



FIRST ANNUAL  
PROGRESS REPORT  
TO  
GOVERNOR LINCOLN ALMOND  
AND  
THE RHODE ISLAND GENERAL ASSEMBLY  
JULY 1998

## **INFORMATION RESOURCES MANAGEMENT BOARD, Membership 1998**

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## Introduction

This document summarizes the prerequisites for management of information technology throughout the State of Rhode Island and progress to date toward establishing those prerequisites. Its scope comprises the entirety of the government's computing and communications systems.

The computers and networks at the core of the government's administration, as well as those of the various state government agencies, the state's telephones, fax machines, hard-copy mail, and publishing operations all must act in concert to effect optimal interaction among state government entities, other governments, vendors, contractors, businesses, and the public. Information technology management must therefore proceed coherently at the global statewide level, while incorporating the particular business needs of government's various functions. This document is intended to act as a guide to construction of the policy and the organizational paths that will engender that coherence as they have emerged from the first year of the Office of Library and Information Services and the Information Resources Management Board. Specifically, this document outlines:

- the mission of the Information Resources Management Board (IRMB) and, consequently, of the Information Technology Services unit (ITS) of the Office of Library and Information Services (OLIS).
- the IRMB's organizational approach to delivering information technology statewide.
- strategic goals for information technology development for Rhode Island State Government.
- a planning process for statewide information technology deployment.
- state-of-the-art of information technology in RI—the beginnings of a state inventory.
- progress to date and the next steps to be taken.

Here, then, is a summary of *what* the State of Rhode Island is doing. Strategic planning reports to be issued throughout the coming year (FY 1999) will detail *how* Rhode Island will accomplish its goals.

### ***The Vision***

*Access to all state services, programs, and information is provided to all Rhode Islanders at convenient locations, and in a way that meets their needs.*

***The Mission***

*Rhode Island state government provides opportunities for residents of the state, state and local government employees, and other interested entities to obtain timely and accurate information on subjects they need to support their businesses and their lives effectively. State government relies on up-to-date information technology to make information resources available to taxpayers and their families in user-friendly formats, and at times and locations that are convenient for them.*

***Policies***

*The IRMB has adopted a list of general policies that establish a baseline for further deliberations on the state's information resources and information technology management. Those policies appear as Appendix I.*

**ORGANIZATIONAL APPROACH**

To ensure that the IRMB and OLIS proceed as part of a community of state agencies, the IRMB has created a governance architecture that will promote interaction among agencies and among agencies and OLIS and the IRMB. The keystone of that architecture is the IRMB Working Group, a symposium of designees of 15 agency directors meeting monthly to discuss and distinguish agency and statewide information resources management needs and fold them into recommendations for the IRMB's planning process.

To pursue its mission, the IRMB must be able to plan, and OLIS must be able to build, the state's information technology resources from an overall perspective. It must put into place an infrastructure that will enable coherent cost-effective development and utilization of information technologies statewide. OLIS is working to effect that infrastructure through the creation of the Rhode Island State Government Information Network (RISGIN).

RISGIN is not simply a concatenation of wires, computers, and software; rather, it is a community of people throughout state government working together, sharing skills, techniques, policies, and practices to forward not only individual agency goals but those of state government as a whole. Achieving statewide cooperation and a global perspective is requiring a redefinition of the roles played by the OLIS, and the agencies.

OLIS, the executive arm of the IRMB, and RISGIN's administrator, is uniquely positioned to provide utility services, identify common needs among agencies, obtain funding beyond program-based budgets, and coordinate the implementation of information technology solutions globally.

With the knowledge derived from its oversight and planning processes, as RISGIN develops, OLIS will have the ability to analyze information technology needs and business directions, then act as facilitator, providing the leadership and coordination that will ensure that the network can:

- Assign and integrate levels of services, determining which needs can be best met at the state, agency, or division level, as well as which can be met in-house and which through the use of consultants; and provide the baseline utility services –

- 1. telecommunications connectivity,*
- 2. technical support services,*
- 3. application development, and*
- 4. computing facilities*

--necessary to operate the network effectively,

- Train users, including organizing the user groups, list serves, mailing lists, and other communication opportunities that will bring together managers and users statewide.
- Educate managers, users, and the public in the capabilities of and opportunities provided by the network.
- Realize economies of scale in purchasing, maximizing utilization of facilities, and sharing personnel and skills.
- Negotiate as a whole with vendors, consultants, suppliers, funding sources, and each other.
- Facilitate central and agencies' procurement of information technology products and services to maximize.
- Research, develop and plan the future of state government's information technology infrastructure.

This approach embraces an information technology staff at OLIS equipped and trained to operate at the cutting edge of technological development. It requires a broad spectrum of information technology, communications, and project management skills among the OLIS staff. That staff will, moreover, need a knowledgeable liaison at each agency with the authority to represent the agency's business needs to the network and the network's needs to the agency. Larger, more complex agencies will require their own information technology staff to implement technological support for the agency's unique needs in the context of statewide operations. That staff, through participation in RISGIN, will, in turn, add to the sum total of skills available for network-wide R&D and planning.

## BACKGROUND

In 1996, Governor Almond had the foresight to propose, and the Legislature had the foresight to enact, Chapter 8, Title 29, of the *Rhode Island General Laws*, creating Rhode Island's Information Resources Management Board. Chapter 8 asserts that:

***"It is the policy of the State of Rhode Island to coordinate and direct the use of information resources and technologies to provide the most cost-effective and useful development, management, exchange, and retrieval of information by its elected officials and citizens."***

It then goes on to enumerate the purposes of the IRMB:

- *"To provide leadership, policy direction, strategic planning and coordination of information resources management . . ."*
- *To develop and implement plans for the effective and efficient use of information, resources, and technology.*
- *To define an information resources management architecture.*
- *To coordinate training and education regarding strategic information systems planning and management.*
- *To identify and assess opportunities for multiagency development and use of information resources.*
- *To establish and maintain information dissemination services/clearinghouse for state information resources management.*
- *To establish and maintain information resources R&D capacity.*
- *To serve as a catalyst for information technology resources in the public sector.*
- *To recommend procedures and legislation regarding public access and privacy of state information resources.*

The same law establishes the position of Chief Information Officer in the Department of Administration and creates the Office of Library and Information Services under her aegis.

Upon its establishment, the CIO began an ambitious program of forging a new unit—OLIS--from the previously independent Department of State Library Services and two entities within the Department of Administration—the Division of Planning and the Office of Information Processing. The Information Technology Services (ITS, formerly OIP) unit itself then began an ambitious program. It completed a study of the state's core administrative computing systems by the Deloitte and Touche consulting group, and proceeded with the work of incorporating all of state government into a coherent vision of the future of information technology in Rhode Island by:

- *functionally reorganizing the OIP into the ITS*
- *creating procurement instruments that facilitate purchase of information technology and services, and use the buying power of the entire government to keep costs down*
- *establishing a central e-mail and Internet access service*
- *designing and building a statewide telecommunications network*

- *upgrading the training, skills, and technologies available to (and consequently from) ITS staff*
- *tackling the noisesome Year 2000 problem*
- *planning a new standards based integrated statewide Financial Management Information System (FMIS)*
- *planning to plan statewide information technology development*

The FY 1998 Appropriations Act included two amendments to the *Rhode Island General Laws* (35-3-4 and 35-3-26), requiring:

- 1. that agencies submit a supplemental presentation of planned expenditures for information resources and technology technologies, and*
- 2. that all expenditures for information resources and information technologies be in conformance with a plan approved by the legislature.*

These provisions will secure much of the data the CIO and the IRMB will need to pursue statewide Information Technology planning.

The IRMB met first on June 25, 1997, for an organizational meeting and its first discussions about developing a long-range information resources management plan. Subsequently, the IRMB has adopted a formal statement of vision, a mission statement, an organizational approach to the planning and providing service, and broad goals for action.

## **STRATEGIC GOALS:**

### ***Goal 1. Develop and implement a coherent statewide information technology infrastructure based upon a global view of state government's information utilization and communication needs.***

OLIS is planning and implementing an infrastructure, the Rhode Island State Government Information Network (RISGIN), that enables all state agencies to pursue their information technology needs in a way that ensures interoperability, economies of scale, effective information sharing, and communication. The infrastructure is a utility extended to all state and local government agencies. It allows agencies to take baseline service for granted, turning their information technology development efforts to those particular needs of their own business processes. RISGIN also provides a foundation upon which OLIS will build equal access to information, government services, and education for all state residents, and to publish information about Rhode Island to the world at large. Action items for this goal include:

- *Create a statewide Wide Area Network that connects all state and local government agencies with voice and data transmission, and the capability of carrying video, computer applications, and is expandable to accommodate the next generation of telecommunication needs.*

- *Implement integrated messaging, Intranet, and Internet access with appropriate security provisions so that all state and local government employees who have a business need have a seamless framework for accessing or communicating information.*
- *Promulgate a framework for sharing information internally and externally to state government, including appropriate security measures.*
- *Provide local information access points conveniently located in each community across the state to encourage equity of access for all Rhode Islanders.*

## **Progress to Date**

### **Functional reorganization of the OIP into the ITS**

OIP was characterized by the isolation of staff groups by task area. To promote communication and skill-sharing among staff in different groups and create a group sense of the future and an ethos of customer and function orientation, ITS has been aggressively reorganizing around the following principles:

- *Information Technology is a coherent unit of the Office of Library and Information Technology.*
- *Communications throughout the Information Technology Unit will be open; management will encourage participation in planning and decision-making.*
- *Current operations and functions must continue with characteristic efficiency.*
- *Information technology is convergent; divisions within the information Technology unit must derive from the unit's goals and be conceived in a way that encourages cross training and cooperation.*
- *The work of the unit will proceed through teams, focused on ongoing tasks and projects. Each team will have a mandate to include planning, and the consideration of tools training and staffing needs among its activities.*

The first team to be created anew was the *Wide Area Network* team, which has been responsible for reengineering and planning of the statewide telecommunications network, Internet access and electronic mail. The WAN team is now working closely with the Telecommunications Director toward the convergence of voice and data telecommunications. The following teams are also currently operating:

- *Management – outreach to agencies*
- *Application Development Managers – including mainframe and distributed systems*
- *Local Area Network/end user support*
- *Training and staff development*

These teams meet to discuss issues beyond their ongoing tasks providing venues for emergence of OLIS- and ITS-wide needs—especially for training and equipment upgrades—planning, and further reorganization. Teams envisioned in the future will include:

- *Operations, bringing together mainframe, open systems, and mail center operation*
- *Database Administration*

- *Research & Development*
- *World Wide Web*

### **Establishment of a central e-mail and Internet access service**

Currently over 5,000 state employees have electronic mail accounts with ITS, either on the Webster UNIX SMTP server, or through Groupwise servers and gateways. There is still a variety of e-mail software in operation, at least one Microsoft Exchange server, and individuals with accounts at a variety of third party ISPs. In the coming year, ITS plans to produce a comprehensive directory of e-mail addresses and continue to build a standard approach to e-mail.

### **Design and implementation of a statewide telecommunications network**

All state agencies must connect to the Computer Center for access to accounting and personnel systems. For the most part, that has meant point-to-point or dial-up connectivity using a variety of protocols. ITS has chosen to focus initially on the construction of a statewide TCI/IP based Frame Relay (FR) network to replace those connections with higher bandwidth, lower cost, and greater functionality.

With the cooperation of Bell Atlantic, beginning in the fall of 1997, only ITS has been authorized to place state government orders for Bell Atlantic data lines. The network has further standardized on Cisco routers. During the past year, three engineering staff were trained in Cisco programming; 16 point-to-point connections to the Computer Center were converted to FR, and an addition 11 FR connections were made. Of the remaining 100 point-to-point connections, 80 will be converted in the coming year, setting the stage for enhancing the network with high-speed transport via SONET. Nearly 90 state office locations are interconnected through the statewide FR network.

### **Upgrading the training, skills and technologies available to (and consequently from) ITS staff**

OLIS programming staff are now equipped with state-of-the-art desktop equipment, and have received training in Windows and MS Office products. Further training is proceeding with McCabe Y2K and program management tools and MicroFocus COBOL productivity tools. Technical support staff will be similarly equipped shortly after the start of the 1999 fiscal year. A new training and staff development team will spearhead future training plans.

### **Goal 2. Direct the State's response to the Year 2000 problem**

This is a short-term, but extremely critical goal. OLIS' Year 2000 coordinator is laboring to ensure that the state's operations will continue after December 31, 1999. Most computer entities—programs, chips, applications, systems—were constructed with the assumption that all dates would be within the twentieth century; hence, need be represented with but two digits. When the calendar turns to the Year 2000, many of these computer entities will be unable to cope. The OLIS Year 2000 coordinator has worked with a consultant to assess the state's

vulnerability to the Year 2000 problem. With the technical assistance of ITS staff and a team of technical people from agencies throughout state government, the coordinator has gone on to target the following areas:

- *Core systems compliance*
- *Grants to agencies for Year 2000 projects to remedy specific problems*
- *Distribution of recommendations and software to empower network administrators and end users to cope with potential pc Year 2000 problems*
- *Embedded systems testing and remedies*

## **Progress to Date**

The state's Y2K Coordinator has made extensive use of the WWW for dissemination of information about the Year 2000 problem and the State's reaction to it. That information is available at <http://lori.state.ri.us/y2k>. The response to the Y2K has proceeded along the following principles:

- *Cost control*
- *Value added approach*
- *Standardization*
- *Key personnel retention*
- *Appropriate testing plans*
- *Risk control*
- *Involvement of business managers*
- *Appropriate testing*
- *Contingency plans*
- *Project management*
- *Authority*
- *Awareness*
- *Timeliness*

The primary Y2K accomplishments to date have been:

- *Executive Order, January 1997*
- *Y2K Coordinator appointed*
- *Department Inventory and assessments*
- *Major System analysis conducted*
- *Training and awareness*
- *Hardware and software replacement*
- *Grants to agencies*
- *Infrastructure planning begun*
- *Network analysis*
- *Contingency planning begun*

### ***Goal 3. Convene cross-agency issue groups to discover, and consider business and technology issues common to multiple state entities***

Many business and technology issues are common to a number of agencies. To address these issues in the most cost-effective way requires that the stakeholders involved in them work together across organizational boundaries to seek best solutions. ITS acts as the conveyer of those stakeholder groups, providing proactive leadership in the determination of common business and technology needs and identifying creative multi-agency solutions.

To accomplish that, ITS and the IRMB are increasing opportunities for interaction among agency and ITS IT staff. Through its employees in the field, review of IT related purchase requests, and management of the state MPA for system analysis, programming and tech support, ITS already obtains a significant overview of agency needs.

Regular interest group meetings add to that perspective. ITS is currently adding listservs to the array of venues for convening discussion on a variety of issues and at a variety of levels. The following groups have been formally established:

- *IRMB working group*
- *State agency MIS directors,*
- *RISGIN Wide Area Network users/administrators,*
- *Novell Local Area Network users/administrators,*

From and through these venues, ITS will:

- *Promote IT solutions to meet common business needs. ITS will promote the use of a single IT solution to meet common business application requirements across multiple agencies whenever possible. This will reduce the time, energy, and cost to implement and support applications. Example: License2000*
- *Adopt standard approaches to new technologies. ITS will identify opportunities for agencies to work cooperatively in implementing strategic new technologies, coordinating formal evaluations of these new technologies, and defining standards and guidelines for statewide implementation. Example: Oracle Database*

### **Progress to Date**

The IRMB working group meets monthly to address interagency concerns. To date, these meetings have included information concerning the IRMB itself and its roles and responsibilities, discussion of the proposed new statewide Financial Management Information System, and the state information technology plans required as part of the annual budget requests.

In addition to the Working Group, the IRMB has begun to solicit input from a growing number of issue-oriented user groups and task forces. To date, agency MIS directors have had three regular meetings. A statewide telecommunications network user group has been

meeting regularly since November 1997 to share information and has made considerable progress toward recommending network security policy to the IRMB. A year 2000 coordinators group representing most state agencies has been critical to progress toward coping with the Year 2000 problem. The FMIS evaluation committee convened to select software and consultants for implementation of the new statewide FMIS, and will transform into an implementation committee as the FMIS pilot gets underway this summer.

OLIS and the IRMB intend to encourage the formation of such task forces and user groups as issues and opportunities arise. A long dormant state webmakers (WWW) group has scheduled a summer meeting.

#### ***Goal 4. Seek economies of scale through consolidation of technologies and services***

Numerous agency-level UNIX and NT applications are currently housed on small stand-alone servers that support only a few, or in many cases only one application. Consolidating these at the state Data Center has the potential of reducing costs by sharing environmental and operations needs, including technical support and database administration. At the same time, consolidation will provide UNIX applications with the high-level security, reliability, and availability that agencies have come to expect from mainframe applications.

### **Progress to Date**

#### **Financial Management Information System**

The past year's planning and evaluation of a new Financial Management Information System included:

- *Design and preparation of a Request for Proposals for a 3-agency pilot project--DOA, DOC, and MHRH--followed by statewide rollout*
- *Evaluation of three proposals from ORACLE, MUNIS, Coopers & Lybrand/Peoplesoft*
- *Award of contract to ORACLE*
- *Pilot to begin early FY 1999*

#### **Creation of procurement instruments that facilitate purchase of information technology and services and use the buying power of the entire government to keep costs down**

With the cooperation of the Division of Purchases, the following procurement instruments are in place:

- *Master Price Agreement (MPA) for computer systems analysis, programming and technical support*
- *MPAs for hardware purchase through—*
  - *Dell*

- Gateway
- Compaq
  
- *MPA for software purchase through Software Spectrum, including statewide licensing agreements with—*
  - Novell
  - Microsoft
  - Lotus (IBM)
  - Symantek
  
- *Statewide licensing of ORACLE DBMS products*

Work is currently underway to create similar instruments for purchase of:

- *Network hardware (routers, hubs, switches, etc.)*
- *End-user hardware maintenance*
- *World Wide Web site services*
- *Cabling/wiring*

**ITS has begun the following activities:**

- *Upgrading the State Data Center through consolidation of operating systems on the mainframe and the addition of a production-level UNIX server and additional DASD, sharable between operating systems*
- *Working with agencies to identify opportunities for server consolidation at the Data Center when cost effective. The Registry of Motor Vehicles and the Department of Administration's new FMIS are the initial candidates for consolidation. Next for consideration will be those servers ITS already operates on behalf of agencies at their sites or at the Powers Building.*
- *Preparing a plan for Data Center disaster recovery*
- *Aggregating demand for end-user support services, including help desk and technical support, and filling that demand with ITS staff or contracted services as appropriate.*
- *Seeking opportunities to further aggregate demand for IT hardware, software, and services through the purchasing process*

**Goal 5. Formalize evaluation of the business impact of information technology decisions statewide**

Successful planning, a prerequisite to successful implementation, must be grounded in measurable definitions of success. The value of IT, hence its success, must be measured by the impact it has on the business functions it supports. Both to monitor and to ensure success, it is essential that business managers and staff be involved in IT development projects from planning through implementation. ITS works with agencies to ensure that this approach is taken in all IT projects and leads to measurable success. ITS will:

- *Develop in-house capacity and standard methodologies for project planning, management, and evaluation to ensure that project success can be measured in business deliverables and benefits, and all stakeholders know their roles in contributing to the success of the project.*

## **Progress to Date**

The IRMB's first year was spent putting into place major elements of a planning process, including:

- *Supplemental presentations of agency IT budgets, providing a picture of baseline needs for planning data*
- *Working Group*
- *Issue Groups*
- *ITS structure for outreach*

## **APPENDIX I: POLICIES**

Approved by the Information Resources Management Board on December 18, 1997)

### ***Public Information Issues***

#### *Public access*

State government must provide reasonable access to all information, which is not protected under privacy laws. The public has a right-of-access to public records subject to certain enumerated exceptions and, the public agency has a duty to provide such access. Legally determined restrictions are the only grounds for denying public access to, inspection of, or copying of public records.

#### *Pricing strategies*

State agencies should establish pricing strategies for creating electronic access to or copying government information based upon actual costs and not upon the need to generate revenue for public agencies. Special pricing provisions might be utilized for commercial use of information developed at public expense.

### ***Management Issues***

#### *Strategic asset/Re-engineering/Business processes*

State agencies should manage all information resources as strategic assets which reflect an organization's mission. Top management is responsible for linking mission and functions to information systems coherently.

The linkage between information systems and organizational mission and functions is accomplished through an assessment called an enterprise analysis in which an agency reexamines what it does and matches information requirements with outcome-based planning. Simple automation of manual processes or replacement of old applications without re-engineering, fundamental restructuring, or streamlining shall be avoided.

#### *Technology refreshment*

State agencies will refresh their technology according to Department of Administration guidelines.

#### *Cost-effectiveness*

Information technology decisions must be cost-effective, and have stated objectives, including a cost-benefit review for implementing new systems. A cost-benefit review should explore alternative purchasing arrangements, which factor not only the initial expenditures but also the total cost of ownership.

#### *Employee-training*

State agencies should develop employee skills in the use of current technology to analyze data and develop options, regularly search for innovative methods to use information in decisionmaking and redefine programs.

*Legal authenticity/Data disposal*

State agencies should manage all information in accordance with any applicable public records laws relating to the authenticity and legal acceptance of records. In addition, state agencies should take steps to ensure that all information is scheduled for retention and disposal.

**Data Sharing***Information Sharing/Organizing data to facilitate access/Avoiding duplication of effort*

State government data is a resource of the state to be managed and shared across organizational lines.

State agencies should make every effort to collect information once and share it as often as needed among the agencies and with the public. This practice eliminates unnecessary duplication and maximizes the networked value of information.

State agencies should make the widest possible use of information within the state government by ensuring that it is organized to facilitate access by all those who require it, subject to legal and policy constraints.

State agencies should maintain a current, comprehensive, and structured identification or classification system or systems which provide an effective means for organizing and locating these resources and, in composite form, comprise a corporate inventory for managing the agency's information holdings.

**Standard Setting**

State information resources and tools must be managed using appropriate standards so that the necessary linkages among the state agencies and between state and local government are supported.

State agencies shall use industry standards with preference for nonproprietary implementations.

**Data Integrity***Privacy/Security/Disaster Recovery/Data Integrity*

Steps must be taken to ensure and protect the quality, integrity, privacy, and security of government information and service, and provide appropriate preservation and archiving of government information to ensure continued usability and availability.