

**NATIONAL GALLERY OF ART
INFORMATION TECHNOLOGY
FY 2013**

The National Gallery of Art depends heavily on Information Technology (IT) to support its interaction with the public and the staff. The Gallery's IT environment is a complex infrastructure consisting of 10 major IT systems serving the multi-faceted requirements of the Gallery including acquisition, care and display of works of art, special exhibitions and education programs, as well as financial and administrative management. The basic daily operations, beginning with opening the Gallery to the public each morning, require a variety of systems such as those for security, building automation, collections management, education, financial management, and retail.

IT supports many other non-major systems that nevertheless play an important role in the day-to-day functions of the institution. Such systems include the VISTA scheduling system for school and group tours, a facilities' work order tracking system, a security incident reporting system used by the Protection division, and computer-assisted design (CAD) systems used by the Gallery's architects, designers and engineers.

IT is also central to the Gallery's risk management strategy as many of the systems require sophisticated IT support, from advanced climate control and security to collection, library, and financial management. The failure of any of these mission-critical systems jeopardizes the security and safety of the works of art, staff and visitors and impedes the ability of the staff to meet performance goals and management initiatives.

Through the Gallery's web site, educational resources on the collection and special exhibitions offer anyone with Internet access features ranging from virtual tours to planning an actual visit and researching the collection. The Gallery's educational role is also supported by IT through the Internet/Intranet/Office Automation systems which provide the public with direct communication through its web site and e-mail and enable efficient staff communication throughout the Gallery.

The Gallery's FY 2013 IT budget submission is based on its IT Strategic Plan, updated in FY 2010 to provide a road map for IT services needed for the next 10 years. IT improvements have required multiple years to implement – up to one year to prepare the solicitation packages and select a vendor, and then up to an additional two years to install, configure and test the new systems. This plan addresses the proactive implementation, replacement, and repair of the Gallery's mission critical systems.

The Gallery's IT environment is divided into the following categories:

- Art Care Systems
- Operations and Maintenance Systems
- Protection Systems
- General Administration Systems
- Enterprise Architecture and Planning

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Current State of the Art Care Systems

Collection Management System (CMS): The Gallery uses *The Museum System (TMS)*, a commercial off-the-shelf system that is used extensively throughout the museum community, to manage the collection of original works of art. This system was acquired and became operational in FY 2008. Planned enhancements to TMS have been made and provided to the Gallery by Gallery Systems, Inc., the TMS vendor. The risk of failure to CMS is low.

Integrated Library System (ILS): The Gallery continues to use the Ex Libris commercial off-the-shelf *Voyager* system as its Integrated Library System. Digital library products are supported using *DigiTool* and *MetaLib* products from Ex Libris. A strong technology refreshment program is in place for these systems. The risk of failure to ILS is low.

Digital Imaging: The Gallery's archives of slides and color transparencies are degenerating. In order to preserve quality images of the collection, this aging technology must be replaced to prevent further deterioration of the images of the works of art and to archive for future generations images of the works of art as they appear today. The Gallery's digital imaging strategy, based on a number of recommendations from an internal study, has resulted in the creation of a digital photographic laboratory and the development of a prototype central electronic repository and management system for digital images of works of art in the collection. The strategy also includes the deployment of an image ordering system (*NGA Images*) for the public. The risk associated with the digital imaging strategy is medium as the Gallery lacks an enterprise-wide system for management of the digital assets of the collection.

Public Web Site: The Gallery's original web site was deployed in 1996 and for many years was an award winning site, but it now has become a dated resource failing to take advantage of emerging technologies to better serve the public. A new project for the redesign of the web site has been initiated and the concept design phase is complete. The build phase for the new site is underway. The risk assigned to the web is medium.

Current State of the Operations and Maintenance Systems

Building Automation System (BAS): One of the Gallery's key goals is to expand the coverage for monitoring and controlling temperature and relative humidity conditions throughout the Gallery complex by adding non-proprietary controllers to the BAS. The deployment of these additional controllers will continue in FY 2013. The risk of failure assigned to this system is low.

Current State of the Physical Protection Systems

Integrated Security Management System (ISMS): The Gallery continues to use Seibold's *Skyline II*, which was acquired and became operational in FY 2006, as its ISMS. A strong technology refreshment program is in place for this system. The risk of failure assigned to the security system is low.

Fire Alarm System: The Gallery's Fire Alarm system provides for fire detection, emergency notification, fixed and portable fire suppression, and life safety controls. The main system, the Siemens Cerebus-Pyrotronics MLX (fire alarms) / MXLV (emergency notification), was last upgraded in FY 2009. The Siemens Network Command Center graphic display software was last upgraded in FY 2008 and is in need of an upgrade to replace the unsupported Windows XP software. In addition, an independent assessment of the complete system is underway to ensure that the system is properly configured and supported to meet the Gallery's

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needs for protection of people and the works of art. It is expected, based on the Gallery's internal knowledge of this system, that this assessment will identify areas needing immediate attention. Currently, the risk assigned to this system is medium.

Current State of the General Administration Systems

Financial Management System (FMS): The Gallery uses *Oracle Federal Financials*, a web-based, externally hosted system as its FMS. Phase I of the financial system was deployed in FY 2007 and Phase II was deployed in FY 2008. The current release of Oracle (version 11.5.10) will no longer be supported after FY 2013. The risk of failure assigned to FMS is medium and increasing.

Human Resources Management System (HRM): The Gallery lacks a Human Resource Management platform and relies on the National Finance Center (NFC) for its payroll processing. As a result, a variety of inadequate and inefficient home grown department systems are used to track personnel information. These systems lack a strong IT security infrastructure, putting this information at risk. The Gallery plans to pursue a shared service provider solution for its Human Resources Management needs. Until an enterprise solution is in place the risk of failure assigned to the HRM is high.

General Support System (GSS)

- **End User Systems and Services (EUSS):** The Gallery has standardized and modernized its Office Automation (OA) environment. Current Gallery-wide desktop Intel-based PC and Apple Macintosh hardware platforms are in place with standardized Microsoft Windows XP/Office 2007 and Macintosh OS 10 system software supported by an outsourced Help Desk. Inventory control of the OA assets has increased with the use of an on-line inventory management system and bar coding of equipment. The IT security of the OA environment has been enhanced with the development of a strong IT Security program and the addition of virus protection software throughout the OA architecture. A highly successful on-site OA training program has been implemented. The intranet is now a part of the EUSS project. The risk of failure to EUSS remains low.
- **Mainframes and Servers Services and Support (MSSS):** The Gallery's server environment is kept current with a strong technology refreshment program. We have put in place virtual server technology as part of our efforts to reduce cost and increase the reliability and availability of our IT systems. The risk of failure to the MSSS remains low.
- **Telecommunications Systems and Support (TSS):** The Gallery's current data network infrastructure, which supports the 10 major IT mission systems and over 1,000 workstations, is out-of-date and highly unstable. The existing network is unable to handle the current data traffic and is being replaced in phases. The first and second phases, the purchase and installation of new core switches and the wiring from the core switches to the data closets, are complete. Phase 3, a multi-year activity, is underway. This phase involves the replacement of the routers and wiring within the data closets and the wiring to the desktops.

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The Gallery has an extensive telecommunications infrastructure that supports voice (land-line and cellular) and voicemail. The Gallery recently upgraded the voice system to the latest version of the Avaya software.

The risk of failure to the TSS is high due to the need to upgrade to a modern cable network.

FISMA/IT Security Program: Gallery-wide IT security is a high priority and the Gallery continues to make progress in meeting FISMA requirements. An independent contractor continues to assist the Gallery with Certification and Accreditation (C&A) of the major IT systems.

Current State of Enterprise Architecture and Planning

Enterprise Architecture: The Gallery continues to maintain its Enterprise Architecture Modernization Blueprint which is being modified to address the Gallery's new IT Strategic Plan. The IT Strategic Plan identifies emerging needs in the following areas:

- Centralized Calendar & Resource Scheduler
- Enterprise Digital Asset Management
- Enterprise Document Management
- Financial Management Enhancements
- Gallery-wide Collaborative Technologies
- Human Resource Management Platform
- Infrastructure Optimization
- Innovation Lab
- Integrated Procurement & Contract Management
- Intranet Modernization
- Inventory Management
- Learning & Training Management
- Mobile Connected Workforce
- Network (Data & Voice) Modernization
- Visitor Enrichment, and
- Works of Art Information Sharing

Capital Planning and Control Process (CPIC): The Gallery's Executive IT Steering Committee (EITSC) took on a major role in the development of the Gallery's IT Strategic Plan and continued its role in the selection and evaluation of major IT system projects as documented in our CPIC process. The EITSC reviews the priorities for the IT budget based on mission need and continued its recommendation of all major IT modernization efforts. The Gallery continued to focus on IT risk management, adherence to the Gallery's enterprise architecture, and inclusion of IT security as part of all IT modernization programs.

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FY 2011 Accomplishments

During FY 2011, the Gallery moved forward with selected high priority projects as well as low cost IT improvements identified in the Gallery's IT Strategic Plan.

Art Care:

The CMS continued to operate successfully. A new feature was added to record length of display periods for objects. Also, an IT solution was developed which allows Gallery staff to access CMS from Apple workstations.

The ILS continued to operate successfully. The *DigiTool* digital asset management system was upgraded to the current version of the software.

The digital imaging ordering system, *NGA Images*, was installed and is being tested internally with plans to open the system to the public in FY 2012.

Work commenced on the build phase for the re-designed Public Website.

Operations and Maintenance:

Additional alarm sensors were connected to the BAS in the East Building art spaces.

Protection:

The ISMS and Fire Alarms systems continued to operate successfully.

The DvTel Network Video Management system was upgraded to the latest version of the software.

A pilot project to explore the use of Radio Frequency Identification (RFID) tags for securing the art exhibited in the public galleries continued.

A contract was awarded to perform an independent review of the Gallery's Fire Alarm System. The assessment will be completed in FY 2012.

General Administration:

The data network modernization project continued with completion of the renovation of the telecommunications rooms in the Connecting Link and wiring to associated office areas.

The Avaya phone system was upgraded to bring the system under vendor support.

The e-OPF project was completed, providing Gallery staff with on-line access to their personnel folders through the e-OPF portal.

Certification and Accreditation (C&A) was completed for the Physical Protection Program (PPP), which evaluated the IT security of the Integrated Security Management System and Fire Alarm System, as was the C&A for the Art Care Program, which consists of the

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Collection Management System, Integrated Library System, Digital Imaging program, and the Public Website. The C&A for the Building Automation System is underway.

All Windows and Linux servers were configured to meet NIST guidelines for IT security. Technology refreshment of the Gallery's office automation system continued with the purchase and deployment of new workstations, monitors, printers and scanners. The annual independent internal and external scan of the data and security networks was performed and IT security vulnerabilities discovered were remediated. Weekly and monthly reporting of virus and spam activity continued. Monthly reporting on the deployment of Microsoft-related IT security patches continued. Metrics were captured on suspended network accounts and failed attempts to access the Gallery's remote access system. A priority was placed on IT Security Awareness training and all users of the Gallery's network received the required annual refresher training. A specialized IT security class was created and administered to all Gallery system administrators.

FY 2012 Objectives

In FY 2012, the Gallery will continue to maintain and enhance the 10 major IT systems through a strong technology refreshment program.

Art Care:

The Digital Imaging ordering system, *NGA Images*, will be deployed. Requirements for a centralized Image Intellectual Property Management system will be developed. The build and testing of the Gallery's new Public Website will continue. Vendor maintenance will continue for the CMS and ILS.

Operations and Maintenance:

The BAS will be supported through a maintenance contract with Honeywell. Additional sensors will be installed in the East Building.

Protection:

The Gallery will address weaknesses discovered from the independent assessment of the Fire Alarm System as documented in the plan of action and milestones. Vendor maintenance will continue for the ISMS and Fire Alarm system.

General Administration:

Work on the Phase 3 network modernization project will continue with completion of the renovation of the telecommunications closets in the West Building and rewiring of the adjoining staff offices. A design for installing wireless technology for the East Building will be completed and implemented to provide an interim solution to address the antiquated interior cabling in the East Building until the MFP can upgrade the cabling.

The Gallery will perform market research and define requirements for a Centralized Calendar/Scheduling system. This new system will automate and centrally control the scheduling of resources for and the publication of events to the public as well as internal Gallery events. These activities today are performed manually, relying on e-mail, phone

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calls, and locally developed databases for tracking events and their required resources (room availability, audio/visual services, facilities, security, etc.).

The Gallery will continue to put a high priority on FISMA compliance. C&A of the BAS will be completed. A program for continuous monitoring of all major systems will be developed and put into place.

FY 2013 IT Budget Request

The Gallery's FY 2013 budget request for IT is \$8,614,000, an increase of \$1,868,000 over the FY 2012 Enacted Budget. This increase is supported by the Gallery's IT Strategic Plan.

Art Care: \$852,000 is requested for Art Care IT systems in FY 2013, an increase of \$350,000 above the FY 2012 Enacted Budget. This increase is needed for the acquisition of the Image Intellectual Property Management system for DIVS and the development and deployment of enhanced features for the new Public Website. The remaining funds are for steady state costs associated with maintenance of the Art Care systems.

Operations and Maintenance: \$125,000 is requested for Operations and Maintenance IT programs in FY 2013, no change from the FY 2012 Enacted Budget. This funding level provides for steady state costs associated with maintenance of the Building Automation System.

Protection: \$585,000 is requested for Protection IT programs in FY 2013, the same amount as the FY 2012 Enacted Budget. These funds are for steady state costs associated with maintenance of the ISMS and improvements needed to the Fire Alarm System.

General Administration: \$7,052,000 is requested for General Administration IT systems in FY 2013, a \$1,518,000 increase over the FY 2012 Enacted Budget. The increase provides funding for migration to release 12 of the Oracle FMS which is necessary because the current version will no longer be supported after FY 2013. Additional funds are also required for Phase 3 of the network modernization project, and acquisition of shared services support needed for the Human Resources activities necessary to address the President's hiring reform initiatives and protection of Personally Identifiable Information (PII). The Gallery will determine requirements for and select a shared service solution for a Human Resource Management platform, providing centrally controlled and secure HR information to authorized Gallery staff.

These funds also provide for the steady state costs of the G&A IT projects including FMS, IT Security, Enterprise Architecture, National Finance Center fees for Personnel & Payroll processing, and the General Support System.

The Gallery's FY 2013 Information Technology Budget Request is shown on the following pages.

**NATIONAL GALLERY OF ART
INFORMATION TECHNOLOGY (IT)
FY 2012 - FY 2013
(Dollars in Thousands)**

	FY 2012 Enacted *	FY 2013 Request	FY 2013 Increase / (Decrease FY 2012
ART CARE			
<u>Other Services</u>			
Collection Management System (CMS)	\$ 60	\$ 60	\$ -
Integrated Library System (ILS)	84	84	-
Digital Imaging	50	50	-
Web Site	238	238	-
subtotal	<u>432</u>	<u>432</u>	<u>-</u>
<u>Equipment</u>			
Integrated Library System (ILS)	20	20	-
Web Site	-	100	100
Digital Imaging	50	300	250
subtotal	<u>70</u>	<u>420</u>	<u>350</u>
Total Art Care	<u>502</u>	<u>852</u>	<u>350</u>
OPERATIONS AND MAINTENANCE			
<u>Other Services</u>			
Building Automation System (BAS)	115	115	-
<u>Equipment</u>			
Building Automation System (BAS)	10	10	-
Total Operations and Maintenance	<u>125</u>	<u>125</u>	<u>-</u>
PROTECTION			
<u>Other Services</u>			
Integrated Security Management System (ISMS)	560	560	-
<u>Equipment</u>			
Integrated Security Management System (ISMS)	25	25	-
Total Protection	<u>\$ 585</u>	<u>\$ 585</u>	<u>\$ -</u>

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	<u>FY 2012 Enacted *</u>	<u>FY 2013 Request</u>	<u>FY 2013 Increase / (Decrease FY 2012</u>
GENERAL ADMINISTRATION			
<u>Rent, Communications, Utilities</u>			
GSS - Telecommunications	\$ 319	\$ 319	\$ -
<u>Other Services</u>			
Financial Management System (FMS)	487	656	169
General Support Systems (GSS)	2,916	3,086	170
IT Security	447	447	-
Enterprise Architecture	176	182	6
Human Resources Management System (HRMS)	121	155	34
subtotal	<u>4,147</u>	<u>4,526</u>	<u>379</u>
<u>Supplies</u>			
General Support Systems (GSS)	57	57	-
subtotal	<u>57</u>	<u>57</u>	<u>-</u>
<u>Equipment</u>			
Financial Management System (FMS)	-	350	350
General Support Systems (GSS)	1,011	1,400	389
Human Resources Management System (HRMS)	-	400	400
subtotal	<u>1,011</u>	<u>2,150</u>	<u>1,139</u>
Total General Administration	<u>5,534</u>	<u>7,052</u>	<u>1,518</u>
GRAND TOTAL IT BUDGET	<u>\$ 6,746</u>	<u>\$ 8,614</u>	<u>\$ 1,868</u>
SUMMARY BY OBJECT CLASS			
Total Rent, Communications & Utilities	\$ 319	\$ 319	\$ -
Total Other Services	5,254	5,633	379
Total Supplies	57	57	-
Total Equipment	1,116	2,605	1,489
GRAND TOTAL IT BUDGET	<u>\$ 6,746</u>	<u>\$ 8,614</u>	<u>\$ 1,868</u>

* The FY 2012 Enacted Budget reflects a 0.16% across-the-board rescission.