

## **Information Technology Strategy and Benefits Fiscal Year 2012**

The Railroad Retirement Board actively pursues automation and modernization of its various business processes in accordance with the principles identified in the agency's Strategic Plan, Strategic Information Resources Management Plan and Enterprise Architecture. Ongoing and planned projects will further increase and enhance the efficiency and effectiveness of our benefit payments and program administration. Automation initiatives in recent years have also significantly improved operations and allowed the agency to reduce staffing in certain areas.

Key capital initiatives for fiscal year 2012 are described below. Additional information concerning each capital element is provided on pages 72 through 78.

***Application Development Services*** - These investments represent innovation technology initiatives to automate manual work, modernize existing systems and improve operations which, in turn, generate long-term cost savings.

- *E-Government* (\$200,000)  
In fiscal year 2012, we will use contractor services to supplement agency resources in continuing the multi-year, multi-stage development of the Employer Reporting System (ERS). The focus in 2012 will be on delivering six new ERS reporting services.
  
- *System Modernization* (\$500,000)
  - To ensure that the recently optimized master database remains platform independent and to develop stored procedures to be used by reengineered mainframe programs that access the master database, we will contract for the services of an experienced DB2 database administrator to supplement agency resources and provide for the transfer of technical knowledge. (\$200,000)
  
  - In addition to modernizing the agency's mainframe-based computer programs, we are also modernizing several LAN-based systems which are programmed in an outdated, commercially unsupported database management system and use old screen scraping technologies. We will use funds for contractor services to supplement agency programmer/developer staff in reengineering the applications to the agency's LAN enterprise program platform, Microsoft .Net. (\$300,000)

## **Information Technology Strategy and Benefits Fiscal Year 2012**

**Cyber Security** – In a changing risk environment, a comprehensive security program requires continuous management to control the risks that threaten the agency’s critical assets. Complementary use of both technology and industry expertise can effectively reduce those risks to an acceptable level.

- *Risk Management and Privacy* (\$254,000)  
For fiscal year 2012, we plan to acquire the following security control and incident response systems to ensure the agency continues to meet the security requirements that are set forth in the Federal Information Security Management Act (FISMA) of 2002:
  - A new intrusion detection system,
  - A security information and event management tool,
  - Malware computer forensic software,
  - Automated web security testing software,
  - A new web proxy server, and
  - A new forensic recovery of evidence device.

**IT Infrastructure** - Information technology infrastructure investments are required to establish a firm foundation for the technology advances we have planned in accordance with the agency’s target enterprise architecture and to maintain our operational readiness. The specific investments in fiscal year 2012 include:

- *Network Operations* (\$14,000)  
This item supports the agency’s centralized wide-area network operation. For fiscal year 2012, we plan to expand the number of Microsoft SQL licenses by six. The additional licenses are needed as part of an overall redesign of our network applications and the databases that support the applications in the agency’s virtual server environment which is the focus of the agency’s data center consolidation effort.
- *Infrastructure Replacement* (\$392,000)  
This item provides funding for the continued upgrading and scheduled replacement of the agency’s IT infrastructure equipment and related software. The upgrades and replacements follow the RRB’s *IT Equipment Replacement Policy* for modernizing and securing the agency’s computer operations. We are targeting the following categories of equipment for replacement in fiscal year 2012:
  - Routers/switches,
  - Imaging system scanners, and
  - Application-specific, stand-alone servers.

**Information Technology Strategy and Benefits**  
**Fiscal Year 2012**

- *Continuity of Operations Improvements* (\$400,000)  
For fiscal year 2012, this initiative will provide for the equipment needed to securely duplicate and store enterprise data at a site outside the Chicagoland area. The additional data backup location will ensure that the data needed to restore agency benefit payment operations is available in the event that a natural or man-made disaster prevents the use of backup data stored in the Chicagoland area.
  
- *Emergency Business System/Application Restoration Services* (\$50,000)  
This non-capital element allows the agency to quickly and efficiently purchase IT services, hardware and software for emergency needs. The funds will be used for expert IT professional services as necessary to facilitate the continuity of operations in emergency situations.

**Information Technology Strategy and Benefits  
Fiscal Year 2012**

**Application Development Services**

Capital Element: **E-Government**

Fiscal Year 2012 Cost: **\$200,000**

We plan to use contractor services to augment existing agency staff to expand the electronic services available to the railroad public via the RRB's website. This goal is consistent with the RRB's overall goal to address our customers' needs and expectations, providing them with a range of choices for conducting business with us, including more Internet options that are private and secure. The benefits of these initiatives will be realized in increased efficiency and accuracy of business transactions between rail employees/employers and the RRB.

A key initiative in this area is the Employer Reporting System (ERS) project, a multi-year, multi-phased project to provide employers with web-based alternatives to all paper-based forms exchanged between employers and the RRB.

In fiscal year 2012, we plan to use contractor services to assist in the development of an automated referral process in ERS to notify employers of errors or the need for additional information and provide a means for correcting the data. With contractor support, we will also develop online processes for employers to respond electronically to requests for information which is needed to process some initial annuity applications. These include requests for verification of last date on the payroll, for railroad service information needed for eligibility (Forms G-88a.1 and G-88a.2), and for information needed to support the payment of supplemental annuities (Form G-88p). We also plan to automate access to the ID-40 series RUIA contribution and ID-6 series tax notices, resulting in two additional services. These new functions will add six services to ERS.

Replacing these paper-based processes will improve customer service by speeding up initial annuity processing and enhance stewardship by securing and protecting personally identifiable information. Contractor support helps to accelerate each phase of the project beyond the rate that can be achieved using only agency staff.

## **Information Technology Strategy and Benefits Fiscal Year 2012**

### **Application Development Services**

#### **Capital Element: System Modernization**

Fiscal Year 2012 Cost: **\$500,000**

Many of the RRB's existing legacy mainframe and LAN-based software programs are old and complex and require a large investment in maintenance from both a technical and business perspective. In fiscal year 2009, the RRB began to modernize its application systems/processes using contractor services to assist us in the evaluation and reengineering of those systems. This is a long-term, multi-year initiative that will continue until all agency applications have been re-engineered.

Our efforts will reduce or eliminate unnecessary or redundant activities, improve accuracy and security of agency systems and their transactions, make systems more user-friendly for agency employees and customers, improve interoperability and flexibility of systems, and improve our ability to collaborate with agency partners. By modernizing our systems, the RRB will ultimately decrease the time and cost to maintain and operate these systems and allow us to then focus on new initiatives.

In fiscal year 2012, we are requesting \$200,000 to contract for the services of an expert DB2 database administrator. Based on the direction of the agency's data modelers, the DB2 database administrator will help to ensure that the optimized master database remains platform independent, meaning that agency data can be used regardless of what new technologies may emerge that require access to the data. This is one of the critical foundation pieces of the modernization effort. The contractor will also be tasked with the continued development of stored procedures for the agency's mainframe-based applications.

In addition to the mainframe-based systems, there are also several old LAN-based computer applications that require modernization. These systems utilize an outdated, unsupported database management system and a dated mainframe screen scraping technology. These systems, although functioning, are becoming more difficult to maintain under newer server operating systems, and there are a limited number of individuals with the knowledge needed to keep the programs functioning. In fiscal year 2012, we are requesting \$300,000 to contract for services to modernize the next most critical of the legacy LAN-based computer programs into a Microsoft .Net platform technology.

## Information Technology Strategy and Benefits Fiscal Year 2012

### Cyber Security

Capital Element: **Risk Management and Privacy**

Fiscal Year 2012 Cost: **\$254,000**

In the face of a changing risk environment, a comprehensive security program requires continuous management to control the risks that threaten the agency's critical assets. Complementary use of both technology and well-trained personnel can effectively reduce those risks to an acceptable level.

For fiscal year 2012, we plan to acquire the following security control and incident response systems to ensure the agency continues to meet the security requirements that are set forth in the Federal Information Security Management Act (FISMA) of 2002:

- A new intrusion detection system (IDS) is necessary because the current IDS will reach the end of its service life in fiscal year 2012. (\$200,000)
- A security information and event management tool will be used to centralize the storage and interpretation of logs, or events, generated by other software running on the network. (\$6,000)
- Malware computer forensic software is needed to complement existing investigative IT security tools and enable agency security experts to quickly identify malicious software programs in order to build better defenses. (\$2,000)
- Web security testing software is needed to identify security vulnerabilities that are undetectable by traditional scanners. (\$25,000)
- A new web proxy server is needed to block employees from accessing unauthorized websites and assist in blocking websites that are known to contain malicious software or links to malicious code. This will replace a product that has been in service since 2002. (\$15,000)
- A new forensic recovery of evidence device (FRED) will be needed for computer forensics because the current device will have reached its end of service life in fiscal year 2012. (\$6,000)

**Information Technology Strategy and Benefits  
Fiscal Year 2012**

**Information Technology Infrastructure**

Capital Element: **Network Operations**

Fiscal Year 2012 Cost: **\$14,000**

The RRB's computer network links headquarters with its field office systems. The heart of the network is a data center that runs the applications which handle the core business and operational data of the agency.

It is vitally important that a reliable network infrastructure be in place to minimize any chance of disruption. This capital item supports planned projects for improvements to the agency's mainframe and servers, as well as associated components, such as telecommunications and storage systems, software, backup power supplies, data communications connections, environmental controls (air conditioning, fire suppression), and special security devices. It also includes funding for mandatory or emergency replacement and upgrade of hardware and software. Contractual assistance is needed to augment agency staff to accomplish the initiatives.

In fiscal year 2012, as a part of the overall redesign of the databases that support the applications in the virtual environment, six additional Microsoft SQL enterprise licenses will be necessary.

## Information Technology Strategy and Benefits Fiscal Year 2012

### Information Technology Infrastructure

#### Capital Element: **Infrastructure Replacement**

Fiscal Year 2012 Cost: **\$392,000**

IT infrastructure is the critical foundation for business applications. Life cycle replacement of infrastructure equipment is a direct cost, but reduces indirect, hidden costs such as lost end-user productivity and downtime. Upgrades and cyclical replacements follow the RRB's *IT Equipment Replacement Policy* for modernizing and securing the agency's computer operations. Core information technology infrastructure elements identified in the IT Replacement Policy include:

- Laptops
- Monitors
- Personal digital assistants (PDAs)
- Personal computers
- Network printers
- Servers
- Personal printers
- Portable printers
- Routers/switches
- Scanners (imaging)
- Scanners (personal)

Funding will be used for replacement of IT equipment based on greatest need, as the funds will not allow replacement of all equipment scheduled for replacement based on our *IT Equipment Replacement Policy*. We are targeting the following categories of equipment for replacement in fiscal year 2012:

- Routers/switches (\$190,000)
- Imaging system scanners (\$58,500)
- Application specific, stand-alone servers (\$143,500)

**Information Technology Strategy and Benefits  
Fiscal Year 2012**

Capital Element: **Continuity of Operations Improvements**

Fiscal Year 2012 Cost: **\$400,000**

Federal Emergency Management Agency and Homeland Security Department directives (Federal Continuity Directives 1 and 2) require Federal agencies to create and maintain a Continuity of Operations (COOP) plan. The plan ensures that the agency can carry on all essential functions in case of a natural or man-made disruption or disaster.

To support the agency's COOP plan, we will implement an e-vault solution for the RRB's backup enterprise data, replacing the use of computer backup tapes for the restoration of mission and time critical applications in the event of a disruption at the headquarters building. The e-vaulted data will be stored at a facility in the Chicagoland area.

In fiscal year 2012, we will use funds to provide for the equipment needed to securely duplicate and store the enterprise data at a site outside the Chicagoland area. The additional data backup location will ensure that the data needed to restore agency benefit payment operations is available in the event of a natural or man-made disaster preventing the use of the backup data stored in the Chicagoland area.

**Information Technology Strategy and Benefits  
Fiscal Year 2012**

Non-Capital Element: **Emergency Business System/Application Restoration Services**

Fiscal Year 2012 Cost: **\$50,000**

This initiative allows the agency to quickly and efficiently purchase IT services for computer programming, hardware, software, and other IT-related services. The funds will be used for expert IT professional services necessary in the event of resource availability shortages and restoration time constraints to facilitate the continuity of operations in an emergency situation.