

Information Technology Information Management

Strategic Plan Fiscal Years 2016–2020



ABSTRACT

The U.S. Nuclear Regulatory Commission's (NRC) Information Technology/Information Management (IT/IM) Strategic Plan for Fiscal Years 2016 – 2020 describes how IT/IM goals and strategies at the NRC support and enable the agency's mission. The IT/IM Strategic Plan responds to Federal Requirements in the Paperwork Reduction Act (PRA) and the Clinger-Cohen Act of 1996, serving as the NRC's strategic information resources management plan in accordance with Section 3506(b)(2) of the PRA. The plan lays out the mission and vision for the agency's IT/IM efforts and establishes six goals along with the associated strategies. It also defines measures of success in attaining the goals. This plan provides the technology and strategic guidance that helps to inform and support the agency's budget formulation and prioritization processes over the next 3 – 5 years.

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EXECUTIVE SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) has updated its Information Technology/ Information Management (IT/IM) Strategic Plan for the years 2016 through 2020. The IT/IM Strategic Plan describes how current plans support “Key Management Objective 2, Information Management and IT,” in the NRC FY 2014 – 2018 Strategic Plan (NRC Strategic Plan). The purpose of this objective is to make authoritative data sources accessible anytime, anywhere, and on any device, while managing the risk of compromise of sensitive information.

The NRC IT/IM Strategic Plan for 2016 – 2020 acts on recommendations from the agency wide long-term housing initiative as well as Project AIM 2020 (SRM-15-015), a task force established in June 2014 to assess the agency’s ability to carry out its mission in light of a rapidly changing technological environment and supporting workforce. These recommendations look toward the future of the NRC mission, the future workforce, and the technologies that supports them. IT/IM capabilities will be streamlined and enhanced as the NRC continues to consolidate offices.¹ The IT/IM Strategic Plan outlines the technological support enabling the NRC’s day-to-day activities including the licensing and regulation of commercial uses of nuclear materials and power plants; research and testing; reactor training; nuclear fuel cycle, and the transport, storage, and disposal of radioactive materials and waste. The plan also helps the NRC to protect public health and safety, promote the common defense and security, and protect the environment.²

The NRC Strategic Plan offers a dedicated framework for building policies, governance, and standards for carrying out a transformation and modernization of agency programs. The IT/IM Strategic Plan was created to build on that framework and describes how IT/IM supports the mission. It also describes how the expanded use of technology allows the NRC to challenge conventional approaches for activities such as vendor inspection and protection against counterfeit, fraudulent, and suspect items.

The goals and strategies presented in this plan will help direct the NRC’s IT/IM program resources over the next 3 to 5 years. It includes, but is not limited to, the following:

- local and wide-area networks (LAN/WAN)
- computers and telecommunication devices
- information and records management functions

The plan covers applications and systems for corporate support functions (payroll, personnel, and accounting) as well as mission-critical support systems (licensing, oversight, waste management, materials management and emergency response) such as:

- RPS (Reactor Program System) – Oversight for operating reactors
- CIPIMS (Construction Inspection Program Information Management System) – Oversight for new reactors
- eRAI (electronic Request for Additional Information) – Licensing of new reactors
- ERDS (Emergency Response Data System) – Incident response

¹ Project AIM 2020 Recommendation I-3c

² NRC Strategic Plan, Mission of the NRC

- NMED (Nuclear Materials Events Database) – Materials management
- WBL (Web-Based Licensing) – Licensing and inspection of nuclear materials
- OCIMS (Operations Center Information Management System) - Incident response
- E-Rulemaking – Rulemaking

The NRC initiated the IT/IM Strategic Plan following the guidance in the Office of Management and Budget's (OMB's) "*Common Approach to Federal Enterprise Architecture*." The IT/IM Strategic Plan defines the technology goals and strategies that enable the agency to accomplish its mission (see Section 2 of the IT/IM Strategic Plan). The information in this plan will offer the NRC and other stakeholders with transparency into the full IT/IM investment portfolio. The IT/IM Strategic Plan also serves as the NRC's Information Resources Management (IRM) plan in accordance with Section 3506(b)(2) of the Paperwork Reduction Act of 1995.

The IT/IM Strategic Plan is updated on an as-needed basis and published every 4 years, in accordance with the Government Performance and Results Act (GPRA) of 1993, Pub. L. 103-62 and the GPRA Modernization Act of 2010. OMB's Memorandum, M-11-29, holds agency CIOs accountable for increasing the return on IT investments, accelerating the implementation of business strategies, and ensuring alignment with agency strategic goals.

The NRC has developed ways to better manage and deploy changes to accommodate the market drivers of today and create a better plan for tomorrow,³ with the knowledge that plans and funding will change based on external forces. Through the lifecycle of strategic planning, the NRC will define a method to continually adjust to anticipated market drivers. The NRC will define performance plans and report agency progress and will use appropriate performance metrics to ensure that targets at the IT/IM strategic goal level are being reached.

³ Project AIM 2020 Recommendation I-1a

MESSAGE FROM THE CHIEF INFORMATION OFFICER

I am pleased to present this update to the U.S. Nuclear Regulatory Commission's (NRC's) Information Technology/Information Management (IT/IM) Strategic Plan. The objective of the NRC's IT/IM program is to make it easier for NRC staff to obtain the information they need from authoritative sources anytime, anywhere, on any device, while simultaneously protecting sensitive information.¹



Darren B. Ash

The NRC's IT/IM program is designed to enable, through the use of technology and information, the NRC's mission of licensing and regulating the Nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. The two main strategic goals from the NRC Strategic Plan for Fiscal Years: 2014-2018 (NRC Strategic Plan) that support the mission are (1) to ensure the safe use of radioactive materials and (2) to ensure the secure use of radioactive materials.

The IT/IM Strategic Plan includes six major goals that support the NRC mission and offer transparency into agency responsibilities and activities. These goals cover IT/IM solutions to enhance mission performance, inform usability, promote business value, adapt technological infrastructure, allocate resources, and prevent unauthorized uses.

Modernization of the NRC's IT infrastructure and new business solutions enable secure access to the NRC's information systems. The addition of cloud computing and mobile technologies will support the agency's mobile workforce in its mission to oversee nuclear reactors and radioactive material use while meeting the safety and security goals.

As the NRC Chief Information Officer (CIO), I am accountable for the agency's IT/IM program, the scope of which extends to every NRC office and affects both internal and external stakeholders. The NRC workforce strives to maintain an open and transparent partnership with our stakeholders, and to ensure responsiveness to future data needs.

¹ NRC Strategic Plan Key Management Objective 2

1. INTRODUCTION

1.1 Purpose

The IT/IM Strategic Plan supports the agency's mission to license and regulate the nation's civilian use of radioactive materials to protect public health and safety, promote the common defense and security, and protect the environment. The plan also specifically addresses the current and future state of the agency's technology investments and assets that support the mission and the corporate support functions of the NRC. These investments and assets include computer networks, desktop computers, telecommunications, mobile computing technologies, collaboration tools, information and records management, software development activities, cybersecurity, and all NRC systems and applications.

The NRC's IT/IM mission and vision have been developed to support the agency's strategic objectives.

IT/IM Mission

Manage information and employ information technology to enhance information access and strengthen agency performance.

IT/IM Vision

Get the right information to the right people at the right time.

The NRC has identified seven IT/IM business challenges related to the IT/IM objectives stated in the NRC Strategic Plan that will help define the future direction of the agency's IT/IM capabilities.



Table 1 IT/IM Business Challenges

IT/IM Business Challenges
Make the NRC's authoritative data securely accessible from anywhere, at any time, on any device to support the agency's mobile workforce ¹ .
Remain agile to respond quickly to external factors with security requirements ² and new communication technologies.
Leverage innovative technologies to coordinate and share information on the safety/security interface with domestic and international partners ³ in a cost-effective manner considering industry best practices to enhance mission capabilities.
Manage and optimize the IT portfolio and resources to enable the mission. ⁴
Manage risk-based cybersecurity strategies to protect against sophisticated cyber attacks. ⁵
Support a "Future Ready" workforce equipped with modern tools, technologies, skills and knowledge necessary to meet both current and future mission needs. ⁶
Maintain and enhance foundational services and infrastructure to enable the mission. ⁷

In addition to the business challenges, the NRC is also responsible for meeting the regulatory and statutory Federal mandates for IT/IM listed in Appendix A. The combined challenges and mandates are the drivers for the FY 2016 - FY 2020 IT/IM goals and their underlying strategies.

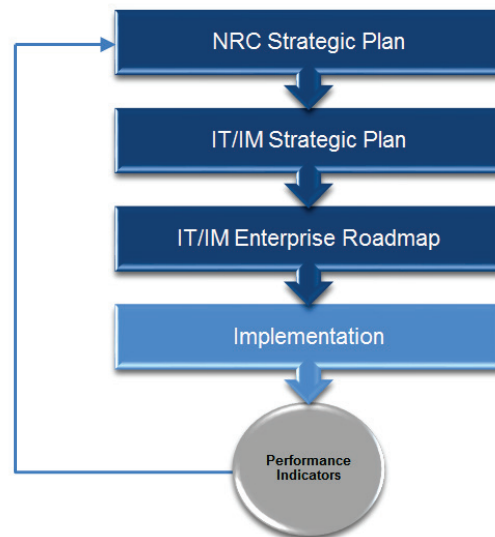
1.2 Relationship to Other NRC Plans

The NRC has developed related documents that outline the methods in which the agency will meet the future needs of its stakeholders. These documents include but are not limited to the:

NRC Strategic Plan - The NRC Strategic Plan describes the agency's key strategic goals and objectives, focusing on the safe and secure use of nuclear materials, and outlines the specific strategies to achieve them.

NRC IT/IM Strategic Plan - The IT/IM Strategic Plan outlines how the NRC will meet the "NRC Strategic Plan Key Objective 2": Make it easier for NRC staff to do their work and to obtain the information they need from authoritative sources anytime, anywhere, on any device, while managing the risk of compromise of sensitive information.

NRC IT/IM Enterprise Roadmap - The enterprise roadmap represents a high-level summary of the current and target state of the agency's IT/IM



¹ NRC Strategic Plan, Key Management Objective 2

² NRC Strategic Plan, External Factors Affecting Security Objective 2

³ NRC Strategic Plan, Regulatory Effectiveness Strategy 3

⁴ NRC Strategic Plan, Key Management Objective 2

⁵ NRC Strategic Plan, Security Objective 1

⁶ NRC Strategic Plan, Key Management Objective 1

⁷ NRC Strategic Plan, Key Management Objective 2

and presents key modernization initiatives that will enable the agency's mission and lead to the achievement of the goals and strategies outlined in the IT/IM Strategic Plan. It describes a plan of key activities and projects for each IT investment to ensure consistency in IT programs, messages, and themes communicated to agency stakeholders, and to move the agency toward meeting its overall mission.

The NRC has developed performance indicators for tracking progression of the goals and strategies. The agency will then carry out the activities outlined in the enterprise roadmap, using the results of the performance indicators as input for the next iteration of the strategic planning process.



Containment vessel bottom head for Plant Vogtle's Unit 3 reactor

2. IT/IM GOALS AND STRATEGIES

The agency has worked with its stakeholders to develop goals, as well as the supporting strategies to achieve them. The NRC is committed to carrying out innovative IT/IM capabilities that deliver cost and performance improvements. As illustrated in the diagram below and the text that follows, six IT/IM goals encompassing both mission and corporate IT needs have been identified.

FY2016 – FY2020 Strategic Goals	
 SOLUTIONS	Deliver Business Capabilities to Enhance Mission Performance
 INFORMATION	Improve Information Usability
 CUSTOMERS	Engage Customers to Promote Business Value
 INFRASTRUCTURE	Develop an Adaptable Technology Infrastructure
 PLANNING	Maximize the Strategic Allocation of IT Resources
 CYBERSECURITY	Prevent Unauthorized Access to Agency Information and Use of Government-Issued Credentials

Figure 1 IT/IM Strategic Goals

The NRC has also developed a performance management program that will give a tangible target for performance, as well as the means for tracking targets and outcomes.¹ The NRC leadership continually reviews the IT/IM goals to ensure that they are aligned with the strategies in the NRC Strategic Plan; that they are attainable, and that they are results-driven.

2.1 IT/IM Strategic Plan Alignment to the NRC's Strategic Plan

This update to the IT/IM Strategic Plan reflects the current state of ongoing IT/IM transformation efforts. The IT/IM Strategic Plan aligns directly with the higher level agency plan (as outlined in the table below); alignment continues into the strategy level, and ultimately influences the activities defined in the IT/IM Enterprise Roadmap. As a conduit between the strategies and objectives in the NRC's Strategic Plan and the activities defined in the IT/IM Enterprise Roadmap, technology planning is always focused on enabling mission success.

¹ NRC Strategic Plan, Fiscal Years 2014-2018, At-A-Glance, "Additional Management Objectives"

NRC Strategic Plan
Key Management Objective 2, Information Management and Information Technology

Make it easier for NRC staff to do their work and to obtain the information they need from authoritative sources anytime, anywhere, on any device, while managing the risk of compromise of sensitive information.

Table 2 Alignment of NRC Strategic Goals

NRC IT/IM Strategic Plan		NRC Strategic Plan	
Goal 1	Deliver business capabilities to enhance mission performance	Information Management and IT Strategy 3	Improve the value of the NRC's IT solutions by providing the right products and services when and where needed to support the agency's mission.
		Information Management and IT Strategy 4	Improve enterprise IT planning, budgeting, and performance management to effectively manage IT resources and investments.
Goal 2	Improve information usability	Information Management and IT Strategy 1	Enable the NRC's staff to easily find and use the information they need.
		Openness Strategy 1—Transparency	Make clear information about the NRC's responsibilities and activities accessible to stakeholders.
Goal 3	Engage customers to promote business value	Information Management and IT Strategy 3	Improve the value of the NRC's IT solutions by providing the right products and services when and where needed to support the agency's mission.
		Additional Management Objective - Internal Customer Services	Improve the accessibility, delivery, and utility of the services that employees and organizational units need to work effectively.
Goal 4	Develop an adaptable technology infrastructure	Information Management and IT Strategy 2	Develop a flexible technology infrastructure that offers the foundation to consistently deliver the IT solutions needed to further the agency's objectives and strategies.
Goal 5	Maximize the strategic allocation of IT resources	Information Management and IT Strategy 4	Improve enterprise IT planning, budgeting, and performance management to effectively manage IT resources and investments.

NRC IT/IM Strategic Plan		NRC Strategic Plan	
Goal 6	Prevent unauthorized access to agency information and use of Government-issued credentials	Information Management and IT Strategy 2	Develop a flexible technology infrastructure that offers the foundation to consistently deliver the IT solutions needed to further the agency's objectives and strategies.
		Security Objective 2	Ensure protection of classified and Safeguards Information
		Additional Management Objective - Cyber and Information Security	Prevent unauthorized disclosures or modifications of NRC information and minimize disruption of the NRC's mission.



Goal 1 - Deliver Business Capabilities to Enhance Mission Performance

The NRC delivers IT/IM capability-based solutions to support mission activities through automated business processes.² IT solutions delivered to staff and management include the evolution of the “Bring Your Own Device” (BYOD) program; identity management and credentialing; configurable and reusable IT/IM platforms; automated system access control;³ and automated workflow systems for licensing, oversight,⁴ enforcement and incident response functions.⁵

The NRC is expanding the use of IT/IM capabilities and enhancing mobility solutions to meet its growing IT/IM requirements⁶ and has defined the following five strategies for achieving this goal:

- Strategy 1: Improve the effectiveness of IT project management (PM) methods and principles throughout the agency.
- Strategy 2: Deliver IT solutions to meet emerging program needs.
- Strategy 3: Enhance current IT capabilities through the implementation of additional features, proven technologies, and shared services.
- Strategy 4: Deliver new IT solutions that allow for both easier and expanded access to relevant information.
- Strategy 5: Improve enterprise support for the development, testing, and transition to production of new application and infrastructure solutions.

The NRC continually works to find IT/IM capabilities to enhance mission performance. Capabilities under consideration include improved methods of internal and external data transfer. In addition, NRC will expand the use of mobile information technology solutions across the agency as well as outfitting NRC staff with more highly functional mobile technologies⁷ to enhance their business capabilities and strengthen mission success.

To support the workforce of the future,⁸ the agency will carry out a strategic workforce plan that makes use of agency wide resource and workload management information to support predictive analytics for better future resource planning.

In addition, the agency will launch a collaborative learning environment (CLE) initiative that will incorporate technology to enable interactive training and learning opportunities over the Internet.

² Project AIM 2020, Recommendation III

³ NRC Strategic Plan, Key Management Objective 2

⁴ Project AIM 2020, Recommendation III-2

⁵ NRC Strategic Plan, Regulatory Effectiveness Strategy 2, Security Strategy 1 and Safety Strategy 5

⁶ Project AIM 2020, Recommendation III-3b

⁷ Project AIM 2020, Recommendation III-3b

⁸ Project AIM 2020 Recommendation I-1



The NRC will improve the fee billing process and data quality. This will improve transparency and simplify how the NRC calculates and accounts for fees, and improve the timeliness of when the NRC communicates fee changes.⁹

IT/IM capabilities that support the NRC mission have increased the need for cross-cutting solutions accessible by the NRC's diverse user community. Some of the cross-cutting strategies that the NRC supports are focused on regulatory effectiveness and openness.¹⁰ The NRC will focus on an agency wide process automation and workflow solution to make operating reactor license application reviews more predictable, timely, and efficient.

The NRC is also in the process of streamlining its IT/IM services to respond to emergent mission activities by using the agile Software Development Lifecycle (SDLC) management approach to deliver more capabilities in shorter timeframes.

Outcome-based measures for Goal 1 include:

- increased IT capabilities that enable agency workforce access to information
- enhanced IT capabilities to automate business processes
- enhanced IT capabilities to enable the agency workforce and affiliates to acquire knowledge

⁹ Project AIM 2020, Recommendation III-1

¹⁰ NRC Strategic Plan, Regulatory Effectiveness Strategy 2

Goal 2 - Improve Information Usability

The NRC must effectively manage information electronically, to support both the needs of the staff and the public. The NRC has identified the following four strategies to guide its current and planned investments in the area of Information Management:

- Strategy 1: Enhance methods for the capture, usage, storage, and disposition of information.
- Strategy 2: Enhance instruction and guidance to users for accessing information.
- Strategy 3: Enhance openness and transparency of information by improving electronic recordkeeping (OMB M-12-18).
- Strategy 4: Enhance methods for users to acquire information.

Through the NRC's information and records management (IRM) program, the NRC undertakes projects designed to ensure that information is retrievable and usable by agency stakeholders.¹¹ The NRC has reviewed its IT/IM capabilities to streamline an efficient electronic recordkeeping system. Agency policies, procedures, guidance, and tools will be updated to improve the completeness and accuracy of information and to ensure information is appropriately handled throughout its lifecycle.

The IRM program, in coordination with the Master Data Management (MDM) program, ensures only complete, authentic, and accurate data is used in agency decision making. The NRC will collect, store, and quickly analyze information using a single solution to gather authoritative data, and offer the highest quality and most efficient service to the public and licensees.

The Digital Accountability and Transparency Act (DATA Act) of 2014 is intended to enhance access and enable the sharing of financial data to achieve transparency. Project AIM 2020 recommendations express the need for acquisition process automation¹² and standardization of financial data in order to simplify the information gathering process and enable more efficient and effective contract and financial management.

The NRC is also carrying out processes for the digitization of all agency records using improved IT/IM capabilities to maximize accessibility and reliability of agency information. These strategies are designed to increase the storage and use of electronic records and to ensure accurate, reliable and authoritative data for decision making.

In addition to improving authoritative data, the NRC is enhancing methods to allow public visibility into the status of Freedom of Information Act (FOIA) requests. Specifically, the NRC is assessing new capabilities to improve the timely delivery of official information, as appropriate. These capabilities include the use of Web content management solutions to simplify content publication and navigation,¹³ Web-based technology standards to share data, and subscriptions to quickly deliver information (including sensitive information, where appropriate) to targeted stakeholders.¹⁴

¹¹ NRC Strategic Plan, Openness Strategy 1

¹² Project Aim 2020, Recommendation III-3a

¹³ NRC Strategic Plan, Openness Strategy 1

¹⁴ NRC Strategic Plan, Security Strategy 6



The NRC also is developing capabilities that will allow access to data sharing of large files from remote locations, as well as other reference material services, to create a more robust enterprise search service. The NRC is also moving to consolidate the agency's internal information sharing and team collaboration capabilities to make greater use of an enterprise Web-based technology platform.

Outcome-based measures that will be used to show fulfillment of Goal 2 focus on:

- assessment of consumers' feedback on information usability
- assessment of paper records disposed of or digitized
- assessment from consumers' feedback on quality of information services

Goal 3 - Engage Customers to Promote Business Value

The NRC is dependent on the effectiveness of IT/IM services in its engagement with both internal and external customers. In support of these efforts, the agency invests its resources in a dedicated IT/IM customer service division to improve the quality of IT/IM service delivery.

The agency has defined the following four strategies focused on improving IT/IM partner and customer outreach, customer service, and service delivery:

- Strategy 1: Increase accessibility and usability for staff and stakeholders of existing IT/IM services and support.
- Strategy 2: Enhance collaboration and communication with staff and stakeholders.
- Strategy 3: Establish and promote customer service values and norms.
- Strategy 4: Increase engagement with customers to determine business needs.

The NRC is focused on continued quality partnerships with its stakeholders, including the international community, the U.S. Congress, NRC staff, and the general public. The NRC has invested in IT/IM capabilities to foster these relationships. The NRC will look for opportunities to further enhance these relationships through providing more flexible service offerings such as help desk consolidation and enhanced self-service capabilities¹⁵ to promote an enhanced customer service experience to meet the needs of our stakeholders.

Additionally, the agency is working diligently to improve services that align the work within the Office of Information Systems and mission-focused offices. The NRC is moving towards streamlining and centralizing processes that will reduce the need for multiple customer request systems and will also enhance the customer experience.

Outcome-based measures that have been created to ensure success of this goal include:

- increased customer satisfaction on quality of IT/IM services
- increased independent customer usage of IT/IM services

¹⁵ Project AIM 2020, Recommendation III-3c



Goal 4 - Develop an Adaptable Technology Infrastructure

Continued improvement in centralized planning and the deployment of infrastructure investments and security are among the agency's largest areas of IT/IM investments. These investments are critical for the NRC to meet its mission of safety and security and to support its business solutions. Mobile network and cloud computing technologies are changing rapidly, which will require the NRC to incorporate flexible solutions architecture. This will allow the NRC to take advantage of opportunities to deliver stable mission and business capabilities.

To align investments with the agency's mission, and the rapidly changing landscape, the NRC has defined the following three strategies for continued enhancement of its foundational IT capabilities:

- Strategy 1: Improve the IT infrastructure to enhance and modernize the customer experience.
- Strategy 2: Improve application hosting services.
- Strategy 3: Improve IT security and resiliency to protect the agency from external and internal threats to minimize the impact on the mission.

Improvements in planning and investment in infrastructure and security are critical for the NRC to meet its mission. To support the mission, initiatives such as data center consolidation, long-term federal solutions for the cloud and virtualization, sharing data centers with external federal agencies and expanding access to the high-performance computing environment are in various stages of development and implementation.

Through these efforts to improve infrastructure, the NRC can supply an expanded selection of flexible, agile, value-added and transparent IT services in support of the goals and objectives in the strategic plan. The NRC is also undertaking infrastructure capacity planning that includes: increasing network bandwidth (allows fast and more stable connections for the Regions, Resident Inspectors and HQ), IP (internet protocol)-based technologies such as Unified Communications (UC), enabling desktop virtualization, virtual private network (VPN), wireless network access, video teleconferencing, and virtual meeting that will allow the staff to work on more mobile and reliable systems.

Successful accomplishment of this goal will be measured through outcome-based measures such as those listed below:

- increased agility of IT infrastructure resources and service levels
- increased flexibility and quality of seat management service



Goal 5 - Maximize the Strategic Allocation of IT Resources

The NRC maximizes IT/IM investments through IT portfolio management, supported by the IT governance. Portfolio management and governance is used to control and direct IT investments, prioritize investments that offer the highest value, and ensure business needs are met effectively and within defined budget constraints.

The following three strategies have been adopted to maximize IT governance and the allocation of IT resources:

- Strategy 1: Enhance IT governance through the integration of IT investment management, performance management, and enterprise architecture.
- Strategy 2: Utilize strategic sourcing strategies.¹⁶
- Strategy 3: Enhance IT strategic planning to drive budget formulation.

The NRC uses a capital planning and investment control (CPIC) approach (as defined in the Clinger-Cohen Act of 1996) during the IT budget formulation¹⁷ process, as illustrated in Appendix B. The IT/IM Strategic Plan and the IT/IM Enterprise Roadmap are used as inputs for that process to ensure that funded IT projects address the NRC's strategic goals. This approach gives a holistic view of an IT portfolio that incorporates enterprise architecture, IT security, portfolio management, and budget formulation¹⁸ to ensure maximized, mission-aligned, IT investments.

By accomplishing effective IT/IM oversight and control, the NRC will increase transparency into the IT governance and acquisitions process¹⁹. Implementing IT governance at the NRC will maximize the IT investment value and achieve economies of scale of the investments. As part of the governance process, the NRC will create improved agency wide IT/IM capabilities and standards to ensure these technologies are sustainable, agile and adaptable to future improvements.

The NRC is in the process of moving towards a services portfolio management approach to optimize costs and increase the service model agility and transparency. The NRC is evaluating and carrying out core IT contract vehicles (e.g., future of seat management at the agency), which shall supply foundational IT capabilities.

IT governance helps carry out the IT Sourcing Plan, the IT/IM Human Capital Plan, and the Reinvestment Plan (Appendix C). Successes of IT investments are measured through performance reviews and a method of portfolio management that responds to new technology requests while looking at agency IT/IM capabilities standards for compliance.

These strategies drive governance and allow managers to direct technology investments to areas that will ensure the organization's requirements are met. The NRC is looking toward future IT workforce needs along with the "office of the future" to supply the right technologies to the staff needed to run an effective organization. As part of this effort, we will review future

¹⁶ Project AIM 2020, Recommendation III-3

¹⁷ Project AIM 2020, Recommendation II-1 and II-2

¹⁸ Project AIM 2020, Recommendation II-1 and II-2

¹⁹ Project AIM 2020, Recommendation III-3a



technology needs on a continuing basis through IT governance and planning activities to verify and validate that IT resources are allocated within the NRC accordingly.

The outcome-based measures below have been developed to ensure fulfillment of this goal by increasing governance and transparency of the IT budget process:

- decreased cost deviation between budgeted and executed IT/IM resources
- achieved favorable score on Government wide IT dashboard
- achieved balanced IT/IM portfolio to support the agency's mission

Goal 6 - Prevent Unauthorized Access to Agency Information and Use of Government-Issued Credentials

Cyber security is a high-priority area for the NRC. Increasing information visibility, while protecting the integrity and security of agency information, presents a constant challenge. To address this challenge, the NRC plans, directs, and oversees a comprehensive cyber security program that emphasizes a balanced risk-management approach. The NRC must ensure all information is secure at all times, this includes licensees.

The agency continues to improve its cyber security program and has developed the following two strategies toward achievement of this goal:

- Strategy 1: Increase information and cybersecurity awareness.
- Strategy 2: Reduce information and cybersecurity vulnerabilities.

Security controls are required to enable risk-adjusted control elements in the computing environment to help prevent data loss. In the event of a cybersecurity incident, the NRC will institute continuity of operations (COOP) to sustain mission-critical functions and reconstitute critical assets to a trusted state, supporting ongoing mission operations.

Through continuous monitoring and through the use of the Computer Security Office (CSO) cyber risk dashboard, there is an enhanced visibility into the agency's security posture. These efforts enable a proactive response to mitigate and contain emerging cyber security threats. Additionally, the NRC works to secure government issued credentials, and preempt unauthorized access to agency systems, data, and personally identifiable information (PII).

The NRC is striving to stay at the forefront of technology in cyber security through continuous diagnostics and mitigation (CDM) and re-examination of the practices associated with the Federal Information Security Management Act (FISMA)²⁰ to ensure an appropriately balanced security posture. IT/IM capabilities to support a secure information environment include the accelerated and mandated use of Personal Identity Verification (PIV) credentials, digital signature technology improvements, enhanced security audit controls, and alternative two factor authentication solutions.

Some of the outcome-based measures defined to ensure fulfillment of this goal include the following:

- an NRC Cyber Security Dashboard score that reflects the agency's security posture as reviewed by the U.S. Department of Homeland Security
- improved organizational understanding of the need to manage cyber risk to systems, assets, data, and capabilities
- safeguards deployed to ensure delivery of critical services

²⁰ Project AIM 2020, Recommendation III-3c



3. LOOKING TOWARD THE FUTURE

In 1974, Congress created the NRC to ensure the safe use of radioactive materials for beneficial civilian purposes while protecting the people and the environment. For over 40 years, the NRC workforce has continued to ensure the safety and security of our country's civilian use of radioactive materials. In that same time period, technology has transformed the way the agency performs its mission. The NRC staff is now able to work in a more effective, efficient, and agile manner, documenting agency activities and sharing them with agency stakeholders in ways that were unimaginable even in the recent past. With knowledge of how quickly technology moves forward, the agency is keeping informed of industry-standard initiatives that will enhance the capabilities of our current and future workforce.

In moving to the future, and to support the success of the goals and strategies outlined, the NRC has taken the following actions:

- **Uphold accountability:** The NRC holds the CIO accountable for IT investment decisions, leaving the offices accountable for delivering IT capabilities in support of individual strategies in accordance with Federal Information Technology Acquisition Reform Act (FITARA) of 2014.
- **Monitor execution:** The NRC has established business line performance indicators for IT/IM to clearly articulate targets and offer ongoing oversight to ensure that IT/IM strategic goals are achieved and tracked over time. The NRC will be using a logic model process as one method to monitor execution success.
- **Collaborate across the agency:** The NRC encourages a collaborative culture to promote transparency and coordination on all IT/IM initiatives. Through the use of the annual Federal Employees Viewpoint Survey (FEVS), we are able to find opportunities for improvements.
- **Allocate resources strategically:** The NRC monitors IT initiatives and allocates resources strategically to ensure success through the budget formulation¹ and execution processes.
- **Communicate continuously:** The NRC ensures that clear direction is communicated to the agency's workforce and stakeholders.

In addition to developing technology- and information-based goals and strategies necessary to achieve the NRC's mission, an enterprise roadmap has also been developed. The enterprise roadmap is a high-level summary of the current and target state of the agency's IT/IM Program and presents key modernization initiatives to enable the agency's achievement of the goals and strategies outlined in the IT/IM Strategic Plan. Descriptions of several technology transformation initiatives are included below.

¹ Project AIM 2020, Recommendation II-1 and II-2

Cloud/Virtualization

The NRC adheres to a “virtualize first” philosophy and approach for all new applications and systems. With approximately three quarters of all production servers virtualized, along with the successful deployment of an NRC private cloud, the NRC is continuing to streamline data centers and move toward a consolidated data center approach.

Business applications continue to be virtualized to the greatest extent possible and, as if needed, older versions are retired or replaced with newer releases. Over time, additional data center consolidation efforts are expected and the core data center will offer support capabilities to meet critical agency requirements.

Concurrent with this internal consolidation, the NRC will evaluate compliant Cloud Service Providers (CSPs) based on the requirements contained in the Federal Risk and Authorization Management Program (FedRAMP) to determine the optimal security controls and acceptable risks for migrating existing IT services to the cloud. As FedRAMP continues to develop, and issue guidance on high impact cloud service security controls, the NRC will expand our cloud solutions to include high impact systems.

Through expanded virtualization, the NRC will better enable the use of IT resources to support the agency’s future mobile workforce. The NRC will also expand cloud services to store and share official information with our strategic partners, allow access to data from remote locations and execute scientific simulations remotely. The NRC will also expand its use of cloud applications to include Software as a Service (SaaS) framework for highly commoditized items such as e-mail, data storage, and work productivity tools.

Disaster Recovery

The NRC will expand the disaster recovery (DR) program to manage and enhance enterprise wide disaster recovery capabilities. Increased visibility and awareness of the DR program across the agency will ensure a better, timelier, decision making process in the event of a disaster. As we have seen from the 2011 Fukushima Dai-ichi event, disasters either man-made or naturally occurring can happen and plans need to be in place for such an incident. The DR program will integrate with the agency’s COOP program, ensuring that DR decisions and solutions are directly related to specific COOP requirements.

Cloud computing makes more resilient DR solutions possible within the agency. The DR program will continually assess the agency’s DR capabilities to include cloud solutions, COOP requirements, and specific IT systems to ensure that mission-related activities are supported at all times.

Future DR will make greater use of real-time incremental replication to make data, systems, and their configurations available for continuous support of mission-essential functions. Processes will be defined to enable recovery prioritization of mission-essential IT capabilities in an event of a disaster.

Mobility

The NRC is making authoritative data accessible from anywhere, at any time, on any device--internationally and domestically. Requirements to build a mobility program include; scalability, flexibility, security, and adaptability. Current plans related to mobility include expanding the

“Bring Your Own Device” effort, cloud-based solutions, and mobile public Web site and search capabilities.

The NRC will improve digital mobility through development of clear technical standards and requirements that meet Digital Government Strategy mandates. The NRC will engage other Federal agencies to discuss best practices and look for future opportunities to support its mobile workforce and the public.

The NRC will assess efforts to improve processes to expand the use of device-agnostic mobile solutions across the agency as well as the use of mobile computers and thin client terminals to allow greater flexibility and enhanced productivity of our agency’s mobile workforce.

The NRC is expanding its engagement with the international community. To support our internationally mobile workforce, the NRC will assess methods to expand its file transfer and networking capabilities from international locations.

Mobility will also be expanded to the use of tablets to help the resident inspectors² in performing their mission essential functions by providing more readily available access to NUREGs and the Code of Federal Regulations (CFR). In the future, access to mission essential applications through mobile technologies will continue to enhance the staff’s ability to work from anywhere, at any time, and on any device both internationally and domestic.

Cyber Security and Privacy

Cyber security is managed by the NRC’s CSO, which is responsible for planning, directing, and overseeing the cyber security program, consistent with applicable laws, regulations, and management initiatives. The Chief Information Security Officer (CISO) offers counsel to the Chairman, Commission, and senior NRC management about programmatic, infrastructure, and administrative aspects of cyber security to achieve and exceed compliance with federal cyber security initiatives and mandates.

Mission-critical applications and continuity of operations procedures are of significant importance to the agency. The NRC continues to invest in its cyber security risk management program, which supplies a governance framework around IT investment and portfolio decisions to ensure they are aligned with the NRC’s cyber security priorities. In an effort to maintain a vigilant security environment, the agency will continuously improve its continuous diagnostic and mitigation efforts.

A continuous assessment of the agency’s risk tolerance to achieve a balanced cyber security posture is ongoing. For example, the NRC is able to respond proactively to incoming threats through the use of software that employs statistical analysis to detect previously unknown computer viruses.

Understanding the risk associated with the use of large amounts of unclassified documents available through public document-access programs, the NRC closely monitors the development and enhancement of the controlled unclassified information (CUI) effort, ensuring even unclassified agency information is monitored. Increasing the ease by which agency documents are approved, the NRC will enhance its digital signature capabilities to promote more effective tracking, sharing and storage of approvals and workflows.

² Project AIM 2020, Recommendation III-3b

The NRC's privacy program is based on the Privacy Act of 1974, as carried out by OMB Circular A-130, the E-Government Act of 2002, and other agency policies. A cornerstone of the NRC's privacy program is that privacy and security offer complementary policies to enforce compliance with cyber security standards designed to protect personally identifiable information. A key objective of the program is to balance the operational needs of the agency with the privacy interests of individuals. The NRC's privacy program consists of statutory and policy-based requirements and is carried out by Privacy Act officers, privacy points-of-contact, and offices.

Enterprise Technology Standards

A key component of IT operational effectiveness is maintaining a standardized technical environment. When technical approaches and services are standardized, several benefits are realized, including:

- simplification of planning and governance through reduced complexity of the IT footprint and redundant data
- reduction of IT spending through improved re-use of infrastructure, software platforms, data points, and related skills
- improvement of IT systems and service delivery

The NRC will achieve these benefits by developing and deploying architectural approaches and principles. These initiatives include: setting organizational IT standards; establishing vendor-agnostic technical standards; streamlining products by capability; standardization of solution platforms, and simplifying data integration between systems to promote consistent use of authoritative data sources. To achieve the results of reduction of IT spending, the NRC will focus on reusable solution platforms that put into place common infrastructure, hardware, and software tools.

Unified Communications

In today's fast-moving world, it is becoming increasingly difficult to enable communication and collaboration across the enterprise. Unified communication (UC) integrates today's communication technologies into seamless capabilities through the use of real-time communication services such as instant messaging, user presence, voice (including Internet protocol telephony), audio, and video conferencing.

The NRC will increase communications effectiveness through the development of a UC strategy. The UC strategy will look at enhancing video conferencing capabilities and replace older telecommunication technologies with Internet protocol-based capabilities. Voice over Internet protocol (VoIP) phones—and especially softphones—allow for greater flexibility and will reduce connectivity requirements and decrease operational spending for telephony services.

To allow for the expanded uses of UC, the NRC will continue to expand the IP network bandwidth within HQ, the regions and the resident inspectors' offices. This will allow for a higher capacity to host a virtual desktop and the virtual private network (VPN) to support an anticipated increase of teleworking staff.

4. SUMMARY

Through the IT/IM Strategic Plan and the IT/IM Enterprise Roadmap, the NRC has defined technology goals, strategies, and activities that will benefit the planning and execution of current and future IT/IM services and solutions. Because of the implementation of these goals and strategies, the NRC will get the right information to the right people at the right time, ultimately strengthening agency performance by enabling NRC staff and stakeholders to effectively license and regulate the nation's civilian use of radioactive material.



Appendix A - FEDERAL MANDATES

Regulatory and statutory requirements are significant drivers of performance management, strategic planning, and governance at the U.S. Nuclear Regulatory Commission (NRC). Guidance detailed in the Clinger-Cohen Act (CCA), the Government Performance and Results Act (GPRA), the Government Paperwork Elimination Act (GPEA), the Federal Enterprise Architecture (FEA), OMB Circular A-130, and the Federal Information Security Management Act (FISMA) have helped the NRC shape how it leverages information technology (IT) to optimize performance and cost.

Determining how IT and information management (IM) can help address the strategic initiatives of the agency is the responsibility of the Chief Information Officer (CIO). As the leading IT change agent for the agency, the NRC's CIO ensures that a strategic agenda for IT is outlined, that it is aligned with the agency's mission, and that it is executed effectively and efficiently.

The Clinger–Cohen Act of 1996 established the Federal CIO position, effectively renaming the former position of “Information Resources Manager” and raising the profile of the position. The CIO is an executive-level position that reports directly to the agency head, with IT/IM as the primary responsibility.

OMB Circular A-130 requires agencies to adhere to a CPIC process.

Table 3 Clinger–Cohen Act Responsibilities

Clinger-Cohen Act CIO Responsibilities	
Enterprise Architecture	Develop, maintain, and facilitate a sound and integrated IT architecture
CPIC	Establish capital planning processes that monitor and evaluate the performance of IT projects
	Integrate with the decision making processes for budget, financial, and program management
IT Security and Privacy	Ensure that the information security policies, procedures, and practices are adequate
Information Resource Management (IRM) IT Strategic Plan	Ensure the IT meets the policies and procedures of the Clinger-Cohen Act and Chapter 35 of Title 44, United States Code
	Promote the effective and efficient design and operation of major IRM processes
	Analyze and revise the mission-related processes of the executive agency before making significant IT investments
IT Workforce Planning	Assess requirements established for agency personnel, executive, and management levels of the agency in IT and IRM knowledge
	Develop strategies and plans for hiring, training, and professional development
Governance/Performance Management	Ensure performance measurements are prescribed for IT used by the executive agency
	Benchmark performance in terms of cost, speed, productivity, and quality of outputs and outcomes

The NRC developed its first Open Government Plan, published on the agency's Web page, in response to OMB mandates.

By instituting enterprise wide IT governance, the NRC will ensure the deployment of IT infrastructure and enterprise services needed for reliable and secure services.

The table below outlines the Federal policies for governing IT investments at the NRC.

Table 4 Federal Policies for Governing IT Investment

Federal Policies for Governing IT Investments		
Law/Memorandum	Title	Date
<u>GPRA</u>	Government Performance and Results Act	1993
<u>H.R.2061</u>	Digital Accountability and Transparency Act of 2013	2014
<u>FITARA</u>	Federal Information Technology Acquisition Reform Act	December 2014
<u>OMB Circular A-123</u>	Management's Responsibility for Internal Control	December 2004
<u>OMB Circular A-130</u>	Transmittal Memorandum #4, Management of Federal Information Resources	November 2000
<u>CFO Act of 1990</u>	Chief Financial Officers Act of 1990	January 1990
<u>Public Law 104-106</u>	Clinger-Cohen Act of 1996	1996
<u>FISMA</u>	Federal Information Security Management Act	2002
<u>FISMA Modernization</u>	Federal Information Security Management Modernization Act	December 2014
<u>Public Law 107-347</u>	E-Government Act of 2002	2002
<u>FOIA</u>	Freedom of Information Act	2007
<u>Memorandum 10-31</u>	Immediate Review of Information Technology Projects	July 28, 2010
<u>Memorandum 12-10</u>	Implementing PortfolioStat	March 30, 2012
<u>GPRA-MA</u>	Government Performance and Results Act–Modernization Act	2010
<u>Title 44 U.S. Code Section 3506</u>	Federal Information Policy/ Federal Agency Responsibilities	2011
<u>OMB Memorandum M-11-29</u>	Chief Information Officer Authorities	August 8, 2011
<u>The Common Approach to Federal Enterprise Architecture, May 2, 2012</u>	Enterprise Architecture Guidance	May 2, 2012
<u>Memorandum 05-02</u>	Increasing Shared Approaches to Information Technology Services	May, 2, 2012
<u>Memorandum 13-09</u>	Fiscal Year 2013 PortfolioStat Guidance: Strengthening Federal IT Portfolio Management	March 27, 2013
<u>Federal Enterprise Architecture Framework (Version 2)</u>	Enterprise Architecture Guidance	January 29, 2013
<u>Federal Acquisition Regulation Part 39</u>	Acquisition of Information Technology	Revised December 2013

Appendix B - NRC IT MANAGEMENT PROCESSES

The U.S. Nuclear Regulatory Commission (NRC) has carried out management processes to ensure that its current and planned information technology (IT) investments conform to the strategic plan and contribute to fulfillment of the NRC mission and operational goals.

IT Governance

IT governance is defined as the structure, processes, and systems that form the oversight and coordination of the Office of Information Systems (OIS) functional areas, specifically enterprise architecture (EA), capital planning and investment control (CPIC), and portfolio management. Governance is defined as the policies, processes, and procedures through which the NRC exercises authority and control of its IT activities. A governance plan defines the rules by which the organization does its business, identifies the domains of decision making (and linkages among domain levels), and formalizes the management processes that execute decision making.

IT governance is a basic mechanism for the review, approval, and rejection of IT capital assets and plans as they move through the agency's management structure. A sound governance process facilitates well-reasoned resource allocation and business decisions.

OMB Circular A-123, Management's Responsibility for Internal Control, establishes management's fundamental responsibility to develop and maintain effective internal controls. It requires that information be communicated to relevant personnel at all levels within an organization. The information should be relevant, reliable, and timely. IT governance helps to achieve this focus.

The NRC has defined a governance structure that includes the use of governance boards. The intent of these governance boards (described below) is to work with the CIO and the Chief Financial Officer (CFO) to better align IT/IM resources to the mission of the NRC.

The following table summarizes the responsibilities and membership of the various groups that supply key technology/information management governance within the NRC.

Table 5 Key IT Governance Groups

Key IT Governance Groups		
Group	Responsibilities	Membership
Information Technology/ Information Management Portfolio Executive Council (IPEC)	Provides business representation from the mission offices and regions for the oversight of the agency wide IT portfolio.	Co-chaired by the agency Chief Information Officer (CIO) and CFO, with a voting membership comprised of office directors and regional administrators.
Information Technology/ Information Management Board (ITB)	Provides oversight and makes recommendations on strategic IT investments and their supporting activities to promote the most effective use of agency resources.	The voting membership is comprised of representatives appointed by office directors and regional administrators.
	Provides insight into the development and revision of processes supporting the selection, control, and evaluation of IT investments.	Non-voting advisory members from various offices offer additional insight, as needed.
Architecture Council (AC)	Supports and oversees the IT Enterprise Roadmap, including help in planning for investment prioritization and definition of architecture segments.	The AC is comprised of key technical stakeholders from across the organization including Production Integration, Computer Security Office, Customer Service, Enterprise Architecture; Solutions, Investment Management, Operations, Project Management, as well as Privacy, Records, and Acquisition.
	Manages and oversees the enterprise architecture and technical standards; including identifying, reviewing, and updating the current and proposed standards.	

The IT Portfolio Executive Council (IPEC) and the Information Technology/Information Management Board (ITB) play key roles in the governance process. The IPEC gives the final approval of the NRC IT budget and investment prioritization¹. The ITB helps to ensure that major IT investments are cost-effective; appropriately integrated within the defined EA; are delivered according to schedule and budget: and are closely tied to the mission objectives of the agency.

Capital Planning and Investment Control

The CPIC, as defined by OMB Circular A-11, is a systematic approach to managing the risks and returns of IT investments for a given mission. It is an integrated management process which calls for the continuous selection, control, and lifecycle management and evaluation of IT investments and is focused on achieving a desired business outcome. The NRC is dedicated to a sound CPIC process that enables the NRC's funded investments to support the mission, goals, and strategies of the agency.

The NRC uses a capital planning process to ensure its IT projects address the NRC's business strategies. The NRC manages these projects within cost, schedule, technical, and performance baselines. Monitoring and control of investments is as important to success as investment selection. Control mechanisms have been established to maximize project success through accurate project scheduling and cost assessment.

¹ Project AIM 2020, Recommendation II-1 and II-2

Portfolio Selection, Consolidation, and Budget

Managing IT investments as a portfolio simplifies the assessment of tradeoffs among competing investment opportunities. Best practices for IT portfolio management include gathering, evaluating, and prioritizing all of the IT projects within an agency. The IT portfolio management process, within the purview of the CIO, involves creating and maintaining the IT portfolio, recognizing the needs and strategic goals of the agency, and selecting the right set of IT investments to maximize the return on investment.

The current budget environment necessitates that the NRC work more effectively with fewer resources. New budget formulation and investment prioritization processes have been instituted to achieve these goals.

IT portfolio management has been addressed within the NRC by the establishment of the IPEC and the ITB. The IPEC serves as the executive management body responsible for determination of the NRC IT/IM strategic direction. Additionally, the IPEC is responsible for management of the IT/IM portfolio by setting current fiscal year priorities. The ITB reviews and recommends changes to the agency's IT/IM architecture, including the portfolio of IT/IM systems, technologies, and standards. The ITB aligns IT/IM investments and technology standards to the NRC's mission, and ensures that IT investments are made according to the agency priorities set by the IPEC. The ITB also does periodic performance reviews of major IT/IM investments and reviews new proposals and current IT/IM investments based on the following: the IPEC priorities, alignment with strategic direction, ability to integrate into the NRC's IT/IM architecture, conformance with technology standards, and potential risks.

Enterprise Architecture

The NRC EA practice maintains an IT architecture that is consistent with OMB guidance. The NRC's EA defines the business, performance, applications, data, and technology that support the achievement of the agency's mission. The EA encompasses both the the strategic plan and the enterprise roadmap, and the EA is used to bridge the IT/IM, the mission programs, and the regional offices together, and creates communication channels to improve interoperability of processes and systems.

The NRC's EA methods are to drive technology requirements and investments by business needs. The EA supplies a roadmap, aligned with the agency's strategic goals, and enables the informed management of change, ensuring compliance with legislative and regulatory drivers (e.g., OMB Circular A-130 and the Clinger-Cohen Act).

The NRC supports the EA program and the IT management processes through the following activities:

- development of the FY 2016-2020 IT/IM Strategic Plan
- advancement of the IT/IM Roadmap to ensure consistency in IT programs, messages, and themes communicated to agency stakeholders
- maintenance of the agency systems/application data calls and system inventories

- data gathering and reporting for the Integrated Data Collection (IDC) and Federal IT dashboard
- identification and highlighting of duplicate or incompatible IT/IM capabilities
- identification of improvement opportunities for governance processes
- support for IT budget formulation and prioritization
- identification of authoritative data (AD) and its sources to support a more efficient, enterprise wide approach to data sharing

The NRC derives benefits from information integration and sharing across all levels of government; by evolving the EA and as-is roadmap; and by aligning IT investments to the Federal reference models under the FEA guidelines produced by OMB.

Appendix C - ORGANIZATIONAL INFLUENCES

The U.S. Nuclear Regulatory Commission's (NRC's) IT/IM Strategic Plan has been developed under the mandates outlined in OMB Memorandum M-13-09, "Strengthening Federal IT Portfolio Management." These mandates offer a solid foundation for developing IT Portfolio Management strategies that result in effective and efficient IT services provided to government stakeholders and the American public. Information below outlines ways in which the NRC has incorporated these mandates into its information technology and information management (IT/IM) organization and operations.

IT Sourcing Plan

The NRC maintains a contract to supply information technology infrastructure and support services to the NRC. This contract includes the planning and the processing of enterprise software licenses. Using NRC contract vehicles, the NRC maintains a comprehensive inventory of agency software licenses and the agency wide procurement and distribution of software. For personal computers (desktops and laptops), OIS gives full lifecycle management of assets from procurement, configuration, delivery, maintenance, refresh, and retirement.

Approach to IT/IM Human Capital Planning

The successful implementation of the CIO mission is dependent upon individuals and their teams to direct and carry out the goals and strategies of the agency. The Office of the Chief Human Capital Officer (OCHCO) at the NRC has carried out a variety of human capital strategies to maintain and bolster employee knowledge and skills. As an increasing number of employees become retirement-eligible, the NRC has been working to foster knowledge transfer activities and is committed to nurturing workforce development through continued training, staff development, and a positive work environment. The NRC has made the agency knowledge management (KM) program a priority by deploying innovative KM support structures and appointing office KM champions to actively capture high value/high risk knowledge and skills. The NRC uses the results of the annual Federal Employee Viewpoint Survey to continuously improve and is consistently ranked as one of the best places to work in the Federal government.

Reinvestment Plan

The NRC regularly evaluates the effectiveness of the agency's technology resources through its Portfolio Management and Investment Review processes. Cost savings that result from these evaluations allow the agency to consider reinvestment into innovative ways to make better use of existing IT/IM capabilities or adopt new ones.

Through the collaborative efforts of EA, IT Policy and Governance, and IT/IM Customer Service, agency stakeholders are involved in the development and implementation of action plans that address new undertakings as opportunities for improvement are discovered. Continuous improvement is a key component of the IT/IM Strategic Plan and drives the path forward in supporting the agency's strategic objectives.

Accessibility

The NRC is actively addressing efforts to create a diverse environment where individuals of all abilities can work, interact, and develop into leaders. The NRC abides by all laws and Office of

Personnel Management policies for maintaining a diverse workforce. More information on the NRC diversity policies can be found in the NRC's [Comprehensive Diversity Management Plan](#).

In 1998, Congress amended the Rehabilitation Act to require Federal agencies to make their systems and services accessible to people with disabilities. Section 508 was enacted to eliminate barriers in Electronic and Information Technology (EIT), to make available new opportunities for people with disabilities, and to encourage the development of IT/IM capabilities that will help achieve these goals. Under Section 508, agencies must give disabled employees and members of the public access to information that is comparable to the access available to others.

The NRC has one Section 508 coordinator, and the agency completed a baseline review of EIT in December 2013. The NRC is using the results of that review to implement a more defined and rigorous Section 508 program.

The NRC offers Section 508 awareness training through its internal learning system, iLearn, and recommends all staff within the NRC take this course. The [Section 508 standards](#) are the technical requirements and criteria that are used to measure conformance. More information on Section 508 and the technical standards can be found at <http://www.section508.gov>.



Appendix D - ACRONYMS

Acronym	Definition
AD	authoritative data
BYOD	bring your own device
CCA	Clinger-Cohen Act
CDM	continuous diagnostics and mitigation
CFO	Chief Financial Officer
CIO	Chief Information Officer
CIPIMS	Construction Inspection Program Information Management System
CLE	collaborative learning environment
COOP	continuity of operations
CPIC	capital planning and investment control
CSO	Computer Security Office
CUI	controlled unclassified information
DR	disaster recovery
EA	enterprise architecture
EIT	electronic and information technology
eRAI	electronic request for additional information
ERDS	emergency response data system
FAMIS	Federal acquisition management information system
FEA	Federal enterprise architecture
FedRAMP	Federal risk and authorization management program
FEVS	Federal employees viewpoint survey
FISMA	Federal Information Security Management Act
FITARA	Federal Information Technology Acquisition Reform Act
FOIA	Freedom of Information Act
FY	fiscal year
GFE	government-furnished equipment
GPEA	Government Paperwork Elimination Act
GPRA	Government Performance and Results Act
GPRA-MA	Government Performance and Results Modernization Act
IDC	integrated data collection
IP	internet protocol
IPEC	information technology/information management portfolio executive council
IRM	information resource management (used for OMB mandate)
IRM	information and records management (used for data management)
IT/IM	information technology/information management
ITB	Information technology/information management board
KM	knowledge management
LAN	local area network
MDM	master data management
NMED	nuclear materials events database
OCHCO	Office of the Chief Human Capital Officer
OCIMS	operations center information management system
OEDO	Office of the Executive Director for Operations
OMB	Office of Management and Budget

Acronym	Definition
PM	project management
PRA	Paperwork Reduction Act
RPS	reactor program system
SaaS	software as a service
STAQS	strategic acquisition system
UC	unified communications
U.S. NRC	U.S. Nuclear Regulatory Commission
VoIP	voice-over-Internet protocol
VPN	virtual private network
WAN	wide area network
WBL	Web-based licensing

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Daniel S. Shapiro
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11. ABSTRACT (200 words or less)

The U.S. Nuclear Regulatory Commission's (NRC) Information Technology/Information Management (IT/IM) Strategic Plan for Fiscal Years 2016 – 2020 describes how IT/IM goals and strategies at the NRC support and enable the agency's mission. The IT/IM Strategic Plan responds to Federal Requirements in the Paperwork Reduction Act (PRA) and the Clinger-Cohen Act of 1996, serving as the NRC's strategic information resources management plan in accordance with Section 3506(b)(2) of the PRA. The plan lays out the mission and vision for the agency's IT/IM efforts and establishes six goals along with the associated strategies. It also defines measures of success in attaining the goals. This plan provides the technology and strategic guidance that helps to inform and support the agency's budget formulation and prioritization processes over the next 3 – 5 years.

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