ETS Infrastructure Projects and WorkPlace Alaska Migration Project | **FY2007 Request: $5,510,500** | **Reference No: 41813**

AP/AL: Allocation
Project Type: Information Systems
Category: General Government
Location: Statewide
Contact: Eric Swanson
House District: Statewide (HD 1-40)
Contact Phone: (907)465-5655
Estimated Project Dates: 07/01/2006 - 06/30/2011
Appropriation: ETS Technology Projects

Brief Summary and Statement of Need:
This request includes two groups of projects relating to ETS Infrastructure (8 projects) and the WorkPlace Alaska Migration Project. The 8 projects contained within the ETS Infrastructure request are a part of the ongoing support of the Enterprise Technology Services Division's mission to deliver computing and telecommunications services to its customer base. The WorkPlace Alaska project is a continuation from FY2006, which replaces the current Lotus Notes/Domino platform. The current platform is functional, but it is not supportable and recruiting staff with Lotus Notes/Domino experience has been unsuccessful.

Funding:	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	Total
Gen Fund	$5,510,500						$5,510,500
Total:	$5,510,500	$0	$0	$0	$0	$0	$5,510,500

☐ State Match Required ☐ One-Time Project ☐ Phased - new ☐ Phased - underway ☑ On-Going
0% = Minimum State Match % Required ☐ Amendment ☐ Mental Health Bill

Operating & Maintenance Costs:

	Amount	Staff
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
Totals:	0	0

Additional Information / Prior Funding History:
ETS Infrastructure: Funding in the amount $447,000 was appropriated in FY 2006. WorkPlace Alaska: Funding in the amount of $144,000 was appropriated in FY 2006.

Project Description/Justification:

Project Name	**Amount (in thousands)**	**Fund Source**
ETS Infrastructure	$ 5,450,000	GF

Problem To Be Solved: These 8 projects are part of the ongoing support of the Enterprise Technology Services Division's mission to deliver computing and telecommunications services to its customer base.

1) Mainframe server upgrade – It is projected that the ETS IBM z/800 Mainframe will reach processing capacity around the fall of FY 2006, and will require increased processing cycles from that point forward. This is within the normal and customary 3-year life cycle of the state's processing history and business trends. It is imperative that ETS provide for the traditional growth we have experienced and the response time that the customer base expects.

2) Data Center environmentals – This initiative is a project to upgrade many of the failing Department of Administration, Enterprise Technology Services (ETS) production support

environmental systems, which include air conditioning, fire suppressant, power distribution and physical reconfiguration.

3) Core Services Contract – The current contract for Voice, Data, Video, and Help Center Services is due to expire on June 17, 2006 unless the State of Alaska exercises its last 1 year extension. That will move the date out to June 17, 2007 and require ETS resources to write a new RFP to encompass the existing and proposed voice, data, and video environments, relying on a 7 x 24 x 365 Help Center to facilitate problem and change management.

4) Server consolidation – The Unisys study/project that provided a governance model for the State of Alaska, also made recommendations for achieving efficiencies in the Information Technology (IT) environments. One of the projects pertained to the consolidation of servers presently deployed in many different facets by the 14 departments in the Executive Branch of government. While there has been a general agreement on the concept of server consolidation, what has yet to be determined are the location(s) for consolidation efforts and whether those sites would be in state owned facilities or in off-site locations. ETS is presently exploring both options to determine viability from a ongoing cost and network connectivity prospective.

5) Mid-tier Data Base Management System (DBMS) services – Several state applications currently run under SQL Server and Oracle's DBMS's. ETS enterprise applications require maintenance support staff for SQL Server. There are state standard DBMS's, but ETS has no funding to support them. SOA agencies have expressed an interest in having ETS centrally manage the DBMS instances for their applications using DBMS's. This project would provide software/hardware and staff, including training, to initially support these services.

6) Storage Resource Management / Disaster Recovery – A project to implement Data Center disaster recovery services and security access controls to the resources in the Wide Area Network (WAN) with fail-over capabilities that provide non-stop availability for access to statewide mission critical systems. Examples: SunOne iPlanet Directory Services, Cisco Security Agent Services, Microsoft Exchange, Microsoft IIS, Microsoft SQL, Lotus Notes, Oracle, DB2 and many Alaska Enterprise applications such as; MyAlaska, Vehicle Registration services, Elections, Financial Systems, Human Resource Systems, Child Support Enforcement Applications, Natural Resource Fire Reporting services and Health and Social Service applications.

7) ETS equipment replacement – This project allows for technology refresh of depreciated equipment and to purchase some new hardware and software.

8) Web Services delivery - To provide ETS partners with the processes and mechanisms for the discovery and delivery of Enterprise Web Services across Alaska in an efficient, effective and customer-oriented manner. ETS creates technology products that leverage shared and centralized cost effective solutions. Web Services are an "Enterprise Wide" perspective keeping the total cost of ownership low for hosting and Web application development. Partners need this mechanism for discovery and delivery to ensure enforcement of our current procedures and standards.

Solution:

(1) The new processor must be IBM compatible, running the z/OS 1.4 operating system at the minimum, and all requirements specified within running z/OS (such as 64 bit processing, and WLM). For customer functionality, it must be able to run the State of Alaska's current workload at the level of all software as of 6/30/2005.

(2) Data center environment:

- Computer/Server room air conditioning system must be capable of cooling 10,000 square foot raised floor area in the Juneau Data Center and a 2,000 square foot raised floor area in Anchorage.

- Uninterruptible Power Supply (UPS) systems, under normal operation, the primary UPS module carries 100% of the critical load while the redundant UPS is unloaded.

- Power distribution systems must be provided utilizing the original electrical wiring plant, as well as additions made through the years to the expanded Computer/Server room. It must be capable of providing expanded electrical requirements for the potential Server Consolidation needs/project.

- Emergency generator systems must be capable of supporting both data centers in Juneau and Anchorage.

- Fire suppression and life safety systems currently use Halon. These systems must not be compromised in any location of the computer/server rooms. Smoke detectors and Halon supply systems must accommodate new fire zones created when walls have been added.

(3) ETS resources that are presently responsible for the voice, data, video and help center components of the services delivered today will be required to focus on crafting a new RFP for Core Services. The intent is using "lessons learned" from previous contractual services and to also take into account the existing and proposed networks as they relate to voice, data and video. ETS is proposing to move to a new Voice Over Internet Protocol (VoIP) telephony environment in FY 2006/FY 2007, which should be considered in the new Core Services contract. More substantial "Day-2" support is also a major consideration for the new services, which will hold service providers to more significant Service Level Agreements (SLA's), with cost recovery stipulations.

(4) In preparation for the Server Consolidation project, it is incumbent upon ETS to prepare existing data center environments and/or locate vendors and facilities that can accommodate the new server locations. It will also be a requirement to facilitate robust data network connectivity to these sites to ensure that access to the new servers is reliable for all entities requiring that connectivity.

(6) ETS proposes utilizing a remote DBA support option initially, while hiring and training staff for long term support. For Oracle, this would initially start with 6 Standard Edition licenses at $15,000 each. This would cover a 4-processor production OLTP server, a test server and an internal test server. For SQL Server, this would start with 2 Enterprise Edition licenses at $12,500 each and 2 test servers for internal testing of fail-over capabilities.

(6) The key functions of the disaster recovery services being considered include a scalable storage solution that ensures data availability and automates traditional data protection tasks. In short, this storage solution is expected to simplify human operations. It is expected that the disaster recovery solution, once implemented, will significantly reduce backup and restore windows through benchmarked performance, unlimited environment scalability and high system and data availability with an integrated disaster recovery procedure.

(7) Equipment to be purchased may include desktops, laptops, 2 way radios, servers, end point routers, storage arrays, and a new mainframe cut sheet printer.

(8) A directory of web services, enabling services to be registered, discovered and integrated together, as well as a repository supporting management and governance of a full range of needed artifacts (a metadata management system).

Benefits:

1) The impact of this upgrade is usually very noticeable at the outset as it usually relieves a CPU under a stressed or near capacity situation. This is as opposed to running the environment on smaller processors, which has been investigated previously and were determined not to be cost effective, based primarily on software licensing charges.

2) Most of the environmental systems are more than 26 years old. Because many of the environmental systems are requiring substantial maintenance on a fairly regular basis, ETS

has assumed that because of technology efficiencies available in the market place, it will be possible to improve efficiencies and significantly reduce costs with newer environmental facilities implemented.

3) Establishing a new Core Services contract should provide a cost benefit to the state for obtaining voice, data, video and help center services across the communities now served by the existing PBX telephony environment, VoIP deployment in Juneau and Anchorage, the SOA/WAN and video network to 17 sites. Help Center services are essential for the day-to-day operations and oversight of all the network components.

4) To realize cost lowering economy of scale, management staff efficiency improvements and increased security by locating State of Alaska computer servers in centralized, 24x7 monitored data centers equipped with common standardized hardware and management tools that provide for delegated remote management of agency servers by existing agency staff.

5) ETS would be the primary resource used to support multiple DBMS applications for SOA agencies. This project would facilitate the creation of and allow for ongoing support of existing DBMS applications using ETS.

6) A few of the requirements for this solution include advanced features for disaster recovery services such as Storage Area Network (SAN) technologies, Server-less enabled application agents, Bare Metal Disaster Recovery for Unix and Windows, Data Protection Domains, Centralized Cross-Platform Management, Benchmarked High Performance backup and recovery of large Oracle and Microsoft SQL databases through parallel streaming of data.

7) Technology refresh of depreciated IT equipment and some new equipment.

8) These services will increase productivity through consistent means of access to both the registry of Enterprise Web Services and its repository of associated metadata (artifacts).

What We Propose to Buy:

(1) The major cost component for the mainframe upgrades are derived from the software licensing costs of non-IBM, Independent Software Vendor (ISV) software. There is typically an initial upgrade fee, then an annual increase (ALUF), based upon the MIPS rating (horsepower) of the new processor. The ISV costs, terms and payment structures are HIGHLY negotiable if planned and started well in advance of the upgrade itself. Estimated total for this upgrade $2,301,147 may include the following:

- z900 processor, Model 2086-A04 $ 230,000
- 8GB memory $ 64,000
- IBM software – increase $ 88,000
- Ficon cards (8-Shark; 8VTS) $ 80,000
- IBM upgrade from current position $ 333,334
- 3rd Party Software upgrades fees $ 1,000,000
- Technical consulting and training $ 50,000
- Hire contract negotiation consultant $ 300,000

(2) Most of the costs will be distributed between the state data centers for the categories of A/C, fire suppression and generators totaling $700,000.

(3) ETS proposes establishing a contractual relationship with a telecommunications provider in Alaska that can meet or exceed the expectations and requirements in the RFP as written. This new contract will be comprehensive and have strict reporting and accountability clauses

within it to be certain that the state receives the services it pays for throughout the life of the contract. Once the contract is written and awarded, ETS estimates the cost of transition to a new provider to be approximately $2 million.

(4) ETS estimates the project cost for this phase of server consolidation project to cost $1,494,500.

(5) ETS estimates the project costs of DBMS support to be approximately $ 550,000.

(6) ETS estimates the project costs of Disaster Recovery to be approximately $700,000 as broken down:

- System design $ 35,000
- Software acquisition $ 140,000
- Software installation/programming $ 60,000
- Hardware acquisition $ 200,000
- Hardware installation $ 70,000
- System testing / integration $ 45,000
- System operation & maintenance $ 50,000
- Training $ 100,000

(7) ETS estimates $850,000 for this hardware and software.

(8) ETS estimates this project cost to be approximately $138,830.

Prior Funding History:

1) ETS received $131,000 in fiscal authorization in FY06 for this project.

2) ETS received $316,000 in fiscal authorization in FY06 towards other environmental upgrades.

3) No prior year funding history exists.

4) No prior year funding history exists.

5) No prior year funding history exists.

6) No prior year funding history exists.

7) No prior year funding history exists.

8) No prior year funding history exists.

Timeline:

1) ETS estimates this project duration to be approximately 6 months long.

2) ETS estimates this project duration to be approximately 18 months long.

3) ETS estimates this project duration to be approximately 6 months long.

4) ETS estimates this project to be ongoing and this phase to be approximately 12 months long.

5) ETS estimates this project to be ongoing and this phase to be approximately 12 months long.

6) ETS estimates this project to be ongoing and this phase to be approximately 12 months long.

7) ETS estimates this project to be ongoing and this phase to be approximately 12 months long

8) ETS estimates this project to be ongoing and this phase to be approximately 12 months long.

Explanation of How Project Contributes to Your Divisional Mission:

ETS is the state agency that has the responsibility to deliver computing and telecommunications services to the 15,000+ users of the data and voice networks. These 8 projects are components of that service delivery and necessary for deployment and/or implementation.

Explanation of How Project Contributes to End Result:

Approval on the funding of these 8 projects will assist ETS in their mission to deliver Enterprise Technology to the customer base it serves.

Project Name	**Amount (in thousands)**	**Fund Source**
WorkPlace Alaska Migration	$60.5	General Fund

Problem To Be Solved:

The platform that WorkPlace Alaska (WPA) resides on is no longer supportable. Attempts to recruit staff with Lotus Notes/Domino experience have been futile. This has placed Division of Personnel (DOP) in the position of being totally dependent upon one Enterprise Technology Services (ETS) staff person who has the skills necessary to administer and program the system. ETS has two other Notes applications (Public Notices and Task Orders), no other agency in state government is using the platform.

However, in order to provide the required Enterprise recruitment and vacancy system, WPA much be functional and it must be supportable.

Solution:

Assess, purchase, and implement a new platform for the WPA application.

It is possible that the required recruitment functionality will be included in the proposed new HR/Payroll system. In that event, the funding for this request will be rolled into the larger funding for the HR/Payroll system. If the functionality is not included in the HR/Payroll system, then a new development platform must be identified that meets both the requirements of functionality and supportability, and that solution must be implemented.

Benefits:

Using newer software and a more widely used platform for the WPA application will ensure that DOP will be able to successfully recruit competent staff to administer and maintain the system.

What We Propose to Buy:

Phase I – Assessment and Selection of appropriate platform		$ 5,000
Phase II – Start-up/Initial Development Licensing		
Initial Development License – 1 X $10,000	$ 10,000	
Additional Dev. License – 3 X $2,500	$ 7,500	
Technical Support (10 incidents)	$ 3,000	
Training – On-site	$ 15,000	
		$ 35,500

Phase III – Production Licensing	
1 SQL Server Enterprise Edition ($20,000)	$ 20,000
GRAND TOTAL	$60,500

Prior Funding History: In FY2006, $144,000 was appropriated for this project, however, the initial price estimates were to low. The increased costs of the development, licensing, technical support, training, and an additional necessary server has left DOP $60,500 short of funding in order to complete the project.

Timeline:

Phase I – Assessment and Selection of Platform:	April, 2006 – June, 2006
Phase II – Start up and Development:	July, 2006 – June, 2008
Testing:	July, 2008 – August, 2008
Pilot Testing:	September, 2008 – November, 2008
Phase III – Production	
Purchase and installation of Servers and Enterprise SW:	September, 2008
Beta Testing:	December, 2008 – January, 2009
Production:	February, 2009

Explanation of How Project Contributes to End Result: Replacement of the current platform that WPA resides on will ensure DOP's ability to maintain a stable recruitment system, which will ensure qualified hires and a capable workforce.