October 24, 2018

Ms. Suzette Kent
Federal Chief Information Officer
Executive Office of the President
1650 Pennsylvania Avenue, NW
Washington, DC 20502

RE: Request for Comments on the 2018 Federal Cloud Computing Strategy

Dear Ms. Kent:

On behalf of our member companies, the Professional Services Council (PSC) respectfully submits the enclosed recommendations in response to the Office of Management and Budget (OMB) Request for Comments on the 2018 Federal Cloud Computing Strategy ("Cloud Smart").[1]

PSC is the voice of the government technology and professional services industry. PSC's member companies represent small, medium, and large businesses that provide federal agencies and the military with services of all kinds, including information technology (IT) and cloud computing services.

America is the world leader in cloud computing, yet our government lags behind the private sector when it comes to cloud adoption. PSC thus supports efforts to build on the 2011 Federal Cloud Computing Strategy, the "Cloud First" policy, to help federal agencies leverage commercial solutions to provide the best services at best value to the American people. PSC has previously advocated for OMB to not only update this policy with additional guidance for agencies but also to hold agencies accountable for the timely implementation of their "cloud first" plans.[2] PSC's annual Federal CIO Surveys, for example, consistently find that few federal IT leaders believe their agencies have made enough progress moving to the cloud.[3]

Nevertheless, federal agencies are generally making progress on cloud migration through effective partnerships with contractors and industry. Adapting fiscal law and encouraging greater use of the contracting flexibilities provided in the Federal Acquisition Regulation (FAR)

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[1] FR Doc. 2018-20819 filed: Sep. 24, 2018
[2] *see:* PSC Comments on Draft Report to the President on Federal IT Modernization. Sep. 20, 2017. *available at:* https://www.pscouncil.org/Downloads/documents/PSC%20Comments%20on%20ATC%20IT%20Modernization%20Report%209-20-17.pdf
[3] *see:* PSC Annual Federal CIO Surveys, *available at:* https://www.pscouncil.org/c/p/CIO_Survey/CIO_Survey.aspx

will help federal agencies derive the full value of "as a service" offerings and cloud-based technologies.

Many of the best practices and lessons learned described in PSC's recommendations are discussed in more detail in our Tech Corridors Innovation Paper entitled "Delivering Results: A Framework for Federal Government Technology Access & Acquisition"[4] and PSC's report "Best Practices for Federal Agency Adoption of Commercial Cloud Solutions."[5]

We thank you for your consideration of the following comments and recommendations. PSC would welcome the opportunity to provide additional details to OMB, as well as policymakers across government, at your convenience. Should you have any questions, please feel free to contact me at chvotkin@pscouncil.org or Kevin Cummins, PSC Vice President Technology, at cummins@pscouncil.org.

Sincerely,

Alan Chvotkin
Executive Vice President and Counsel

encl: PSC Response to OMB Request for Comments on the 2018 Federal Cloud Computing Strategy

cc: Mr. Bill Hunt, Office of the Federal Chief Information Officer, OMB

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[4] *available at:* https://www.pscouncil.org/Downloads/documents/Tech%20Corridors%20White%20Paper%20-%20Final%20-%2012-9-15.pdf
[5] *available at:* https://www.pscouncil.org/Downloads/documents/PSC-Cloud-WEB%20-%2012-10-15.pdf

PSC Comments on Draft 2018 Federal Cloud Computing Strategy

Recommendations

1. Add statement reiterating Administration's commitment "to help agencies better leverage American innovations through increased use of commercial technology."
2. Clarify that Cloud Smart builds on, rather than replaces, the Cloud First goals of accelerating the pace at which the government will realize the value of cloud computing.
3. Direct agencies to prioritize the use of vendor-based solutions for IT services.
4. Editorial suggestion (utilizing and informative).
5. Delete "(Re-)Defining Cloud Computing" subheading title in introduction section.
6. The Cloud Smart strategy should provide more explicit guidance to agencies for using key performance indicators (KPIs) and measurable outcomes to ensure the success, quantify the value, and realize the full benefits of cloud migrations.
7. The Cloud Smart strategy should direct agencies to update their "Cloud First" plans for cloud adoption.
8. Editorial suggestion (layered security approach).
9. Support the continued evolution to a more agile security requirements framework for cloud-based solutions.
10. Direct agencies to accept ATOs to increase the use of secure cloud technologies.
11. Continue to streamline and accelerate the FedRAMP authorization process.
12. Encourage DoD to Amend DoDI 5000.74 – Defense Acquisition of Services – to allow reciprocity for cloud security authorizations, including FedRAMP authorizations.
13. Encourage DoD to amend its Cloud Computing Security Requirements Guide (SRG) to allow reciprocal use of security authorizations and greater use of off-premises cloud solutions.
14. Include a commitment by OMB to work with Congress to adapt fiscal law to accelerate cloud adoption and IT modernization.
15. Leverage existing budget flexibilities to accelerate IT modernization.
16. The Cloud Smart strategy should encourage flexible contracting mechanisms for buying both cloud native and complementary IT solutions.
17. PSC supports policies that enable the federal government to attract, train, develop and retain a world-class workforce, with particular emphasis on acquisition, IT management, cybersecurity and similarly critical skills.
18. Contracting officers should be trained on the utilization of, and contracting for, consumption-based contracts to increase cloud adoption.
19. Include workforce-related recommendations as additional CIO Council Actions to support Cloud Smart.
20. Engage industry early and often when gathering best practices and updating policies as described in the CIO Council Actions.

Discussion

Cloud Smart Strategy

Introduction: From Cloud First to Cloud Smart

1. Add statement reiterating Administration's commitment "to help agencies better leverage American innovations through increased use of commercial technology," described in the preface of the White House Report to the President on IT Modernization (*available at:* https://itmodernization.cio.gov/assets/report/Report%20to%20the%20President%20on%20IT%20Modernization%20-%20Final.pdf). The convergence of technology and services, the power of consumption-based buying, and the availability of an ever-increasing array of new technologies create a marketplace where innovation and ingenuity abound. Yet agencies often take far too long to contract for needed solutions and frequently fail to use contracting practices that foster innovation. The federal government must not continue to lag in its adoption of commercial best practices and new technologies, particularly when it spends over $90 billion annually on information technology.

2. Clarify that Cloud Smart builds on, rather than replaces, the Cloud First goals of accelerating the pace at which the government will realize the value of cloud computing, including through consumption-based (or "as a service") buying, provisioning capabilities with minimal up-front investment and overhead, and measurable outcomes for cloud services.

3. Direct agencies to prioritize the use of vendor-based solutions for IT services.
While the variety of cloud computing capabilities available today allow almost any combination of vendor and government ownership, the final Cloud Smart strategy should urge agencies to focus on their core (and inherently) governmental missions while leveraging IT solutions available from industry to deliver non-core services through outcome-based contracts.

4. Editorial suggestion (utilizing and informative). Delete "utilizing" in first paragraph of introduction. Replace "informative" with "informed" in second paragraph.

Section I. Cloud at a Glance

(Re-)Defining Cloud Computing

5. Delete "(Re-)Defining Cloud Computing" subheading title in introduction section.
The "(Re-)Defining Cloud Computing" subheading title gives the impression that the Cloud Smart strategy seeks to redefine the National Institute of Standards and Technology (NIST) definitions of cloud computing. In contrast, the "Defining Cloud Computing" section of the original 2011 Federal Cloud Computing Strategy ("Cloud First") more appropriately cites and relies on the NIST definitions, which should not be re-defined by Cloud Smart.

Modernization and Maturity

6. The Cloud Smart strategy should provide more explicit guidance to agencies for using key performance indicators (KPIs) and measurable outcomes to ensure the success, quantify the value, and realize the full benefits of cloud migrations.
OMB should provide guidance and oversight of agencies cloud migrations, including through the use of KPIs and other measures for evaluating the effectiveness.

7. The Cloud Smart strategy should direct agencies to update their "Cloud First" plans for cloud adoption. Such plans should account for both current and future needs to upgrade IT infrastructure as well as the availability of tools to allow agencies to migrate services and capabilities. OMB should further hold agencies accountable for implementation of these plans.

Section II. Security

8. Editorial suggestion (layered security approach).
Replace "agencies should transition to security and protections at the data layer instead of the network and physical infrastructure layers, as well as improve the governance of systems" with "agencies should improve the governance of systems and implement a layered security approach to protect devices, networks, applications and data."

Trusted Internet Connections

9. Support the continued evolution to a more agile security requirements framework for cloud-based solutions, including updating the network boundary-based approaches of the Trusted Internet Connections (TIC), Cloud Access Point (CAP) and the Internet Access Point (IAP) programs.
Cloud Smart discusses TIC updates but should also cite similar ongoing efforts to adapt the Cloud Access Point (CAP) and the Internet Access Point (IAP) programs for network boundary security. Rather than mandating specific mechanisms to meet security needs, the TIC, CAP and IAP should instead set performance-based requirements that focus on desired outcomes. The current boundary protection architecture can increase latency, which impedes access to cloud-based services and innovation. Cloud Service Providers (CSPs) and network service providers often have security capabilities residing on their platforms that result in equivalent or similar security protection without using a network boundary approach.

FedRAMP

10. Direct agencies to accept ATOs to increase the use of secure cloud technologies.
The final Cloud Smart policy should direct agencies to rely on CSPs' Authorizations to Operate (ATOs) and provisional authorizations from other agencies or the Joint Authorization Board.

Following this "do once, use many times" approach originally envisioned by the Federal Risk and Authorization Management Program (FedRAMP) would help accelerate cloud adoption and encourage more companies to compete for federal contracts. When such reciprocity – through proper, risk-based leveraging of an ATO – is not granted, agencies should report and explain to OMB and to the FedRAMP Program Management Office why such reciprocity is not appropriate.

11. Continue to streamline and accelerate the FedRAMP authorization process.
The FedRAMP program has made strides in reducing the time necessary to obtain authorizations to operate (ATOs), including through the FedRAMP Accelerated and FedRAMP Connect initiatives as well as providing a "playbook" with guidance for agencies. However, CSPs can update their cloud environments much more rapidly for commercial customers than for government customers. SaaS providers must also have separate FedRAMP authorizations for software hosted on an authorized IaaS. Federal CIOs and IT leaders interviewed as part of PSC's annual Federal CIO Surveys (*available at* www.pscouncil.org/c/p/CIO_Survey/CIO_Survey.aspx) similarly expressed frustration with burdensome certification requirements for solutions that house only low-risk data.

OMB should work with GSA to continue to streamline and accelerate the FedRAMP process, especially for SaaS offerings in FedRAMP-authorized cloud environments. Cloud Smart should further seek to accelerate and standardize the ATO approval process across the civilian agencies. PSC's 2015 publication "Best Practices for Federal Agency Adoption of Commercial Cloud Solutions" (*available at* www.pscouncil.org/Downloads/documents/PSC-Cloud-WEB%20-%2012-10-15.pdf) includes additional recommendations and guidance for agencies in these areas.

12. Encourage DoD to Amend DoDI 5000.74 – Defense Acquisition of Services – to allow reciprocity for cloud security authorizations, including FedRAMP authorizations.
"DoDI 5000.74 – Defense Acquisition of Services" impedes – access to commercial cloud services and innovation by requiring DoD-specific security authorization before a contract award. Enclosure 7 "Acquisition Considerations for IT within Services (Including IT As-a-Service)" requires that all commercially-provided cloud services have a DoD Provisional Authorization (PA) granted by the Defense Information Systems Agency (DISA) prior to contract award and an ATO granted by the PM/FSM's Authorizing Official prior to operational use. Cloud Smart should instead encourage the reciprocal use of FedRAMP JAB authorizations and ATOs issued by other agencies, including other DoD organizations.

13. Encourage DoD to amend its Cloud Computing Security Requirements Guide (SRG) to allow reciprocal use of security authorizations and greater use of off-premises cloud solutions.
The DoD Cloud Computing Security Requirements Guide (SRG) should require the reciprocal use of, and reliance on, ATOs and PAs from DoD organizations and the FedRAMP JAB. Section 4.5 of the SRG requires a company to obtain a DISA PA before it can respond to a DoD cloud services RFP for an off-premise cloud solution but waives this requirement for a private, on-

premises cloud solution. OMB should encourage DoD to amend this section to allow greater use of off-premises cloud solutions.

Section III. Procurement

14. Include commitment by OMB to work with Congress to adapt fiscal law to accelerate cloud adoption and IT modernization.

The current way that agencies conduct budget planning and Congress appropriates funding creates challenges for commercial cloud adoption. The federal budget process is conducted on an annual basis, and appropriations law generally prohibits an agency from making a future year fiscal commitment beyond what Congress has already funded. Federal procurement rules make it easier for agencies to purchase a physical product, which is purchased in a single fiscal year, compared to acquiring an "as-a-service" technology. Agencies generally buy cloud services using "one year" money from operations and maintenance (O&M) funding. In contrast, the commercial technology marketplace increasingly uses consumption-based purchasing, which private organizations can more effectively leverage than government to take advantage of the flexibility and scalability of cloud computing. This allows organizations to fund IT investments with operational expenditures (OpEx) instead of capital expenditures (CapEx).

While flexibilities do exist in current federal acquisition rules, the legal framework for how government buys technology must adapt to the fundamental shift in the commercial marketplace to consumption-based buying. PSC understands that OMB is already aware of these frustrations. PSC welcomes the opportunity to further engage with policymakers to seek ways to increase contracting and budgeting flexibilities that support the transition to cloud-based and as-a-service technologies.

15. Leverage existing budget flexibilities to accelerate IT modernization.

Cloud Smart should recommend that agencies leverage existing budget flexibilities to accelerate IT modernization, such as the Technology Modernization Fund (TMF). In addition to using a more flexible approach to buying cloud solutions with O&M funds, agencies could take greater advantage of working capital funds (WCFs) for consumption-based buying of IT services to take better advantage of flexibility and scalability. While cloud platforms easily accommodate variable use and surges in demand, this advantage of being in the cloud complicates agency budget planning and contracting. The Air Force addresses a similar challenge created by variable use and spikes in demand for jet fuel by using a WCF to support "into-plane" refueling contracts at foreign airports. The Modernizing Government Technology Act (Pub. L. No. 115-91) permits federal agencies to establish WCFs that allow investments in IT modernization over a three-year period, yet according to the U.S. House Committee on Oversight and Government Reform, just three agencies intend to set up such IT Working Capital Funds (*see* "Detailed FITARA 6.0 Scorecard" *available at*

https://oversight.house.gov/wp-content/uploads/2018/05/OGR-Scorecard-6.0-details-v2-.pdf).

16. The Cloud Smart strategy should encourage flexible contracting mechanisms for buying both cloud native and complementary IT solutions.
Agencies should be able to flexibly acquire both cloud native services and other IT solutions that complement cloud native platforms. For example, agencies should consider the availability of software as a service (SaaS) solutions and opportunities to add functionality to their cloud computing environment when contracting for cloud services. In the commercial marketplace, cloud customers can generally acquire SaaS solutions directly from the software maker or through a CSP's marketplace. Government customers, however, may not have similar broad access to SaaS solutions if the cloud services contract does not contemplate access to both the CSP's marketplace software listings and bring your own license (BYOL) offerings.

Section IV. Workforce

17. PSC supports policies that enable the federal government to attract, train, develop and retain a world-class workforce, with particular emphasis on acquisition, IT management, cybersecurity and similarly critical skills.
The missions of government demand a workforce that is well trained, well-funded, and supported by its leadership. The government is faced with a workforce crisis. The federal technology workforce is aging and government is having trouble attracting and retaining new workers with the skills and experience to deliver cutting edge solutions. At the same time, the federal acquisition workforce is increasingly young, inexperienced, and by and large, is not being provided adequate professional development and training in critical thinking, business acumen and technical skills. A well-trained, experienced, skilled and supported federal acquisition workforce is necessary to achieve successful outcomes.

18. Contracting officers should be trained on the utilization of, and contracting for, consumption-based contracts to increase cloud adoption. The final Cloud Smart policy should encourage agencies to take full advantage of trainings and skills workshops offered by industry organizations like PSC and tech companies to fill this gap. CSPs, for example, often offer such trainings for free or as part of their contracts with agencies.

CIO Council Actions

19. Include workforce-related recommendations as additional CIO Council Actions to support Cloud Smart.
PSC welcomes the opportunity to further engage with OMB and provide more detail on the following workforce-related recommendations:

- Launch a pilot program to identify and test alternative acquisition workforce training and development tools.
- Work with Congress to amend the Office of Federal Procurement Policy Act to give the Office of Federal Procurement Policy (OFPP) statutory authority over the entire acquisition workforce, including clear authority and responsibility over program managers.
- Institute new acquisition workforce requirements to include mandatory cross-functional rotations and training.
- Create a new cross-functional career path for "technology management."
- Create an Acquisition Excellence Council (AEC) with responsibilities including redesigning and restructuring the federal acquisition training system and developing a common evaluation and assessment process.

20. Engage industry early and often when gathering best practices and updating policies as described in the CIO Council Actions.
The final Cloud Smart policy should direct agencies to collaborate and share best practices with industry to increase awareness of innovative private-sector solutions and perspectives. By requiring market research, industry outreach and collaboration sessions, OMB could improve the quality of industry engagement by federal IT and program managers. OMB should further consider requiring outreach and industry collaboration in General Services (GS) position descriptions and annual performance plans.