



**NASA Headquarters
Information Technology & Communications Division**

**Information Technology Tactical Plan
FY2011, FY2012 and FY2013**

**Headquarters Information Technology Support Services
(HITSS) Contract**

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1 Purpose

This document provides the NASA Headquarters (HQ) Information Technology Tactical Plan for fiscal years 2011, 2012, and 2013. It serves as the basic planning document for NASA HQ IT. It does NOT include infrastructure and life-cycle services or enhancements or sustaining maintenance activities and infrastructure efficiencies. The initiatives contained within this plan are mainly customer facing, customer driven and customer submitted. The majority of the initiatives are collected from the Customer Advisory Council (CAC). All of the initiatives are prioritized by the CAC. The initiatives are listed with descriptions and estimates of core labor and other direct costs (ODC) to communicate a clear idea of the activities to the Information Technology and Communications Division (ITCD), customers and stake-holders.

This Tactical Plan is devised as a planning document to help the NASA HQ customers and ITCD to focus manpower and plan budgets, to address the requirements of our community, and to maintain compliance with Agency and Federal mandates. The plan proposes and provides a basic priority, benefits, rationale, and approximate cost for projects supporting the customers of HQ IT services.

2 Strategic Vision

Many guiding principles and business drivers influence the selection and ranking of initiatives in this plan, many of which are derived from the NASA Information Resources Management Strategic Plan as mandated by NPD 2800.1A. These principles are described below. However in the final analysis the CAC selects and ranks the initiatives.

2.1 Adapt to Emerging Technologies

“Provide an IT infrastructure that can evolve and adapt to emerging technologies and service models.”

IT has evolved largely through a bottom-up approach, with many related parallel efforts emanating from Centers and programs. This has resulted in an architecture that (as a whole) is slow to adapt and interoperates only at great expense.

NASA has facilities around the world, and mobile computing eliminates the concept of business hours. It is HQ’s goal to provide IT services that are available at all times and the technology to access those services from any location. As a design discipline, our services must be provided in a way to assure that they are always available. Highly available architectures attempt to reduce the cost of maintenance and service and position us favorably to have our services mirrored at multiple sites for continuity of operations.

NASA has huge repositories of information and institutional knowledge that it is unable to fully leverage, due in part to limitations in information technology. As these technology barriers are lifted, NASA HQ must continue to press forward with initiatives to free this knowledge so it can be productively used. Fundamental changes are required in the way we acquire, process, and manage data in order to assure that information and data assets can be discovered, trusted, and repurposed.

Tactical initiatives included in the FY2011-2013 plan that support this strategic driver include:

- Improve Internal Wireless Access
- Synchronize User Data for User Mobility and COOP
- Improve / Simplify Guest Network Access

2.2 Common Tools and Services

“Optimize investments in mission and program-unique IT systems by utilizing common infrastructure tools and services where practical.”

An over-arching goal at NASA, and the inspiration for many ongoing projects, is the objective of enabling NASA to work as a single team without regard to geography or organizational affiliation. In an effort to reduce costs, Agency consolidation has impacted numerous projects to migrate infrastructure and operations to a central provisioner, with more to come in the future.

Tactical initiatives included in the FY2011-2013 plan that support this strategic driver include:

- Improve Internal Wireless Access
- Provide User Feedback for Tivoli Backups
- Synchronize User Data for User Mobility and COOP
- Implement fast-track Software Approval Process
- Improve / Simplify Wired Guest Network Access
- Simplified Electronic Collaboration
- Voice Mail Forwarding to NOMAD e-mail
- Data Catalog & Cleanup Tools
- User Self Service Report Generation
- Implement PC Functionality on a Highly Portable Device

2.3 Mission and Customer Focus

“Provide a mission and customer focus to the provisioning of common IT services across NASA.”

IT is never an end in itself, but rather a tool for fulfilling NASA missions and meeting its objectives. We maintain a customer focus to guide us to the correct solution for a given situation, then work to deliver that solution with quality and reliability. User outreach will be provided, if necessary, to make sure our customers are aware of and can effectively use our valuable services.

Tactical initiatives included in the FY2011-2013 plan that support this strategic driver include:

- Improve Internal Wireless Access
- Provide User Feedback for Tivoli Backups
- Synchronize User Data for User Mobility and COOP
- Allow Limited Connectivity to Local Network Resources when Connected to HQ Network via VPN (e.g. printers)
- eWhiteboard
- Implement fast-track Software Approval Process
- Improve / Simplify Wired Guest Network Access
- Simplified Electronic Collaboration
- Voice Mail Forwarding to NOMAD e-mail
- Data Catalog & Cleanup Tools
- User Self Service Report Generation

2.4 Security

“Protect and secure the Agency’s information assets.”

IT Security is not something you buy, but rather a discipline that must be integrated into every service provided to NASA. We must believe in our data and ensure that they are both credible and available. The more widely and pervasively IT is deployed, the greater the need to have security “built in” and not “bolted on” as an afterthought. NASA must explore mechanisms to drive down the increasing costs of security assurance plans, equipment, and reporting, while maintaining compliance with Federal and Agency mandates.

Tactical initiatives included in the FY2011-2013 plan that support this strategic driver include:

- Support for Securing Home Networks
- Implement PC Functionality on a Highly Portable Device

2.5 Unified Investment Portfolio

“Maintain an Agency-wide IT investment portfolio in alignment with missions and business needs.”

As always, we must be good stewards of NASA resources by reducing cost and increasing efficiency and automation. We continue the move away from manual processing and towards “lights out” operations. We also seek to reduce cost by adopting common architectures and leveraging NASA’s vast economies of scale. Finally, managing our services as an integrated portfolio is a required step in migration to Service Orientated Architectures and assuring alignment with the Agency’s Enterprise Architecture.

Tactical initiatives included in the FY2011-2013 plan that support this strategic driver include:

- Agency Action Tracking
- Agency and HQ Applications for the BlackBerry and iPhone (PDA)
- Increase Visibility into HQ and Agency Pilot Projects

2.6 Effective Work Force

“Maintain a strong IT workforce through effective human capital management.”

NASA’s most important resource is its people, therefore the greatest gains are to be found from enabling communication and collaboration. Whether it is efficient broadcast of information, collaborative workgroups, or reliable person-to-person communications, the reliability, capabilities, and quality of collaboration tools must continuously be improved. We will promote designs and approaches that will enable our customers to discover information relevant to their activities, communities of similar interests, and more automated mechanisms for obtaining and sharing information.

Tactical initiatives included in the FY2011-2013 plan that support this strategic driver include:

- Improve Internal Wireless Access
- Provide User Feedback for Tivoli Backups
- Synchronize User Data for User Mobility and COOP
- Allow Limited Connectivity to Local Network Resources when Connected to HQ Network via VPN (e.g. printers)
- eWhiteboard
- Implement fast-track Software Approval Process
- Improve / Simplify Guest Network Access
- Simplified Electronic Collaboration

- Voice Mail Forwarding to NOMAD e-mail
- Agency and HQ Applications for Mobile Devices
- Increase Visibility into HQ and Agency Pilot Projects
- Data Catalog & Cleanup Tools
- User Self Service Report Generation
- Implement PC Functionality on a Highly Portable Device
- Agency and HQ Applications for the BlackBerry and iPhone (PDA)

3 Scope

In general, this plan proposes improvements to HQ-wide IT services provided and managed by ITCO, which reports to the HQ Office of Infrastructure and Administration (OIA). Services sited at HQ that are not part of the ITCO-provided and managed infrastructure, applications, IT System and services may influence, but are not a part of this plan. Infrastructure initiatives are NOT part of this plan. Continuous Improvement and Maintenance Projects are NOT part of this plan.

4 Approach

The NASA HQ Tactical Plan was developed by soliciting input from the Customer Advisory Council (CAC). Ideas, projects, initiatives and requirements were solicited from individual CAC members. These inputs were refined and provided back to the CAC for approval. Once approval was obtained, a CAC meeting was held on August 4, 2010. The CAC members voted on each initiative in order to obtain a priority ranking for all of the initiatives. The initiatives are presented in this document in the relative rank order based upon the priority ranking established at the August 4, 2010 CAC meeting. Each initiative has been assigned an estimated ODC cost and an estimated labor cost. The ODC costs represent hardware, software and all non-labor costs. These costs are rough order of magnitude (ROM) estimates based upon the best understanding of the technical aspects of the initiative and overall scope of the initiative as described in this document.

This document in no way attempts to provide a schedule or articulate a start and end timeframe for projects. Project schedules will be developed at a later date during the normal Service Request (SR) process that will be initiated for each funded and approved project. The number of projects that can be started in FY 11 are dependent on budget, resources and Board of Directors (BOD) approval. The designation FY11+ is used throughout this document to indicate that the initiative may be started in FY11 or later. This document does not attempt to convey the “cut”, “funding” line or top projects that will be funded / started in FY11. It is anticipated that a presentation will be made to the BOD in the October timeframe and at that time the approximate top 10 initiatives articulated in this document will or will not receive funding and approval on an individual basis to move forward.

5 Tactical Plan Initiatives in Context

This section provides an overview of the tactical plan initiatives and discusses them in the context of their business and strategic drivers. Many initiatives are based on recurring common themes; this is a reflection of HQ’s unified approach to architecture and management, as well as Agency consolidation initiatives.

5.1 Infrastructure

The most significant recurring theme in the area of infrastructure improvement is redundancy and high-availability. The requirements for fault tolerance and high availability include: (a) no downtime, (b) lower maintenance and repair costs, and (c) continuity of operations. Our approach to addressing these requirements has evolved steadily. We once relied on hardened server components and later on “high availability” servers with redundant components. This trend must continue: we must build reliable services that do not rely on a single server and ultimately provide geographically distributed services that do not rely on the availability of a specific building or geographic region. The expansion and direct use of high-availability storage will greatly improve service availability. The high-availability Intranet, Extranet, and database services also address this need.

Additional themes are security and ease of use. These concepts often compete with one another if not carefully designed. They will be accomplished through the careful design and redesign of infrastructure architectures. Network security technology adds intelligence to the network and enables the network to automatically configure and provision the proper service to the devices that attach to it.

Infrastructure initiatives are NOT part of this plan.

5.2 Continuous Improvement and Maintenance Projects

The large array of HQ systems and services already deployed require ongoing maintenance, as well as upgrades to meet evolving needs. These continuous improvement projects are described separately from new initiatives, although there is often overlap and interdependence between the two. Several projects attend to system and infrastructure upgrades that are necessary to keep pace with technology and evolving requirements. These projects include enhancements to enterprise-wide enterprise storage and backup services.

Continuous Improvement and Maintenance Projects are NOT part of this plan.

5.3 Telecommunications

Regardless of their location, HQ customers require reliable and secure access to Agency services and services hosted in our computer facility. Our telework capabilities will receive continuous upgrades and improvements that will provide additional functionality, increased capacity, and redundancy to ensure service availability.

5.4 Security

Security initiatives will provide system monitoring and auditing improvements that will facilitate automated reactions to possible security incidents, thus reducing response time and meeting ever-increasing incident recording requirements.

5.5 Application Services

This plan describes many projects that are the result of our renewed focus on the importance of integrating data and information. Some of our customers require access to many similar or related pieces of information that reside in different databases or data repositories. It is difficult to discover where all these related pieces of data are and, once discovered, difficult to collect the needed pieces and combine them together. We intend to apply the same type of Web Services deployed in Web-

based business applications to tie logical pieces of data together and conform to multiple workflows. Treating the Web as a platform we can leverage current applications and strategies to create richer content and sharing outside the boundaries of traditional databases. We will look to current Web service and machine discoverable (semantic) technologies to turn data sources into reusable resources that can be harvested through browsing and queries. This effort will achieve increases in efficiency and will reduce analytic compilation time for data calls, budget formulations, and program decision support.

6 Tactical Plan Initiatives in Detail

This section describes each project in the portfolio of projects that may be executed within the next 36 months. The initiatives are presented in the order prioritized by the Customer Advisory Council (CAC).

6.1 Improve / Simplify Wired Guest Network Access

The current guest network (both wired and wireless) requires a user to obtain a username and password prior to use. This can be cumbersome for spur of the moment needs, especially for Headquarters users when using connections in pods and conference rooms. This initiative will eliminate the requirement for authentication for the wired guest network. Additional wired guest network drops will be provided in pods and conference rooms as required.

Completed Actions: SR # 2009 – 0000599 (recommend reducing guest wireless PWs) partially addressed this issue. Completed the implementation of the Agency Standard wireless network profile. This service utilizes NCAD credentials and is currently available to all NASA personnel that travel to HQ.

Planned Actions for FY 11+: Eliminate authentication for the wired guest network. Increase number of wired connections.

Estimated ODC = \$50,000 Estimated Labor = \$75,000

6.2 Improve Internal Wireless Network (Roaming)

The current Headquarters internal network has many “dead” spots and requires re-authentication as users move throughout the building. The existing deployment also does not support more modern, higher speed alternatives such as 802.11n. As a result, users may not get connectivity or may resort to the guest network. This project will implement building-wide roaming without the need to re-authenticate.

Completed Actions: Completed implementation of the Private Wireless Network Agency Standard. Completed procurement of all hardware necessary to implement facility-wide roaming without the need to re-authenticate. This will be implemented in FY 2011.

Planned Actions for FY 11+: Below estimates are to implement building-wide roaming without the need to re-authenticate. Greater consideration is related to the transition of HQ network services from HITSS to I3P in mid 2011. This project would need to be completed prior to transition.

Estimated ODC = \$50,000 Estimated Labor = \$150,000

6.3 Agency Action Tracking

This initiative will build upon all of the action tracking requirements gathering and product evaluations that have taken place to date. The focus of this initiative is to facilitate Agency-wide action tracking. ITCD will coordinate with the Agency CIO office to promote an Agency solution.

ITCD convey the HQ Customer Advisory Committee's identified need for an Agency solution for Action Tracking and facilitate discussions between the OCIO leadership and interested HQ IT BoD members.

Completed Actions: A Kaizen event for requirements gathering was successfully completed on June 10, 2010, with 10 people representing 9 organizations participating. Beginning in early July 2010 numerous action tracking vendors provided demonstrations. All Action Tracking Working Team participants as well as other stakeholders were invited to the demonstrations.

Planned Actions for FY 11+: Coordinate with the OCIO on Agency approach to Action Tracking, including possible solution cost for Agency-wide workflows. Provide technical briefings for OCIO personnel regarding findings from HQ technology research as requested to support Agency decisions.

Estimated ODC = \$0 Estimated Labor = \$50,000

6.4 Implement PC Functionality on a Highly Portable Device

This initiative will investigate and identify potential solutions that can provide PC Functionality on a Highly Portable Device. Alternative commercial solutions will be evaluated such as a COTS USB device that provides full/secure desktop functionality, bypassing the computer's hard drive, or a SSL website tied into a private cloud which provides services and access to data. An example would be the IronClad product announced from Lockheed Martin but not yet available. The NASA Nebula project will be considered as a possible solution.

Completed Actions: None

Planned Actions for FY 11+: Research and evaluate solutions to meet the stated requirement. Procure and implement if deemed appropriate.

Estimated ODC = \$50,000 Estimated Labor = \$50,000

6.5 Allow Limited Connectivity to Local Network Resources when Connected to HQ Network via VPN (e.g. printers)

Allow Limited Connectivity to Local Network Resources when Connected to HQ Network via VPN (e.g. printers) While connected to the Headquarters VPN service users cannot access local networked devices such as scanners and printers. This requires TDY, telework, and COOP users to disconnect from the VPN in order to scan or print; this is especially a problem if the user is using a softphone connection to the VoIP service, because the softphone will not function while the VPN is down. This project will examine the feasibility of modifying the VPN service to allow limited access to local services such as printers while using the VPN. If the security concerns can be mitigated, this initiative will implement a solution.

Dependencies: VPN client software support for granular level service control for split tunneling

Completed Actions: None

Planned Actions for FY 11+: Security review. Implement if security assessment is favorable. May require deployment of new VPN client.

Estimated ODC = \$0 Estimated Labor = \$75,000

6.6 Implement fast-track Software Approval Process

When applications are ready to be distributed they must pass through the same lengthy certification process used for externally-developed, third party applications. This process can take up to 6 months. During the certification process users must forgo use of their applications or rely on contractor-provided, non-ODIN laptops. Delays in deployment approval can also impact the Software Development Life Cycle since developers cannot get general feedback on applications

while they are held up in the approval process. This initiative will examine the feasibility of developing and implementing a “fast track” approval process for applications that are developed in-house using NASA-approved development processes as well as an examination of the triage 3 process.

Completed Actions: None

Planned Actions for FY 11+: Assess the current software approval process with a general impact assessment from ODIN and HITSS security. Implement process improvements and resource/management realignments based on the assessment to reduce times required for software approval. Establish generally accepted timelines for the approval process.

Estimated ODC = \$0 Estimated Labor = \$25,000

6.7 Provide User Feedback for Tivoli Backups

Backups are key to protecting user data. NASA Headquarters uses the Tivoli Storage Manager (TSM) system to backup user workstation data. However, recent experience has shown that even when users take all the proper steps to support automated backups, sometimes these fail. Users get no automated feedback when backups fail or do not run. Users currently have an application where they can check the status of their backups, however this requires users to take action. NASA HQ also relies on standard backup reports sent to IT POCs who must then manually review the report looking for exceptions and inform affected users. This is inefficient and relies on an overburdened resource to continually check for issues. This project will develop an automated system that informs users of their backup status.

Completed Actions: Reporting responsibility has been transitioned from ODIN to HITSS. Current TSM reporting initiative should be implemented by August 2010. Backup status monitoring processes and corrective actions to be completed by Sept 2010.

Planned Actions for FY 11+: Below estimates are to develop a custom reporting user notification application.

Estimated ODC = \$25,000 Estimated Labor = \$250,000

6.8 Data Catalog & Cleanup Tools

Users potentially have much redundant and near redundant data on hard drives and other storage media; additionally they often have trouble finding older data. This initiative will investigate and make available if possible, tools that help users catalog and maintain their data in a way that identifies redundant and near redundant data and improves the ability for users to search data and categorize data. This initiative should improve effectiveness by helping users manage "data clutter" on their workstations and quickly find data they need. In addition, this initiative should increase efficiency by decreasing the amount of data that users store and need to back up. This should also improve the ability of users to quickly find data as well as improved data quality by helping users eliminate older, unneeded versions of files that cause confusion when accessing historical data.

Completed Actions: None

Planned Actions for FY 11+: Research and determine best of breed tools taking into consideration tools currently available to the HQ community. Procure tools if required. Publish a list of tools and capabilities as well as outreach materials.

Estimated ODC = \$25,000 Estimated Labor = \$50,000

6.9 Synchronize User Data for User Mobility and COOP

Recent COOP exercises have shown that key data stored on user desktops or laptops may be required during COOP events. Such data includes Web browser bookmarks, local address book contact lists, Entrust profiles, etc. While it is technically possible to recover most of these data from

backups it is not practical to do so. This project will deploy a service that synchronizes key user data to a storage environment to ensure those data are available to users regardless of their physical location. This initiative will support an effective workforce by allowing users to have full access to key data wherever they are located and improve readiness in COOP situations by eliminating time needed to recover key data.

Completed Actions: Completed recommendations document for data synchronization and roaming profiles. Initiating a data sync pilot in July 2010 that will have direct application to this initiative.

Dependencies: Windows 7 is deployed. Snow Leopard is deployed. All NASA HQ users are transitioned to new Tivoli Storage, which should be complete by approximately November 2010.

Planned Actions for FY 11+: Below estimates are to implement roaming profiles for Windows 7 and portable home directories for Macs as well as additional storage / backup as required.

Estimated ODC = \$200,000 Estimated Labor = \$250,000

6.10 Agency and HQ Applications for the BlackBerry and iPhone (PDA)

This initiative will identify a specific NASA HQ application or applications where efficiency will be gained by access from Agency approved smart phones. Additionally, this initiative will put in place policy and procedures to ensure new application development initiatives take in to consideration, where appropriate, development and deployment on Agency approved smart phones. ODCs represent any software / SDKs required for development.

Completed Actions: None

Planned Actions for FY 11+: Evaluate NASA HQ applications for one or more applications for potential smart phone development. Establish processes and procedures for developing smart phone application(s).

Estimated ODC = \$15,000 Estimated Labor = \$10,000 / \$90,000

6.11 Simplified Electronic Collaboration

This initiative will research and procure, if possible, a small group collaboration tool that supports "many to many" collaboration and supports both NASA and non NASA participants. The tool should target small, ad-hoc, group collaboration environments with low management overhead and costs to address the needs of small groups that need real-time collaboration. Need to investigate OMB Max.

Completed Actions: None

Planned Actions for FY 11+: Research and if possible, procure and deploy a small group collaboration tool.

Estimated ODC = \$100,000 Estimated Labor = \$50,000

6.12 Support for Securing Home Networks

Users routinely bring laptops home, but they may not have the knowledge to secure their home networks. This initiative will provide a "home security" kit and instructions to help users secure their home network environment. User outreach and education is an integral part of this project. This initiative should increase efficiency by allowing users to confidently connect to Internet and other resources while improving data quality by ensuring that systems used at home are not compromised. This initiative should increase the overall security posture of NASA HQ.

Completed Actions: None

Planned Actions for FY 11+: Update HQ websites. Create / update outreach materials. Conduct user training / education.

Estimated ODC = \$0 Estimated Labor = \$25,000

6.13 Improve Internal Wireless Network (802.11n)

The current Headquarters internal network has many “dead” spots and requires re-authentication as users move throughout the building. The existing deployment also does not support more modern, higher speed alternatives such as 802.11n. As a result, users may not get connectivity or may resort to the guest network. This project will upgrade the internal wireless network to 802.11n and improve coverage to ensure all key areas within the building are adequately served and improve monitoring.

Completed Actions: Completed implementation of the Private Wireless Network Agency Standard. This will be implemented in FY 2011.

Planned Actions for FY 11+: Below estimates are to upgrade all access points to 802.11n and add additional access points / hardware / software as required. Greater consideration is related to the transition of HQ network services from HITSS to I3P in mid 2011. This project would need to be completed prior to transition.

Estimated ODC = \$250,000 Estimated Labor = \$150,000

6.14 Increase Visibility into HQ and Agency Pilot Projects

This initiative will implement and maintain a centralized pilot progress site that will provide information about the progress, issues, etc. of various pilot projects both Agency and NASA HQ that will affect headquarters users. This initiative strives to improve effectiveness by keeping IT POCs and NASA HQ users informed, allowing them to provide input into how new technologies might affect the user community. It is anticipated that this initiative will facilitate collaboration by broadening the scope of input for pilot projects and keeping affected groups aware of developments prior to deployment. This should increase efficiency by allowing IT POCs and other customers to keep abreast of new technologies before they are implemented.

Completed Actions: None

Planned Actions for FY 11+: Deploy a Website listing Agency and HQ pilots.

Estimated ODC = \$0 Estimated Labor = \$50,000

6.15 eWhiteboard

This initiative will evaluate and procure some number of eWhiteboards. Various factors will be considered during the evaluation such as wireless capability, interactivity, portability, compatibility with ODIN core load computers and the NASA HQ environment as well as potential collaboration features. The requirement is an interactive whiteboard which can be set up in any room and whose contents can be easily recorded electronically. The eWhiteboard should have the capability to be easily moved between rooms if possible.

Completed Actions: None

Planned Actions for FY 11+: Evaluate and procure. These devices could be potentially used to facilitate collaboration.

Estimated ODC = \$20,000 (\$4,000 each x5) Estimated Labor = \$10,000

6.16 Voice Mail Forwarding to NOMAD e-mail

This initiative will research and implement, if possible, a solution to forward voice mail from the NASA HQ VoIP telephone system voice mail service to the Agency email service. Users of the NASA Headquarters telephone system receive voice mail on a service accessible only via a telephone interface. Users must check periodically while on travel to see if they have voice mail. Many users also direct users not to leave voice mail, but rather to send an e-mail message for this reason. Many commercial VoIP systems provide voice mail support forwarding of messages to a user's mailbox as a message with an attached audio file. This initiative will research the feasibility and implement if possible, a process by which a user can receive their voice mail as a NOMAD e-mail message with an attached audio file.

Completed Actions: None

Planned Actions for FY 11+: Research alternatives, and if possible, procure a COTS solution. If a COTS solution is not available determine the complexities of developing a custom application and if feasible do so. Possibly an upgrade to Cisco Unity would be required.

Estimated ODC = \$75,000 Estimated Labor = \$150,000

6.17 User Self Service Report Generation

This initiative will investigate new Web / Application reporting tools that could reduce the reliance on custom code and provide users the ability to quickly and easily query data repositories without engaging support personnel. If an appropriate tool or tools are identified procure and implement a solution.

Completed Actions: Previous Service Requests (SRs) have evaluated reporting tools. SR # 2010 - 0001016 JasperReports. SR # 2009 - 0000822 Evaluate adhoc reporting tools.

Planned Actions for FY 11+: Leveraging upon the previous work completed, and taking in to consideration any new additions and changes in COTS reporting tools, research, recommend, procure and implement an appropriate tool(s) for user self service report generation.

Estimated ODC = \$150,000 Estimated Labor = \$125,000