

## 2008 Innovations Awards Program APPLICATION

ID # (assigned by CSG): 08-S-42VA

**Please provide the following information, adding space as necessary:**

State: Virginia

Assign Program Category (applicant): Government Operations

**1. Program Name**

Virginia Information Technologies Agency Infrastructure Public-Private Partnership

**2. Administering Agency**

Virginia Information Technologies Agency (VITA)

**3. Contact Person (Name and Title):** Marcella Williamson, Executive Director of ITIB and Public Information and Communications

**4. Address:** 11751 Meadowville Lane, Chester, VA 23836

**5. Telephone Number:** (804) 416-6002

**6. FAX Number**

**7. E-mail Address:** marcella.williamson@vita.virginia.gov

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**9. Please provide a two-sentence description of the program.**

The Virginia Information Technologies Agency (VITA) and Northrop Grumman formed a public-private partnership to provide a reliable, standard and secure information technology (IT) environment for more than 80 Virginia state agencies, which manage 68,000 computer users. The 10-year \$2 billion partnership is delivering a more resilient and transformed technology infrastructure for Virginia state government, the first and largest program of its kind in the country.

**10. How long has this program been operational (month and year)? Note: the program must be between 9 months and 5 years old on March 1, 2008 to be considered.**

July 1, 2006, marked service commencement for the IT Infrastructure Partnership. Under VITA's direction, Northrop Grumman became responsible for transformation of and service delivery for the state's technology infrastructure for 86 executive branch state agencies.

**11. Why was the program created? What problem[s] or issue[s] was it designed to address?**

The program was created to leverage private sector resources – including significant capital investment – to make the Commonwealth's IT infrastructure more reliable, secure and modern without additional costs to taxpayers.

Prior to 2003, each Virginia state agency managed its own IT infrastructure – a hodgepodge of technology, some modern, others extremely outdated. Overlapping, often redundant systems with varying levels of security protection and no comprehensive capability to detect and proactively react to the increasing threats of cyber attacks left the Commonwealth vulnerable and inefficient.

In 2003, the Virginia General Assembly created the Virginia Information Technologies Agency (VITA) to consolidate and centralize technology information for executive branch agencies, which would help them to deliver quality services to citizens, businesses and local governments.

Upon looking under the hood of the state’s IT systems, it was clear to VITA that private sector resources were needed for the program to be truly successful. Eighty percent of agencies had inadequate security, and in some agencies, the hardware lacked regular maintenance, virus software was virtually useless and some desktops and servers were more than a decade old. There were no enterprise performance metrics or consistent service levels for the infrastructure. IT infrastructure spend was largely discretionary, not a planned, budgeted expenditure.

Following support and approval by the legislature and former Governor Mark Warner, VITA entered into a partnership with Northrop Grumman. The partnership is transforming a fragmented technology environment to a consolidated and modern infrastructure that has consistent and updated technology statewide. The result will be a more efficient and secure infrastructure that enables state employees to better serve citizens.

## **12. Describe the specific activities and operations of the program in chronological order.**

Dec. 2005: The partnership entered in the interim agreement phase, which permitted VITA and Northrop Grumman to plan the transition and transformation activities beginning July 2006.

May 2006: 850 VITA employees were given the choice to work directly for Northrop Grumman, or to remain with the state under technical direction from Northrop Grumman. Approximately 560, or 67 percent of eligible VITA employees, transitioned to their new positions with Northrop Grumman, which opens opportunities to grow and advance in the IT field beyond state government.

July 2006: Northrop Grumman assumed responsibility for the delivery of infrastructure services with VITA oversight. Over the next three years the Commonwealth’s infrastructure is transformed into a cohesive, efficient, up-to-date platform that will better meet needs of state government, permitting agencies to enhance their services to citizens.

July 2006 – today: Several transformation projects take place at the same time all the while the partnership maintains current operations and prepares to transition to managed service – the future state of operations. The most visible highlights include:

- Summer and fall, 2007: Two new data centers opened. The primary data center in Central Virginia and the back-up facility in Southwestern Virginia house many of the professionals and cutting-edge technology that are central to the transformation of the Commonwealth’s information operations. These centers consolidate Virginia government data centers which previously were spread across more than 100 locations and provide the most up-to-date security, fire protection and backup power.

The Commonwealth Enterprise Solutions Center is a 192,000 square-foot facility located in Chester, Virginia. The data center, which opened in the summer of 2007, features:

- Centralized managed operations center
- Network operations center
- Cyber security incident response center
- 1,000 powerful new servers, representing a two-thirds reduction through consolidation

The Southwest Enterprise Solutions Center located in Lebanon, , Virginia opened in the fall of 2007. This facility serves as Northrop Grumman’s East Coast service delivery hub and supports the Partnership’s customer functions. Core functions of this facility include:

- Technology support and help desk
  - Enterprise security
  - Network operations management
  - Data center operations
- December 2007: Connections to the old mainframe serving 15 state agencies in downtown Richmond were shifted to a new mainframe at the new data center in Chester. As a result, data and data processing are more reliable and protected in a more secure environment. The move was successful because of extensive preparation, planning and around-the-clock testing and monitoring.

In addition to the data centers, the partnership has made significant progress in other service areas to transform the technology environment:

- New desktops – To date, replaced or refreshed 17,631 computers with PCs that are standard across agencies for improved compatibility and servicing. This process is ongoing. A total of 68,000 computers will be replaced by July 2009.
- Centralized help desk – A new incident management tool used to process calls now is live at 41 agencies. The help desk, located at the newly built Southwest Enterprise Solutions Center, will provide a single point of contact for service, improving around-the-clock coverage, reliability and centralized tracking. Staffing the help desk has begun and the centralized help desk operations will be stood up this year.
- Global messaging services – All agencies have been moved to a single, enterprise-wide e-mail system, improving inter-agency file sharing and security.
- Mainframe and servers – New mainframes and 600 servers have been located in the new Commonwealth Enterprise Solutions Center – a single and secure location for monitoring and maintenance. The number of servers will be reduced from 3,000 to 1,000, saving space, cutting energy costs and increasing efficiency of operations.
- Better security – New security centers to be stood up in June 2008. The enterprise security operations center and computer security incident response center will ensure that critical information is protected.
- Reliable network, voice and video – Network migration to multiprotocol label switching is completed at 405 agency sites. Voice and video improvements will begin this year. This will

provide a state-wide area network that can be monitored in one place, allowing technicians to identify and resolve problems before outages occur.

July 2008: Service will be measured based on recognized industry standards. The VITA/Northrop Grumman agreement contains 177 service performance measures with a penalty structure if measures are not attained. The agreement also contains provisions requiring continuous improvement in service levels over the term of the contract.

July 2009: Transformation will be completed, following ongoing improvements and service delivery of the infrastructure.

July 2009 – July 2016 – ongoing operations

### **13. Why is the program a new and creative approach or method?**

With the support of state lawmakers, VITA turned the traditional world of state government information technology upside down through its innovative public-private partnership. It created an entirely new model that leverages the strengths of the private sector to transform government service delivery. VITA and Northrop Grumman bring the best of public and private sector resources to build and maintain a world-class IT infrastructure for state government. VITA provides the leadership, governance and oversight in its partnership with the private industry, while Northrop Grumman provided the needed capital investment and expertise to build a more resilient, reliable and secure infrastructure, while at the same time providing long-term service delivery. Northrop Grumman is held accountable to performance measures. Careful checks and balances are in place so that the best interests of the public are represented. No other state in the county has taken on a program of this type.

### **14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)**

The planning effort to launch the partnership program included more than 100 people from both VITA and Northrop Grumman. They worked from the fifth floor of the VITA Operations Center in downtown Richmond.

The existing 850 VITA employees were given the option to stay with the state or transition their positions with Northrop Grumman. The arrangement allowed the partnership to retain the knowledge and experience of employees who know their customer base well.

Cost numbers are answered in the following question.

### **15. What are the program's annual operational costs?**

Northrop Grumman's investment of \$270 million finances the first three years in which transformation activities, including the construction of two data centers, will be completed. The entire contract is fixed priced – \$2 billion over a span of 10 years.

### **16. How is the program funded?**

The program is funded by two sources: a \$270 million capital investment from Northrop Grumman and payments from state agencies that receive services from the partnership. Those agencies are billed

monthly based on the number and type of computers, phones and other IT equipment they use. This billing system provides a stable source of funding to support IT services and products that are consistent, reliable, up to date and provide better security.

The contract is \$2 billion over 10 years. The benefit is that the IT budget remains flat over that time. The support from the private sector in addition to agencies pooling resources result in cost avoidances because economies of scale are leveraged.

**17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number.**

Virginia Public-Private Education and Infrastructure Act of 2002 56.575.1 et seq of the Code of Virginia, modified in 2003 to include information technology.

In November 2005 Governor Mark Warner approved an interim agreement with Northrop Grumman to modernize the state's information technology infrastructure.

In July 2007, the Commonwealth of Virginia finalized the Northrop Grumman \$2 billion IT Infrastructure Partnership contract.

**18. What equipment, technology and software are used to operate and administer this program?**

The partnership offers 8 service areas for more than 80 state agencies that total a \$270 million investment.

- Two new data centers - \$60 million investment
- New desktops - \$35 million investment
- Centralized help desk - \$10 million investment
- Global messaging services - \$25 million investment
- New mainframes and consolidated servers - \$50 million investment
- Enterprise security operations center and computer security incident response center - \$10 million investment
- Reliable network - \$60 million investment
- Better voice and video - \$20 million investment

**19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address.**

This program originated in Virginia. Lemuel C. Stewart Jr., chief information officer for the Commonwealth of Virginia, had the vision to partner with the private sector to bring a more reliable and secure IT infrastructure to state agencies. His contact information:

Lemuel C. Stewart Jr.  
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Virginia Information Technologies Agency  
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Chester, VA 23836  
804-416-6100  
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**20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?**

There are no other programs of this magnitude in other states.

**21. Has the program been fully implemented? If NO, what actions remain to be taken?**

This program has been fully implemented. Transformation is under way and will be completed in July 2009. The contract lasts for 10 years, beginning July 2006.

**22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.**

**Pro -**

A completely transformed IT environment within a three-year timeframe, with ongoing refreshes to keep it in step with future technology advancement. Key example: Agencies that had outdated computers with poor security now have modern computers with virus protection and a regular maintenance schedule for replacement.

Essential upfront capital and facility infrastructure, not otherwise practically available to state agencies. Key example: Two new data centers house the technology to operate the IT infrastructure of agencies, providing a more secure and robust technology environment that did not exist before the partnership.

Collective buying power and economies of scale equivalent to the best practices in the corporate world. Key example: By agencies pooling resources, value is realized in purchasing IT goods and services in large volumes instead of each agency purchasing goods from a multitude of vendors. Without the partnership program, the state would have paid an additional \$200 million over the next 10 years to support an increasingly outdated and expensive infrastructure.

Professional growth and development opportunities for infrastructure staff with a world-class IT organization. Key example: Partnership employees are trained to use the Information Technology Infrastructure Library (ITIL). ITIL is best management practices to operate an enterprise-wide infrastructure. By employees learning how to use ITIL and putting it to practice in their daily job, they are engaging in best practices while becoming more valued and skilled in a modern IT environment.

Multiple price and performance assurances. Key example: Service will be measured based on recognized industry standards. The VITA/Northrop Grumman agreement contains 177 service performance measures with a penalty structure if measures are not attained. The agreement also contains provisions requiring continuous improvement in service levels over the term of the contract.

Significant economic development benefits for both Central and Southwestern Virginia. Key example: Approximately 400 employees will be hired to staff the new Southwest Enterprise Solutions Center in Southwestern Virginia. More than 40 employees have been hired and already are on the job. These are much-needed jobs in economically challenged regions. Citizens see the potential for jobs that can provide their children and their grandchildren with the opportunity for a career that could allow them to stay in their home towns. The opening of the Commonwealth Enterprise Solutions Center in Central Virginia

creates a technology corridor with high-tech jobs. In total, the partnership is expected to bring \$38 million in economic benefits to the Commonwealth.

## **Con -**

Managing change and minimizing disruptions that come with transformation are extraordinary challenges. Key example: The partnership is building a modern IT infrastructure in the middle of heavy computer traffic, while at the same time maintaining current operations for more than 60,000 state agency computer users. Careful planning, change management, strategic communications, training, collaboration, testing, pilot roll-outs and back-up plans are among the many tasks required to manage transformation. It takes patience and cooperation from agency customers involved as their desktops are replaced, their networks are consolidated and many other components of their technology infrastructure are changed and transformed. Employees are learning how to use new standard processes to manage the transformed technology environment. The partnership provides the organizational structure, experienced leadership, expertise, resources and tools to help mitigate the impacts of change.

### **23. How has the program grown and/or changed since its inception?**

Since the partnership officially launched its three-year transformation process on July 1, 2006, many of the key milestones have been achieved, including the construction of two data centers and getting the technology environment prepared for another critical milestone – the launch of managed services on July 1, 2008. This date marks the beginning of a new way in which the technology environment will be sustained and managed over the long-term.

The focus of the program is delivering IT services to 86 state agencies. There has been interest from other local government agencies within Virginia to join the partnership. The partnership plans to expand to include more customers.

### **24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?**

States need the following in order for the program to work:

- Commitment from the customers, the legislature and the Governor's office – Support and commitment are required all the way up to the Governor. It is a commitment the state has to make to ensure the funding and support are solid. Customers and state leaders cannot lose sight of the end game and must be involved and informed along the way.
- Funding – With the commitment of the customers and state leaders, including legislation that mandates an enterprise IT infrastructure, funding is ensured.
- Commitment from employees – They must be committed to the vision of providing better technology services to their customers.
- Capable implementation team – A team of the best IT and transformation professionals must be able to take a project from concept to delivery and operate at peak efficiency.
- Good partnering relationship – The public and private sectors must know how to work together and partner with each other. They must work toward the same goals and see themselves as one team.