



DAS
DEPARTMENT OF
ADMINISTRATIVE
SERVICES

OREGON STATE CIO COUNCIL'S

Progress Report to the 75th Legislative Assembly's Legislative Fiscal Office

**Actions and Opportunities to Optimize
Information Technology Cost and Efficiency**

June 25, 2009

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Executive Summary

Background

State government has experienced an unprecedented reduction in funding. Yet, that situation is just a reflection of the conditions Oregonians currently experience. Because of these unprecedented challenges, on February 12, 2009 the Legislative Fiscal Office (LFO) asked the State Chief Information Officer (CIO) to convene the state CIO Council to: describe to the legislature what state government's information technology (IT) community is already doing to help deal with the current fiscal crisis; and to explore other ways information technology could be leveraged in these tough times. On February 17, 2009, a joint message was sent by State CIO Dugan Petty and CIO Council Chairperson Bob DeVyldere to the CIO Council members inviting them to participate in a series of "Fast Track" brainstorming sessions beginning February 25, 2009.

Initial "Brainstorming" Phase

The first 1 ½-hour brainstorming session produced: 41 ideas for IT cost optimization; and the beginning of a list of actions already underway to optimize IT costs and efficiency. Over the next several days CIO Council members evaluated that list of opportunities (i.e. financial benefit, business impact, timing, organizational and technical risk, and cost).

Program Area Breakout Brainstorming Sessions

With the concepts from the Feb. 25 brainstorming session ranked, the full CIO Council then met on March 3, 2009 to conduct four additional brainstorming sessions. Each session was comprised of CIOs from similar program areas (natural resources, public safety, education, and general government). The State Data Center also held an independent "Fast Track" brainstorming session. A broad range of ideas were proposed over a total of 4½ hours of brainstorming. Using IT cost optimization categories defined by Gartner, Inc., a renowned IT research authority, staff sorted, analyzed and aggregated the suggestions into meaningful categories of action. Staff found that candidate concepts had been identified by CIOs in all of the categories identified by Gartner.

Prioritization of Near-term Opportunities

The CIO Council then met on several occasions to identify and prioritize possible IT cost optimization actions, especially those that could be undertaken near-term. CIOs identified and ranked 11 near-term candidates. The state's Administrative Business Services Directors group was then asked to independently rank the CIO Council's list of 11 candidate actions. The first six were ranked identically by both groups.

Acting on Near-Term Opportunities

In one last session, CIOs met to select concepts that could be acted on near-term. Three concepts were identified for immediate exploration and possible action including: 1) re-negotiating existing contracts, licenses and agreements to lower costs; 2) expanding the use of cost efficient web-enabled tools; and 3) creating a new paradigm in contracting and web-enabled "Software as a Service" procurement that would have one agency representing all others in the procurement process thus optimizing the cost and efficiency.

Agencies' Efforts Already Underway

Agencies cited a variety of practices already underway to optimize cost and efficiency. Examples included: streamlining management practices; consolidating IT assets to eliminate duplication and optimize energy use; deployment of a variety of web-enabled tools to streamline business processes; and a variety of deferred or cancelled near-term expenditures.

Next Steps in IT Cost Optimization and Efficiency

The CIO Council will continue to act on the three near-term (Wave 1) IT cost optimization actions. Multi-agency teams will evaluate each concept to determine the potential impact and benefit. If cost optimization and benefit potentials warrant, these multi-agency teams will progress to action. CIO Council members anticipate providing LFO periodic progress reports on IT cost optimization with the next update by December 31, 2009.

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About Fast Track Planning – Detailed Summary

Situation and Approach

The Legislative Fiscal Office (LFO) asked State Chief Information Officer Dugan Petty if the state’s technology leaders, the CIO Council, would be willing to describe to the legislature: 1) what the state’s government IT community is already doing to help deal with the current fiscal crisis; and 2) how else IT could be leveraged to provide solutions to address these budget challenges. While each CIO had already been focused on mitigating the impact of budget shortfalls on their agencies, CIO Council members agreed to explore how state information and technology resources could be applied in additional ways to help deal with the current fiscal crisis.

First Brainstorming Session

The CIO Council took the first step in the Fast Track Planning process on February 25, 2009. The first session included members of the CIO Management Council and several other CIOs and identified 41 new opportunities for IT cost optimization. For a more detailed review of the cost optimization opportunities described in the first brainstorming session, please see Appendix “A.”

Evaluating the Results of the First Brainstorming Session

The week after the first brainstorming session several CIO Council members evaluated the list of 41 concepts using criteria provided by Gartner, Inc., a nationally recognized IT consulting and research firm with special expertise in IT cost optimization on an enterprise basis. The evaluation criteria were as follows.

CRITERIA	QUESTION	-	RATING / INFO		+
Potential Benefit	How big is the saving if implemented and how does it affect cash flow?	Low	-	Medium	- High
Business Impact	What impact will this have on the state business?	Adverse to None None to Positive Positive to Strong			
Time	Can savings be captured in this fiscal year? Next?	2011-13	-	2009-11	- 2007-09
Degree of Organizational Risk	Is the organization capable of implementing / adapting to the changes?	High	-	Medium	- Low
Degree of Technical Risk	Is there risk that change will undermine the ability of systems to deliver?	High	-	Medium	- Low
Investment Requirement	Does the change require a large up-front investment before savings can be captured? Is the organization willing and capable of making the investment at all?	High	-	Medium	- Low

The evaluation was then converted to a graphic view (Figure 1) demonstrating how opportunities scored using the sums of benefit (x) and risk (y). The most potentially beneficial of the identified opportunities were those evaluated as low cost and risk, and high value. Three opportunities clearly stood out.

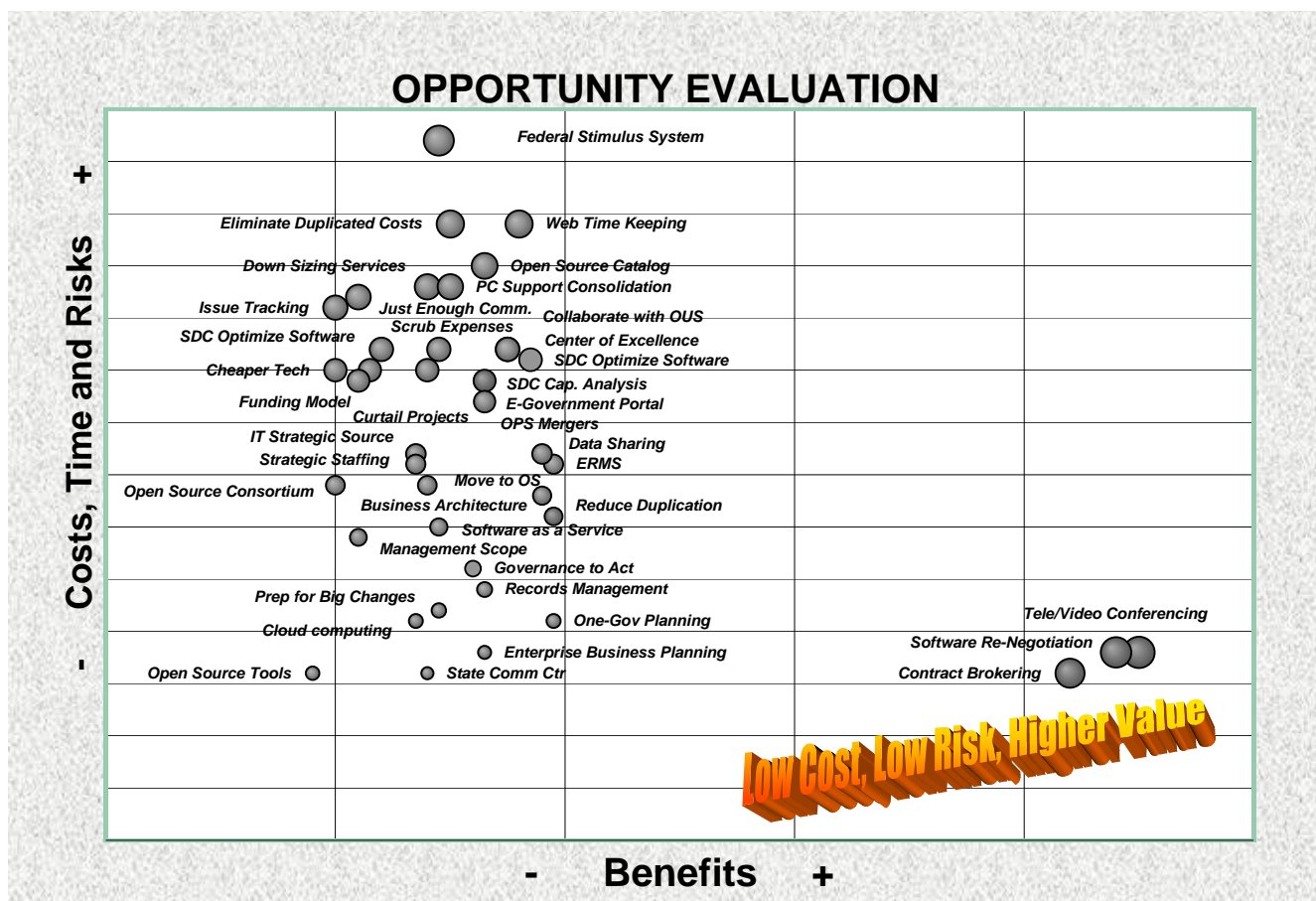


Figure 1

Top-Three Candidates for Near-term Action from First Evaluation

Of the initial 41 IT cost optimization and efficiency concepts three surfaced as most highly ranked including:

- **Teleconferencing / Videoconferencing / Telework / Web-enabled Collaboration Software** - This category of opportunities would optimize cost and time by providing an environment where committees, teams, and multi-agency planning groups could accomplish work without having to physically travel to meet. Many technology-enabled tools allow high-quality, remote collaboration 24 hours per day.
- **Software Re-negotiation** - This category of opportunities would optimize cost by quickly re-negotiating a variety of existing contracts, software licenses, and maintenance agreements, etc.
- **Contract Brokering** - This category of opportunities is representative of a theme heard repeatedly. Have one agency host, or contract for hosting, services or business capabilities now replicated across every agency. This concept represents a significant opportunity for streamlining.

Program Area Breakout Brainstorming Sessions

A second series of planning sessions were conducted the following week. Drawing from past multi-agency planning experiences, several assumptions guided those sessions:

- Sessions should be directly relevant and valuable to the agencies;
- Sessions should focus largely on the business requirements of the agencies;
- Sessions should promote a more natural alignment of interests between agencies; and
- The planning approach should be selected to optimize productivity of effort, especially given tight timelines.

The second series of planning sessions occurred in groups defined by program area including: education; public

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safety/judicial; natural resources; and general government. The State Data Center also conducted a separate Fast Track Planning session. The results of each of these sessions are incorporated in this progress report.

Sort Concepts by Gartner’s Categories of IT Cost Optimization

Gartner, Inc. was also consulted during the Fast Track Planning process. Gartner has rich experience and research in the area of IT cost optimization. They recommended focusing on several areas of cost optimization described in Figure 2 below.

<p style="text-align: center;">IT PROCUREMENT</p> <ul style="list-style-type: none"> • Renegotiate Network Rates • Consolidate Desktop Hardware Contracts • Consolidate Desktop Software Contracts • Renegotiate "Shelf-ware" Maintenance • Renegotiate HW/SW Maintenance and SLAs • Consolidate Commodity (Non-IT) Purchases • Consolidate Purchasing Staff (Shared Service) • Consolidate IT Contract Services Vehicles • Hire Internally At Lower Rates Than Contract Staff • Enable Shared Risk/Reward Contracts • Defer Desktop Purchases 	<p style="text-align: center;">COST SAVINGS IN IT</p> <ul style="list-style-type: none"> • Automated Software Distribution • Stratification of Desktop User Types • Desktop Printer Rationalization • Standardize Desktop Products • Cell Phone Audits • Centralize Portal Management • Telecommunications Line Audits • Consolidation of IT Infrastructure • Server Virtualization • Storage Migration to SAN and NAS • Limit Database capacity • Application Maintenance Outsourcing • Turn off Legacy System Maintenance • Outsource Repetitive Software Testing • Assess Internal IT Staffing Needs
<p style="text-align: center;">JOINT BUSINESS & IT COST SAVINGS</p> <ul style="list-style-type: none"> • Emergency Call Centers (Government) • Non-emergency Call Centers (Customer Service) • Teleworking / Videoconferencing • Create Data Warehouse to Mine Opportunities • Enterprise Self-Service Integration • Workflow and Handoff Analysis and Automation • Asset Utilization Analysis • HR Self-Service Expansion • Deploy E-procurement Catalogs • Examine Storage Policy to Reduce Storage Size • Consolidate Radio Systems • Consolidate Geo-Spatial Systems and Data • Enforce Modularization of Large Scale Procurements 	<p style="text-align: center;">SHARED SERVICES – IT CAPABILITY</p> <ul style="list-style-type: none"> • Call Centers (Emergency and Non-emergency) • Electronic Document Management System • Computing Centers (Mainframes, Servers, Storage) • Networks • Non-administrative Applications • Middle-Office Application Support • IT Contract Vehicles • Desktop Applications (Acquisition, M/A/C) • IT Help Desk • Self-Service Web Sites • Reassess Internal IT Staffing Needs

Figure 2

The IT cost optimization concepts were subsequently sorted into Gartner’s categories. That effort allowed CIOs to determine if they had touched on all of the areas for potential IT cost optimization during the brainstorming sessions. They had.

What Agencies Are Already Doing To Optimize IT Cost and Efficiency

Examples of agencies' cost savings using IT procurement practices

- Statewide Price Agreements (through DAS EISPD / State Procurement Office) leverage buying power and reduce duplication of effort.
- Desktop/laptop computer configuration standards make volume buying projections possible optimizing cost.
- IT Managed Service Provider (MSP) (CIO Workgroup) - Reduced time to contract – 7 months to 17 days.
- IT Quality Assurance Services (CIO Workgroup)
- Using more Shrink-wrapped Commercial-Off-the-Shelf Software (COTS)
- Electronic Records Management Systems Software and Services
- Video & Web-enabled Conferencing
- IT Research and Advisory Services
- GIS Software Enterprise License Agreement - Enterprise License Agreement (ELA) established for GIS Software. Lowers the time and money required to administer and maintain GIS software.

Examples of IT cost savings at the State Data Center

- Telecommunications - SDC is currently moving from frame relay to digital lines saving \$50k per month.
- Network Consolidation - Network management consolidation / network security upgrades completed.
- Voice Upgrade and Consolidation - Switch upgrades / consolidation completed.
- Server Consolidation - Shared infrastructure / virtualization / standardized server management underway. Powered down 76 of 128 enterprise servers (60% reduction). Powered down 608 of 1749 windows based servers (35% reduction).
- Mainframe Consolidation - 3 into 1 mainframe consolidation completed. A 36-month mainframe lease provides increased capacity on-demand.
- Storage Consolidation - 435 Terabytes of tiered storage / virtual tape system / automated tape library completed.

Examples of operational IT cost savings undertaken by agencies

- Stretching IT asset lifecycles (PC replacement time frame) reduces cost.
- Server consolidation / virtualization in the agencies - Cost savings in power, cooling, space, maintenance, monitoring, administration. Virtualization means multiple physical data storage devices are viewed as a single logical unit.
- Open source software and code - common code library (Dept. of Transportation)
- Web-enabled tools - Enterprise Learning Management System (iLearnOregon - DAS HRSD). Collaboration software enables 24/7 concept development and planning.
- Telework (Telecommuting) - Agencies expanding telework via enabling tools (Citrix).

Examples of business and IT cost savings undertaken by agencies

- Web-enabled Citizen Services - 83 agencies, boards and commissions using portal. Content increasing 40 percent annually. Agencies using web-enabled applications to serve citizens and business.
- Agency and Enterprise Web 2.0 - Web-enabled Collaboration Tools - Web-enabled collaboration tools replaces the need for travel to face-to-face meetings (trainings, communications, etc.) resulting in lower fuel, maintenance and travel costs.
- E-Commerce Stores - 32 active e-commerce stores. 16 new stores were added in 2008-09 with 4 more in progress. 405,476 transactions for \$49 million (2008). 5 e-commerce stores connect directly to the state's accounting system.
- Auto Notification - Oregon GovDelivery used to automatically notify interested parties of information updates and to receive needed notifications (Dept. of Consumer and Business Services).
- Green IT - Desktop Power Management practices reduce energy consumption, greenhouse gas emissions and cost. Forums were held to gain knowledge of opportunities to better manage power consumption and reduce greenhouse gas emissions. A DAS Internal PC Power Management Assessment is in progress. PC Power Management Software Statewide Price Agreement (in process / DAS EISPD).

Emerging Ideas for IT Cost Optimization and Efficiency

General Observations

State of Oregon agencies have already undertaken many cost optimization steps recommended by Gartner research experts. CIOs provided a full range of additional ideas for cost optimization covering nearly all of the categories cited by Gartner. CIOs also provided suggestions for a path to gain enterprise-scale efficiencies. Several of the proposed concepts are likely to result in immediate and significant cost optimization. Other recommendations will require varying degrees of planning and timing with the potential of increasingly greater efficiencies near, mid and long term.

When viewed in composite, CIOs recommendations fell into several stages of progressive action:

- 1) Act on opportunities presented by the State Data Center
- 2) Re-negotiate existing contracts, licenses, and agreements
- 3) Reassess asset utilization and scrub inefficiency
- 4) Authorize and enable multi-agency planning
- 5) Consolidate common business processes (described below)
- 6) Set expectations for collaborative, multi-agency planning and action

High-level observations on the range of brainstorming concepts

When these opportunities are viewed in composite, several patterns become evident. Those findings are described in the Figure 3 below, and the following narrative.

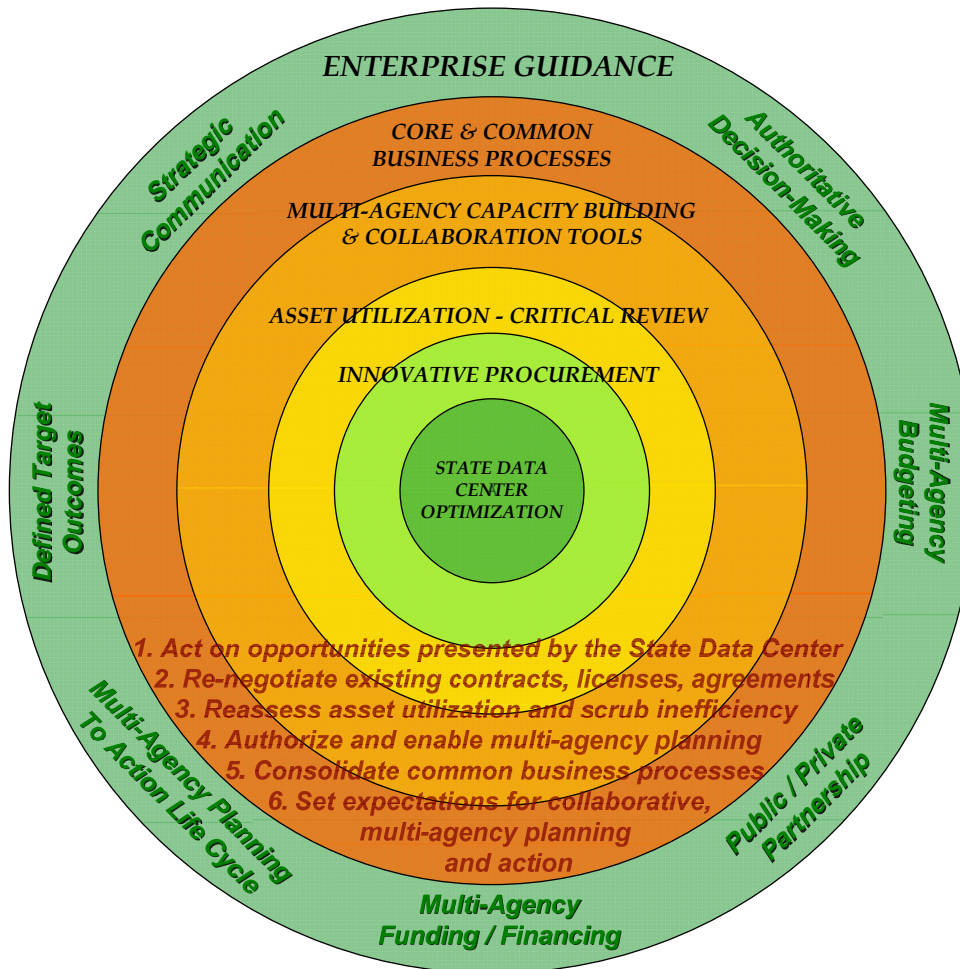


Figure 3 – Assumptions

State Data Center Optimization – The SDC is the core investment enabling most other opportunities.

Innovative Procurement – Can be done immediately with high positive impact.

Asset Utilization – Can be done now and into the future as continuous improvement.

Multi-agency Capacity Building – Before acting on the more substantial opportunities certain enterprise-level capacities must be enabled.

Core and Common Business Processes – Once multi-agency capacity for action is enabled core and common business processes offer high impact opportunities.

Enterprise Guidance – Once the capability and experience for unified action is achieved, the enterprise can be guided to purpose.

Discussion of General Observations

1. Act on opportunities presented by the State Data Center - Now that the SDC exists, it also represents a clear path to additional and significant cost optimization. *Note - Recent reductions in budget effecting new SDC business, consolidation, and disaster recovery are projected to significantly slow the state's ability to achieve Fast Track Planning participant's recommendations that include the following.*

Continue SDC consolidation and de-duplication - According to Fast Track Planning participants, the State Data Center (SDC) represents the most significant opportunity for IT cost optimization. The SDC continues the process of consolidating and virtualizing co-located systems and infrastructure. The SDC has also made progress reducing duplication (i.e. redundant software, software consolidation, multiple circuits from a single geographic location, etc.) The SDC should accelerate those efforts.

Application Software Consolidation – A practice that can be pursued to create additional IT cost optimization is application software consolidation. A variety of candidate areas were described by Fast Track Planning participants.

Expand the SDC customer base to lower costs - The SDC now has a fixed customer base. By expanding the SDC's customer base additional cost efficiencies can be gained. At the same time the SDC can progressively shift to an on-demand service model that allows agencies to receive only the level of service required. The combination of an expanded customer base, consolidation and an on-demand environment could fundamentally shift the cost equation, potentially lowering costs to agencies across-the-board.

2. Re-negotiate existing contracts, licenses and agreements - The fastest path to cost optimization is by re-evaluating and potentially re-negotiating a full range of existing contracts, licenses and agreements.

Quickly re-negotiate lower costs - Gartner, Inc. consultants advise that one of the quickest ways to optimize IT costs is to re-negotiate existing commitments. In many cases terms and conditions allow such re-negotiation in times of fiscal crisis. Participants in the Fast Track Planning sessions cited re-negotiation as an immediate priority in any effort to optimize IT cost.

Apply the concept of Strategic Sourcing to apply to IT - Further, participants cited the State of Oregon's experience beginning in 2005 in strategic sourcing, the Governor's Smart Buy Initiative. The same practices that were used to trim millions of dollars in general costs to state government could now be focused on information technology and resources.

Multi-agency contracting model - Currently, agencies contract on an individual basis. Contracts have to be replicated for each agency that requires the product of that contract. That serves the interests of vendors who have redundant contracts with a variety of agencies, but not state government as a whole. DAS has made it a priority to issue statewide price agreements to substantially reduce the amount of time and expensive effort required to put a contract in place. Participants suggested that by routinely contracting as the State of Oregon rather than an individual agency, further efficiencies can be gained. Participants recommended changing the contract "standard" so all other agencies would be able to use contracts initiated by any one agency.

3. Reassess asset utilization and reduce inefficiency - Immediately review and reassess the full range of ongoing expenditures such as utilities, network infrastructure, telecommunications, and PC costs.

Quickly reassess spending patterns - Participants cited a variety of opportunities to wring additional efficiencies from existing services and infrastructure. Participants suggested extending lifecycle replacement time frames for computers and other equipment. Participants also suggested exploring less expensive alternatives to laptop and desktop computers.

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Move to less expensive infrastructure solutions - The SDC's move away from frame relay devices provides an example of right-sizing to optimize cost. The SDC has implemented a new contract that moves all agencies away from use of frame relays with its high line charge. Though there are some additional costs associated with making that transition (i.e., routers, switches, etc.), the State Data Center believes line conversions away from the use of frame relay devices will result in \$50,000 savings per month.

Participants also proposed replacing T1 circuits with broadband wireless communications cards at agencies' remote offices. The Oregon Department of Transportation's expects to reduce SDC network charges by approximately \$287,000 per biennia. That approach could be replicated by other agencies.

Wholesale conversion to VoIP - Participants suggested accelerating the migration from traditional telephones to telephones using Voice over Internet Protocol (VoIP). Further, taking a critical look at telephone use and cost participants questioned if all staff needed access to a dedicated telephone.

Wholesale adoption of Web-enabled alternatives - Participants suggested agencies expand the use of teleworking, teleconferencing and video conferencing to substantially reduce expensive travel and streamline meetings.

Evaluate wholesale adoption of open source alternatives - Participants highlighted the concept of open source software as a potential avenue to optimize information technology. Participants suggested several efforts that would lay the foundation for broad adoption of open source alternatives. They suggested establishing an Open Source Consortium, possibly interstate in nature, to distribute costs and allow for a much greater return-on-investment. Participants suggested creation of a catalog of open source solutions used by agencies to encourage and facilitate reuse or replication by others. Participants suggested creation of a Common Code Library promoting a repeatable development methodology that delivers useful and shareable code quickly. Some participants felt this may be the time to consider a wholesale swap to open source alternatives to pursue substantially lower costs.

4. Authorize and enable a multi-agency planning model - The greatest opportunity for cost optimization is enabled by a multi-agency approach to common business processes. This type of planning has been awkward for agencies whose prime statutory directives do not anticipate collaborative, multi-agency planning and action. Authority and direction for multi-agency planning would enable subsequent tiers of efficiencies and cost effectiveness.

Enable business-driven, multi-agency planning and action - The CIO Council has been acknowledged as a highly successful planning forum. Several versions of the Enterprise Information Resource Management Strategy (2002, 2005, and 2007) have been drafted in under the CIO Council's guidance. Still there is no formal vehicle for authoritative, multi-agency planning and action. Participants suggested that establishing a multi-agency planning forum is the first step needed to establish the organizational capacity required to act on the larger opportunities identified in the Fast Track Planning sessions.

Follow-on activities required to increase organizational capacity include:

- Web 2.0 Multi-agency planning forum** - Establish a web-enabled (Web 2.0) collaboration environment allowing agencies to communicate and plan multi-agency actions on a 24/7 basis.
- Map common lines of business** - Creation of a business architecture to develop an understanding of intersections between agencies' business processes highlighting opportunities for cooperative, multi-agency action.
- Business process streamlining expertise** - Acquiring the expertise needed by all agencies to routinely design and implement streamlined business processes and supporting infrastructure.
- One-government approach** - Periodically expand the multi-agency planning forum to include all jurisdictions in Oregon (i.e., Federal, state, local, regional and tribal) allowing a one-government approach

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and a far broader range of potential opportunities for optimization.

- **Formally recognize a multi-agency portfolio of initiatives** - Create a portfolio approach to multi-agency initiatives and projects allowing targeting of investments and resources on pre-defined target objectives.
- **Strategic communications** - Create the lines of communications needed to allow cross-agency information sharing and the promotion of opportunities to reduce costs, optimize service or provide new capacities needed for future planning and collaborative action.
- **Multi-agency funding** - Establish a funding / financing / savings model allowing agencies to see the financial benefit of SDC and other optimization.
- **Inclusive governance model** - Create an acknowledged governance model expanded to include: the state's chief executives; representative agency heads; administrative and business services leaders; technology leaders; and key subject matter experts. Further, participants highlighted the potential benefit of including a private-sector Business Advisory Board with the objective of importing practices from the private sector directly into government planning and action.
- **Strong decision support** - Strengthen business case and return-on-investment calculation practices for improved support of decision-making.

5. Consolidate agencies' common business processes - Once agencies have the capacity to collaboratively plan and act to optimize state government services and infrastructure, CIOs have highlighted a range of candidate actions.

Combine common, redundant services – First, consider the full range of agencies' common business practices that could be consolidated, or converted to shared services or services provided by a single agency for all other (i.e. a Center of Excellence). For example, a single state system for all agencies to use to address the requirements of the American Recovery and Reinvestment Act of 2009 was considered a substantial opportunity. A sampling of common business processes identified by participants includes: web-enabled time sheets; consolidated e-mail; electronic payroll statements; digitized fingerprinting (OSP); a single point for IT service management; web-enabled training tools; one single state government anti-spam service; a criminal background check service (OSP); a single state licensing system; a single grant management system; a state communications center; and a state consolidated electronic records management system.

Increase E-Government services - Participants proposed shifting to delivering e-government services through a portal provider using a different contract delivery model; one that is scalable and agile enough to meet future demand. The objective is to move as many services as possible to the Web thus lowering cost while at the same time improving service and better addressing citizen expectations.

Data sharing as the norm - Participants repeatedly emphasized the large scale of the opportunity presented by a potential shift to a common data infrastructure and data sharing environment. Data is currently developed and used largely on an individual agency basis. At the same time a host of examples were offered about how investments in data could be leveraged to serve multiple purposes and provide significantly increased strategic value. A state data sharing initiative would require standardization of data formats across state government so over time data could be shared easily and value optimized. Participants suggested the agencies engage in an ongoing initiative to de-duplicate data. Then, using the principle of service oriented architecture, agencies need to find ways to re-design how data can be built once and then used by many to serve a variety of purposes. Of particular value and interest to participants was the challenge of citizen information; personal information about citizens that is created over and over at each agency. Data about individuals are not connected. Participants suggested that creating a single citizen data file that each agency would then use could dramatically streamline agencies' business processes, and provide a connection point to align all other data sets. Efforts such as these would eliminate redundant data and optimize cost and value. Participants pointed out that some statutes complicate or prohibit data sharing. A legislative mandate in statute promoting agencies' sharing of data, where it makes sense to do so, would encourage and enable data sharing.

Geospatial data utility and service cooperative - Geospatial data supports and increases the value of all other data. DAS has, via administrative rule, standardized on one particular suite of geospatial software. Further, DAS

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then negotiated an Enterprise License Agreement optimizing the cost and value of that suite of geospatial software to agencies. Participants in the Fast Track Planning sessions proposed DAS, as a first step in evaluating statewide needs and opportunities in the realm of geospatial information, should inventory all geospatial data used across agencies. Participants then proposed forming a single cooperative or shared geospatial service provider using a single common geospatial data set. This approach would promote the most efficient and effective practices in geospatial information system management, while also eliminating the need for redundant data sets and service units.

6. Set business expectations for collaborative, multi-agency planning and action -

Fast Track Planning is a first step. Clearly voiced expectations for the IT community will accelerate IT cost optimization efforts.

Clearly defined target outcomes - Participants highlighted the need to legislatively define target outcomes for unified multi-agency or enterprise action. Without that guidance agency-specific statutory mandates will displace other enterprise initiatives. Agencies need to have clearly defined enterprise-level target outcomes, and the accountability to achieve then those outcomes.

Predictable, standardized multi-agency budgeting / funding model - Participants described the need for a routine path to solicit and receive funding for IT efforts at the multi-agency or enterprise level. That problem must be solved before the larger opportunities described in this report can be harvested.

“Short List” of proposed near-term actions to optimize IT cost and efficiency

The CIO Council, in several rounds of prioritization, arrived at the following list of actions they felt could be successfully initiated and conducted near-term:

1. **Renegotiate Contracts, Licenses and Agreements** - During these difficult economic times a number of IT companies have sought concessions from their suppliers to reduce costs. Renegotiating state contracts where feasible for IT hardware, software and services could result in cost reduction, especially when magnified by the potential of multi-agency purchases and spending.
2. **Utilize more Web-based Tools** - Web-based tools, such as web-conferencing and collaboration tools, provide a cost-effective alternative to time-consuming and resource-intensive travel to meetings.
3. **Contract Brokering through Cross-agency Collaboration** - One agency could act as a lead to develop the IT procurement and brokering service for other agencies thus reducing the overhead required to conduct multiple procurements. If the contracts result in enterprise wide price agreements, there will be leveraged purchasing power.
4. **Electronic Payroll Statements (Pay Stubs)** - Transition from a paper-based distribution of state employee payroll statements to an electronically distributed system to substantially reduce printing costs and the cost of staff resources needed to distribute and file the paper documents, also creating a more sustainable practice.
5. **Improve Citizen Access to State Government Services** - More web-enabled self-service applications allows citizens to access information and government services when and where they need it and reduces the cost of conventional transactions by agencies.
6. **Streamline “Software as a Service” Acquisition** - Software as a Service (SaaS) is a model of software deployment where a provider licenses an application to customers for use as an on-demand service. It can eliminate the need to: install, maintain, support and upgrade computer applications. It can often provide a business solution with low start-up and ongoing-costs. Combining agency needs and streamlining access to SaaS applications can result in less duplication, better outcomes and reduced pricing.
7. **Online Timekeeping** - Several agencies have deployed web-enabled user interfaces to the state employee timekeeping system. Is it feasible to leverage that development effort by sharing the coding and techniques with other agencies to streamline the timekeeping process, lower costs and optimize value?
8. **Enterprise Anti-Spam** - Consolidate the various anti-spam services now occurring at several agencies into one robust service provided as a utility by the State Data Center. This could serve to optimize cost and free-up valuable staff resources to better focus on targeted business objectives.

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9. **IT Better Enables Telecommuting** - DAS statewide policy enables telecommuting. But to optimize costs and promote more sustainable practices, explore actions that can be taken using the innovative application of IT to make the practice of telecommuting a more attractive alternative for all agencies when appropriate to achieve business purposes.
10. **Expedite Shared Development and Use of Code** - A forum and secure repository to allow programmers to easily share code and software when it is appropriate and compliant with licensing constraints can lead to reduced costs. A well-organized code library that also identifies use, license and distribution restrictions could promote data sharing and encourage replicable software development that delivers reusable code quickly.
11. **GIS Data Consolidation** - Build on Oregon’s achievements in geospatial data coordination to create a Geographic Information Systems (GIS) data warehouse within the State Data Center. That would blend agencies’ currently separate GIS data sets into a single strategic asset to which each agency contributes and all can use.

Ranking Potential Near-term IT Cost Optimization Efforts

Ranking Overview

A majority of the members of the CIO Council (CIOC) and Administrative Business Services Directors (ABSD) group took the time to independently prioritize the list of 11 potential near-term cost optimization concepts originally identified by CIO Council members. More than half of the concepts received the same relative priority from both groups. With that alignment, the short list of actionable, near-term opportunities was clear.

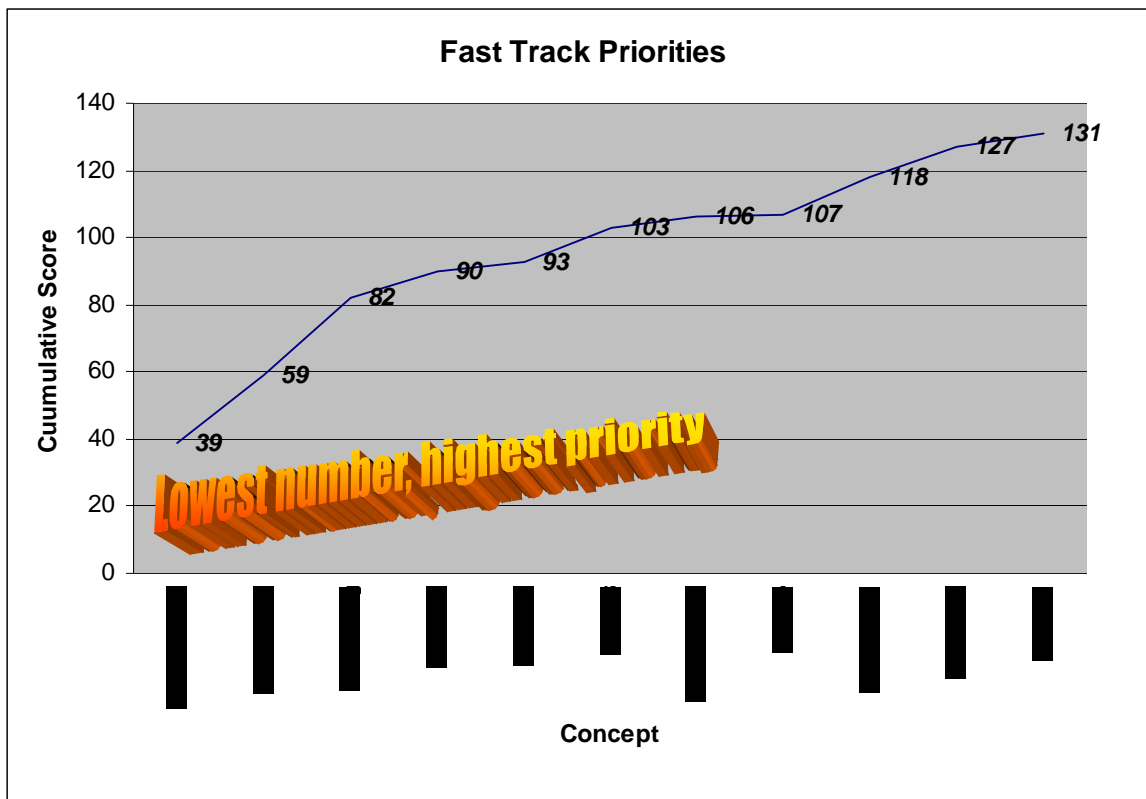
ABSD Survey Results

Sixteen ABSD members responded to the survey. All responses were incorporated in the results. Two concepts were clear priorities. All other concepts followed a general trend line. The smaller the total score, the higher the cumulative priority.

# / Concept	Revenue	DHS	PUC	Parks	Colleges	PEBB	OSP	Correction	Water	Geology	ODOT	Justice	DCBS	Lottery	Forestry	Education	TOTAL	RANK
1. Web-based Tools	2	2	2	1	8	6	3	2	4	4	3	4	2	5	6	5	59	2
2. Improve Citizen Access to Government	1	6	3	4	5	7	11	8	6	2	4	6	3	8	9	10	93	5
3. Streamline “Software as a Service” Procurement	6	4	5	5	6	4	5	9	7	8	8	9	6	2	8	11	103	6
4. Renegotiate Contracts, Licenses and Agreements	3	1	1	6	1	8	2	3	1	3	1	5	1	1	1	1	39	1
5. Contract Brokering through Cross-agency Collaboration	4	5	4	11	2	9	1	4	5	6	10	10	4	3	2	2	82	3
6. Electronic Payroll Statements	7	9	7	3	7	2	6	5	2	5	7	3	8	10	3	6	90	4
7. Expedite Shared Development and Use of Code	8	11	6	10	10	11	8	7	8	9	5	7	9	4	11	7	131	11

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# / Concept	Revenue	DHS	PUC	Parks	Colleges	PEBB	OSP	Correction	Water	Geology	ODOT	Justice	DCBS	Lottery	Forestry	Education	TOTAL	RANK
8. Telecommuting	5	3	9	2	11	1	9	6	9	10	2	2	11	11	7	8	106	7
9. Online Timekeeping	9	8	11	9	3	3	4	1	3	11	9	1	7	9	10	9	107	8
10. GIS Data Consolidation	11	7	10	8	9	10	7	11	10	7	6	11	5	7	4	4	127	10
11. Enterprise Anti-Spam	10	9	8	7	4	5	10	10	11	1	11	8	10	6	5	3	118	9



ABSD Survey Results Analysis

The results of the ABSD survey are as follows:

- #4 “Renegotiate Contracts, Licenses and Agreements” scored best (lowest overall scores). Then there is a clear gap.
- #1 “Web-based Tools” scored next best. Then there is again a clear gap.
- #5 “Contract Brokering through Cross-agency Collaboration,” #6 “Electronic Payroll Statements,” and #2 “Improve Citizen Access to Government” scored in the next tier following a general trend line. Then there is another more subtle gap.
- #3 “Streamlined Software as a Service Procurement,” #8 “Telecommuting” and #9 “Online Timekeeping” scored rather evenly in the next plateau. Then again there is a more substantive gap.
- #11 “Enterprise Anti-spam” scored in the next tier by itself.
- #10 “GIS Data Consolidation” and #7 “Expedite Shared Development and Use of Code” scored lowest (highest overall scores).

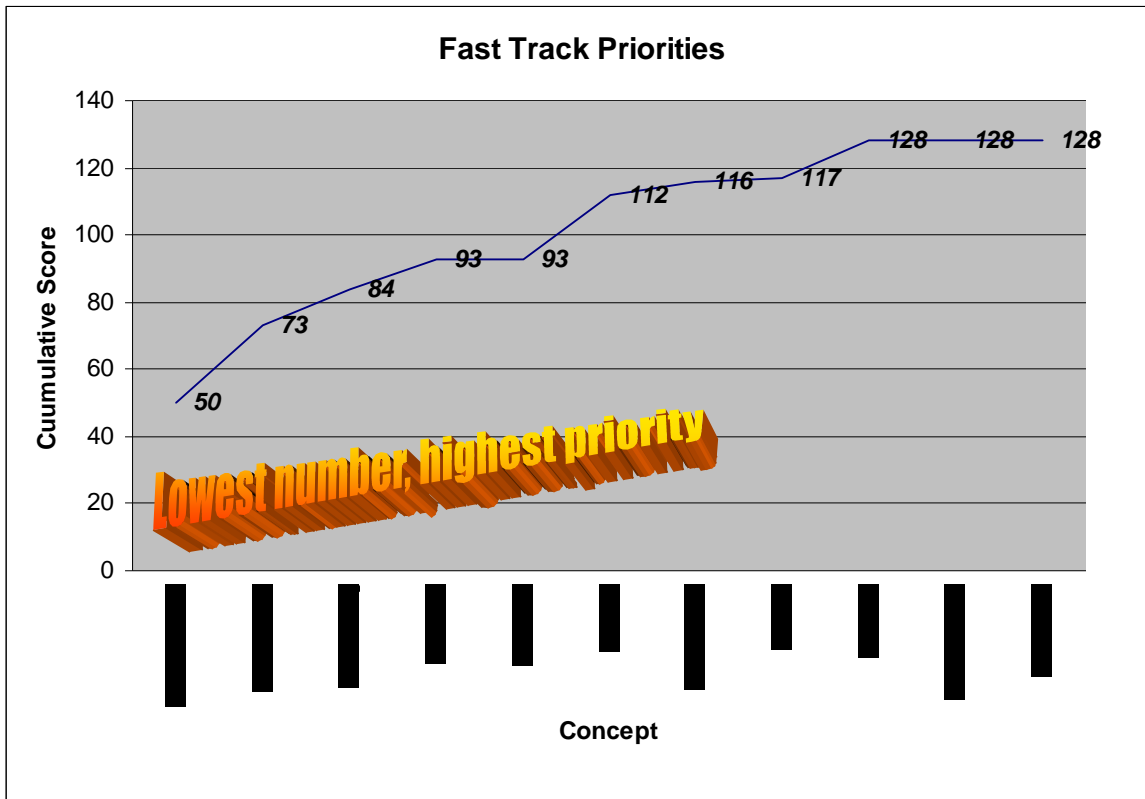
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CIOC Survey Results

Nineteen CIOs responded to the survey. Seventeen CIOs provided complete responses incorporated in the results. One CIO did not prioritize but indicated they would support the priorities of the rest of the CIOs. One CIO provided only their top 5 priorities. With or without that CIO's priorities incorporated, the top 5 concepts remained the same. It did change the bottom six. So that CIO's rankings are not included in this list keeping the top five intact and the bottom six an accurate reflection of the input of other CIOs. One CIO did not prioritize one item saying the action was already done in their agency. That item was shown as that CIO's 11th priority. That did not skew the cumulative ranking in any way. Staff tallied CIO's priorities for each concept. The smaller the total score, the higher the cumulative priority. The top priority scored lowest.

# / Concept	Revenue	DPSST	ODOT	Housing	PUC	Forestry	Fish	Data Center	Corrections	PERS	DCBS	Agriculture	Education	DAS	DEQ	DHS	Parks	TOTAL	RANK
1. Web-based Tools	1	6	4	4	4	7	5	11	5	1	1	1	9	1	9	2	2	73	2
2. Improve Citizen Access to Government	2	5	2	5	3	8	2	10	6	9	5	3	10	8	8	6	1	93	4
3. Streamline "Software as a Service" Procurement	3	8	7	10	5	9	6	9	8	4	4	6	11	6	7	4	5	112	6
4. Renegotiate Contracts, Licenses and Agreements	8	1	1	2	2	1	1	2	2	8	2	5	1	3	6	1	4	50	1
5. Contract Brokering through Cross-agency Collaboration	9	9	8	3	1	3	9	1	3	7	3	9	2	4	5	5	3	84	3
6. Electronic Payroll Statements	4	3	11	8	6	4	4	4	4	3	8	7	6	5	1	9	6	93	4
7. Expedite Shared Development and Use of Code	11	7	5	1	7	11	10	7	7	5	6	4	7	9	10	11	10	128	9
8. Telecommuting	5	11	3	7	11	5	11	8	11	2	11	8	8	10	3	3	11	128	9
9. Online Timekeeping	6	4	10	9	8	10	3	5	1	11	7	10	5	7	4	8	9	116	8
10. GIS Data Consolidation	7	10	6	11	10	2	7	3	10	10	9	2	4	11	11	7	8	128	9
11. Enterprise Anti-Spam	10	2	9	6	9	6	8	6	9	6	10	11	3	2	2	10	7	113	7

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CIOC Survey Results Analysis

There appear to be four fairly obvious scoring plateaus.

1. #4 “Renegotiate Contracts, Licenses and Agreements” scored best (lowest overall scores). Then there is a wide gap.
2. #1 “Web-based Tools,” #5 “Contract Brokering through Cross-agency Collaboration,” #2 “Improve Citizen Access to Government,” and #6 “Electronic Payroll Statements” scored in the next tier following a general trend line. Then there is another wide gap.
3. #3 “Streamlined Software as a Service Procurement,” #11 “Enterprise Anti-spam” and #9 “Online Timekeeping” score evenly in the next plateau. Then again there is a gap.
4. #7 “Expedite Shared Development and Use of Code,” #8 “Telecommuting” and #10 “GIS Data Consolidation” scored evenly and lowest (highest overall scores).

Prioritization, Not “Go” / “No Go”

A lesser score did not mean the concept should not be explored. Both groups (CIOC / ABSD) were asked to indicate their preference for the order or priority in which the concepts should be undertaken. So, a priority ranking only means the concept should be explored first, and others later.

Comparison of CIOC and ABSD Survey Responses

Below is a table demonstrating how the CIOC and ABSD independently ranked the list of 11 candidate near-term concepts for IT cost optimization and efficiency.

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BLEND ED RANK	# / Concept	CIOC TOTAL	CIOC RANK	ABSD TOTAL	ABSD RANK
1	4. Renegotiate Contracts, Licenses and Agreements	50	1	39	1
2	1. Web-based Tools	73	2	59	2
3	5. Contract Brokering through Cross-agency Collaboration	84	3	82	3
4	6. Electronic Payroll Statements	93	4 (tie)	90	4
5	2. Improve Citizen Access to Government	93	4 (tie)	93	5
6	3. Streamline “Software as a Service” Procurement	112	6	103	6
7	11. Enterprise Anti-Spam	113	7	118	9
8	9. Online Timekeeping	116	8	107	8
9	8. Telecommuting	128	9	106	7
10	10. GIS Data Consolidation	128	9	127	10
11	7. Expedite Shared Development and Use of Code	128	9	131	11

The following observations can be drawn from the results of the two surveys:

First, both groups independently scored the first six the same in the following order.

1. #4 “Renegotiate Contracts, Licenses and Agreements” - Scored best (lowest overall scores) in both rankings, then there is a wide gap in both rankings.
2. #1 “Web-based Tools” - Scored second best in both rankings, and then there is another substantive gap in both rankings.
3. #5 “Contract Brokering through Cross-agency Collaboration”
4. #6 “Electronic Payroll Statements” - The CIO Council ranked both #2 Improve Citizen Access to Government” and #6 “Electronic Payroll Statements” as their fourth priority with a score of 93, then followed by #6 (not #5) in the ranking.
5. #2 “Improve Citizen Access to Government”
6. #3 “Streamlined Software as a Service Procurement”

From that point on, the CIOC and ABSD departed slightly in their rankings.

Concept	CIOC	ABSD	AV.
• #11 “Enterprise Anti-spam”	7	9	8
• #9 “Online Timekeeping”	8	8	8
• #8 “Telecommuting”	9 (Tie)	7	8
• #10 “GIS Data Consolidation”	9 (Tie)	10	9.5
• #7 “Expedite Shared Development and Use of Code”	9 (Tie)	11	10

Conclusions on Near-Term Actions

With the prioritized list of near-term IT cost opportunities in-hand, CIO Council members then sought to determine the few actions to take first. The list (see “Short List” descriptions - pages 15 and 16) was pared down to three actions that would be sponsored and undertaken near-term under the auspices of the CIO Council including:

1. **Renegotiate Contracts, Licenses and Agreements**
2. **Utilize more Web Based Tools**
3. **Contract Brokering - Blending two concepts into one (“Contract Brokering through Cross-agency**

Progress Report – Information Technology Cost Optimization and Efficiency “Collaboration” and “Streamline Software as a Service Acquisition”)

Further, the CIO Council determined that several of the prioritized concepts could be forwarded to other subject-specific governance bodies for evaluation and potential action including:

1. **Electronic Payroll Statements** - The concept will be proposed to the Administrative Business Services group for evaluation and possible action.
2. **Improve Citizen Access to State Government Services** - The concept is already being addressed via substantial changes to the EISPD E-Government Program business model.
3. **Online Timekeeping** - The concept will be proposed to the Administrative Business Services group for evaluation and possible action.
4. **Enterprise Anti-Spam** - The concept will be proposed to the State Data Center’s CIO Advisory Board for evaluation and possible action.
5. **GIS Data Consolidation** - The concept will be proposed to the Oregon Geographic Information Council and State Data Center Advisory Board for evaluation and possible action.

The status of the other prioritized nearer-term IT cost optimization opportunities will be described in the December 2009 Progress Report.

Next Steps

Summary of Anticipated Next Steps

Since there is alignment between the CIOC and ABSD on the first six priorities the recommended next steps should be:

- Coordinate actions with enterprise policy owners, in particular coordinating action with contracting and accounting, to resolve policy issues
- Move longer-term strategic ideas to the Enterprise Information Resource Management Strategy (EIRMS) update process
- Solicit interest from agencies to work on refining IT cost optimization concepts and conducting opportunity assessments on the top concepts based on available resources
- Complete an opportunity assessment for the concepts to be pursued
- Based on the results of the opportunity assessments, form teams to further assess opportunity related to resources, benefits and schedule for a first-wave approach (Wave 1)
- Define potential project charters and targets for multi-agency teams
- If resources are available, develop cross-agency action teams with defined project charters and targets
- Pursue projects based on available resources
- Obtain agency progress and team progress in pursuing accomplishments by concepts and categories of concepts
- Provide a progress report to the Legislative Fiscal Office
- Track and monitor progress against charter and targets
- Review and conduct opportunity assessment for the remaining concepts to be pursued in Wave 2

Assumptions and Constraints

Action to deploy emerging IT cost optimization strategies is likely to be limited by resource availability. The DAS Enterprise Information Strategy and Policy Division will support the IT cost optimization process within its limited resources. All involved believe that the most prudent approach is to deploy fewer IT cost optimization concepts but do them well. The CIO Council understands that this effort is the beginning of an ongoing effort. To that end, identification of further IT cost optimization concepts is expected and welcome.

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Strategic Opportunities

The majority of identified IT cost optimization opportunities provide needed input for the update of the Enterprise Information Resource Management Strategy (EIRMS). There is agreement that these concepts should be evaluated for positive potential impact. The concepts that hold high potential for IT cost optimization become part of a portfolio of opportunities and the subject of further discussion and planning with stakeholders and decision-makers. Many of these higher-value opportunities will require new capabilities in multi-agency planning and action.

Opportunity Assessment

An opportunity assessment can be an effective way of determining whether a given concept makes sense to pursue or to determine how best to obtain the benefits from the outcome a particular concept. The method used to conduct an opportunity assessment may vary based on the scope and subject in the concept. An opportunity assessment may be performed through individual or team analysis or through work shops. Typically an opportunity assessment could include:

- Define the concept and underlying assumptions;
- Define the business objectives and if those objectives are being met in the as-is-state;
- Obtain information to draw conclusions about opportunities;
- Establish benchmarks for as-is state (existing outcomes, costs, or processes)
- Describe the range of approaches and potential outcomes that would be more beneficial or better optimize cost (includes estimates of measures of to-be processes or outcomes);
- Compare the as-is state to alternatives to determine the most appropriate approach leading to cost optimization and/or efficiencies;
- Determine the alternative that is most likely to achieve optimal results
- Assess the time required to act on the opportunity (shorter is better); and
- Determine the appropriate elements and direction that would be beneficial for the execution of the concept.

Multi-agency Workgroups

Once a concept has been preliminarily explored and evaluated through an opportunity assessment, establish an appropriately configured multi-agency workgroup composed of domain experts chosen from state agencies. The work group should:

- Identify the tasks to move to execution;
- Establish a workgroup charter and submit to CIOMC for adoption;
- Adopt baseline information and targets as appropriate to measure savings, cost avoidance and/or efficiencies; and
- Report outcomes to the CIOMC.

Portfolio of Potential IT Cost Optimization Opportunities

EISPD staff will maintain the portfolio of evaluated opportunities and report on progress and outcomes.