Information Technology Strategy and Benefits
Fiscal Year 2005

STRATEGIC MANAGEMENT OF INFORMATION RESOURCES

The Railroad Retirement Board is actively pursuing further automation and modernization of its various claims processing systems. Automation initiatives in recent years have significantly improved operations and allowed the agency to reduce staffing in key areas. Ongoing and planned projects will further increase and enhance the efficiency and effectiveness of our benefit payments and program administration. Key initiatives can be grouped into two major categories, as described below.

Application Design Services – Investments in the initiatives in this category focus on automation projects that are critical to our long-range strategy to promote better customer service through automation, while lowering the costs and increasing the efficiency of our operations. The specific investments in this category in fiscal year 2005 include:

- *E-Government ($200,000)*
  This represents the amount required to provide electronic services to the public as mandated by the Government Paperwork Elimination Act of 1998 and other Federal directives as well as the RRB's objective of providing our customers with more flexible service delivery options.
- *IT task orders ($225,000)*
  This non-capital item represents funding to implement the President's goals for increasing private-sector competition in commercial-type activities. Contractor resources would be used on a task-order basis to obtain competitive assistance services in application development for a variety of systems needing updating or enhancement to meet the goals of the "one-and-done" initiative.
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Technology Infrastructure Services – These investments are required to establish a firm foundation for the planned technology advances and to maintain our operational readiness. The specific investments in this category in fiscal year 2005 include:

- *Mainframe ($175,000)*
  We plan to replace the mainframe processor in fiscal year 2004 with flexible enterprise server capabilities and greater capacity than the current system. This amount represents an annual lease payment.
- *System development tools ($100,000)*
  This amount provides for software licenses needed to retool the system development staff, to enable them to build new systems and modify existing legacy systems to meet the goals of the RRB's newly established information technology architecture. Such tools will include the resources needed to continue to develop our Microsoft.NET, SQL, and DB2 environments.

- *Network/Server Operations ($250,000)*
  This amount represents funding to support the agency's wide area network operations. It includes funding to cover mandatory replacement and/or upgrades of servers, network operating software licenses, routers, and switches. It also includes funds to begin a proactive replacement of a portion of our network servers and software with more up-to-date models or versions. We plan a 3-year replacement cycle, in which we would replace approximately one third of the servers each year.
- *Standard Workstation Infrastructure ($200,000)*
  This amount includes funds to support the agency's desktop computing environment, including personal computers and printers, personal computing software suites and other software licenses needed at individual workstations.
- *Information Security ($150,000)*
  The RRB plans to provide specific role-based training to employees having responsibilities for security of agency information systems. In fiscal year 2004, the initial development and implementation of an intrusion detection system and procedures for handling computer security incidents began. In the succeeding years, we plan to expand this system and implement new procedures as necessary to provide enterprise-wide support. Ongoing periodic assessments and evaluations of IT systems and their associated security plans are required to ensure compliance with the Federal Information Security Management Act. In fiscal year 2005, we shall acquire contractual support to develop a template of the security evaluation methodology using a selected major application system. That template will then be applied to all remaining systems scheduled for security assessments.
- *Enterprise Architecture ($25,000)*
  This amount represents a continuation of contractual support for the ongoing refinement of the agency's enterprise architecture, which was initially developed during fiscal year 2001.

Detailed information on the RRB's automation initiatives for fiscal year 2005 follows.

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Application Design Services

Capital Element: **E-Government**

Fiscal Year 2005 Cost: **$200,000**

Agency Strategy and Benefits:

Initiatives in this category are required to provide electronic services to the public, as mandated by the Government Paperwork Elimination Act of 1998 and other Federal directives. They are also required to achieve our strategic objective of providing our customers with more flexible service delivery options. We will be strengthening our agency's Website by expanding it to provide interactive, individual-specific, electronic services for our customers -- giving them the option of Internet self-service in addition to more traditional means of conducting their business transactions. We have already begun by developing a preliminary array of Internet initiatives offered through our Website. These include a means of making on-line requests for various services, including service and compensation histories, replacement Medicare cards, annuity rate verification letters, duplicate tax statements, and a district office finder service.

During fiscal year 2003, we conducted a pilot of our employer reporting system, which involves a strategic shift from paper forms and reports to Internet-based reporting by railroad employers. This system was made available to participating employers in early fiscal year 2003 for beta testing. Based upon the feedback received, we are enhancing and expanding this system to a larger array of employer reporting instruments, together with a nationwide rollout of the service.

During fiscal year 2004, we will expand the Employer Reporting System, which was rolled out nationwide in December 2003. It will expand services to railroad employers by providing online completion or transmission of additional employer paper forms, providing an acknowledgement of receipt, filing status information, complete and timely information on processing results, testing capabilities, and additional customer support. We will also provide the capability for railroad employees to file unemployment applications via the Internet.

During fiscal year 2005, we are planning to implement projects for additional on-line Internet transactions. These include claims for unemployment and sickness benefits. We also plan to begin development of interactive applications involving on-line entry of direct deposit and change of address information.

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Application Design Services

Capital Element: **IT Task Orders**

Fiscal Year 2005 Cost: **$225,000**

Agency Strategy and Benefits:

This non-capital item represents funding to implement the President's goals for increasing private-sector competition in commercial-type activities. Contractor resources would be used for staff augmentation on network engineering and application development projects.

It is anticipated that task orders in fiscal year 2005 would be used to accelerate the development of e-government initiatives as well as for assistance in migrating the agency's near-exclusive reliance on a single non-relational database management system product to multiple relational database management system products to ensure the long-term viability of the agency's development environment, and to maximize the utilization of commercially available off-the-shelf software products.

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Technology Infrastructure Services

Capital Element: **Mainframe**

Fiscal Year 2005 Cost: **$175,000**

Agency Strategy and Benefits:

In early fiscal year 1999, the RRB replaced its mainframe processor, an IBM 3090-400J acquired in 1991, with a new processor, an IBM S/390 Multiprise 2003 2C5. The specific benefits of this replacement included conversion to CMOS (Complimentary Metal-Oxide Semiconductor) technology, which does not require specialized water-cooling or air conditioning as the previous technology did. In general, CMOS processors require less space, lower energy costs, and lower maintenance costs. Space savings have been used to help consolidate other computer equipment (such as LAN servers) from other floors in the headquarters building in order to facilitate coordination and more standardized administration.

We procured the replacement processor through a 3-year operating lease, with an optional buy-out in the fourth year. During fiscal year 2001, the RRB decided to accelerate the termination of the lease and to buy out the equipment at that time, rather than waiting until fiscal year 2002.

After replacing the mainframe processor, we also replaced the operating system, IBM MVS/ESA, also acquired in 1991, with OS/390. The mainframe operating system supports our nationwide delivery of services as well as our suite of mainframe legacy application programs and databases.

Our current plans are to replace the mainframe in fiscal year 2004 with flexible enterprise server capabilities and greater capacity than the current system. This will support the agency's plans for increasingly automated operations and new e-government functions. Anticipated benefits include reduced energy requirements, faster performance, growth options for increased capacity, and an ongoing ability to install new releases of operating system software.

Requested funding is for the 2nd year of a 3-year lease arrangement.

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Technology Infrastructure Services

Capital Element: **System Development Tools**

Fiscal Year 2005 Cost: **$100,000**

Agency Strategy and Benefits:

This capital item would be used to expand our capabilities in the systems development area. The enterprise architecture development has identified several initiatives that will require advanced capabilities of our systems developers provided by new tools such as data warehousing, XML, modeling and prototyping. These initiatives will lead to streamlined system development and more efficient systems and databases to better serve our customers.

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Technology Infrastructure Services

Capital Element: **Network/Server Operations**

Fiscal Year 2005 Cost: **$250,000**

Agency Strategy and Benefits:

This capital item includes funds to support the agency's centralized wide-area network operations.

A shared, intelligent fiber optic backbone for network operations in the headquarters building facilitates the physical movement of microcomputer workstations and provides a secure, reliable operating environment. Referred to as the Virtual Local Area Network (VLAN), this backbone allows for flexible communications between the various servers throughout headquarters and the field offices.

The RRB, with contractor assistance, has recently undergone an upgrade of its overall network infrastructure with the objective of ensuring a stable and robust network infrastructure to support the agency's program needs. This upgrade included converting to Microsoft Windows Advanced Server Active Directory Service, eliminating the remaining Novell servers, upgrading the agency's email system to Exchange 2000, developing an SQL 2000 database environment for development, testing and production, introducing additional network management and monitoring capabilities, and introducing new firewall technology.

In fiscal year 2005, funding this item will provide for the continued upgrading of the network and replacement of aging servers and other network components, such as routers, switches and their attendant software to ensure reliable and secure communications on a day-to-day basis.

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Technology Infrastructure Services

Capital Element: **Standard Workstation Infrastructure**

Fiscal Year 2005 Cost: **$200,000**

Agency Strategy and Benefits:

This capital element provides the investment needed to establish and maintain a common framework to support agency-wide operations. It reflects the RRB's strategic intention to maintain standardized equipment profiles based on job functions and business needs. To support our strategy, we have defined specific user profiles for various types of microcomputer workstations, depending on the work requirements of the user. This approach allows for more effective and efficient procurement and controls over desktop equipment.

The agency has established a standard replacement cycle for its desktop computing equipment (hardware and software) to ensure that RRB staff are adequately equipped to function effectively at their workstations. Failure to continue with the planned replacement cycle can lead to increased risks of downtime, loss of productivity, an inability to use current versions of software as required, and an inability to serve the customers in a timely manner.

This capital investment represents the replacement of less than one-quarter of the agency's desktop and laptop computers, along with upgraded software. It also includes the replacement of some peripheral support equipment, such as printers.

Information Technology Strategy and Benefits
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Technology Infrastructure Services

Capital Element: **Information Security**

Fiscal Year 2005 Cost: **$150,000**

Agency Strategy and Benefits:

The key to the RRB's philosophy of information security is the concept of "risk management," as opposed to "risk avoidance." RRB accepts that complete avoidance of risk is not cost-effective. Instead, information security risks are assessed, understood and mitigated to the point that residual risks are considered acceptable by management. Implicit to this concept is a "tailored" approach to information protection, in which information and functions of differing criticality are protected at different levels.

Ultimately, management makes an informed determination of acceptable risk and appropriate protection. To support this informed determination, RRB's Chief Information Officer has established the following agency-wide goals:

1. RRB and contractor employees will understand IT security responsibilities and demonstrate the skills needed to carry them out.
2. System and application vulnerabilities will be kept at a level where operations are not jeopardized.
3. RRB will be alert to intrusion attempts and takes effective action to thwart them.
4. RRB will utilize an effective infrastructure for authentication, access control and encryption.
5. RRB will maintain effective policies and guidance for IT security, based on law, regulation and best practices.

This non-capital element provides for funding a variety of information security-related measures, including:

- Independent evaluations of system security for major applications.
- Specific role-based training for employees having responsibility for security of agency information systems.
- Independent reviews of the system administrator functions throughout the agency.
- Expansion of the intrusion detection system and procedures to provide IT enterprise-wide support in the detection and handling of security incidents.
- Development of a template of the security evaluation methodology.

Information Technology Strategy and Benefits
Fiscal Year 2005

Technology Infrastructure Services

Capital Element: **Enterprise Architecture**

Fiscal Year 2005 Cost: **$25,000**

Agency Strategy and Benefits:

The key to the agency's success in developing and evolving an enterprise architecture that responds to the business needs is the consistent and active participation of all RRB components in defining, instituting and supporting the designated standards, principles, patterns and initiatives. Through nearly a year of collaborative meetings, the RRB Target Architecture was identified. The target architecture outlines the future direction for various components of the organization that are imperative if we are to successfully meet and adjust to tomorrow's business and technical challenges.

Through extensive collaboration with decision-makers throughout the RRB, research into industry best practices and adherence to the RRB's objectives and architectural principles, the RRB has documented 10 initiatives. These initiatives are identified in the agency's Gap Analysis Results report. They will provide guidance in business decision making and foster the infrastructure, training and skills needed by the IT staff to rapidly and successfully respond to the needs of the agency and its customers.

In fiscal year 2002, an Enterprise Architecture Strategic Plan was developed, highlighting priority elements of specific initiatives and creating a road-map for the next 7-year period, detailing concrete activities, their prerequisites and interdependencies that the agency must begin to undertake if we are to ensure that the Federal IT architecture direction and the agency's business evolution are aligned with and supportable by our IT resources.

In fiscal year 2003, the Enterprise Architecture Capital Asset Plan was developed. This plan identifies major acquisition areas that will contribute significantly to the achievement of the RRB's Target Architecture in order to meet the agency's performance goals and the President's Management Agenda.

This non-capital item will provide funding for contractual assistance with the maintenance and evolution of the architecture and its required reference models. The OMB required models include the Performance Reference Model, the Business Reference Model, the Service Component Reference Model, the Data Reference Model and the Technical Reference Model. It will also be used for training, software acquisition and maintenance, and support for architecture related venues such as data modeling, capital planning, project management, and quality assurance and control.