



Indian Health Service

The Federal Health Program for American Indians and Alaska Natives

Office of Information Technology IT Strategic Plan

for

FY2011-FY2015

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Recommendation and Approval

This document is recommended for approval.

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1. Executive Summary

The mission of the Indian Health Service (IHS) Office of Information Technology (OIT) is to provide a highly reliable and efficient health information system to support the delivery of health care to the American Indian and Alaska Native (AI/AN) People that the IHS serves. The 2011-2015 Information Technology Strategic Plan (ITSP) describes the strategic approach the OIT intends to take to meet this challenge.

The 2011-2015 ITSP cascades from the current IHS Strategic Plan and fully supports the priorities of the IHS Director:

Priority 1: To Renew and Strengthen our Partnership with Tribes

Priority 2: In the Context of National Health Insurance Reform, to Bring Reform to IHS

Priority 3: To Improve the Quality of and Access to Care

Priority 4: To Make All of our Work Accountable, Transparent, Fair, and Inclusive

In particular, the IHS partnership with the Tribes has been strengthened through the joint development of the ITSP by the OIT and the Information Systems Advisory Committee (ISAC). As a result of this partnership, the 2010-2011 ISAC priorities played a prominent role in the development of the goals and objectives of the ITSP.

An overarching goal of the OIT is to ensure that the Information Technology (IT) needs of the IHS are aligned with and fully supported by the current and planned information technology applications. The OIT recognizes that this goal can only be accomplished through ongoing collaboration with the IHS programs and the Tribes, careful attention to customer feedback, and frequent reviews of the effectiveness and performance of IT systems that are in place.

2. Introduction

The OIT has a continuing commitment to an enterprise-wide approach to IT planning, investments, and standards. The ITSP provides a strong foundation for effective information resources and technology management for current and future years. A collaborative strategic planning process is employed, which includes IHS, Tribal, and Urban (I/T/U) technology stakeholders. The ISAC is the principal forum for Tribal input to be gathered and resulting documents disseminated to Tribes for review.

The Clinger-Cohen Act of 1996 requires that each Federal agency update their Five-Year ITSP on an annual basis. The ITSP is primarily OIT and IHS Headquarters focused and does not include direct input from the IHS Areas. The assumption is that the IHS Areas will use the ITSP as a guide as the Area ITSPs are updated annually.

2.1. Purpose

The purpose of the OIT ITSP is to articulate the mission, vision, and strategic direction of information technology resources within the OIT and to publish the OIT Fiscal Year (FY)2011-FY2015 IT strategic goals and objectives.

2.2. Background

There is an expanding dependence on health IT in the delivery of effective and efficient health care. Comprehensive, accurate, and timely information is needed about the individuals and communities for whom services are provided. The OIT has proven the ability to integrate health IT and the delivery of health care. In order to maintain and improve this capability, the IT planning and operations are kept consistent with the current needs of the I/T/U clinical and administrative programs.

Information Technology provides the means for internal and external communication and collaboration between the I/T/U and its customers. The ability to exchange health information between providers is essential for proper health care, and communication among IHS senior management is a critical need for IHS operations.

2.3. Scope

The ITSP uses a five-year planning horizon (FY2011-FY2015) with annual updates and major updates if required to coincide with the OIT strategic planning cycle. The ITSP cascades from the IHS Director's Priorities and the goals and objectives of the IHS Strategic Plan, and fully supports the mission and vision of the IHS.

The ITSP was developed using a collaborative approach to ensure that all OIT stakeholders could provide input into the process and have their needs presented and considered.

The flow of the ITSP began with an analysis of the current IT environment and an assessment of the impact and direction stemming from the internal and external drivers. Following this analysis, the target IT environment was developed based on the known and projected business needs of the IHS. A gap analysis was performed between the current and target environments in order to develop a transition strategy for attaining the target environment.

The ITSP goals and objectives are strongly influenced by the Nationwide Health Information Network (NHIN) requirements for interoperability and information exchange, and the demands for Meaningful Use as related to the Electronic Health Record (EHR). In addition, the increased need for Information Security is a major factor. The protection of personal and medical information is a paramount responsibility for the IHS.

3. Strategic Roadmap

The OIT recognizes the need to collaborate with others to continue to improve its health care delivery capabilities. The long-standing relationships with the Tribes and other organizations, such as the Department of Veterans Affairs (VA), allows for the leverage of resources and knowledge sharing concerning clinical practice management and administrative reporting and interoperability.

The ITSP is a critical document to other strategic planning and operational processes. It drives the allocation and management of resources and is a critical component in the budget process.

3.1. Strategic Elements

3.1.1. OIT IT Vision

Vision Statement

Meeting customer needs by providing excellent, reliable, interoperable health information services that protect privacy while connecting patients, providers, and payers, enabling improved patient outcomes and controlled costs in support of the IHS Mission.

3.1.2. IHS Director's Priorities

Priority 1: To Renew and Strengthen our Partnership with Tribes

Priority 2: In the Context of National Health Insurance Reform, to Bring Reform to IHS

Priority 3: To Improve the Quality of and Access to Care

Priority 4: To Make All of our Work Accountable, Transparent, Fair, and Inclusive

3.1.3. ISAC Priorities

The ISAC is chartered by the IHS to help guide the development of a co-owned Indian health information infrastructure and information systems. The ISAC works in partnership with representatives from the IHS, Tribes, and Urban programs to develop priorities and provide guidance to the Director of the IHS.

The FY2012-2013 ISAC Priorities are listed in the table below:

PRIORITY ORDER	PRIORITY NAME	PRIORITY ORDER	PRIORITY NAME
1	PRACTICE MANAGEMENT (REVENUE GENERATION, COST AVOIDANCE, ICD-10)	10	DATA QUALITY/ACCURACY
2	INTEROPERABILITY / HEALTH INFORMATION EXCHANGE	11	IHS MASTER PATIENT INDEX (MPI)
3	ELECTRONIC HEALTH RECORD	12	ADMINISTRATIVE MANAGEMENT TOOLS
4	INFRASTRUCTURE/ARCHITECTURE	13	BANDWIDTH
5	CLINICAL DECISION SUPPORT	14	SECURITY AND REGULATORY COMPLIANCE
6	MEANINGFUL USE	15	INNOVATION OF TECHNICAL AND BUSINESS PRACTICES
7	WORKFORCE DEVELOPMENT	16	PATIENT COMMUNICATION
8	TELEMEDICINE COORDINATION	17	ENVIRONMENTAL HEALTH
9	TRIBAL SHARES CALCULATION		

3.1.4. Strategic Drivers

There are many external and internal strategic drivers that impact the direction of OIT.

EXTERNAL DRIVERS	INTERNAL DRIVERS
<ul style="list-style-type: none"> • Consumer Privacy • Government Accountability Office Reports • Department of Health and Human Services (HHS) IT Strategic Plan • HHS Secretary's Priorities • Legislation • Office of Management and Budget (OMB) Directive and Guidance • Office of the National Coordinator for Health Information Technology (ONC) Strategic Plan • Presidential Initiatives and Directives 	<ul style="list-style-type: none"> • Customer Satisfaction • Cyber Security Plan • Health Needs of the AI/AN People • IHS Director's Priorities • IHS Inspector General Audits • IHS Program Office Business and IT Needs • IHS Stakeholder needs • IHS Strategic Plan • Tribal Input/Consultation

3.1.5. External Drivers

OIT is firmly committed to supporting the President's and the HHS Secretary's consolidation and modernization efforts to meet the challenges of several initiatives:

- The American Recovery and Reinvestment Act of 2009
- Meaningful Use
- Health Information Technology (HIT)
- Health Care Improvement Act
- Centers for Medicare and Medicaid Services Directives
- Health Insurance Portability and Accountability Act (HIPAA)
- Federal Information Security Management Act

Additionally, the drive for greater efficiency in Federal IT spending encourages Federal departments and agencies, including HHS and IHS, to share infrastructures and services. The ITSP combines the Department's enterprise-wide IT strategies and IHS-specific technologies, plans, and operational activities to accomplish the IHS mission.

3.1.6. Internal Drivers

The internal drivers that impact IT strategic planning are the IHS strategic goals and objectives, which support infrastructure/technology enhancements and program-driven challenges, such as, health care changes, beneficiary needs and changing requirements, and provider and community support.

3.1.7. Standards

Information technology has become a basic component for IHS clinical and administrative activities and operations; therefore, the need for a comprehensive, enterprise-wide Agency strategy for complying with operating and security requirements and directives has become critical. To meet this strategic need, OIT will establish an IT Standards Committee (SC) that reports to the IHS CIO. The SC will provide an avenue for IHS Area offices and the OIT to jointly develop and approve enterprise-wide IT standards to be used throughout IHS.

OIT is actively engaged in the ONC efforts to achieve interoperability of electronic health records by 2014. IHS is inserting standard contract language promoting interoperability into new health IT contracts.

3.2. OIT Strategic Goals

Goal 1:	Ensure involvement of Tribes in advisement and participation in Information Technology related decision-making process that encourages stronger collaborations; innovations in the management of programs; and timely and important issues being brought forward for consideration.
Goal 2:	Enhance the quality, accuracy, availability, and delivery of clinical information and applications to improve care of patients and communities.
Goal 3:	Enhance the administrative information management and applications to optimize our business processes and health care operations.
Goal 4:	Implement an enterprise approach to information technology infrastructure that will foster communication, innovation, collaboration, standardization, and interoperability.
Goal 5:	Achieve excellence in the management of IT resources through efficient and effective fiscal, project, operations, and human capital management.
Goal 6:	Provide information security that ensures the confidentiality, integrity, and availability of IHS information resources.

4. Strategic Direction

IT plays a critical role in supporting IHS as it carries out its complex, wide-ranging, and evolving mission and objectives. OIT uses IT investments and support programs that protect the health of AI/AN People and provide essential health care services. IT systems are interconnected with partners in the Federal, state, local, Tribal, and private sectors.

The OIT operates on a stable foundation, which consists of three major investments: the Resource and Patient Management System (RPMS), the National Patient Information Reporting System (NPIRS), and Infrastructure, Office Automation, and Telecommunications (IOAT). These investments fund “internal projects” such as hardware acquisitions, software maintenance, training and enhancements, etc. and, “external initiatives” driven by HHS and OMB.

In addition to the three designated investments, there are six Capital Planning and Investment Control (CPIC)-designated IHS programs:

- RPMS
- NPIRS
- IOAT
- CPIC
- Enterprise Architecture (EA)
- Security

These programs, in addition to the IHS Telehealth Program, are outlined below with a description, current environment, target environment, and high level milestones. There are also performance measures for each program in Section 6.2 of this document.

4.1. RPMS

The RPMS is the health information system supporting the delivery of health care services at I/T/U facilities, as well as many of the business operations for these programs. A comprehensive health information suite, RPMS supports the complete cycle of patient care from registration through revenue collection, and includes, together with components from the VA and interfaces to a number of commercial off-the-shelf products, a complete EHR.

The RPMS is unique in that it is the only system designed specifically to support the direct care and public health mission of IHS and supports the electronic government health information technology strategy. Electronic capabilities include interoperability and information exchanges with commercial laboratories, states, partner medical communities, and insurance payers.

4.1.1. Current Environment

The RPMS is in use at all Federal IHS programs and the great majority of Tribal and Urban programs in the Indian health system. In addition, non-I/T/U implementations of RPMS are increasing in number and are expected to continue, given the national push for HIT adoption and the need for affordable systems that have proven capabilities.

The RPMS staff helps define, plan and collaborate on the software development lifecycle (SDLC) of the various integrated applications that make up RPMS.

The RPMS software domain applications are categorized into three distinct groups. These are:

- Clinical applications
- Practice management applications
- Infrastructure support applications

The RPMS HIT projects within these groups support modernization and enhancements that not only meet the needs of the users of the I/T/U health system, but Federal standards and criteria of the Health Information Technology for Economical and Clinical Health (HITECH) Act. The HITECH Act sets current RPMS environment SDLC initiatives that include:

- Clinical Application Support: Ensure meaningful use of the RPMS EHR and Quality of Care Improvements
- Practice Management Application Support: Meeting criteria for financial incentives on behalf of I/T/U beneficiaries, improving revenue cycle and achieving efficient patient administrative operations
- Infrastructure Support - Health Information Exchange (HIE), architecture, and configuration management

4.1.2. Target Environment

These objectives align to the OIT Strategic goals 1-5:

- **Objective 1:** Ensure that the IHS-EHR is certified to meet all national standards including those for meaningful use. Institute a state-of-the-art Computerized Patient Record (CPR) environment.
- **Objective 2:** Interoperability/Health Information Exchange: Support the exchange of health care related information with IHS, Federal, state, Tribal, urban, public health, contract, the National Health Information Network, HIEs, and other healthcare service organizations. Facilitate standards-based interoperability.
- **Objective 3:** Provide a quality billing/general ledger system that is integrated into the IHS health information system with associated training.
- **Objective 4:** Plan, develop and deploy software to support International Classification of Diseases (ICD)–10 implementation
- **Objective 5:** Provide a range of opportunities for patient communication including social media, personal health records, patient portals, and contact with health care providers.

The RPMS has opportunities to overcome and advance in the following areas:

1. Funding to support operations & maintenance and training on new software development will need to be identified and sustained.
2. The Meaningful Use initiative has resulted in a large number of new Tribal and Urban programs seeking to implement the RPMS EHR.

3. **Decisions by the VA concerning the Veterans Health Information Systems and Technology Architecture will affect the ability to continue to adopt VA applications and releases: particularly Laboratory and Pharmacy in the short term.**
4. **Self Governance and Compacting: The cost to fully support the RPMS system is not proportional to the number of users. When Tribes exercise their self governance and compacting rights, there is an immediate decrease in users and available funds, but the costs to support the RPMS system remain the same.**

4.1.3. Milestones

The RPMS program milestones provide more specificity on how the program objectives will be accomplished in support of the IT strategic plan. The objectives align to OIT strategic goals 1-5. The RPMS milestones that are currently planned for completion within the FY2011-2015 timeframe define the target environment and help meet the identified objectives.

RPMS OBJECTIVES	RPMS MILESTONES	FISCAL YEAR
Objective 1: Ensure that the IHS-EHR is certified to meet all national standards including those for meaningful use. Institute a state-of-the-art CPR environment.	Milestone 1.1: Certification of RPMS under ambulatory, inpatient, and behavioral health criteria in order to support the achievement of Meaningful Use by I/T/U hospitals and providers	2011
	Milestone 1.2: Development of browser-enabled software: starting with EHR but across business functions, and development of Active Service Pages model capabilities	2011-2015
	Milestone 1.3: A standardized approach to middle tier architecture will be developed, including meaningful data modeling and documentation to facilitate future software and interface development	2011-2015
	Milestone 1.4: Development and maintenance of the technical infrastructure necessary to support electronic prescribing and other types of health information exchange	2011-2015
	Milestone 1.5: Enhancements devoted to the continued integration of mental health services with primary care, under the direction of the Division of Behavioral Health.	2011-2015
	Milestone 1.6: Continued improvements in favor of small site implementation and deployment, particularly in the areas of Laboratory and Pharmacy	2011-2015
Objective 2: Interoperability/Health Information Exchange: Support the exchange of health care related	Milestone 2.1: Implement and support I/T/U operational data exchange with the National Health Information Network, including interfaces to accommodate data exchange for ePrescribing, reference labs, and immunization registries.	2011-2012

RPMS OBJECTIVES	RPMS MILESTONES	FISCAL YEAR
information with IHS, Federal, state, Tribal, urban, public health, contract, the National Health Information Network, HIEs, and other healthcare service organizations. Facilitate standards-based interoperability.	Milestone 2.2: Facilitate the adoption and integration of standards and specifications, like Systematized Nomenclature of Medicine Clinical Terms (SNOMED-CT), RxNorm, and Logical Observation Identifiers Names and Codes (LOINC), supported by implementation of an enterprise terminology service.	2011-2012
	Milestone 2.3: Nationwide implementation and operational support of the MPI and other enterprise services like the Personal Health Record (PHR) and clinical decision support.	2011-2012
Objective 3: Provide a quality billing/general ledger system that is integrated into the IHS health information system with associated training.	Milestone3.1: Enhancements in Practice Management applications to improve performance across the revenue cycle, under the direction of the Office of Resource Access and Partnerships.	2011-2015
	Milestone3.2: Develop graphical user interfaces (GUI) for RPMS Registration, Third Party Billing & Accounts Receivable, Scheduling, Admit-Discharge-Transfer, Contract Health Service, and Referred Care Information System	2011-2015
Objective 4: Plan, Develop and Deploy software to support ICD-10 implementation	Milestone 4.1: Implement an enterprise terminology service	2011-2013
	Milestone 4.2: Develop and deploy modifications to RPMS applications and database structure	
	Milestone 4.3: Coordinate training and deployment	
Objective 5: Provide a range of opportunities for patient communication including social media, personal health records, patient portals, and contact with health care providers.	Milestone 5.1: Develop and Deploy a PHR	2011-2013

4.2. Telehealth

The IHS and Tribes increasingly use state-of-the-art technology to improve access to care for communities they serve through video conferencing, secure computer software, and innovative monitoring and outreach methods. Currently, a large number of I/T/U programs deliver care for their patients through Telehealth. The OIT strives to support health care delivery to AI/AN communities through expanded uses of Telehealth innovation and capability.

The OIT supports Telehealth by:

- Providing an IT infrastructure that will allow the IHS and Tribes to efficiently and consistently deliver quality Telehealth services.
- Responding with dedication to new customer Telehealth requirements.
- Enhancing a framework that both supports existing Telehealth operations and is positioned to accommodate change and growth.

4.2.1. Current Environment

The OIT supports the efficient delivery of Telehealth services through the IHS and Tribal sites. The IT infrastructure enhances the health and well-being of AI/AN People by providing a well-managed and secure enterprise IT environment.

All twelve IHS Areas are using or providing some form of Telehealth services. Nonetheless, there are many more I/T/U Indian health sites that could benefit from these services. As the level of Telehealth services increases, the demands on the IT infrastructure will also increase.

The OIT is committed to supporting a broad range of Telehealth services in partnership with IHS Areas and I/T/U.

4.2.2. Target Environment

The Telehealth supports OIT Strategic Goals 1 - 5. The Telehealth Program objectives are the following:

- **Objective 1** - Enhanced videoconferencing capability
- **Objective 2** - Integrated platforms supporting Store-and-Forward Telehealth
- **Objective 3:** Established standards for remote monitoring and mobile health (mHealth)
- **Objective 4** - Improved Telehealth data flow, coding, and workload reporting
- **Objective 5:** Expanded network-to-network connectivity
- **Objective 6** - Support for Picture Archiving Communication System (PACS) and Teleradiology
- **Objective 7** - National user collaboration
- **Objective 8** - Telehealth Service Network (TSN) (proposed)

Telehealth Service Network

Many AI/AN communities have limited access to primary and specialty care. Such limitations in access can result in delays in diagnosis and treatment for a number of health conditions, leading to variations in both quality of care and health care cost.

The Telehealth tools enhance timely consultation, diagnosis, and treatment. They support best practice approaches to care. They enable new “connected care” models of service that emphasize relationships and communication while facilitating improved health care quality, cost-effectiveness, and value.

While a growing number of I/T/U health facilities and programs have experience with Telehealth, the Indian health system has yet to leverage its collective successes and experience with Telehealth so that all AI/AN communities can benefit from new Telehealth service models. Critical variations exist regarding the availability of Telehealth, the infrastructure to use it, and the operational support to implement and maintain expanded Telehealth services. Such variation hampers opportunities for local communities to extend their care models. It restricts strategic implementation of innovation on a scale that can extend care and consultation to Indian health communities in a financially sound business model.

This proposal outlines a new approach to expanded access in Indian health: a TSN. The TSN model includes clinical Telehealth services (for primary and specialty care), modernized infrastructure, regional technical/coordination/training capacity, and national program support. This multi-dimensional approach will emphasize Telehealth integration into regional systems of care, enhance service model viability through the co-location of difficult-to-recruit clinicians and support staff, and permit 24/7 after-hours shared service capability among regional Telehealth clinical care centers for select disciplines (e.g. psychiatry and pharmacy).

A distributed TSN will expand access to quality care across the Indian health system.

4.2.3. Milestones

The Telehealth program milestones provide more specificity on how the program objectives will be accomplished in support of the OIT strategic goals 1-5. The Telehealth milestones that are currently planned for completion within the FY2011-2015 timeframe define the target environment and help meet the identified objectives.

The Telehealth milestones for each objective are the following:

TELEHEALTH OBJECTIVES	TELEHEALTH MILESTONES	FISCAL YEAR
Objective 1: Enhanced Videoconferencing capability	Milestone 1.1: Implementation of quality of service measures in support of Telehealth	2011
	Milestone 1.2: Recommendations concerning videoconferencing equipment purchase and use	Ongoing
	Milestone 1.3: Updated planning for bandwidth requirements to support expanded videoconferencing	Annual
	Milestone 1.4: Draft and disseminate best practice guidelines concerning use of videoconferencing for clinical services	2011
Objective 2: Integrated platforms supporting store-and- forward Telehealth.	Milestone 2.1: Complete RPMS-Alaska Federal Health Care Access Network bidirectional interface	2011
	Milestone 2.2: Complete RPMS-Joslin Vision Network bidirectional interface	2011
	Milestone 2.3: Finalize guidelines for the transport of store-and-forward data files	2012

TELEHEALTH OBJECTIVES	TELEHEALTH MILESTONES	FISCAL YEAR
Objective 3: Establish standards for remote monitoring and mHealth	Milestone 3.1: Conduct formal requirements process for remote monitoring platform	2011
	Milestone 3.2: Develop strategy to pilot test and expand remote monitoring and mHealth use within Indian Health	2011
Objective 4: Improved Telehealth Data Flow, Coding, and Workload Reporting	Milestone 4.1: Complete requirements analysis for data flow, coding, and workload reporting processes	2011
	Milestone 4.2: Complete requirements analysis for 3 rd party billing process	2011
	Milestone 4.3: Design, approve, and disseminate RPMS coding requirements in response to above milestones	2011
	Milestone 4.4: Finalize interfaces for data flow/integration with RPMS	2012
Objective 5: Network to network connectivity	Milestone 5.1: Pilot test use of Internet 2 as standardized approach for network-to-network connectivity	2011
	Milestone 5.2: Develop operational plan for expanded network-to-network connectivity with outside health care organizations	2011
	Milestone 5.3: Support HHS planning for 3 rd Internet 2 access point in Albuquerque, NM	2011
Objective 6: Support for PACS and Teleradiology	Milestone 6.1: Working with Biomedical Engineering, develop standardized recommendations for integrating tele-radiology reports into RPMS and health information systems	2012
Objective 7: National user collaboration	Milestone 7.1: Establish a national Telehealth user group for increased collaboration among I/T/U sites using or interested in using Telehealth tools	2011

4.3. NPIRS

The NPIRS houses IHS's national data repository within the National Data Warehouse (NDW). The purpose of NPIRS/NDW is to provide a broad range of clinical and administrative information to managers at all levels of the Indian health system to allow them to better manage individual patients, local facilities, regional and national programs and to produce various reports that are required by statute and regulation.

It is critically important to maintain an Agency-wide data repository that supports a collective database from all AI/AN health programs to meet national reporting requirements, and for Federal budget advocacy, formulation, and justification.

4.3.1. Current Environment

The NPIRS provides our customers various routine reports including the annual production of the official Workload Reports and end of fiscal year User Population reports for use in Headquarters' official count determination. Web-published reports allow access by authorized users to pre-designed reports on a safe, secure IHS web site.

The current environment for NPIRS reflects the following:

- Maintain current operational capabilities
- Increase the breadth of useful information NPIRS can provide to its customers
- Provide helpful information about the quality of their data to those who are providing it
- Maintain and improve accuracy of derived reports and analyses
- Maintain and improve timeliness of available information
- Maintain and improve user access to data
- Improve our ability to assure data integrity
- Improve user understanding of the meaning of the data
- Maintain and improve user confidence in the data and information NPIRS provides
- Maintain and improve documentation of the system, its processes, and its data
- Improve program management to better use and account for the use of government resources
- Provide the NPIRS infrastructure in a manner that facilitates and encourages competitive sourcing for program/organization specific data marts

4.3.2. Target Environment

From an IT strategic plan perspective, the NPIRS supports OIT Strategic Goals 1-6. Each numbered objective reflects the same numbered strategic goal.

Following from the high-level program mission and vision, the NPIRS program objectives are identified to define the target environment so that NPIRS can adequately support and enable the achievement of the NPIRS Program vision and the OIT strategic plan goals. The NPIRS objectives are the following:

- **Objective 1:** Enhance steady-state operations while collaborating with IHS and Tribal sites
- **Objective 2:** Enhance the quality, accuracy, availability and delivery of NDW information
- **Objective 3:** Integrate clinical data and administrative data to improve on health care operations
- **Objective 4:** Implement a technology refresh process for an enterprise approach to harbor standardization, communication and IT infrastructure
- **Objective 5:** Enhance management of IT resources to ensure effective fiscal technology upgrade path

- **Objective 6:** Enhance information security procedures to ensure confidentiality, integrity, and availability of NDW data

4.3.3. Milestones

The NPIRS program milestones provide more specificity on how the program objectives will be accomplished in support of the OIT Strategic Goals 1-6. NPIRS milestones that are currently planned for completion within the FY2011-2015 timeframe define the target environment and help meet the identified objectives.

NPIRS OBJECTIVES	NPIRS MILESTONES	FISCAL YEAR
Objective 1: Enhance steady-state operations while collaborating with IHS and Tribal sites	Milestone 1.1: Establish new exports with sites	2011
	Milestone 1.2: Maintain and improve NPIRS documentation	2011-2015
Objective 2: Enhance the quality, accuracy, availability and delivery of NDW information	Milestone 2.1: Enhance data quality, error, and tracking reports for customers	2011-2012
	Milestone 2.2: Enhance un-duplication process of related data	2011-2012
Objective 3: Integrate clinical data and administrative data to improve on health care operations	Milestone 3.1: Collaborate with stakeholders to evaluate/enhance NDW infrastructure for increased functionality	2011
	Milestone 3.2: Conduct collaborative activity with other agencies to pilot/establish an enterprise level multi-dimensional database environment for Business Intelligence	2011
Objective 4: Implement Technology Refresh Process for an enterprise approach to harbor standardization, communication and IT infrastructure	Milestone 4.1: Implement a technology refresh process for standardization within the IHS EA structure	2012-2014
Objective 5: Enhance management of IT resources to ensure effective fiscal technology upgrade path	Milestone 5.1: NPIRS technology refresh: Maintain currency and improve technology of NPIRS systems by enhancing management of IT resources	2011-2015

NPIRS OBJECTIVES	NPIRS MILESTONES	FISCAL YEAR
Objective 6: Enhance information security procedures to ensure confidentiality, integrity and availability of NDW data	Milestone 6.1: Enhance operating system and database security tools to increase NPIRS information security posture	2011-2012

4.4. IOAT

The IOAT investment encompasses all the common information technology resources such as hardware, software, networks, services, staffing and associated security efforts that are required to design, develop, test, deliver, monitor, control, support, maintain or manage IT services. The IOAT investment includes the infrastructure components that are the fundamental technology support for essential IHS data services access and data availability to facilitate systems.

The IOAT investment reports on all IT projects supporting universal IHS user systems, communications, and computing infrastructure.

The IOAT has full support and interest in implementing cloud computing and server virtualization in support of reducing server count within the IHS. The implementation of a full cloud initiative is hampered to by the rural environments where our sites and facilities are located. Virtualization holds much higher promise for the IHS and it can be implemented independent of rural bandwidth constraints.

4.4.1. Current Environment

The current state of the IOAT environment reflects largely the progression that the IHS infrastructure has faced over its time in service. Standardization and a more structured approach to IT services have been identified as a goal. Efforts are currently underway to change this and this is reflected in the target environment described below.

Currently the IHS infrastructure environment exists in a distributed model where a few common services, the core network administration/authentication services, and connectivity are centrally administered.

The IHS infrastructure is largely managed by the Division of Information Technology Operations (DITO) within the OIT. OIT/DITO is currently providing more operational direction via published standards and adoption of supported technology, which in turn, provide leadership to Areas and sites. These standards of support, as published, begin to provide a roadmap for the Area and site decision makers but fall short of enforceable enterprise-wide standards largely due to independent authority.

4.4.2. Target Environment

Because the IOAT investment is foundational to many aspects of IT within the IHS, we support multiple OIT strategic goals, specifically goals 3-5.

The IOAT target environment supports OIT strategic goals 3-5 by focusing on these objectives:

- **Objective 1** - Increased bandwidth and connectivity
- **Objective 2** - Increased enterprise level solutions via more centralized acquisitions and administration and elimination of redundant distributed services
- **Objective 3** - Standardization of software and hardware for support and security
- **Objective 4** - Integrated project and organization planning

Increased Bandwidth and Connectivity:

Increasing bandwidth and connectivity are key components in rural sites that are participating in current and future technologies. The remote facilities (often referred to as “edge” sites) are for the most part prevented from participation in current IT solutions because of the difficulty associated with low bandwidth and low connectivity. The connectivity and bandwidth issues force the IHS to architect and use distributed client-server models for IT services, which defeats economies of scale achieved by implementing enterprise-level solutions, increases costs, and requires local administration. Increased bandwidth and connectivity are expected to be ongoing objectives.

Increase enterprise level solutions:

The OIT will begin to offer more centralized solutions. One such option that is garnering a lot of attention is cloud computing. Though cloud computing requires significant participation from user communities within the IHS and its affiliated Tribal partners to become effective, it would allow centralized administration of systems and free the local administrators who no longer have need of expertise in, or control over the technology infrastructure “in the cloud” that supports them.

Standardized software and hardware:

It is an objective for the IOAT investment is to achieve more uniformity, standardization, centralized management to employ solution expertise and create fewer burdens on the local admin. Candidates for action under this solution include any common hardware platform, application, and operating system.

Integrated project and organizational planning:

The integrated project and organizational planning initiative would be a low-cost effort to have sites and Areas communicate their project plans and goals, much as is being completed at OIT. The target for the IOAT investment is to move to enterprise-wide solutions that invite Tribal participation or adoption by Tribes in their own environment to foster peer, collaborative efforts that support Tribal inclusion or Tribal independence of the IHS. The current lack of coordination for all IT activities, purchasing, and implementation across IHS results in higher operational friction and cost.

4.4.3. Milestones

The IOAT program milestones provide more specificity on how the program objectives will be accomplished in support of the OIT strategic Goals 3-5. IOAT milestones that are currently planned for completion within the FY2011-2015 timeframe define our target environment and help meet the identified objectives.

The IOAT milestones for each objective are the following:

IOAT OBJECTIVES	IOAT MILESTONES	FISCAL YEAR
Objective 1: Increase bandwidth and connectivity at all sites utilizing the IHS wide area network	Milestone 1.1: Complete a review and redesign of the IHS network	2011
	Milestone 1.2: Implement redesign	2011-2014
	Milestone 1.3: Monitor and evaluate	2014-2015
Objective 2: Increase enterprise level solutions across the IHS network	Milestone 2.1: Review and determine virtualization and cloud computing candidate sites	2011
	Milestone 2.2: Implementation solutions	2012-2013
Objective 3: Increase the use of standardized software and hardware	Milestone 3.1: Complete a review of possible hardware and software candidates for standardization	2011
	Milestone 3.2: Implement standardized software and hardware solutions	2012-2014
	Milestone 3.3: Monitor and evaluate	2015
Objective 4: Implement Integrated organization-wide project and organizational planning	Milestone 4.1: Develop a baseline of planning through use of questionnaire and feedback	2011
	Milestone 4.2: Amalgamate responses and develop projects and plans	2011-2012
	Milestone 4.3: Implement project plans	2012-2015

4.5. Security

As IHS increasingly relies upon IT to run daily operations and most importantly in the delivery of health and wellness services to the AI/AN People, information security becomes increasingly important as a driver of Agency IT strategy and investment.

The Division of Information Security (DIS) strives to meet the IHS Information Security Program mission:

Provide an agency-wide secure and trusted information technology environment in support of IHS's commitment, in partnership with AI/AN People, to raising their physical, mental, social, and spiritual health to the highest level.

The evolving nature of and increasing reliance on IT in IHS demands increased attention on information security. This includes providing safeguards to protect the confidentiality, integrity, and availability of patient health and other critical information. Clearly defined information security strategies are needed to shape IT in support of IHS mission and goals.

4.5.1. Current Environment

There are a number of enterprise-wide security controls in place such as:

- Vulnerability scanning devices
- Antivirus and spam filtering software
- Virtual private network appliances
- Secure socket layer applications
- Intrusion prevention devices
- Internet policy enforcement software
- Automated centralized patching software

In addition, the current IHS information security environment has multiple controls in place, including a penetration testing program, Information System Security Awareness training and Rules of Behavior, Certification and Accreditation (C&A) program, Incident response team, and access control tracking through the online Information Technology Access Control application.

Information Security has opportunities to overcome and advance in the following area:

- Implementing a log management program: Centralized event log management is essential to collecting, cataloging, and analyzing logs from IT devices agency-wide, but must be done with care not to over-saturate available bandwidth.

4.5.2. Target Environment

From an IT strategic plan perspective, the DIS supports OIT strategic plan Goal 6: Provide information security that ensures the confidentiality, integrity and availability of IHS information resources.

Following from the high-level program mission and vision, three program objectives are identified to define our target environment so that DIS can adequately support and enable the achievement of the Information Security Program vision and the OIT strategic plan Goal 6. The Information Security Program objectives are the following:

- **Objective 1:** Improve the overall information security posture to adequately assure the confidentiality, integrity, and availability of information and information resources
- **Objective 2:** Implement security standards agency wide, consistent with Federal guidelines and best practices
- **Objective 3:** Support integration of information security into IHS lines of business

4.5.3. Milestones

The Information Security Program milestones provide more specificity on how the program objectives will be accomplished in support of the OIT strategic plan Goal 6. The DIS milestones that are currently planned for completion within the FY2011-2015 timeframe define our target environment and help meet the identified objectives.

The Information Security Program milestones for each objective are the following:

SECURITY OBJECTIVES	SECURITY MILESTONES	FISCAL YEAR
<p>Objective 1: Improve the overall information security posture to adequately assure the confidentiality, integrity, and availability of information and information resources</p>	<p>Milestone 1.1: Complete and maintain National Institute of Standards and Technology (NIST) C&A for every major application and general support system</p>	2011-2015
	<p>Milestone 1.2: Achieve and maintain compliance with the HIPAA Security Rule and the HITECH Act</p>	2011-2015
	<p>Milestone 1.3: Implement an IHS-wide penetration testing capability</p>	2011-2012
	<p>Milestone 1.4: Improve the current IHS Incident Response capability and integrate with the HHS Computer Security Incidence Response Center</p>	2011
	<p>Milestone 1.5: Implement an automated patch management system, vulnerability management system, and centralized logging solution agency wide</p>	2011-2013
	<p>Milestone 1.6: Implement an encryption of data at rest and in motion solution</p>	2011-2013
<p>Objective 2: Implement minimum security standards agency wide, consistent with Federal guidelines and best practices</p>	<p>Milestone 2.1: Establish a capability to develop, document, validate, and disseminate standard hardware and software components and configurations in accordance with NIST and other Federal guidelines</p>	2011-2013
	<p>Milestone 2.2: Promote cooperation and coordination with IHS personnel in development and maintenance of standard hardware and software components and configurations</p>	2011-2015
<p>Objective 3: Support integration of information security into IHS lines of business</p>	<p>Milestone 3.1: Ensure IT investments have documented plans for addressing security at each stage in the investment lifecycle, including incorporation of security into current IT capital plans</p>	2011-2015
	<p>Milestone 3.2: Accurately identify information security funding requirements to ensure that budget requests are responsive to information security priorities and ensure that security budget planning aligns with CPIC requirements</p>	2011-2015

4.6. CPIC

The CPIC is a structured approach to managing IT investments. CPIC ensures that IT investments align with the IHS mission, strategic goals, and objectives, and support business needs, while minimizing risks and maximizing returns throughout the investment's life cycle.

Investments in IT can dramatically enhance organizational performance. When carefully managed, IT becomes a critical enabler to improve business processes, makes information widely available, and reduces the cost of providing essential Government services. As IT rapidly evolves, the challenge of realizing its potential benefits also becomes much greater.

4.6.1. Current Environment

There are a number of enterprise-wide initiatives in place, such as:

- CPIC
- Enterprise Performance Lifecycle (EPLC)
- Earned Value Management (EVM)
- Information Technology Governance
- Information Technology Dashboard Reporting

These initiatives described below.

CPIC

CPIC relies on systematic selection, control, and continual evaluation processes to ensure that the investment's objectives are met effectively.

EPLC

The EPLC defines the standard life-cycle phases of an IT project and the stage gate reviews that the project must undergo before it can transition from one phase to another.

EVM

The IHS policy establishes EVM as an IT investment management requirement and incorporates EVM as a fundamental element of IHS CPIC and investment portfolio management oversight. IHS uses EVM to monitor cost, schedule, and performance data on all IT investment costs to ensure that investments are delivered on time and perform within budget and scope.

IT Governance

The IHS IT Governance process is used in the management of capital assets in the IHS, from development of an IT business needs statement to the IHS review and approval of the business case. This process adheres to the HHS CPIC policies and procedures for the preparation and review of IT business cases. The IHS IT governance process allows IHS to optimize the benefits of scarce IT resources, address the IT support of strategic functional requirements, and comply with applicable laws and guidance.

IT Dashboard

The IT Dashboard provides the public with an online window into the details of Federal information technology investments and provides users with the ability to track the progress of investments over time.

4.6.2. Target Environment

From an IT strategic plan perspective, the CPIC supports OIT Strategic Plan Goal 5: Achieve excellence in the management of IT resources through efficient and effective fiscal, project, operations, and human capital management.

Following from the high-level program mission and vision, three program objectives are identified to define our target environment so that CPIC can adequately support and enable the achievement of the CPIC Program vision and the OIT strategic plan Goal 5.

The CPIC program objectives are the following:

- **Objective 1:** Improve overall information technology capital planning to adequately assure that all IT spending is done efficiently and effectively
- **Objective 2:** Create an environment where all IT employees' have a basic understanding of the capital planning and investment requirements
- **Objective 3:** Establish and maintain consistent agency-wide policies and procedures to manage IT investments and projects

4.6.3. Milestones

The CPIC program milestones provide more specificity on how the program objectives will be accomplished in support of the OIT strategic plan Goal 5. CPIC milestones that are currently planned for completion within the FY2011-2015 timeframe that defines our target environment and help meet the identified objectives.

The CPIC milestones for each objective are the following:

CPIC OBJECTIVES	CPIC MILESTONES	FISCAL YEAR
Objective 1: Improve the overall information capital planning to adequately assure that all IT spending is done efficiently and effectively	Milestone 1.1: Ensure all IT development, modernization and enhancements are completed through the Enterprise Performance Life cycle (EPLC)	2011-2015
	Milestone 1.2: Accurately identify CPIC funding requirements to ensure that budget requests are responsive CPIC priorities and ensure that planning aligns with CPIC requirements	2011-2015

CPIC OBJECTIVES	CPIC MILESTONES	FISCAL YEAR
Objective 2: Create an environment where all IT employees' have a basic understanding of the capital planning and investment requirements	Milestone 2.1: Present quarterly CPIC topics using distant learning techniques	2011-2015
Objective 3: Establish and maintain consistent agency-wide policies and procedures to manage IT investments and projects	Milestone 3.1: Annually update CPIC policies to comply with HHS, OMB, and all other applicable Federal requirements	2011-2015
	Milestone 3.2: Maintain agency-wide CPIC procedures to comply with HHS, OMB, and all other applicable Federal requirements and disseminate	2011-2015

4.7. Enterprise Architecture

The OIT is responsible for managing the EA program, which was established to improve the effectiveness of the business processes, data, resources, services, systems and technology that support IHS mission and goals.

Enterprise architecture is a comprehensive framework used to manage and align an organization's IT assets, people, operations, and projects with its operational characteristics. The enterprise architecture defines how information and technology will support the business operations and provide benefit for the business.

The Enterprise Architecture provides a "blueprint," a road map of sorts, for building (or acquiring) and implementing IHS information systems that directly support the IHS mission and that link IHS IT assets with its mission. The EA program supports IHS efforts to:

- Build a common understanding of IHS's future IT direction
- Identify systems and information needed to support IHS business processes
- Define IHS's technology infrastructure
- Document the management processes for aligning IT to business

Following the guidelines and specifications of the "blueprint" ensures investments that not only align with the IHS mission directly but also facilitates interoperability across all IHS systems.

4.7.1. Current Environment

Considerable progress has been made towards the development of the EA program infrastructure within OIT. The current EA environment includes the following:

- Lead the planning and development of the OIT Strategic Plan and the Transition Strategy

- Develop a national IHS Technical Service Profile that aligns to the HHS Technical Reference Model requirements
- Participate with HHS EA Identity, Credential, and Access Management (ICAM) Segment Architecture in developing a more detailed view into the current and target state service architecture, and aligning those services with the framework outlined in the Federal ICAM guidance
- Continue the support of and reporting to the HHS EA Repository, including model changes, data updates, and business segment activity
- Partake as a critical partner within the EPLC stage gate reviews for all proposed IT projects
- Expand EA collaboration activity to include Headquarters, Area business owners, clinical and administrative programs, hospitals, clinics, urban sites and Tribes
- Embark on EA communications, marketing, and training activities to increase the knowledge and awareness of enterprise architecture within the IHS

4.7.2. Target Environment

From an IT strategic plan perspective, the Enterprise Architecture supports OIT strategic goals 3, 4, and 5.

- **Objective 1:** Create an IHS blueprint that captures the business architecture, the technical architecture, and the business processes to enhance health care operations
- **Objective 2:** Further develop the IHS EA reference models to demonstrate alignment of the major IT investment with the business and technical architectures
- **Objective 3:** Develop and maintain technical standards that are integrated in the enterprise infrastructure and operations

4.7.3. Milestones

The EA program Milestones provide more specificity on how the program objectives will be accomplished in support of the OIT strategic plan Goals 3-5. EA Milestones that are currently planned for completion within the FY2011-2015 timeframe define our target environment and help meet the identified objectives.

The EA milestones for each objective are the following:

EA OBJECTIVES	EA MILESTONE	FISCAL YEAR
Objective 1: Create an IHS blueprint that captures the business architecture, the technical architecture, and the business processes to enhance	Milestone 1.1: The As-Is set of IHS business and technical architectures completed	2011-2012
	Milestone 1.2: To-Be set of IHS business and technical architectures completed	2012-2013
	Milestone 1.3: Gap analysis of business architecture	2013-2014

EA OBJECTIVES	EA MILESTONE	FISCAL YEAR
health care operations	and technical architecture completed	
	Milestone 1.4: Transition strategy of business architecture and technical architecture completed	2014-2015
Objective 2: Further develop the IHS EA reference models to demonstrate IT investment alignment with the business and technical architectures	Milestone 2.1: Business, service, and technical reference models integrated	2012-2014
	Milestone 2.2: Data reference model and performance models integrated with business and technical architecture	2014-2015
Objective 3: Application of technical standards and standard configurations that are integrated into the enterprise infrastructure and operations	Milestone 3.1: Identification and enterprise-wide sharing of all applicable technical standards	2011-2012
	Milestone 3.2: Oversight process to monitor and enforce standards compliance	2011-2012

5. Assumptions and Constraints

5.8. Assumptions

The following facts and statements, which are understood to be true, will help achieve the OIT strategic goals and objectives outlined in this plan:

1. The VA health IT products will contribute to meeting I/T/U health IT requirements.
2. The OIT will continue its health IT collaborations and IT sharing relationship with the VA, other partners, and pertinent HHS operating divisions.
3. The OIT will continue to participate in the development of standards through the Federal Health Architecture, under the ONC for Health IT.
4. The OIT will continue to deploy and employ adopted standards, e.g., Health Information Technology Standards Panel, Health Level 7, National Council for Prescription Drug Programs, LOINC, SNOMED-CT; ICD10 and will have no identified business case for standards that have not been adopted, e.g., the Human Gene Nomenclature.
5. Use of and adherence to Federal Enterprise Architecture models will continue to be mandated by oversight organizations, e.g., OMB.
6. In general, the Federal government will continue down the path of outsourcing, although return of some contracted work to the Federal workforce will occur.

5.9. Constraints

The following are potential obstacles to achieving the OIT strategic goals and objectives outlined in this plan:

1. Not all IT and information resources management functions and workforce are under the direct control of the IHS Chief Information Officer (CIO).
2. IHS has no specific IT budget line item; rather, the IHS IT funding is interwoven into the IHS budget as a part of the infrastructure in support of programs, services, functions, and activities.
3. There are departmental and other congressionally required and unfunded initiatives that must be performed.
4. The OIT 5-year ITSP was developed on the premise that OIT will be able to fulfill and support the objectives and initiatives contained within this plan contingent upon sufficient IHS IT funds being available.
5. The OIT will maintain the flexibility of meeting its objectives to address clinical and administrative IT needs in light of loss of funds due to OIT functions being considered as non-residual and other congressionally required functions IHS is mandated to assume.

6. Performance Management

The need to justify funding to maintain existing investments or to implement new information technology initiatives has driven an expanded demand for increased performance reporting, analysis, and management capability throughout the Federal Government.

The strategic vision of better performance for IT investments is being achieved through the coordinated focus of legislation and management guidance in three principal areas:

- Performance
- Budgeting
- Enterprise Architecture

The IHS CIO is responding to this demand for expanded reporting and improved performance management, by seeking an integrated solution aligning strategic and tactical planning with performance measurement.

Each of the OIT strategic goals and objectives described in the ITSP is based on a results-oriented management approach. The OIT will track progress toward each goal and objective through a series of performance measures.

6.1. Methodology

Planning and performance management are linked and performance managed on an aggregated “portfolio” basis using the EPLC structure and processes.

The driver-goal-objective-outcome alignment ensures that performance measures at all levels are always traceable back to OIT strategic goals and objectives. This alignment is essential to managing in the aggregate and to being able to add, update, or replace goals and objectives as necessary in the performance lifecycle. The alignment also allows flexibility by allowing high-level goals to be stated in general terms and to remain relatively permanent, helping organizational focus.

6.2. OIT Performance Measures for FY 2011

PROGRAM	FY11 PERFORMANCE MEASURES
RPMS	Performance Measure 1: Certification of RPMS under ambulatory, inpatient, and behavioral health criteria
	Performance Measure 2: Percentage of RPMS facilities/sites that install key patches and application versions within 45 days of release
Telehealth	Performance Measure 1: Completion of requirements processes for workload capture, coding, billing, and remote monitoring
	Performance Measure 2: Finalization of the plan for implementation of the TSN

PROGRAM	FY11 PERFORMANCE MEASURES
NPIRS	Performance Measure 1: Accuracy of reports: Specified report counts are accurate within a 1% margin of error
	Performance Measure 2: Security certification & accreditation: Percentage of security requirements that are met within 5 work days of scheduled date
IOAT	Performance Measure 1: Completion of the IHS data center move to the Bureau of Indian Affairs Albuquerque facility
	Performance Measure 2: Completion of the data center virtualization project
Security	Performance Measure 1: 100% of employees and contractors completing annual security training
	Performance Measure 2: 99% of incidents evaluated and reported to HHS Secure One Communications Center
CPIC	Performance Measure 1: Complete 3 distance learning trainings in FY11
	Performance Measure 2: For FY11: Oversee the approval of at least 75% of the development, modernization, and enhancements budget within IHS/OIT, and complete the first two stage reviews of the EPLC
Enterprise Architecture	Performance Measure 1: Complete the FY11 Stakeholder Report and Customer Survey by February 2011
	Performance Measure 2: Draft National Technical Standards Profile available by July 2011

Appendix A: OIT ITSP Goals, Mapped to Directors and ISAC Priorities

ISAC PRIORITY DESCRIPTION	2012 - 2013 RANKING	SUPPORTS IHS DIRECTOR'S PRIORITIES	2011-2015 OIT STRATEGIC GOALS
Practice Management (Revenue Generation, Cost Avoidance, ICD-10)	1	2	4
Interoperability/Health Information Exchange	2	3	2
EHR	3	3	2
Infrastructure/Architecture	4	2	3
Clinical Decision Support	5	3	2
Meaningful Use	6	3	2
Workforce Development	7	2	5
Telemedicine Coordination	8	3	2
Tribal Shares Calculation	9	1	1
Data Quality/Accuracy	10	3	3
IHS MPI	11	2	4
Administrative Management Tools	12	2	3
Bandwidth	13	3	3
Security And Regulatory Compliance	14	3	6
Innovation Of Technical And Business Practices	15	4	4

ISAC PRIORITY DESCRIPTION	2012 - 2013 RANKING	SUPPORTS IHS DIRECTOR'S PRIORITIES	2011-2015 OIT STRATEGIC GOALS
Patient Communication	16	3	6
Environmental Health	17	2	6

Appendix B: Table of OIT ITSP Goals and Objectives

STRATEGIC GOALS	OBJECTIVES
<p>Goal 1: Ensure involvement of Tribes in advisement and participation in Information Technology related decision-making process that encourages stronger collaborations; innovations in the management of programs; and timely and important issues being brought forward for consideration</p>	<p>Objective: Enhance steady-state operations while collaborating with IHS and Tribal sites</p> <p>Objective: Interoperability/Health Information Exchange: Support the exchange of health care related information with IHS, Federal, state, Tribal, urban, public health, contract, the National Health Information Network, HIEs, and other healthcare service organizations; facilitate standards-based interoperability</p>
<p>Goal 2: Enhance the quality, accuracy, availability, and delivery of clinical information and applications to improve care of patients and communities</p>	<p>Objective: Enhanced Videoconferencing capability</p> <p>Objective: Improved Telehealth data flow, coding, and workload reporting</p> <p>Objective: Expanded network to network connectivity</p> <p>Objective: Enhance the quality, accuracy, availability and delivery of NDW information</p> <p>Objective: Provide a range of opportunities for patient communication including social media, personal health records, patient portals, and contact with health care providers</p>
<p>Goal 3: Enhance the administrative information management and applications to optimize our business processes and health care operations</p>	<p>Objective: Integrate clinical data and administrative data to improve on health care operations</p> <p>Objective: Increased bandwidth and connectivity</p> <p>Objective: Create an IHS blueprint that captures the business architecture, the technical architecture, and the business processes to enhance health care operations</p> <p>Objective: Provide a quality billing/general ledger system that is integrated into the IHS health information system with associated training</p>

STRATEGIC GOALS	OBJECTIVES
<p>Goal 4: Implement an enterprise approach to information technology infrastructure that will foster communication, innovation, collaboration, standardization and interoperability</p>	<p>Objective: Integrated platforms supporting store-and-forward Telehealth</p> <p>Objective: Implement a technology refresh process for an enterprise approach to harbor standardization, communication, and IT infrastructure</p> <p>Objective: Increase enterprise level solutions via more centralized acquisitions and administration and elimination of redundant distributed services</p> <p>Objective: Integrated project and organizational planning</p> <p>Objective: Further develop the IHS EA reference models to demonstrate major IT investment alignment with the business and technical architectures</p> <p>Objective: Support for PACS and Teleradiology</p> <p>Objective: Plan, develop, and deploy software to support ICD-10 implementation</p>
<p>Goal 5: Achieve excellence in the management of IT resources through efficient and effective fiscal, project, operations, and human capital management</p>	<p>Objective: National user collaboration</p> <p>Objective: Establish standards for remote monitoring and mHealth</p> <p>Objective: Enhance management of IT resources to ensure effective fiscal technology upgrade path</p> <p>Objective: Standardized software and hardware for support and security</p> <p>Objective: Improve the overall information capital planning to adequately assure that all IT spending is done efficiently and effectively</p> <p>Objective: Create an environment where all IT employees' have a basic understanding of the capital planning and investment requirements</p> <p>Objective: Establish and maintain consistent agency-wide policies and procedures to manage IT investments and projects</p> <p>Objective: Develop and maintain technical standards that are integrated in the enterprise infrastructure and operations</p> <p>Objective: Telehealth service network (proposed)</p> <p>Objective: Ensure that the IHS-EHR is certified to meet all national standards including those for meaningful use. Institute a state-of-the-art CPR environment</p>

STRATEGIC GOALS	OBJECTIVES
<p>Goal 6: Provide information security that ensures the confidentiality, integrity and availability of IHS information resources.</p>	<p>Objective: Enhance information security procedures to ensure confidentiality, integrity, and availability of NDW data</p> <p>Objective: Improve the overall information security posture to adequately assure the confidentiality, integrity, and availability of information and information resources</p> <p>Objective: Implement security standards agency wide, consistent with Federal guidelines and best practices</p> <p>Objective: Support integration of information security into IHS lines of business</p>

Appendix C: References

Documents that were referenced in the development of the ITSP or that provide additional information are listed below:

- **HHS Strategic Plan, 2007-2012**
http://www.hhs.gov/strategic_plan/
- **HHS Information Resources Management Strategic Plan, 2007-2012**
<http://www.hhs.gov/ocio/ea/documents/proplans.html>
- **HHS Enterprise Transition Strategy, February 2009**
<http://www.hhs.gov/ocio/ea/documents/proplans.html>
- **IHS Strategic Plan, 2006-2011**
<http://www.ihs.gov/NonMedicalPrograms/PlanningEvaluation/>
- **IHS FY2009 Justification of Estimates for Appropriations Committees and Online Performance Appendix**
http://www.ihs.gov/NonMedicalPrograms/BudgetFormulation/bf_cong_justifications.asp
- **IHS Enterprise Transition Strategy (Draft), February 2009**
<https://workgroups.ihs.gov/sites/EA/default.aspx>

Recommendation and Approval

This document is recommended for approval.

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Theresa Cullen, MD, MS
RADM, U.S. Public Health Service
Chief Information Officer, IHS

January 6, 2011

Date

This document has been approved.

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Carolyn Crowder
Information Systems Advisory Committee Co-Chair

January 14, 2011

Date

This document has been approved.

//

Floyd Thompson
Information Systems Advisory Committee Co-Chair

January 6, 2011

Date

25 Point Implementation Plan

On December 9, 2010, the Office of the U.S. Chief Information Officer (CIO), Office of Management and Budget (OMB), issued the “25 Point Implementation Plan to Reform Federal Information Technology Management.” This document presents a bold, comprehensive plan to fundamentally change the manner in which Federal Agencies achieve IT operational efficiency and effectively manage large-scale IT programs.

The implementation plan has the following structure: Parts I and II, and sub-levels, A. through E. The details of the structure can be found at the following web link:

<http://www.cio.gov/documents/25-Point-Implementation-Plan-to-Reform-Federal%20IT.pdf>

PART I: ACHIEVING OPERATIONAL EFFICIENCY

A. Apply “Light Technology” and Shared Solutions

PART II: EFFECTIVELY MANAGING LARGE-SCALE IT PROGRAMS

B. Strengthen Program Management

C1. Align the Acquisition Process with the Technology Cycle

C2. Align the Budget Process with the Technology Cycle

D. Streamline Governance and Improve Accountability

E. Increase Engagement with Industry

The OMB CIO has set a two-year time frame to implement the 25 steps. As of this writing, the IHS is awaiting implementation guidance from Health and Human Services (HHS) and the OMB. As the HHS direction is received, the implementation steps and requisite task activity will be included in the 2011-2015 Strategic Plan and the annual Tactical and Work Plans.