
Appendix D

INFORMATION RESOURCES MANAGEMENT SUPPLEMENT

INFORMATION RESOURCES MANAGEMENT SUPPLEMENT

State of Oregon, 2005-2007 Budget and Legislative Concept Instructions Information Resources Management Supplement

Statewide Enterprise Information Resources Management Strategy

The Enterprise Information Resources Management (IRM) Strategy provides a common vision and direction by which to guide state government-wide (enterprise) information technology (IT) and telecommunications planning, budgeting, procurement, staffing, and service delivery efforts.

The enterprise approach to the management of information resources is a statewide perspective focused on relationships, resource sharing, and collaboration among all generators and users of information resources.

The primary role of information and technology resources is to support business objectives. IT can improve business processes, and reduce costs. However, IT has a limited value when applied independently of business objectives and goals. IRM planning, budgeting, and management within government agencies must be closely integrated with business planning, development, and management to ensure that information resources and technology are being applied effectively and efficiently.

The enterprise approach for managing information resources and technology will enable the state to improve organizational efficiency, increase program effectiveness, and provide greater accountability for expenditures and results.

The effective management of information resources and technology involves three primary improvements in the way government currently operates. First, investments must be identified, evaluated, and selected so expenditures are made on solutions that are feasible and employ mature, proven, and reliable technologies. Individual investments must be made so that they maximize the returns to the state's total technology asset portfolio.

Second, investments must be implemented and operated effectively and economically. These investments must adhere to the state's technical architecture and standards and be implemented in alignment with the state's project management and quality assurance guidelines. The degree to which new investments support the state's technical architecture and enterprise information resources management initiatives is essential.

Third, information technology assets must be employed in ways that benefit the business. The use of information technology to enable the reengineering of business processes, streamlining interagency communications for programs crossing organizational boundaries, and creating new service delivery methods are key considerations.

Source: State of Oregon Enterprise IRM Strategy (August 2002)

Enterprise Approach

The enterprise approach provides the greatest opportunity for state government, in collaboration with local government and business partners, to improve the efficiency and effectiveness of and restore the public's confidence in government.

Key Goals and Objectives

Key goals and objectives addressed in the Enterprise IRM strategy are: IT governance, architecture and standards development; efficiencies in the procurement and operation of the state's IT infrastructure; IT Asset Management and Portfolio Management; leveraging existing IT infrastructure and emerging internet technologies; IT security; disaster recovery/business continuity planning; information access and data sharing; human resource development; IT funding; and statewide information technology system privacy and policy-related compliance with the federal legislation known as the Health Insurance Portability and Accountability Act (HIPAA).

The State of Oregon Enterprise Information Resources Management Strategy can be found at:

http://irmd.das.state.or.us/prog_proj/itec/eirms/Enterprise%20IRM%20Strategy%20v1.pdf

Key Enterprise Initiatives with Potential Agency Impact

In support of these goals and objectives the Department of Administrative Services, in partnership with the CIO Council, has initiated several enterprise IT-related initiatives. Initiative descriptions are provided below.

▪ **Computing and Networking Infrastructure Consolidation**

The Computing and Networking Infrastructure Consolidation Initiative is a phased project to study and recommend possible consolidation of the state's computing (data center) and networking infrastructure. It is designed to assess the efficiency and effectiveness of current, decentralized data center and data network operations and consider whether consolidation and centralization of these operations would provide substantial benefits and cost savings to the state.

Work will be completed in two phases: Phase I – Planning; Phase II – Implementation. Phase I of the project will culminate in the development of a detailed business case, an implementation plan, and a statement of work for the completion of Phase II – Implementation work. Any consolidation implemented by the state will be based on a clearly defined business case with a return on investment within 24 to 36 months.

How it may change the way the agency is operating/receiving services today.

Based on industry experience, significant consolidation of agency computing and networking infrastructure components should improve operating efficiency, service, IT-related security, and lower costs of operations. The changes associated with consolidation are, typically, administrative and supervisory in nature as management of computing and networking infrastructure operations (i.e. the IT-related hardware, software, personnel, etc) is centralized and provided as a shared service to all state agencies.

▪ **E-Government Program: Statewide Content Management System**

The Legislature directed and funded DAS IRMD to establish an E-Government program to centrally host web content and to provide for a central portal for citizens, a secure portal for state employees, and a trusted environment for electronic commerce transactions.

The SecurePay system has been deployed and is in use by multiple state agencies and the portal infrastructure is in place. The E-Government program has also developed a central content management system. The migration of static web page content is currently in progress. Communications have been distributed to agencies on the project timeframes and expectations.

The E-Government program is committed to working with agencies to make content migration a success. The program will work with agencies to develop project plans, web content migration training, site design, and information architectures. These deliverables will assist agencies in maximizing the value of the Content Management System.

How it may change the way the agency is operating/receiving services today.

The E-Government program will provide to agencies a set of core infrastructure services that will enable consistent, cost-effective, and integrated approaches for the delivery of critical services to Oregon citizens.

The use of the Content Management System, in particular, will allow agencies to more effectively and efficiently manage web content (key agency information) from a business perspective, on a business-driven timetable. Web content ownership and the corresponding responsibility for content accuracy and timeliness will be more easily and more appropriately established within agency program areas as opposed to the agency information technology unit.

▪ **Cyber Security**

The state's computing and networking infrastructure today is not centrally managed nor has it kept up with contemporary means to meet an increasing challenge to maintain information security. As with other large computing and network environments, the state's systems are vulnerable to intentional intrusion (hacking), as well as viruses and worms. With ever-increasing dependency on automated systems to conduct the business of state government, the need to protect against disruption or damage to the state investment in technology and business operations is critical. The purpose of this enterprise initiative is to create a centrally managed, state government-wide Cyber Security program in order to:

- ❑ minimize increasing threats caused by unauthorized data access, both internally and externally;
- ❑ mitigate the risks and costs that result from improper security planning;
- ❑ prevent information and systems from being compromised;
- ❑ establish an enterprise-wide set of standards for information technology security to maximize the functionality, security and interoperability of the state's distributed information technology assets, including communications and encryption;
- ❑ regularly review existing security standards and practices in Oregon state government to determine that they meet enterprise-wide security and encryption requirements; and,
- ❑ comply with ORS and administrative rules including ORS 291.016, 291.018, 291.24, 291.034, 201.037.

The Cyber Security Program will implement the tools and processes to identify, quantify, and mitigate security vulnerability risks. Enterprise activities will include, but are not limited to: policy development and implementation; coordinated incident response; performance measurement and evaluation; oversight;

INFORMATION RESOURCES MANAGEMENT SUPPLEMENT

investigation and forensics; communications including education and awareness; patch management and verification; intelligence reporting; and vulnerability notification.

The successful implementation and management of the Cyber Security Program is essential to the ultimate success of the Computing and Networking Infrastructure Consolidation, E-government, and Business Continuity Planning initiatives.

How it may change the way the agency is operating/receiving services today.

Based on industry experience, centralized cyber security coordination and services should improve security efficiency generally and provide the knowledge necessary to make informed decisions on a state government-wide basis. Already successful agency information security services and operations are likely to continue on their current path in cooperation with the state's Cyber Security team. Additional efficiency will be provided through state government-wide collaboration and leveraged procurements. Agencies that are not as successful will have the information necessary to take appropriate, measured action to correct the situation. The state's Cyber Security team will provide consulting resources necessary for each agency to achieve essential information security performance thresholds.

▪ Business Continuity Planning

State government is very vulnerable to natural disasters, accidents, or purposeful acts of disruption that can interrupt operations and the provision of services that are critical to the citizens of Oregon, primarily because of a lack of planning for the maintenance or restoration of critical services on the part of state agencies.

Because of our vulnerability, it is essential that state government create business continuity plans (BCP) for both the business processes that are essential to our ability to provide critical state services and those processes that are, additionally, critical to continued agency operations.

BCP involves developing plans to get state and agency mission critical business functions and processes back into operation through planning and recovery for all critical resources, including employees, facilities, specialized equipment, information technology, and telecommunications. It also includes communicating with the public and acquiring replacement products or outside services.

Many agencies created plans for continuity of operations in reaction to the risks of Y2K. These plans were limited to the specific threats posed by Y2K, were of varying quality, and many were not thoroughly tested. And now, in 2003, they are likely all obsolete.

How it may change the way the agency is operating/receiving services today.

State government as a whole will need to invest resources to undertake BCP. Plans are underway to identify those business processes that are critical to the functioning of state government. Agencies which operate those functions will need to invest staff time to prepare business continuity plans for them. After that, agencies will need to prepare plans for other business processes that are critical to continued agency operation.

Agency Information Resources Management (IRM) Planning

The enterprise and agency business strategy sets forth a vision and a direction for the future. The enterprise and agency IRM Plans must consider information, and the people, processes and technologies that support it, as assets to be managed and leveraged to achieve those business strategies.

The purpose of IRM planning is to provide guidance as more detailed information technology tactical plans and initiatives are developed. The focus of IRM planning, at the agency level, is the agency's IT projects and infrastructure but must be developed with an awareness of enterprise IT projects and infrastructure, planned, underway, or in use. IRM planning has the following characteristics.

- Supports enterprise and agency vision, mission, goals and objectives
- Aligns IT budget with the business plan
- Identifies and tests innovative ways to use technology to serve customers and expand opportunities for public access
- Improves agency efficiency by effectively managing information and technology
- Promotes partnerships with other agencies, local/regional jurisdictions and the private sector to create mutually beneficial IRM communities
- Demonstrates compliance with state's technical architecture and standards through IT asset inventory and the creation of application portfolios
- Identifies IT and technical staff resources and training needs

The agency IRM Plan should include, but not be limited to, the following elements:

An Agency Profile that contains the following:

- Agency Name
- Agency Mission Statement
- Agency high-level organization chart
- Total # of employees
- Total # of branch/satellite office locations
- Name of IT section
- IT section organization chart
- Summary of IT programs and services
- Total # of IT employees within the IT organization and those deployed in other agency program areas
- Total # of agency staff supported
- Description of and total number of other users supported
- Summary of agency business processes and applications enabled by information technology
- Summary of priority IT initiatives for 2005-2007 biennium
- Summary of 2003-2005 information technology investment achievements
- Summary of how the Agency IRM plan aligns with/supports the Agency's strategic and business plans
- Summary of how the Agency IRM Plan aligns with/supports the Governor's Priorities and initiatives, the Enterprise Information Resources Management (EIRM) Strategy, the Oregon Statewide Plan for Geographic Information Management and other related statewide plans, initiatives, goals and objectives.

INFORMATION RESOURCES MANAGEMENT SUPPLEMENT

A current technology profile, that includes intended information system changes within the planning horizon, is typically created through the completion of an IT Asset Inventory and consists of the following types of information:

- Hardware, software, and operating systems at the mainframe, mid-range, server, and desktop level
- Local Area Network Topology

NOTE: As part of the agency IRM planning process, agencies should establish standard lifecycles for agency IT assets. Further, to help the state accomplish the Enterprise IRM Strategy's objective to have a standard desktop environment by July 2007, agencies that have developed a PC lifecycle replacement plan should submit a copy as part of its IRM planning document. Agencies that have not yet developed a PC lifecycle replacement plan should contact Sean McSpaden, Enterprise Planning and Policy at 503-378-5257 for assistance, sample PC Lifecycle Replacement plans, or information regarding statewide efforts relating to PC standards/lifecycle replacement/purchasing.

An Applications Portfolio typically consisting of the following:

- Application name, Agency Program owner, and business purpose
- Age, Date of last upgrade, Planned changes/enhancements in the future
- Language/Database platform
- Key user groups & FTE Support needed

An Organizational Capacity Assessment typically consisting of:

- Current staffing and skill set descriptions
- Barriers and strategies for retaining and recruiting quality staff
- Training needs of the organization

An IT-Related Contracts Portfolio typically consisting of:

- List contracts by type (e.g. Goods, trade services, personal services) that includes, vendor name, description of goods and/or services obtained through the contract, dollar amount (throughout the life of the contract), and contract term (effective and expiration dates).

An IT-related Projects/Initiatives Portfolio typically consisting of:

- List, program owner, sponsor name, description, cost, and status of all IT-related projects/initiatives started, underway, or completed in the 2003-2005 biennium.
- List, program owner, sponsor name (if assigned), description, and estimated cost (hardware, software, staff, contract services) of proposed IT-related projects/initiatives for 2005-2007 biennium.
- Description of how each proposed 2005-2007 project/initiative aligns with or supports the Governor's Priorities and initiatives, the Enterprise Information Resources Management Strategy, the Oregon Strategic Plan for Geographic Information Management, and other related statewide plans, initiatives, goals and objectives.
- Description of how each proposed 2005-2007 project/initiative is linked with/support agency strategic and business plans.

INFORMATION RESOURCES MANAGEMENT SUPPLEMENT

An IT-related Performance Measures and Benchmarks Section that consists of:

- A list of the key IT-related operational performance measures and benchmarks through which the agency intends to measure, document, and improve agency IT-related operational performance over time.
- A list of the key IT-related project/initiative performance measures through which the agency intends to evaluate the status of projects/initiatives during their implementation and to measure and document the actual performance (e.g. on-time, on-budget, attainment of estimated savings/benefits/ROI, etc.) of IT-related projects/initiatives at their conclusion.

As these profiles/portfolios are completed and the future information access and sharing needs of the agency and its partners are assessed, a future vision of the IT environment will begin to take shape. That vision, along with an exploration of information resource partnering opportunities across the enterprise (state, local, federal, or private sector), provide the foundation for the IRM Planning process.

IRM strategies, goals, and objectives are then created and put into action. IRM Plan effectiveness is, ultimately, measured by how well major IT investments support the enterprise and the agency in achieving desired results over time. With business strategy driving IRM Planning and IRM performance defined by business performance, business and IRM Planning are continuously connected from end to end.

Without this connection, information technology can be a solution in search of a problem and business goals may not take into account new IT capabilities. As planning processes mature over time, business planning and IT planning should merge. Any endeavor that seeks to improve the organization must take into account all the tools available and deliver an integrated solution. Even today, it is rare to find a business initiative that doesn't contain an IT component that must be coordinated with organizational, human resource, and procedural components. The successful transformation of the state government enterprise and the agency depends on the integration of these components with the business goal in mind.

Agencies are required to develop and submit an IRM Plan to the Information Resources Management Division, Enterprise Planning and Policy Section at the same time as its agency request budget to DAS Budget and Management.

For additional information, IRM Planning instructions, sample PC Lifecycle Replacement plans, or information regarding statewide efforts relating to PC standards/lifecycle replacement/purchasing, please contact Sean McSpaden, Enterprise Planning and Policy at 503-378-5257.