VITA Innovation Center of Excellence

(VITA ICE)

Innovative and Emerging Technology

Initiation: July 1, 2016

Completion: March 2017

Nomination submitted by:
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2017 Commonwealth of Virginia NASCIO Award Submission
Project: VITA Innovation Center of Excellence: VITA ICE
Category: CIO Special Recognition Category

Executive Summary

Virginia CIO Nelson Moe frequently shares his favorite quote: Time, tide and technology wait for no one. To better address this truism and especially the difficulties of keeping government agile while navigating rapid information technology (IT) change, Moe launched the Virginia Information Technologies Agency's Innovation Center of Excellence (VITA ICE).

Government today must provide secure, private and user-friendly services to a diverse and changing population. New technologies in IT management, web applications, data, analytics, information security, cloud computing and more offer government new chances to improve service delivery. However, Virginia's executive branch agencies and other government entities did not have a centralized way to learn about and access technology innovation prior to purchase.

Now, with the help of VITA ICE, Virginia government entities can learn about, evaluate and select appropriate IT tools and projects in the earliest stages of project development – independent of an actual procurement. The new center of excellence was designed from the outset as a platform for government to hear and suppliers to showcase developments.

VITA ICE consolidates demonstrations and presentations about emerging technology innovation and offers specialized events that bring state IT leaders and suppliers together in a collaborative forum. The center also provides for supplier-state agency pilot programs at no cost to the state and partnered to support the Governor's Data Internship Program (GDIP).

By partnering industry technology leaders with IT leaders in state agencies and institutions, VITA ICE identifies emerging technologies and opens a path for agile processes. It facilitates knowledge of rapidly changing technology trends. Demonstrations educate stakeholders through supplier showcases to communities of interest. VITA ICE addresses technologies that valuate viability, applicability, architectural fit and business value. This approach ensures that this program identifies opportunities for innovation and partnerships that are realistic and attainable.

VITA ICE is driven to fulfill the commonwealth's strategic needs by providing new technology resources, retaining and educating qualified staff to implement and employ these technologies, eliminating duplicative efforts, providing governance and enhancing VITA's agility to meet agency demand for new services.

Concept

VITA ICE enables the exploration, evaluation and implementation of new technologies as the commonwealth moves to the next generation of IT. The program provides an outlet to research new technologies of potential interest to the commonwealth, collaboration with the private sector to identify emerging technologies and develop pilot technical demonstrations, an agile process to facilitate the speed of technology change and demonstrations of new technologies to agencies' IT leaders.

Significance: Scope and Stakeholders

VITA ICE has several program components in its scope, encompassing different relationships and ways stakeholders from college students to state IT leaders to top 100 companies can participate:
- Research
- Education and training
- Collaboration
- Facilitation of existing supplier relationships
- Supplier management

Virginia's 63 executive branch agencies did not have a centralized way to learn about and access technology innovation, so CIO of the Commonwealth Nelson Moe and VITA staff rolled out VITA ICE in July 2016. It enables the exploration of new technologies. Objectives of the program include:
- Spur technology innovation
- Evaluate agency business needs
- Translate technical innovation into best practices
- Create a centralized clearinghouse
- Advance the knowledge of technology trends
- Serve as a catalyst for technology innovation development
- Provide a forum for industry expertise, research and collaborations
- Position the Commonwealth of Virginia as a recognized leader in IT

Additionally, VITA ICE seeks to enrich data sharing and leverage technology to improve worker productivity and make state employment more attractive to the current and future workforce. It supports educational attainment initiatives key to achieving state economic development and quality of life goals. Supporting initiatives that continue to place Virginia as a leader in IT security and cybersecurity, expand and support enterprise and collaborative IT services, and expand technology platforms and productivity tools are also goals of the program.

From the charter: "The VITA ICE program will accomplish these goals by leveraging supplier relationships with those suppliers who currently have existing contracts with VITA ("existing supplier") and through targeted outreach to suppliers within specific areas of the open market. Supplier participation in the VITA ICE program will not constitute a procurement under the Virginia Public Procurement Act (§2.2-4300 *et seq.* of the *Code of Virginia*) nor will any participation result in a contract award for any product or service. Rather, the findings of the program may play a part in the development of VITA's future procurement planning."

In September 2016, the CIO and VITA outlined the agency's strategic plans and goals through the year 2020, with a focus on improvements in cybersecurity, IT services, governance, financial framework, workforce planning and workflow. Carrying out the VITA ICE program is listed as one of the strategic actions.

A multi-tiered, multi-channel communications strategy was launched to inform state agencies of opportunities to participate in the program. The plan included:
- A kick-off announcement from the CIO to agency heads, IT leaders and information security officers
- Discussion about the program at regularly scheduled meetings
- Invitations to each event (demonstration or presentation) from the CIO to those stakeholders listed above
- Surveys of event attendees to gather data useful in improving the programs and seeking input regarding upcoming topics
- Contact with agencies and other entities to develop pilot data programs in partnership with suppliers at no cost to the state
- Contact with suppliers who have technology to demonstrate or promote that may be useful to commonwealth agencies and entities
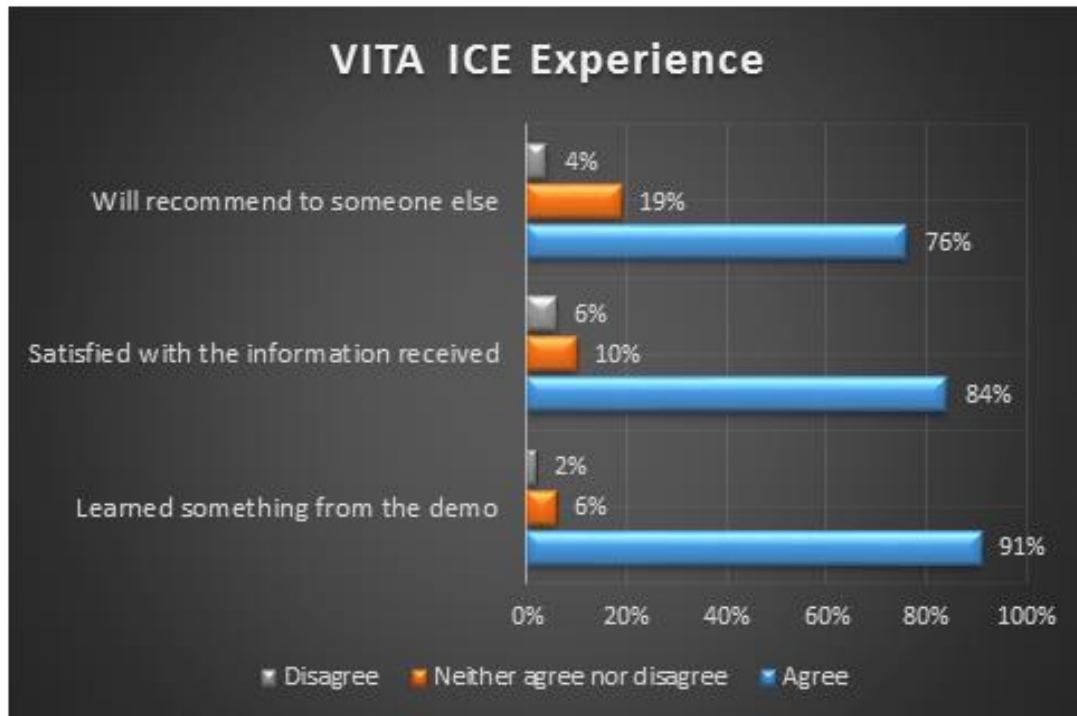
VITA employees, an agency executive director, the governor's secretary of technology and VITA's sister agency (the Center for Innovative Technology) participate in organizing and producing the VITA ICE programs.

The scope and stakeholders of the program include a vast contingent of the population of Virginia: findings of the VITA ICE program are available to all Virginia government entities -- state agencies, local governments, universities and Virginia's citizens. Additionally, improvements in the effectiveness and efficiency of government gained through VITA ICE provide benefits across all stakeholders.

Benefits

VITA ICE has delivered 11 well-attended demonstration/presentation sessions with eight suppliers offering new technology applications and services that already have resulted in two

procurement actions. More than two dozen suppliers have stepped up for future events. Surveys of participants in the demonstration/presentation sessions show that 91 percent gained knowledge of technology innovation. (See chart below)

The creation of VITA ICE enabled the rapid standup and partnering/incorporation of a number of programs that have impacted the commonwealth over the past year:

- Gov. Terry McAuliffe issued a directive to "increase data sharing, correlation and analysis capacity to enable the state to achieve efficiencies … " VITA ICE pioneered programs that leveraged data and technology innovation from a wide array of sources; 11 selected suppliers were selected that offered agencies a range of analytics solutions and professional services. Those ranged from business intelligence, predictive analytics, statistical analysis and simulation, data visualization, data governance data quality to big data. The Departments of Social Services, Juvenile Justice and Transportation utilized the next generation data analytics (NextGen) program to pair with suppliers to better summarize their agency data and ultimately gain vision for future decisions based on that data. NextGen pilot program's success resulted in an extension through November 2017.

- The Governor's Data Internship Program (GDIP) provides agencies the opportunity to take advantage of the knowledge of upper-level undergraduate and graduate-level interns to answer "burning questions" about data. This business-driven partnership between agencies and universities delivers analytics solutions for data visualization, predictive modeling, geospatial analysis and other advanced analytics metrics. Virginia universities

including the University of Virginia, Virginia Commonwealth University, George Mason University, George Washington University and Virginia Tech intertwined existing collegiate programs with agencies that required data analysis of complex data sets. The Virginia Departments of Health, Motor Vehicles, Aging and Rehabilitative Services had the interns explore access to healthcare and socioeconomic determinants of health, temporal and spatial analysis of vehicle crash data to improve driver safety, and analyze caregivers and agency performance indicators and assess management practices, based on established maturity models. The collaboration provided answers to many questions about state data that had gone unanswered for many years, resulting in better use of agency resources, and experience with the analysis of real-world data sets for university interns. https://governor.virginia.gov/newsroom/newsarticle?articleId=12074

Since its inception, VITA ICE has seen great success. To date, performance metrics for the program are as follows:
- Demonstrations by suppliers and agencies: eight
- Agencies enrolled: four
- Suppliers enrolled: 29
- Total participants overall: 450+
- Collaborative partnerships (agencies and suppliers): five
- Follow up procurement actions: two (mission secure cybersecurity with the Virginia Department of Transportation for research and development of autonomous vehicles; and a NextGen pilot that has developed into a procurement)
- VITA ICE presentations: 13

(Late breaking: Nex-Gen and GDIP have been moved into VITA ICE.)

In addition to meeting the governor's directive and the CIO's strategic plans and goals mentioned above, VITA ICE can provide information to Virginia's IT leaders on nine of NASCIO's top 10 strategies, management processes and solutions. Particularly, VITA ICE is in line with consolidation, budget, enterprise vision and agility. Demonstrations/presentations have highlighted some areas. Following is a list of the presentations to date:
- October 2016: Cyber Security for Operational Technology
- November 2016: "Agile Rapid Value Delivered"
- December 2016: "Are Your Agency Applications Ready for the Cloud?"
- January 2017: Transitioning to the Cloud Discussion
- February 2017: "What, When, Why DevOps?"
- March 2017: "The Art of Innovation"
- March 2017: "The Next Generation Data Center"
- April 2017: Governor's Data Analytics Summit
- April 2017: "Big Data Challenges and Management"
- April 2017: "Modern Business Intelligence and Data Analytics"

VITA ICE is an exact fit to Gov. McAuliffe's goal of innovation: "Explore and pursue innovative strategies to increase government efficiency or to reduce government costs for needed services."

By partnering industry technology leaders with IT leaders in state agencies and institutions, VITA ICE identifies emerging technologies and opens a path for agile processes, facilitating knowledge of rapidly changing technology trends. Demonstrations educate stakeholders through supplier showcases to communities of interest. Addressing technologies that valuate viability, applicability, architectural fit and business value ensures that this program identifies opportunities for innovation and partnerships that are realistic and attainable.

VITA ICE is driven to fulfill the commonwealth's strategic needs by providing new technology resources, retaining and educating qualified staff to implement and employ these technologies, eliminating duplicative efforts, providing governance and enhancing VITA's agility to meet agency demand for new services.