices, prior to deploying the full system. The second phase will implement the scanning centers, web access, and remaining eforms and workflows for the rest of the Department. The data conversion and interface efforts would be split across the phases based on functional area.

The solution vendor will be responsible for providing the following services:

- Installing and implementing the scanning hardware and software.
- Installing and configuring the document management system, software and repository.
- Conducting business process analysis to develop the document index information, security access and user groups, workflows and eforms based on the CDI's current business processes.
- Developing interfaces between the new repository and the IDB, EIP and eCounsel systems.
- Integrating the new repository with the CDI's content management system to allow posting of documents from the repository to the CDI's public website.
- Performing data conversion of the image and index data from the Psigen Scan HQ/Image HQ, ParaDocs and Hummingbird DM systems to the new repository.
- Performing unit, integration, system, performance, regression and pilot testing, including development of all test plans, scripts, data and results reports.
- Assisting the CDI to conduct user acceptance testing, conducting analysis of all test anomalies and errors, and resolving any errors.
- Performing end user training for all CDI staff, and technical user training for CDI technical staff.
- Developing system documentation to allow the CDI to manage, operate, and maintain the delivered system.

6.5.2 Project Assumptions

The following are the assumptions on which the project is based, the external events the project is dependent upon, and the constraints under which the project is to be conducted. Additional assumptions associated with costs are provided in Section 8, Economic Analysis Worksheets.

Assumptions

- CDI management will provide support for the project and will commit the necessary resources to the project to ensure its success.
- The project will adhere to a formal schedule.
- The project will perform proactive issue, risk and change management to minimize impacts to the project schedule.
- Video conferencing technology will be available to communicate with other offices, and will be used to the extent possible to minimize travel expenses.

- The proposed solution will utilize the existing CDI infrastructure to the extent possible.
- CDI Subject Matter Experts (SMEs) will provide timely review of all deliverables and work products.
- The existing systems (Scan HQ/Image HQ, Hummingbird DM, and ParaDocs) will be replaced and the existing data converted to a new repository, including existing index data.
- Phase 1 of the project will focus on converting the administrative forms and workflows, and implementing electronic approvals for administrative forms (e.g., ADM005s, P-2s), except for the PLB's licensing forms.
- Phase 2 of the project will focus on scanning and converting documents received by the CDI, including PLB forms, and additional eforms and workflows in non-administrative areas.
- A pilot of the new system will be conducted in Phase 1 to verify the system is operating correctly prior to implementation of the system to the full Department.
- The document repository will comply with records retention policies and will allow CDI staff to manage long-term storage of documents to the same standards as if the documents were stored by the State Records Center.
- The CDI will update its policies and regulations to allow electronic approvals for use in approving internal forms and documents in lieu of a "wet ink" signature.
- The CDI and its partners will accept the image of a document/signature a viable substitute for a physical document and "wet ink" signature.
- The solution vendor will develop approximately 60 workflows, 75 eforms, and 30 workflow reports. The CDI will prioritize and select the forms and workflows to be converted based on highest volume (e.g., administration forms) and complexity of routing (e.g., number of approvals).
- Scanning equipment will be purchased for the regional mailrooms, the West Sacramento warehouse, and satellite offices that receive mail directly. Offices with existing scanning equipment may scan ad hoc items and import the scanning items into the repository.
- The scanning centers in each regional office will require approximately 300 sq. ft. The CDI will utilize existing space and furniture to house these scanning centers.
- Additional staffing will be redirected or made available to perform scanning and management of the document repository. These staff will need specific training to be able to recognize, correctly index, and route the mail for each bureau.
- The hardware will be procured and available for use prior to the start of the design phase to allow the equipment to be installed and ready for use during design and prototyping sessions.

- The document management system is intended to enhance, but not replace the CDI's other case management systems (e.g., IDB, FIDB, and Cosmos).

Dependencies

- A Spring Finance Letter is required to authorize funding for this project.
- Supporting procurements and contracts must complete on schedule.
- CDI resources with the appropriate skills must be committed to the project for the length of time specified in the project schedule.
- A Leveraged Procurement Agreement Exemption Request (LPAER) must be submitted and approved in order to exceed the MSA's $1,500,000 limit.
- The hardware for the solution will be defined by the solution vendor based on their specific product configuration. Once the solution vendor is selected, the CDI will work with the DGS to procure the necessary hardware via a competitive procurement.
- Some of the administration forms and processes will be affected by the CDI's transition to the California Automated Travel Expense Reimbursement System (CalATERS) and the State Controller's Office 21st Century project. The business process re-engineering efforts must align with these projects.

Constraints

- The proposed solution must comply with the CDI's enterprise architecture, standards and policies.
- The proposed solution must comply with all State and CDI security requirements and records retention requirements.
- Scanning activities cannot delay the processing of accounting transactions. These activities will be given priority or may require special processes to ensure compliance with financial and audit regulations.

6.5.3 Project Phasing

The following project phases have been defined for the project.

Table 6-4. Paperless Workflow Project Phases

Project Phase	CDI Phase Activities	Vendor Phase Activities
Procurement Planning Phase	• Define requirements • Develop Statement of Work for Project Manager, Oversight/V&V, and Solution Vendor • Define evaluation criteria and method	• None
Procurement Phase	• Release Request for Offer for	• None

Project Phase	CDI Phase Activities	Vendor Phase Activities
	Project Manager to vendors on the IT Consulting MSA or the CMAS • Release Request for Offer for Oversight/V&V services to vendors on the IT Consulting MSA/CMAS • Release Request for Offer to vendors on Imaging, Workflow and Document Management MSA for the solution vendor • Evaluate offers from the three solicitations • Select vendors and execute contract	
Project Initiation and Planning Phase	• Develop Project Plan, Project Schedule, Communication Plan, and other supporting plans • Review and approve the solution vendor's Project Management Plan and Schedule • Brief sponsor, users, and stakeholders on the project, project schedule, and anticipated points of participation	• Develop and deliver Project Management Plan and schedule for vendor activities • Participate in developing project plan and schedule by providing inputs based on the vendor project plan and schedule
Phase 1 – Implement Repository		
Requirements Analysis and Design	• Work with solution vendor to validate requirements and perform gap analysis • Work with solution vendor to analyze business processes and organizational forms • Work with solution vendor to define interface specifications to the IDB, EIP, and eCounsel • Review and approve vendor's requirements, design, interface and data conversion deliverables	• Perform requirements validation and gap analysis based on the CDI's requirements and the product features • Analyze current business processes and organizational forms, starting with the administration forms and processes • Develop the System Requirements Specification (SRS) deliverable • Define interface specifications for the IDB, EIP, and eCounsel • Develop and deliver the System Design Document (SDD), including interface design • Analyze the current Hummingbird DM repository and develop and deliver the Data Conversion Plan
Customization and Data Conversion	• Participate in business process redesign and assist with process transition approach • Monitor the vendor during solution build, configuration,	• Perform business process redesign and develop process transition approach • Perform configuration, installation and customization of repository

Project Phase	CDI Phase Activities	Vendor Phase Activities
	customization and installation • Review and approve the vendor's testing and training plans • Work with vendor to develop the User Acceptance Test Plan and scripts • Monitor and assist with legacy data conversion • Monitor interface development and testing • Review and approve system documentation, training, and business process deliverables • Participate in knowledge transfer and technical training sessions	• Develop eforms and workflows based on business process analysis • Develop and test custom interfaces • Develop testing plans • Work with the CDI to develop the User Acceptance Test Plan and scripts • Perform data cleanup and data conversion of legacy data, and load the converted data to the new system; and document results of data conversion effort • Develop and conduct technical training and knowledge transfer sessions • Develop End User Training Plan • Develop/customize system documentation • Perform unit and integration, testing of system and document results • Develop and deliver draft of new and modified business processes
System Testing and User Acceptance Testing	• Assist vendor to prepare for system test • Monitor system, performance, and interface testing • Review and approve system test results • Determine if system is ready for user acceptance test • Work with vendor to prepare for user acceptance test • Execute user acceptance test scripts and document results • Determine if user acceptance test was successful and if system is ready for pilot	• Prepare for system test, including preparing the test environment, test data and test documentation • Perform system test, including interface and performance tests, and document results • Address/correct any anomalies or bugs found during system test • Conduct end user training for staff participating in user acceptance testing • Work with the CDI to prepare for user acceptance test • Assist with user acceptance test • Address/correct any anomalies or bugs found during user acceptance test
Conduct Pilot	• Assist vendor to prepare for pilot • Work with vendor to conduct pilot • Monitor results and pilot operations, and document results and anomalies • Conduct user forums to discuss results of pilot operations. • Work with vendor to address problems and anomalies	• Prepare for pilot including preparing the production environment, operational procedures, monitoring procedures, and coordination logistics • Conduct end user training for staff participating in pilot • Commence pilot operations at selected offices • Address/correct any anomalies or problems found during pilot

Project Phase	CDI Phase Activities	Vendor Phase Activities
	• Determine if pilot was successful and if system is ready for production	
Deployment	• Monitor deployment schedule • Participate in training for end user staff • Work with the vendor to implement new and modified business processes based on workflow and eforms • Monitor and assist with deployment to selected offices • Work with vendor to address problems and anomalies • Conduct lessons learned session to capture improvements for next phase	• Visit each office and verify system operations • Conduct user training at each office • Train staff on new business processes, workflows and eforms • Deploy the new system and business processes at each office (“go live”) • Address/correct any anomalies or bugs found during deployment • Provide just-in-time training and refresher training, as necessary, during deployment • Update system and business processes documentation, as necessary
Phase 2 - Implement Regional Scanning Centers and Web Access		
Phase 2 Planning Phase	• Update Project Plan, Project Schedule, Communication Plan, and other supporting plans, as necessary • Review and approve the solution vendor’s Project Management Plan and schedule updates, if necessary • Brief sponsor, users, and stakeholders on the project, project schedule, and anticipated points of participation • Assist vendor with site preparation and configuration for the scanning centers	• Update and deliver Project Management Plan and schedule for vendor activities, as necessary • Perform site survey at each regional office and perform necessary site preparation and configuration activities for scanning center installation
Requirements Analysis and Design	• Work with solution vendor to analyze business processes and organizational forms • Work with solution vendor to define interface specifications for integrating with the content management system for posting to the CDI public website • Review and approve vendor’s requirements, design, interface and data conversion deliverables	• Analyze current business processes and organizational forms • Develop the System Requirements Specification (SRS) deliverable • Define interface specifications for integrating with the content management system for posting to the CDI public website • Develop and deliver the System Design Document (SDD), including interface design • Analyze the current ParaDocs and Psigen Scan HQ/Image HQ

Project Phase	CDI Phase Activities	Vendor Phase Activities
		repositories and develop and deliver the Data Conversion Plan
Customization and Data Conversion	• Monitor the vendor during scanning center configuration, and installation • Participate in business process redesign and assist with process transition approach • Monitor the vendor during solution build, configuration, customization and installation • Review and approve the vendor's testing and training plans • Work with vendor to develop the User Acceptance Test Plan and scripts • Monitor and assist with legacy data conversion • Monitor interface development and testing • Review and approve system documentation and business process deliverables • Participate in knowledge transfer and technical training sessions	• Perform configuration, installation and customization of scanning equipment and software • Perform business process redesign and develop process transition approach • Perform configuration, installation and customization of repository • Develop eforms and workflows based on business process analysis • Develop and test custom interfaces • Develop testing plans • Work with the CDI to develop the User Acceptance Test Plan and scripts • Perform data cleanup and data conversion of legacy data, and load the converted data to the new system; and document results of data conversion effort • Develop and conduct technical training and knowledge transfer sessions • Develop End User Training Plan for Phase 2 • Develop/customize system documentation • Perform unit and integration, testing of system and document results • Develop and deliver draft of new and modified business processes
System Testing and User Acceptance Testing	• Assist vendor to prepare for system test • Monitor system, performance, and interface testing • Review and approve system test results • Determine if system is ready for user acceptance test • Work with vendor to prepare for user acceptance test • Execute user acceptance test scripts and document results • Determine if user acceptance test was successful and if system is ready for production	• Prepare for system test, including preparing the test environment, test data and test documentation • Perform system test, including interface and performance tests, and document results • Address/correct any anomalies or bugs found during system test • Conduct end user training for staff participating in user acceptance testing • Work with the CDI to prepare for user acceptance test • Assist with user acceptance test • Address/correct any anomalies or bugs found during user acceptance test

Project Phase	CDI Phase Activities	Vendor Phase Activities
Deployment	• Monitor deployment schedule • Participate in training for end user staff • Work with the vendor to implement new and modified business processes based on workflow and eforms • Monitor and assist with deployment to remaining offices • Work with vendor to address problems and anomalies	• Visit each office and verify system operations • Conduct user training at each office • Train staff on new business processes, workflows and eforms • Deploy the new system and business processes at each office (“go live”) • Address/correct any anomalies or bugs found during deployment • Provide just-in-time training and refresher training, as necessary, during deployment • Update system and business processes documentation, as necessary
Project Closeout	• Review and approve final system documentation • Conduct an assessment of business process changes • Review and approve system administration documentation • Monitor transition of responsibilities from vendor staff to CDI IT staff • Conduct lessons learned session to capture improvements for next project • Monitor system and collect data for the PIER to close project	• Deliver any updated system documentation • Address/correct any remaining anomalies, bugs and outstanding issues • Deliver final system administration, maintenance and operations documentation • Transition responsibilities to CDI IT staff

6.5.4 Roles and Responsibilities

The following are the project team roles and responsibilities for the Paperless Workflow project. Note that a team member may perform multiple roles.

Table 6-5. Project Roles and Responsibilities

Project Team Role	Responsibilities
Project Sponsor	• Provide sponsorship and support for the PW project from the CDI directorate & executive management. • Provide the highest level decision making authority. • Advocate for project funding and necessary resources. • Establish project goals and priorities. • Approve any significant changes to project scope, budget or schedule.
Information Technology Executive Council (ITEC)	• Provide CDI leadership and support for project. • Provide executive oversight for the PW project. • Allocate resources to ensure project goals are met. • Interpret federal and state level statutes and executive orders and determine the impact on the PW project. • Direct policy and procedure changes, when needed. • Provide final decision making on decisions that could not or should not be made at lower levels. • Resolve critical issues and risks which could not or should not be resolved at lower levels. • Ensure consistency with the CDI Strategic Plan and IT strategies and policies. • Ensure consistency with other IT projects and non-IT activities in CDI. • Provide executive direction to the project in areas of scope, schedule and resources. • Approve all adjustments to the PW project schedule.
CDI Information Security Officer (ISO)	• Attend ITEC meetings. • Participate in and oversee all activities regarding information security and confidentiality. • Provide final approval of all Paperless Workflow security requirements. • Work with the Privacy Officer to provide input to the project team pertaining to CDI security, privacy and confidentiality requirements. • Provide input to requirements related to electronic signatures, data redaction, data storage and retention, data privacy and confidentiality. • Coordinate the updating of the CDI Operational Recovery Plan (ORP) and its submission to the DOF.
CDI Legal – Privacy Officer	• Work with the CDI ISO to provide input to the project team pertaining to CDI privacy and confidentiality requirements. • Provide input to requirements related to electronic signatures, data redaction, data storage and retention, retention of paper, data privacy and confidentiality.
CDI Project Contract Manager	• Promotes the vision for the PW project. • Communicate project progress to the ITEC, project sponsor and control agencies. • Serve as the customer advocate for the PW project. • Assist in obtaining and managing resources assigned to the PW

Project Team Role	Responsibilities
	project. • Facilitate security and privacy matters with CDI ISO and the CDI Privacy Officer. • Develop the solicitation documents for the PW solution, including the Statements of Work and evaluation criteria. • Review and approve the development of business requirements for the PW solution. • Manage policy development and implementation. • Manage the vendor contracts for the PW project, including monitoring progress and compliance with contracts, and reviewing and approving invoices. • Review and approve the solution vendor's project schedule and project management plan. • Review and approve key project deliverables. • Provide internal project oversight to ensure that CDI project management and quality standards are met. • Provide CDI requirements, standards, and templates for project deliverables. • Participate in risk identification, evaluation, strategy, action planning, and mitigation/contingency activities. • Identify project risks and issues, and determine when critical items should be elevated to facilitate their resolution. • Approve risk mitigation strategy and action plans.
Oversight and V&V (consultant)	• Validate documentation of project plans for alignment with industry standards and best practices, and the CDI's standard project management approach. • Verify project processes for adherence to documented project plans. • Monitor project status (schedule, budget, commitments) and report anomalies. • Meet the requirements of the SIMM's IT Project Oversight Framework. • Monitor and report risks and variations that may occur during the project, and recommend corrective actions. • Verify and validate that intended outcomes and work products meet the formal specifications of the project and the CDI's project management standards. • Provide input to project team pertaining to the quality of project deliverables. • Verify and validate requirements, system functionality, and system acceptability. • Monitor the issue and change management process, including tracking issues and changes in the Issue and Change Logs. • Monitor the vendor's system anomaly and defect management process to ensure system problems are analyzed and resolved in a timely manner. • Participate in and provide guidance to activities regarding project quality.

Project Team Role	Responsibilities
Paperless Workflow Project Manager (consultant)	• Report to the CDI Project Contract Manager. • Manage the overall project implementation effort, including ensuring overall project process and deliverable quality. • Perform overall project planning for the PW project, including working with the solution vendor to develop and maintain the project schedule and communication plans. • Facilitate project status meetings with vendors, managers and team leads. • Ensure timely communication with vendors, project team members, stakeholders, the Project Sponsor and the ITEC. • Serve as the single point of contact for planning, tracking, and recommending all communication methods and communication vehicles related to the project, including recording and tracking all project communication deliverables and contacts. • Ensure that project processes and deliverables adhere to CDI project management standards. • Work with the vendor team to correct process quality and deliverable deficiencies. • Lead risk identification, evaluation, strategy, action planning, mitigation/contingency execution and risk tracking activities. • Ensure the implemented solution addresses the project goals and associated department objectives. • Serve as the central point of communication and coordination for the project. • Track actual progress against the project plans, including schedule, budget and resources, and identify potential issues and risks for resolution. • Manage project risks, changes and issues, and ensure the items are documented in the project's tracking database. Escalate appropriate items to the CDI Project Contract Manager to ensure appropriate resolution by the ITEC and Project Sponsor. • Maintain all pertinent project documentation and ensure key project documents are retained for historical purposes. • Work with the CDI Project Contract Manager to direct the activities of State personnel assigned to the project. • Direct and manage the solution vendor. • Coordinate and manage the pilot, including development of pilot processes and monitoring procedures.
CDI Subject Matter Experts (SMEs)/Program Staff	• Represent the needs and interests of the users of the system. • Ensure timely completion of team work activities. • Provide status to project managers. • Assist with requirements definition/validation and business process analysis by providing insight and expertise on the current processes. • Participate in the design and customization of the system to ensure regulations and operational needs are met. • Provide input on eforms, workflows, screen design, and procedures.

Project Team Role	Responsibilities
	• Review and provide comment on vendor deliverables. • Identify issues, risks and concerns to the PW Project Manager as they arise. • Assist with critical problem solving. • Review and provide comment on end user training materials. • Participate in user acceptance testing and pilot activities, and provide feedback. • Provide final customer approval of the system.
CDI Technical Staff	• Assist with project planning and communication activities, as it relates to infrastructure procurement, setup and configuration activities. • Assist in the design, setup and roll out of project tools. • Ensure timely completion of teamwork activities. • Provide status to project managers. • Collaborate with CDI ISO and Legal on data privacy, security and confidentiality issues. • Provide technical architecture recommendations and direction to ensure compliance with CDI technical architecture standards. • Monitor implementation of security to ensure all CDI policies and guidelines are observed and correctly implemented • Assist with validating requirements, requirements decomposition and gap analysis. • Provide technical recommendations regarding interfaces, data, and data conversion. • Assist with data conversion by providing data extracts from the legacy systems for cleansing and conversion to the new repository formats. • Review and provide comments on vendor deliverables. • Provide technical input into deployment activities. • Assist in system (including interface and performance testing), user acceptance testing and pilot operations, as appropriate. • Participate in knowledge transfer activities with the vendor team to ensure understanding and ownership of the new system. • Participate in transition of responsibilities from solution vendor project team to CDI technical team. • Provide input into project risk and issue efforts and participate in resolution, as assigned.
Vendor Project Manager	• Work with the PW Project Manager to manage the implementation of the project. • Direct the vendor project team efforts, and manage vendor staff and performance. • Establish and manage the project schedule in coordination with the PW Project Manager. • Lead the analysis of the current environment and business processes, and installation, customization and deployment of the proposed solution. • Coordinate the analysis and resolution of system anomalies and

Project Team Role	Responsibilities
	errors, and quality deficiencies • Prepare and deliver the project schedule, project management plan, and all identified project deliverables, in accordance with CDI's defined process. • Ensure that the system meets CDI security and privacy requirements. • Detect risks and variations that may occur during the project, recommend corrective action to the PW Project Manager, and participate in the mitigation or resolution, as appropriate.
Vendor Team	• Validate the business and functional requirements contained in the solicitation document, and perform requirements decomposition, business process analysis, and gap analysis. • Define technical requirements and design for customized components and interfaces. • Create the System Requirements Specification (SRS) for CDI review and acceptance. • Define the system design including the technical architecture. • Create the System Design Document (SDD) for CDI review and acceptance. • Perform installation, configuration and customization of the COTS document management system. • Develop eforms, workflows, business rules and validations, and reports for the new system. • Develop interfaces to the IDB, EIP and eCounsel systems and integrate with the content management system for posting documents to the CDI public website. • Perform data conversion of image and index data from the Psigen Scan HQ/Image HQ, ParaDocs, and Hummingbird DM systems to the new system and load the converted data to the production system. • Create and manage configuration control and change control procedures, and document and manage the configuration of the new system until successful completion of the project and transition to CDI IT staff. • Implement a system anomaly and defect management process to analyze, track and resolve anomalies and defects found in the system during testing, pilot and production activities. • Conduct unit, integration, system, interface and performance testing, including documenting the results and any anomalies or defects. • Assist with development of the user acceptance test plan and procedures, and execution of user acceptance testing. • Assist with the pilot, including development of pilot processes and monitoring procedures. • Develop training materials and documentation. • Conduct end user and technical training. • Deliver and install the regional scanning center equipment and software. • Provide knowledge transfer sessions for CDI technical staff to ensure transfer of key technical knowledge needed to operate and maintain

Project Team Role	Responsibilities
	the system. • Establish appropriate deployment "go-live" strategies. • Execute deployment "go-live" strategy. • Develop and deliver project work products and deliverables, as defined in the solicitation document. • Provide input into project risk and issue efforts, and participate in resolution as assigned.

6.5.5 Project Management Schedule

The following diagram outlines the schedule for each of the major milestones associated with this project. The schedule, as outlined below, begins with the approval of this FSR and completes with the project closeout process.

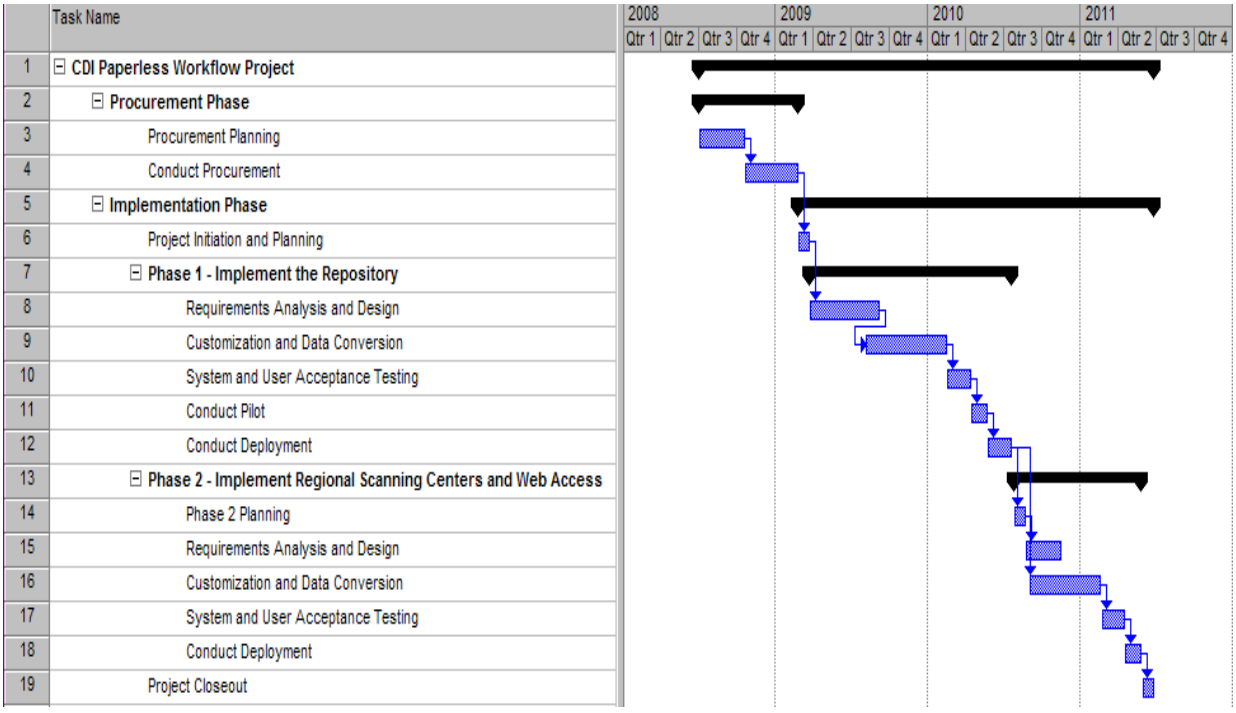

Figure 6. High-level Project Schedule

Table 6-6. Project Phase Dates

Project Phase	Begin	End	Duration
Procurement Phase			
Procurement Planning Phase	Jul 2008	Oct 2008	4 months
Conduct Procurement	Oct 2008	Feb 2009	5 months
Phase 1 – Implement Repository			
Project Initiation and Planning Phase	Mar 2009	Mar 2009	1 month
Requirements Analysis and Design	Apr 2009	Sep 2009	6 months
Customization and Data Conversion	Aug 2009	Jan 2010	7 months
System Acceptance and User Acceptance Testing	Feb 2010	Apr 2010	2 months
Conduct Pilot	May 2010	May 2010	1 month
Deployment	Jun 2010	Jul 2010	2 months
Phase 2 – Implement Regional Scanning Center and Internet Access			
Planning Phase	Aug 2010	Aug 2010	1 month
Requirements Analysis and Design	Aug 2010	Nov 2010	3 months
Customization and Data Conversion	Sep 2010	Jan 2011	6 months
System Acceptance and User Acceptance Testing	Feb 2011	Apr 2011	2 months
Deployment	May 2011	May 2011	1 month
Project Closeout	Jun 2011	Jun 2011	1 month
Total Project Implementation (note some activities overlap)			36 months

6.6 Project Monitoring

The CDI will comply with the SIMM's IT project oversight framework reporting requirements. Project status reports will be required on a regular basis and status meetings will be held to discuss and communicate issues, concerns, risks, and upcoming activities. In addition, CDI will secure the services of a consultant Project Manager and an Oversight/V&V vendor with knowledge, expertise and skills in comparable projects to provide additional recommendations regarding best practices.

Monitoring of the project will be performed using:

- Documented weekly and monthly status reports from the solution vendor
- Weekly status meetings with the solution vendor and project team
- Monthly overall project performance reports (i.e., State project team and vendor performance) that document project metrics, variances and trends against the project baseline
- Monthly oversight reports in accordance with SIMM 45

The CDI will also submit periodic project progress reports to the DOF reporting the planned and actual cost savings, cost avoidances, and increases in staff efficiencies, as part of monitoring the project's return on investment.

6.7 Project Quality

Quality assurance will be monitored using the CDI's existing IT quality control procedures. Procedures include separation of duties, acceptance testing, version control tools, requirements traceability matrix, and customer walk-through. The project management consultant will assist in the development of quality standards and their implementation for this project. The oversight/V&V vendor will validate the project's adherence to the plan and evaluate products to ensure they meet quality standards.

6.8 Change Management

The project team will utilize the CDI's existing change management processes as defined within the project management framework. In addition, the Project Sponsor must approve significant changes to the project baselines (cost, schedule, scope and quality). During development, the project team will use CDI's configuration management processes.

6.9 Authorization Required

Approval of this FSR is required internally from the CDI's Executive Office, the CIO, and the Budget Officer. Approval is required from the DOF as part of the standard FSR review process. A copy of the FSR will also be provided to the Legislative Analyst's Office.

In addition, the Department of General Services (DGS) must review the associated Information Technology Procurement Plan (ITPP) to ensure the proposed procurement approach is consistent with current procurement policy and practices. An LPAER must be submitted to receive approval to exceed the Imaging MSA's $1,500,000 limit.

7.0 Risk Management Plan

The project's Risk Management Plan will document the processes and procedures used to identify risks associated with the project and how they will be managed. The project will follow the risk management processes identified by the CDI's PMO and the SIMM.

7.1 Risk Management Worksheet

The following worksheet defines the current risks associated with the project. The columns in the worksheet are defined as follows:

- **Category/Event** – The risk category defined by the IT Project Oversight Framework or a specific statement of risk.
- **Impact** – The magnitude of the effect on the project should the risk occur. Expressed as High (H), Medium (M) or Low (L).
- **Probability** – The likelihood that the risk will occur. Expressed as High (H), Medium (M) or Low (L).
- **Timeframe** – The timeframe within which action must be taken to mitigate the risk. Expressed as Short-term (S), Medium-term (M), or Long-term (L).
- **Exposure** – The combined effect of the Impact and Probability, as computed per the IT Project Oversight Framework. Expressed as High (H), Medium (M) or Low (L).
- **Severity** – The combined effect of the Exposure and the Timeframe, as computed per the IT Project Oversight Framework. Expressed as High (H), Medium (M) or Low (L).
- **Mitigation/Contingency Actions** – Preliminary mitigation and contingency actions that have been proposed to address the risk.

Table 7-1 Risk Management Worksheet

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
Plan/Schedule						
Project delays may extend the schedule.	H	M	M	H	H	-Develop and implement change control and schedule monitoring processes. -Ensure decision makers receive regular status updates to ensure they are aware of when they need to respond to project requests. -Develop mitigation and contingency plans for tasks that are likely to cause project delays.
Scope creep may delay project completion.	H	H	M	H	H	-Clearly define and document the scope and objectives for the project in a project plan. -Develop and implement a change control process with specific criteria to evaluate the merit of proposed changes. -Communicate to staff and stakeholders the objectives and project schedule.
Organization and management						
Loss of management support during project execution will almost certainly affect acceptance of the system.	H	L	M	M	M	-Confirm priorities for the project with executives and management. -Develop and implement a Communication Plan, Project Management Plan, and Change Leadership Plan to ensure managers and executives are kept informed of project progress and successes, and solicit feedback

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
						to confirm expectations and support.
Lack of support from division management will likely have a negative impact on acceptance and adoption of the system.	H	M	S	H	H	-Communicate to division managers the business need and objectives of the project. -Develop and implement a Communication Plan, Project Management Plan, and Change Leadership Plan to ensure managers and staff are kept informed of project progress and successes. -Develop and distribute regular status reports and involve division managers in regular status meetings to allow them to voice concerns.
Lack of coordination and communication between the project team and users in the satellite offices will likely have a negative impact on acceptance and adoption of the system.	M	M	S	M	H	-Develop and implement a Communication Plan, Project Management Plan, and Change Leadership Plan to ensure satellite office staff are kept informed of project progress and successes. -Develop and distribute regular status reports and involve satellite offices in regular status updates to allow them to voice concerns. -Develop a travel plan and/or use video conferencing to allow satellite offices to participate in requirements and design sessions and prototype walkthroughs.
Inadequate business process analysis will likely result in insufficient or poorly designed process and	H	M	S	H	H	-Include tasks in the project plan to address correction and adjustment of business processes and workflows. -Obtain management commitment of resources to participate in requirements,

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
workflow changes.						design, and testing activities. -Include users in the business process analysis and in reviews of early working drafts and prototypes, as well as in the testing process. -Provide a feedback and suggestion form to allow users to comment and offer suggestions prior to going into production.
Lack of commitment from users (buy-in and support) and resistance to change will negatively impact acceptance and adoption of the system.	M	H	M	H	H	-Communicate to users the business needs and objectives of the project. -Develop and implement a Communication Plan, Project Management Plan, and Change Leadership Plan to ensure staff are kept informed of project progress and successes. -Develop and distribute regular status reports and provide a mechanism for users to pose questions or provide feedback. -Enlist management and executive support to communicate support for the project.
Development Environment						
Problems with equipment availability or delays in procurement may cause delays to establishing the system environments.	H	M	S	H	H	-Begin work on the hardware procurement as soon as possible. -Identify alternative suppliers that may be able to fulfill the order in case of problems.
User Involvement						

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
Inadequate subject matter expert (SME) involvement in defining requirements, process design, and testing results will likely result in poorly designed workflows and index/profiles.	H	M	S	H	H	-Obtain management commitment of resources to participate in requirements, design, and testing activities. -Provide regular status updates to users and ensure participants are clear on when they will be needed and what the time expectations are. -Identify backup or alternative SMEs that can be used in the event a primary SME is unavailable. Ensure the backup SME receives the same communications and updates that the primary SME receives.
Business processes may vary for different locations within the same bureau causing conflicting requirements.	L	M	M	L	L	-Encourage participation from all satellite offices during requirements and design phases, and deliverable reviews. -Specifically solicit feedback from all locations during the review process and during the testing phase. -Document any issues or conflicting requirements in an Issue Log and assign specific owners for resolution. -Develop and implement an Escalation process to decide on the correct approach if the conflicting requirements or issue cannot be resolved by the defined due date.
Contractor Performance						
Poor contractor performance will likely	H	L	S	M	H	-Clearly document expectations in the solicitation document, including acceptance

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
delay the project schedule.						and quality criteria. -Include penalties in the contract for poor performance and clear criteria for when the penalties would be executed. -Develop an Escalation process that can be used to resolve issues and disagreements prior to resorting to contractual penalties.
Poor quality documentation and training will almost certainly have a negative impact on user acceptance of the system.	H	L	M	M	M	-Clearly document expectations in the solicitation document, including acceptance and quality criteria. -Require bidders to provide samples of training materials and references to allow the CDI to determine the success of the bidders' prior engagements. -Use Deliverable Expectation Documents (DEDs) and/or annotated outlines to achieve mutual understanding of deliverable content and level of detail prior to the vendor beginning work on the deliverable. -Require delivery of the training design prior to the start of testing. -Schedule training to occur just before the deployment or testing phase. -Include users in the review of deliverables to ensure the delivered materials are at a sufficient level of detail. -Include tasks in the project schedule for follow-up training and refresher training to

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
						address poor retention.
Insufficient training and knowledge transfer for CDI IT staff will almost certainly cause problems in maintaining and operating the system.	H	M	M	H	H	-Clearly document expectations for knowledge transfer and technical training in the solicitation document, including acceptance and quality criteria. -Require delivery of a knowledge transfer plan as part of the training plan developed by the solution vendor. -Schedule specific knowledge transfer sessions to allow CDI IT staff to ask questions or walkthrough specific design or technical topics. -Include technical staff in the review of appropriate deliverables (e.g., design and interface documents) to ensure the delivered materials are at a sufficient level of detail. -Include tasks in the project schedule for follow-up training and refresher training to address poor retention.
Requirements management						
Additional requirements are identified during reviews leading to scope creep.	H	H	M	H	H	-Clearly define and document the scope and objectives for the project in a project plan. -Develop and implement a change control process with specific criteria to evaluate the merit of proposed changes. -Communicate to staff and stakeholders the objectives, project schedule and scope.

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
External Environment						
Insufficient funding will have a negative effect on the success of the project.	H	L	S	M	H	-Discuss scope with the executives and budget staff and enlist support for the project. -Develop potential alternatives and scope tradeoffs, if funding appears to be in jeopardy.
Legal requirements for retention of paper and original signatures may cause the project to be unable to achieve its full benefits.	H	M	S	H	H	-Continue discussions with Legal staff regarding current regulations and legislated requirements. -Identify and prioritize the forms and documents which would provide the most benefit from being paperless and have Legal staff research and advice on legal requirements. -Communicate and coordinate with industry partners to promote movement to electronic methods and address authentication/electronic signature requirements.
Personnel						
Lack of required staffing with the appropriate skills may result in a poor quality system.	H	M	S	H	H	-Obtain management commitment of resources to participate in requirements, design, and testing activities. -Develop a Staffing Plan to determine when specific skill sets are needed, and monitor staff availability as the time approaches. -Provide regular status updates to users and ensure participants are clear on when they will be needed and what the time

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
						expectations are. -Identify backup or alternative SMEs that can be used in the event a primary SME is unavailable. Ensure the backup SME receives the same communications and updates that the primary SME receives.
Staff turnover and retirements may lead to loss of critical knowledge and resources.	H	H	M	H	H	-Identify backup or alternative SMEs that can be used in the event a primary SME is unavailable. Ensure the backup SME receives the same communications and updates that the primary SME receives. Assign backups for each key staff. -Develop a Staffing Plan to determine when specific skill sets are needed, and monitor staff availability as the time approaches. -If necessary, develop knowledge transfer and succession plans for key staff to ensure their skills and knowledge are shared with other staff prior to departure.
Non-availability of management staff to make decisions may negatively affect project schedule and/or quality	H	L	S	M	H	-Communicate to division managers the business need and objectives of the project. -Develop and implement a Communication Plan, Project Management Plan, and Change Leadership Plan to ensure managers and staff are kept informed of project progress and successes. -Develop and distribute regular status reports and involve division managers in regular status meetings to allow them to voice

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
						concerns. -Develop and implement an Escalation process to decide on the correct approach if the conflicting requirements or issue cannot be resolved by the defined due date.
Design and Implementation						
Impacts to the network may be greater than predicted causing delays in retrieving and storing image data.	H	L	L	M	L	-Require the solution vendor to document their capacity and throughput models and assumptions. -Require the solution vendor to perform load and stress testing prior to going into production. -Monitor resource consumption and network performance during system and user acceptance testing. -If necessary, obtain additional capacity to address problems.
Poor system performance will negatively impact acceptance of the system.	H	M	L	H	M	-Require the solution vendor to document their capacity and throughput models and assumptions. -Require the solution vendor to perform load and stress testing prior to going into production. -Monitor resource consumption and network performance during system and user acceptance testing.

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
						-Obtain hardware that has expansion capabilities. -If necessary, obtain additional capacity to address problems.
Management Processes						
If additional staffing is not approved to support the project, the project may be cancelled or severely de-scoped.	H	M	S	H	H	–Determine how many staff are available through redirection. -Review the results and recommendations of the Commissioner's staffing analysis when available to understand proposed changes and staffing impacts. -Consider reducing project scope and determine the impacts and consequences of the reductions.
Control agency reviews may delay project activities and jeopardize the ability of the project to be successful.	H	M	S	H	H	-Work with control agencies to understand the review cycles and deadlines. -Actively communicate with control agencies to ensure the objectives and needs are clearly understood, and the consequences of missing project milestones and deadlines.
Other						
Inconsistency in naming and indexing will likely reduce search effectiveness.	H	H	S	H	H	-Develop standards for naming and indexing. Include these standards as part of the training curriculum and help features. -Use pulldown menus, pre-populated lists and selection boxes in the design of the indexing step to reduce the amount of freeform text

Risk Category /Event	Impact	Probability	Timeframe (Short, Medium, Long)	Exposure	Severity	Mitigation/Contingency Actions
						entry required. -Establish a Repository Librarian to enforce standards and monitor the contents of the document repository.
Unrealistic customer expectations will likely affect acceptance of the system.	M	M	S	M	H	-Clearly define and document the scope and objectives for the project in a project plan. -Communicate to staff and stakeholders the objectives, scope and project schedule. -Develop and implement a Communication Plan, Project Management Plan, and Change Leadership Plan to ensure managers and staff are kept informed of project progress and successes. -Provide a mechanism for users to pose questions or provide feedback.
Scanning staff initially will not have the detailed knowledge of the types of received mail for each bureau. This could lead to incorrect profiling, delays in routing and/or misrouting of electronic documents, and an initial degradation in processing times.	M	H	S	H	H	-Have each area identify the types of mail it receives and how to identify and index it. -Conduct several dry runs and training sessions with scanning staff and area experts prior to going into production. -If possible, implement techniques to help scanning staff identify how to classify mail including, specific P.O. boxes, form numbers, bar codes on outgoing documents, return address codes, etc. -Develop a specific process for handling mail that cannot immediately be identified.

7.1.1 Assessment

The Risk Management Worksheet (Table 7-1, above) identifies the potential sources of risk associated with this project. The risks identified on the worksheet will be re-evaluated on a monthly basis, or more frequently if required, throughout the project. In addition, the PW Project Manager, serving as the Risk Manager, will include all identified risks in the detailed project plan using CDI's standard project management planning tools. This plan will encompass the entire structure of the project and its deliverables, providing a comprehensive framework for assessing each aspect of the project for potential risk.

7.1.2 Risk Identification

The following tools were used to aid in the identification of risks:

- SIMM 45 – IT Project Oversight Framework, Categories and Examples of Risk
- Historical information, including risks from other CDI projects
- Project team brainstorming
- Interviews with stakeholders

The characteristics of each identified risk are captured on the Risk Management Worksheet. During the course of the project, a formal risk identification process will be implemented that provides appropriate mechanisms for CDI staff, project staff and vendor staff to identify risks as the project progresses.

7.2 Risk Analysis and Quantification

After identification, each risk is analyzed by the CDI Project Contract Manager, PW Project Manager, and vendor project manager to determine the risk impact, probability, and mitigation timeframe. The exposure and severity are evaluated and documented in the Risk Management Worksheet. Triggers that will result in an increase in risk exposure and/or severity will be identified at that time. The project managers will determine which risks warrant a response.

7.2.1 Risk Prioritization

Initial risks are, by their nature, of high priority as they are the earliest warnings of potential problems on the project. As the project moves forward, risks will be prioritized to identify where to apply resources to mitigate the risk. Prioritization factors include:

- Timeframe for resolution
- Ability of the organization to avoid the risk entirely

- Cost of mitigation and contingencies
- Impact on the budget and schedule

7.2.2 Risk Response

As noted above, the initial project risks are inherently high priority for resolution because they have been determined to be significant at this point in time. Each risk is validated, prioritized, and a risk owner is identified. The risk owner will not always be a project manager. Instead, the owner is the person who can most directly affect the risk. The risk owner is responsible for the definition of the risk management strategy. There are three primary risk response categories: avoidance, acceptance, and mitigation (described below). Once this primary category has been defined, the risk owner is responsible for developing, implementing and reporting on the strategy used to manage the risk. Risk owners may include any member of the project or vendor teams, CDI staff, the Project Sponsor, and/or the ITEC (as individual members or the council as a whole).

Table 7-2. Risk Response Categories

Response	Description
Avoidance	The project team can control this risk so that it is avoided entirely. Risk avoidance may be implemented in circumstances where the probability of impact and the severity of impact are so high that an alternative plan will be implemented to eliminate the possibility of the risk occurring. The team cannot eliminate all risk, but specific risk events often can be eliminated.
Mitigation	The project team can implement mitigation activities to control the impact or probability of the risk. Most risks will be subject to some form of risk mitigation. A detailed plan will be developed with specific steps, trigger dates or events, and anticipated outcomes to measure the effectiveness of mitigation efforts. The results of risk monitoring and mitigation efforts will be discussed in the regular status meetings, and mitigation plans and activities may be adjusted based on the effectiveness of the mitigations.
Acceptance	The project team has no control over this risk or the impact is low, and so the project accepts the risk event and the consequences should the risk occur. Usually, no mitigation activities are performed, though contingency plans may be developed, if appropriate.

7.2.3 Risk Sharing

The PW Project Manager will be responsible to delegate and manage those activities that have an associated risk factor. The CDI will share risk with the selected vendors performing work on this project and will establish areas of risk responsibility as either solely owned by one party to the effort or shared among multiple/all parties.

7.3 Risk Tracking and Control

7.3.1 Risk Tracking

The PW Project Manager will be responsible for establishing and maintaining risk status information, defining action plans, and taking corrective action, when appropriate. In addition, an oversight/V&V consultant will assist in monitoring the project for risks.

Risks will be formally reviewed on a biweekly basis. Risk escalation requirements as defined in the SIMM will be followed. The Risk Management Plan will be used in order to respond to risk events throughout the life of the project.

The tools used to monitor risk include project management software to identify potentially impacted project activities situated on the critical path, a risk management plan, and risk management worksheets. Additionally, metrics for measuring performance and progress toward resolving risks will be established and maintained.

7.3.2 Risk Control

Risk control executes the risk management plan to respond to the risk events throughout the duration of the project. As changes occur, identification, quantification, prioritization, and response are repeated. This cycle of monitoring and control continue throughout the life of the project. Some risk control techniques to be used are as follows:

- **Perform preventive action**. This action uses the risk management plan as a guide to proactively reduce or eliminate the probability of a risk event occurring.
- **Perform corrective action**. This action uses the risk management plan as a guide to performing the planned contingency risk response should a risk event occur.
- **Update the Risk Management Plan**. As the project changes, anticipated risks occur or fail to occur. As risk event effects are evaluated or new risks emerge, the risk management plan will be updated.

8.0 Economic Analysis Worksheets

The following section includes the Economic Analysis Worksheets for the PW Project.

- Existing System/Baseline Cost Worksheet
- Proposed Alternative: Implement New Document Repository and Regional Scanning
- Alternative 1: Upgrade Hummingbird DM and Implement Regional Scanning Centers
- Economic Analysis Summary Worksheet
- Project Funding Plan Worksheet

8.1 Existing System/Baseline Cost Worksheet

EXISTING SYSTEM/BASELINE COST WORKSHEET

Department: California Department of Insurance — All costs to be shown in whole (unrounded) dollars. — Date Prepared: 12/12/2007

Project: Paperless Workflow

	FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
Continuing Information Technology Costs										
Staff (salaries & benefits)	0.5	38,452	0.5	38,452	0.5	38,452	0.5	38,452	**2.0**	**153,808**
Hardware Lease/Maintenance		31,062		31,062		31,062		31,062		**124,248**
Software Maintenance/Licenses		34,206		34,206		34,206		34,206		**136,824**
Contract Services		58,422		58,422		58,422		58,422		**233,688**
Data Center Services		0		0		0		0		**0**
Agency Facilities		16,000		16,094		16,188		16,282		**64,564**
Other		4,058		4,058		4,058		4,058		**16,232**
Total IT Costs	**0.5**	**182,200**	**0.5**	**182,294**	**0.5**	**182,388**	**0.5**	**182,482**	**2.0**	**729,364**
Continuing Program Costs:										
Staff	1338.3	122,623,548	1338.3	122,623,548	1338.3	122,623,548	1338.3	122,623,548	**5353.2**	**490,494,192**
Other		54,675,252		55,106,124		54,969,424		54,969,424		**219,720,224**
Total Program Costs	**1338.3**	**177,298,800**	**1338.3**	**177,729,672**	**1338.3**	**177,592,972**	**1338.3**	**177,592,972**	**5353.2**	**710,214,416**
TOTAL EXISTING SYSTEM COST	**1338.8**	**177,481,000**	**1338.8**	**177,911,966**	**1338.8**	**177,775,360**	**1338.8**	**177,775,454**	**5355.2**	**710,943,780**

8.1.1 Existing System/Baseline Cost Assumptions

The following are the assumptions for the existing system/baseline costs.

1. No changes in IT or program staff are anticipated. The current staffing includes 0.5 PYs that support the Hummingbird DM system.
2. Hardware Lease/Maintenance costs are expected to remain the same across all years. These costs include the Hummingbird DM server maintenance, backup tapes for the ParaDocs system, and maintenance contracts for 20 existing Canon scanners.

Table 8-1. Existing Worksheet Hardware Lease/Maintenance Costs

Item	Ongoing Cost (annual)
Hummingbird DM server maintenance ($800 per server; 6 servers)	$4,800
ParaDocs backup tapes	$500
Maintenance for 2 Canon scanners for ParaDocs system ($1,171 per scanner)	$2,342
Maintenance for 20 department Canon scanners ($1,171 per scanner)	$23,420
Total	**$31,062**

3. Software Maintenance/Licenses costs include the licensing and maintenance of the Hummingbird DM and ParaDocs systems.

Table 8-2. Existing Worksheet Software Maintenance/License Costs

Item	Ongoing Cost (annual)
Hummingbird DM software maintenance	$21,754
Hummingbird DM – PatchLink software maintenance ($50 per server; 6 servers)	$300
ParaDocs Phase 1 software maintenance	$3,847
ParaDocs Phase 2 software maintenance	$8,200
ParaDocs backup software maintenance	$105
Total	**$34,206**

4. Contract Services include $58,422 for annual software support services for Hummingbird DM which is in addition to the software licensing and maintenance costs. The contracts are for services ($44,211) and consulting support ($14,211).
5. No changes in data center services are anticipated.
6. Agency Facilities costs include the current cost of file storage ($16,000) and retrieval at the SRC, which are expected to increase by an estimated 0.5% ($94) per year, if this FSR is not approved.

7. Continuing IT Other costs includes the OE&E for the 0.5 PYs supporting the Hummingbird DM system.
8. Continuing Program Staff Costs include all CDI staff (except for the 0.5 PYs supporting the Hummingbird DM system), since all CDI staff will be affected by the proposed solution.
9. Other Continuing Program Costs include OE&E for CDI program staff including additional fees for offsite storage at Multiplex facility, and current rent for all facilities.
10. Other Continuing Program Costs for FY 09/10 include costs for obtaining additional facility space and equipment for storage of documents if this FSR is not approved. The Department will have to determine whether the increased cost can be absorbed or if additional spending authority is needed to address these costs. FY 10/11 depicts the ongoing costs for the additional facility space.
    a. The additional space estimates for the West Sacramento warehouse are based on the last space acquisition at West Sacramento (2007) and the current rate of growth in files. The last acquisition was for approximately 1000 sq ft, and the new space is nearly 20% full with newly processed files. The estimate below assumes a 20% increase in space (current total space is 8044), which is estimated to accommodate five to six years of new files.
    b. The additional space estimates for San Francisco legal files are based on procuring an approximate equivalent amount of space to store five to six years' worth of new files. The estimate of 1890 sq ft is approximately three percent (3%) of the total San Francisco sq ft (63,002).
    c. The cost for the facility upgrades in San Francisco is based on the costs for the last upgrade to the San Francisco central files ($80,000).
    d. The increase in overall office space (for the remaining offices) was assumed to accommodate both additional storage space and additional staffing needs. The costs are based on a summation of two percent increase applied to the current space at the current rent for each facility (excluding San Francisco and West Sacramento).
    e. The cost for the West Sacramento shelving units is based on the last acquisition. For 1000 sq. ft. of space, 95 shelves were needed. For an addition of 1600 sq ft, 143 shelves were estimated at a cost of $175/shelf. San Francisco shelving units were estimated at 181 shelves, based on the West Sacramento acquisition assumptions.

Table 8-3. Existing Worksheet Other Continuing Program Costs for FY 09/10

Item	One-time Cost	Ongoing Cost (annual)
Additional rent at West Sacramento warehouse (additional 1600 sq ft at $0.75/sq ft)		$14,481
Additional rent at San Francisco office (additional 1890 sq ft at $4.87/sq ft)		$110,452
Facility upgrade costs to support additional weight of files at San Francisco	$80,000	
Additional rent at remaining locations (average of 2% growth in current space)		$169,239
Additional shelving units for West Sacramento warehouse at $175/shelving unit	$25,025	
Additional shelving units for San Francisco Legal files at $175/shelving unit	$31, 675	
Total	**$136,700**	**$294,172**

8.2 Proposed Alternative: Implement New Document Repository and Regional Scanning Centers

The proposed alternative consists of obtaining the products and services of a COTS imaging and document management vendor. The solution vendor would install, configure and customize the product; develop eforms and workflows to automate CDI's internal processes; develop the necessary interfaces to the existing systems; perform business process analysis, testing, training and data conversion; and deploy the system to all CDI offices.

In addition, a consultant project manager is needed to oversee and manage the solution vendor, and an oversight/V&V vendor is needed to ensure the project and product meet its defined requirements and objectives.

8.2.1 Proposed Alternative Assumptions

The following are the assumptions for the proposed alternative.

General Assumptions

1. No additional data center services will be required. The existing network infrastructure possesses sufficient excess capacity to absorb the increased traffic.
2. The scanning and document management software will be COTS products that require configuration and minor customizations. Custom coding will be required to address the interfaces to the CDI's existing three systems (IDB, EIP, eCounsel) and the integration with the content management system.
3. The solution will reside at the CDI's Sacramento location in keeping with the CDI's efforts to consolidate their infrastructure and reduce costs. A "hot site" location will be established in Los Angeles (or other geographically separate location).
4. Regional scanning centers will be established at the Sacramento, San Francisco, and Los Angeles offices. Each scanning center will require approximately 300 sq ft of facility space, which will be made available from existing office space.
5. Members of the public may access the system via the public viewing rooms. Specific documents which are appropriate to the public also will be made available via the Internet in Phase 2 of the project.
6. The CDI will use the Imaging MSA to obtain the services of the solution vendor and either the CMAS or IT Consulting MSA to obtain the services of a consultant PM and an oversight/V&V vendor. A single contractor will provide both project oversight and V&V services.
7. The procurement phase for the three contracts is estimated to be eight months.

PROPOSED ALTERNATIVE: **New Document Mgmt Repository with Regional Scanning**

Date Prepared: 12/12/2007

Department: California Department of Insurance

All Costs Should be shown in whole (unrounded) dollars.

Project: Paperless Workflow

	FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs										
Staff (Salaries & Benefits)	1.8	192,140	5.6	586,108	9.2	743,224	0.0	0	16.6	1,521,472
Hardware Purchase		983,000		0		0		0		983,000
Software Purchase/License		1,243,200		0		0		0		1,243,200
Telecommunications		0		0		0		0		0
Contract Services										
Software Customization		328,680		1,898,733		1,716,855		0		3,944,268
Project Management		74,700		179,280		179,280		0		433,260
Project Oversight		23,760		71,280		71,280		0		166,320
IV&V Services		27,000		108,000		104,940		0		239,940
Other Contract Services		71,086		0		0		100,000		171,086
TOTAL Contract Services		525,226		2,257,293		2,072,355		100,000		4,954,874
Data Center Services		0		0		0		0		0
Agency Facilities		0		0		0		0		0
Other		35,779		66,510		116,545		0		218,834
Total One-time IT Costs	**1.8**	**2,979,345**	**5.6**	**2,909,911**	**9.2**	**2,932,124**	**0.0**	**100,000**	**16.6**	**8,921,380**
Continuing IT Project Costs										
Staff (Salaries & Benefits)	0.0	0	0.0	0	2.6	245,798	9.6	696,902	12.2	942,700
Hardware Lease/Maintenance		0		0		156,020		156,020		312,040
Software Maintenance/Licenses		0		0		243,860		243,860		487,720
Telecommunications		0		0		0		0		0
Contract Services		0		0		0		0		0
Data Center Services		0		0		0		0		0
Agency Facilities		0		0		0		0		0
Other		0		0		32,460		89,265		121,725
Total Continuing IT Costs	**0.0**	**0**	**0.0**	**0**	**2.6**	**678,138**	**9.6**	**1,186,047**	**12.2**	**1,864,185**
Total Project Costs	**1.8**	**2,979,345**	**5.6**	**2,909,911**	**11.8**	**3,610,262**	**9.6**	**1,286,047**	**28.8**	**10,785,565**
Continuing Existing Costs										
Information Technology Staff	0.5	38,452	0.5	38,452	0.0	0	0.0	0	1.0	76,904
Other IT Costs		143,748		143,748		54,414		41,762		383,672
Total Continuing Existing IT Costs	**0.5**	**182,200**	**0.5**	**182,200**	**0.0**	**54,414**	**0.0**	**41,762**	**1.0**	**460,576**
Program Staff	1336.5	122,431,408	1334.7	122,239,904	1329.0	121,875,442	1331.2	122,167,562	5331.4	488,714,316
Other Program Costs		54,660,510		54,646,009		54,673,885		54,687,973		218,668,377
Total Continuing Existing Program Costs	**1336.5**	**177,091,918**	**1334.7**	**176,885,913**	**1329.0**	**176,549,327**	**1331.2**	**176,855,535**	**5331.4**	**707,382,693**
Total Continuing Existing Costs	**1337.0**	**177,274,118**	**1335.2**	**177,068,113**	**1329.0**	**176,603,741**	**1331.2**	**176,897,297**	**5332.4**	**707,843,269**
TOTAL ALTERNATIVE COSTS	**1338.8**	**180,253,463**	**1340.8**	**179,978,024**	**1340.8**	**180,214,003**	**1340.8**	**178,183,344**	**5361.2**	**718,628,834**
INCREASED REVENUES		0		0		0		0		**0**

8. The schedule assumes a contract start date of February 2009 for the consultant project manager, and a start date of March 2009 for the oversight/V&V vendor.
9. The schedule assumes a contract start date of March 2009 for the solution vendor, with duration of 28 months for the implementation (ending June 2011). An additional year of software support consulting services will begin after system deployment.

One-Time IT Project Costs

10. One-time Project costs for staff include CDI program subject matter experts and technical support staff at the following estimated average participation percentages during the implementation phase:

Table 8-4. Proposed Alternative: One-time Project Costs for Staff

Staff Role	Average Participation per Staff	Number of Staff	Comment
Project Sponsor	2%	1	Chief Deputy of Operations, Dennis Ward
CDI IT Project/Contract Manager	25%	1	PMO representative
CDI Information Security Officer (ISO)	2%	1	
CDI Legal Advisor/Privacy Officer	2%	1	Assistant Chief Counsel, Bob Hagedorn
CDI IT Network Staff	10%	1	System Software Specialist III
CDI IT Applications Staff	50% 100%	2	Senior Programmer Analyst Staff Programmer Analyst; CDI will request a three-year limited term position for the Staff Programmer Analyst
CDI IT Database Administrator/-Repository Administrator	100%	1	Senior Programmer Analyst; CDI will request a three-year limited term position.
CDI IT Web Services Staff	5%	1	Staff Information Systems Analyst
CDI IT Help Desk Staff	10%	10	5 – Staff Information Systems Analysts 5 – Associate Information Systems Analysts Approximately 2 months of participation during testing and pilot phases to gain experience with the system
CDI Repository Librarian	50%	1	Associate Governmental Program Analyst
CDI Scanning Staff	50%	5	5 – Office Technicians; During Phase 2 only
CDI Program Subject Matter Experts	10%	20	1 Division level staff member from all divisions (20 divisions)

11. One-time project costs for FY 08/09 include the CDI project staff costs for planning and conducting the procurement for the consultant project manager, the oversight/V&V vendor and the solution vendor. The procurement phase is scheduled for July 2008 through February 2009.

12. The Hardware Purchase costs assumes the following:

Table 8-5. Proposed Alternative: One-time Project Costs for Hardware Purchase

Item	Number	Comment
Production Servers	8	Dual or quad processors
Scanning Workstations	16	
Indexing Workstations	10	
Production Scanners – medium volume	6	2 at each regional office
Production Scanners – low volume	8	2 each at four satellite offices
Development/Test Scanners	2	1 low volume 1 medium volume
Hot site Servers	6	
EMC Center, 16TB WORM storage	2	1 production and 1 hot site

13. The hardware purchase estimate was derived from the market survey information provided by likely COTS vendors, which were then averaged.

Table 8-6. Proposed Alternative: Market Survey Costs for Hardware Purchase

Vendor	Cost
Vendor A	$1,061,000
Vendor B	$617,000
Vendor C	$839,000
Vendor D	$839,000
Average	**$839,000**

14. The Hardware Purchase costs include additional 21-inch monitors for 300 CDI staff at a cost of $480 per monitor (including cable) for a total of $144,000. The cost is estimated based on the Strategic Sourcing Initiative list dated September 4, 2007.

15. The scanning and document management software estimate was derived from the market survey information provided by likely COTS vendors, which were then averaged. The following assumptions were used in obtaining pricing information:

    a. User population of 1,350

    b. Electronic workflow and document retrieval licenses are needed for all users

    c. Scanning performed at three regional sites

    d. TIFF to PDF conversion functionality is required

e. System must support email, fax, and bulk import

f. System must integrate with Microsoft Office

16. The Software Purchase/Licenses costs include the following:

Table 8-7. Proposed Alternative: One-time Project Costs for Software Purchase

Item	Cost	Comment
Scanning and Document Management Software	$1,216,138 (average)	Average based on four vendor quotes:
Vendor A		$2,004,800
Vendor B		$849,750
Vendor C		$960,000
Vendor D		$1,050,000
CommVault license ($1,565 per server, 14 servers)	$21,910	Used for backups
iDataAgent license ($368 per server, 14 servers)	$5,152	Used for backups
Total	**$1,243,200**	

17. The solution vendor software customization services are estimated at:

Table 8-8. Proposed Alternative: One-time Project Costs for Software Customization Services

Role	Average Participation per Staff	Number of Staff	Comment
Vendor Project Manager	50%	1	To manage vendor team
Business Analyst/Test Lead	100%	1	
Business Analysts	100%	3	
Developers	100%	2	
DBA/Data Conversion Lead	100%	1	
Scanning Lead	50%	1	Phase 2 only
End User Trainers	25%	1	Full-time during training months
Technical Trainer	10%	1	

18. The consultant project manager contract is estimated at 0.5 FTE for approximately 29 months. The consultant PM will manage the solution vendor on behalf of the CDI and will begin work approximately one month prior to the solution vendor to begin customization of the processes and procedures that will be used to manage the solution vendor, based on the CDI's project management methodology.

19. The oversight/IV&V contract is estimated at 0.5 FTE for approximately 28 months. The vendor will be responsible for providing oversight as required by the IT Project Oversight Framework and will provide IV&V services to ensure the delivered products meet the business needs of the CDI.

20. Other Contract Services includes the DGS administrative fees for processing the procurement transactions at the current rate of 1.98% of the contract value, with a maximum of $35,000 per transaction.

21. One-time IT Project Costs/Other includes the OE&E costs for project staff and the cost of travel to the satellite offices for requirements gathering/site preparation and deployment assistance. Four trips to each site were assumed with four persons traveling on each trip. The following assumptions were made regarding travel:

    a. Each trip would consist of 5 days/4 nights of travel.

    b. Mileage for San Francisco includes travel to San Francisco and additional mileage for travel to the Benecia and Morgan Hill satellite offices.

    c. Mileage was calculated at $0.485 per mile.

    d. Car rentals were assumed for Los Angeles, Orange County and San Diego and based on recent travel rates.

    e. Hotel and per diem rates are in accordance with the Department of Personnel Administration's current allowable rates.

Table 8-9. Proposed Alternative: One-time Project Costs for Travel

Location	Airfare (roundtrip)	Mileage/ Car Rental	Hotel (4 nights)	Per Diem	Total 1 trip/1 person
San Francisco	n/a	$179	$560	$200	$939
Los Angeles	$240	$350	$440	$200	$1,230
Fresno	n/a	$168	$336	$200	$1,126
Orange County	$240	$350	$336	$200	$1,260
San Diego	$270	$350	$440	$200	$704

Continuing IT Project Costs

22. Continuing IT Project costs for staff include CDI technical support staff at the following estimated average participation percentages. The CDI will request two (2) three-year limited term positions to serve on the project and to allow the CDI to evaluate the amount of effort required for on-going support of the new system.

Table 8-10. Proposed Alternative: Continuing IT Project Costs for Staff

Staff Role	PY	Classification
CDI IT Server Staff	1.0	Staff Information Systems Analyst
CDI IT Applications Staff	1.0	Staff Programmer Analyst Limited Term Position
CDI IT Help Desk Staff	1.0	Associate Information Systems Analyst
CDI IT Database Administrator/-Repository Administrator	1.0	Senior Programmer Analyst Limited Term Position
CDI IT Web Services Staff	0.1	Staff Information Systems Analyst
CDI Repository Librarian	0.5	Associate Governmental Program Analyst
CDI Scanning Staff	5.0	Office Technicians

23. The Hardware Lease/Maintenance costs were derived from the market survey information provided by likely COTS vendors, which were then averaged. The costs include $5,000 in consumables for scanner maintenance (i.e., cleaners, replacement rollers, etc.).

Table 8-11. Proposed Alternative: Market Survey Costs for Hardware Maintenance

Vendor	Cost
Vendor A	$195,980
Vendor B	$116,060
Vendor C	$156,020
Vendor D	$156,020
Average	**$156,020**

24. The Software Licensing/Maintenance costs for the scanning and document management software were derived from the market survey information provided by likely COTS vendors, which were then averaged. The ongoing software maintenance for the COTS scanning and document management software would be procured from the solution vendor for a period of three years (renewable annually). The Software Licensing/Maintenance costs are comprised of the following components.

Table 8-12. Proposed Alternative: Continuing Project Costs for Software Licensing/Maintenance

Item	Cost	Comment
Scanning and Document Management Software	$237,280 (average)	Average from four vendor quotes:
Vendor A		$360,864
Vendor B		$152,955
Vendor C		$172,800
Vendor D		$262,500
CommVault maintenance ($345 per server, 14 servers)	$4,830	Used for backups
iDataAgent maintenance ($125 per server, 14 servers)	$1,750	Used for backups
Total	**$243,860**	

25. Continuing IT Project Costs, Contract Services costs include additional software maintenance consulting services from the solution vendor for one year at a cost of $100,000.

26. Continuing IT Project Costs Other includes the OE&E for the staff required for continuing support of the new system.

Continuing Existing Costs

27. All existing costs are the same as from the Existing worksheet, except for the following items:

    a. Continuing Existing IT Staff costs include the staff currently performing maintenance of the Hummingbird DM solution. These staff will continue supporting the DM solution until the new system is deployed (FY 10/11) and then will be redirected to other duties.

    b. Continuing Existing Other IT costs during FY 10/11 is reduced due to the decommissioning of the Hummingbird DM system when Phase 1 of the project is deployed. The ParaDocs system is decommissioned in Phase 2 of the project (FY 11/12), leaving the costs for the existing scanner maintenance and SRC storage.

    c. Continuing Existing Program Staff includes all CDI staff except those staff participating in the project and those staff currently supporting the Hummingbird DM system.

    d. Continuing Existing Program Staff costs in FY 10/11 reflect the redirection of the Hummingbird DM support staff to other duties where they are users of the new system.

    e. Continuing Existing Program Other costs includes the OE&E for program staff except staff participating in the project or supporting the Hummingbird DM system.

8.3 Alternative 1: Upgrade Hummingbird DM and Implement Regional Scanning

In Alternative 1, the CDI would upgrade the existing Hummingbird DM product and extend it to the rest of the Department, and implement a scanning center in each of the mailrooms at the regional offices (Sacramento, San Francisco, and Los Angeles). Mail items would be scanned upon receipt and staff would index and route the scanned images of the documents electronically via rules-based workflow to the appropriate bureau. In cases where a satellite office receives mail directly at the location, low volume scanning equipment would be provided to allow staff at the satellite office to scan and index the received items.

As in the proposed alternative, a consultant project manager is needed to oversee and manage the solution vendor, and an oversight/V&V vendor is needed to ensure the project and product meet its defined requirements and objectives.

8.3.1 Rejected Alternative 1 Assumptions

1. No additional data center services will be required. The existing network infrastructure possesses sufficient excess capacity to absorb the increased traffic.
2. The existing Hummingbird DM system would be upgraded, and scanning software and an additional module would be installed to address the workflow requirements. The COTS products would require configuration and minor customizations. Custom coding will be required to address the interfaces to the CDI's existing three systems (IDB, EIP, eCounsel) and the integration with the content management system.
3. The solution will reside at the CDI's Sacramento location in keeping with the CDI's efforts to consolidate their infrastructure and reduce costs. A "hot site" location will be established in Los Angeles (or other geographically separate location).
4. Regional scanning centers will be established at the Sacramento, San Francisco, and Los Angeles offices. Each scanning center will require approximately 300 sq ft of facility space, which will be made available from existing office space.
5. Members of the public may access the system via the public viewing rooms. Specific documents which are appropriate to the public also will be made available via the Internet in Phase 2 of the project.
6. The CDI will use either a non-competitive bid (NCB) to obtain the products and services from the current vendor, or an RFP to obtain a competitive solution from vendors. There are four Hummingbird vendors in California, including the current vendor.

ALTERNATIVE #1: Upgrade Hummingbird DM and Implement Regional Scanning

Date Prepared: 12/12/2007

Department: California Department of Insurance

All Costs Should be shown in whole (unrounded) dollars.

Project: Paperless Workflow

	FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
One-Time IT Project Costs										
Staff (Salaries & Benefits)	1.0	107,916	5.5	574,568	9.6	782,620	0.2	24,333	16.3	1,489,437
Hardware Purchase		0		983,000		0		0		983,000
Software Purchase/License		0		829,812		0		0		829,812
Telecommunications		0		0		0		0		0
Contract Services										
Software Customization		0		1,531,765		1,926,430		14,940		3,473,135
Project Management		0		179,280		179,280		14,940		373,500
Project Oversight		0		65,340		71,280		5,940		142,560
IV&V Services		0		118,800		129,600		10,800		259,200
Other Contract Services		287,828		56,064		0		100,000		443,892
TOTAL Contract Services		287,828		1,951,249		2,306,590		146,620		4,692,287
Data Center Services		0		0		0		0		0
Agency Facilities		0		0		0		0		0
Other		7,982		65,835		140,987		1,776		216,580
Total One-time IT Costs	**1.0**	**403,726**	**5.5**	**4,404,464**	**9.6**	**3,230,197**	**0.2**	**172,729**	**16.3**	**8,211,116**
Continuing IT Project Costs										
Staff (Salaries & Benefits)	0.0	0	0.0	0	2.1	201,398	9.1	652,502	11.2	853,900
Hardware Lease/Maintenance		0		0		156,020		156,020		312,040
Software Maintenance/Licenses		0		0		151,075		151,075		302,150
Telecommunications		0		0		0		0		0
Contract Services		0		0		0		0		0
Data Center Services		0		0		0		0		0
Agency Facilities		0		0		0		0		0
Other		0		0		32,460		89,265		121,725
Total Continuing IT Costs	**0.0**	**0**	**0.0**	**0**	**2.1**	**540,953**	**9.1**	**1,048,862**	**11.2**	**1,589,815**
Total Project Costs	**1.0**	**403,726**	**5.5**	**4,404,464**	**11.7**	**3,771,150**	**9.3**	**1,221,591**	**27.5**	**9,800,931**
Continuing Existing Costs										
Information Technology Staff	0.5	38,452	0.5	38,452	0.5	38,452	0.5	38,452	2.0	153,808
Other IT Costs		143,748		143,748		83,392		50,620		421,508
Total Continuing Existing IT Costs	**0.5**	**182,200**	**0.5**	**182,200**	**0.5**	**121,844**	**0.5**	**89,072**	**2.0**	**575,316**
Program Staff	1337.3	122,515,632	1334.8	122,251,444	1328.6	121,841,994	1331.0	122,149,177	5331.7	488,758,247
Other Program Costs		54,667,270		54,646,684		54,674,274		54,677,339		218,665,567
Total Continuing Existing Program Costs	**1337.3**	**177,182,902**	**1334.8**	**176,898,128**	**1328.6**	**176,516,268**	**1331.0**	**176,826,516**	**5331.7**	**707,423,814**
Total Continuing Existing Costs	**1337.8**	**177,365,102**	**1335.3**	**177,080,328**	**1329.1**	**176,638,112**	**1331.5**	**176,915,588**	**5333.7**	**707,999,130**
TOTAL ALTERNATIVE COSTS	**1338.8**	**177,768,828**	**1340.8**	**181,484,792**	**1340.8**	**180,409,262**	**1340.8**	**178,137,179**	**5361.2**	**717,800,061**
INCREASED REVENUES		0		0		0		0		**0**

7. The CDI will use either the CMAS or IT Consulting MSA to obtain the services of a consultant PM and an oversight/V&V vendor. A single contractor will provide both project oversight and V&V services.
8. The procurement phase for the three contracts is estimated to be thirteen months
9. The schedule assumes a contract start date of July 2009 for the consultant project manager, and a start date of August 2009 for the oversight/V&V vendor.
10. The schedule assumes a contract start date of August 2009 for the solution vendor, with duration of 24 months for the implementation (ending June 2011). An additional year of software support consulting services will begin after system deployment.

One-Time IT Project Costs

11. One-time Project costs for staff include CDI program subject matter experts and technical support staff. Refer to Table 8-4. Proposed Alternative: One-time Project Costs for Staff for the approximate percentages. Due to the difference in project length between the proposed solution and Alternative 1, the costs are slightly less.
12. One-time project costs for FY 08/09 include the CDI project staff costs for planning and conducting the procurement for the consultant project manager, the oversight/V&V vendor and the solution vendor. The procurement phase is scheduled for July 2008 through July 2009.
13. Hardware purchase costs are the same as the proposed alternative. Refer to Table 8-5. Proposed Alternative: One-time Project Costs for Hardware Purchase.
14. Software purchase costs were quoted from Open Text (the new owner of Hummingbird) based on upgrading the current system and providing licenses for 1,150 users (taking into account the existing 200 licenses).

Table 8-13. Alternative 1: One-time Project Costs for Software Purchase

Item	Cost	Comment
Scanning and Document Management Software	$802,750	
CommVault license ($1,565 per server, 14 servers)	$21,910	Used for backups
iDataAgent license ($368 per server, 14 servers)	$5,152	Used for backups
Total	**$829,812**	

15. Solution vendor customization services are estimated at the same percentages as the proposed alternative. Due to the difference in project length between the proposed solution and Alternative 1, the costs are slightly less.
16. The project management and oversight/V&V contracts are estimated at the same rate as the proposed solution. Due to the difference in project length between the proposed solution and Alternative 1, the costs are slightly less.

17. Final system deployment is scheduled for June 2011. Project closeout activities are scheduled for July 2011.
18. An acquisition support consultant would be hired to assist the CDI with writing the NCB or RFP. The contract is estimated at 1650 hours and would run from September 2008 thru July 2009.
19. Other contract services for FY 08/09 include the cost of the acquisition support contract and the DGS administrative fees for processing the acquisition support contract.
20. Other contract services for FY 09/10 include the DGS administrative fees for processing the PM and oversight/V&V contracts at a rate of 1.98% of the contract value. DGS fees for processing the solution vendor contract are estimated at 250 hours at a rate of $85 per hour.
21. One-time IT Project Costs/Other includes the OE&E for project staff and the cost of travel to the satellite offices for requirements gathering/site preparation and deployment assistance. The travel estimates are the same as for the proposed solution (Refer to Table 8-9. Proposed Alternative: One-time Project Costs for Travel). One set of trips for Phase 1 requirements gathering are included in FY 09/10. The remaining three sets of trips occur in FY 10/11.

Continuing IT Project Costs

22. Continuing IT Project costs for staff include CDI technical support staff at the following estimated average participation percentages:

Table 8-14. Alternative 1: Continuing IT Project Costs for Staff

Staff Role	PY	Classification
CDI Existing DM Support Staff	0.5	Staff Information Systems Analyst
CDI IT Server Staff	1.0	Staff Information Systems Analyst Limited Term Position
CDI IT Applications Staff	1.0	Staff Programmer Analyst
CDI IT Help Desk Staff	1.0	Associate Information Systems Analyst
CDI IT Database Administrator/-Repository Administrator	1.0	Senior Programmer Analyst Limited Term Position
CDI IT Web Services Staff	0.1	Staff Information Systems Analyst
CDI Repository Librarian	0.5	Associate Governmental Program Analyst
CDI Scanning Staff	5.0	Office Technician

23. The Hardware Lease/Maintenance costs are the same as for the proposed alternative. Refer to Table 8-11. Proposed Alternative: Market Survey Costs for Hardware Maintenance.
24. Software maintenance costs were quoted from Open Text (the new owner of Hummingbird) and are in addition to existing Hummingbird maintenance costs. The ongoing software maintenance for the COTS scanning and document management

software would be procured from the solution vendor for a period of three years (renewable annually).

Table 8-15. Alternative 1: Continuing Project Costs for Software Licensing/Maintenance

Item	Cost	Comment
Scanning and Document Management Software	$144,495	
CommVault maintenance ($345 per server, 14 servers)	$4,830	Used for backups
iDataAgent maintenance ($125 per server, 14 servers)	$1,750	Used for backups
Total	**$151,075**	

25. Continuing IT Project Costs, Contract Services costs include additional software maintenance consulting services from the solution vendor for one year at a cost of $100,000.

Continuing Existing Costs

26. All existing costs are the same as from the Existing worksheet, except for the following items:

    a. Continuing Existing IT Staff costs include the staff currently performing maintenance of the Hummingbird DM solution. These staff will continue supporting the DM solution after the new system is deployed.

    b. Continuing Existing Other IT costs during FY 10/11 is reduced due to the completion of the existing Hummingbird consulting support services from the current vendor. The ParaDocs system is decommissioned in Phase 2 of the project (FY 11/12), leaving the costs for the current Hummingbird licenses, existing scanner maintenance and SRC storage.

    c. Continuing Existing Program Staff includes all CDI staff except those staff participating in the project and those staff currently supporting the Hummingbird DM system.

    d. Continuing Existing Program Other costs includes the OE&E for program staff except staff participating in the project or supporting the Hummingbird DM system.

8.4 Economic Analysis Summary Worksheet

ECONOMIC ANALYSIS SUMMARY Date Prepared: 12/12/2007

Department: California Department of Insurance
All costs to be shown in whole (unrounded) dollars.
Project: Paperless Workflow

	FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
EXISTING SYSTEM										
Total IT Costs	0.5	182,200	0.5	182,294	0.5	182,388	0.5	182,482	2.0	729,364
Total Program Costs	1338.3	177,298,800	1338.3	177,729,672	1338.3	177,592,972	1338.3	177,592,972	5353.2	710,214,416
Total Existing System Costs	1338.8	177,481,000	1338.8	177,911,966	1338.8	177,775,360	1338.8	177,775,454	5355.2	710,943,780
PROPOSED ALTERNATIVE	**New Document Mgmt Repository with Regional Scanning**									
Total Project Costs	1.8	2,979,345	5.6	2,909,911	11.8	3,610,262	9.6	1,286,047	28.8	10,785,565
Total Cont. Exist. Costs	1337.0	177,274,118	1335.2	177,068,113	1329.0	176,603,741	1331.2	176,897,297	5332.4	707,843,269
Total Alternative Costs	1338.8	180,253,463	1340.8	179,978,024	1340.8	180,214,003	1340.8	178,183,344	5361.2	718,628,834
COST SAVINGS/AVOIDANCES	0.0	(2,772,463)	(2.0)	(2,066,058)	(2.0)	(2,438,643)	(2.0)	(407,890)	(6.0)	(7,685,054)
Increased Revenues		0		0		0		0		0
Net (Cost) or Benefit	0.0	(2,772,463)	(2.0)	(2,066,058)	(2.0)	(2,438,643)	(2.0)	(407,890)	(6.0)	(7,685,054)
Cum. Net (Cost) or Benefit	0.0	(2,772,463)	(2.0)	(4,838,521)	(4.0)	(7,277,164)	(6.0)	(7,685,054)		
ALTERNATIVE #1	**Upgrade Hummingbird DM and Implement Regional Scanning**									
Total Project Costs	1.0	403,726	5.5	4,404,464	11.7	3,771,150	9.3	1,221,591	27.5	9,800,931
Total Cont. Exist. Costs	1337.8	177,365,102	1335.3	177,080,328	1329.1	176,638,112	1331.5	176,915,588	5333.7	707,999,130
Total Alternative Costs	1338.8	177,768,828	1340.8	181,484,792	1340.8	180,409,262	1340.8	178,137,179	5361.2	717,800,061
COST SAVINGS/AVOIDANCES	0.0	(287,828)	(2.0)	(3,572,826)	(2.0)	(2,633,902)	(2.0)	(361,725)	(6.0)	(6,856,281)
Increased Revenues		0		0		0		0		0
Net (Cost) or Benefit	0.0	(287,828)	(2.0)	(3,572,826)	(2.0)	(2,633,902)	(2.0)	(361,725)	(6.0)	(6,856,281)
Cum. Net (Cost) or Benefit	0.0	(287,828)	(2.0)	(3,860,654)	(4.0)	(6,494,556)	(6.0)	(6,856,281)		

8.5 Project Funding Plan Worksheet

The CDI intends to redirect the majority of the project staffing resources required for the project, and will request spending authority for the one-time project funds and for the continuing support from the Insurance Fund.

Two additional IT positions will be required to assist with the project and the maintenance and operation of the on-going system. The CDI intends to request two (2) three-year limited term positions: one for database administration and repository administration, and one for application support. These two staff will participate in the project to gain expertise on the proposed solution and to assist with implementation. The staff would continue for a third year, after project implementation completes, to provide maintenance and support of the new system.

Because this system will transform the CDI's methods and business processes, it is difficult to evaluate the true amount of effort that will be required for ongoing support, particularly in the areas of eforms, workflows, and repository administration. By selecting three-year limited term positions, the CDI is able to evaluate the ongoing workload associated with the new system, prior to requesting permanent positions.

The Project Funding Plan is depicted below.

PROJECT FUNDING PLAN

Department: California Department of Insurance | All Costs to be in whole (unrounded) dollars | Date Prepared: 12/12/2007

Project: Paperless Workflow

	FY 2008/09		FY 2009/10		FY 2010/11		FY 2011/12		TOTALS	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
TOTAL PROJECT COSTS	**1.8**	**2,979,345**	**5.6**	**2,909,911**	**11.8**	**3,610,262**	**9.6**	**1,286,047**	**28.8**	**10,785,565**
RESOURCES TO BE REDIRECTED										
Staff	1.8	192,140	3.6	383,644	9.8	786,558	7.6	494,438	**22.8**	**1,856,780**
Funds:										
Existing System		0		0		0		0		**0**
Other Fund Sources		0		0		0		0		**0**
TOTAL REDIRECTED RESOURCES	**1.8**	**192,140**	**3.6**	**383,644**	**9.8**	**786,558**	**7.6**	**494,438**	**22.8**	**1,856,780**
ADDITIONAL PROJECT FUNDING NEEDED										
One-Time Project Costs	0.0	2,787,205	2.0	2,526,267	2.0	2,423,824	2.0	318,694	**6.0**	**8,055,990**
Continuing Project Costs	0.0	0	0.0	0		399,880		472,915	**0.0**	**872,795**
TOTAL ADDITIONAL PROJECT FUNDS NEEDED BY FISCAL YEAR	**0.0**	**2,787,205**	**2.0**	**2,526,267**	**2.0**	**2,823,704**	**2.0**	**791,609**	**6.0**	**8,928,785**
TOTAL PROJECT FUNDING	**1.8**	**2,979,345**	**5.6**	**2,909,911**	**11.8**	**3,610,262**	**9.6**	**1,286,047**	**28.8**	**10,785,565**
Difference: Funding - Costs	0.0	0	0.0	0	0.0	0	0.0	0	**0.0**	**0**

Total Estimated Cost Savings	0.0	0	0.0	0	0.0	0	0.0	97,828	**0.0**	**97,828**

APPENDIX A – ACRONYMS LIST

Acronym	Definition
ADA	Americans with Disabilities Act
AIMS	Agency Information Management Strategy
BITS	Budget Information Tracking System
BSC	Balanced Score Card
CCR	California Code of Regulations
CD	Compact Disc
CDI	California Department of Insurance
CIC	California Insurance Code
CIO	Chief Information Officer
CMAS	California Multiple Award Schedule
COIN	California Organized Investment Network
COTS	Commercial Off the Shelf
CSMC	Consumer Services and Market Conduct
CVS	Concurrent Versions System
DED	Deliverable Expectation Document
DGS	Department of General Services
DMC	Desktop and Mobile Computing
DMZ	Demilitarized Zone
Document	In a Document Management System, a document is a collection of one or more images that form a logical grouping. A document may be created by scanning a set of papers whose resulting images form a logical document. A document may also be a file generated by another program, such as a Microsoft Word, Excel, or PowerPoint file, an email file, or a PDF file. Examples of documents: An investigation report; a one page, two-sided Loan Application is a document.
DOF	Department of Finance
DTS	Department of Technology Services
DVD	Digital Video Disc
EAW	Economic Analysis Worksheets or Workbook
EIP	Enterprise Information Portal
FIDB	Fraud Integrated Database
FSR	Feasibility Study Report
FTP	File Transfer Protocol

Acronym	Definition
FY	Fiscal Year
GB	Gigabyte
GHz	GigaHertz
HTML	Hyper Text Markup Language
IDB	Integrated Data Base
IIS	Internet Information Server
Image	A representation of a single side of a sheet of paper, similar to a photograph. An image is the output of the process of scanning a piece of paper. If the paper is two sided (with text or graphics on both sides) then two images will be created by the scanner.
Indexing or profiling	The process of applying key information (words, names, dates, etc.) relating to the document to enable easy and accurate document retrieval when a user is performing a document retrieval or search. The index information helps distinguish one document from another. The indexing step is performed prior to saving a document to the Document Management System. Index information must be entered for each document in the repository. Examples of index fields: Insurance Co. Name, NAIC #, Doc Rec'd Date, etc.
IP	Internet Protocol
IPOC	Independent Project Oversight Consultant
ISO	Information Security Officer
IT	Information Technology
ITEC	Information Technology Executive Council
ITPP	Information Technology Procurement Plan
ITRP	Information Technology Refresh Policy
IV&V	Independent Verification and Validation
JPG	Joint Photographic Group format
LAN	Local Area Network
LPAER	Leveraged Procurement Agreement Exemption Request
MB	Megabyte
MHz	MegaHertz
MS	Microsoft
MSA	Master Services Agreement
NAIC	National Association of Insurance Commissioners
NAS	Network Attached Storage
NCB	Non Competitive Bid
NOS	Network Operating System

Acronym	Definition
OAS	Oracle Application Server
OCR	Optical Character Recognition; allows the system to read selected text areas of a document for data capture and text searches
OE&E	Operating Expense and Equipment
ORP	Operational Recovery Plan
OS	Operating System
PDF	Portable Document Format
PIE	Personnel Information Exchange
PIER	Post Implementation Evaluation Report
PLB	Producer Licensing Bureau
PM	Project Manager
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project Management Office
PMP	Project Management Professional
POP	Point of Presence
PRA	Public Records Act
Profiling	See Indexing
PSTN	Public Switched Telephone Network
PW	Paperless Workflow
PY	Personnel Year
RADIUS	Remote Authentication Dial-In User Service
RAID	Redundant Array of Independent Disks
RAM	Random Access Memory
RDBMS	Relational Database Management System
RFO	Request for Offer
RFP	Request for Proposal
RRB	Rate Regulation Branch
SAM	State Administrative Manual
SAN	Storage Attached Network
SDD	System Design Document
SERFF	System for Electronic Rate and Form Filing
SIMM	Statewide Information Management Manual
SME	Subject Matter Expert
SQL	Structured Query Language
SRC	State Records Center

Acronym	Definition
SRS	System Requirements Specification
TARS	Time Activity Reporting System
TCP/IP	Transmission Control Protocol/Internet Protocol
TIFF	Tagged Image File Format
TOAD	Tool for Oracle Application Development
V&V	Verification and Validation
VB	Visual Basic
VOIP	Voice Over Internet Protocol
VPN	Virtual Private Network
WAN	Wide Area Network
WORM	Write Once Read Many storage

APPENDIX B – BUSINESS FUNCTIONAL REQUIREMENTS

The following are the draft business and functional requirements that have been identified to meet the CDI's business needs. The table is comprised of the following columns:

- **Number** – A unique identifier for each requirement.
- **Requirement** – A specific requirement statement derived from the CDI's business needs.
- **Category** – A grouping based on type of functionality. Refer to Table 8-16.
- **Comments**– A comment providing clarification to the requirement statement.

Table 8-16. Business and Functional Requirements Categories

Requirement Category	Types of Features
Workflow	- Workflow routing - Approval routing - Task status - Notifications and reminders - Electronic signatures/approvals - Workflow creation and update features
Document Retrieval	- Check-in and check-out features - Concurrent access to documents - Document search features (index/profile and full-text)
Document Storage	- Electronic and imaged paper - Version control features - Document import and export - File format and compatibility
Document Intake	- Scanning resolution, speed and throughput - Document size, color, paper weight and capacity - Data capture/Optical Character Recognition(OCR) and accuracy - Barcodes, separators and batches - Date and time stamping - Quality assurance features - Inserting and removing pages of a document - Document profiling/indexing - Document relationships and identifiers - Identification of duplicates
Document Processing	- Document manipulation (zoom, scroll, rotate, copy, paste) - Annotations and markup features - Redaction features - Document comparison features - Document list searching, sorting and filtering
Remote Access	- Electronic forms submission and workflow - Access via the web

Requirement Category	Types of Features
Reporting and Statistics	- System reports - Document type reports - Workflow reports - Archive reports
Technical	- Department standards and compatibility - Americans with Disabilities Act (ADA) compliance - System administration and management features - Backup and recovery - Redundancy (Hot Site for fail-over) - Help facilities and online documentation
Performance	- Workflow/document retrieval response time - Workflow/document storage response time - Document search response time - Storage capacity and growth - Concurrent user capacity - System availability
Security	- User role and access controls - Remote access and controls - System logon and security controls - System monitoring logs and features - Confidential document protection features - Encryption features - Audit trail of access and changes
Interfaces	- Integration with Microsoft Office - Integration with email and/or fax - Interfaces with internal (CDI) systems (e.g., IDB, EIP) - Interfaces with external partner systems (future)

Business and Functional Requirements

#	Requirement	Category	Comments
1.	All documents submitted to the repository must be processed using the same indexing/profiling structure.	Document Intake	Documents received electronically must be indexed and processed in the same manner as documents received via paper that are scanned.
2.	Using OCR, the system shall automatically find, read and capture computer generated, laser printed and manually written characters and numbers from designated forms submitted to the Department.	Document Intake	OCR refers to Optical Character Recognition, which allows the system to read selected text areas of a document for data capture and text searches
3.	When performing data capture/OCR of forms, the system must validate that all required fields have been completed. If a field is incomplete or missing the system shall route the document to a user for review and resolution.	Document Intake	
4.	If the required data fields cannot be discerned via OCR, with at least a 95% confidence level, the system shall route the documents to a user for review and resolution.	Document Intake	
5.	Data fields which fail validation shall be identified and a message presented to the user which explains how to correct the error.	Document Intake	
6.	Documents must be stored and indexed according to specified index/profile metadata appropriate to the type of document.	Document Intake	For example, index information for a rate filing would likely be different than the index information for a market conduct report.
7.	Documents received electronically must be stored in their native format (e.g., Microsoft Word, PDF, and TIFF).	Document Intake	

#	Requirement	Category	Comments
8.	The scanners must accept 10 to 100 lb. weight paper stock.	Document Intake	Heavier card stock may be scanned via existing CDI flat bed scanners.
9.	The system must accept, process and store all incoming documents in the document management system, regardless of how they were received (e.g., email, fax, workflow fill-in form, paper).	Document Intake	
10.	The system must accept electronic submission of documents received via email.	Document Intake	
11.	The system must accept fax documents electronically via the Voice Over Internet Protocol (VOIP) system.	Document Intake	These may be directed to an indexing queue or directly to an end-user for indexing and storage.
12.	The system must allow the scanning operator to discard a document during the scanning process to account for blank pages and duplicate copies.	Document Intake	
13.	The system must assist the user in identifying duplicate documents. For example, when a new document is received, the system should check for other documents with similar index values (e.g., title, date of document, sender, recipient), and display such documents received within a recent date range.	Document Intake	This requirement may require custom coding and/or business process changes (i.e., it may not be available “out of the box” depending on the selected product).

#	Requirement	Category	Comments
14.	The system must create, capture and store the document received time-stamp showing the date, hour, and minute.	Document Intake	This can be accomplished by a physical stamp applied during the scanning process, or an annotation applied to the image during scanning. Alternatively, it can also be manually stamped by the mail room or the department receiving the documents.
15.	The system must have the capability to scan and store color images in color.	Document Intake	Scanning in black and white will be the default, but color scanning must be available as an option.
16.	The system must permit scanning of personal and business sized checks.	Document Intake	
17.	The system must provide a document indexing/profile feature to capture appropriate metadata for each document to assist with identification and searching.	Document Intake	
18.	The system must provide an auto-complete/suggest feature to minimize duplicate entries when completing or editing index information. For example, if the Insurance Company already exists in the database the system should match the name and present it or a list of similar names to the user to avoid duplicating or mistyping information.	Document Intake	
19.	The system must provide data validation and business rules for appropriate data entry fields. Appropriate data entry fields are those fields which are not free-text or comment fields.	Document Intake	For instance, validation of date formats or that a company name is valid.

#	Requirement	Category	Comments
20.	The system must provide scanning equipment which supports a minimum of 200 x 200 or 300 x 300 dots per inch, DPI.	Document Intake	
21.	The system must read and interpret bar codes for determining document and batch index values.	Document Intake	
22.	The system must read and interpret patch codes for determining document boundaries and changes within a batch.	Document Intake	Patch Codes indicate to the system where a document starts with in a batch of documents. They can also provide additional functionality during scanning.
23.	The system must scan and image documents received in hardcopy, including forms, reports, correspondence, checks, and envelopes.	Document Intake	
24.	The system must scan and store documents containing multiple-pages and double-sided pages as a single document file.	Document Intake	
25.	The system must scan, image and capture data from white paper for OCR and ICR processing from printed text.	Document Intake	Using OCR and ICR technology for hand written documents is not generally recommended due to low recognition rates.
26.	The system must support and enable duplex scanning (i.e., scanning of front and back without manual intervention) for 8.5 x 11-inch pages, 8.5 x 14-inch pages, half-sized sheets of paper and personal and business-sized checks.	Document Intake	
27.	The system must support scanning of black and white, color and grey-scale documents.	Document Intake	

#	Requirement	Category	Comments
28.	The system shall apply field-level validations and business rules when data is entered (and prior to moving to the next screen).	Document Intake	
29.	The system shall identify to the user those fields that are considered low confidence and allow the user to correct the field or character(s).	Document Intake	
30.	The system shall import and store email, audio and video files.	Document Intake	
31.	The system shall leave data that is correct on the screen and only require the user to correct data fields that are in error.	Document Intake	
32.	The system must support scanning of 8.5” x 11” paper, 8.5” x 14” (legal) paper, “half sheets” (8.5” x 5.5”), personal and business sized checks, and personal, business (#9 and #10) and 9” x 12” envelopes.	Document Intake	Additional, occasional odd sized scanning may be required by several divisions.
33.	Authorized users shall be permitted to define the document retention parameters and criteria for each document.	Document Processing	
34.	The system must allow authorized users to attach documents to outgoing email.	Document Processing	
35.	The system must allow authorized users to copy data to external storage media (e.g., tape, DVD, CD-ROM) based on user-defined selection criteria.	Document Processing	For instance, to support backups or to respond to Public Records Act (PRA) requests for data.
36.	The system must integrate with the Microsoft Office suite.	Document Processing	The user must be able to access the repository from within the Microsoft Office suite of applications and not have to perform separate steps to open or save documents stored within the repository.

#	Requirement	Category	Comments
37.	The system must provide features to convert any document within the system to a searchable PDF.	Document Processing	
38.	The system must support copy and paste functionality within text-based documents (such as Microsoft Office, WordPerfect, and PDF). Copy and paste is not required for document images (i.e., TIFF, JPG).	Document Processing	For instance, to copy and paste data into the index or workflow screens instead of having to retype the information.
39.	The system shall permit authorized users to export documents from the system, such as for posting to the Department's internal and external websites.	Document Processing	
40.	The system shall allow search queries using wildcards and "partials" (e.g., Smi = Smi*).	Document Retrieval	
41.	The system must provide a multi-level search capability to allow users to search for documents by various criteria, including dates, keywords, index information, wild cards, document number or sequence, document type, document format (e.g., Microsoft Word, PDF), and Boolean criteria (e.g., and, or, not).	Document Retrieval	
42.	The system must allow document search results to be sorted and filtered by any of the document index/profile fields, including document type, title, date received, and date of (on) the document.	Document Retrieval	
43.	The system must allow users to sort the display list of documents using multiple sorting criteria (e.g. cascading or multi-level sort).	Document Retrieval	
44.	The system must identify the most current version of a document in the search results, and retain old versions where they can be accessed if needed.	Document Retrieval	

#	Requirement	Category	Comments
45.	The system must provide tools for document manipulation functions such as zoom, scroll, rotate, annotate, highlight, and redaction.	Document Retrieval	
46.	The system should have a reverse contrast (negative image) feature to assist with viewing poor quality images.	Document Retrieval	
47.	The system must allow the user to zoom-in and out, view whole pages, adjust the size of open windows, and adjust the contrast of the window to support viewing images.	Document Retrieval	
48.	The system must allow users to add notes or annotations to a document, and designate whether the note is private or public (e.g., available to only the user, the user's group, or to everyone).	Document Retrieval	
49.	The system must allow users to view multiple documents from within the repository simultaneously.	Document Retrieval	
50.	The system must permit the user to view the front and back of scanned documents.	Document Retrieval	
51.	The system must provide a feature to compare different, searchable PDF documents.	Document Retrieval	Documents generated by CDI staff (e.g. Microsoft Word, Excel, PowerPoint) can be compared via the native application.
52.	The system shall allow only authorized users to modify document index values after the document has been initially indexed and stored.	Document Retrieval	
53.	The system shall provide check-in and check-out features (locking) that control access to a document.	Document Retrieval	

#	Requirement	Category	Comments
54.	When a document is locked, only the user who has successfully checked-out or locked the document shall be permitted to make modifications to the document and document index/profile information. All other users shall be presented a view-only version of the document (subject to appropriate security).	Document Retrieval	
55.	The system shall require the user to enter a comment when checking in a document that describes the changes made and/or reason for the new version.	Document Retrieval	
56.	When a document is locked, the system must prevent other users from checking-out or modifying the document.	Document Retrieval	
57.	By default, the system shall provide document access in read-only mode. Users wishing to modify an existing document must perform an explicit “check-out” of the document in order to access the document in read/write mode.	Document Retrieval	
58.	The system shall provide version control features that automatically track and manage changes to a document.	Document Retrieval	
59.	The system must be a document management system which provides secure, centralized storage and management of all documents selected for document storage by the Department.	Document Storage	
60.	The system must provide an indexed storage management structure or similar model for organization of documents.	Document Storage	

#	Requirement	Category	Comments
61.	The system must be flexible in the indexing function, allowing document index/profile information to vary by division or type of business within the Department.	Document Storage	
62.	The system must enable authorized users to correct or change the document index/profile information.	Document Storage	
63.	The system must automatically assign a unique identifier for each document.	Document Storage	This would be in addition to the specific document title stored as part of the index.
64.	The system must have a field for the title of document, which is separate from the document identifier.	Document Storage	
65.	The system must permit several document repositories to be created and in use at the same time, with each repository having different security, roles, and index/profiles.	Document Storage	
66.	The system must allow documents to be linked to each other to show relationships between the documents, such as a parent-child relationship or a sibling-to-sibling relationship.	Document Storage	For instance, to mark a report as the “parent” document and associate the comments or rebuttals to the report as “children”, so that if you accessed the rebuttal (child) first, you would see a link to the main report (parent) exists.
67.	The system must provide a graphical user interface which includes the following features -mouse-driven navigation -menu-driven navigation -keyboard-only navigation	Interface	
68.	The system must provide a browser-based user interface.	Interface	

#	Requirement	Category	Comments
69.	The system shall use lookup tables, pull down menus and lists to allow the user to select predefined codes, categories, and known information.	Interface	
70.	The system must provide online user documentation that is indexed and searchable.	Interface	
71.	Error messages must be concise and not require the user to look up error codes or numbers.	Interface	
72.	The system shall provide field-level, context sensitive, and workflow help for all screens.	Interface	Field-level help is defined as information about entering data into the specific field (i.e., range of values, data types, coded values). Context sensitive help meaning information about how the field relates to other fields/data elements on the screen (e.g., parametric checks, business rules and validations). Workflow help includes the current process step(s), the anticipated next step(s), and a description of the current workflow.
73.	The system must integrate or be compatible with Dragon NaturallySpeaking for use and operation of the document management application.	Interface	
74.	The system must allow authorized users to export data for use in other analysis and reporting tools in file formats including Oracle Discoverer, Crystal Reports, Microsoft Access, and Microsoft Excel.	Interface	

#	Requirement	Category	Comments
75.	The system must interface with both internal CDI systems (e.g., IDB, EIP, eCounsel) and external partner systems, such as SERFF (future).	Interface	
76.	The system must transmit fax documents electronically from the repository with a CDI-defined cover sheet.	Interface	
77.	The system shall provide access to all appropriate repositories based on a single logon via Microsoft's Active Directory (AD).	Interface	
78.	The system must provide a browser-based user interface.	Interface	
79.	The application must meet the defined performance standards on the Department's minimum desktop hardware configuration.	Performance	
80.	The response time for saving a document to the database shall be less than two (2) seconds per document.	Performance	
81.	The response time for a search request of a document (and subsequent display of eligible documents) shall be less than two (2) seconds.	Performance	
82.	The response time for launching the native application (e.g., Microsoft Word, PDF viewer, etc.) for an electronic document from the repository shall be less than two (2) seconds for a document of less than 1MB.	Performance	
83.	The response time for retrieving and displaying on the screen the first page of an imaged document from the repository shall be less than one (1) second, and the entire document shall not exceed five (5) seconds.	Performance	

#	Requirement	Category	Comments
84.	The response time for retrieving and displaying on the screen the first page of an electronic workflow document from the system shall be less than one (1) second.	Performance	
85.	Laser printed characters and numbers in 8, 10 and 12 point standard fonts must be recognized with an accuracy rate of at least 97%. Standard fonts include Courier, Arial and Times New Roman. The accuracy rate will be based on a representative sample over a thirty (30) calendar day period.	Performance	
86.	Typed and line printer generated characters and numbers in 8, 10 and 12 point standard fonts must be recognized with an accuracy rate of at least 90%. Standard fonts include Courier, Arial and Times New Roman. The accuracy rate will be based on a representative sample over a thirty (30) calendar day period.	Performance	
87.	The system shall have a repository storage capacity capable of supporting the needs of the CDI for a period of not less than 5 years.	Performance	
88.	The system must have a concurrent, logged-on user capacity of not less than 10% of all CDI staff. As of 2007, this equates to approximately 135 staff.	Performance	
89.	The typical hours of operation shall be defined as 8:00 AM to 5:00 PM Monday through Friday. Provision must be made to allow the hours of operation to be flexible depending on needs of the Department.	Performance	Generally, this parameter of a system is dependent on system backups and system maintenance schedules, and is usually determined and implemented by the system support organization.

#	Requirement	Category	Comments
90.	The system shall be available 99.5 % of the published hours of operation.	Performance	
91.	The system must generate audit reports presenting various system metrics, including performance, volume, and security, for management.	Reporting	
92.	The system must produce periodic and ad hoc reports describing the current volumes of documents and document statistics based on document index and metadata.	Reporting	
93.	The system must collect and report workflow statistics for analysis via Oracle Discoverer, Crystal Reports and Microsoft Excel.	Reporting	
94.	The system must store all application-generated reports for a period of not less than one year.	Reporting	
95.	The system must maintain an audit trail for all scanning operations and shall record the following information at a minimum; scanner operator, scanning date, location, date and time of scanning, document type.	Security	
96.	Audit trail functions of the system must record who added or removed pages from documents and when they made the changes.	Security	
97.	The system must automatically track versions of documents, including an audit trail of who made changes, and when the changes were made.	Security	
98.	Managers and supervisors must be able to designate access levels for their staff for the viewing and printing of reports.	Security	
99.	The system must control and administer multiple levels of user access and privileges.	Security	

#	Requirement	Category	Comments
100.	Only authorized users shall see that a sensitive or confidential document exists and be able to access the document.	Security	
101.	The system must provide a feature to track who viewed each document.	Security	
102.	The system shall allow authorized users to produce printed and electronic copies of a document where sections of that document are redacted, such that the information that was redacted is neither readable in the printed copy nor recoverable from the electronic copy.	Security	
103.	The system shall utilize user groups that define permissions and limitations on data that can be viewed and manipulated.	Security	
104.	The system must allow authorized users to add special condition identifiers to a document to indicate it is sensitive or confidential.	Security	
105.	The system must allow document permissions to be set for different document versions (e.g., version 3 may be public, but version 4 may be restricted until it is released).	Security	
106.	The system must enable authorized users to manually redact appropriate information from documents, images to be provided to non-Departmental staff, such as to comply with privacy and HIPAA requirements.	Security	
107.	The system must limit access to documents and document manipulation functions based on security profiles that include user roles, document type, responsibilities, and relative position (e.g. supervisor, clerical staff, the public, etc.).	Security	

#	Requirement	Category	Comments
108.	The system must permit public users to access documents specifically marked as available to the public. Documents marked as sensitive and confidential shall never be made available for public access.	Security	
109.	The system must prevent sensitive and confidential documents from being displayed in a search list or document index listing for users without appropriate authorization.	Security	
110.	The system must print appropriate security markings on the document when the document is printed or transmitted electronically. Appropriate security markings may include sealed, confidential markings, and sensitive.	Security	This requirement may require custom coding and/or business process changes (i.e., it may not be available “out of the box” depending on the selected product).
111.	The system must provide security features so that only authorized users have the ability to delete or add pages to a document or to delete an entire document.	Security	
112.	The system must segregate in reports the tracking of documents viewed by internal and public users.	Security	
113.	The system must comply with CDI standards for system architecture, hardware, software, security, and design.	Technical	
114.	The system shall be compatible with CDI’s current infrastructure, including SAN.	Technical	
115.	The system must conform and be compliant with the Americans with Disabilities Act (ADA), Section 508.	Technical	
116.	The system’s web presentation components must conform to the State of California Governor’s web standards.	Technical	

#	Requirement	Category	Comments
117.	The system must operate within the existing telecommunications environment.	Technical	
118.	At a minimum, the system must support files in the following formats: TIFF, JPG, GIF, WordPerfect Suite, HTML, Microsoft Office suite (including Microsoft Project and Microsoft Visio), ASCII, Rich Text Format (RTF), and PDF.	Technical	
119.	Data security must be compliant with HIPAA standards.	Technical	
120.	The system must use an Oracle database.	Technical	
121.	The system must allow access by CDI users working in the field via VPN, the internet or the intranet.	Technical	
122.	The system must allow importing of images and index values from other source and imaging systems (such as Hummingbird and ParaDocs)	Technical	This may require some conversion tools and/or coding to import the index information, depending on the amount of differences between the legacy and new system.
123.	The system must allow system administrators to set a timeout period which would cause the system to logout/disconnect users who have been inactive for a defined period of time.	Technical	
124.	The system must co-exist in an environment that includes multiple applications, including Microsoft Office and other third-party applications.	Technical	In other words, shall not interfere or cause other applications to degrade or crash.
125.	The system must have a duplicate, redundant site available for immediate fail-over, in case of a catastrophic failure of the primary site where the system is located.	Technical	

#	Requirement	Category	Comments
126.	The system must have an automatic expiration time for the checkout of a document (e.g., if there is no action taken for 30 minutes).	Technical	
127.	The system must include database security features including login and logout.	Technical	
128.	The system must operate on desktop and server hardware that is compliant with Departmental technology standards.	Technical	
129.	The system must perform daily backups of images and metadata/index/profile information, including logs and system files.	Technical	
130.	The system must provide administration, monitoring and audit tools, including event logs, access logs and transaction logs to assist with monitoring of system performance and diagnosing of problems.	Technical	
131.	The system must provide facilities to trace execution of modules, system errors and warnings, and scripts to support diagnosis and reconciliation of system errors.	Technical	
132.	The system must provide help functionality at the system administrator level to facilitate common maintenance and administration functions.	Technical	
133.	The system must provide the same user functionality regardless of workstation location (internal CDI office, or remote connection via a laptop connected via VPN, internet or intranet.)	Technical	
134.	The system must provide transaction journaling to assist with recovery and auditing of all database transactions.	Technical	

#	Requirement	Category	Comments
135.	The system must support industry-standard network protocols, including TCP/IP, FTP, SFTP, SSH, HTTP and HTTPS, as applicable.	Technical	
136.	The system must support Microsoft Internet Explorer, version 6 or higher. Other desirable browsers include Foxfire, Netscape, Safari and Opera.	Technical	
137.	The system must utilize industry-standard Application Programming Interfaces (APIs), adapters, adapter development kits, and similar enterprise application integration (EAI) tools to facilitate application-to-application data transmission.	Technical	
138.	The system shall allow remote administration of the system by authorized system administrators.	Technical	
139.	The system shall provide native tools for version control, backup, and recovery of the application, images and database.	Technical	
140.	The system shall provide tools for performance management, configuration of user roles and access privileges, and other utilities for overseeing the database(s).	Technical	
141.	The system shall support outgoing fax and email capabilities.	Technical	
142.	The system's key tables must be encrypted to protect the system data. It is estimated that 25% of data would require encryption, and would include such personally identifiable data such as Social Security Number, names and address, employer/company name and address	Technical	
143.	The solution must be designed and implemented using virtualization applications such as VMware.	Technical	

#	Requirement	Category	Comments
144.	The system must provide features to create, modify and manage electronic-based forms (e-Forms).	Workflow	
145.	The system must allow users to fill-out the eForm and route it for approval via workflow.	Workflow	
146.	The system shall store the eForms and allow authorized users to retrieve, review and modify the eForm.	Workflow	
147.	The system shall capture and track electronic approvals of eForms as part of the workflow process.	Workflow	
148.	The system shall provide automated notifications to the eForm submitter upon rejection or final approval of the eForm.	Workflow	
149.	For each workflow task, the system shall indicate to the user the current step and the next step in the workflow.	Workflow	
150.	Managers and supervisors must have the ability to reassign roles without going through Departmental IT staff.	Workflow	
151.	Managers and supervisors must have the ability to view, re-route and re-assign their staff's work to respond to changes in staffing levels, high priority assignments, and changes in business needs.	Workflow	
152.	Managers must be able to view summary information about the tasks that have been assigned to their staff, including which tasks have been assigned to whom and how many tasks an individual has.	Workflow	

#	Requirement	Category	Comments
153.	The system must allow authorized internal users to override the standard workflow to accommodate special requests or problems (exception workflow).	Workflow	
154.	The system must allow authorized internal users to reroute documents to other offices in case of one location going offline (e.g. disaster recovery).	Workflow	
155.	The system must allow for “long-running” workflows which require several weeks or months to complete.	Workflow	
156.	The system must allow multiple branches of a workflow process to execute sequentially or simultaneously, such as when multiple approvals are required.	Workflow	
157.	The system must allow users to designate priority levels to documents in their “in-box” and documents that they assign to other users.	Workflow	
158.	The system must allow users to forward or “pass” an item in a workflow to more than one user or group.	Workflow	For example, to ask for assistance, or to determine if other users have encountered a similar document or complaint.
159.	The system must allow workflows to execute across locations as well as within a single location.	Workflow	For instance, to allow the Ombudsman or Custodian of Records to send an item to another office for analysis and receive information back.
160.	The system must log any workflow overrides in a document workflow log and require an explanation of the rationale.	Workflow	

#	Requirement	Category	Comments
161.	The system must permit authorized users to change or override the designated processing priority.	Workflow	
162.	The system must provide a “pending” workflow or queue for items where not all information has been received to complete the current task step.	Workflow	
163.	The system must provide a mechanism to designate processing priority for documents in the workflow based on document type.	Workflow	
164.	The system must provide task status including a listing of previous workflow steps completed and related details, including, dates, durations and user names via an on-line window or report.	Workflow	
165.	The system must provide the ability to view documents in any stage of the workflow.	Workflow	
166.	The system must provide tools to allow trained business and technical staff to create, modify, delete, enable and disable workflows.	Workflow	
167.	The system must provide version control of the workflow and user-configurable rules for when versions are assigned (e.g. only when changed, each step of workflow, etc).	Workflow	
168.	The system must provide workflow processing features to allow documents to automatically be routed to appropriate users based on pre-defined business rules.	Workflow	
169.	The system must support automatic, manual, and exception routing capabilities.	Workflow	
170.	The system shall allow users to forward an item from their “in-box” to their supervisor for review, questions, or further action.	Workflow	

#	Requirement	Category	Comments
171.	The system shall allow users to forward an item from their “in-box” to other units to assist with resolution based on defined business rules.	Workflow	
172.	The system shall allow users to perform a multi-level sort and filter of their “in-box” by different parameters including date the task was assigned, due date of the task, who assigned the task, aging, priority, event, etc. Three (3) levels of sorting criteria must be supported.	Workflow	
173.	The system shall provide an “in-box” or similar function for presenting to the users the documents in the workflow that have been assigned to them for completion.	Workflow	
174.	The system shall present the “in-box” to the user when they login to the system and allow them to return to it at any time.	Workflow	
175.	The system shall provide a feature for identifying high-priority issues or work items across the system (i.e., high-priority tasks such as items coming due or overdue) based on business rules.	Workflow	
176.	The system shall provide a mechanism that will allow “electronic signature” or approval of a work item.	Workflow	
177.	The system will provide alerts to the user when a work item has not been opened after the specified wait time in a queue.	Workflow	
178.	The system will provide an alert to the user and the user’s manager when a work item has not been acted upon after the specified wait time in a queue.	Workflow	

#	Requirement	Category	Comments
179.	The system will provide notifications to the user indicating when a new work item is received in a person's work queue.	Workflow	
180.	Use of the exception workflow must be authorized by managers/supervisors.	Workflow	