

STATEMENT OF MARIA ROAT
CHIEF INFORMATION OFFICER
U.S. SMALL BUSINESS ADMINISTRATION

BEFORE THE

COMMITTEE ON SMALL BUSINESS
U.S. HOUSE OF REPRESENTATIVES

HEARING ON

HELP OR HINDRANCE? A REVIEW OF SBA'S OFFICE OF THE CHIEF INFORMATION
OFFICER

JULY 12, 2017

Chairman Chabot, Ranking Member Velazquez, and Members of the Committee, thank you for the opportunity to discuss how the Small Business Administration (SBA) is improving its leadership roles in overseeing and addressing information technology (IT) investments and security risks. I would like to share with you today where SBA is in the process of rationalizing its IT infrastructure, and stabilizing and modernizing to drive standardization, consolidation, and integration across its IT portfolio.

In October 2016, the Office of the Inspector General issued its "Report on the Most Serious Management and Performance Challenges in Fiscal Year 2017." The reports' Challenge 2 focused on the Office of the Chief Information Officer (OCIO) and the need to improve its leadership roles in overseeing and addressing IT and security risks. Since 2005, SBA has had 8 Chief Information Officers and frequent turnover in key IT positions "adversely affecting the ability for SBA to make lasting improvements in its IT investments and security in multiples areas."¹ I am here to tell you about how the Office of the Chief Information Officer is transforming to help the agency and support its mission of delivering services to small business owners.

I on-boarded SBA on October 3, 2016 as the Chief Information Officer, after having served as the Chief Technology Officer at the US Department of Transportation for more than two years. By mid-November, I completed an initial assessment of the overall operating environment and identified stabilization and modernization targets to reach by the end of the fiscal year. It is necessary to pivot OCIO from a reactive, fire-fighting, technical support operation to a more proactive services organization that is innovative and responsive to the business and technology needs of SBA's mission. After I arrived, the OCIO began moving aggressively to address its network, systems, applications and overall operational challenges, move its primary data center to the cloud, address security deficiencies and decrease its personnel vacancy rate.

¹ https://www.sba.gov/sites/default/files/oig/FY_2017_-_Management_Challenges_-_10_14_16_7.pdf

When I arrived, SBA's heating, ventilation, and air conditioning (HVAC) units in its data center were experiencing weekly incidents with temperatures rising to 120 degrees or more causing frequent outages and system degradation. SBA's inventory of network, servers, software, and applications was incomplete, resulting in ineffective management of the entire network. Program offices were operating in silos with some network segments firewalled from OCIO visibility for monitoring and management. Further, operating systems were long past end-of-life, and others nearing end-of-life, introducing significant security risks into the environment.

SBA's network infrastructure was not adequately architected to support SBA's requirements. Specifically, one third of all network circuits are overloaded, and the environment has aging voice equipment, single points of failure, inconsistent end-point management, and separate voice and data wide area networks (WANs). Gaps existed in the areas of configuration management, and a lack of a mature enterprise architecture capability has led to a fragmented technology stack with deficiencies in standardization, and duplicative or overlapping tools deployed across SBA.

Strategies to Stabilize and Modernize

It is imperative to modernize SBA's infrastructure and build in security as a design principle to support a mobile workforce. To address the WAN performance issues, immediate actions were taken to make configurations changes to move certain traffic loads to off-hours. With its service provider, OCIO developed plans to migrate from a Time-Division Multiplex (TDM) to a converged, Ethernet IP based network that will result in reduced network latency, improved application performance, address security gaps, and introduce scalability and resiliency. In working with the service provider, I provided direction that the effort must be cost-neutral – no additional funding was available. Orders for 111 circuits were placed and the first 20 circuits are on-line today.

Of primary importance was stabilizing the primary data center's environment. By December, the OCIO team conducted a detailed data center inventory from the physical devices to the applications. The inventory was produced with about 85% accuracy, and provided sufficient initial data to identify what could be shut down, upgraded, and/or moved to the cloud. The OCIO team made a determination to either upgrade systems or shut down unnecessary equipment in preparation for transitioning to the cloud. By March, the team shut down 170 servers directly resulting in HVAC stabilization, and a tangible reduction in power usage. Upgrades to operating systems and applications significantly reduced vulnerabilities and improved SBA's security posture. Because of my direction that no new hardware would be purchased or placed in the data center, SBA is the first federal agency to deploy the Continuous Mitigation and Diagnostic system in a cloud environment, with Phase I starting in March.

SBA migrated e-mail to Microsoft O365 in May 2016 due to failing on-premise e-mail servers; however, no other subsequent migration actions were planned to take advantage of the O365 platform's capabilities. As the data center stabilization tiger teams stood down, cloud tiger teams stood up to migrate the data center to Microsoft's Azure cloud and O365. The teams follow agile methodologies with daily stand-ups, releases and sprints, and all activities tracked in JIRA. The cloud architecture design was completed in March, migration planning is nearing completion, migration staging begins in July, and actual migration starts in August. Migration to SharePoint Online has been completed for those applications that could be migrated, and assessment is underway for remaining SharePoint applications to either be upgraded or considered for replatforming, consolidating or transitioning to commercial off the shelf (COTS) or other software as service applications.

Prior end-user environments were deployed inconsistently across SBA with no standard image, resulting in security vulnerabilities, inconsistencies, and multiple versions of software installed on the desktops. Upgrades to Windows 10, Office 2016 and OneDrive for the entire SBA enterprise are underway. Deployment to pilot users was completed in May and OCIO-wide roll-out begins in July. SBA-wide upgrades will begin at the end of the fiscal year.

The Deputy CIO and I reviewed and evaluated all purchase requisitions for reduction or elimination based on duplication, overlap, gaps, and need as the transition to O365 and the cloud is underway. Additionally, OCIO leadership reviewed all service contracts and identified opportunities to eliminate duplicative services and address gaps.

Pivoting from a functionally siloed organization to a customer-centric and service-optimized structure requires an understanding of the customer's requirements. Operational credibility is key to IT taking on a more strategic role within the enterprise. Improved support from the IT Service Desk including closing outstanding issues, implementing tiered support processes and receiving and incorporating customer feedback is improving customer satisfaction. Further, the data center stabilization efforts significantly reduced incoming calls to the Service Desk.

Improving SBA's IT Governance Structure

The Federal Information Technology Acquisition Reform Act (FITARA) provides the tools needed to transform how we manage IT. It is imperative that the CIO, Chief Human Capital Officer, Chief Financial Officer and Senior Procurement Executive work collaboratively to understand SBA's business needs and drive informed decisions. Over the last year, SBA has initiated a review of its IT portfolio and actively uses the agency's Investment Review Board (IRB), co-chaired by the CIO and Chief Financial Officer. The IRB has oversight responsibility for major programs and is working to institutionalize its

ability to deliver successful programs and mature SBA's governance capabilities and improve transparency.

Through a stronger governance model, the CIO has greater visibility to improve planning, identify cost savings opportunities and to better understand current and planned IT resources to support program objectives. This includes leveraging Enterprise Architecture as the roadmap to improve, integrate and streamline processes and systems, and requiring CIO approval for acquisition plans for all new IT contracts above the simplified acquisition threshold to safeguard against the procurement of duplicative and/or non-compatible technologies and services, and ensure alignment with SBA's technology standards and strategic direction. I conducted four deep dives on major investment to review milestones, technology capabilities, funding and risks: Capital Access Financial Systems; Disaster Credit Management Modernization; Small Business Innovation Research Program; and Certify.sba.gov. Additionally, I conducted a TechStat on the Certify.sba.gov IT investment in June to examine program data with a focus on delivered and planned functionality that will lead to concrete actions to improve overall program performance and reduce risk.

Leveraging IT to Support Mission Outcomes

SBA delivers loans, loan guarantees, contracts, counseling sessions and other forms of assistance to small businesses. The agency's primary public website (sba.gov) is visited by over 15 million people per year, but the agency has struggled with meeting the needs of these current and prospective small business owners. Information has been buried in confusing language and layers of navigation, and has been hard to access on mobile and table devices. Approximately 31% of SBA's web site traffic comes from mobile devices and 5% from tablets, and mobile traffic grew by 2.5% last year. In 2016, a Digital Service team was stood up and on-boarded a team of digital experts to lead a modernization effort for sba.gov. The Digital Service team moved sba.gov to a new Content Management System, established a modernization roadmap and is systematically changing the site to greatly improve SBA's customer experience. The agency's Leveraging Information and Networks to access Capital (LINC) capability will receive a major refresh and re-launch later this month to help connect small business borrowers with participating SBA lenders. As part of the modernization effort, the tool will be renamed to Lender Match for ease of communicating its purpose and value. Prospective borrowers complete a short online questionnaire, and the responses are forwarded to participating lenders that operate within the small business' county. If lenders are interested in the referral, the lender and prospective borrower's contact information will be exchanged.

The OCIO is collaborating with the Office of Entrepreneurial Development to replace its legacy system, and the Office of Investment and Innovation to upgrade the SBIC Web technology stack and to transition the systems monitoring and management to OCIO. These outward facing systems that support mission objectives, such as partnering with Small Business Development Centers and Veterans Business Outreach Centers, and facilitating the flow of long-term capital to America's small businesses must be secure.

Developing SBA's IT Workforce

To be successful with cloud adoption, the OCIO must make fundamental changes to its organizational mission and roles. All IT personnel across SBA and functional areas, including security, infrastructure and operations, must maintain their relevance as technology evolves and OCIO transitions to support Development and Operations (DevOps), and a software centric organization that incorporates hybrid cloud solutions. To keep up with rapid technology changes, typical organizational structures and the IT workforce must evolve to operating within small, autonomous teams that cross-collaborate to work on fast-flowing ideas, opportunities and improvements. Further, a risk-tolerant environment that allows for the exploration of ideas can accelerate the value delivered to the SBA.

The OCIO's vacancy rate was 30% in October 2016 and was reduced to 15% by February 2017. Ten employees were hired including a Deputy CIO, Chief Technology Officer, Director of Operations, Enterprise Data Manager, Section 508 Program Manager, Branch Chiefs for Information Security Operations and Compliance, and other staff positions. SBA initiated a reorganization to realign the Digital Service team into the OCIO and merge it with the existing development team. OCIO will hire 10 additional staff to fill existing vacancies. OCIO is hiring not for the organization of today, but for the organization that can support future capabilities. For example, an Enterprise Data Manager was hired to create business value through data and analytics and rethink how information as an asset can take a more active and dynamic role in the activities of SBA.

As SBA continues its efforts to implement FITARA, the CIO and CHCO are committed to developing a holistic approach to build a strategic workforce plan for all SBA IT professionals. Attracting and developing IT staff is critically important to long-term success as legacy systems are modernized and shifted to the cloud, and an enterprise approach to IT is implemented. SBA has approximately 170 IT specialists and digital service experts, of which 70 are directly assigned to the OCIO. Workforce planning requires significant improvement and SBA will initiate strategic workforce planning by the end of the fiscal year. SBA has a strong mission draw for IT and cybersecurity professionals and we must partner with the CHCO to better market ourselves.

Challenges Remain and Opportunities Exist

Even with the progress outlined above, challenges related to the fiscal environment have put pressure on IT organizations. Internal and external customers and stakeholders expect SBA to deploy services and technology on par with their personal use and interaction with private sector firms. The need for speed and agility in acquisition is vital to deliver products and services.

Develop the Right Organization and Workforce – SBA must determine needed competencies and develop and sustain a workforce that can use, deliver and support not just the technologies of today, but those of the future. Recruiting the right people into the federal government with the right skills and the capacity to freely and quickly change and innovate is difficult at best. The ability to leverage and integrate with trusted private sector partners to supplement the federal IT workforce is more critical than ever.

Build the flexibility to implement IT best practices – SBA’s program office applications and systems were generally developed in silos. Customer information, for example, is duplicated across systems and information sharing is limited. Program offices are looking for modern, easy-to-use applications that can be quickly deployed, while OCIO concurrently takes a strategic approach to standardizing on a limited set of application suites to minimize integration issues, maximize security and reduce IT costs. Further, implementing shared services will evolve over time, and consolidating contracting of commodity IT requires flexible, agile acquisition practices and will result in increased value of the services to the business.

Increase Visibility into IT Planned Expenditures – Data concerning planned and actual spending must be readily available, and capable to drive SBA’s ability to identify opportunities to improve leverage and operational cost. Further maturity in this area will ensure that information is accurate and that evidence based decision making is properly integrated with the governance process.

Mature Cybersecurity Capabilities – Cybersecurity is critical in a modern information infrastructure that includes data virtualization, separation of storage, compute, and cloud-based data persistence. SBA must modernize to keep its IT systems current and secure with a clear understanding of risks to availability and reliability.

Conclusion

Information technology is a key enabler of digital transformation, and we are taking a multi-pronged approach that leverages current technologies while looking ahead to the future to proactively address the agency’s needs. We are focused on building a strong foundation that is robust, scalable, secure and responsive to changing business needs. Together with SBA’s program offices, we will build on this foundation to create and deliver digital solutions that will not only improve the public’s experiences with

SBA's services, but will also improve our internal customer experience. Actions to consolidate and update support contracts will continue, and areas such as system development and program support will be strengthened as OCIO transitions to a services-oriented organization. A robust enterprise governance that has leadership alignment will drive progress and ensure IT programs and projects are selected and managed to ensure SBA's needs are met in an effective manner while minimizing unnecessary duplication. The CIO is a key stakeholder in driving horizontal and vertical collaboration to ensure that the right authority, with the right information, at the right time makes the best possible decision to effectively deliver IT programs. Thank you for the opportunity to speak with you today and I look forward to your questions.