California Information Technology Strategic Plan

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Strategic Concepts, Strategies, & Goals
Volume 1

Arnold Schwarzenegger
Governor

Teri Takai
Chief Information Officer

GOVERNOR ARNOLD SCHWARZENEGGER

January 15, 2009

California Strategic Information Technology Plan

Our Golden State has given me the chance to excel as an athlete, movie hero, businessman and, now, Governor, and my wish is that every Californian has the same opportunity to pursue their talents and dreams. I believe government can play an important role in providing the services and information that our people need for a better life, and there is no doubt that technology plays a critical role in this process.

Even as California faces unprecedented challenges, including the current budget crisis, aging infrastructure and growing populations, we have unique opportunities for the future. We will create the world's best systems for education, transportation, public safety and the environment, and technology will serve as our greatest partner and asset in this endeavor.

In keeping with our state's proud tradition of technological innovation, the California Strategic Information Technology Plan presents the vision and strategies that government will embrace to fulfill our potential. The Plan is both a white paper and blueprint for current and future leaders as we move into the next generation of computers and technology.

The Plan represents the collaborative efforts of technology professionals – led by California's Chief Information Officer Teri Takai – from across state departments who produced these dynamic ideas of where to go from here. Following the Plan, we will modernize California's computer networks, replace our aging systems and deliver government services and information more efficiently.

I am committed to delivering the very best services while protecting privacy and saving taxpayer dollars. I applaud our many information technology professionals for their valuable contributions to these goals and our Strategic Information Technology Plan. They have my support as we work to make this happen and advance technology in California.

Sincerely,

Arnold Schwarzenegger

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OFFICE OF THE STATE CHIEF INFORMATION OFFICER

Teri Takai
California Chief Information Officer

I am pleased to present the State of California's Information Technology Strategic Plan. This Plan provides the vision and strategies to leverage technology to enhance government services for California's residents and businesses.

Californians can now register their vehicles or pay their taxes online. They can stream real-time traffic information or apply for research grants online. With over 400 online services available, Californians are increasingly interacting with government through Internet browsers instead of offices.

We need to build upon this strong foundation by making strategic investments to meet growing public expectations for access to services and information 24 hours a day, seven days a week. This requires a continued commitment to build and renew our technology infrastructure.

I would like to acknowledge all of the hardworking state government IT professionals and business leaders who contributed to this Plan. The outcome is a guiding document that truly reflects the insight and values of the state's business and IT leaders.

As California's Chief Information Officer, I am excited to work closely with my partners throughout state government to ensure that technology enables the state to deliver vital services to Californians.

Sincerely,

Teri Takai

Table of Contents

Foreword 1
Executive Summary 3

Book 1: Organizing for Success 5
Creation of the OCIO 6
Roles and Responsibilities 7
Promise of the CIO 8
Governor's IT Reorganization Plan 8

Book 2: Striving to be Number 1 13
Information Technology in California state government 14
Wins for Information Technology in California 14
What we know about IT in California 18
The Statewide IT Survey 19
The IT Capital Plan 21
Challenges We Face 21
Focusing our Talent for Success 23

Book 3: Facing the Future 25
Overview 26
Mirroring the Public's Priorities 26
Statewide Initiatives 27
Vision of California's Future 27
Moving to California - 2018 29
How will state government improve the lives of future Californians? 30
Strategic Concept 1: IT as reliable as electricity 33
Strategic Concept 2: Fulfilling technology's potential to transform lives 37
Strategic Concept 3: Self-governance in the digital age 41
Strategic Concept 4: Information as an asset 45
Strategic Concept 5: Economic and sustainable 50
Strategic Concept 6: Facilitating collaboration that breeds better solutions 54

From Goals to Action 57

Foreword

All organizations worth their salt rely on strategy. Whether Google (*Organize the world's information*) or Nike (*Everybody is an athlete*) or the State of California, strategy sets direction toward a more productive future. Like Odysseus in Homer's epic poem *The Odyssey* who was lashed to the mast of his ship so he could not follow the sirens' song to destruction, strategy helps us navigate the uncertain and complex world in which we operate. As business moves faster, organizations must have a strategy if they hope to survive. Strategy is about making tough choices. Indeed, great strategies are a cause.

Government agencies have been building strategic plans for decades. The typical form – values, principles, mission, vision, strategies, goals and actions – has served mature agencies well. In California, however, we need more. The CIO is committed to working closely with the state's business leaders to ensure that business needs drive the application of technology. The CIO inherited a complicated technology environment of infrastructures, systems and departments pursuing a vast array of large projects.

Therefore, California's IT Strategic Plan needed to be developed in the context of the business priorities of state agencies, the new leadership vision, and the significant IT investments that have already occurred. The IT Strategic Plan represents a partnership between the business functions of government and the technology activities that deliver on those business priorities. Moreover, the IT Strategic Plan must meld new leadership with the community of professional IT leaders who have been supporting government programs with technology solutions for many years. Technology leadership in California is shared among the State CIO, Agency Information Officers and departmental CIOs. The IT Strategic Plan that follows is the product of their collective guidance.

This IT Strategic Plan is presented in three books. Book 1 discusses organization and governance of technology in the state, Book 2 acknowledges the accomplishments of California's IT community and Book 3 lays out strategic concepts for building successful IT programs in California over the next decade. It tells the story of *who we are and where we are going*.

We gratefully acknowledge the IT leaders of California, listed below, for their significant contributions to this plan and to the information technology programs of California.

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California Information Technology Strategic Plan

EXECUTIVE SUMMARY

California is the birthplace and home of the companies that are creating the information rich future for our society. Great California companies are transforming the way people live, work and communicate through technology. They are creating a vibrant future for California. State government should be part of this transformation as well. California has long recognized the significant advantages of using information technology (IT) to provide needed services to the public. With demands for service availability around the clock, California is strongly dependent on IT.

In 2008, California placed 3rd among 50 states in the annual Best of the Web competition; 4th in the independent annual Brookings Institution's State and Federal Technology Survey; 5th in the Digital State Survey.

Establishing of the Office of the Chief Information Officer (OCIO) addressed many of the long-standing internal and external issues surrounding information technology in California. In addition, from both the national and state level, the perception of California has changed from a state struggling with large information systems projects to a state organized to leverage IT to meet its challenges.

With the signing of SB 90, the building blocks for a strong IT program were put in place. By creating the OCIO at the Cabinet level and supporting the effective use of information technology, the Governor and the Legislature have established the necessary conditions for success. Success, however, requires more than building blocks. Providing the appropriate governance structure is also essential. The governance process must facilitate good decision-making and ensure that services are delivered cost-effectively.

The Federated Governance Model establishes the relationship among state agencies and the state CIO. It maintains the authority of agencies to manage program-specific technology processes and systems. Technology functions that are common across the entire state are managed at the enterprise level by the CIO organization. The Federated Governance Model confirms that programmatic needs are the primary drivers for IT decisions and acknowledges the importance of IT as an enabler of agency success.

The CIO is committed to working closely with the Agency Secretaries, Department Directors, and Constitutional Officers to ensure that business needs drive the application of technology. Therefore, California's IT Strategic Plan has been developed in the context of the business priorities of the state agencies, new leadership and significant prior investment. The IT Strategic Plan represents a partnership between the business functions of government and the technology activities that deliver on those business priorities.

In order to fulfill this promise of excellence, California must continue to find enterprise-wide opportunities for consolidation and pursue those opportunities in an operating framework that engages programs, encourages a service-based focus for IT, and enables a paradigm shift from the state as a collection of agency silos to a single enterprise.

To achieve their goals, all organizations rely on strategy. Whether Google (*Organize the world's information*) or Nike (*Everybody is an athlete*) or the State of California, strategy sets direction toward a more productive future. As business moves faster, organizations need strategy if they hope to survive. Strategy is about making tough choices. Indeed, great strategies are a cause.

As we articulate the ideas that will position California to meet the challenges of the future, it is important to remember that the six strategic concepts that frame this plan are not just the direction for the IT community, but a shared direction for the state.

The Six Strategic Concepts are:

1. **IT AS RELIABLE AS ELECTRICITY** – Allowing business decision-makers to focus on business operations with the expectation that their IT needs will be provided for by a professional IT organization.
2. **FULFILLING TECHNOLOGY'S POTENTIAL TO TRANSFORM LIVES** – Open and accessible online government services ensure that the state is meeting the expectations of the people it governs.
3. **SELF-GOVERNANCE IN THE DIGITAL AGE** – The greatest value from the state's use of IT is the ability to engage residents and businesses on their terms at a time and place of their choosing.
4. **INFORMATION AS AN ASSET** – State agencies have a wealth of data and information that, if properly interpreted and mobilized, can be used to better inform the public.
5. **ECONOMIC AND SUSTAINABLE** – By aligning the state's operations, agenda and goals to be relevant and applicable in perpetuity, we are able to balance the demands of today with the challenges of the future.
6. **FACILITATING COLLABORATION THAT BREEDS BETTER SOLUTIONS** – No one entity has a monopoly on good ideas. Enabling communication between stakeholders, external and internal to government, is essential to open and accountable government.

These six strategic concepts and their accompanying strategies and goals empower business executives, state IT leadership, and state employees to realize a future in which the state government enterprise uses information technology to better fulfill the task of governing a complex and dynamic state.

BOOK 1
ORGANIZING FOR SUCCESS

"The Governor and Legislature have taken an important first step in creating a cabinet-level Office of the Chief Information Officer. Other steps must follow. California must seize the opportunity to take the various resources it has and organize them under the leadership of its new state chief information officer to drive change."

Daniel W. Hancock
Chairman, Little Hoover Commission
November 20, 2008
Letter to the Governor and Legislature

CREATION OF THE OCIO

California is the birthplace and home of the companies that are creating the information rich future for our society. Great California companies are transforming the way people live, work and communicate. They are creating a vibrant future for California. State government should be part of this transformation as well. California has long recognized the significant advantages of using information technology to provide needed services to the public. With demands for service availability around the clock, California is strongly dependent on information technology.

Consistent with California's reputation as the nation's "Silicon" state, the foremost goal is to make California state government the leader among the states in using information technology to enable the delivery of consistent, innovative, reliable, and secure services that satisfy the needs of residents, businesses and public sector agencies. Central to this goal is the intention to make government services widely *available* and *accessible* in a way that is *affordable*, all while protecting the privacy and security of the information that Californians provide to their government.

In 2005, Governor Arnold Schwarzenegger proposed a significant early step in improving the management of information technology services with his Governor's Reorganization Proposal to consolidate the state's two multipurpose data centers. His plan called for aligning telecommunications with data, recognizing the convergence of data, voice and video technologies. The alignment positioned state government to better deliver on the promise of technology to improve the lives of Californians.

In 2006, the Legislature and Governor worked together on legislation to create the Office of the State Chief Information Officer (OCIO). SB 834 (Chapter 533, Statutes of 2006) made the State CIO a member of the Governor's cabinet. The 2007 Budget Act and related legislation (SB 90, Chapter 183, Statutes of 2007) substantially expanded on SB 834, providing resources to stabilize the OCIO.

With the creation of the OCIO, the Governor and the Legislature established the structure on which to build a durable information technology program. A strong foundation is so important because the information and program demands in California are like no other state. California is big and complex. California's large population, its vast geography, and the diversity of its people challenge the best practices for developing information processing applications. This is true as state government strives to serve populations that depend on state programs in areas

including education, health services, social services, business, environmental protection and consumer protection among others. While California has competing priorities for resources, technology enables it to achieve its goals and serve the public.

Roles and Responsibilities

In addition to the development of this strategic plan, the OCIO has a number of specifically stated roles and responsibilities within the construct of SB 90.

Role of the CIO	Key Actions to Date
Advise the Governor on the strategic management and direction of the state's IT resources.	➢ School Finder/Education Data Project ➢ Broadband and digital literacy ➢ GIS Task Force
Establish and enforce state IT strategic plans, policies, standards, and enterprise architecture.	➢ The IT Capital Planning process implemented by OCIO ensures all IT investments are consistent with state policy priorities, IT policy and standards, while reducing duplication and overlap.
Minimize overlap, redundancy and cost in state operations.	➢ Moving forward with server consolidation plan that will significantly reduce costs when fully implemented. ➢ Leading efforts to consolidate state e-mail systems to enhance security, reduce costs, and improve reliability.
Coordinate activities of AIOs and the Director of Department of Technology Services (DTS).	➢ With DTS Director, implemented spend control program at DTS achieving savings on new hardware and significant cost avoidance related to capital expenditures. ➢ Significantly enhanced the state's web presence through coordination with AIOs, recognized by Brookings institute and the Center for Digital Government.
Improve organizational maturity and capacity in the effective management of IT.	➢ Establishing Project/Risk management methodology including a new training program as a requirement for state IT Project Managers. ➢ Developing statewide workforce development and planning strategy focused on training, recruiting, and retaining IT staff.
Establishing performance management and ensuring IT services are efficient and effective.	➢ In establishing the Project Management Methodology, developed key metrics to assess performance of IT projects.

PROMISE OF THE OCIO

Establishing the OCIO has addressed many of the long-standing internal and external issues surrounding information technology in California. In addition, from both the national and state level, the perception of California has changed from a state struggling with large information systems projects to a state organized to leverage information technology to meet its challenges. In order to fulfill this promise, California must continue to find enterprise-wide opportunities for consolidation, and pursue those opportunities in an operating framework that engages programs, encourages a service-based focus for IT, and enables a paradigm shift from the state as a collection of agency silos to a single enterprise.

GOVERNOR'S IT REORGANIZATION PLAN

While the building blocks for a strong IT program are in place. Success requires more than building blocks; the appropriate governance structure is essential. The governance process must facilitate good decision-making and ensure that services are delivered cost-effectively. In arguing for an invigorated IT governance structure, the Little Hoover Commission concluded, "The state CIO must be given the authority to set and execute technology priorities as laid out in the state's IT Strategic Plan. The state CIO must be given the resources to accomplish the task."[1]

The governance model should align with the organization and decision-making structure of the Executive Branch. In California state government, Agencies establish policies and business priorities in subject areas, and departments, within Agencies, execute policy direction and deliver government programs in business areas. Statewide control agencies, including the Department of Finance and the Department of General Services, manage and oversee the budget, support services and procurement.

[1] See "A New Legacy System: Using Technology to Drive Performance" Little Hoover Commission, November 2008

In addition to aligning with the decision authorities of the California Executive Branch, an effective IT governance process should also:

- Maintain decision authority at the appropriate tier;
- Provide secure IT infrastructures and services statewide;
- Consolidate IT resources to align with business priorities, increase capacity and enhance efficiency;
- Improve the management of IT projects;
- Streamline the approval, purchase and oversight processes; and
- Foster collaboration and data sharing.

Trends in the public sector, especially in those states which have been recognized as IT performance leaders by the Pew Center on the States, provide context as to the form, organization and benefits of effective information technology governance. Among the states that earned a grade of "A" (Michigan, Missouri, Utah, Virginia, and Washington), all have integrated policy and operational functions within information technology organizations that have an enterprise, or statewide, perspective.

Defining Federated IT Governance

The federated governance model establishes the relationship among state agencies and the state CIO. It maintains the authority of agencies to manage program-specific technology processes and systems. Technology functions that are common across the entire state are managed at the enterprise level by the CIO organization. The Federated Governance Model confirms that programmatic needs are the primary drivers for IT decisions and acknowledges the importance of IT as an enabler of agency success.

The Reorganization Plan that will be offered by the Governor in January 2009 provides a similar approach - a *federated governance model* for information technology in California.

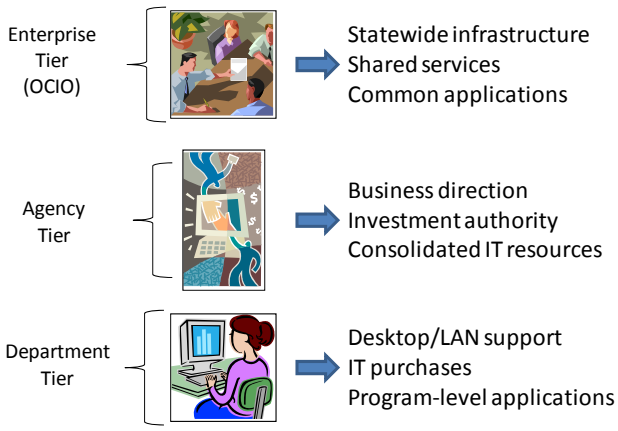
Modern technology governance is no longer just about technology; it is about leadership in effectively and efficiently managing the use of technology to meet an organization's business needs. It includes the structures and processes for setting direction, establishing standards and principles, and prioritizing IT investments that leverage technology to improve business value. It is the mechanism for deciding who makes what decisions about technology use and it creates an accountability framework that drives the desired use of technology. Effective information technology governance also includes the processes by which key decisions are made about IT investments. Consequently, success

depends on effective, ongoing communication across all levels of state government.

The Plan will seek to reorganize the state's information technology structure to:

- Establish a common sense governance model that aligns with best practices by aligning IT decision-making across the Executive Branch.
- Increase coordination and efficiency, reduce costs and improve energy efficiency through statewide IT shared services, common IT standards, and consolidated IT infrastructure.
- Meet growing public expectations for services accessible over the Internet.

The Reorganization Plan will seek to consolidate enterprise information technology functions under the OCIO to improve coordination and realize significant efficiencies in procurement and technology implementation. This governance approach is better suited for managing California's use of technology to meet its business needs than either the status quo or models which envision total consolidation, because it acknowledges and respects the organizational alignment of the Executive Branch. By preserving the authority of state agencies to establish policy and determine program priorities, the federated approach to governance is driven from business strategies and uses common or shared technology (enterprise architecture) to ensure the wise investment of limited resources.



Results are realized by defining enterprise architecture standards across program areas, thereby providing interoperability while supporting the diverse programmatic missions of state agencies. In addition, this approach provides a common platform and standards for operations and growth (strengthens speed in implementation), realizes efficiencies, and enables a favorable return on investment.

The federated governance model ensures the integrated and strategic use of technology resources statewide by bringing together the state's key IT policy and

operating functions into a single organization. It also redefines the role of the State CIO and provides the organizational framework for technology leadership.

This Reorganization Plan will seek to establish an expanded OCIO, with the State CIO serving as the primary point of accountability for, and management of the state's integrated information technology and security program.

The expanded OCIO will be made up of the following existing organizations:

- The Office of the State Chief Information Officer;
- The information security functions within the Office of Information Security and Privacy Protection;
- The Department of Technology Services; and
- The Telecommunications Division within the Department of General Services.

In addition, the expanded OCIO would gain responsibility for key IT functions, including:

- Enterprise Information Technology Management;
- Enterprise Information Security;
- Data Center and Shared Services;
- Unified Communications Services;
- IT Human Capital Management;
- Information Technology Procurement Policy; and
- Broadband and Advanced Communications Services Policy.

The State CIO would remain a cabinet-level position, appointed by the Governor and confirmed by the California State Senate.

The federated governance framework presented in the Reorganization Plan would enable the strategic use of both human and IT resources to achieve a higher level of performance in the state's delivery of services.

BOOK 2

STRIVING TO BE NUMBER 1

"For me life is continuously being hungry. The meaning of life is not simply to exist, to survive, but to move ahead, to go up, to achieve, to conquer."

Governor Arnold Schwarzenegger

Information Technology in California State Government

California calls on the best and the brightest from around the globe to come and create the future. People in the nation's "Silicon state" are inventing the technologies that will determine the course of our information rich society – the technologies that are transforming the way people live, work and communicate. In the same spirit, California government relies on technology to deliver services that are always available, easily accessible, and affordable. California strives to be the leader among states in meeting the needs of residents and businesses for information and services.

In California, Agency Secretaries, Constitutional Officers and Department Directors establish policy direction and business priorities. Technology leadership is provided by the state's Chief Information Officers – the State CIO, 14 CIOs at the Agency level and some 130 CIOs in boards, bureaus, departments, and offices in support of program needs. This professional community of business and technology professionals is a team of abundant skills and experience. They take the field every day in pursuit of winning approaches to meet the needs of the people of California.

In order to make the best possible business-IT environment for California state government, business leaders, IT executives, and staff must work together as a team. In 2008, the State of California was recognized by several rankings and surveys of state IT programs. Attaining high rankings are not an end, but rather a challenge to measure the state against other states achieving at a high level. California's precipitous rise in the national rankings signifies an important fact. The state's best work, when done, is as good as the best work of anyone else.

In 2008, California placed 3rd among 50 states in the annual Best of the Web competition; 4th in the independent annual Brookings Institution's State and Federal Technology Survey; 5th in the Digital State Survey.

Wins for Information Technology in California

The story of IT in California is one of many successes and a few failures. Between 2003 and 2007, California successfully completed more than 90 projects. These projects, stewarded by a combination of hardworking state employees, involved executives, and a watchful legislature, have provided services to millions of

Californians in an efficient and effective manner. The list below exemplifies the breadth and variety of California's IT successes.

1	**California Child Support Automated System**		*Franchise Tax Board and Dept of Child Support Services*
Cost:	*~$1.7 billion*	Implemented:	*Fiscal Year (FY) 2008-09*
The California Child Support Automation System (CCSAS) project is a single statewide automated child support system. Statewide implementation was successfully achieved. Federal certification resulted in the reimbursement to the state General Fund of $193 million in federal penalties.			
2	**Statewide Automated Welfare Systems**		*Office of Systems Integration*
Cost:	*~$ 1.6 billion*	Implemented:	*FY 2006-07*
The SAWS Project automated county welfare business processes. SAWS supports six core programs and provides eligibility determination, benefit computation, benefit delivery, case management, and management information.			
3	**Electronic Benefits Transfer (EBT)**		*Office of Systems Integration*
Cost:	*$209 million*	Implemented:	*FY 2004-05*
The project automated paper-based processes for delivering food stamp and cash assistance benefits, replacing printed coupons and checks with electronic benefit transfer cards. California EBT processes approximately $5.1 billion in benefits annually, serving 1.4 million households and accessing thousands of commercial endpoints.			
4	**Computer Aided Dispatching**		*Dept of Forestry and Fire Protection*
Cost:	*$25 million*	Implemented:	*FY 2007-08*
The Computer Aided Dispatching (CAD) system is capable of handling the complexities of wildfire response as well as all types of emergencies dispatched by CalFire Command Centers. It uses a Geographical Information System (GIS) based system to determine the closest unit to send to an incident.			
5	**CalParole**		*Dept of Corrections and Rehabilitation*
Cost:	*$10 million*	Implemented:	*FY 2005-06*
This project replaced a number of aging parolee systems with one system, better coordinating information across multiple jurisdictions. The system is used by parole agents, local law enforcement, and the Department of Justice to ensure both their safety and public safety.			
6	**SB 950 Armed Prohibited Persons System**		*Dept of Justice*
Cost:	*$6 million*	Implemented:	*FY 2005-05*
The system provides law enforcement with data on individuals prohibited from buying or possessing firearms. The data are available to DOJ and law enforcement through the California Law Enforcement Telecommunications System (CLETS).			

7	**Apportionment Payment System (APS) Replacement**	*State Controller's Office*
Cost:	*$5 million*	Implemented: *FY 2006-07*
This project allows the SCO to apportion over $38 billion annually to local governments, agencies, and special districts within California via the internet. As a result, the SCO is able to process more payments thru the APS via Electronic Funds Transfer to cities and counties.		
8	**I-15 Reversible Lane Closure System (RLCS)**	*Dept of Transportation*
Cost:	*$4 million*	Implemented: *FY 2005-06*
This system positions Caltrans to complete several planned transportation projects that will improve the I-15 corridor between San Diego and Escondido. The system allows the lanes to be opened/closed more quickly providing additional relief from traffic congestion.		
9	**Tax Amnesty (TA)**	*Franchise Tax Board*
Cost:	*$3 million*	Implemented: *FY 2004-05*
The project promoted a self-service Tax Amnesty program via the Internet to reduce the tax gap and accelerate revenue. The effort generated $790 million over 3 years in increased revenue.		
10	**Governor's Budget Presentation System**	*Dept of Finance*
Cost:	*$2 million*	Implemented: *FY 2005-06*
The project provides California budget information through an interactive website. With this effort, the Governor's Budget is available to millions of Californians in a reader-friendly format on the World Wide Web.		

In addition to the myriad of successfully completed projects, California currently has an expansive portfolio of active projects. Below are the top nine state IT projects by cost:

1	**Financial Information System for California (FI$Cal)**	*Department of Finance*
Cost:	*~$1.6 billion*	Duration: *11.8 years*
This project will replace the state's aging and non-integrated financial systems with a single comprehensive financial application supporting the state's fiscal and policy decision processes. The proposed solution is to implement an Enterprise Resource Planning (ERP) application that will meet the state's budget, accounting, and some procurement needs. The solution will also address various fiscal information needs of the Legislature.		

2	**Strategic Offender Management System**		*Department of Corrections and Rehabilitation*
Cost:	*~$416 million*	Duration:	*5.7 years*
This project will replace or integrate almost all existing manual or automated offender management systems and extend system availability to 9,400 new users. The new consolidated system will provide one source for reliable and instant data to the CDCR staff that require it to manage the inmate population.			
3	**In-Home Supportive Services/Case Management Information and Payrolling System**		*Department of Social Services*
Cost:	*~$298 million*	Duration:	*10 years*
This project will replace the existing legacy Case Management, Information and Payrolling System (CMIPS I) that handles case management and payrolling services for caregivers providing In-Home Supportive Services for qualified aged, blind, and disabled individuals. CMIPS II will employ newer technology, improve system stability and provide data integration with the California Medicaid Management Information System (CA-MMIS).			
4	**Interim Statewide Automated Welfare System (ISAWS) Migration**		*Department of Social Services*
Cost:	*~$263 million*	Duration:	*3.8 years*
This project will migrate the 35 counties in the Interim Statewide Automated Welfare System (ISAWS) Consortium to the Consortium IV (C-IV) system. This move will consolidate the ISAWS and C-IV Consortia into a single entity, thereby reducing the number of SAWS Consortia from four to three.			
5	**Child Welfare Services / Case Management System New System**		*Department of Social Services*
Cost:	*~$254 million*	Duration:	*7.3 years*
This project will replace the current Child Welfare Services/Case Management System with a new system that is expected to meet all federal Statewide Automated Child Welfare Information System requirements. The new system will expand upon the current system's functionality to include automated adoptions case management, Title IV-E eligibility determinations, and interfaces with other state systems.			
6	**Information Technology Modernization**		*Department of Motor Vehicles*
Cost:	*~$207 million*	Duration:	*6.8 years*
This project will incrementally upgrade the DMV core systems and processes over a seven year timeframe by modernizing all components of the existing Driver License, Vehicle Registration, and Occupational Licensing legacy systems applications and programs, transactions processing and database architecture using more current and easier to support technologies.			

7	**Consolidated Information Technology Infrastructure Program**		*Department of Corrections and Rehabilitation*
Cost:	*~$191 million*	Duration:	*2.9 years*
This project will expand the CDCR data communications network, increase network bandwidth, and replace 3270 terminals with PCs. The CITIP will also address electrical power needs for the new infrastructure.			
8	**Human Resources Management System (21st Century) Project**		*State Controller's Office*
Cost:	*~$179 million*	Duration:	*6.1 years*
This project will replace the State's employee roster and payroll systems.			
9	**Business Information System**		*Department of Corrections and Rehabilitation*
Cost:	*~$176 million*	Duration:	*4.5 years*
This project will purchase, modify, and install an Enterprise Resource Planning system in order to reengineer the CDCR's business processes for financial, human resource, and procurements/contracts.			

WHAT WE KNOW ABOUT IT IN CALIFORNIA

The last year has revealed a number of things about the state of technology in California government. We know that the state has the potential to reach the height of achievement in information technology projects. We have also learned that these successes bring recognition to California and improve our government's operations.

We have a preponderance of anecdotes that demonstrate the potential that California possesses, and, if we take a broader survey of California's IT landscape, we get a clearer picture about how we are positioned to make good on that potential.

Until recently, California state government has lacked an overarching business driven information technology strategy. Most information technology initiatives, even the

"Instead of coordinating resources, departments and agencies develop projects in silos, with a stretched workforce and growing reliance on more costly outside contractors. The diffused authority and responsibility can result in poor public outcomes and missed opportunities to share applications, share data, and consolidate similar business functions." ~ Little Hoover Commission, "A New Legacy System," 11/2008.

most successful ones, were developed by departments without any internal or external consideration of other initiatives. The state's basic information technology infrastructure was also developed this way, dilating the financial and technical capability needed to perform the most fundamental information technology functions such as email, data sharing, and system redundancy. This has created a technology environment that makes it difficult to adequately manage the state's valuable resources and assets.

Delivering the Baseline: The Statewide IT Survey

In an effort to understand and baseline the state's IT assets, the OCIO conducted a statewide survey in May 2008. The survey obtained information about how IT organizations across the state and how they use technology to deliver services. This survey included questions on IT infrastructure, as well as use of mainframes, servers, storage, e-mail services and technical environments. The complete results of the survey can be viewed on the OCIO website at www.cio.ca.gov.

Survey Highlights

Top Line Information

The State has operating expenditures of more than ***$3 billion annually*** with ***130 individuals*** serving as CIOs or an equivalent function within state agencies.

Infrastructure

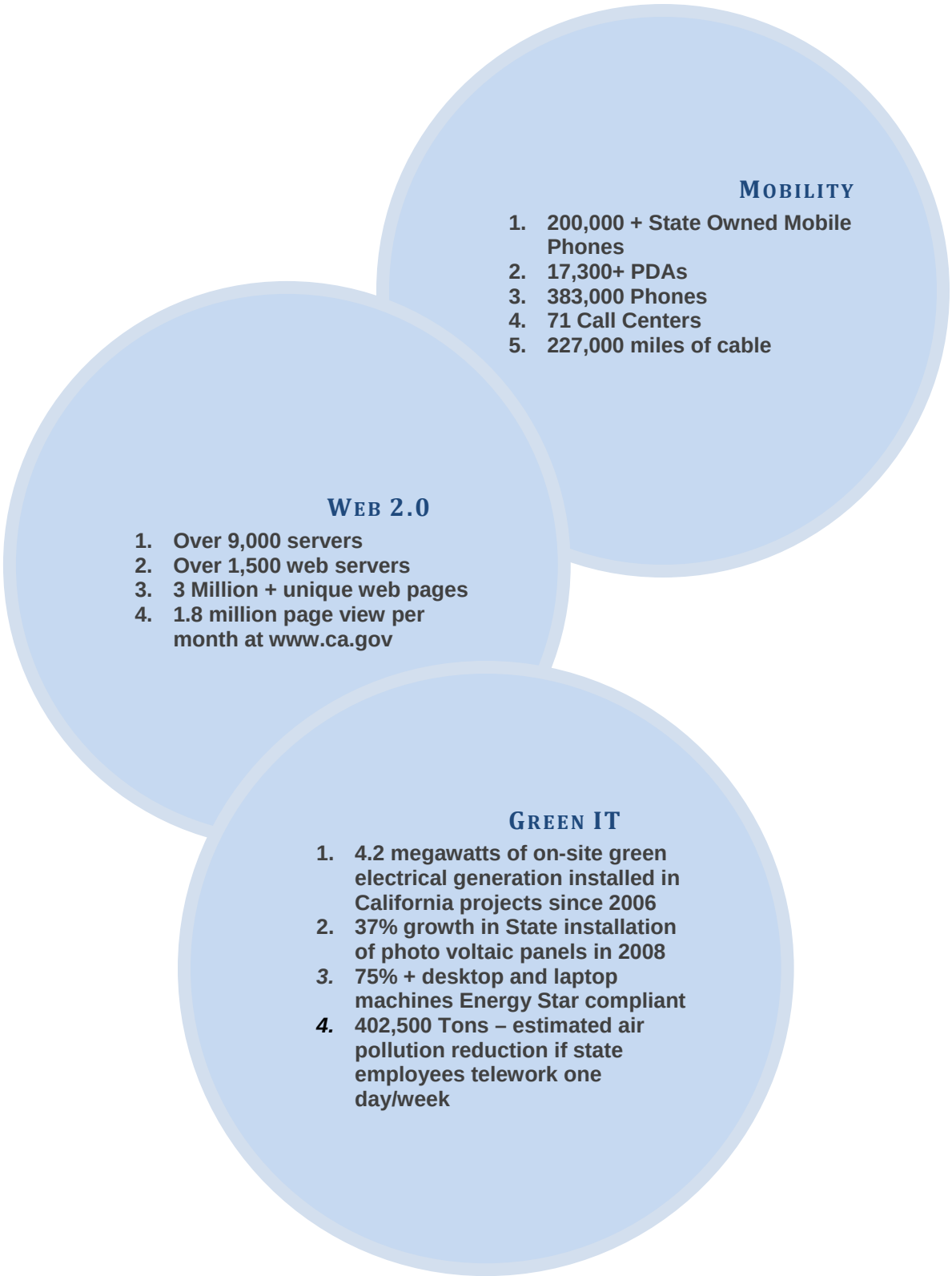
The State has approximately ***409,000 sq. ft. of floor space in 405 locations*** dedicated to data centers and server rooms. The State owns and operates ***9,494 servers.***

Email

The State of California has more than ***100 different e-mail systems*** which support approximately ***180,000 mailboxes.***

Staffing

There are a reported ***8,009 statewide IT staff*** out of 217,418 general staff. *The OCIO believes there are closer to 10,000 IT staff based on personnel data from the DPA.*


MOBILITY
1. 200,000 + State Owned Mobile Phones
2. 17,300+ PDAs
3. 383,000 Phones
4. 71 Call Centers
5. 227,000 miles of cable
WEB 2.0
1. Over 9,000 servers
2. Over 1,500 web servers
3. 3 Million + unique web pages
4. 1.8 million page view per month at www.ca.gov
GREEN IT
1. 4.2 megawatts of on-site green electrical generation installed in California projects since 2006
2. 37% growth in State installation of photo voltaic panels in 2008
3. 75% + desktop and laptop machines Energy Star compliant
4. 402,500 Tons – estimated air pollution reduction if state employees telework one day/week

Expanding upon the Baseline: The IT Capital Plan

To forge ahead with the integration of the business and IT functions in California state government, beginning in Fiscal Year 2008-09 state agencies submitted their first five-year IT capital plans to the OCIO and the Department of Finance. Cabinet Secretaries or their equals were asked to approve these plans. These documents will form a Statewide Five-Year IT Capital Plan that will be released in January 2009.

In its first iteration, the agency IT capital plans also provide the OCIO with a view of all reportable projects and IT investments (including infrastructure changes) that are being proposed by agencies and departments over the next five years.

Collecting the information on what the planned IT activities will be for a five-year period will provide policy makers, business, and IT leaders with a clear picture of how technology is used and is planned to be used in the future. The Statewide IT Capital Plan will establish the foundation for ensuring that all IT investments support state and agency priorities, business direction, and alignment of IT investments within enterprise architecture. This plan will give the state the ability to pursue a strategic direction that meets current and future needs.

Challenges We Face

Any organization where information technology is central to their operations faces challenges. The challenges California faces, even with its size and complexity, are, at their core, the same challenges any organization faces.

Implementing large projects

The scope and scale of California state government causes even seemingly simple projects to become large, difficult and complicated to implement and maintain. Large systems integration projects require significant experience, judgment, technical and management skills in addition to the ability to creatively think, plan and collaborate.

The state's need to implement large IT projects is exceedingly important. In short, California must meet the challenge of developing project management talent and methodologies in order to meet its business needs.

Risk Elimination versus Risk Mitigation

Risk is inherent in all IT projects and the larger and more complex the project, the greater the risk. State governments in general, and California state government in particular, have reacted to risk by implementing layer upon layer of oversight. While oversight is necessary, it is insufficient if it perpetuates a culture that unrealistically seeks to eliminate risk. The state must accept that risk exists and work to effectively manage it by coupling strong project structures with rigorous project management and constructive engagement from oversight agencies.

Integrated IT Governance

Integrated IT governance requires state leaders to effectively and efficiently manage their organization's use of technology to meet its business needs. The state must continue to develop robust, inclusive and transparent structures and processes for setting direction, establishing standards and principles, and prioritizing IT investments to leverage technology to improve business value and programmatic results.

Developing and Retaining Key IT skills

As has been previously and widely recognized, the state is facing a serious challenge in attracting and retaining IT skills. The potential retirement of 57 percent of the state's IT personnel in the next ten years requires immediate and comprehensive succession planning. This remains a pressing issue for agencies that are already experiencing a 10 to 15 percent vacancy rate.

The state must develop succession and workforce plans based on clear information on where skill shortages will occur throughout the state. In addition, the state needs to continually train state IT personnel to meet the changing technology environment.

Securing IT Assets

Today, state IT assets reside in two central data centers and hundreds of peripheral data centers and computer rooms around the state. The level of disaster recovery ability varies from location to location. IT is vital to government operations, whether it is managing public safety communication systems or ensuring that checks are being mailed to California's most vulnerable residents, the state must ensure that IT assets are secure and available.

Focusing our Talent for Success

As we fulfill the charge presented by the Legislature and the Governor, it would serve us to consider the counsel of tennis great Billie Jean King – "Pressure is a privilege." The challenge we face is the privilege that we have been afforded. Settling long-standing issues surrounding how the state utilizes technology and positioning the state for transformation is necessary to meet current demands as well as future expectations.

John Wooden, another high-achiever and one of the great winners in collegiate basketball once quipped "Winning takes talent, to repeat takes character."

In order to continue our winning ways the state must combine the talent of its dedicated employees with the vision that defines truly high achieving IT organizations. By virtue of our talent we are in elite company, but it will take vision, direction, coordination and dedication by all to ensure that we remain among the best.

Book 3
Facing the Future

"He who's not busy being born is busy dying."

Bob Dylan

OVERVIEW

Book 3 presents the six strategic concepts that will establish the future direction for state IT. In presenting these strategies, we have been mindful of the public priorities and statewide policy initiatives. The strategies anticipate a future in which Californians and their government will be highly dependent on access to rich multi-media information – information that is widely available and easily accessible over the Internet.

Each of the six strategic concepts is presented in a standard format:

- The ***Strategic Concept***
- ***Purpose*** of the concept
- ***Quotation*** providing insight into the concept
- ***Description*** of the concept
- ***Strategies*** to achieve the concept
- ***Goals*** that measure attainment of the strategies
- ***A Bottom Line*** that summarizes the value of accomplishing the Strategic Concept
- ***Perspectives*** offering an expert's view on the strategic concept

The essays, which accompany each of the six Strategic Concepts, were written by experts and were previously published in *Government Technology Magazine*, *Public CIO*, *Governing Magazine*, and a publication by The National Association of State CIOs.

MIRRORING THE PUBLIC'S PRIORITIES

As we articulate the ideas that will position the state to use technology to meet the challenges of the future, it is important to remember that our strategic direction is not just the direction of the OCIO but the direction of technology in the state. Our vision of technology must align with the public's priorities for how state government will continue to meet the needs of a dynamic California. From balancing revenues and spending while protecting California's vital interests, to expanding educational and economic opportunities, to investing in infrastructure – Californians are driven by the belief that our best days are before us. This desire to achieve a better future, and the commitment to position the state to

enable this desire, inform the strategic concepts and direction laid out in this Strategic Plan.

STATEWIDE INITIATIVES

The 2006 Strategic Plan, produced by the state's CIOs, provided California Information Technology with the following mission: *Information technology support for the Executive Branch of California State Government will operate as a seamless enterprise, delivering consistent, cost-effective, reliable, accessible and secure services that satisfy the needs of its diverse public and private customers, including the People of California, its business communities and its public sector agencies.* (California State Information Technology 2006 Strategic Plan, pg 5)

The 2006 mission's focus on the outward facing effects of creating a state government that leverages technology for itself and its constituents is at the core of the state's large technology initiatives. These initiatives, touching on various policy areas, are consistent with the belief that technology has the potential to better the state we live in.

We know that technology is going to be part of our future, or as Governor Schwarzenegger said at the 2008 GTC West meeting, "There are a lot of new and exciting changes that are taking place and transforming our future, all made possible by technology. That's why I am a big, big believer in technology, technology, technology. That's where the action is." The question that we address in this section is what that future might look like and how will the state use technology to shape that future.

VISION OF CALIFORNIA'S FUTURE

What will California be like in 2025? The Public Policy Institute of California[2] gives us a glimpse of California's future:

- CALIFORNIA'S FUTURE ECONOMY -- CALIFORNIA WILL PROVIDE 20 MILLION JOBS BY 2025. Between 2005 and 2025, employment of wage and salary workers in California is expected to grow by 36%. EMPLOYMENT WILL SHIFT FROM MANUFACTURING TO SERVICE-RELATED INDUSTRIES. The

[2] see CA2025 at http://www.ppic.org

services industry represented 37% of the economy in 2005, and the share is expected to increase to 40% by 2025. Government employment will decline slightly from 17% to 16%. CALIFORNIA'S FUTURE ECONOMY IS LIKELY TO PROVE LESS TAXING ON INFRASTRUCTURE. The industrial shift will likely ease some of the infrastructure challenges created by growth in the population and economy. EDUCATION NEEDS OF THE WORKFORCE WILL RISE SUBSTANTIALLY. The shift toward service-related industries from manufacturing will increase demand for college-educated workers. If these trends continue, employment projections suggest that the share of workers with a college degree will need to increase from 30% in 2000 to 39% in 2020.

- CALIFORNIA'S FUTURE POPULATION -- BY 2025, CALIFORNIA WILL GAIN BETWEEN 7 AND 11 MILLION NEW RESIDENTS. Natural increase (the excess of births over deaths) and immigration will be the key drivers of this growth. By 2025, 30 percent of the state's residents will be foreign-born. LATINOS WILL ACCOUNT FOR AN INCREASINGLY LARGE SHARE OF THE POPULATION. Latinos are projected to become the largest racial/ethnic group in the state by 2020 and to constitute a majority by 2050. THE POPULATION WILL GROW OLDER. California's population will continue to age as life expectancies increase and baby boomers begin to reach retirement age in 2011. By 2030, the number of seniors will double and one in every five Californians will be over age 65.

- OTHER ASPECTS OF CALIFORNIA'S FUTURE -- CALIFORNIA SPENDS ABOUT AS MUCH ON INFRASTRUCTURE AS THE NATIONAL AVERAGE. GENERAL OBLIGATION BONDS HAVE BECOME INCREASINGLY IMPORTANT. CALIFORNIA HAS MORE THAN $60 BILLION IN DEBT – AND THAT AMOUNT IS GROWING RAPIDLY. ADDITIONAL FACILITIES ARE NEEDED AT COMMUNITY COLLEGES . . . AND THE SAME IS TRUE FOR UNIVERSITIES. CALIFORNIANS SPEND A DISPROPORTIONATE SHARE OF THEIR INCOME ON HOUSING. MANY CALIFORNIA COMMUNITIES FACE SIGNIFICANT RISKS OF FLOODING. FLOOD RISKS ARE ALSO A CONCERN FOR THE STATE'S WATER SUPPLIES.

What might it be like to live in California in 2018? Suppose you were moving your family to California in the year 2018. What might that experience be like? It could be something like this …

Moving to California – 2018

Imagine a place where you could obtain any government service by accessing your own personalized home page. Cathy Johnson and her family were looking to relocate to California to care for her ailing parents. During Cathy's last visit she saw a billboard advertising a government home page for every Californian. Intrigued by the concept she created a page for each of her family members and was astonished at how many services were available online. She was able to apply for jobs and was offered a position after participating in a virtual interview. Cathy's son, Jeff, applied to colleges, was accepted, and coordinated his entire transition to campus life through his page. Cathy's husband, Tom, planned to start his own business in California and was able to buy a startup company from the resources available on his site. Being the avid outdoorsman that he is, Tom was also able to apply for his fishing license and is planning the next family trip to Yosemite. The entire family was able to upload their medical records to ensure a smooth transition of their medical care. Cathy even set up pages for her parents. They were able to research home care resources for her mother and obtained veterans services for her father.

How will state government improve the lives of future Californians? This is the central question that motivates the IT Strategic Plan. The OCIO was established to provide leadership in the use of information technology. The state CIO is a partner with Agency Secretaries in using technology to further the business interests of California government. The over-arching goal of this partnership is to improve the delivery of government services that satisfy the needs of residents, businesses and public agencies.

In collaboration with the state's IT professionals, the CIO is the strategic planner and architect for California's information technology programs and the leader in advancing a vision for those programs. As a community of interest around the effective use of IT, we have focused on six Strategic Concepts that drive the state's performance toward excellence over the next decade.

The Six Strategic Concepts are:

1. **IT AS RELIABLE AS ELECTRICITY** – Allowing business decision-makers to focus on business operations with the expectation that their IT needs will be provided for by a professional IT organization.
2. **FULFILLING TECHNOLOGY'S POTENTIAL TO TRANSFORM LIVES** – Open and accessible online government services ensure that the state is meeting the expectations of the people it governs.
3. **SELF-GOVERNANCE IN THE DIGITAL AGE** – The greatest value from the state's use of IT is the ability to engage residents and businesses on their terms at a time and place of their choosing.
4. **INFORMATION AS AN ASSET** – State agencies have a wealth of data and information that, if properly interpreted and mobilized, can be used to better inform the public.
5. **ECONOMIC AND SUSTAINABLE** – By aligning the state's operations, agenda and goals to be relevant and applicable in perpetuity, we are able to balance the demands of today with the challenges of the future.
6. **FACILITATING COLLABORATION THAT BREEDS BETTER SOLUTIONS** – No one entity has a monopoly on good ideas. Enabling communication between stakeholders, external and internal to government, is essential to open and accountable government.

To realize the integration of the six strategic concepts with the business and IT functions in California state government, state entities submitted their first ever Five-Year IT Capital Plans (ITCP) to the OCIO and the Department of Finance. Included in the ITCPs are concept proposals for IT projects needed to support departments' and agencies' programs and business processes over the next five years.

These IT project concept proposals establish the mechanism for ensuring that the state's IT investments support:

- The state's business needs and priorities
- The program requirements of the departments and agencies
- Alignment with at least one of the Strategic Concepts

A list of the OCIO-approved IT project concept proposals will be included in Volume 2 to be released in January 2009.

These Strategic Concepts and their strategies, goals and actions, along with the IT Capital planning process, will keep California at the forefront of technology in delivering programs required from government. By reviewing the goals and actions, developed by work-groups of CIOs from agencies and departments, we have discerned themes that transcend individual strategic concepts and converge as statements of direction for information technology in California government. The converging themes include the following:

The converging themes include the following:

- EXPAND ACCESS TO GOVERNMENT SERVICES AND INFORMATION
  - Provide online self-service options to residents and businesses.
  - Make public information accessible, reliable and usable.
  - Promote government accessibility and transparency.
- ENHANCE GOVERNMENT ACCOUNTABILITY AND PERFORMANCE
  - Ensure information sharing among agencies to enhance decision-making while engaging and empowering Californians.
  - Transform technology infrastructure to support current and future demands for more robust online services.
  - Establish technology platforms to promote performance management.
- PROMOTE PUBLIC SAFETY, CONTINUITY OF OPERATIONS AND INFORMATION SECURITY AND PRIVACY PRACTICES

- Modernize the state's communication systems and technology infrastructure to ensure public safety and the continuity of government operations.
- Assure consistent information security and privacy protection practices.

With this as a prelude, California's IT Strategic Concepts for the future begin on the next page.

STRATEGIC CONCEPT 1: IT AS RELIABLE AS ELECTRICITY

Purpose: Make information technology so pervasive you take it for granted

Description: The idea of IT as a utility is a powerful one. Think about the way you use electricity in your home. When you turn on the microwave, lights, or television you don't think about alternating currents, miles of power lines, and transformers. You simply expect that you will be able to get electricity, in just about any amount you would ever need, and at the end of the month you pay the bill for the electricity that you use. That's reliability, it's service provided with such expertise that it allows you to focus not on the transmission of that service, but on the task which that service facilitates. In state IT parlance, it allows business decision-makers to focus on business operations with the expectations that their IT needs will be provided for by a professional IT organization. For example, the Department of Motor Vehicle's Information Modernization Project upgraded DMV's core systems and processes by modernizing components of the existing Driver License, Vehicle Registration, and Occupational Licensing legacy systems applications and programs, transaction processing and database architecture. These upgrades created a robust but nimble IT environment that made the implementation of business decisions quicker and less expensive.

> *"Reliability is top of the list... People don't want to reboot their systems ever."*
> *Bill Gates*

Strategy 1: Make IT more reliable for state customers

Goal 1.A: Develop a grid computing model (grid computing requires the use of software that can divide and farm out pieces of a program to as many as several thousand computers) that leverages existing technology infrastructure to facilitate seamless computing operations across state government.

Goal 1.B: Ensure state IT investments support the grid computing model.

Strategy 2: Make IT processes more efficient

Goal 2.A: Establish Standards for "No Planned Downtime"/"Failures Transparent to End Users" – These standards are necessary to address engineering and business-driven uptime requirements at the application, system or shared service level necessary to effectively leverage the state's technology infrastructure.

Strategy 3: Create secure transactions for our state customers

Goal 3.A: Build Organizational Maturity through Standardized Operational Processes - Common operational processes need to be identified and standardized across the state in support of the grid computing model.

Strategy 4: Meet a higher standard of service

Goal 4.A: Staff Development in Support of the grid computing model – Technical and management training programs need to be developed to establish, build and operate the grid computing model.

Goal 4.B: Establish System Performance Baseline - In order to measure the relative improvement in system uptime performance (system reliability) resulting from the move to a grid computing model, existing system performance must be established to serve as the baseline.

Bottom Line: These goals move the state toward the implementation of a grid computing model allowing statewide computing resources to operate in a seamless, redundant and reliable manner. Individually, the goals address the critical areas of technology infrastructure, applications and systems, business processes, staff development, and IT performance management processes necessary to make IT as reliable as electricity. By standardizing the way we build and operate IT services and by leveraging the dollars that would otherwise be spent on maintaining and refreshing our disparate architectures, we can dramatically improve the value and reliability of IT as an indispensible business tool in delivering the functions of state government.

Perspectives…

The essay that follows explores the idea of *IT as reliable as electricity* playing out in the future.

Requiem for the Digital Age **Paul W. Taylor, Center for Digital Government**
From the "IT Doesn't Matter guy"

Nick Carr has written a meditation on loss – the loss of the old when confronted by the shock of the new, the loss of incumbents' advantage when history shifts under them, the loss of control over data to third parties, and the loss of sovereignty by individuals, communities and even societies to institutions and other actors over which we have no control.

It may not be what you would expect from the "IT Doesn't Matter guy," a self-deprecating reference to the Harvard Business Review article that made him (in)famous a few years ago, or from a book with the seemingly optimistic title of *The Big Switch: Rewiring the World, from Edison to Google*. That said, Carr builds on his earlier arguments -- that information technology was necessary but did not confer competitive advantage -- by suggesting that organizations will inevitably abandon everything from data centers to PCs and almost all locally installed software in favor of cheap, utility-supplied computing.

In making the case for a big switch to utility computing, Carr draws heavily on a richly detailed analogy to electrical utilities that changed the way the world worked a century ago. Carr's Thomas Friedman-esque historical review of the profound effect of cheap electricity on society is the heart of the first half of the book. The historical romp helps to set up the darker half of his thesis – no less a figure than Thomas Edison was wrong about how electrical utilities would develop and was unable to see the myriad uses to which electricity could be put if it was stable, reliable and economical.

He also tweaks Microsoft for being wrong (and late) in a chapter called Goodbye Mr. Gates, although companies such as Dell, Oracle and SAP get briefer but no kinder notices.

Carr points to Salesforce.com and Google as exemplars of utility computing but also worries aloud that Google may be capable of evil, despite its founding premise, even if unwittingly. Such is the curious contradiction of the book that is never reconciled. Carr repeats the commonly accepted view of technological neutrality – "Technology is amoral, and inventions are routinely deployed in ways their creators neither intend nor sanction" – yet reveals a strong technological determinism when he warns, "It should come as no surprise, then, that most of the major advances in computing and networking … have been spurred not by a desire to liberate the masses but by the need for greater control on the part of commercial and governmental bureaucrats."

There is a message for those of us who have been hopeful about the Internet: we're wrong too. "It's clear that two of the premises most dear to the Internet optimists – that the Web will create a more bountiful culture and that it will promote greater harmony and understanding – should be treated with skepticism. Cultural impoverishment and social fragmentation seem equally likely outcomes." Carr's dystopic homily fits with the spirit of this moment, characterized by moribund politics, uncertain economics and loss of national confidence. It would be too easy to say that the lessons of the book are that government should not build data centers and that its bureaucracies should not be trusted.

He concludes, "The full power and consequence of a new technology are unleashed only when those who have grown up with it become adults and begin to push their outdated parents to the margins. As the older generations die, they take with them their knowledge of what was lost when the

new technology arrived, and only the sense of what was gained remains. It's in this way that progress covers its tracks, perpetually refreshing the illusion that where we are is where we were meant to be." Unfortunately, Carr's sweeping narrative is less about redressing this loss, or resisting the forces that cause it than ultimately being resigned to it.

STRATEGIC CONCEPT 2: FULFILLING TECHNOLOGY'S POTENTIAL TO TRANSFORM LIVES

Purpose: Deliver better results while meeting growing expectations

Description: As the Silicon state, California is the home of technological innovation. California companies are inventing the future of information management and presentation and our residents demand that their interactions with government be up to these high standards. The most public-facing aspect of an organization, its online presence, needs to meet the growing demands of the public it was built for. While technology will not change the motivation behind people's transactions with government, it can profoundly affect the way those transactions are pursued. Open and easy online government services are one of the best ways we can ensure that California is meeting the expectation that government helps serve the people it governs. The California Department of Child Support Services recently implemented a single statewide system for the collection and disbursement of child support payments. The California Child Support Automated System ensures that the state is delivering this vital service based on the needs of the people of California, not the dictates of an organizational chart.

"Things alter for the worse spontaneously, if they be not altered for the better designedly." – Francis Bacon

Strategy 1: Establish a service oriented culture

Goal 1.A: Implement standard capabilities to ensure the secure exchange, transmission and storage of confidential information.

Goal 1.B: Establish a Web portal which provides a comprehensive list of government e-services.

Goal 1.C: Provide government services to residents and businesses through innovative technologies.

Strategy 2: Make Government Services Mobile

Goal 2.A: Extend government e-services to mobile devices.

Goal 2.B: Implement a "My California" Web portal that allows residents and businesses to create secure accounts and subscribe to e-services provided by the state.

Goal 2.C: Develop a Web portal for mobile devices that provides a comprehensive list of government e-services.

Strategy 3: Open new channels for services to Californians

Goal 3.A: Provide virtual government services to residents and businesses through video conferencing and video touring.

Goal 3.B: Expand e-notification for government services to residents and businesses.

Goal 3.C: Expand availability of live help chat for government services.

Goal 3.D: Extend government e-services to mobile devices.

Goal 3.E: Provide access to online government services via all Internet enabled devices.

Bottom Line: Achieving these goals will improve accessibility of services by providing 24/7 self-service, increasing the number of online services and enabling access via mobile devices. Acting on these goals will increase government efficiency and reduce costs while making government more responsive to the needs of California's residents and businesses. By introducing multiple ways for residents and businesses to receive government services, while accommodating personal preferences, Californians will be better informed and more aware of government services online.

Perspectives…

The essay that follows explores the idea of *fulfilling technology's potential to transform lives* playing out in the future.

IT Transformation: CIOs Must Address Roadblocks to Change

Liza Lowery Massey
Public CIO, 2008

The greatest productivity gains and cost savings I've witnessed during my IT career happened when business process improvements occurred *before* the technology's deployment. Next (and less effective) are transformational projects where a gap analysis during implementation forced changes to business processes. The worst-case scenario is when an IT system was customized to mimic the "way we have always done it."

I recently participated in a panel and discussed lessons learned from transformational IT projects and the role of cultural change. I recalled two projects that included upfront business process improvements and consequently achieved dramatic results. One was a supply chain management (SCM) project for Los Angeles, and the other was a regional Smart Permitting initiative in Silicon Valley.

The goal of the L.A. project, like any good SCM initiative, was to move from just-in-case to just-in-time inventory management. L.A.'s results were staggering: millions of dollars saved (initially and recurring), hundreds of positions no longer needed to support the process, and the number of warehouses was cut in half. The project succeeded for several reasons: the inclusion of process review and improvement, sound project and change management, collaboration within the city and with the vendor, and before-and-after measurement. Additionally, the city's leadership made the tough decisions that often deter organizations from realizing dramatic improvements.

The Smart Permitting project began with 27 cities and two counties in California's Silicon Valley. Developers faced a regional building code with 400 local amendments; by collaborating, the amendments were reduced to 11, then nine and finally only two. The savings -- before any technology was implemented -- was estimated at billions of dollars and impacted more than 90,000 commercial and residential projects. Other business process changes were also made before technology was eventually introduced: governance, executive involvement, before-and-after measurement, and well defined goals all contributed to the initiative's success. Once again, leaders made tough decisions.

These examples probably evoke memories of other highly successful IT projects. But following closely on their heels are likely recollections of projects that didn't live up to their potential. While the aforementioned success factors make a significant difference, why is transformational change so difficult -- especially in the public sector?

First and foremost, government lacks a unifying purpose. Unlike private industry, whose single unifying function is profitability, each government agency or department has its own mission that -- while contributing to the overall community good -- is narrowly focused on specific goals and objectives.

Other factors -- both intentional and unintentional -- stymie process improvement and the success of IT projects. The inadvertent roadblocks include not understanding the value of reviewing and improving business processes and inadequate skills to do it. Human nature also plays a key role. We are creatures of habit who value our comfort zone. I call this Liza's Theory of Change: "People only change when the pain of not changing becomes too great." It sounds pessimistic, but it's realistic and I use it as a driver to search for "pain" to ensure the situation is ripe for transformation.

Intentional roadblocks to success include: resistance, competing agendas, risk aversion, and fear of job loss or negative change to working conditions. In addition, people do not like to be wrong. As IT professionals, we often look at everything through a lens of "how can I fix it?" While it's the nature of our business, we put non-IT folks on the defensive when we approach them this way. I've learned that approaching everything in the spirit of further improvement acknowledges that people are doing their best.

Some progress can be made when technology forces change or adapts to bad business processes. While often more difficult, transformational results are realized when business process improvements precede technology implementation. Acknowledging and addressing the roadblocks, as well as tackling the areas of greatest pain, lead to the greatest gains.

STRATEGIC CONCEPT 3: SELF-GOVERNANCE IN THE DIGITAL AGE

Purpose: Technology that makes government transparent, available, and intuitive

> *"Whenever the people are well-informed, they can be trusted with their own government." – Thomas Jefferson*

Description: The wide-spread use of technology in government has fundamentally changed the ability of government to interact with the people of California. Consequently, we can now reach more constituents in more ways than ever before. The vision of a government that is transparent, accessible, and accountable demonstrates the profound transformative potential of weaving a coordinated IT portfolio throughout California government's operations. For instance, the Governor's eBudget solution and its corresponding Web site not only improved how budget information is submitted from agencies to the Department of Finance, but it also put budget information online in an organized and digestible format. Now, the people of California can have access to the data they need to have an informed hand in the budget process. The greatest value from government's use of (and investment in) information technology is the ability to engage residents and businesses on their terms at a time and place (in social networks, online communities and collaborative spaces) of their choosing. Creating a California that fulfills this potential is one of the most important tasks of government operating in the digital age.

Strategy 1: Make government more transparent

Goal 1.A: Ensure transparency is the de facto business model for state business.

Goal 1.B: Deploy available technologies to allow Californians to offer suggestions as part of the policy development and deliberative process.

Goal 1.C: Provide service-focused technology solutions that engage the public on their terms.

Goal 2.D: Provide flexible and adaptable solutions that ensure government is transparent to Californians and responsive to their needs.

Strategy 2: Increase the availability and accessibility of government services and information

Goal 2.A: Baseline public expectations about the accessibility and convenience of government services.

Goal 2.B: Pursue innovative technology initiatives and public-private partnerships to enhance programmatic outcomes.

Goal 2.C: Consolidate data from many sources to create new services and enhance existing services.

Goal 2.D: Pursue technologies that exceed the requirements of Section 508 regarding accessibility (29 U.S.C. 794d).

Strategy 3: Make government services easier to find and use

Goal 3.A: Utilize innovative information technologies to achieve organizational efficiencies and the delivery of services.

Goal 3.B: Make all state application and contract processes available online.

Goal 3.C: Deliver services promptly, economically, and reliably.

Strategy 4: Protect personal and other sensitive information entrusted to state government

Goal 4.A: Provide end-to-end, critical information security oversight and direction that will benefit the entire state and its partners.

Goal 4.B: Perform regular assessments or audits of the state IT assets (infrastructure, applications, etc.) and ensure that participating agencies

and their systems are in compliance.

Goal 4.C: Ensure that users understand how their information will be used and safeguarded when they use online services provided by or through the state.

Bottom Line: To eliminate barriers between Californians and their government, it is necessary for the state to expand access to public information and services, such that government engages residents and businesses on their terms at a time and place of their choosing.

Perspectives…

The essay that follows explores the idea of *self-governance in the digital age* playing out in the future.

Technology Shouldn't Dehumanize Customer Service **Andy Opsahl**

Government Technology, 2009

I don't recommend checking in on an interactive airport kiosk without your confirmation number, lest you repeat my experience with a Southwest Airlines "customer service agent" on a recent flight to Orlando, Fla.

I forgot to check in online, and I didn't print the e-mail itinerary that had my confirmation number. So I politely asked a Southwest agent, "Joe" - I didn't see a nametag - for help.

"Use your driver's license like the picture shows you," Joe snapped. In other words, "Look at the screen, idiot." I saw no such picture, but it was 4:30 a.m. I inserted my driver's license and followed the prompt. No ticket emerged, but the screen directed me to another kiosk. I reluctantly reported the problem.

"It must be something you're doing," Joe griped. He told me to follow the prompt again, and when the machine wouldn't continue, Joe hopped to my side of the counter, rolling his eyes. He opened the machine and my printout was jammed inside. Instead of an apology, I got a rebuke.

He asked why I needed a ticket when the machine said I'd already checked in from home. "But I didn't check in from home," I said. "Well, someone at home checked you in," he retorted.

After finally printing my ticket, I just wanted to escape this jerk. But then he complained about sticking baggage tags to the video equipment crate I was checking. Joe said the tags would likely fall off during transit, and if so, I'd be out of luck. But shoving the large crate into the airplane's overhead bin wasn't an option. Thankfully it arrived safely in Orlando.

Was Joe's attitude his fault, or do these machines dehumanize customers? This question has implications for government field offices. Technology often increases efficiency and saves money, but government leaders must train employees to prevent machines from turning customers into cattle.

Citizens typically use these agency machines at the humblest points of their lives. Applying for food stamps at an agency's terminal may be humiliating, but at least you don't have to face a person. If you can't figure out how to operate the machine, a curt government employee telling you how easy it should be would feel like rock bottom.

I began writing this article immediately after navigating airport security officials - who were much friendlier than Southwest Joe. If I had waited, my anger would have dissipated. Maybe Joe was just having a bad day. But that's for his supervisor to determine, not customers paying good money to be treated like garbage.

STRATEGIC CONCEPT 4: INFORMATION AS AN ASSET

Purpose: Make information useful (e.g., digital, accessible, searchable, understandable, spatially enabled, shareable)

"Information technology and business are becoming inextricably interwoven. I don't think anybody can talk meaningfully about one without talking about the other." – Bill Gates

If knowledge is power, then it follows that information is the seed of that power. Much of what we do in state government is about information: its collection, analysis, generation and publication. We do this because information that is accurate and encompassing will allow decision-makers to better steward our state and serve the public. Additionally, information as a tool also keeps the residents of California better informed on the operations of their government. Ensuring that detailed and nuanced information can be succinctly and meaningfully presented to California constituents allows agencies to advance their agendas within the parameters of good government. State agencies have a wealth of data and information that, if properly interpreted and mobilized, can be used to better inform the general public about many important events and resources. There is also a great opportunity to positively influence decisions in other government sectors by providing customized data and informational products derived from agency maintained informational resources.

Strategy 1: Coordinate and leverage existing state investments in data and information resources

Goal 1.A: Establish a State Geospatial Information Office (SGIO) with sufficient authority and capacity to coordinate state geospatial investments, partnerships and related geospatial data infrastructure planning, development and operation, and steward strategically important data.

Goal 1.B: Establish a Web-based clearinghouse within a federated environment for the inventory and cataloging of state data and information assets.

Goal 1.C: Establish a Web-based "library" to host strategic data sets.

Goal 1.D: Establish a Web portal to foster collaboration in the development and maintenance of information assets.

Goal 1.E: Integrate geo-coding of data into the application development lifecycle.

Goal 1.F: Have agencies take stewardship responsibility for strategically important data sets and related information services.

Goal 1.G: Require that state agencies use common data and information management services.

Goal 1.H: Develop and implement a governance process by which state agencies coordinate their data and information management programs.

Strategy 2: Increase the amount of searchable material on state Web sites

Goal 2.A: Establish open, industry standards for all online databases to ensure that they are accessible and searchable.

Goal 2.B: Integrate geo-coding into the development of state Web pages.

Strategy 3: Eliminate institutional barriers to the sharing of data and information

Goal 3.A: Establish data and information sharing policies and practices.

Goal 3.B: Establish a common data dictionary for all state data systems to facilitate data sharing and analysis.

Goal 3.C: Develop agency data models to document opportunities and needs for data transfer and interoperability.

Strategy 4: Establish collaborative and cooperative relationships with public and private sector organizations to invest strategically in data and information assets and promote reusability

Goal 4.A: Establish a governance process to facilitate the sharing of data across all levels of government and with the private sector.

Goal 4.B: Develop common standards for business intelligence and business analytics tools to enhance the decision-making and policy development process.

Strategy 5: Ensure that public data and information assets are usable and can be accessed when and where they are needed

Goal 5.A: Survey and determine which state agencies hold data and information assets of "strategic importance."

Goal 5.B: Explore ways to reuse data and information assets.

Goal 5.C: Require that strategically important data and information assets are organized around the state's core business functions.

Goal 5.D: Develop a common data architecture to facilitate the analysis of state data and information assets.

Strategy 6: Utilize the Internet as a warehouse to store public information

Goal 6.A: Leverage the state Web portal to provide timely, accurate and complete information to the general public on disasters and related resources.

Goal 6.B: Develop methods for identifying and prioritizing the development of a common data warehouse for public information.

Bottom Line: State data and information assets are public resources paid for with public dollars. State agencies are obligated to properly steward their data and ensure that the full value of their data and information assets is realized. California's residents and businesses stand to realize substantial benefits through the sharing of data and other information assets among and between state agencies and their partners in the public and private sectors. Information resources properly leveraged reduce costs, foster consistency and effective decisions, and bring transparency to government. Imagine the many benefits that we could realize when heretofore isolated data are combined in new and innovative ways.

Perspectives…

The essay that follows explores the idea of *information as an asset* playing out in the future.

The Value of X **Paul W. Taylor, Center for Digital Government**

Exchange points shaped and sized for government

Even novice Scrabble players know the letter "X" is worth a much-prized 8 points – and the value multiplies five fold in an officially recognized 8-letter word. (Of course, the board game disallows acronyms and initials, which effectively rob government and technology workers of half their vocabulary and any advantage in competitive word play.)

The value of X in the public sector IT community has been rising steadily if somewhat stealthily in recent years. X stands at the beginning of a pair of TLAs (three letter acronyms) that have been added to the cryptic lexicon of government technology – XML and XBI.

While the former is the coin of the realm with even the intrepid if idiosyncratic geeks at slashdot.org, the latter is a worthwhile experiment among a faithful band of converts to wrap their arms around the complex business of building a XML-based platform for governing (in which technology may well be the easy part).

XML - extensible markup language - makes data portable across previously discrete systems, agencies, jurisdictions and sectors of the wider society. XML makes possible a long anticipated shift in focus from the problems of dissimilar systems to the opportunities of common data. The great lesson here is that it is the exchange point that matters in intergovernmental data sharing.

Enter XBI – a shorthand for cross boundary integration and the working name of a framework for transcending political, organizational and technological boundaries that brings together the essential elements of governance, architecture and organizational change. In a recent white paper on the promise of XBI from the National Electronic Commerce Coordinating Council (NECCC), its proponents concede that "it won't be easy" but argue that a coherent and comprehensive model is necessary to realize the transformational potential of digital government. The hard work begins by fleshing out the framework to provide a common reference point for government executives, program managers, policy makers and IT leaders that tie together the best thinking from their previously discrete disciplines. That needs to come next.

In its final form, XBI could become a multidisciplinary glue that binds what the British call "joined together government." It could also become a catalyst for tipping the balance in the intractable debate between agency autonomy and the needs or interests of the larger enterprise.

XBI's greatest value may come from its relationship to TLAs imported from the private sector. ERP, CRM and both flavors of BPM all automate generic business rules – and cause organizations to act like the software, not the other way around. While allowing for exceptions, XBI is an assault on governments' claims to having unique needs that cannot be satisfied through commercial software. In its final form, a XBI framework could provide the context for having that fight within your organization and with your neighbors.

So this X-treme sport now has a name – never mind that "X" stands for "extensible" in XML and "cross" in XBI. After all, it is only the private language of public sector IT. Therein lays a cautionary note and a potential lesson from the British where the use of language is concerned. We are still speaking geek while those whom we seek to persuade (and, in some cases, beat in the competition for scarce public resources) are playing by Scrabble rules.

STRATEGIC CONCEPT 5: ECONOMIC AND SUSTAINABLE

Purpose: Lowering costs, saving the planet

Description: In times of perpetually stretched state budgets, it is essential to design our operations, services, and workforce to meet the rigors – present and future – of doing more with less. Economic and sustainable means reducing our carbon footprint. It means ensuring, that with a rapidly dwindling workforce, we have the expertise and flexibility to meet our human capital needs. It means promoting the use of technologies throughout the state to enhance California's workforce, such as the California Broadband Task Force's recommendations on the deployment and adoption of Broadband technologies. In essence, it means aligning our operations, agenda, and goals to be relevant and applicable in perpetuity; balancing the demands of today with the challenges of the future.

"Far and away the best prize that life has to offer is the chance to work hard at work worth doing." – Theodore Roosevelt

Strategy 1: Promote practices that protect the environment and reduce energy usage

Goal 1.A: Ensure that strategically sourced contracts IT hardware include the most stringent energy and environmental requirements.

Goal 1.B: Incorporate proven green technologies into the state's IT infrastructure.

Goal 1.C: Utilize sources of green energy for state data centers.

Goal 1.D: Require the use of energy-efficient equipment and technologies in IT project approval process.

Goal 1.E: Replace end-of-life desktops with energy-efficient laptops.

Strategy 2: Ensure the disaster resiliency of state's IT infrastructure

Goal 2.A: Enact policies that encourage the use of the State Data Center by state agencies and departments.

Goal 2.B: Ensure project budgets include funding for redundancy and disaster recovery.

Goal 2.C: Facilitate the development of sufficient redundancy in data center infrastructure.

Goal 2.D: Ensure periodic, structured testing of backup and recovery systems.

Strategy 3: Support Innovation

Goal 3.A: Facilitate "Centers of Excellence" to showcase and evaluate innovative technologies.

Goal 3.B: Establish a laboratory for the state to test new applications and technology solutions.

Strategy 4: Create IT bench strength

Goal 4.A: Change the current testing process for all IT classifications so that they are statewide open continuous exams.

Goal 4.B: Recruit college students through targeted marketing and outreach programs.

Bottom Line: The IT community must establish leadership by engaging in an effective governance structure for the management of technology. Considered policies should give direction to government agencies on IT requirements and standards. Solutions that benefit recipients of services will be of highest priority. Shared facilities and infrastructures should enable government agencies to deliver their programs while balancing the demands of today with the challenges of the future.

Perspectives…

The following describes how other states' IT organizations are projecting the concept of *economic and sustainable* into their futures.

Green IT in Enterprise Practices: The Essential Role of the State CIO

Oregon Policy Embracing Acquisition and Disposal of Electronic Products

In support of the Governor's Sustainability Executive Order, Oregon adopted a policy addressing the acquisition and disposal of computers and monitors. The policy adopts EPEAT standards for acquisition of electronic products. It also addresses e-waste in that excess electronic products must be refurbished for reuse, disposed of through statewide electronic recycling contracts or returned to manufacturers through contract "buyback" provisions for ultimate disposition in a manner that prevents hazardous materials from entering the waste stream. The primary e-waste contract for state agencies and other public entities in Oregon is a joint venture with a qualified rehabilitation facility (QRF). The contract allows the state to achieve its objectives of providing secure, sustainable, cost effective e-waste options and meaningful employment for people with disabilities.

Kansas Implements Desktop Power Management Initiative

In Kansas, power management software which automatically powers down idle computer components after a pre-set period of time has been installed on all Department of Administration desktop computers. In December of 2007, the Kansas Division of Information Systems and Communications (DISC) implemented a tool to centrally manage power settings on Windows client workstations.

North Carolina's Consolidation Program

North Carolina is improving their state's IT related carbon footprint through process, technology and architectural improvements. This consolidation initiative, a statewide strategic effort, is implementing these improvements across all state agencies. This multi-year program will help reduce carbon footprint by decreasing the amount of data centers, servers and associated IT infrastructure that are required to deliver services to their residents and employees. This program is in its second execution phase, and the eight participating agencies will eliminate their local data centers and will reduce the number of physical servers by 35 percent.

Data Center Energy Efficiency a Goal for Washington State

The State of Washington is currently in the process of planning for a new data center for their IT enterprise. State office buildings in Washington must now be built to be compliant with a LEED Silver rating at a minimum. While the nature of a data center is not compatible with this level of compliance, the state is working to ensure they have an efficient data center that aligns with their state's green goals of energy efficiency and minimal environmental impact. Locating the data center on the state campus in Olympia, they are focusing on three areas that will lend to energy efficiency—roof handlers for airside cooling, implementing a comprehensive virtualization program, and investing in super-efficient uninterrupted power supply.

Making Wind into Energy in Montana

Cascade County, Montana, is finding extra revenue in an unexpected place. Through wind turbines, the air that flows through rural Cascade County and many other parts of Montana can be captured and utilized to produce an alternative source for energy, contributing to overall carbon footprint reduction. The County utilized its pre-existing GIS tool, which showed wind providers information about the land that they could not get anywhere else from just one application. The tax revenue from the wind turbines, as well as the extra income given to landowners, adds up to significant revenue for the county and a cleaner environment through alternative energy.

Tracking Carbon Sequestration in Pennsylvania:

Through enhancements to Pennsylvania's Seamless Digital Base Map (PAMAP), the Commonwealth has the ability to continually measure statewide biomass changes and forest carbon sequestration. Through their work on the Midwest Regional Carbon Sequestration Partnership, they have mapped major Pennsylvania stationary carbon emissions sources and potential geologic sinks in the western part of the state. The state hopes to map geologic sequestration resources for the entire Commonwealth over the next 3-5 years and plans to develop protocols for siting and operating state geologic sequestration projects. Through the use of GIS technology, Pennsylvania is able to track and monitor carbon sequestration in the Commonwealth.

Arizona Turns to Web Conferencing

The state of Arizona has adopted web conferencing technology throughout their agencies as a means to cut mileage, fuel, vehicle use and travel; the software charts the distance between web conference participants and then calculates cost savings based on the likely method of travel and the amount of fuel that would be used. Overall, the state of Arizona has tracked a C02 footprint saving of 300,000 pounds in the first quarter of 2008.

STRATEGIC CONCEPT 6: FACILITATING COLLABORATION THAT BREEDS BETTER SOLUTIONS

Purpose: Encourage communication and collaboration to maximize information exchange and improve decision-making

Description: With more than 38 million residents, California ranks first in population among the states. As a service provider, California government compares favorably to other states by having one of the lowest ratios of state and local government employees to residents – we rank 41st. Nevertheless, due to the size and complexity of California, there are more than 130 agencies, boards, bureaus, commissions, councils, and departments within the Executive Branch with more than 220,000 employees. No one entity has a monopoly on good ideas. Providing effective means for communicating between stakeholders, external and internal to government, is integral to the wise stewardship of public money and trust. Emerging technologies and business needs make collaboration imperative to the act of governing. The successfully implemented Electronic Benefit Transfer (EBT) Program saw the coordination of federal, state, and local governments along with private sector food retailers to better deliver food stamp benefits to more than 1.4 million California households. The connections this process created across levels of government and with the private sector, allowed the California Department of Social Services to extend the EBT program to include farmers markets and restaurants.

"Many ideas grow better when transplanted into another mind than the one where they sprang up."
Oliver Wendell Holmes

Strategy 1: Establish common technology standards and strategies to maximize the sharing of information resources

Goal 1.A: Create a culture of collaboration that transcends organizational and political change.

Goal 1.B: Establish partnerships between the state's business and IT functions to leverage information assets between state agencies.

Goal 1.C: Invest in the development of interoperable communications systems and related technology infrastructure.

Strategy 2: Establish public-private partnerships to promote innovative technology solutions to business problems

Goal 2.A: Identify and eliminate barriers to technology-focused public-private partnerships.

Goal 2.B: Foster collaborative partnerships with public and private sector organizations to promote innovation by leveraging knowledge and expertise.

Strategy 3: Streamline access to government services and information assets

Goal 3.A: Establish "Communities of Interest" to enable the efficient delivery of government services.

Goal 3.B: Develop a Web portal to ensure public access to information about government operations and expenditures.

Bottom Line: Collaboration tools provide a valuable channel for the state to engage residents and business as well as gather their input on the policy issues that are important to them. In addition, these tools provide a framework for state employees to share best practices and work together to support the delivery of efficient government services.

Perspectives…

The essay that follows explores the idea of *Facilitating collaboration that breeds better solutions* playing out in the future.

Government at La-Z-Boy Speed

Todd Sander
Public CIO, July 2008

I was talking with my son about a paper he's writing for a summer school course at The University of Arizona. He was sitting in our family room holding his laptop and collecting research from the Internet using the wireless connection that, I must admit, he helped me set up. He was telling me about the various Web sites he was visiting, the material he was collecting from around the world, and the project team members he was collaborating with via instant messaging and Facebook from the comfort of my La-Z-Boy recliner. I couldn't help but think back to my own experiences researching and writing school papers. I'm sure many of you, much like myself, remember a vastly different experience.

It wasn't long ago that the search for information required multiple trips to the library and a hard-earned familiarity with the card catalog and Dewey decimal system. Successful navigation often resulted in a National Treasure-like search through rows and rows of books with the hope that at the end, we would stumble across just the right book that held the potential for making us look smarter than we probably were. More often than not, I arrived at the cryptically defined location only to discover that I couldn't find the book I needed. Either I had misinterpreted the clues somewhere along the way or someone else working on the same project had beaten me to the singular prize.

It amazes me how fundamentally our world has changed. Almost without noticing, we have moved from a world of information scarcity to information overload. Our challenge now isn't finding enough information about a particular subject, but making sense of and qualitative judgments about the almost limitless variety of data and information that's available.

At a recent gathering of the Digital Communities CIO Task Force, members spent a good portion of the day talking about how social networking and collaboration tools are beginning to affect the operation of local government. Pressure to change the way that information flows and is managed within an organization is coming both from newly hired employees (some were almost born with digital devices in their hands) and citizens who have come to rely on mobile communication devices and free-flowing information to manage their day-to-day lives. Even so, some CIOs believe they have more than enough to worry about with existing systems, ever-changing security requirements and expensive infrastructure demands.

To many in government, the Web 2.0 stuff - social networks, blogs, wikis, instant messaging systems, viral videos and virtual communities - may sound cool, but it's more appropriately left to college campuses and consumers. They say there's really no place for Web 2.0 tools in government; I have even heard them described as "technologies in search of a problem."

I disagree, and a look at government across the country shows what business calls Web 2.0 technologies are in some places quietly becoming foundational components of what government is now beginning to call Government 2.0. It's bringing a new kind of order to the information turmoil all around us - and just in time.

From Goals to Action

The Six Strategic Concepts that make up this plan include:

1. **IT AS RELIABLE AS ELECTRICITY** – Allowing business decision-makers to focus on business operations with the expectation that their IT needs will be provided for by a professional IT organization.
2. **FULFILLING TECHNOLOGY'S POTENTIAL TO TRANSFORM LIVES** – Open and accessible online government services ensure that the state is meeting the expectations of the people it governs.
3. **SELF-GOVERNANCE IN THE DIGITAL AGE** – The greatest value from the state's use of IT is the ability to engage residents and businesses on their terms at a time and place of their choosing.
4. **INFORMATION AS AN ASSET** – State agencies have a wealth of data and information that, if properly interpreted and mobilized, can be used to better inform the public.
5. **ECONOMIC AND SUSTAINABLE** – By aligning the state's operations, agenda and goals to be relevant and applicable in perpetuity, we are able to balance the demands of today with the challenges of the future.
6. **FACILITATING COLLABORATION THAT BREEDS BETTER SOLUTIONS** – No one entity has a monopoly on good ideas. Enabling communication between stakeholders, external and internal to government, is essential to open and accountable government.

These concepts are built on strategies and goals for action - our next step is to partner with state agency business and IT leaders to determine the tactical steps required to implement these strategies and realize tangible benefits from this Plan in the near term.

Despite limited resources, we must continue to make strategic investments to enhance government services and renew our technology infrastructure.