SERVICE MANAGEMENT ORGANIZATION

OF THE

VIRGINIA INFORMATION TECHNOLOGIES AGENCY

INTERIM REVIEW OF THE

INFORMATION TECHNOLOGY PARTNERSHIP

FEBRUARY 2008

APA

Auditor of Public Accounts

COMMONWEALTH OF VIRGINIA

AUDIT SUMMARY

Background

In November 2005, the Commonwealth entered into a Public-Private Partnership (Partnership) with Northrop Grumman through signing a Comprehensive Agreement (Agreement). In doing so, effective July 2006 the Virginia Information Technologies Agency (VITA) turned over to Northrop Grumman the management of the IT infrastructure, including security operations, for those agencies using VITA. The Commonwealth agreed to pay a sum not to exceed $236 million per year (cap) for the next ten years for a baseline IT infrastructure.

The Agreement, managed by VITA's Service Management Organization (SMO), calls for a phased approach toward the consolidation and takeover of the information system infrastructure. Although Northrop Grumman assumed responsibility for infrastructure security and management as of July 2006, transition of the management of the infrastructure consolidation will occur in three distinct phases: Current Operations, Transformation, and Post-Transition. This review focuses on completion of the Transformation phase and the upcoming first year of the Post-Transition phase. For more information on current operations or past milestones please reference our 2007 Interim Review of Information Technology Partnership report which may be found on our website (www.apa.virginia.gov).

Findings

Our review found that Northrop Grumman may not meet several milestones, including significant milestones relating to the Information Technology Infrastructure Library (ITIL) and the Disaster Recovery Test at the Southwest Enterprise Solution Center. Although performance of the actual Disaster Recovery test is not at risk, Northrop Grumman and the SMO have not agreed to acceptance criteria or testing plans for this milestone. Additionally, Northrop Grumman has not documented the process by which Northrop Grumman will collect, report, and analyze the performance metric data as required by the Partnership Agreement. The ITIL and the performance metric process are essential deliverables granting the Commonwealth the ability to measure Northrop Grumman's performance after July 1, 2008.

As the Partnership moves to a managed service environment on July 1, 2008, without a completed procedures manual including the ITIL; and a complete set of standards for performance measures, the Commonwealth is at risk of not having adequate means to assess complete delivery of Northrop Grumman services after July 1, 2008.

We recommend that the SMO work with Northrop Grumman to develop a contingency plan in the likely event complete and official policies, processes, and procedures are not agreed-upon before transition to a managed service environment.

This report includes other matters and findings which may be of interest.

-TABLE OF CONTENTS-

	Pages
AUDIT SUMMARY	
STATUS OF TRANSFORMATION	1
MILESTONE PENALTY OPTIONS	1
DELAYED MILESTONE DELIVERY	2-5
OPERATING IN A MANGED SERVICE ENVIRONMENT	5
PERFORMANCE MEASUREMENT	6-8
CUSTOMER MANAGEMENT	9-13
TRANSMITTAL LETTER	14-15
AGENCY RESPONSES:	
Virginia Information Technologies Agency	16-18
AGENCY OFFICIALS	19
APPENDIX A: Aging of Milestones Due between February 1, 2007 and July 1, 2008	20-21

STATUS OF TRANSFORMATION

The Service Management Organization (SMO) is approaching the contracted date of June 30, 2009 for a fully transformed IT environment. A fully transformed IT environment will mean that all infrastructure and related management will transfer to Northrop Grumman and the Service Management Organization will shift from having oversight responsibility for milestone deliverables to responsibility for determining adequacy of continued service delivery. As the contract period approaches the end of transformation, the milestones remaining become increasingly important to ensure adequate service and provide sufficient accountability. If the Partnership has not completed the transformational milestones by June 30, 2009; they may need to modify portions of the Agreement to account for the delay in transformation.

Transformation includes the completion of contractual milestones in the Agreement. These are targets for the successful completion of the transition from a Commonwealth-managed infrastructure to a Northrop Grumman-managed infrastructure. On June 30, 2008, the billing and payment structure will change to a service provider design, such as that used by utility providers.

Before commencing each milestone, VITA and Northrop Grumman are to develop and agree upon a set of acceptance criteria and testing plans that will constitute the acceptable measure of completion by both parties for each major milestone. Once VITA and Northrop Grumman establish and agree on the acceptance criteria and testing plans, Northrop Grumman will carry out the accepted criterion. Upon completion, review, and testing of each deliverable by the SMO, VITA makes payment as called for in the Agreement. An option to make partial payment for a milestone based upon partial completion of acceptance criteria also exists.

This report reviews the status of transformation with focus on those milestones delivered and accepted since our last review (January 31, 2007) and those future milestones subject to delivery and acceptance through the remaining transformation period.

MILESTONE PENALTY OPTIONS

Should Northrop Grumman fail to fulfill the requirements set out in the Agreement regarding sufficient timely delivery of a milestone with an associated payment; they may be subject to certain payment penalties for each day they fail to deliver a completed milestone past the contracted date. These penalties relate only to critical milestones where there is a payment. VITA has withheld payments in the past for not meeting and fulfilling critical milestones.

In the event Northrop Grumman does not meet a critical milestone, Northrop Grumman must provide additional resources at no additional cost to the Commonwealth to complete the milestone by the original due date or as soon as commercially practicable. Additionally, for each critical milestone the Commonwealth may penalize Northrop Grumman five percent per week of the milestone payment up to a maximum of 20 percent. However, Northrop Grumman can recoup this money for early delivery of other critical milestones. Through February 29, 2008, Northrop Grumman has earned $1.2 million in early delivery credits, which it may apply against future penalties.

From January 31, 2007 through the remaining transformation period, Northrop Grumman must deliver 44 milestones per the Agreement. 11 of these milestones are critical with aggregate contractual payments totaling $35.8 million. Given $87.3 million in milestone payments over this period; the SMO's potential financial leverage relative to the delivery of milestones is $7.16 million per the Agreement.

In addition to the application of penalties for critical milestones, VITA may also withhold payment for non-milestone invoices for failure to provide services in accordance to the agreement. Through February 29, 2008, VITA has withheld $770,000 from various current operation and facility invoices. This penalty includes $332,808 for late delivery and completion of the Commonwealth Enterprise Solutions Center, $24,903 for late delivery and completion of Southwest Enterprise Solution Center; $200,000 for failure to deliver a completed procedures manual; $175,000 for failure to deliver an adequate disaster recovery plan; and $37,500 for untimely delivery and completion of the financial and operational audits.

DELAYED MILESTONE DELIVERY

Our review of milestones completed and future milestones found a number of milestones delivered late and there is an increasing risk that future milestones are more likely to experience delivery delays as the Partnership moves into the final phases of the transformed environment.

For the period February 1, 2007 through January 31, 2008, Northrop Grumman had to deliver 28 milestones which the SMO must determine and then accept as complete.

- Northrop Grumman delivered twenty milestones and the SMO has accepted them as complete. Only three of these milestones are critical.
- Two milestones are pending SMO acceptance.
- Two milestones have established acceptance criteria and testing plans but are pending delivery.
- Two milestones have no agreed-upon acceptance criteria or testing plan.
- One milestone is in remediation and neither the SMO nor Northrop Grumman has agreed on acceptance.
- The SMO has partially accepted a critical milestone for delivery of an enterprise network operations center.

Future Milestones

Northrop Grumman must deliver 16 additional milestones by July 1, 2008. Northrop Grumman and the SMO have agreed to acceptance criteria and testing plans for only four of these upcoming milestones. A schedule reflecting the aging of acceptance plan and testing plan agreements as well as milestone delivery against contractual dates may be found in Appendix A.

The following are two critical milestones for which the SMO anticipates Northrop Grumman will not meet their deadline dates.

Southwest Enterprise Solution Center Disaster Recovery Test Milestone

The first disaster recovery test milestone utilizing the Southwest Enterprise Solution Center, which is due May 1, 2008 and has a $9 million payment, has encountered problems as discussed below, which may delay delivery. Although performance of the actual Disaster Recovery test is not at risk, Northrop Grumman and the SMO have not agreed to acceptance criteria or testing plans for this milestone.

Northrop Grumman intends to use VITA's legacy procedures and processes for performing the data center's recovery test. However, the SMO contends that Northrop Grumman's processes should be part of the Information Technology Infrastructure Library and used for the recovery test. Therefore, the delivery of this milestone is contingent upon delivery of another milestone: the delayed Information Technology Infrastructure Library.

Information Technology Infrastructure Library (ITIL) Delivery Milestone

The Information Technology Infrastructure Library (ITIL) is a framework that assists in developing a set of policies, procedures, templates, and organizational structures that will define, in detail, both the specific services Northrop Grumman is providing, as well as define the various physical IT solutions and approaches to troubleshooting various issues. This process is different than the comprehensive procedures manual, but will be used in developing that manual.

The development of ITIL processes has three phases grouped as shown in Figure 1. Below is a description of each process in further detail.

Figure 1: ITIL Process Implementation Phases

Phase 1	Phase 2	Phase 3
• Configuration Management • Change Management • Release Management	• Incident Management • Problem Management • Availability Management • Capacity Management	• Service Level Management • IT Service Continuity Management • Security Management

Configuration Management

The Configuration Management process will create a database containing details of the elements used in the management of the Commonwealth's IT services. The database will include information on infrastructure, operating systems, and other IT items, which will show the maintenance, movement, and problems experienced with the Configuration Items.

Change Management

The Change Management process ensures that staff is using standardized procedures to ensure fast and efficient handling of all changes. The process should minimize the impact of change and the problems it may cause on the service quality of the Commonwealth.

Release Management

The Release Management process follows change management through to execution, or release. The documented process ensures roll-out of changes occur with the minimal impact on the existing environment and transition smoothly.

Incident Management

Incident Management seeks to restore service operation to levels agreed upon in the Service Level Agreements as quickly as possible and minimize the adverse effect on business operations. This process will ensure that Northrop Grumman maintains the best possible levels of service quality and availability.

Problem Management

Problem Management involves performing a root-cause analysis of incidents caused by errors within the IT infrastructure, to resolve and prevent future incidents. Problem management requires service providers to resolve the underlying problems causing those incidents found.

Availability Management

Availability Management involves the identification of levels of service availability. It involves the collection and measurement of data to ensure that Northrop Grumman is meeting the Service Level Agreements. The constancy of this process becomes very important to ensuring contractual compliance when the Partnership moves into a managed services environment on July 1, 2008.

Capacity Management

Capacity Management identifies the optimal combination of time, volume, and price of IT infrastructure components to provide the level of service contractually agreed-upon per the Service Level Agreements.

Service Level Management

Service Level Management is dependent on all of the prior Service Delivery processes and is the culmination of the information from these processes. This process defines the procedures that ensure delivery of the agreed-upon services in an effective, efficient, and secure manner.

IT Service Continuity Management

IT Service Continuity Management develops plans for recovery in the event of a serious incident. This process includes IT continuity, business continuity, and disaster recovery.

Security Management

The Security Management Process describes the structured fitting of security in the management organization.

Status of ITIL Milestone

For each process above, Northrop Grumman develops documentation reflecting policy, processes, procedures, work development, usable templates, and a "Go Live" document which is equivalent to a punch-list for the process before implementation. The SMO reviews each document within each process group for sufficiency, reasonableness, and consistency prior to acceptance. The SMO has been diligent to ensure that ITIL documentation is truly complete since it will be the base-line for all future service management processes.

The SMO expects delayed delivery of the completed ITIL. Contracted delivery should occur by June 1, 2008. However, as of February 29, 2008, the SMO and Northrop Grumman have only agreed to the acceptance criteria for Phase 1 of this process. Testing plans for Phases 1 and 2 are in development while little to no work is complete on Phase 3.

The ITIL framework is a tool to manage mature service environments. Absent the comprehensive procedures manual, which is also not scheduled for completion prior to June 30, 2008; the SMO is at risk of having a managed services environment without complete base-line policies, processes, and procedures for a large part of those managed services. This is a significant risk which the SMO has not addressed.

Finding 1

We recommend that the SMO work with Northrop Grumman to develop a contingency plan in the likely event complete and official policies, processes, and procedures are not agreed-upon before transformation to a managed service environment. Failure to have a solid agreed-upon set of policies, processes, and procedures could create additional operational risks for the Commonwealth.

OPERATING IN A MANAGED SERVICE ENVIRONMENT

The Partnership will enter a managed service environment on July 1, 2008. This environment will change the way the SMO and the Commonwealth will measure Northrop Grumman's performance and pay for IT infrastructure services. The SMO will no longer receive itemized invoices including direct costs for infrastructure purchases and management; instead invoices will include an itemization of resource units within each of nine service areas. Where the SMO previously could substantiate direct billings from Northrop Grumman, this becomes more difficult in a managed service environment.

Resource Units

Northrop Grumman will use resource units within each service area to comprise billings to the Commonwealth. Each resource unit may be a fully managed, secure, physical asset, such as a desktop or server. Resource units may also be units of storage capacity, phone, or data transmission lines.

Northrop Grumman will measure, track and retain related data in a repository. Northrop Grumman will then validate and report the Commonwealth's resource units, utilizing the processes and procedures in the approved Procedures Manual. The Agreement stipulates that Northrop Grumman will only use resource unit measurement processes and procedures that have received approval of the Commonwealth.

Asset Inventory and Baseline Resource Units

Over the past year, Northrop Grumman conducted a number of physical inventory counts to validate IT infrastructure asset counts across the Commonwealth. This documented inventory will serve as confirmation by both Northrop Grumman and the SMO of the actual existence of assets and confirmation that assets are part of the base services. Based upon validation of the physical inventory by the SMO, a baseline resource unit count will establish the current contract price.

Northrop Grumman must report and the SMO must validate resource unit counts each month, with reporting scheduled to start in April 2008. Northrop Grumman will charge a fixed rate, volume-based fee for each resource unit, supported by the baseline inventory quantity beginning in July 2008.

VITA and Northrop Grumman are currently negotiating a change order to extend the due date of the base-line asset inventory to December 2008. A number of factors cause this delay, including Northrop Grumman's inconsistency in inventory collection methods and customer non-acceptance of inventory reconciliations. These issues also pose a risk to the Commonwealth's ability to operate in a managed service environment and are part of our financial review of the VITA operations.

Additional Resource Charges and Reduced Resource Credits

In the event the Commonwealth requires additional resource units above the baseline, Northrop Grumman may charge the Commonwealth for any additional resources added to the inventory baseline. Credits for reducing resources are also applicable whenever the Commonwealth removes resource units from the inventory. It is important to note that any additions or reductions to the IT infrastructure inventory after July 1, 2008 may change the total dollar value of the cap and individual resource fees under the Agreement.

Other Managed Service Fees

In addition to the fixed rate, volume-based fees described above, there are certain fixed recurring fees that VITA will incur in the managed service environment. There will be an annual service fee for account management and administration services. This fee is $1.39 million each year through the tenth year of the agreement. Northrop Grumman will also receive an annual facility fee of $6.76 million for the occupation and use of the Central and Southwestern Virginia Data Centers.

PERFORMANCE MEASUREMENT

Current Metrics

Currently, the SMO reports performance metrics to the Information Technology Investment Board (Board) using data supplied by Northrop Grumman and gathered using various methods, without a documented form of validation by the SMO. During this transformation process, Northrop Grumman is collecting data from various sources including phone switches and service tickets.

The metrics the Board receives are not the defined service level agreement information which is part of the performance measurement required after July 1, 2008. Although the metrics appear similar to those in the agreement, they are not the same or subject to the same level of review. Northrop Grumman's customer representatives get field metrics and central management gathers the central operations metrics. Some data lends itself to automated collection, such as that used to determine average speed to answer and email/voicemail response, but Northrop Grumman's employees are collecting most data manually.

The Partnership does not have standard procedures for the gathering and evaluating the current field metrics. Procedures for gathering current field metrics data varies from customer to customer, and only includes agencies that have the locally managed service. Further, Northrop Grumman does not collect sufficient data to perform a weighted average of performance against a given metric; rather they use a simple average which may reflect inaccurate performance measures when aggregated in the final presentation to the Board. However, Northrop Grumman does collect data which show individual customers experiencing poor performance in a given metric in order to initiate corrective action.

Current metrics are comprised of both central and field metrics as shown below:

Central Operations Metrics	Field Metrics
• Average Speed to Answer	• Average Speed to Answer
• Call Abandonment Rate	• Call Abandonment Rate
• Email Response	• First Call Resolution
• Voicemail Response	• Average Time On-hold
• First Call Resolution	• Help Desk Password Resets
• VITA Messaging System Availability	• Service via Incident Ticket
• Shared Messaging System Availability	• Service via Service Request
• IBM Mainframe Availability	• Incident Repair
• Unisys Mainframe Availability	• Messaging Service
• UNIX Server Availability	• Windows Mission Critical Servers
• Windows Server Availability	• RISC/Unix Other Servers
• Circuits Availability	• Quality Assurance/Test Systems and Servers
• ACF2 Logon Requests	• Development Servers
• Security Incident Reporting	• Internet Access

Service Level Agreements - Status

Although there is some concern that the SMO does not have a documented process to validate the current metrics; these metrics are not contractual, but an indicator of Northrop Grumman's progress towards a fully managed service environment. The Partnership Agreement defines 196 service level agreements, which the SMO will use to determine Northrop Grumman is accountable after moving to a managed service environment. Before the completion of this transition, both the SMO and Northrop Grumman must agree upon each of the 196 service level agreements and the method of collecting and measuring data.

The Agreement stipulates a phasing in of the use of service level agreements by category and organizes them into 41 categories within nine service areas. For nearly all 196 service level agreements, Northrop Grumman must develop a document detailing how they will collect and evaluate the data to determine whether they are meeting the respective service level agreements. The SMO must review and accept these documents before entering a managed service environment.

The Agreement calls for Northrop Grumman to provide "limited interim reporting" starting as early as June 2007, but no such interim reporting has occurred. In February 2008, the SMO and Northrop Grumman agreed to its first set of requirements for reporting, therefore, the SMO has limited time to analyze the metrics in practice before needing to use the service level agreements for actual performance measurement.

In addition to not having the limited interim reporting done, the delivery of some milestones is dependent on the completion of service level agreements. For example, the completion of the Southwest Enterprise Solutions Center disaster recovery test is dependent upon development and acceptance of the related criteria for such a test (service level agreement).

Finding 2

The Agreement anticipates having 56 Data Collection Documents in place on July 1, 2008. Of these documents, Northrop Grumman has not started 26, 14 are being drafted, 12 are in negotiation, one is ready to begin measurement, and three are approved and in use. With transformation quickly approaching, it is important for the SMO to have these Data Collection Documents in place in order to effectively measure Northrop Grumman's performance in a managed service environment. Delays past June 1, 2008 will have financial consequences for Northrop Grumman and service management repercussions for the Commonwealth.

Service Level Agreements – Future

In a managed service environment, Northrop Grumman will supply the SMO with the results of the service level agreement metrics, which the SMO will then validate. Significant collection of relevant data will occur through the automated help desk system known as Peregrine. Northrop Grumman has set up various information systems to feed into Peregrine, such as HP Open View, for items such as server downtime. Northrop Grumman and the SMO must agree on documentation which stipulates how Northrop Grumman will derive each metric from each system and compile the data for measurement.

The Agreement requires the SMO to choose eight to 20 service level agreements each month that will be eligible for a credit if Northrop Grumman does not meet the required service level. If Northrop Grumman incurs the cost of a Commonwealth credit, they may earn it back by meeting the deficient service level agreement target for the three consecutive months following the deficiency. Although the Commonwealth may only earn credits on those metrics chosen for the month, the SMO will monitor all 196 metrics each month to determine the riskiest metrics to place financial considerations around in the following month.

CUSTOMER MANAGEMENT

In managing the Agreement, the SMO also retains some responsibility for ensuring Northrop Grumman is meeting VITA customer needs. The service level agreements discussed above cover those services which are already within the scope of the Agreement and will satisfy measurement of Northrop Grumman's ability to meet existing customer needs. However there are certain services which may arise that are in addition to the baseline services in the Agreement which create additional risk and potential cost to the Commonwealth. VITA identifies these additions or deletions of service through its Request for Service process.

Customer Account Management

The VITA Customer Account Management Division (Account Management) is responsible for qualifying customer service requests. There are five account managers assigned by secretariat who work with the Project Management Division to review basic business requirements of customer requests to ensure they fit in their respective strategic plans. Account managers, in conjunction with the Project Management Division, are responsible for monitoring agency strategic plans for both business and IT to identify future service requests of the customers. Once the account manager identifies the customer needs, they pass the information on to the Agency Performance Manager for completion. The account manager remains available as needed for customer service support.

Agency Performance Management

The SMO has a group of performance managers who serve as the interface between customers and the Partnership. Performance managers have the same organization as the account managers, which is by secretariat, and serve as a point of contact for customer operational issues. Performance managers are responsible for managing customer requests and issues related to the Partnership, including requests for infrastructure services, requirements-gathering, and troubleshooting operational and service issues beyond the scope of the VITA Help-Desk. Performance managers are generally responsible for all customer service delivery issues.

Commercial Management

The commercial management division of the SMO oversees the financial and contractual aspects of the Partnership. They are responsible for managing the Agreement, including deliverables, disputes, audits, benchmarking, and contract modifications. Commercial Management provides oversight of Partnership-related procurement, validation of invoices from Northrop Grumman, and management of the Partnership budget.

Request for Service Process

The Request for Service process handles change order requests from the customers. A request for service is more than merely adding or deleting resource units, but involves up-front analysis of business requirements and development and delivery of a solution that meets customer needs. A typical example is the addition of a web-based server, which involves both a non-recurring cost for the initial set-up, as well as the continuing cost of the resource units (the servers). Any accepted service requests add to the contract base-line, as there are additional costs incurred by the requesting customer.

The request for service process consists of ten steps described below in chronological order.

Step 1: Lead Qualification

Lead qualification requires the performance manager to gather information from customers about business requirements for a new service or service enhancements. Although the performance manger has responsibility for part of this process, it involves coordination of a number of parties. The customer must involve the performance manager early in the development stages of any project or business change which may have an impact on IT infrastructure. The account manager may also initiate this process while assisting customers with strategic planning for IT resources.

This process involves the customer, the performance manager, the account manager, and Northrop Grumman working together to set a summary scope of the business requirement in order to determine its feasibility. The duration of a request in this phase of the process varies depending upon the size, complexity, and feasibility of the business requirements, including customer readiness such that key information is available to initiate a project. It is possible for a request to never leave this phase and eventually all parties may declare the project infeasible.

It is unclear to the customer who is ultimately responsible for initiating and completing this part of the process. We will later discuss the implications of this lack of clarity.

Step 2: Requirements Gathering

Once the performance manager determines a request is feasible, Northrop Grumman gathers and documents all of the related business and functional requirements of the customer. Northrop Grumman must then review the developed business and functional requirements with the customer and the performance manager. This step of the process should last no more than 15 business days once the customer has decided on the business need.

Step 3: Customer Requirement Analysis

On completion of requirements gathering, the performance manager must obtain the customer's acceptance of documented business and functional requirements in order to define the scope of work. Although the performance manager is responsible for this step, the review and agreement by the customer is contingent on Northrop Grumman's ability to sufficiently gather business requirements and the customer's ability to identify its business needs. This step should last no more than five business days from the end of the prior step.

Step 4: Solution and Cost Proposal

Once the customer agrees that VITA and Northrop Grumman have sufficiently identified and documented their requirements, Northrop Grumman must develop a solution to meet the requirement and deliver a cost proposal for providing such a solution. This step varies in length based upon the nature of the business requirements; however Northrop Grumman must provide a reasonable estimate for developing a solution and cost proposal prior to beginning work. VITA may hold Northrop Grumman accountable for delivering a solution and cost proposal within the time estimated. The cost proposal developed by Northrop Grumman includes non-recurring costs that may accrue to VITA as well as any additional resource costs that may continue in perpetuity.

After lead qualification, this part of the process is the most common bottleneck for service requests. As of February 26, 2008, 45 out of 148 open requests are in this process. Five of these requests have been awaiting Northrop Grumman to develop and price a solution for more than 200 days; seven for more than 100 days; 11 for more than 60 days; and the remaining 22 have been in this process for less than 60 days. However, the Partnership changed its process for service requests to better identify root causes for these delays in January, 2008 and some of these delays may have been a product of the former process.

Step 5: VITA Solution Review and Pricing

Once VITA receives the solution and cost proposal from Northrop Grumman, Commercial Management must review and develop a price proposal for the affected customers. Commercial Management communicates the completed price proposal to the performance manager within seven business days of completion of Step 4. Furthermore, Service Delivery Management and the performance manager must also review the solution to ensure that the solution aligns with transformation and the customer's requirements.

Step 6: Customer Proposal Review

The customer, after receiving the proposal, meets with the performance manger and Northrop Grumman to formally review the proposal and discuss the specifics detailed in a statement of work. VITA's goal is to review the statement of work and price proposal and provide any clarification to the customer within ten days of completing Step 5.

Step 7: Authorization to Proceed

Once educated on the proposed solution and its financial impact, customers must authorize Northrop Grumman to proceed with the statement of work. VITA requires that customers provide their decision within five business days of meeting and evaluating the proposal in step 6. In the event the customer rejects the proposal, the customer may either terminate the request or revert to step 2 in order to redefine business or functional requirements.

Step 8: Implementation

Upon authorization by the customer, Northrop Grumman must deliver the proposed solution as defined in the statement of work. Again, the duration of this step depends upon the size and complexity of the solution, but Northrop Grumman has determined and defined the delivery period within the statement of work. All parties agree and document the criteria for successful delivery in the proposal prior to the customer's authorization to proceed. Northrop Grumman has fifteen business days from the completion of the work to notify VITA of its completion.

Step 9: Customer Acceptance

Upon notification by Northrop Grumman of the delivery of the solution, the customer has ten days to inspect and accept delivery of the solution. Acceptance signifies the customer's agreement to pay for the services.

Step 10: Invoicing and Archiving

Once the customer has accepted the solution, Northrop Grumman bills VITA for the work, both for the non-recurring costs and the continuing charges, and VITA bills the requesting customer for the new services.

Application of Request for Service Process

We observe that the lead qualification process does not clearly define responsibility for the initiation of customer service requests. Customers may not always be aware of the process described above. Customers requesting services above the baseline of the Agreement may not understand at what point they must involve VITA. In the past, customers were able to purchase IT hardware quickly without any regard to how it fit into the remaining Commonwealth Infrastructure. With the consolidation of IT services, however, VITA and Northrop Grumman must solution each customer's request for additional service to ensure it not only meets the customer's needs but integrates with the existing infrastructure of the Commonwealth.

Potentially adding to the confusion is the relationship of the Customer Account Management and Agency Performance Management inter-working with the customers. Customers answer questions about their strategic plans to the customer account managers, without understanding how, when or if the responses provide information to the agency performance managers. Also, with the loss of agency expertise on infrastructure to VITA, many agencies may not fully understand how system changes affect the infrastructure. It is unclear if the new VITA customer structure compensates for this internal loss of knowledge.

We find that VITA has not communicated to the customer the responsibilities of the customer or the responsibilities of the service provider as they pertain to requesting additional service. In failing to communicate the responsibilities of each party there have been unreasonable expectations placed on both VITA and its customers regarding the delivery of IT infrastructure solutions.

For example, VITA delivered a request for service for the Department of Professional and Occupational Regulation for the hardware needed to support the delivery of a new software system late. VITA's lack of involvement and communication in the strategic planning phase of this project caused this delay. Lacking any knowledge to the contrary, the customer hired an external consultant to not only develop the software solution, but also develop the hardware implementation plan, an exercise that VITA and Northrop Grumman must perform to ensure congruency with existing infrastructure. When the customer turned to VITA for a simple hardware purchase, VITA and Northrop Grumman countered with the necessary steps to provide the customer with an appropriate solution for the Commonwealth's new infrastructure. This process, because of the timing of the customer's request, caused excess costs and delays in the customer's project and damaged the perception of the Partnership's ability to complete similar service requests.

Finding 3

We recommend that VITA management document and communicate with all its customers the responsibilities of the Partnership as well as the responsibilities of the customer. Doing so will help to prevent the placement of unreasonable service delivery expectations on both parties by one-another. Further, we recommend that VITA place accountability for each phase of the service request process with only one responsible party. The clear identification of responsibility will help to identify the root-cause of potential future service delivery failures.

Communication of Service Delivery Failures

The Partnership must continue to improve its response to customer technology needs. Although the Partnership is still transforming and many processes are still being developed, continued service delivery failures will result in further decline of customer satisfaction, as past failures have already directly impacted customer operations. Over the past few months we have found the late delivery of technology services at the Department of Professional and Occupational Regulation (discussed above), Rehabilitative Services, and Transportation. Most recently, we became aware of service delivery issues affecting the Department of Motor Vehicles (DMV).

Specifically, in late August 2007 DMV formally requested the Partnership provide technology services by November 2007 to support their new system. DMV went live with the system in January 2008, despite not having the services, forcing DMV and Virginia State Police to use a workaround for collecting and reporting vehicle crash information to the federal government. As of their February 28th steering committee meeting, DMV has been unsuccessful in obtaining a revised timeline from the Partnership despite several attempts. Based on information we were provided about the delays, we found it was caused by poor communication between VITA and Northrop Grumman, and the Partnership's failure to follow defined processes for handling customer technology service requests and associated technology procurements.

VITA management briefings to the Board do not include sufficient details regarding these types of customer service delivery problems. Rather, SMO briefings contain general information about Partnership performance. Those briefings may not give the Board an accurate sense of what problems are occurring, why they are occurring, and who is financially accountable for service delivery issues.

Finding 4

We recommend that VITA management continually perform root-cause analyses for any major service delivery problems, such as the one described above, and report their findings at each Board meeting. These analyses should also include an estimate of resulting Commonwealth costs as a direct result of VITA or Northrop Grumman's failure to handle the request properly or follow a defined process.

Commonwealth of Virginia

Walter J. Kucharski, Auditor

Auditor of Public Accounts
P.O. Box 1295
Richmond, Virginia 23218

February 29, 2008

The Honorable Timothy M. Kaine
Governor of Virginia
State Capital
Richmond, Virginia

The Honorable Thomas J. Norment
Chairman, Joint Legislative Audit
and Review Commission
General Assembly Building
Richmond, Virginia

We have audited the Service Management Organization of the **Virginia Information Technologies Agency** (VITA) and are pleased to submit our report entitled "Interim Review of Service Management Organization". We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The Information Technology Partnership is a ten-year, $2 billion agreement with Northrop Grumman to operate and manage the information system infrastructure for most executive branch agencies, excluding institutions of higher education and independent agencies. Our office monitors the status of major Commonwealth contractual commitments such as the Information Technology Partnership to help identify and prevent failures related to contract management in order to minimize loss to the Commonwealth.

Objectives

Our objectives for the review of the Service Management Organization were to determine whether:

- Milestones are on schedule to be completed prior to the transformation deadline;
- the Service Management Organization sufficiently monitors the development of the Information Technology Infrastructure Library (ITIL) and ensures complete and timely delivery in accordance with the Partnership Agreement;
- current performance metrics are measurable and accurately reported;
- contractual service level agreement metrics are measurable and accurately reported; and
- the "Request for Service" process is reasonably defined and consistently applied.

Scope and Methodology

Our review examined the Comprehensive Agreement between VITA and Northrop Grumman. Our review focused on the actual delivery of Milestones per the Agreement that are to be delivered between the period February 1, 2007 and January 31, 2008, and the expected delivery of Milestones between February 1, 2008 and June 30, 2008. We reviewed the progress of the Information Technology Infrastructure Library and Procedures Manual as well as the reasons for other delayed Milestones. We also reviewed the request for service process and how those requests are initiated and communicated to the SMO. We reviewed the methods of collecting and reporting current field and central operation metrics to the ITIB as well as progress toward development of Service Level Agreements and related Data Control Documents.

Our work consisted of management inquiries regarding the status of contractual milestones, examination of the Interim Comprehensive Agreement, review of existing and draft procedures, service level agreements, data control documents, request for service documents, and attendance at Information Technology Investment Board committee meetings responsible for tracking the Information Technology Partnership.

Conclusion

Overall, we found that the Service Management Organization follows procedures for testing and acceptance of Milestones and Milestones are generally delivered within the contractual date; however, there are some Milestones which are at risk of being delivered late. We found that the SMO sufficiently monitors Northrop Grumman in developing a complete Information Technology Infrastructure Library; however, delivery will not be timely. We found that current performance metrics are measureable but not complete and are accurately reported to the extent data is available. We found that a sound process is in place for the development of processes to ensure measurable and accurate data are collected to monitor service level agreements; however, these will not be complete by the necessary date. We found that the Request for Service process is reasonably defined but not consistently applied as evidenced by our findings regarding the DMV TREDS project.

Additional information concerning the Partnership status and future managed service environment may be found in the body of this report. Information concerning the history of VITA and design of the Information Technology Partnership can be found in our January 2007 report entitled Interim Review of Information Technology Partnership.

Exit Conference and Report Distribution

We discussed this report with the Service Management Organization on March 26, 2008. The Service Management Organization's response has been included at the end of this report.

This report is intended for the information and use of the Governor and General Assembly, management, and the citizens of the Commonwealth of Virginia and is a public record.

AUDITOR OF PUBLIC ACCOUNTS

AWP/clj

COMMONWEALTH of VIRGINIA

Virginia Information Technologies Agency
11751 Meadowville Lane
Chester, Virginia 23836-6315
(804) 416-6100

Lemuel C. Stewart, Jr.
Chief Information Officer
Email: cio@vita.virginia.gov

TDD VOICE -TEL. NO.
711

April 8, 2008

Mr. Walter J. Kucharski
Auditor of Public Accounts
Post Office Box 1295
Richmond, Virginia 23218

Dear Mr. Kucharski:

Thank you for the opportunity to respond to the Auditor of Public Accounts' audit of the Virginia Information Technologies Agency (VITA) Service Management Organization (SMO). The audit covers the milestones that were expected to be delivered between February 1, 2007 and January 31, 2008, and the milestones expected to be delivered between February 1, 2008 and June 30, 2008.

The transformation and modernization of the Commonwealth's information technology (IT) infrastructure and operations is a monumental task. Transformation clearly is delivering benefits that will improve service delivery to our customers and the citizens they serve for decades to come. We have accomplished much in a short time. Among our major accomplishments, we have:

- Constructed and opened a new primary data center and a new back-up data center -- the cornerstones for delivering enhanced, agile IT services in the years ahead
- Refreshed more than 20,000 personal computers, greatly benefiting the front-line state employees who use them
- Transformed more than 500 network connections that now provide more reliable services for state agencies
- Implemented a Security Operations Center that has improved the Commonwealth's IT security posture
- Enhanced economic development and created new jobs in rural Southwest Virginia

We have much left to do but are confident that we will continue to improve services and deliver benefits as we progress through this massive, first-of-its-kind public-private partnership. We are proud to have such a strong corporate sector partner such as Northrop Grumman.

AN EQUAL OPPORTUNITY EMPLOYER

In addition to the transformation activities, we also have worked on a number of major IT initiatives to meet the imperative business needs of several large state agencies. A few of those include:

- Sitter & Barfoot Veterans Care Center openings
- Eastern State Hospital opening
- Governor's One Stop in Charlottesville opening
- Consolidation of six agencies into one location in the Richmond metropolitan area

We know there always is room for improvement, and we are working diligently to streamline our process to deliver solutions to customers in a more efficient, effective and timely manner. That said, we concur with the four findings and recommendations in the audit of our Service Management Organization. We already have plans in place to sufficiently mitigate many of issues you have outlined -- most before June 2008.

Finding 1

We recommend that the SMO work with Northrop Grumman to develop a contingency plan in the likely event complete and official policies, procedures, and processes are not agreed - upon before transformation to a managed service environment. Failure to have a solid agreed-upon set of policies, processes, and procedures could create additional operational risks for the Commonwealth.

- We anticipate having sufficient processes in place to manage the operating environment come July 2008. We will continue to train our central and field staff on the use of the procedures and will make ongoing improvements as needed. Northrop Grumman has engaged additional resources, both internal and external, to ensure that we will achieve this goal. We have project plans and the necessary program management rigor in place to ensure this is achieved.

Finding 2

The Agreement anticipates having fifty-six Data Collection Documents in place on July 1, 2008. Of these documents, Northrop Grumman has not started twenty-six, fourteen are being drafted, twelve are in negotiation, one is ready to begin measurement, and three are approved and in use. With transformation quickly approaching, it is important for the SMO to have these Data Collection Documents in place in order to effectively measure Northrop Grumman's performance in a managed service environment. Delays past June 1, 2008 will have financial consequences for Northrop Grumman and service management repercussions for the Commonwealth.

- We are committed to completing all necessary Data Collection Documents (DCDs) prior to July 2008. We already have improved our position from the time this audit took place. We have many DCDs completed and will finish the remaining DCDs well in advance of July 2008 to ensure we have the appropriate monitoring and reporting in place.

Finding 3

We recommend that VITA management document and communicate with all of its customers the responsibilities of the Partnership as well as the responsibilities of the customer. Doing so will help to prevent the placement of unreasonable service delivery expectations on both parties by one-another. Further, we recommend that VITA place accountability for each phase of the service request process with only one responsible party. The clear identification of responsibility will help to identify the root-cause of potential future service delivery failures.

- With the recent formation of our integrated VITA/Northrop Grumman Customer Account Management teams, our priority focus on improving the request for services process and our expanded communications with agencies to clarify roles and responsibilities, we are confident there will be substantial improvements in this area.

Finding 4

We recommend that VITA management continually perform root-cause analyses for any service delivery problems, such as the one described above, and report their findings at each Board meeting. These analyses should also include an estimate of resulting Commonwealth costs as a direct result of VITA or Northrop Grumman's failure to handle the request properly or follow a defined process.

- We will work closely with the Information Technology Investment Board (ITIB) to improve the level of reporting we provide on a regular basis.

We applaud the professionalism of your staff, particularly Andy Powell and Eric Tomson, in performing this audit and preparing this report. As always, we appreciate input from your office and already are striving to address the findings.

Sincerely,

Lemuel C. Stewart, Jr.

c: James F. McGuirk II, Chairman, ITIB
Hiram R. Johnson, Vice Chairman, ITIB
Members, ITIB
The Honorable Aneesh Chopra, Secretary of Technology
Judy Napier, Deputy Secretary of Technology
Doug McVicar, Vice President and Program Manager, Northrop Grumman

VIRGINIA INFORMATION TECHNOLOGIES AGENCY

INFORMATION TECHNOLOGY

INVESTMENT BOARD MEMBERS

James F. McGuirk II,
Chairman

Hiram Johnson,
Vice Chairman

Kenneth S. Johnson, Sr.
Walter Kucharski
Dr. Mary Guy Miller
Scott Pattison
Len Pomata
Bertram S. Reese, III
Aneesh P. Chopra
Alexander Y. Thomas

OFFICIALS

Aneesh P. Chopra,
Secretary of Technology

Lemuel C. Stewart, Jr.,
Chief Information Officer and VITA Director

Marcella Williamson,
Executive Director

APPENDIX A: AGING OF MILESTONE DUE BETWEEEN FEBRUARY 1, 2007 AND JULY 1, 2008

Milestone Due	Milestone	Northrop Grumman Submits Criteria	Test Plan Agreed-Upon
2/1/2007	Submit Architecture Network Blueprint Address Plan	1/16/2007	N/A
3/1/2007	Migrate existing projects to Maintenance Umbrella	1/30/2007	4/20/2007
3/1/2007	Begin Desktop Refresh (*Critical*)	2/21/2007	3/14/2007
4/1/2007	Internal Application Transformation Complete	1/30/2007	4/20/2007
4/1/2007	Richmond Plaza Building Server Consolidation	5/21/2007	5/21/2007
4/1/2007	Quarter 1 Refresh	5/16/2007	6/26/2007
4/1/2007	Global Address List "Commonwealth-wide" (*Critical*)	1/19/2007	3/9/2007
4/1/2007	VOIP Architecture Design and Recommendations	N/A	N/A
7/1/2007	Commonwealth Enterprise Solutions Center (CESC) ready for Occupancy	6/28/2007	N/A
7/1/2007	Commissioning Certificate for CESC	6/28/2007	N/A
7/1/2007	Connectivity to CESC	6/13/2007	9/27/2007
7/1/2007	Quarter 2 Refresh	7/13/2007	10/18/2007
8/1/2007	Complete Site Surveys	9/19/2007	9/19/2007
9/1/2007	MPLS Core Established	6/14/2007	10/15/2007
9/1/2007	Back-end Infrastructure in place	1/26/2007	6/8/2007
10/1/2007	15% LAN Migration	10/19/2007	10/29/2007
10/1/2007	Quarter 3 Refresh	11/2/2007	11/5/2007
11/1/2007	Southwest Enterprise Solutions Center (SWESC) ready for Occupancy	N/A	2/5/2008
11/1/2007	Commissioning Certificate for SWESC	N/A	N/A
11/1/2007	Connectivity to SWESC	10/30/2007	11/21/2007
11/1/2007	Enterprise Network Operations Center (*Critical*)	N/A	12/13/2007
11/1/2007	ESOC Transitional	10/3/2007	10/17/2007
12/1/2007	Server Consolidation 25% Complete (*Critical*)	7/11/2007	11/20/2007
12/1/2007	Installation of Avaya Telephony	11/13/2007	11/13/2007
12/1/2007	Dedicated Incident Management System/Agent Workstations Installed	N/A	12/3/2007
1/1/2008	30% LAN Migration	1/14/2008	1/14/2008
1/1/2008	Quarter 4 Refresh	1/18/2008	1/18/2008
1/1/2008	SWESC Staffed and Trained	10/3/2007	11/15/2007
2/1/2008	Move mainframe/server from Richmond Plaza Building to Enterprise Solutions Center	1/30/2008	1/30/2008
3/1/2008	Move infrastructure for disaster recovery to SWESC	N/A	N/A
3/1/2008	Tape Automation Complete	N/A	N/A
3/1/2008	Richmond Plaza Building Migration Complete (*Critical*)	N/A	N/A
3/1/2008	Transition Services to SWESC	N/A	N/A
3/1/2008	ESOC VAP Operational (*Critical*)	1/30/2008	1/30/2008
3/1/2008	CSIRC Complete (*Critical*)	2/6/2008	N/A
4/1/2008	45% LAN Migration	N/A	N/A
4/1/2008	Quarter 5 Refresh	N/A	N/A
5/1/2008	Disaster Recovery Test at SWESC (*Critical*)	N/A	N/A
6/1/2008	ITIL Process Optimization	1/4/2008	N/A
6/1/2008	Mainframe Print Consolidation	N/A	N/A
6/1/2008	Quarter 6 Refresh (*Critical*)	N/A	N/A
6/1/2008	ESOC Complete (*Critical*)	N/A	N/A
7/1/2008	60% LAN Migration	N/A	N/A
7/1/2008	Production Incident Mgmt System/Help Desk (*Critical*)	N/A	N/A

*Source: SMO Milestone Register

SMO Accepts Criteria	Milestone Delivered	Milestone Accepted	Contract Price	Paid Amount
1/16/2007	1/18/2007	2/7/2007	$ 832,594	$ 832,594
2/1/2007	4/6/2007	4/20/2007	$ 103,217	$ 103,217
2/23/2007	3/1/2007	3/30/2007	$ 5,588,132	$ 5,588,132
2/1/2007	4/16/2007	4/20/2007	$ 472,609	$ 472,609
5/21/2007	5/24/2007	6/13/2007	$ 3,292,895	$ 3,292,895
5/17/2007	6/18/2007	6/28/2007	$ 392,787	$ 1,397,033
2/2/2007	3/21/2007	3/27/2007	$ 3,948,306	$ 3,948,306
N/A	N/A	N/A	$ -	$ -
6/28/2007	N/A	N/A	$ -	$ -
6/28/2007	N/A	N/A	$ -	$ -
6/13/2007	7/2/2007	9/27/2007	$ 416,297	$ 416,297
7/27/2007	10/18/2007	10/19/2007	$ 4,077,267	$ 4,077,267
9/19/2007	9/20/2007	12/5/2007	$ -	$ -
6/14/2007	8/24/2007	10/17/2007	$ 5,416,099	$ 5,416,099
2/2/2007	8/29/2007	9/7/2007	$ 4,936,689	$ 4,936,689
10/22/2007	11/1/2007	12/30/2007	$ 1,973,748	$ 1,973,748
11/5/2007	11/5/2007	11/30/2007	$ 4,077,267	$ 4,077,267
1/31/2008	2/5/2008	2/5/2008	$ -	$ -
N/A	N/A	N/A	$ -	$ -
10/31/2007	11/5/2007	11/21/2007	$ 416,297	$ 416,297
N/A	N/A	N/A	$ 4,934,370	$ 3,947,496
10/3/2007	10/17/2007	12/13/2007	$ 817,689	$ 817,689
7/20/2007	11/2/2007	11/20/2007	$ 3,077,686	$ 3,077,686
11/13/2007	11/13/2007	1/28/2008	$ 456,195	$ 456,195
12/3/2007	12/3/2007	12/21/2007	$ 456,195	$ 456,195
1/14/2008	1/16/2008	N/A	$ 657,916	$ 657,916
1/18/2008	1/18/2008	N/A	$ 4,077,267	$ -
10/3/2007	11/29/2007	N/A	$ 456,195	$ -
1/30/2008	N/A	N/A	$ 1,097,632	$ -
N/A	N/A	N/A	$ 8,526,126	$ -
N/A	N/A	N/A	$ 4,683,785	$ -
N/A	N/A	N/A	$ 3,000,000	$ -
N/A	N/A	N/A	$ 456,195	$ -
1/30/2008	N/A	N/A	$ 1,205,227	$ -
2/7/2008	N/A	N/A	$ 1,205,227	$ -
N/A	N/A	N/A	$ 657,916	$ -
N/A	N/A	N/A	$ 2,130,066	$ -
N/A	N/A	N/A	$ 9,000,000	$ -
1/9/2008	N/A	N/A	$ -	$ -
N/A	N/A	N/A	$ -	$ -
N/A	N/A	N/A	$ 2,130,066	$ -
N/A	N/A	N/A	$ 1,205,227	$ -
N/A	N/A	N/A	$ 657,916	$ -
N/A	N/A	N/A	$ 456,195	$ -