

# Information Technology Capital Plan



## CALIFORNIA STUDENT AID COMMISSION

### Agency IT Capital Plan

**Information Technology Capital Plan, Plan Year 2009-10 through 2013-14 Executive Approval Transmittal**



**Agency Name**

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**APPROVAL SIGNATURES**

I am submitting the attached Information Technology Capital Plan as required by the State Administrative Management Section 4904.

I certify that:

- The IT Capital Plan was prepared in accordance with State Information Management Manual Section 57; and
- The IT project proposals included in the IT Capital Plan are approved and represent my Agency's Information Technology priorities.

<b>Chief Information Officer</b>		<b>Date Signed</b>
<b>Printed name:</b>	John Bays	<b>Printed name:</b>
<b>Budget Officer</b>		<b>Date Signed</b>
<b>Printed name:</b>	Janet McDuffie	<b>Printed name:</b>
<b>Department Director</b>		<b>Date Signed</b>
<b>Printed name:</b>	Diana Fuentes-Michel	<b>Printed name:</b>
<b>Agency Secretary</b>		<b>Date Signed</b>
<b>Chief Information Officer</b>		<b>Date Signed</b>



## Enterprise Architecture

To accomplish its mission, the Commission staff is organized into five divisions. These divisions report under the Executive Director in the Executive Office:

- Federal Policy & Programs Division,
- Legal and Audit Services Division,
- Information Technology Division (IT),
- Administration and External Affairs Division,
- Program Administration & Services Division.

The ITS Division consists of 28 positions organized into four sections that report directly to the ITS Chief. These sections are Customer and Network Services, Application and Project Services, Quality Assurance and Configuration Management, and Enterprise Services. They provide services and technology to approximately 140 in-house staff, 400 institutional customers (1,383 individual users to date) and 4000 high schools. The ITS Division Chief serves as Chief Information Officer with due regard to all Commission information technology efforts including those performed by EdFUND. The Commission's staff also includes an Information Security Officer who resides within the Legal and Audit Services Division and has access to the Commission's Executive Director.

### 1.1. Agency Organizational Functions

#### 1.1.1. EXECUTIVE OFFICE

The Executive Office provides policy and administrative support for the 15 appointed members of the California Student Aid Commission and the highest level of management oversight for the Agency's administrative operations. The Executive Director serves as the Commission's Chief Executive Officer and is assisted in that capacity by a Chief Deputy Director and five Division Chiefs responsible for Information Technology Services, Legal and Audit Services, Loan Program Oversight, Administration and External Affairs, and Program Administration. All these divisions report to the Executive Office (see attached Organizational Chart).

#### 1.1.2. PROGRAM ADMINISTRATION AND SERVICES DIVISION

The Program Administration and Services Division (PASD) is responsible for developing, implementing, and administering, operational policies and procedures necessary to ensure the most efficient delivery of funds to students while adhering to program laws, regulations, and policies. The policies and procedures developed within the PASD must interface with other Commission units and various stakeholders and governmental agencies, such as the State Controller and the U.S. Department of Education. The Division Chief serves as the staff liaison to the Grant Advisory Committee and the Grants and Programs Standing Committee. In addition, the Commission is statutorily required to produce reports for review throughout the numerous yearly cycles. These reports serve as critical processing tools and provide much-needed data for future policy development and evaluation.

##### 1.1.2.1. Grant Operations Unit

The Grant Operations Unit is responsible for developing, implementing, and administering the operational activities of all the Commission's grant

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and specialized aid programs. Each of these programs includes an application process, selection of awardees, award announcements, customer inquiries, payments, payment reconciliation, and payment/award appeals.

- 1.1.2.2. **Student Support Services Unit**  
Responsiveness to customers and the ability to provide accurate information is a top priority. The Customer Services Unit consists of well trained phone staff to respond to thousands of inquiries from students, parents, schools, legislative offices, and other state and federal agencies. Additional professional staff are available to assist with more difficult or technical inquiries, in addition to responding to correspondence.
- 1.1.2.3. **School Support Services Unit**  
Provides assistance to the schools regarding their Cal Grant eligibility and are available to assist with more difficult or business inquiries, in addition to responding to correspondence.
- 1.1.2.4. **Specialized Programs Operations Branch**  
In addition to the Cal Grant programs, the Grant Services Division maintains a Specialized Programs Unit that is responsible for administering numerous specialized financial aid programs, each of which serves a specialized group of students and requires separate processing systems.
- 1.1.2.5. **Program Policy and Development Unit**  
Responsiveness to schools regarding the Institutional participant agreement, and the ability to provide program guidance is a top priority. The Program Policy and Development Unit consists of staff that respond to the more difficult and sensitive inquiries from schools, stakeholders, legislative offices, and other state and federal agencies. Staff define policies and procedures and establish legally compliant policies.
- 1.1.2.6. **Business Systems Integration Unit**  
The Business Systems Integration Unit defines and update business requirements and processes for all users of the Cal Grant System. The Business Staff work with the IT Development Staff to perform user acceptance testing and regression testing on all changes to the system.

The Division Chief serves as the staff liaison to the Grant Advisory Committee and the Grants and Programs Standing Committee.

### 1.1.3. GOVERNMENTAL & PUBLIC AFFAIRS DIVISION

Established in February 2000, this Division provides support for the Commission's planned expansion of its outreach activities. With the continued growth of the Cal-SOAP program and the implementation of the new GEAR UP program, the Commission needs a structure that will move these programs forward over the next several years. The immediate charge of the newly created

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Administration and External Division is to assume responsibility for the programs and activities noted above. The longer-term charge of this Division is to develop and implement a comprehensive, coordinated outreach and training program for the Commission.

### 1.1.3.1. Outreach

The Division's outreach and training activities include administration of the California Student Opportunity and Access Program (Cal-SOAP) and the development, review, and dissemination of outreach materials. Training responsibilities include producing training materials on Commission programs and processes; conducting annual Cal Grant workshops; group training presentations; conference training sessions; and individual guidance and interpretation of program policies and procedures.

The Division Chief serves as the staff liaison to the Cal-SOAP and Outreach Advisory Committee and the Commission's Outreach Committee.

### 1.1.3.2. Communications

Another important function of the Division is communications. The Commission communicates with thousands of students, schools, segmental representatives, financial aid associations, and news agencies. Maintaining an up-to-date and accurate flow of information with these constituents is essential. Much of this communication is done through publications, which must be developed and/or reviewed by the Communications staff. Development and/or review of policy memos, news releases, newsletter articles, and other written communications are all components of this Division's responsibilities.

The Communication Unit oversees the monitoring of the Loan program. This Unit is responsible for ensuring that EdFUND meets its contractual obligations and administers the Commission's Federal Family Education Loan Program in compliance with applicable State and federal laws and regulations. The unit was established in October 1998 in response to a State audit that required heightened and broadened oversight be conducted on the Commission's auxiliary, EdFUND.

One of staff's primary responsibilities is to develop, negotiate, revise, and monitor the Operating Agreement between the Commission and EdFUND. Staff is also responsible for reviewing, analyzing, and monitoring EdFUND policies, contracts, financial statements, loan program statistics, and information technology activities; reviewing and approving EdFUND's expense reimbursements; and handling borrower complaint appeals.

The Unit Staff serves as the staff liaison to the Loan Advisory Council and the Commission's Federal Loan and EdFUND Oversight (FLEO) Committee.

Additionally the staff performs a variety of functions, including legislative representation, policy analysis and research, and public communications.

### 1.1.3.3. Public Affairs Branch

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On behalf of the Commission, this unit analyzes monitors and influences state and federal legislation, regulations and policies. It establishes and maintains effective relations with the Governor's Office, higher education segments, legislators and staff, governmental agencies, and constituent groups.

### 1.1.3.4. Research & Policy, Analysis Branch

Research is a critical part of the Division's program policy and analysis responsibilities. Staff compiles numerous reports and statistical summaries to assist in evaluating program policies and operations. One of the most critical reports developed by the division is the Student Expenses and Resources (SEARS) Survey, which is conducted every three years. SEARS provides much-needed data to assess students' expenses and their ability to pay for college costs.

### 1.1.4. MANAGEMENT SERVICES DIVISION

#### 1.1.4.1. Personnel Services

Staff provide information, advice, and consultation to the Commission, Commission management, and staff on a variety of matters, including labor relations, payroll, employee wages and benefits, worker's compensation, recruitment, training, civil service exams, and other related personnel activities.

#### 1.1.4.2. Budgets and Business Services

Virtually all administrative operational functions fall within the Management Services Division. These functions include contract management, purchasing, facilities planning and oversight, building security, health and safety, supplies, policy development, and other support services.

#### 1.1.4.3. Accounting Services

Accounting Services staff handles the Commission's financial affairs. Staff is responsible for ensuring that the financial information is properly controlled, accounted for, and reported, as required by statute or regulations. This includes managing all transactions, such as the payment of invoices and travel claims; processing all receipts; monitoring appropriation and contract balances; and preparing financial statements for the Commission's funds. Staff ensure that spending levels are consistent with the planned budget level of each fund, utilizing projections and expenditure analysis. They work closely with the State Department of Finance and Commission management in developing proposed budgets and maintaining the current-year budgets.

The Division Chief serves as the staff liaison to the Commission's Fiscal Policy and Long-Range Planning Committee.

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### 1.1.4.4. Program Compliance

The Commission must maintain program integrity by ensuring that students, schools, and other program participants comply with the laws, regulations, and policies governing those programs. Program Compliance staff make regular visits to schools and conduct administrative reviews on a limited sample of records. When an institution evidences an unusually high incidence of errors, staff may request an institution to review its entire portfolio. In some cases, reviews result in the school reimbursing the Commission for previous grant awards that were made in error. The compliance staff review this process as an educational one in which they help the schools understand program requirements and avoid future assessments.

### 1.1.4.5. Internal Audit Services

Internal Audit Services provides management with independent appraisals, analyses, recommendations, and other pertinent comments concerning the Commission's operations and contract services. Staff is responsible for conducting mandated and follow-up audits and is also responsible for performing other special request reviews. The objectives of these audit activities include: 1) appraising the accuracy and reliability of financial statements and information; 2) determining the adequacy of internal controls and operating procedures; 3) ascertaining compliance with laws, rules and regulations and management policies; 4) promoting operating efficiency; and 5) preventing and detecting loss of state assets. Internal Audit Services also works closely with outside audit organizations for the purpose of coordinating outside audit requests and responding to audit findings and citations. This Division also educates management and Commission staff on internal control requirements and related issues.

The Division Chief serves as the staff liaison to Commission's Audit Committee.

### 1.1.4.6. Legal Services

The Legal Services provides legal support for the Commission and Commission staff. This responsibility includes legal guidance and representation on all legal matters relating to the Commission and its programs.

### 1.1.5. INFORMATION TECHNOLOGY SERVICES DIVISION

The Information Technology Services Division is responsible for running, maintaining, and enhancing the Grant Delivery System (GDS) and the WebGrants interface. This Division is also responsible for managing the Department of Technology Services (DTS) support contract, assisting system users, providing technical support for staff and external customers. The Division also supports new information technology initiatives, including project initiation, design, development, and management of information technology projects.

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This Division is additionally responsible for providing technical oversight for the EDFUND information technology projects.

### 1.1.5.1. Project Management

This Branch manages all new deliverables for the GDS and the SB1644 Entitlements projects. Responsibilities also include the management of contract vendors working in conjunction with CSAC development staff on both projects, and management of a Project Team that encompasses staff from all CSAC Divisions. The Branch is responsible for reviewing and approving all requirements, design, code, and testing deliverables. It is also responsible for database and systems administration for test and development environments. The Branch prepares test cases, test plans, conducts User Acceptance Testing, and exercises final approval of all project deliverables. This Branch also coordinates with the control agencies to keep them apprised of project status and timelines. Other responsibilities include management of project budgets, risk mitigation, project scheduling, defect resolution and change control, Request for Proposal (RFP) preparation and operational implementation.

### 1.1.5.2. Quality Assurance & Configuration Management

Configuration management is essential to the success of the GDS and Entitlements projects, development, testing and production environments. Virtually no changes to modules, screens, or data structures are migrated to production, development or testing environments without the close involvement and scrutiny of this staff. This Branch is responsible for the management of our Software Configuration, the change control process for software and documentation, and the migration of modules and application to the development, test, and production environments. This Branch manages both the GDS production environment as well as the fast-paced Entitlement project. Soon, this Branch will also be managing development of the Phase II project. Only the change control, review and approval processes of Quality Assurance have been implemented at this time. Future implementation will establish project and production metrics as well as a more comprehensive regression testing program.

### 1.1.5.3. Network & Customer Support

One of the most vital services provided by Information Technology Services is technical support for its clients. This Branch supports internal CSAC and Commission staff, EDFUND staff (with DTS/HRIS access), as well as our external customers (postsecondary education institutions).

External customers turn to this Branch for support with issues including system access; the how to's of our upload/download features of the web-based WebGrants system; testing and approval of record layouts for electronic processing; training on general use of the WebGrants system; and security access.

Internal CSAC staff relies on this branch for technical troubleshooting and problem resolution. All requests for assistance are captured via Help

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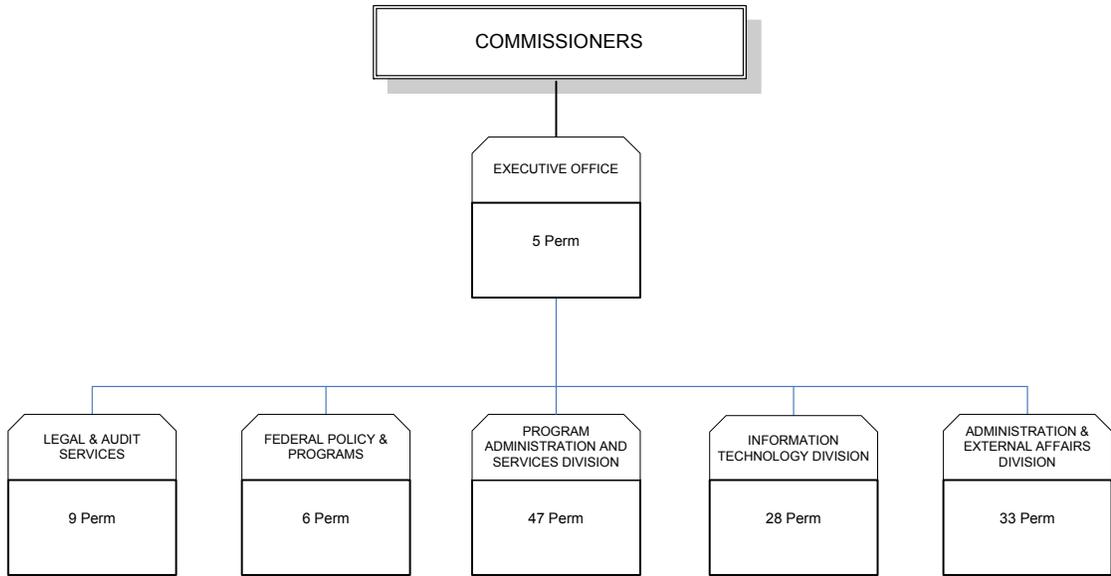
Desk Tickets. Problems range from phone issues to software problems. This Branch is also responsible for IT equipment purchases, maintenance and distribution of equipment.

Technical areas also supported by this Branch include Network Administration and maintenance, File Server Administration and maintenance, Access control, LAN/WAN design and management, Remote Access services, VPN services, Firewall and Intrusion Detection management, security, and Groupware.

### 1.1.5.4. Application & Database Support

The Commission's Cal Grant programs are currently maintained on the grant system known as the Grant Delivery System (GDS). This System is designed and separately housed at the DTS, utilizing their COEMS service. This Branch is responsible for maintaining the GDS production environment and running the production operations. This includes all system operational processing functions, database administration, Unix system administration, and related programming, testing and migration to production. This also includes advising staff on proposed system changes, offering suggestions to improve GDS services, and providing solutions to system problems. The GDS system's Internet based product, WebGrants, allows schools better system access for grant processing transactions. Maintenance of this product is also managed by this Branch.

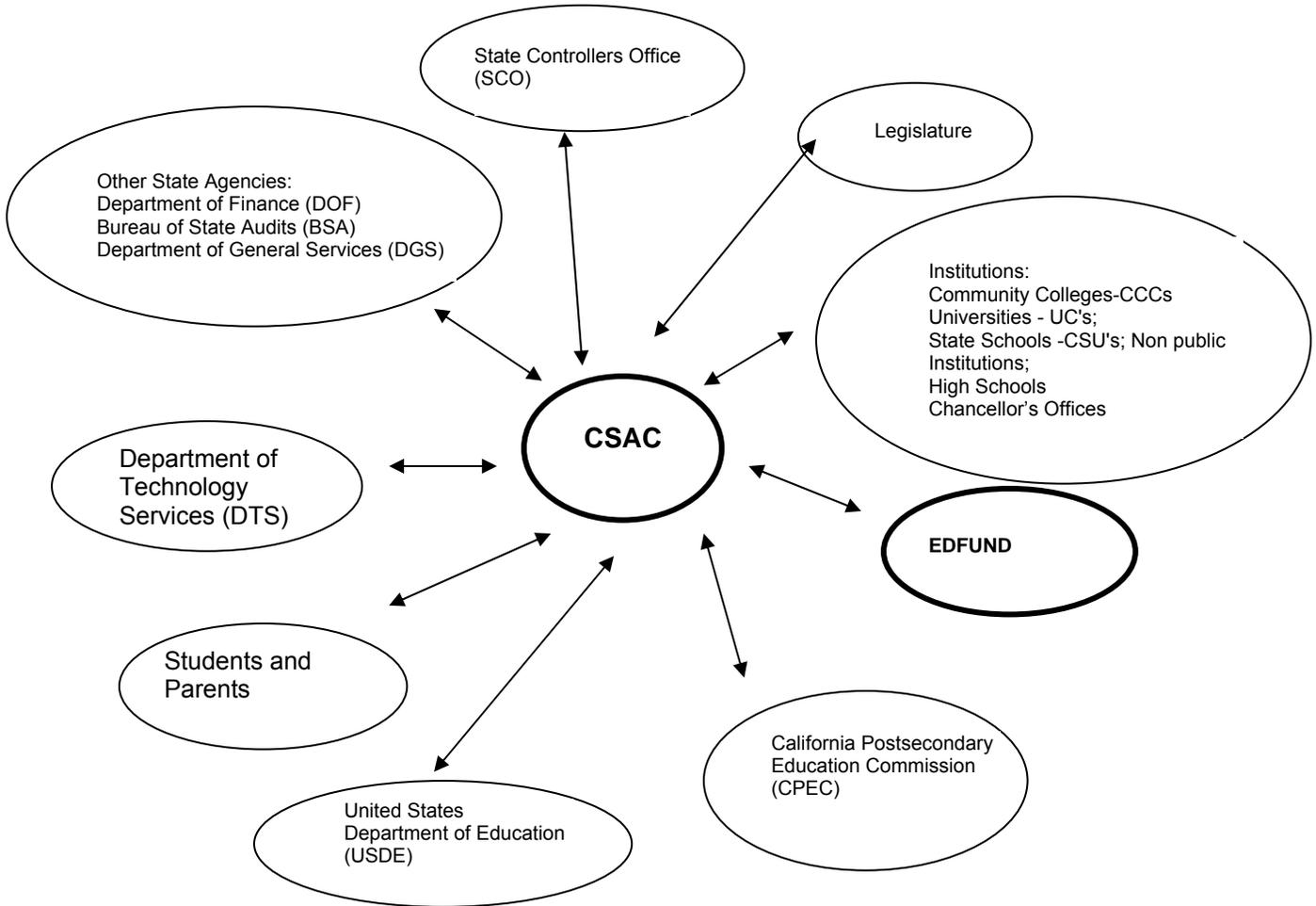
CALIFORNIA STUDENT AID COMMISSION  
New



Total Staff= 128 Perm

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**CUSTOMER CONTEXT DIAGRAM**



## Enterprise Architecture

### 1.3. Summarize your organization's business goals and objectives below: Strategic Planning

In 2003, CSAC developed its last Agency Information System Strategy (AIMS), outlining current and future information technology directions to support business strategies of the agency. This AIMS updates those strategic objectives and information contained in that previous AIMS on the enterprise's infrastructure and future directions of the agency.

During the past five years, there have been significant changes that have occurred in the agency's organization and technology infrastructure. The Grant Delivery System (GDS) project that converted the old Natural Ad abase System (FAPS) to a functional conversion to a web application for external users, an in-house client/server application, and an Oracle Database was completed and became operational in January 2000. Because the project was completed as a 'vanilla' conversion, it still retains many of the legacy features of its batch-processing heritage. An FSR for an enhancement project planned to start in FY 2001 was initiated to address these legacy deficiencies, but was withdrawn when the Commission was required to implement a new Cal Grant Award Program established by new legislation (SB1644) in September 2000. Initial capability for this new Program was required by March 2001. The new program is currently being implemented under a phased project that features just-in-time changes to the GDS for the award, payment, and management of the many grant processes inherent in the Grant programs.

In 2006, CSAC began the project to upgrade to the GDS system because the vanilla version of the Cal Grant System was a batch Orient System that did not provide real time Grant award and payment information nor status to institution financial aid administrators and CSAC staff. The system was inflexible, hard to change and maintain. CSAC developed a FSR to enhance the GDS system and make the system more maintainable.

The scope of the Service Oriented Enhancements FSR is designed to deal with the following issues:

- Convert batch processes to real time that will reduce payment reconciliation efforts by schools, increase accuracy of payments information, provide real time data to students, schools, and staff. The current system was largely a manual system that did not integrate well with the institution financial aid management systems and created significant workload associated with reconciling payment transactions between systems. Schools had conceded the advantage of having real time data in reducing workload, reconciling payment transactions and getting just-in-time payments.
- Simplifies the data interfaces for high schools, colleges, and supports the new XML interface requirements of the US Dept of Ed.
- Provides Students with web access to their current grant status or allow them to make instant changes to their school of choice and self-report other critical information not obtained from the normal data sources such as the FASFA and the GPA verification report as well as requesting CSAC to obtain their GPA from their high school.
- Restructure the database for better security of confidential personal data, auditing changes, flexibility in making changes, and increased data integrity.

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- Provide flexible alternatives for verification of Cal Grant eligibility requirement. These verification requirements become a growing concern for institutions, legislature, administration and high schools. The changing responsibilities for how and who does the verification was adding significant complexities that needed flexibility to deal with the potential for the rapid changing program requirements. Our current batch processing system was difficult to change and required considerable manual intervention that make it more vulnerable to human error related problems.
- Prepared for the adoption of new web services technology that provides the capability for 'transparent' automated data transaction between institution financial aid management systems, high school student information systems, and the GDS – thus in effect creating a decentralize view of the CSAC grants from the institution/high school perspective.

The advantages of enhancing GDS provided the following benefits:

- Allowed students a better opportunity to determine award eligibility, status and financial aid availability and select the college of choice.
- Provided better and more flexible services to high schools, institution and students
- Streamlined workload for participating institutions and high schools
- Streamlined workload for customer Service
- Provided better accounting and budgeting information for the state
- Allowed users to be able continue awards using the federal ISIR specifications when they change.

### 1.3.1. CSAC MISSION AND VISION

#### 1.3.1.1. CSAC MISSION

Making education beyond high school financially accessible to all Californians.

#### 1.3.1.2. CSAC VISION

A California that invests in educational opportunity, fosters an active, effective citizenry, and provides a higher quality of social and economic life for its people.

Achieving the Commission's mission requires commitment and focus with respect to its strategic goals. The strategic goals highlighted below encompass all of the Commission's major programs and services – grants, loans, outreach and research and policy analysis. Achieving these goals also entails organizational improvements in the Commission itself. By working in concert with California's policy makers, educational institutions, lenders, and other government agencies to accomplish its goals, the Commission helps to ensure that postsecondary education is financially accessible to all Californians.

- Expand Postsecondary Educational Opportunity
- Increase California's Investment in Education
- Expand and Enhance Outreach
- Develop Innovative Programs and Services
- Build Coalitions and Partnerships with Public and Non Public Members of the Educational Community

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- Enhance the Organizational Capacity of the California Student Aid Commission

### 1.3.1.3. ITS MISSION AND VISION

#### 1.3.1.3.1. MISSION STATEMENT

Provide the Commission, California's educational segments, public and private stakeholders with all the information, processes, and technologies necessary for them to provide needed financial services to California students pursuing a post high school education.

#### 1.3.1.3.2. VISION STATEMENT

Provide technologically transparent innovative information technology services that directly support the Commission's strategic goals and objectives in a cost-effective manner.

Achieving the ITS vision for CSAC requires that we continue to build on our current technological, data and process architectures and strive to provide our financial aid enterprise with information technology staff, processes, and methodologies that successfully integrate information technology with cross-functional, Commission focused goals and objectives. To achieve this level of involvement and meet our vision we must:

- Collaborate with project sponsors and champions to achieve realistic goals and objectives
- Closely integrate project teams with fully empowered cross-functional teams
- Limit technological risk by using proven technologies and open architectures
- Educate customers and staff on the potential and availability of new technologies
- Use best practices in evolving departmental processes, architectures, and interfaces
- Collaborate and partner with business partners and other agencies on requirements, business process reengineering, and technological interface standards
- Gain needed resources through timely planning and coordination with control agencies

## Enterprise Architecture

### 1.3.2. AGENCY IT & BUSINESS STRATEGY

The Commission's Strategic Plan recognizes the central role of the Commission in providing essential financial aid funds and services to students, families, and postsecondary institutions and the importance of ensuring that the Commission's financial aid delivery system and processes are user-friendly. In addition, this plan recognizes the Commission's role in providing financial aid research and policy leadership. In particular, it recognizes the central importance of postsecondary education to the well-being of both California's individual citizens and the state as a whole. This recognition placed a great demand on the Commission to provide policy recommendations and program performances reports based on solid research and analysis and well-documented outcome data.

In this plan, the Commission frames six strategic goals:

1. Expand postsecondary opportunity by providing all California students financial access to the postsecondary education of their choice by ensuring that grant aid is available to all financially needy students, promoting financial planning for college, and ensuring that educational loans are readily available at the lowest cost.
2. Increase California's investment in education through the Commission's role as a leader in student financial aid research and policy by examining new forms of funding and investment, and advocating for increased financial aid funding. The ITS division will be developing a data warehouse process to better assist in this goal.
3. Expand and enhance outreach to all Californians, from new parents to primary and secondary school students to non-traditional and transfer students, to ensure their awareness and understanding of financial aid programs.
4. Develop innovative programs and services to support the educational choices of the unprecedented number of students and parents who will seek financial aid in the next decade and to respond quickly and efficiently to meet critical workforce needs in California.
5. Build coalitions and partnerships with public and non public members of the educational community by taking a leadership role in financial aid policy and strengthening the Commission's relationships with other members of the educational, governmental, business and non-profit communities concerned with higher education.
6. Enhance the organizational capacity of the California Student Aid Commission by developing performance measures for programs and operations, expanding the Commission's research and policy analysis role, and increasing funding to properly meet the administrative costs of new or growing programs.

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These goals reflect the most important strategic issues confronting the Commission. The ITS division must and will be a vital force in the Commission's ability to realize all of these goals through IT innovation and support.

The sheer number of potential students, who will need financial aid in the next decade, if they are to enroll in postsecondary education, demands that the Commission develop innovative programs and services to meet their needs. Critical to its response will be a comprehensive analysis of the potential impact of an increase in student financial aid requests in general, and on the Commission's programs in particular. The Commission will evaluate alternatives such as streamlining application processes, year round funding, aid for distance learning, web access to intuitions and students to inquiry the status of their Cal Grants.

The need for innovation will not only be driven by the increased number of students needing financial aid but also by the Commission's need to ensure that its loan guarantee operations survive and prosper in a competitive student loan market. The need to ensure we are compliant with the State and Federal Department of Education changes will enable CSAC to interface with their database and receive the FASFA information timely, which will improve our processing time to better serve the students of California.

Emerging technologies require the Commission to continually develop new and innovative products and services. The Commission will develop a long-range plan to enhance its programs and operations through the application of new technology. The use of the Internet for customer interface and communications is fast becoming the norm. The Commission has begun to take full advantage of net-based and other technological opportunities to better serve its customers. This has been accomplished through an enhanced home page web site, the web portal, list serve services, web services as part of the GDS Phase II project and the Grant Delivery System's Internet based WebGrants front end product for schools. This new capability allowed CSAC a broader reach and distribution of critical information to our customers. The Commission fully intends to continue its growth and use of new technology to compliment and enhance its line of products and services.

CSAC is moving forward with collaborative planning and coordinated execution to make grant services more accessible to the people it serves, to improve the cost-effectiveness of government programs and operations, and to embrace the spirit of innovation that is California's distinctive characteristic. Information and telecommunications technologies lie at the heart of nearly all significant improvements in statewide programs and operations. As a consequence, we have invested substantial time and effort in our IT Strategic Planning Process to make sure that our information technology and telecommunications systems stay well aligned with the State's business needs and goals as well as the institutions of California.

Information technology is a key contributor to the execution of CSAC programs and is a measurement of our success. Although CSAC has unique technology needs to provide access to over 400 schools, the technology must address and focus on the specific business needs of the organization, several cross-cutting

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needs and priorities can be identified that are important to most or all Institution programs and customers. Among these are the following:

- Further development of Internet- and technology-based channels for the delivery of grant information and services for the convenience of the institutions and the public.
- A need for consistent and accurate data that will interface with other systems as necessary.
- The assurance that confidential information and valued assets are secure.
- The ability to easily access information and services while ensuring that such access is allowed only to those intended.
- Availability of appropriate tools for executive oversight, management decisions, and program implementation.
- Efficient and cost saving means to deliver services.
- Need to respond and transact quickly.
- Need to maintain systems and services in adequate working order throughout their life

Currently CSAC leverages its auxiliary organization, EDFUND, to provide some of our IT services. Due to the proposed sale of EDFund, CSAC has taken steps to secure an infrastructure to support the systems. CSAC has subscribed to the Department of Technology Services COEMS service and has relocated GDS, WebGrants, and IVR systems to this site. Other critical Commission systems will be migrated to this site in early 2009. Because the Commission is a stand alone agency who collaborates with California high schools and over 400 post secondary institutions, the ability to share resources with other state entities is not available. The Universities in California alone utilize over 62 different types of financial aid programs. The ability to share data is our goal and we have provided tools for all of the institutions to upload and download data. CSAC with the GDS Project has expanded to provide web services to institutions but not all the institutions have the technology to utilize it.

In the Governor's 2008 May Revision, the proposal was to sell EDFUND and that CSAC would incur budget reductions, faces the loss of staff due to a SROA process, separating from EDFUND which involves a move to another building, acquiring additional duties, acquiring EDFUND/CSAC staff that do not possess the same skill sets thus requiring a learning curve, and reduction in funding for the Commission overall. These changes in the Commission greatly impact the resources, schedule and scope of the GDS scope of the project. CSAC has evaluated the impact and determined that the web services scope would need to be reduced down to one scalable web service and the implementation of the project to be moved out to December 2008.

CSAC is transitioning into a self supported roll and is developing processes to ensure the long-term preservation of data and the public access to digital records that have enduring legal, historical or administrative value. CSAC has written Budget Change Proposals and Feasibility Study Reports to acquire approval to procure and develop replacement services that EDFund provided.

**Enterprise Architecture****1.3.3. INFORMATION TECHNOLOGY GOALS AND LONG TERM OBJECTIVES**

In order to meet the Commission's strategic goals and objectives, goals of the ITS division are:

- To plan, standardize, build and evolve the information and system architectures in concert with customers, partners, regulatory, and government agencies using industry best practices.
- To provide a project management, technological environment and culture that increases the capability and capacity of the Commission to provide innovative and valuable services to customers and students.
- To achieve a SEI Capability Maturity Model level 3 rating with respect to software development and maintenance.
- To meet the information, technical support services, and communications needs of the Commission and its customers with a high level of responsive customer service.
- To maintain an appropriate technology infrastructure within the Commission to permit effective and efficient communication among Commission staff and outside entities. Also to ensure availability of necessary information access and productivity tools.
- To facilitate the project initiation process and obtain or implement information systems needed by the Commission, its managers and staff to perform the function of the Commission, monitor performance, and assess the impact of decisions upon service levels and other "success" indicators.
- To establish and foster collaborative relationships with other agencies, departments, customers, and vendors that allows the timely exchange and sharing of information, technologies and establishment of needed standards.
- To provide the capability for accurate financial reporting to the State and to our customers.
- To reduce the ongoing costs of ITS development, enhancements and operations.

The ITS Division's critical success factors include:

- Maintaining a positive and productive relationship with State agencies charged with oversight of information technology and approval of budget and staffing requests.

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- Obtaining authorization to employ a sufficient number of high quality information technology staff with the appropriate experience and skills.
- Receiving sufficient budgetary resources to maintain and build required hardware, software and communications systems at appropriate levels.
- Establishing an ITS organization structure which reduces management's span of control to acceptable levels and appropriately delegates responsibility and authority to the lowest organization level.
- Recruiting competent, motivated staff to fill existing and projected position vacancies at all levels.
- Setting realistic and achievable project requirements with project sponsors and champions.
- Providing integrated cross-functional project teams to work in concert on achieving project requirements.
- Obtaining concurrence of partners, customers, and collaborating departments and agencies on project business requirements, business process reengineering, and technological interface standards.
- Using proven technology and open architectures.

**2. What are your organization's plans to upgrade or replace your IT infrastructure for the following? When responding, please indicate the timeframes of your intended upgrade or replacement efforts.**

**2.1. Hardware / Software**

**2.1.1. Desktop Computers and Software:**

- a. All computers are Intel dual core Pentium based machines. Current desktop operating system is Windows XP Service Pack 3.
- b. Personal productivity office tools include MS Word, Excel, Visio, and Access.
- c. We maintain over 130 PCs and 20 laptops located in a single facility
- d. Software distribution is done using Zen works network delivered applications.
- e. HEAT system for software and hardware asset management.

**2.1.2. Security**

- a. The Commissions LAN is protected from external access using a Cisco Secure PIX firewall. All security devices in use at the Commission are maintained and operated by Commission Network staff. The Commission also uses a Cisco ASA5520 to provide firewall protection to its COEMS LAN located at the Department of Technology Services. All connectivity between

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CSAC and the COEMS site and CSAC business partners including EdFund and DTS is encrypted over a LAN to LAN tunnel. All web servers have ISS Preventia Intrusion Detection Software installed.

- b. The Commission maintains WebGrants and WebGrants for Students. Both are web applications that allow schools and students to access grant data across the Internet. The user accounts are approved and administered by CSAC. The site uses 128 bit encryption technology from VeriSign to encrypt files and data sent and received by the site.
- c. Virus protection is provided by McAfee virus protection software.

### 2.1.3. Helpdesk/Support

- a. The Helpdesk support is staffed 7:00 a.m. – 5:30p.m. weekdays, for internal staff, and additionally, 8:00am – 5:00pm for external staff. Support is provided to 400 external institutions (1,383 individual users to date) and provides support to 130 internal staff for the WebGrants Application, security access, mainframe support, phone support and LAN/PC computer support.
- b. The Commission uses Front Range Systems HEAT ticketing database software. The HEAT infrastructure is owned and maintained by EdFund.

### 2.1.4. Intranet/Extranet/Internet:

An Oracle 10g DMBS system with four test instances is maintained for GDS development and testing on a Linux server. MS Access databases and application are used and supported. Personal Oracle is also used on several notebooks for training institutional financial aid staff on WebGrants.

An IIS test web server is also maintained for GDS web application development and testing.

- a. Our Internet home page is hosted by a private ISP vendor – Media Leverage
- b. The GDS Production system is maintained by EdFund and the Commission at the Commission's COEMS site at the Department of Technology Services. The Commission operates two Linux boxes running RedHat Linux Enterprise Services Version 3. Each box runs Oracle 10G Release 2. The Commission's WebGrants application operates on a Windows 2003 operating system.
- c. Remote access is provided via a Cisco 3030 VPN Concentrator.
- d. CSAC manages the Oracle production and test instances using Oracle Enterprise Manager, TOAD, and Oracle Designer.
  - e. CSAC schedules, runs, and monitors operational production support using UNIX and Oracle scripts.

## Enterprise Architecture

### 2.2. Network

#### ENTERPRISE ARCHITECTURE

CSAC developed an IT and telecommunications infrastructure that is secure, reliable and meets high performance standards per the Department of Technology Services (DTS). By standardizing our infrastructure around an Enterprise Architecture the commission can manage the infrastructure to support and enable a more customer-focused government.

The Enterprise Architecture will create consistent, secure, and interoperable information technology systems for the commission and is an integral part of the governance process for information technology. CSAC's architecture will enhance information sharing, guide technology standards, reduce application development costs and complexities, and better serve the needs of the people of California.

##### 2.2.1. Manage our Enterprise Architecture

Pursuant to the California Enterprise Architecture Framework, CSAC has adopted an Enterprise Architecture to our support business-driven, service-oriented IT solution that facilitates the Grant Delivery System (GDS) in support of enterprise data sharing and statewide systems interoperability with schools and institutions statewide. CSAC adopted and implemented the Enterprise Architecture as a foundation to support the GDS enhancements and the SOA for schools and institutions to leverage to acquire the student data. Enterprise Architecture provides the foundation for which several other entities can leverage for their IT Strategic Plan.

##### 2.2.2. Current Information Technology Infrastructure

2.2.2.1. **Administration Services:** The Information Technology Services Division provides the following administrative and policy functions for CSAC:

1. Provide technology oversight of EdFUND our non-profit auxiliary.
2. Provide IT project initiation procedures, technology oversight and analysis for CSAC.
3. Provides Work Group Computing Policy reviews and approves information technology procurement procedures. Writes Statement of Work and provides contract management for information technology projects. Manages and participates in RFP and subsequent evaluations.
4. Reviews, prepares, coordinates, and manages Feasibility Study Reports, Special Project Reports, and Post Implementation Reports for client projects.
5. Establish and maintain standards, policies, and procedures for ITS infrastructure, projects, asset management, software licensing, and service requests.
6. Works with clients for business process re-engineering and planning.

## Enterprise Architecture

7. Coordinates ITS strategic and tactical planning, and requirements with state, federal, local, and private organizations for financial aid.
8. Provides required reports and produces to control agencies.
9. Participates in federal, state, local, and private educational standardization groups for financial aid automation.

2.2.2.2. **Infrastructure Services:** The Information Technology Services Division manages, maintains, and supports the following:

1. Network and Computer Room:
  - a. Network Backbone: Category 5E wiring is provided to cubicles, offices and conference rooms. A minimum of two data and two voice RJ 45 jacks per location.
  - b. Routers/Switches: The Commission operates a TCP/IP switched Local Area Network. Switch topology consists of Cisco 3750 switch stack supporting 100baseT/1000baseTX. At the core is a Cisco 3800 series router providing backbone connectivity. The Commissions' Pix 515E firewalls provide firewall protection and DMZ hosting for web enabled devices. The Commission uses a Cisco 2800 series router for Connectivity to CSGNet. The Commission relies on a 20 MB OPT-E\_MAN connection to CSGNET and a T-1 backup.
  - c. Network Operating Systems: CSAC Supports more than 22 servers. CSAC has servers running Netware 4.11 SP 6, Windows 2003, SUSE 10, Fedora Core 8 and Red Hat Linux 6.1. Our primary file servers run Netware version 6.5 SP6. The server environments support configuration management, web applications development, Intranet services, Mail services, application development, database testing, file services, dhcp, dns, security, etc.
  - d. The Commission provides remote access connectivity to end systems via web based vpn services utilizing a Cisco 3030 VPN Concentrator.
  - e. Backup/Recovery: VERITAS Net Backup is used to backup and recover LAN servers. Backups are done nightly. A bonded vendor maintains offsite tape backup storage.
  - f. Uninterruptible Power Supplies – all critical devices including servers, routers, and firewalls are protected by UPS. UPS for mission critical servers include the capability for controlled shutdown of servers when power failures occur. The UPS provides sufficient power to maintain critical devices on line for up to 45 minutes.
  - g. Facilities: Computer facilities are located in an electronically secured computer room. The room has separate 1400 BTU air conditioner and temperature controls. Voice, data, and fiber network connections

## Enterprise Architecture

terminate in that room. Access is limited to ITS managers, network support, and system administrator personnel. Total power requirements for ITS devices are 30 KVA. FM200 dry chemical fire suppression is in use.

### 2.2.2.3. Email

2.2.2.3.1. GroupWare: GroupWise version 7.03 is used for Internet and internal email as well as calendaring. Over 130 mail accounts are administered.

### 2.2.2.4. Mainframe

- a. DTS furnishes maintenance, operations and support.
- b. Mainframe access is gained through EDFund. The mainframe is used by CSAC for GDS file uploads, down load, research and grant simulations using SAS, and printing GDS letters, rosters and reports.
- c. CALSTARS, DMV and the Personnel System (HRIS) are also accessed through the mainframe.

## 3. Existing Approved Reportable IT Projects

**Table 1-Existing Approved Reportable IT Projects Summary by Department**

Existing IT Project	Approved Project Cost*	Project Number	Implementation Date
Grant Delivery System Service-Oriented Enhancements -FSR	FSR	\$7,292,172	7980-
Grant Delivery System Service-Oriented Enhancements -SPR	SPR Pending	\$4,936,483	7980-

**\*Note:** If a Special Project Report (SPR) was submitted for review in July 2008 that includes project costs that differ from the last approved project document, enter both the last approved project cost and the revised project cost from the SPR under review.

**Table 2-Proposed IT Project Summary**

Proposed IT Project	Priority Ranking	FSR Submission Date	Estimated Total Cost
Imaging Project	Pending	21 Jul 2008	\$1,459,969
Firewall Refresh Project	2		\$60,000

## Enterprise Architecture

**PROPOSED IT PROJECTS****3.1. Proposal name and priority ranking: Grant Delivery System Service-Oriented Enhancements FSR/SPR – Priority 1****3.1.1. Description of the proposed IT project:**

The Department of Finance approved a Feasibility Study Report (FSR) for the Grant Delivery Service Oriented Enhancements, Project Number 7980-31 on January 10, 2006. It was agreed the Commission would complete the project in two phases. Phase 1 consisted of the restructure of the GDS database and began real-time database processes. Phase I also set-up the real time framework and was completed on June 30, 2007. Phase II entails the completion of the real time components, development of atomic transactions, and implementation of a service-oriented architecture with five scalable Web services. These web services will provide all schools with an enhanced capability to acquire, update, and reconcile grant information in real time using WebGrants. These services provide real time information to students on awards and payments. It also includes real time updates and information retrieval using Web Services categories that will provide a new generation interface for automated data exchange between systems.

In the Governor's May Revise, the proposal was to sell EDFUND and that CSAC would incur budget reductions, faces the loss of staff due to a SROA process, separating from EDFUND which involves a move to another building, acquiring additional duties, acquiring EDFUND/CSAC staff that do not possess the same skill sets thus requiring a learning curve, and reduction in funding for the Commission overall. These changes in the Commission greatly impact the resources, schedule and scope of the GDS Phase II portion of the project. CSAC has evaluated the impact and determined that the web services scope would need to be reduced down to one scalable web service and the implementation of Phase II to be moved out to December 2008. Moving the schedule out has to do with the downtime associated with the move to another location and the learning curve of a change in resources. Completing the real time components is essential for the agency to support the needs of the schools.

The GDS system will continue to support all current services such as the batch uploads and down loads via WebGrants. The project is designed to deliver a system that meets the wide diversity of technology needs presently existing at schools as well as provide a road map to the future. The project is also designed to strategically align our system with the US Department of Education who is also moving toward web services technology. The Web Services being offered by Phase II will be designed to meet long standing requests from larger schools for automated transfer of data between systems and provides a bridge for the use of this technology at all schools in the future. Commission staff understands that many smaller schools do not have the technical support or budget to alter their systems to fully utilize web services. Through the Advisory Committee, CSAC has been working with schools to identify potential alternatives and solutions for schools who cannot directly utilize the web services solution with their Financial Aid Management System (FAMS). Since the schools do not have technology services to develop client for web services, CSAC is providing a simplistic client

## Enterprise Architecture

for schools to utilize upon completion of web services. Once these initial web services are provided, there is potential for all schools to use or extend these services in innovative and effective ways. Due to this technical limitation for the schools, CSAC decided to provide one scalable web service for now and postpone the remaining web services to the future.

CSAC staff have been actively coding the Real Time components and have completed the grade point average web service milestones of the project. The remaining four web services were in progress but staff will redirect their focus on completing the real time components. Vendors that have been hired to do maintenance on the existing application while the CSAC Staff coded the new changes will remain on their contracts until they expire. Due to budget restrictions, no additional contracts will be established. The CSAC staff will be completing the real time components and doing system maintenance simultaneously. The absorbed staff from EDFUND will be assisting the current CSAC staff while learning Oracle and ASP.Net programming language. With the extension of the schedule, the remaining staff will complete the redefined scope of the project.

### **3.1.2. Which of your department's business goals and objectives does this project support, and how?**

- 3.1.2.1. Expand Postsecondary Educational Opportunity – Enhancing the Grant Delivery System (GDS) and WebGrants for Students website will provide grant information to students via the internet and allow students the ability to check their grants status via WebGrants for Students. The enhancements to the Grant Delivery System will expedite the grant awarding and payment process for students.
- 3.1.2.2. Increase California's Investment in Education – By providing real-time processing of grants and on line services to schools and students, CSAC is contributing to the information and awareness for students and overall customer satisfaction.
- 3.1.2.3. Expand and Enhance Outreach – By enhancing GDS the Commission will provide up to date information concerning grants and on line forms to eliminate mailing of forms will improve the award process. The ability to provide information to students via the internet allows today's generation to search and understand the rules and regulations governing the Cal Grant programs.
- 3.1.2.4. Develop Innovative Programs and Services – CSAC is providing a web service for schools to directly upload grade point averages to GDS and speed up the grant awarding process. On line screens that can be electronically submitted replace the current paper forms that students had to mail in. WebGrants for Students is an interactive site for students to inquire their loans status as well as submit on line forms for changes to their grant information. Students no longer have to call or write a letter. They have the ability to search and query their information any time.

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**3.1.3. What are the expected business outcomes or benefits of the proposal as they relate to your organization's business goals and objectives?**

The scope of the **Grant Delivery System Service-Oriented Enhancements** project was to cleaning up duplication in the database and establishing atomic stored procedures that cleaned out duplicate code and could be used by calling procedures such as batch procedures. Additionally the project would provide web services so that we may better serve students, institutions, and staff. The proposed changes will increase our agility, provide quicker turnaround from inputs to results, and give stakeholders more direct access to their information. These enhancements will benefit the schools, students and CSAC by:

- Providing increased flexibility for High School, Institution and Student Services to acquire information.
- Improve security with the new ASP.NET environment.
- Reduces workload for participating Institutions and High Schools.
- Reduces workload for CSAC's Student Support Services and Grant Operations staff.
- Provides enhanced accounting and budget reports for the state.
- Allows CSAC the ability to continue awarding using the Federal ISIR specifications when they change by aligning with the Federal standard.
- Incorporate real time transactions.
- Improved performance.
- Web Grants, WebGrants for Students, and IVR provides real time status.
- Real Time and Batch capability provided round the clock.
- Access to uploaded data and receive status reports in real time.
- Up to date student record information.
- Reduced data maintenance.
- Flexible letter production.
- Increased information security.
- Accommodate limited program changes.
- Deliver a Web Services and use this as a framework towards additional web services in the future.

**3.1.4. The following are from the State's IT strategic plan. Check the appropriate box(es) to identify the goals this proposal supports:**

- Supporting and enhancing services for Californians and businesses
- Enhancing information and IT security
- Reducing state operational costs (leveraging, consolidation, new technology, etc.)
- Improving the reliability and performance of IT infrastructure
- Enhancing human capital management
- Supporting state and agency priorities and business direction

## Enterprise Architecture

**3.1.5. Is the proposal consistent with your organization's Enterprise Architecture?**

- Yes  
 No

**If no, please explain why the deviation from the organization's Enterprise Architecture is necessary.**

**3.1.6. Will the proposed system collect, store, transmit, or exchange confidential or sensitive information?**

- Yes  
 No

**3.1.7. If this proposal is conceptually approved, what is the estimated date (mm/yyyy) the FSR will be submitted?**

**SPR was submitted July 2008 for changes to implementation date.**

**3.1.8. What is the estimated project start date (mm/yyyy) if the FSR is approved?**

**The project was approved to start July 2006 but due to the late approval of the budget the project did not begin until late August 2007.**

**3.1.9. What is the duration of the proposed project?**

**The last phase of the project is scheduled to implement by December 2008.**

**3.1.10. Will the proposed project utilize the existing infrastructure?**

- Yes  
 No

**If no, please explain.**

**3.1.11. Is the proposal related to another proposal or to an existing project?**

- Yes  
 No

**If yes, describe the related proposal or project and how it is related:**

**3.1.12. Describe the consequences of not doing this proposed project at the planned timeframe:**

The GDS Phase 2 Project was delayed due to the Governor's May Revise. The May Revise included language that CSAC would incur budget reductions, faces the loss of staff due to a SROA process, separating from EDFUND which involves a move to another building, acquiring additional duties from EDFund,

**Enterprise Architecture**

acquiring EDFUND/CSAC staff that do not possess the same skill sets thus requiring a learning curve, and reduction in funding for the Commission overall due to the proposal to sell EDFUND. These changes in the Commission greatly impact the resources, schedule and scope of the GDS Phase II portion of the project. CSAC has evaluated the impact and determined that the web services scope would need to be reduced down to one scalable web service and the implementation of Phase II to be moved out to December 2008. Moving the schedule out has to do with the downtime associated with the move to another location and the learning curve of a change in resources. Completing the real-time components is essential for the agency to support the needs of the schools. An additional delay in implementation would just add additional workload on remaining staff. Currently the project is on schedule.

**3.1.13. Check the appropriate box(es) to identify the proposal's funding strategy:**

- Augmentation needed
- Redirection of existing funds
- Other (describe): The project had received an augmentation.

**3.1.14. What are the estimated cost and funding source(s) by fiscal year through implementation (information should be provided in the following format):**

<b>CSAC Fund Source</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14 and future</b>	<b>Total</b>
<b>General Fund</b>	\$828,372	\$828,372	\$828,372	\$828,372	\$828,372	\$4,141,860
<b>Federal Fund</b>						
<b>Special Fund*</b>						
<b>Total</b>	\$828,372	\$828,372	\$828,372	\$828,372	\$828,372	\$4,141,860

**\* Note: Identify the fund source and if the department is the sole user of the fund.**

## Enterprise Architecture

**PROPOSED IT PROJECTS****3.2. Proposal name and priority ranking: Imaging Project - 2****3.2.1. Description of the proposed IT project:**

The Imaging project was proposed to replace the current imaging system that EDFund provides. With the enactment of the 2007/2008 State budget, came legislation to sell EDFUND, CSAC's auxiliary organization responsible for the administration of CSAC's student loan program. CSAC submitted a 2008/2009 Budget Change Proposal to request the resources necessary for the Commission to fully re-establish the functions in business operations, technology services, research, communications, training/outreach, program compliance, and security and risk management that have been provided by EDFUND.

EDFUND currently provides both hardware and software support for Imaging and Intelligent Character Recognition (ICR). In order to access, manage and protect the 634,000 new documents annually necessary for proper administration of the various grant programs, and retain access to 600,000 previously archived documents, a networked imaging system is necessary. These services have been provided via a Service Level Agreement between EDFUND and CSAC for the contracting and maintenance of scanning hardware, the imaging software system and services since 2005. EDFUND purchased all the equipment and software for the GPA Imaging Optimization project and currently provides CSAC with the VisiFLOW system and services. Since steps are being taken for a sale of EDFUND and de-coupling efforts are being examined, CSAC must find a viable solution or replacement for imaging, scanning, storage, ICR data capture, and retrieval services.

Services currently provided by EDFUND include contract support services for GPA intelligent character recognition changes and scanning services using software that allows for the storage and retrieval of documents for subsequent processing, as well as grant and specialized program document scanning and networking services. The Commission currently leverages EDFUND's licenses for VisiFLOW, the imaging recognition software and utilizes their storage area network (SAN) for the data storage and retrieval of the documents for processing. Additionally the Commission utilizes EDFUND as a service provider for the required network infrastructure to enable transfers of large amounts of data between the two facilities. The scanning of documents for CSAC has been in process but CSAC still has a three year backlog of documents to be scanned and indexed.

**3.2.2. Which of your department's business goals and objectives does this project support, and how?**

This project supports all of the goals due to being able to image, index, store and retrieve student information. The solution will be able to upload the scanned data into the GDS system which will improve processing time of grants. This solution

## Enterprise Architecture

also allows staff and students the ability to get information timely, have their grants processed timely and provide answers to question immediately by retrieving record electronically. The intent of the imaging solution is not only scan and store the six different types of forms that CSAC currently images but to expand to image and store all correspondence. This will reduce in key data entry, human error from keying data, storage space for files, and labor to scan and file the documents. The goals it primarily support are:

- Expand and enhance outreach to all Californians, from new parents to primary and secondary school students to non-traditional and transfer students, to ensure their awareness and understanding of financial aid programs.
- Develop innovative programs and services to support the educational choices of the unprecedented number of students and parents who will seek financial aid in the next decade and to respond quickly and efficiently to meet critical workforce needs in California.
- Build coalitions and partnerships with public and non public members of the educational community by taking a leadership role in financial aid policy and strengthening the Commission's relationships with other members of the educational, governmental, business and non-profit communities concerned with higher education.
- Enhance the organizational capacity of the California Student Aid Commission by developing performance measures for programs and operations, expanding the Commission's research and policy analysis role, and increasing funding to properly meet the administrative costs of new or growing programs.

### **3.2.3. What are the expected business outcomes or benefits of the proposal as they relate to your organization's business goals and objectives?**

The process of document imaging and records management enables the Commission to reduce storage space, to reduce risk management due to fire and documentation loss, to use technology to access, reduce key data entry, filing and retrieve documents. The solution will create an electronic file of all documents scanned and index them by student for easy retrieval. The reduction in the back-up of all records provides a fire safe area.

### **3.2.4. The following are from the State's IT strategic plan. Check the appropriate box(es) to identify the goals this proposal supports:**

- Supporting and enhancing services for Californians and businesses
- Enhancing information and IT security
- Reducing state operational costs (leveraging, consolidation, new technology, etc.)

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- Improving the reliability and performance of IT infrastructure
- Enhancing human capital management
- Supporting state and agency priorities and business direction

**3.2.5. Is the proposal consistent with your organization's Enterprise Architecture?**

- Yes
- No

**If no, please explain why the deviation from the organization's Enterprise Architecture is necessary.**

**3.2.6. Will the proposed system collect, store, transmit, or exchange confidential or sensitive information?**

- Yes
- No

**3.2.7. If this proposal is conceptually approved, what is the estimated date (mm/yyyy) the FSR will be submitted?**

The FSR was submitted in July 2008.

**3.2.8. What is the estimated project start date (mm/yyyy) if the FSR is approved?**

The project start date is for July 2009.

**3.2.9. What is the duration of the proposed project?**

The project is schedule to implement in June 2010.

**3.2.10. Will the proposed project utilize the existing infrastructure?**

- Yes
- No

**If no, please explain. The project will utilize some of the existing hardware but will require additional hardware and software due to the amount of data that needs to be stored.**

**3.2.11. Is the proposal related to another proposal or to an existing project?**

- Yes
- No

**If yes, describe the related proposal or project and how it is related:**

**3.2.12. Describe the consequences of not doing this proposed project at the planned timeframe:**

## Enterprise Architecture

If the project is not completed timely, it will incur additional workload on staff and increase the backlog of documents to be scanned. It will delay the grant awarding process, delay answers to students who call or need to know their status of their grant application and require staff to manually key in all information from the documents received.

**3.2.13. Check the appropriate box(es) to identify the proposal's funding strategy:**

- Augmentation needed  
 Redirection of existing funds  
 Other (describe):

**3.2.14. What are the estimated cost and funding source(s) by fiscal year through implementation (information should be provided in the following format):**

Fund Source	2009-10	2010-11	2011-12	2012-13	2013-14 and future	Total
General Fund	\$ 528,439	\$ 211,945	\$ 211,945	\$ 211,945	\$ 211,945	\$1,376,219
Redirected	\$ 16,750	\$ 16,750	\$ 16,750	\$ 16,750	\$ 16,750	\$83,750
Federal Fund						
Special Fund*						
<b>Total</b>	\$545,189	\$228,695	\$228,695	\$228,695	\$228,695	\$1,459,969

\* Note: Identify the fund source and if the department is the sole user of the fund.

**3.3. Proposal name and priority ranking: Firewall Refresh Project (2)**

**3.3.1. Description of the proposed IT project:**

In 2005, The California Student Aid Commission (CSAC) replaced its Cisco Pix 515 firewalls infrastructure with Pix 515E's. The Pix firewall serves as the primary security defense mechanism that protects devices at CSAC from intentional hostile intrusion that could compromise confidentiality or result in data corruption or denial of service for those systems that reside at CSAC.

At the time of replacement, the Pix 51E5 Firewall was Cisco's premiere security appliance designed for small to medium-sized business networks. Since 2005, Cisco has announced that the Pix 515E series will be replaced by the new Cisco Adaptive Security Appliance (ASA). The Pix 515E Firewall reached its end of sale (EOS) on July 28, 2008. End of Hardware and Software Support will expire on October 23, 2012. As a result, the firewalls need to be replaced so CSAC can continue to provide first line network security.

## Enterprise Architecture

Although the 515E's are meeting current expectations, they will not be able to run future releases of the Pix Operating System. Without upgrades to a newer OS, CSAC will be susceptible to new network based attacks that could jeopardize mission critical resources. The recommended replacement product for the PIX 515E Cisco PIX Security Appliance is Cisco ASA 5520 Series Adaptive Security Appliances. The ASA 5520 is built on the same software foundation as the Cisco PIX Security Appliances. The Cisco ASA 5520 Series offers more robust firewall and IPSec VPN capabilities, as well as many additional benefits, including:

- Significantly better performance and scalability
- Secure Sockets Layer (SSL) VPN support (including clientless, portal-based remote access)
- Advanced Unified Communications (voice/video) security
- A modular design that allows you to add features such as intrusion prevention (IPS), anti-virus, anti-spam, anti-phishing, and URL filtering.

Migration to the Cisco ASA 5520 series is straightforward. CSAC can take advantage of its knowledge and investment in Cisco PIX Security Appliances, because there are essentially no changes in user interface, operations, or training.

### **3.3.2. Which of your department's business goals and objectives does this project support, and how?**

This project supports all of the goals and objectives of the Department. The Commission must have leading edge network security mechanisms in place. The Commission must be able to provide a secure environment in which secure data transactions can occur affording protection to both the Commission and its business partners. This will allow the Commission to:

- Expand and enhance outreach to all Californians, from new parents to primary and secondary school students to non-traditional and transfer students, to ensure their awareness and understanding of financial aid programs.
- Develop innovative programs and services to support the educational choices of the unprecedented number of students and parents who will seek financial aid in the next decade and to respond quickly and efficiently to meet critical workforce needs in California.
- Build coalitions and partnerships with public and non public members of the educational community by taking a leadership role in financial aid policy and strengthening the Commission's relationships with other members of the educational, governmental, business and non-profit communities concerned with higher education.
- Enhance the organizational capacity of the California Student Aid Commission by developing performance measures for programs and operations, expanding the Commission's research and policy analysis role,

## Enterprise Architecture

and increasing funding to properly meet the administrative costs of new or growing programs.

**3.3.3. What are the expected business outcomes or benefits of the proposal as they relate to your organization's business goals and objectives?**

Upgrading the Commissions firewall infrastructure will allow it to take advantage of new security features and enhancements. It will also allow the Commission to stay ahead of the curve and provide secure data transactions.

**3.3.4. The following are from the State's IT strategic plan. Check the appropriate box(es) to identify the goals this proposal supports:**

- Supporting and enhancing services for Californians and businesses
- Enhancing information and IT security
- Reducing state operational costs (leveraging, consolidation, new technology, etc.)
- Improving the reliability and performance of IT infrastructure
- Enhancing human capital management
- Supporting state and agency priorities and business direction

**3.3.5. Is the proposal consistent with your organization's Enterprise Architecture?**

- Yes
- No

If no, please explain why the deviation from the organization's Enterprise Architecture is necessary.

**3.3.6. Will the proposed system collect, store, transmit, or exchange confidential or sensitive information?**

- Yes
- No

**3.3.7. If this proposal is conceptually approved, what is the estimated date (mm/yyyy) the FSR will be submitted?**

The FSR will be submitted in July 2009.

**3.3.8. What is the estimated project start date (mm/yyyy) if the FSR is approved?**

The project start date is for July 2009.

**3.3.9. What is the duration of the proposed project?**

The project is schedule to implement in December 2009.

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3.3.10. Will the proposed project utilize the existing infrastructure?

- Yes
- No

If no, please explain. The project will utilize some of the existing hardware but will require additional hardware and software due to the amount of data that needs to be stored.

3.3.11. Is the proposal related to another proposal or to an existing project?

- Yes
- No

If yes, describe the related proposal or project and how it is related:

3.3.12. Describe the consequences of not doing this proposed project at the planned timeframe:

If the project is not completed timely, it will incur additional workload on staff. Additionally, failing to implement in a timely manner leaves the Commission susceptible to new network based attacks that could jeopardize mission critical resources. If the Commission does not replace the equipment prior to its end of support date, the Commission is susceptible to hardware or software failures.

3.3.13. Check the appropriate box(es) to identify the proposal's funding strategy:

- Augmentation needed
- Redirection of existing funds
- Other (describe):

3.3.14. What are the estimated cost and funding source(s) by fiscal year through implementation (information should be provided in the following format):

Fund Source	2009-10	2010-11	2011-12	2012-13	2013-14 and future	Total
General Fund	\$	\$ 30,000	\$	\$	\$ 30,000	\$60,000
Redirected	\$	\$	\$	\$	\$	\$
Federal Fund						
Special Fund*						
<b>Total</b>		\$30,000	\$	\$	\$30,000	\$60,000

\* Note: Identify the fund source and if the department is the sole user of the fund.

Enterprise Architecture

4. Enterprise Architecture

4.1. Does your organization have documented Enterprise Architecture principles, strategies, or standards to guide decisions on technology projects?

- Yes
- No

4.2. Indicate on Table A-1 below, the completion status of the component Reference Models of your formal Enterprise Architecture efforts. If available, please submit a copy of your Enterprise Architecture document.

Table A-1, Enterprise Architecture Completion Status

Component Reference Model	Status			
	Implemented	Implementation in Progress	Planned or Planning in Progress	Not Implemented and Not Planned
Business			X	
Service			X	
Technical		X		
Data		X		

4.3. Describe the governance structure your organization uses to review and approve the Enterprise Architecture and any subsequent changes.

All new Enterprise Architecture initiatives are presented and approved by the Commission's IT Steering Committee.

4.4. Does your organization have an Enterprise Architect? (if yes, provide their name, telephone number, and e-mail address below)

- Yes
- No

Name: Jarrid Keller

Classification: SSS III

Telephone Number: 464-6473 E-Mail: jkeller@csac.ca.gov

## Enterprise Architecture

### Enterprise Architecture Defined

#### 4.5. Enterprise Architecture Vision and Benefits

##### Vision

To enable better information technology decisions that are driven by the business needs of the state in the delivery of services.

##### Benefits

- Improves alignment of information technology with the CSAC's missions, goals, and objectives.
- Improves CSAC service delivery and business operations.
- Lowers costs and improves security, reliability and performance of the CSAC's information technology infrastructure.
- Improves CSAC's and School's data sharing and systems interoperability.
- Improves integration resulting in fewer occurrences of duplicate infrastructure, information silos, and application redundancy.

#### 4.6. Enterprise Architecture Framework Selection Principles

The following selection principles were developed to guide the creation of the CSAC's Enterprise Architecture Framework:

- Includes involvement by many schools and universities to encourage collaboration, buy-in and synergy on a universal format to be able to interface with.
- Maintains compatibility with the Federal Enterprise Architecture Framework.
- Allows for standardization and reusability of services.

##### Benefit:

- Aligns with the California Technology Governance Structure.
- Utilizes principles as a way to make fully supportable and consistent information technology investment decisions.
- Provides both short-term improvements that provide quicker value and longer-term improvements that provide more substantial value over time.
- Realistic and can be used for decision-making. It is not just "shelf ware".

**Enterprise Architecture**

- Ability to measure the value of enterprise architecture.
- Provides strategic direction to the Enterprise Architecture and Standards Committee.
- Advocates and educates information technology stakeholders (Agency heads, Legislature, Governor’s office) on enterprise architecture and its benefits.
- Markets the benefits of enterprise architecture via collaborative forums.

**4.7. The CSAC Enterprise Architecture Framework**

Based on the Federal Enterprise Architecture Framework, the CSAC Enterprise Architecture Framework promotes shared development for common processes, interoperability and sharing of information among schools and colleges as well as the Federal Department of Education. This framework provides an organized structure and a collection of common terms by which multiple agencies can align their respective enterprise architectures.

**Standards** – Contain guidelines and best practices. Some standards may be proven, while others are evolving. This component also includes configuration options for implementing the standards. Examples include the following:

- Security Standards – Apply to all levels of security from routine to classified.
- Data Standards – Apply to data, meta data, and related structures.
- Applications Standards – Apply to application software.
- Technology Standards – Apply to the operating systems and platforms.

**Strategic Direction** – Guides the development of target architectures. The strategic direction incorporates the vision, principles for guiding the architecture evolution, and goals and objectives for managing information technology and determining progress towards the vision.

**4.8. 5.2. Enterprise Architecture Principles**

The following principles represent the criteria against which potential investment and architectural decisions are weighed.

<i>Principle #1</i>	<i>Business Drives Information Technology</i>
<i>Rationale</i>	Information technology direction will be driven by what the business needs to serve their customers. Business events represent the essential activities that define the boundaries of a good information technology environment. This principle will foster an atmosphere where the information environment changes in response to the needs of the business, rather than having the business change in response to information technology changes. Technology changes provide an opportunity to improve the business process and hence, change business needs.

**Enterprise Architecture**

*Implications*

- Minimize unintended effects on business due to information technology changes.
- Build what we need, not what we want.
- Easier to identify technical impacts when business events change.
- Must include the business and its perspective in the process.

<b><i>Principle #2</i></b>	<b><i>Enterprise Focus</i></b>
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*Rationale*

Information management decisions will consider the impact and maximize the benefit to the commission and the state as a whole.

*Implications*

- The IT Steering Committee is the governance structure that supports the CSAC investment decision-making.
- Achieving maximum statewide benefit will require changes in the way we plan and manage information. Technology alone will not bring about this change.
- The IT initiatives will be conducted in accordance with the IT Capital Plan and the Agency Strategic plan.

## Information Security

## 5. Information Security Officer

5.1. How is your Information Security Officer (ISO) involved in proposed project development efforts?

The ISO reviews and approves all project FSRs. The ISO is part of the Defect and IT Steering Committee meeting as well as our defect meetings.

5.2. What are your department's core business principles, policies and standards related to information integrity, confidentiality, and availability and the protection of information assets?

The ISO has many security policies for the agency and complies with the State Administrative Manual and governing regulations concerning Security.

5.3. If data within your department is shared with external entities, does your department implement data exchange agreements with these entities?

Yes

No

If no, please explain.

Not applicable

5.4. How does your department ensure that software developers and programmers follow standards and best practices for Web, application, and system development?

All changes to code must have a peer review and code walk through. This walk through of code is for senior programmers to validate that all programmers adhere to the standards and best practices set by CSAC.

5.5. Does your organization have an Information Security Officer? (if yes, provide their name, telephone number, and e-mail address below)

Yes

No

Name: Justin Masters

Classification: Senior Information Systems Analyst

Telephone Number: (916) 464-8978 E-Mail: jmasters@csac.ca.gov

**6. Workforce Development Plan**

**6.1. Does your organization have a workforce development plan for IT staff?**

- Yes  
 No

**If yes, briefly describe it.**

**6.2. Check the appropriate box(es) to identify which workforce development tools, if any, your organization is using for IT classifications:**

- Training  
 Upward Mobility  
 Mentoring  
 Career Assessments  
 Knowledge transfer program  
 Performance Evaluations  
 Other (please list)

**6.3. Does your organization have a workforce plan for IT staff (i.e., for Rank and File)?**

- Yes  
 No

**If yes, briefly describe it.**

**We utilize our defect tracking system to assist in prioritization and allocation of staff.**

**6.4. Does your organization have a succession plan for IT staff (i.e., for Management)?**

- Yes  
 No

**If yes, briefly describe it.**

CSAC only has one employee that applies to succession planning.

6.5. IT Staffing

Provide the following information in table C-1 on the following page:

- The name of each IT classification currently in the organization.
- The number of staff in each IT classification in the organization.
- The number of staff in each IT classification eligible to retire in the next five years.
- The percentage of each IT classification eligible to retire in the next five years.

Table C-1 — IT Staffing

IT Rank and File Staff Classification	Number of IT Rank and File Staff in Classification	Number of IT Rank and File Staff in Classification Eligible to Retire in Next 5 Years	IT Management Staff Classification	Number of IT Management Staff in Classification	Number of IT Management Staff in Classification Eligible to Retire in Next 5 Years
CIO			1		1
DPM III			1		
SSSIII			1		
SSSII	1		1		
SSSI	3				
Senior PA	5				
Senior ISA	1				
Staff PA	2				
Staff ISA	4				
Assoc PA	2				
Assoc ISA	3				
Assist PA	1				
Programmer II	1				

**7. Portfolio Management**

**7.1. Does your organization have a process for improving the alignment of business and technology?**

- Yes  
 No

**If yes, briefly describe it.**

**The Defect meetings and the IT Steering Committee Meetings are meetings where the business and IT collaborate on all issues and proposed projects for the agency. The Business and Technology managers work together to improve business processes with technology. All of the solutions must fit within the infrastructure and standard technologies at the Commission to ensure cost effective maintenance and skill sets.**

**7.2. What is the status of implementing a formal portfolio management methodology for technology projects within your organization?**

Implemented (Please describe)

Implementation in progress (Please describe)

**CSAC is in the process of developing a PMO office with portfolio management. Since we are a small agency the portfolio is small but the information is used to govern projects at the IT Steering Committee Meetings.**

- Planned or planning in progress  
 Not implemented and not planned

**7.3. List any automated tools being used for portfolio management. Enter "None" if no automated tools are being used.**

**We currently have a defect tracker system that was developed in house; Projects are also tracked within the tool.**

**7.4. What is the status of implementing a standard project management methodology for technology projects in your organization?**

**Implemented (Please describe)**

**Implementation in progress (Please describe)**

**CSAC utilizes the SAM and SIMM regulations and standards for project management. All projects are monitored and documented through out their life cycle.**

**Planned or planning in progress**

**Not implemented and not planned**

**7.5. Does the organization require its project managers to be certified, either through a professional organization (e.g., PMI, ITIL) and/or through completion of specified project management coursework:**

- Yes
  - PMI
  - ITIL
  - Agency-specified project management coursework (identify below)

No

**7.6. Select from the list other areas of training your organization requires of its project managers:**

- Fundamental Project Management
  - Systems Development Life Cycle
  - Scheduling tool (identify below)
    - 
    - 
    -
  - Project Performance Management (e.g., Earned Value Management)
  - Business Process Analysis
  - Requirements Traceability
  - Procurement/Contracts Management
  - Other (identify below)
    - 
    -
- None

**7.7. Describe project-level governance practices, including change management, issue resolution, and problem escalation.**

All issues are documented utilizing the defect tracker system. These tickets are then analyzed, prioritized and managed. The weekly defect meetings provides a forum for managers and staff to discuss changes and understand the impact prior to prioritizing the defect. If defects need to be escalated to a project, then an issue paper or FSR is completed. All defects and projects are governed at the IT Steering committee meetings. Resources are allocated based on business need and emergency fixes. All projects are defined, approved, monitored, and reviewed on a weekly basis,

**7.8. Does the project management methodology include processes for documenting lessons-learned and applying these to future projects?**

**Yes (Please describe)**

**A lesson learned JAD is done at the end of phases and the end of a project to document the pros and cons of the project and overall performance in completing the projects. This information is utilized in completing the Project Information Evaluation Report (PIER).**

**No**