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is the deadline for agencies to tell OMB if they plan to establish an IT working capital fund

MGT Act rollout takes shape

The Office of Management and Budget issued its final guidance for implementing central modernization funding under the Modernizing Government Technology Act and named a seven-member team to administer the fund. The moves came as new U.S. CIO Suzette Kent assumed her duties in late February.

The members of the Technology Modernization Board, which Kent will lead, are Alan Thomas, commissioner of the Federal Acquisition Service; Mark Kneidinger, director of federal network resilience at the Department of Homeland Security; Matt Cutts, acting administrator of the U.S. Digital Service; Social Security Administration CIO Rajive Mathur; Small Business Administration CIO Maria Roat; and Charles Worthington, CTO at the Department of Veterans Affairs.

Thomas leads the acquisition and procurement arm of the federal government, while Cutts helps direct a critical office in the White House that recruits private-sector technology professionals to the federal government. Roat has earned a reputation as a leader and driver of IT modernization, data center consolidation and cloud adoption at SBA, and she managed the Federal

Risk and Authorization Management Program in its early days. Kneidinger specializes in cybersecurity — a critical pillar of IT modernization — and leads outreach efforts for the Continuous Diagnostics and Mitigation program at DHS.



Suzette Kent

The team will oversee distribution of a planned \$500 million to agency projects over two years, as authorized in the MGT Act. The Trump administration asked for \$210 million for the fund in its fiscal 2018 budget request, but the money has not yet been appropriated.

“The [fund] and agency IT working capital funds represent years of hard work between the administration and Congress to address our technology modernization efforts and provide the

necessary resources that will drive change needed to get us into the 21st century,” Kent said.

Agencies whose cloud migration and other modernization projects receive funding under the MGT Act will have to pay that money back into the fund as the projects advance. When submitting project proposals, agencies should consider feasibility, the reduction in outdated and insecure systems, cost savings, improvements to security, or “demonstrable and visible impact to the public in alignment with the agency’s mission,” the OMB document states.

The guidance reflects a strict policy of repayment into the centralized fund. “Reimbursement is not contingent upon the achievement of project-related savings,” it states. OMB will act as a mediator if an agency fails to reimburse the central fund and if the General Services Administration and the agency in question cannot resolve the issue.

Still up in the air as of this writing is whether board members will have to recuse themselves from considering projects proposed by their own agencies.

— *Derek B. Johnson and Chase Gunter*

FCW CALENDAR

4/3 Blockchain

The Department of Health and Human Services’ Jose Arrieta, Treasury’s Craig Fischer and DHS’ Anil John are among the speakers at this ACT-IAC forum. Washington, D.C. is.gd/FCW_blockchain

4/18 Cloud

A wide range of government and industry experts will explore security, migration and multi-cloud management strategies at FCW’s 2018 Cloud Summit. Washington, D.C. FCW.com/cloud

5/8-9 Law enforcement

AFCEA Bethesda’s Law Enforcement and Public Safety Technology Forum will focus on systems modernization and interoperability at federal, state and local agencies. Washington, D.C. is.gd/FCW_lawIT

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DHS to launch new cloud steering group

The Department of Homeland Security is launching a cloud steering group as part of its cloud computing strategy.

“There are 584 applications roughly in DHS, [and] there are 29 applications across the components at headquarters that are currently in the cloud right now,” DHS CIO John Zangardi said at AFCEA's Cyber Summit in February. “That's not a significant number when you think about it, out of 584. We need to do better.”



The cloud steering group would operate at the undersecretary level, he said, “to make sure that we take advantage and cut across all the equities that are out there and start moving this forward.” It would include executives such as the chief procurement officer, chief security officer, chief privacy officer, CIOs and their deputies.

The move comes as the Defense Department, where Zangardi served as acting CIO before his move to DHS, is fielding a high-level cloud steering group to come up with a plan for large-scale cloud adoption. DOD's effort, which the Defense Digital Service is leading, is holding an industry day in March to update vendors on its plans.

Zangardi also said he was considering adding a virtual trusted interface connection, similar to DOD's cloud access point, and is working with vendors to reduce the complexity and latency that happens during cloud migrations.

— *Lauren C. Williams*

HR managers want fewer hiring regs, more flexibility

As the average number of days agencies take to hire employees continues to creep upward, federal managers are calling for fewer rules and regulations and more hiring events.

At a March 1 hearing held by the Senate Homeland Security and Governmental Affairs Committee's Regulatory Affairs and Federal Management Subcommittee, Chairman James Lankford (R-Okla.) called the government's systemic struggles to fill open positions a hiring crisis. The average time to hire has steadily risen

that although federal agencies have important considerations that the private sector does not have, “the laws and regulations governing hiring are complex and in need of reform.”

Angela Bailey, chief human capital officer at the Department of Homeland Security, added, “We lose the vast majority of the people whenever they have to go to the [Electronic Questionnaires for Investigations Processing] system, and they have to fill out the background system paperwork. They give up.”

The best and brightest candidates will not wait around for three and a half months, and our strategy cannot rely on hoping that they do.

— SEN. JAMES LANKFORD (R-OKLA.)

to 106 days in 2017 from the 100 days it took in 2016, he added.

“This is not sustainable,” he said. “The best and brightest candidates will not wait around for three and a half months, and our strategy cannot rely on hoping that they do.”

Mark Reinhold, associate director of employee services at the Office of Personnel Management, testified

Instead, Bailey said she would like to see more hiring done in the style of hiring fairs, where agencies have face-to-face meetings with candidates and make tentative job offers on the spot.

“I think you'd cut out at least six weeks” of bureaucratic back-and-forth, she said.

— *Chase Gunter*



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NGA previews upcoming acquisition overhaul

Change is coming to the National Geospatial-Intelligence Agency's acquisition strategy.

"I'm not going to give too much of it away, but I am looking forward to sharing with you a new approach that I'm taking to acquisition," NGA Deputy Director Justin Poole announced during a U.S. Geospatial Intelligence Foundation event in February. "We're overhauling it."

Poole, who also serves as the agency's component acquisition executive, said he will lead a panel detailing NGA's plan to restructure acquisition at the GEOINT Symposium in Tampa, Fla., in April.

He said NGA's component acquisition executive team will work with the chief procurement executive and the CIO to drive changes in the agency's consolidated IT and services

shop, which launched in 2015.

Poole told FCW the overhaul was more of an alignment activity because "we have a hard time explaining what the mission outcomes are. I want our acquisition program to make more sense from a mission perspective. So it has a lot more to do with aligning the way IT programs are managed for support-specific mission areas."

He added that "what I want to do is make sure we understand what that looks like and then ensure we have contracts properly aligned to those mission programs."

Poole said the realignment would include leaning on small businesses and using other transaction authorities, which allow the Defense Department to carry out rapid prototyping and pilot programs.

— Lauren C. Williams

Why DOE needs a cyber office

In February, Energy Secretary Rick Perry announced a new Office of Cybersecurity, Energy Security and Emergency Response. The department is seeking \$96 million in funding in fiscal 2019 for coordinating preparation for physical and cyberthreats to critical infrastructure.

Lawmakers at a hearing of the Senate Energy and Natural Resources Committee, however, were skeptical that the new office dovetails with governmentwide efforts to incorporate cybersecurity across all systems.

Bruce Walker, Assistant Secretary of the Energy Department's Office of Electricity Delivery and Energy Reliability, said the proposed office is meant to be "actionable, near-term and highly responsive," while the rest of DOE's reliability efforts focus on longer-term strategies and research and development.

Congress has designated the department as the sector-specific agency for grid security under the Fixing America's Surface Transportation Act. "Just that strategy alone in identifying and working through the defense-critical energy infrastructure is a significant undertaking both in breadth and depth," Walker said.

In her opening statement, Sen. Maria Cantwell (D-Wash.) told Walker that she and Sen. Ron Wyden (D-Ore.) were still waiting for cybersecurity threat assessments about the vulnerability of the U.S. energy infrastructure. The two lawmakers had asked President Donald Trump for an assessment a year ago.

"We are just dead serious that this is a problem," Cantwell said. "And we are dead serious that we have to come up with a threat assessment."

— Mark Rockwell

FCW INSIDER

Raj Shah leaves DIUx

After almost two years at the helm of the Defense Department's innovation shop, Raj Shah has returned to the private sector.

Shah, a 2018 Federal 100 winner whose background is in venture capital, served as managing director of the Defense Innovation Unit Experimental. He joined DIUx in May 2016 and oversaw its expansion from a single Silicon Valley outpost to an initiative with offices in Boston and Austin, Texas.

Current focus areas include artificial intelligence, space, IT and autonomous systems. DIUx has awarded in excess of \$100 million in contracts for more than 45 pilot projects. The agency is expected to be

funded at \$54 million in fiscal 2018, and the Pentagon is seeking \$71 million in fiscal 2019.



Raj Shah

"There is no doubt in my mind that DIUx will not only continue to exist, it will actually grow in its influence and its impact on the Department of Defense," Defense Secretary Jim Mattis said last summer during a visit to the unit's Silicon Valley office.

Shah's departure has long been expected, two Silicon Valley sources told FCW, and the Pentagon has started a search for a new managing director. In the meantime, Navy Capt. Sean Heritage, the military deputy at DIUx, is serving as acting managing director.

— Adam Mazmanian

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Trending

GSA takes lead on making federal websites mobile-friendly

In January, President Donald Trump signed the bipartisan Connected Government Act, which requires agencies to ensure that new citizen-facing websites are mobile-friendly. The statute codifies existing governmentwide guidance and includes a schedule to push agencies to adopt mobile-friendly design practices.

Data has shown that more than 40 percent of traffic to federal websites comes from mobile users. Jacob Parcell, director of the Technology Transformation Service's Mobile Program Management Office, said that proportion has been steady for some time, and it's essential to make sure that mobile and desktop experiences are comparable.

By early July, new government websites must be designed with mobile users in mind, meaning they load quickly, offer mobile-optimized navigation and supply the same basic services as a desktop-friendly site.

Parcell is leading the General Services Administration team charged with making agency web development comply with the Connected Government Act's mobile-friendly requirements.

For the past seven years, Parcell has been nurturing a mobile community of practice inside the federal government that has reached 1,100 feds who have developed or are developing mobile apps. He has also recruited a volunteer group of more than 250 people who test mobile sites in development across a range of devices and operating systems to troubleshoot potential problems and design bugs.

He and his group are talking to agencies to address any questions they have about the Connected Government Act and the standards that will be put in place to determine whether a site qualifies as mobile friendly. Agencies are not required to update legacy sites to conform to the law unless they decide to redesign the sites.

Parcell said more guidance will likely be issued in March. He expects to take existing mobile guidance "and hone it and make it more specific to the requirements of the law," including some detail on what constitutes a redesign versus an iterative update.

The law is also an opportunity to examine what mobile users want from a website. Parcell said the best practice is "to really look at analytics and look at what mobile users are coming to the website for and design mobile versions of the website that actually meet those needs."

— Adam Mazmanian

Intelligent Automation Brings Efficiency to Agencies

IA delivers agility to help agencies meet new digital initiatives, maximize resources, and reduce operational costs.

The list of demands on a government CIO's desk grows longer every day. Digital transformation promises to make government leaner, more efficient, and nimble, but many agencies struggle to take advantage of new technologies.

They have to rely on legacy systems and outdated business processes to fulfill their mission as increasing regulations drag down productivity. Departments often lack the personnel and funding needed to retool and keep up with user demands.

Help is available in the form of Intelligent Automation (IA), which offers harried government officials a way to streamline tedious, inefficient business processes. "By adding IA to their toolbox, it empowers departments to dramatically improve productivity," says Kirke Everson, managing director and government Intelligent Automation lead at KPMG. Employees can spend less time on routine, manually-intensive processes, such as completing forms, and have more time for strategic initiatives, such as servicing customers.

Industry researcher Gartner expects one IA segment, Robotic Process Automation (RPA), to grow at a CAGR (Compound Annual Growth Rate) of 41 percent and reach \$1 billion in revenue in 2020. Clearly, many are seeing the benefits of implementing IA technology to automate repetitive tasks.

SURVEY THE LANDSCAPE

Today's government executives are seeing their workloads expand in both size and complexity. Data volumes are increasing dramatically. By 2025, the world will have accumulated 180 zettabytes (ZB) of data, up

from 44 ZBs in 2020 and 10 ZBs in 2015, according to market research firm International Data Corp. The number of devices users work with is constantly growing. Compliance regulations increase and place more demands on IT systems, and security threats change daily. As the to-do list grows, IT budgets have grown by only a few percentage points at best. In most cases, they've remained stagnant or even been reduced. Many see the need to work differently.

CIOs find themselves trying to meet growing demands with limited resources. IA can boost agency productivity without increasing expenses. Government agencies can use IA to streamline business processes, improve efficiency, respond to new demands more quickly and reduce costs.

So how does it work? Intelligent Automation is a suite of solutions that deliver a range of functionality. RPA focuses on automating mundane, routine tasks that employees prefer not to do. It then redirects their efforts to more satisfying work requiring human judgment and experience. Cognitive tools ingest massive amounts of data, then look for patterns, make decisions more quickly than humans, and dramatically boost productivity.

Intelligent Automation's low cost, non-invasive capabilities help government agencies tackle projects previously thought to be too complex or costly. The solutions are flexible and can be deployed on a small or enterprise scale. On the basic automation side of the IA spectrum, the tools automate routine items, like repetitive data entry. On the more cognitive side of the spectrum, they highlight anomalies and provide recommendations for corrective actions. The technology also scales to meet fluctuating workloads.

What Type of Intelligent Automation Meets Your Needs?

Intelligent Automation (IA) describes a variety of technologies that streamline business process. KPMG divides the market into three types of tools: Class 1, Class 2, and Class 3.

- **Class 1:** Class 1 centers on Robotic Process Automation (RPA) where routine, clerical processes such as cutting and pasting data from one form to another are automated. The software runs either attended or unattended by virtual machines in the background. These solutions are often available as stand-alone solutions. Class 1 tools often serve as a good starting point for an agency's IA journey.
- **Class 2:** For agencies ready to move up the IA food chain, Class 2 solutions feature cognitive automation. This class includes technologies like Natural Language Processing (NLP), that address complex transactions, require a deep level of analytics, and work with both structured and unstructured data. One example is using a bot on an agency website to help citizens find information through text or voice chat.
- **Class 3:** The highest level of sophistication is Class 3, which features reasoning cognitive automation. These solve problems using artificial intelligence, machine learning, and NLP. This is suitable for agencies working with large volumes of unstructured and structured data. If Class 1 mimics a human's arms and legs, then Class 3 mimics the brain, making decisions and generating recommendations. These solutions solve highly complex problems, such as assimilating multiple data sources and feeds into a common environment and trying to determine where threats may be occurring or could potentially occur.

Agencies have to understand the different categories when making their deployment decisions. They don't want to over-engineer or under-engineer the solution. With the former, they could incur unnecessary expenses. With the latter, they may have difficulty scaling to meet application demands. They need to find the technology that fits just right.

WHERE TO APPLY IA?

Over the years, agencies have developed complex business processes. These processes are often document intensive and involve completing and routing various forms. With IA, agencies can orchestrate and automate that workflow.

IA can work throughout the agency and automate front, middle, and back-office functions. In the back office, finance and human resources departments provide administrative support and payment services.

Consequently, finance represents a great place for agencies to start dabbling with IA. Finance data is structured and workflows are rules-based. For instance, accounts receivable departments produce monthly aging reports. Employees spend considerable time entering data, copying records from one format to another, and examining numbers to find potential inconsistencies. With IA, bots input data, reconcile records, perform calculations, compare numbers, highlight inconsistencies, and make recommendations.

Federal agencies employ more than 2 million workers throughout the United States. During the year, human resource departments constantly hire new employees. Using IA, HR professionals can offload many of the repetitive tasks associated with onboarding and spend more of their time trying to ensure the department attracts and retains the best talent.

In front offices, employees interact with the public, provide them with information or deliver agency services. Over the years, the available communication channels have grown considerably. Face-to-face and telephone communications have been augmented with web interactions, mobile communications, and now social media. IA relies on recent technical advances to improve and streamline such communications. Natural Language Processing (NLP) and chat bots provide intelligent interaction. They deliver friendly, intuitive, and multi-channel interaction and content from many different information sources and systems.

Middle offices draw on the resources of the front and back offices. "Middle office solutions require a lot of collaboration from multiple stakeholders," says Michael Caporusso, Intelligent Automation solution director at KPMG. Internal groups act as monitors and perform certain functions, such as ensuring compliance and managing IT resources. Many agencies now use RPA

and chat bots to automate password resets, so help desk personnel can spend their time on more challenging problems.

IA chat bots and back-office integration are also changing the customer experience. Government agencies are increasingly deploying multi-channel solutions. Individuals start off with information on the web and work their way to contacting an agency representative if needed.

IA IN ACTION

Government agencies are now realizing the benefits of adopting IA technology. Here are a few examples of the time and cost savings they are experiencing:

- KPMG is working with a federal agency that has reduced its travel request process to a single step. As a result, work that took six- to eight hours is now done in less than one hour.
- KPMG is working with a federal agency to automate the generation of daily aging reports and e-mailing them on a timely basis to affected recipients.
- KPMG is working with a state agency to automate additional end-to-end regression testing scenarios of their applications prior to production deployment.
- KPMG is working with a federal agency to automate time sensitive, repetitive and mundane processes that would not just free up time but relieve staff from working with sensitive data that would have conflicted them from other duties.
- Another agency ingests 50,000 five- to 100+-page PDF files. Previously, employees had to identify and extract all relevant reporting information and put it in the correct format. Now, with KPMG's help, bots do most of that work. Consequently, the time required to process an average file was reduced from 45 minutes to less than three minutes.
- A state contract management agency has a limited team of skilled lawyers who review contracts from stakeholders and ensure they comply with agency rules. With KPMG's help, an IA application relying on NLP and machine learning capabilities can review the contracts and present only possible exceptions to the legal team so that they can audit more contracts and focus on the exceptions.
- Another agency working with KPMG receives royalties based on how other organizations use its services. The users self-report their usage levels, however, the agency lacked sufficient personnel to complete audits for all

users. Now an IA solution triages data sources and identifies customers who may be underreporting their use of the department's resources, so they come closer to 100 percent compliance.

A growing number of agencies are seeing significant reductions in contact center expenses because of IA. The average cost of an agent servicing a call is several dollars. That number drops to less than a dollar with IA. For specific scenarios, it has shown a reduction of over 95 percent in both time and cost.

So, how should an agency begin its IA journey? Start small. Automobile manufacturers are not waiting for every driverless car technology challenge to be solved before launching their services. They now deliver functions, like automated parallel parking and lane departure alerts. So agencies don't have to have all their desired IA features perfected in their first roll out. Instead, begin with something simple, repetitive, and that will easily benefit from automation, like monthly financial reports.

Collaboration is also a critical factor. IT managers need to realize IA can bring jarring changes for their agencies. Because IA touches on more than technology issues, leaders from across an agency need to participate in the planning. Government often starts by establishing advisory committees on automation, build proofs-of-concept to determine their return on investment, and then develop IA roadmaps.

"As progress is made, agencies form centers of excellence", says Payam Mousavi, Intelligent Automation director at KPMG. This group helps ensure consistent implementation across department boundaries, develop best practices, and piggyback on lessons learned from various groups on their IA journeys.

IA technology has only recently matured, and is now well positioned to help government agencies maximize their resources. By deploying IA technology, government can streamline business processes, improve productivity, reduce errors, and cut expenses.

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A hollow administration?

Hundreds of top agency positions remain unfilled in the Trump administration, but maybe some should stay that way

After more than a year in office, the Trump administration is maintaining a very slow pace for filling top government jobs. The appointments tracker run by the Partnership for Public Service and the Washington Post shows that President Donald Trump is “months behind his predecessors in staffing up political leadership.”

Only 267 of 636 key Senate-approved positions had been filled as of mid-February — far fewer than the previous four presidents at this point in their presidencies.

The State Department has the most openings — 65 positions. Might this reflect the alleged tension between the White House and the secretary of State? Or policy and personnel tensions over who should fill key jobs? It's a startling number of vacancies, and it would be good to understand the cause.

These departments face a better staffing picture: Justice (17 positions), Treasury (16), Energy (11) and Transportation (10). All other departments and agencies have vacancies in the single digits.

A good bit of attention has focused, as it should, on the open positions at the top of key agencies. Specifically, there are no permanent directors of the Census Bureau and the Bureau of Alcohol, Tobacco, Firearms and Explosives; no undersecretary for health or benefits at the Department of Veterans Affairs; no director for the Office of Science and Technology Policy at the White House; and

no commissioner for the Social Security Administration.

Equal weight should be given to the openings in the administration's top management ranks, including chief financial officers, CIOs, chief operating officers, inspectors general and administrator of the Office of Federal Procurement Policy. I have counted at least 17 positions that would fall into that

We need to get more information to determine whether the government is suffering because of the number of unfilled roles.

category, and a good number of them have a direct impact on the federal IT community.

There is, however, another side to the appointments/confirmation coin. I counted at least 60 openings on various boards, commissions, foundations, endowments, administrations and authorities. One would think I'd heard of everything after a 30-year career in government, but the roles and responsibilities of the International Joint Commission or the Northern Border Regional Commission stumped me. And should such positions be

presidential appointments requiring Senate confirmation?

A similar issue of concern: Of the 65 State Department vacancies, 31 are ambassador positions and 11 are representatives to various international bodies, such as the United Nations and the European Union. Clearly, some are important and should be filled soon (e.g., the ambassadors for Egypt and South Korea). For others, the bigger deadline pressure might be that nominees risk being stuck here for the remainder of the winter season and miss out on the warmer weather in Jamaica or Trinidad and Tobago. As for Mongolia, I don't know much about the best time of year to be there.

My point is not to demean or diminish any of the openings or vacancies. Instead, my argument is that we need to get more information to determine whether the government is suffering in any way because of the number of roles that have yet to be filled.

Finally, I encourage readers to take a look and suggest two or three positions that might better be dropped from the list of those that require Senate confirmation. I nominate the following: assistant secretary for economic development at the Commerce Department, director of the Office of Economic Impact and Diversity at the Energy Department and special counsel for immigration-related unfair employment practices at the Justice Department. ■

The future is federal.

Congratulations to the 2018 Federal 100 winners!

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2018 FEDERAL 100

100 examples of where IT is headed

Shared services. IT modernization. Major acquisitions, cloud migrations and, of course, cybersecurity.

A cursory glance at this year's Federal 100 winners would suggest that federal IT continues to be driven by the same handful of challenges that dominated last year — and the year before and the year before that. Dig deeper, however, and you'll find that virtually every winner has a unique story to tell.

In some cases, that story is event-driven, as with the multiple winners who stepped up in remarkable ways to help Puerto Rico and other areas recover from last year's natural disasters. In a few others, a winner worked with new technologies that were all but unheard-of in government before 2017.

For most of the 2018 Federal 100, however, the fascinating part is how they were able to advance an agency mission by tackling familiar pillars of IT in entirely new ways.

So although it's interesting to look for patterns and trends, it's important to remember that these are individual awards. In the pages that follow, you'll read about 100 women and men, from government and industry, doing tremendous work to make federal government technology — and by extension, the federal government itself — deliver better results.

The first year of any new administration is always a bit bumpy, and 2017 saw more churn than most. But federal IT experienced very little of the stasis and standoffs that were common elsewhere in government, and many of the tech-driven innovations and improvements were nothing short of remarkable. That progress is due almost entirely to the efforts and expertise of outstanding individuals like these 100 winners.

So congratulations to the 2018 Federal 100 — for their past accomplishments and for the future path they're charting for federal IT.

— The editors

Col. Terrence A. Adams

Director of Communications and CIO
Air Mobility Command
U.S. Air Force

Austin Agrella

Legislative Director
Office of Rep. Will Hurd

Jack Albright

Associate CIO for IT Shared Services
Department of Transportation

Kirit M. Amin

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Jose L. Arrieta

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Note: Winners' affiliations in this list reflect where the accomplishments being recognized took place. Several individuals have since changed jobs; those moves are noted in the profiles that follow.

Federal 100 Judges

FCW receives hundreds of nominations for the Federal 100, and an independent panel of judges reviews every one to identify the most worthy winners each year. The experts, all

of them past winners themselves, are the Federal 100's "secret sauce," and FCW is grateful for their time and expertise. This year's panel is profiled below.

Daniel J. Chenok

*Executive Director
IBM Center for the Business of
Government*

At IBM, Chenok combines his deep knowledge of how government works with his business experience in the private sector. He started his career in government as branch chief for information policy and technology at the Office of Management and Budget and moved to the private sector in 2003. A three-time Federal 100 award winner, Chenok won FCW's industry Eagle award in 2016.

Mary Davie

*Deputy Commissioner,
Federal Acquisition Service
General Services Administration*

A career public servant and acquisition expert who has held a wide range of IT leadership roles at GSA, Davie permanently assumed the FAS deputy commissioner role in late 2017 after serving in an acting capacity for several months. She is also deeply involved in the broader federal IT community, having served as president of the American Council for Technology and as an ACT-IAC Executive Committee member. Davie has been a Federal 100 winner four times and won the government Eagle award in 2016.

Margie Graves

*Federal Deputy CIO
Office of Management and
Budget*

Graves joined OMB on a temporary detail in 2016 after having served as a Department of Homeland Security executive almost since that agency's creation. She assumed her current role in early 2017 and served as acting U.S. CIO for most of last year. Graves was DHS' deputy CIO for six years and was acting CIO for that agency as well. She is a two-time Federal 100 winner.

Jeanette Manfra

*Assistant Secretary for the
Office of Cybersecurity and
Communications,
National Protection and
Programs Directorate
Department of Homeland
Security*

As DHS' chief cybersecurity official, Manfra supports the department's mission of strengthening the security and resilience of the nation's critical infrastructure. Her previous positions include acting deputy undersecretary for cybersecurity and director for strategy, policy and plans at NPPD; senior counselor for cybersecurity to the DHS secretary; deputy director of DHS' Office of Emergency Communications; and director of critical infrastructure cybersecurity for the National Security Council staff at the White House. She is also an Army veteran, having served as a communications specialist and a military intelligence officer.

Essye Miller

*Acting CIO
Department of Defense*

A career member of the Senior Executive Service, Miller was appointed DOD's acting CIO in December 2017. She also serves as the department's deputy CIO for cybersecurity and senior information security officer. She has held a number of other IT leadership roles, including director of cybersecurity for the Army CIO/G-6 and director of information management and CIO for Headquarters Air Force. Miller was a Federal 100 award winner in 2017.

Venkatapathi "PV" Puvvada

*President
Unisys Federal Systems*

Puvvada oversees all federal government operations at Unisys, where he has served in a variety of leadership roles since 1992. He has been Unisys Federal Systems' CTO and led the unit's federal civilian agency business for four years before assuming the top job in 2014. A four-time Federal 100 award winner, Puvvada is actively involved with the Professional Services Council, where he is currently on the board, and the Industry Advisory Council, which he chaired in 2007 and 2008. He was FCW's industry Eagle award winner in 2015.

David M. Wennergren

*Managing Director
Deloitte Consulting*

Wennergren, who won FCW's government Eagle award in 2007, has served as chairman of Federal 100 judging several times. He moved to the private sector in 2013 and now focuses on IT modernization and transformation with a range of federal customers. His long career at the Defense Department includes serving as deputy CIO and as the Department of the Navy's CIO. A three-time Federal 100 winner, he also is a past vice chairman of the federal CIO Council.

Renee Wynn

*CIO
NASA*

A career public servant, Wynn joined NASA in July 2015 as deputy CIO and stepped into her current role a few months later. She came to NASA from the Environmental Protection Agency, where she had worked for more than 25 years — the final two as acting assistant administrator for the Office of Environmental Information. Wynn is the current president of the American Council for Technology.

Eagle judges

From each year's Federal 100 winners, a separate slate of judges selects two Eagles — the most distinguished government and private-sector individuals among those 100 top talents. Once an individual has won an Eagle, he or she is retired from future consideration for Federal 100 awards. Former Eagle winners serve as judges for the program.

Maj. Gen. Sarah Zabel

*Director of IT Acquisition
Process Development,
Office of the Assistant
Secretary of the Air Force for
Acquisition
U.S. Air Force*

Zabel has been deeply involved in military IT throughout her 30-year career, after graduating from the U.S. Air Force academy with distinction in computer science. She has served as a communications squadron commander, a computer security evaluator, a computer and network programmer, an Air Force Academy instructor and an Air Staff officer. Before taking on her current role, she served as vice director of the Defense Information Systems Agency and also served as a staff officer on the Joint Staff and at two combatant commands.

Teresa Carlson

*Vice President of the Worldwide Public Sector
Amazon Web Services*

Eagle Award for Industry 2013

Carlson brings more than 20 years of business experience to bear in assessing the accomplishments of IT leaders. Before her current position at Amazon, she was vice president of federal government business at Microsoft, where she won the first of her two Federal 100 awards in 2009.

Daniel J. Chenok

*Executive Director
IBM Center for the Business of Government*

Eagle Award for Industry 2016

At IBM, Chenok combines his deep knowledge of how government works with his business experience in the private sector. He started his career in government as branch chief for information policy and technology at the Office of Management and Budget and moved to the private sector in 2003. Chenok is a three-time Federal 100 winner.

Karen Evans

*National Director
U.S. Cyber Challenge*

Eagle Award for Government 2004

Evans was the federal CIO before the job carried that title when she capped a 28-year government career by serving as administrator of e-government and IT during the George W. Bush administration. She remains involved in a wide range of federal IT and broader education initiatives in science, technology, engineering and math. A two-time Federal 100 winner, Evans now leads a nationwide talent search and skills development program focused specifically on the cyber workforce.

Lesley Anne Field

*Acting Administrator,
Office of Federal Procurement Policy
Office of Management and Budget*

President's Award 2017

Field has spent her entire career as a public servant and has been deputy administrator of OFPP since 2008. She has stepped into the acting administrator role on four occasions and has run the office in that capacity since the beginning of the Trump administration. Before OFPP, Field worked at the Transportation Department as a contracting officer, program analyst and procurement policy analyst in the Office of the Secretary. She is a two-time Federal 100 winner.

David McClure

*Principal Director, CIO Advisory Services
Accenture Federal Services*

Eagle Award for Government 2012

McClure — whose Accenture portfolio includes cloud adoption, digital transformation and IT modernization — was associate administrator of the General Services Administration's Office of Citizen Services and Innovative Technologies until 2014. Before GSA, he was Gartner's managing vice president for government research, and he also spent 18 years at the Government Accountability Office, where he conducted wide-ranging reviews of major systems development. McClure is a four-time Federal 100 award winner.

Richard A. Spires

*CEO
Learning Tree*

Eagle Award for Government 2013

Spires has been in the IT field for more than 30 years, with eight years of federal government service that culminated in the position of Department of Homeland Security CIO. While at DHS, he served as vice chairman of the CIO Council and co-chaired the Federal Data Center Consolidation Initiative. In addition to his 2013 Eagle selection, he won Federal 100 awards in 2007 and 2011.

Note: All Federal 100 and Eagle judges participate in a personal capacity, and the judging takes place outside normal business hours. Their participation and selections in no way represent official endorsements by their organizations.



REP. WILL HURD:

Making modernization possible

BY DEREK B. JOHNSON

The first time Rep. Will Hurd (R-Texas) realized the depth of the federal government's IT problems was shortly after he arrived on Capitol Hill in 2015. He was being briefed by staffers from the House Oversight and Government Reform Committee's IT Subcommittee in advance of a hearing on the Digital Accountability and Transparency Act of 2014.

New to Congress, Hurd asked for background on what the bill did. They told him that the government needed standards for collecting information about its online payments and expenditures.

Hurd, a computer science major who had served as a senior adviser to cybersecurity firm FusionX before being elected to Congress, was stunned. There wasn't already a standard in place to collect that kind of data?

"That's 101," Hurd said. "How do you know how much you're spending or how much it costs? That was the first time I was like, 'What the hell?'"

The episode served as a wake-up call and helped kick off a two-year legislative odyssey for Hurd that ended with the passage of the Modernizing Government Technology Act in December 2017. The law gives CIOs the ability to create working capital funds at their agencies to address long-standing IT modernization needs not covered by normal appropriations. It also authorized a \$500 million Technology Modernization Fund to be managed by the General Services Administration, with agencies submitting proposals and competing for funding.

In less than three years on the job, Hurd has carved out a role in Con-

gress as a leading voice on government technology issues and someone who is willing to work across party lines. In a town defined by its ability to make virtually any issue partisan or ideological, the MGT Act drew broad bipartisan support — from both the Obama and Trump administrations, Republican leaders and tech-minded Democratic members of Congress such as Reps. Steny Hoyer (D-Md.), Gerry Connolly (D-Va.), Robin Kelly (D-Ill.) and Ted Lieu (D-Calif.).

Hurd's passion for the subject is real. He often jokes that when he returns home to his district near San Antonio, there are never any activists holding up signs angrily demanding IT procurement reform.

It was his work conducting oversight of the Federal IT Acquisition Reform Act that opened his eyes to the extent to which federal CIOs still lacked visibility into and control over their own IT budgets. In Hurd's view, he couldn't hold agency CIOs accountable if they didn't have the tools they needed to do their job. That toolkit starts with budgetary flexibility and a system that doesn't punish agencies when they implement more efficient IT. Under the MGT Act, when an agency upgrades its technology infrastructure and saves money, those savings can be used to fund future projects.

"That's why I think the [law] is so important, to give the CIO the ability to modernize and not be negatively impacted for modernizing," Hurd said. "If you save money [in government], money gets taken away oftentimes. Therefore, you don't do things that will ultimately save you money." ■

DAVE WAJSGRAS:

Under the radar, reimagining cybersecurity

BY TROY K. SCHNEIDER

Raytheon is best known as a defense contractor. In the federal IT space, however, the firm has a low profile that belies its massive role. Dave Wajsgras is working to change that.

“We’re known as the largest missile maker in the world,” he told FCW. “Our strategic focus is to also become known as a world-class fed IT and cybersecurity solutions provider.”

As president of Raytheon’s Intelligence, Information and Services, Wajsgras leads a \$6 billion business with more than 16,000 employees, most in the Washington, D.C., area. His team delivers the Department of Homeland Security’s Development, Operations and Maintenance program, which protects vast swaths of the .gov domain, and last year upgraded the Joint Polar Satellite System’s Common Ground System, almost doubling the speed at which the National Weather Service can get observation data.

Then there is a broad range of work, much of it classified, for the defense and intelligence agencies that have been Raytheon customers for decades. That classified work is one reason IIS remains somewhat under the radar, Wajsgras said. A larger factor, however, might be the way the company spun IT and cybersecurity services out of its traditional security offerings.

Much like Amazon leveraged the infrastructure it built to power its retail business into a cloud services colossus, Raytheon has taken the software and solutions it developed to harden its weapons, space and command-and-control systems and is using them to position IIS

as an industry leader in cybersecurity, analytics and automation.

About a decade ago, “we saw that what we delivered as IT mission solutions... was becoming a much broader area of focus for our customer base,” Wajsgras said. IIS was formed to “begin to offer these solutions to our customers as a separate and distinct service offering.”

The fact that Raytheon’s cybersecurity expertise was born out of its mission systems brings other benefits as well. “CIOs or CISOs are getting much more involved on the mission side,” Wajsgras said, and that integration comes naturally to IIS. “The strategy we embarked on a few years ago is really converging.”

That aptitude for taking the long view also shows in Wajsgras’ focus on workforce development. Although IIS does not have any “noticeable talent shortfalls” today, he said proudly, “this war for talent is only going to get greater.”

So IIS looks nationwide for promising talent, and Wajsgras is a key supporter of the National Collegiate Cyber Defense Competition, which focuses on identifying young talent and showcasing opportunities in government IT.

Yet the workforce is just one facet of the rapidly shifting cyber landscape that Wajsgras wants to see Raytheon master.

“It’s a very complicated business, with a very broad portfolio of capabilities,” he said, but that complexity is part of the appeal. “We offer, I believe, the broadest solution set of any IT or cyber company.”

Over the years, Wajsgras said, “I’ve had 19 different jobs. This is the most challenging and rewarding role I’ve had in my entire career.” ■





Col. Terrence A. Adams

Director of Communications and CIO,
Air Mobility Command
U.S. Air Force

The cyber coach. Securing any government system is a complicated undertaking, but the Air Mobility Command comes with special complexities. Adams, who stepped into his current role last July, took every challenge in stride. He bolstered a modernization effort that was in danger of stalling, developed a first-ever system architecture and decreased the average time to mitigate critical vulnerabilities by 75 percent. He also finds the time to mentor more than 100 students, staffers and junior officers. As one colleague said of Adams, “His personal relationship with people on staff makes them want to do more than they think is possible.”

Austin Agrella

Legislative Director
Office of Rep. Will Hurd

The background man. Rep. Will Hurd (R-Texas) describes Agrella as persistent, hardworking and an unbelievably quick study. The congressman also credits his aide as the intellectual brainchild behind last year’s Modernizing Government Technology Act. Agrella was the lead writer of the act, so his influence can be found throughout the legislative process. When the bill stalled in the Senate after passing the House, Agrella was the person Hurd sent to negotiate with the staff of Sen. Jerry Moran (R-Kan.) to help push the bill over the finish line.

Jack Albright

Associate CIO for IT Shared Services
Department of Transportation

Shared-services hat trick. Albright hit three dazzling IT goals in 2017 in the effort to encourage federal agencies to adopt shared services. First, he identified a contract at another agency that mirrored what DOT offered and met that need with his department’s services, saving \$300,000. Second, he nailed down funding and worked to create a more efficient software-configured network for DOT. Third, he closed down a 10-year-old “temporary” data center and moved its capabilities into a governmentwide data center, which saved money and dramatically improved the center’s disaster recovery capabilities.

Kirit M. Amin

CIO
International Trade Commission

Small-agency advocate. With a federal résumé that includes work at the departments of Commerce, State, and Housing and Urban Development, Amin wanted to test his IT leadership at a smaller agency. And at ITC, he passed with flying colors. Under his leadership, the commission successfully responded to a congressional mandate by deploying the Miscellaneous Tariff Bill Petition System, while modernizing its network, redesigning its intranet and closing all outstanding inspector general findings. Amin’s work also extended beyond benefits to his own agency: He advocated for the 96 smaller agen-

cies to get a piece of the Modernizing Government Technology Act pie and to be included on the CIO Council.

Lee Ann Anderson

Vice President, Civilian Sales
Unisys Federal

Tax tech advancer. Anderson helped the IRS develop an innovative storage-as-a-service model that has already reduced costs by 30 percent in its first year. The project delivers more than 7 petabytes of private storage within business-driven performance tiers, giving the IRS the right storage at the right time and resulting in substantial efficiencies. Her work with the Agriculture Department facilitated an improved process for farmers using the new EZ Guarantee Loans program, which allowed USDA employees to modify how they monitor losses associated with loan portfolios. Her work also enhanced the program’s use of web services to improve the accuracy and timeliness of funds control.



Col. Terrence A. Adams



Austin Agrella



Jack Albright



Kirit M. Amin



Lee Ann Anderson

Jose L. Arrieta

Director, Schedule 70 Operations
General Services Administration

Blockchain trailblazer. Arrieta has since moved to a new role at the Department of Health and Human Services, but at GSA he led the largest IT contract in the world. Schedule 70 averages \$15 billion in business annually and provides IT products and services to 1,000 federal, state and local customers. Under his leadership, GSA became the first federal organization to use blockchain to automate contract awards and modifications. In only eight weeks, Arrieta led the development and launch of the technology. As a result, the awards approval process dropped from 110 days to nine and the time to make contract modifications narrowed from 40 days to three.

Vera Ashworth

Vice President
CGI Federal

Data Act coach. Ashworth leads the strategy, innovation and delivery oversight of CGI Federal's services to the departments of State and Commerce and the U.S. Agency for International Development. She spearheaded the firm's work to prepare clients for the Digital Accountability and Transparency Act by collaborating with agencies and industry, preparing outreach materials, educating teams and pulling in outside experts. Her work helped agencies focus on data quality and internal controls ahead of deadlines.

In 2017, data on billions of dollars' worth of federal spending was made available to the public under the Data Act.

Marianne Bailey

Principal Director, Deputy CIO for
Cybersecurity
Department of Defense

Threat detective. If such things were possible, Bailey could have won two Federal 100 awards for her work in 2017. For the first part of the year, she was principal director for the Defense Department's chief information security officer and led DOD's threat-based cybersecurity architecture review. A longtime NSA employee before coming to DOD, she returned to the agency last spring to be the lead cybersecurity adviser for all U.S. government national security systems deemed critical for military and intelligence activities. Virtually all those efforts are classified but absolutely vital to national security.

Matthew R. Bailey

Digital Services Expert and Acting Unit
Chief, Office of the Federal CIO
Office of Management and Budget

The cruft-cropper. Much like software code, the federal government's internal policies can get unwieldy over time. "There's a broad recognition that the way we make policy today is something that was created before we created the internet," Bailey said. Through Project Cruft, he reviewed over 250 IT policies issued by OMB and identified dozens that were ineffective or impeding innova-

tion, and many were eliminated. He is also reshaping the way policies are accessed and implemented by leading efforts to create a website that presents policy requirements in a clear and concise manner.

Judith Baltensperger

Project Manager
Department of Homeland Security

Console controller. Baltensperger is responsible for developing, deploying and supporting Continuous Diagnostics and Mitigation dashboards to help agencies improve the cybersecurity of their networks. She achieved several major milestones in 2017, including the certification and accreditation of the overall federal dashboard and two releases of the agency-level dashboard with increasing functionality. She also established data exchanges between several agency dashboards and the federal one. Her colleagues say those activities required close attention to detail, clear communication with a variety of internal and external stakeholders, a sense of humor and a firm commitment to getting the dashboards released despite challenges along the way.



Jose L. Arrieta



Vera Ashworth



Marianne Bailey



Matthew R.
Bailey



Judith
Baltensperger

Tony Bardo

*Assistant Vice President,
Government Solutions
Hughes*

VSATs ASAP. In response to the devastation caused by Hurricane Maria in Puerto Rico, Bardo spearheaded an effort to get 1,200 portable satellite communications terminals to government agencies, hospitals, businesses and nonprofit organizations across the 3,400-square-mile island. He and his team worked seven days a week to overcome logistical challenges to deploy the terminals so people could communicate with the outside world. Authorities have used the terminals to place tens of thousands of voice-over-IP calls in support of relief and recovery efforts. Bardo led similar efforts in response to Hurricane Katrina and Superstorm Sandy.

Jack Bates

*Director, Business Intelligence
Service Line
Department of Veterans Affairs*

Transparency provider. Bates and his team were actively updating the Department of Veterans Affairs' Access to Care app two hours before it went live on April 12, 2017. The online tool was a high priority for VA Secretary David Shulkin because it allows veterans to review data on wait times for appointments and quality of care at VA medical facilities.

The project represented a new level of transparency for the troubled agency, and more than that, it required Bates and his five-person team to move from prototype to production in 30 days to satisfy Shulkin's demanding schedule.

David B. Bennett

*Director of Operations and CIO
Defense Information Systems Agency*

Straightforward strategist. Bennett directed the launch of several concurrent, innovative IT initiatives in 2017, including leading DISA's implementation of software-defined networking with the objective of dramatically expanding its use across the enterprise. The benefits include task automation, enhanced resilience and lower costs. He also led the reorganization of DISA's computing environment into a single ecosystem as a necessary first step toward consolidating operations into a single, end-to-end enterprise while overseeing an initiative that enhances the resiliency of the IT enterprise by using two continually replicated, always-on computing infrastructures to protect against operational disruption.

Maj. Tom Bereknyei

*Lead Engineer
Defense Digital Service*

Hands-on leader. Some projects require leaders to be more than visionaries and strategists — they have to get technical, too. That's what Bereknyei did for Project Jyn, an initiative by Army Cyber Command and Defense Digital Service that sought to address challenges in identify-

ing, recruiting, training and retaining cyber professionals. Acting Defense Department CIO Essye Miller said Bereknyei's technical contributions and leadership led Jyn's first cohort to "build a system capable of detecting and selectively defeating the targeted [unmanned aerial vehicle systems] through exploitation" without jamming communications, and it accomplished that feat in a matter of weeks.

Diane L. Brewer

*Program Manager, MilitaryChildCare.com, Commander Naval Installations Command
Department of the Navy*

Real-world readiness. Finding child care is a crucial task for military parents, whether they are moving thousands of miles or simply looking for a new child care program. Brewer led an 18-month development and pilot-testing effort that gathered feedback from military families to bring the department's practices into the 21st century by transitioning from a paper-based system to a new portal. She ultimately delivered a secure website that provides a single gateway for service members to find comprehensive information on military-operated or military-approved child care programs worldwide.



Tony Bardo



Jack Bates



David B.
Bennett



Maj. Tom
Bereknyei



Diane L. Brewer



Congratulations, Dan Helfrich and Jim Walker

Deloitte congratulates our colleagues, Dan Helfrich and Jim Walker, and all of this year's Federal 100 Award winners for their extraordinary contributions to the federal IT community.

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V. Joseph Broadwater

Senior Vice President and General Manager of Space Group
Vencore

Achieving liftoff. When NASA's Exploration Mission 1 thunders past the pull of Earth's gravity next year, it will be possible in part because of work done by Broadwater and his team of industry and government experts. It used to take years for NASA to transition to new launch software, but now it takes just four months due to the advanced technology he and his team have put into place. The new system will allow for quick transitions between government and commercial payloads. Broadwater has also been instrumental in ensuring appropriations for manned space travel as an industry adviser to the Senate.

Col. Jacqueline (Denise) D. Brown

Chief, Network Plans and Governance Division, CIO/G-6
Department of the Army

Modernization's problem-solver. In a team of innovators, Brown stood out for her tenacity in bringing about necessary change. She understood that the Army's acquisition process does not fully capitalize on the private sector's advancements in communications and networking, which hampers the Army's ability to acquire new technologies for warfighters. She consolidated studies and research from various sources, including battlefield commanders, to identify equipment that could address gaps warfighters encountered during combat

operations. Thanks to her efforts, the Army's network modernization strategy is designed to ensure rapid insertion of new technology and will likely reduce costs in the long run.

Sean Casey

Senior Policy Advisor,
Office of American Innovation
Office of Management and Budget

Mr. Modernization. Few budgetary reform debates have raised hopes in the federal IT community the way the Modernizing Government Technology Act has. And there's a strong case to be made that MGT could not have passed without Casey's constant collaboration. Tapped by the White House to facilitate modernization efforts, he worked all the angles. He carved out a pathway for appropriations and led brainstorming and analysis sessions at OMB, and he coordinated with congressional staffers in the House and Senate and with industry representatives and helped craft language to ensure support for MGT.

Byron Caswell

President and CEO
Regent Solutions

Overhaul driver. Any IT transformation or upgrade project at a federal agency carries inherent risk, but there is also danger in keeping to the status quo. In 2017, Caswell worked with the Federal Communications Commission on an effort to overhaul the agency's decades-old technology stack by adopting cloud-based tools. As a result of his efforts, external users can now interact with the FCC without downloading any extra appli-

cations or extensions. The FCC also achieved 80 percent savings with the new stack over the cost of on-premises infrastructure.

Guy Cavallo

Deputy CIO
Small Business Administration

The power of "Why not?" SBA faced two massive challenges in 2017: overhauling its IT systems for the cloud and laying the groundwork for digital modernization. Cavallo had no budget for the agency's cloud and data center consolidation initiative, so he streamlined existing software and service contracts and used the \$1.2 million in savings to power his agency to the cloud. It's that sort of creativity and inventiveness that colleagues admire. "You have to be able to look at something and say 'why not?' and [Cavallo] brought that to the table," CIO Maria Roat said.



V. Joseph
Broadwater



Col. Jacqueline
(Denise) D.
Brown



Sean Casey



Byron Caswell



Guy Cavallo

Joanne Collins-Smee

Deputy Commissioner and Director of Office of American Innovation Centers of Excellence Projects, Federal Acquisition Service

General Services Administration

Modernization mogul. Collins-Smee joined GSA last September after a long career at IBM. In that short time, she has made significant progress on GSA's Office of American Innovation IT modernization Centers of Excellence projects, which seek to tap the most talented leaders from the public sector and industry to improve federal IT acquisition processes and support. She redefined work streams and worked with several agencies to identify challenges and opportunities in terms of cloud, IT infrastructure, service delivery analysis and customer contact centers. She also established the initial COE partnership with the Agriculture Department. In December, Collins-Smee took on even more responsibility, stepping in as acting director of GSA's Technology Transformation Service.

Cheri G. Couchis

Assistant Program Manager, Personnel Modernization, Sea Warrior Program, Program Executive Officer Enterprise Information Systems

Department of the Navy

Fleet streamliner. Couchis enhanced personnel management by consolidating IT systems across the active and reserve components and piloted a solution that would integrate the Navy's personnel and pay systems. She also partnered with stakeholders to improve business process

reengineering for personnel systems, allowing the Sea Warrior Program to deliver improvements in half the time of typical projects. Couchis' management of the Navy Standard Integrated Personnel System — the largest implementation of PeopleSoft Human Capital Management — has reduced time to market, total cost and program overhead, and affected every sailor in the Navy.

Kevin Cox

Continuous Diagnostics and Mitigation Program Manager

Department of Homeland Security

CDM supply and demand. Cox has been instrumental in making the CDM program easier for federal agencies to access through the General Services Administration. Teaming with federal engineering, supply chain security and acquisition experts, he led work on the CDM Dynamic and Evolving Federal Enterprise Network Defense strategy. His efforts to bring focused, innovative acquisition strategies, including the CDM Approved Products List and GSA's Special Item Numbers, are speeding cybersecurity tools and services to federal agencies. The first CDM DEFEND task order was awarded in December and valued at \$92.8 million.

Glenn Davidson

Executive Director of Enterprise Services

Department of Commerce

Shared-services success story.

Davidson made significant progress on the most mature shared-services program in the federal government.

He set up a program management office to oversee Commerce's enterprise services operations and presented a convincing case to his boss, Secretary Wilbur Ross, to enrich and expand the program. The Office of Management and Budget has recognized Davidson for his government-wide leadership on shared services, and he speaks frequently on the topic to external organizations, including the Shared Services Leadership Coalition and the Partnership for Public Service's Shared Services Roundtable.

Donna Dodson

Chief Cybersecurity Advisor

National Institute of Standards and Technology

The invisible hand of cybersecurity. Dodson was a seasoned and steady influence on federal cybersecurity policy in 2017 as new leaders settled into the White House, the Department of Homeland Security and the Defense Department. She served as the top cybersecurity adviser at NIST in a year when new executive orders elevated the agency's cyber mission, and she helped oversee the first update to NIST's Cybersecurity Framework since 2014. Along the way, Dodson earned a reputation for effectively engaging with industry executives. "She's often the invisible hand guiding NIST," said Dan Chenok, executive director of the IBM Center for the Business of Government.



Joanne Collins-Smee



Cheri G. Couchis



Kevin Cox



Glenn Davidson



Donna Dodson

Michael J. Duffy

Branch Chief, Office of Cybersecurity and Communications
Department of Homeland Security

Cybersecurity at scale. Duffy's ability to lead interagency cybersecurity efforts across DHS and with the White House and agency partners has led to steep declines in high-value asset vulnerabilities in the past year and a 99 percent decrease in vulnerabilities on internet-facing systems. His work to improve the way DHS issues and oversees cyber directives across the federal government has helped agencies hone and streamline their cyber protection plans so that they can implement strong email authentication and stronger web security in weeks instead of years.

Alan Evans

Principal Deputy Comptroller
Department of State

State of modernization. For someone without a computer science background, Evans certainly made a mark on State Department IT in 2017. He oversaw major modernization upgrades to the department's budget system, helped implement a new business intelligence platform and led a two-year effort to integrate the department's procurement and financial management systems. According to Evans, the technical challenges presented by those endeavors were not nearly as difficult to navigate as managing staff expectations. "Never underestimate the amount of time and effort that needs to go into change management," he said.

Joshua M. Franklin

IT Security Engineer, Applied Cybersecurity Division
National Institute of Standards and Technology

The standard-setter. Franklin literally wrote the book on mobile device security. He had a huge impact last year as one of the authors of NIST's Mobile Threat Catalogue, and he was responsible for setting the standards for cybersecurity in a series of hot-button policy areas. In 2018, the Election Assistance Commission is poised to adopt the first major update to voluntary security standards for the nation's voting machines since 2005, with Franklin as the principal developer. "It's a constant challenge to make requirements that are detailed enough to have an impact but also apply to 55 states and jurisdictions," he said.

Adrian Gardner

CIO
Federal Emergency Management Agency

The disaster artist. When local communications infrastructure broke down in storm-ravaged Puerto Rico and the Virgin Islands, Gardner pushed FEMA to embrace a "survivable communications" strategy by shipping satellite phones and low-frequency communication devices to local officials so they could operate effectively in a disaster environment. He also instituted new derived credentials for FEMA mobile devices and fought off an upsurge in cyberattacks from opportunistic hackers looking to take advantage of the chaos.

"Adversaries see that kind of response coming from an agency, and they look at that as an opportunity to throw all they can at you," Gardner said.

Vice Adm. Michael M. Gilday

Commander, U.S. Fleet Cyber Command and U.S. Tenth Fleet
U.S. Navy

More than good ideas. Thanks to Gilday's leadership, the Navy achieved full operational capability for all 40 Cyber Mission Force teams one year ahead of schedule. He also increased the realism of cyberspace operations in combatant command exercises, implemented plans to advance the Navy's use of cloud-based technology, streamlined operational processes for patching and response actions in the face of threatening malware such as WannaCry, and initiated two new rapid development programs supporting network situational awareness and defense. "His leadership and experience are unmatched in bringing cyber effects to the fight," said Rear Adm. Danelle Barrett, director of the Navy Cybersecurity Division.



Michael J. Duffy



Alan Evans



Joshua M. Franklin



Adrian Gardner



Vice Adm. Michael M. Gilday



Congratulations

to this year's Federal 100 award winners for their outstanding leadership and contributions to the government IT community.

William R. Graves

Chief Engineer, DOD Biometrics
Department of Defense

Credentials king. When it comes to keeping biometric credentialing future-proof, DOD turns to Graves. Under his leadership, DOD's new Biometrics Enabling Capability and its accompanying system, the Biometric Automated Toolset-Army, were both awarded in 2017. His contributions to the requirements, acquisition approaches and technical evaluations were crucial to each system's success. He is also leading or contributing to many future DOD biometric programs. The goal of all his efforts is to better protect member of the U.S. military and the country's assets and interests while fostering cooperation among allies.

Donald Hall

Government Solutions Director
OnSolve

IPAWS advocate. Hall worked tirelessly to increase U.S. jurisdictions' adoption of the Integrated Public Alert and Warning System to enhance citizen safety in emergency events such as hurricanes, wildfires and active-shooter incidents. He launched an education campaign that involved webinars for localities on the benefits of IPAWS and how to use the system effectively. Hall and his team also focused on driving innovation to enhance the system's capabilities, and he brings a first-hand perspective to the effort: For 42 years, Hall has been part of Maryland's Volunteer Fire and Rescue Service.

Dan Helfrich

Federal Government Services Leader
Deloitte

Collaborating for change. As anyone attempting DevOps quickly discovers, true collaboration is essential. Helfrich has learned that lesson well. A good portion of Deloitte's \$1.7 billion federal practice is built on such side-by-side transformation efforts, and Helfrich applies the approach to his own leadership style as well. He has championed greater flexibility in IT contracting, taken part in the Defense Department's Section 809 Panel and led Deloitte to launch its own crowdsourced innovation accelerator to create viable IT solutions specifically for the federal market. That approach paid dividends for government partners in 2017 on everything from process robotics to smart-city technologies for military bases.

Capt. Damen O. Hofheinz

Branch Head, OPNAV N2N6G5
Cyber Resiliency
U.S. Navy

Masterful planner. Hofheinz was crucial to the Navy's successful migration of its first network to the Joint Regional Security Stacks in 2017. JRSS will improve situational awareness by combining common event information across the military services. Hofheinz led the Navy's collaboration efforts, which included identifying more than 30 critical updates to the Defense Department's software accreditation tool for Navy systems. His efforts will eliminate administrative burdens and reduce the time it

takes to process accreditations. His work culminated in the development of the Navy's risk management framework guide and established a transition process that is saving more than \$3.8 million.

Karina L. Homme

Senior Director, Azure Government
Microsoft

Cloud evangelist. Homme serves as a liaison between the Microsoft Azure cloud engineering team and federal agencies. The role involves removing barriers to cloud adoption in the government and aligning Microsoft's government cloud roadmap with agency needs. She has led five federal cloud implementations, developed a robust 21,000-strong social media network and holds monthly meetups as a peer learning forum open to all regardless of rank or resources. In 2017, she helped bring 24 demonstrations of cloud best practices to a federal IT community seeking to overcome challenges and facilitate collaboration.



William R.
Graves



Donald Hall



Dan Helfrich



Capt. Damen O.
Hofheinz



Karina L.
Homme

Rep. Will Hurd

Congressman

U.S. House of Representatives

The IT facilitator. In just a few short years in Congress, Hurd has earned a reputation as a bipartisan collaborator and a leader on federal technology policy. His efforts to push through the Modernizing Government Technology Act have set the stage for IT modernization for years to come. He said the inclusive approach he and his staff took to working with all the stakeholders in government, industry and Congress proved critical to the bill's passage. "There were folks who had concerns or thought we should zig versus zag," Hurd said, "but we worked all that out before we dropped text."

Tim Hurlebaus

President

CGI Federal

Growth driver. Hurlebaus has led CGI Federal through several small but strategic acquisitions that have brought more high-end consulting, cloud solutions and digital services to its federal customers. Under his leadership, the company helped the Agriculture Department migrate to a cloud-based shared-services platform called Momentum. Forty other federal agencies use Momentum for services such as financial management. The company also worked with the Army to develop a new enterprise-wide system for contract writing and management and launched credential management for 26 federal agencies as part of Phase 2 of the Continuous Diagnostics and Mitigation program.

Kamal Jabbour

Senior Scientist for Information

Assurance, Air Force Research Labs

Department of the Air Force

Dedicated teacher. Jabbour led a 72-member vulnerability analysis and resiliency group in combing through 15 acquisition systems worth \$200 billion to analyze their cybersecurity. He was then tapped to assess a key Air Force Materiel Command space system. Beyond his skill at switching between working on F-35 systems one day and business enterprise systems the next, Jabbour is known for his ability to educate and inspire students. "They leave his classes as highly motivated experts in cyber methodology, systems engineering and cyber resilience," said William Redmond, executive director of the Air Force's Operational Test and Evaluation Center.

Tom Jones

Deputy Director, Spectrum Policy

and International Engagements,

Office of the CIO

Department of Defense

DOD's global ambassador. Jones' work is critical to ensuring that DOD and U.S. allies are synchronized across portfolios, including information exchanges and policy development on secure mobile communications, spectrum, cybersecurity, tactical communications and information systems security. Much of that vital engagement was behind the scenes, but Jones also planned, coordinated and executed two U.S.-

hosted CIO forums — at U.S. Pacific Command and the Naval Postgraduate School — and a similar meeting in Australia. By working relentlessly to engage with his counterparts across a wide range of time zones, he ensured that the events — and the broader partnerships — were as productive as possible.

Rob Joyce

White House Cyber Coordinator

National Security Council

King of the cyber hill. Joyce, the former leader of an elite National Security Agency hacking division, has helped set the stage for national and international conversations about cybersecurity as President Donald Trump's top adviser on information security policy. In 2017, Joyce was responsible for implementing the executive order on cybersecurity, pushed federal IT modernization as a cybersecurity strategy, introduced a more transparent framework to govern bug disclosures and helped institute "name and shame" strategies for nation state-oriented cyberattacks. Joyce has earned bipartisan respect for his expertise as the Trump administration made cybersecurity a top policy priority.



Rep. Will Hurd



Tim Hurlebaus



Kamal Jabbour



Tom Jones



Rob Joyce

Kay Kapoor

President

AT&T Global Government Services

Government IT trifecta. Landing a large contract is not in itself Federal 100-worthy. Winning an award as critical as FirstNet is another story — particularly when that win involved rethinking central contract provisions to ensure that the 25-year deal delivers for first responders and AT&T alike. Kapoor's creative leadership showed in other ways as well: The executive team she recruited has brought services and IT solutions expertise to the rapidly evolving telecom giant, along with new ways to serve government customers. Before leaving in October to launch Arya Technologies, Kapoor also helped AT&T win key spots on the Enterprise Infrastructure Solutions and Alliant 2 contracts.

Casey Kelley

Director, Customer Engagement Division,
IT Category, Federal Acquisition Service
General Services Administration

Alliant leader. Kelley was a major force behind GSA's next-generation contracting vehicle that will likely be a keystone in the federal government's IT modernization plans. Kelley led the effort to take government/industry collaboration to a new level. Under his leadership, GSA's Alliant 2 showcased several key enhancements and updates, including flexibility as technologies and the definition of IT evolve, ancillary non-IT support when it is integral to the IT services-based outcome, and provisions that ensure

a highly qualified and competitive pool of contractors. GSA awarded the 15-year, \$50 billion contract to 61 contractors in November.

Trey Kennedy

Advisor, Federal CIO Council
General Services Administration

Counseling the council. Kennedy spent 2017 implementing recommendations from the CIO Council's "State of Federal IT" report, which were designed to change the way agencies manage and use IT. "We wanted to create that situational awareness for incoming IT leaders" in the Trump administration, he said. Kennedy also oversaw a realignment of the council's committee structure to facilitate more input from non-CIOs, executed new contracts to lay the groundwork for implementing Technology Business Management principles across government and served as lead organizer of the council's first technology and cybersecurity recruitment event, which led to dozens of new hires.

Yogesh Khanna

Senior Vice President and CTO
CSRA

Cloud bridge builder. Khanna oversees CSRA's technology partnerships with some of the largest and most notable companies, including Amazon, Google and Microsoft. He is particularly adept at bringing cloud computing, data analytics, machine learning and other automation tools from the commercial world into the federal environment at a time when agencies are increasingly eyeing those technologies as

a lever to lower costs and increase efficiencies. His skill at building bridges is evident in the milCloud 2.0 project CSRA is implementing for the Defense Information Systems Agency. It connects the military to a commercial cloud that features pay-for-use pricing and no vendor lock-in.

Robert C. King

Director, Systems and Information
Integration, Management Directorate
Department of Homeland Security

DHS' data equalizer. Thanks to King's leadership, DHS is making marked improvement on achieving data-driven decision-making, integrated analysis and advanced data visualization. His efforts are giving decision-makers line-of-site visibility across the historically siloed areas of finance, procurement, human capital, asset management and investment data. By bundling all those capabilities, he is redefining how DHS uses information to respond to national events, and he has put DHS on a new path to positioning information as a strategic asset. King's colleagues say those enterprise-level, integration-focused accomplishments are nothing short of revolutionary at a department plagued with the ongoing challenge of unifying 22 disparate agencies.



Kay Kapoor



Casey Kelley



Trey Kennedy



Yogesh Khanna



Robert C. King

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Joseph F. Klimavicz

CIO

Department of Justice

Cloud-first for real. Klimavicz, who is leading DOJ's digital transformation, oversaw a department-wide initiative to move to a shared, cloud-based productivity suite and successfully migrated more than 80,000 users to the shared service in just 12 months. He also spearheaded data center consolidation efforts and is on track to take the department down to three data centers by March 2019. By moving more activities to the cloud, he is allowing Justice to focus on its mission rather than data center management. In addition, Klimavicz's efforts are saving money and fostering collaboration across the department.

Roger Krone

Chairman and CEO

Leidos

The integrator. After closing a market-altering merger in 2017, Krone spend the year successfully driving the integration of Lockheed Martin's IT business while continuing to put agency customers' needs first. Leidos' partnership with Cerner to develop the Defense Department's electronic health record system is also crucial. The first real deployments happened late in the year, but that effort, along with the Department of Veterans Affairs' decision to embrace the same platform, put Leidos at the center of what is arguably today's biggest federal IT project.

Tanya W. Lambert

Deputy, AF Program Executive Officer for C3I and Networks

Department of the Air Force

Champion of the cloud. As a result of Lambert's leadership in transitioning Air Force operations to the cloud, over 2,000 public-facing applications and three internal enterprise resource planning systems are now consolidated and better secured on a shared cloud service. Lambert was able to transfer the applications by building a common computing environment and creating a new development methodology that drew on the expertise of industry leaders. Her innovative approach to cloud transition has led to a standard hardware stack for the ERP apps and has reduced monthly reporting speeds from hours to minutes.

Evan Lee

CTO and Director of Digital Services, Office of Inspector General

Department of Health and Human Services

Modernizing oversight. The HHS OIG is the largest in government, providing oversight of more than \$1.2 trillion in spending. To adapt to an increasingly complex environment for fighting fraud, waste and abuse, Lee took on the challenge of fixing existing systems and persuaded an extremely risk-averse organization to modernize. The Enterprise Dashboard he and his team developed now allows the OIG to access data and provide accurate responses to con-

gressional inquiries in real time rather than months. His work helped the OIG detect the biggest Medicaid and Medicare fraud schemes in history, which had resulted in \$1.3 billion in false billing.

Naomi Lefkowitz

Senior Privacy Policy Advisor

National Institute of Standards and Technology

The privacy keeper. Lefkowitz promotes the development of trustworthy systems that protect individuals' privacy and civil liberties. In 2017, she published a NIST Internal Report that introduces a systems engineering approach to privacy, including a novel privacy risk model. Last year, she also contributed to multiple international privacy engineering standards and orchestrated the addition of privacy guidance to NIST's Digital Identity Guidelines. Her work will enable organizations to engineer privacy into their systems and move beyond a check-the-box compliance exercise to a risk-based approach that parallels enterprise information security programs.



Joseph F. Klimavicz



Roger Krone



Tanya W. Lambert



Evan Lee



Naomi Lefkowitz

Chris Liddell

Director of Strategic Initiatives
Office of American Innovation

From Microsoft to modernizing government. Liddell made the transition from Microsoft chief financial officer to public servant at an opportune time. Last year, he led the modernization strategy for the Trump administration, encouraging industry executives to share their expertise and viewpoints and ensuring that IT remained a management priority. Under his guidance, the Office of American Innovation created inter-agency working groups to determine modernization priorities. The White House's IT Modernization Report reflects those priorities, including a push to the cloud, adoption of shared services, enhanced cybersecurity and the establishment of centers of excellence.

Greg B. Little

Team Lead, Office of the Under Secretary of Defense (Comptroller)
Department of Defense

Mr. Accountable. Little was responsible for building a data lake of financial transactions for the Office of the Secretary of Defense, defense agencies and field activities. The project involved moving data from approximately 50 accounting and business IT systems onto a purpose-built big-data platform. His efforts enabled new platforms to become accredited and operational more quickly, which was essential to enabling audits to begin three months before the statutorily required date. "Greg has tremendous

ability to work through all obstacles presented to him — cultural resistance, technical and acquisition challenges," said Alaleh Jenkins, assistant deputy chief financial officer for DOD's comptroller.

Michael Maiorana

Senior Vice President, Public Sector
Verizon Enterprise Solutions

Emergency response and modernization. Maiorana's team provided significant support to federal agencies in 2017, notably during the wildfires in California and after hurricanes Harvey, Jose and Maria. As a result, agencies had a trusted IT partner supporting them while they provided much-needed services for those affected by the natural disasters. Maiorana led his team in helping each agency obtain the secure and reliable technology it needed to meet the surge in demand in each event's immediate aftermath. "Across the company, we say that we run to a crisis, not away," he said.

Kevin McAleenan

Acting Commissioner
Customs and Border Protection

Putting CBP on the cutting edge. McAleenan made sure CBP was at the front of the line to partner with DHS' Science and Technology Directorate and use other transaction authorities to buy new technology in more efficient ways. Less than a year into that effort, CBP now has 12 startups on contract innovating in a range of areas, including protecting canines that work in 120-degree heat, small-

drone radar concepts and big-data analytics that can better spot violators of intellectual property rights. "It's pretty exciting to be on the cutting edge in a much more efficient way," he said.

Sandra McGill

Director, Enterprise IT Portfolio Office
Centers for Disease Control and Prevention

A change agent for CDC. McGill saw the Federal IT Acquisition Reform Act as an opportunity to empower the 19 organizations within CDC by giving them the data they need to advance critical missions. She shifted the focus from mere compliance to true transformation. Thanks to McGill's leadership, CDC's IT governance practices are now guided by the agency's new IT Strategic Plan, which details five goals and 19 objectives through 2021. Last year, McGill also led virtual sessions to train nearly 700 employees and contractors on best practices for IT project management.



Chris Liddell

Greg B. Little

Michael
Maiorana

Kevin
McAleenan

Sandra McGill

Conor McGrath

Legislative Assistant
Office of Sen. Jerry Moran

Moving MGT. The Modernizing Government Technology Act promises to help agencies modernize IT systems, improve efficiency and save money. Getting to that point, however, required years of relentless behind-the-scenes work from the likes of McGrath. As a legislative assistant for one of the bill's Senate sponsors, McGrath strategized the plan to include MGT in the annual defense authorization bill. He was also instrumental in rallying industry support and pitching the Trump administration on how what at first blush appeared to be an IT policy bill had the potential to make better use of taxpayer dollars.

Brett McMillen

Senior Manager, U.S. Federal, Civilian
Amazon Web Services

Cloud connector. McMillen coordinated activities among partners, vendors, managers and federal leaders from the C-suite down on numerous projects in 2017. He helped implement the Department of Veterans Affairs' Vets.gov portal, which involved integrating more than 200 formerly distinct websites and services. The new, mobile-friendly website makes it easier for veterans to complete essential tasks, such as filing a claim or applying for health benefits. McMillen also helped develop a facial recognition program at Customs and Border Protection

that will be deployed at airports nationwide to increase security and free up valuable resources at CBP for other tasks.

Col. James (Darby) F. McNulty

Project Manager, Integrated Personnel and Pay System—Army, Program Executive Office Enterprise Information Systems
U.S. Army

Human resources revolutionary. McNulty is overseeing the development of a next-generation system that will include personnel, pay and talent management capabilities. The system is fundamentally changing how the Army does business and will affect approximately 1.1 million soldiers worldwide by fiscal 2020. IPPS-A will help the Army enhance its readiness by enabling the matching of soldiers' knowledge, skills and behaviors against requirements. McNulty has a clear view of the big picture and the ability to "masterfully break it down into individual pixels to guide their development," said Terry Watson, acting program executive officer for enterprise information systems.

Mitzi I. Mead

CEO
Accela Consulting

ACT-IAC's advocate. There were skeptics when Mead was elected to the Industry Advisory Council as something of an insurgent candidate, but her leadership in 2017 won over industry and government stakeholders alike. The Communities of Interest

that IAC and the American Council for Technology jointly organize have taken on new life, and Mead aggressively courted agency CIOs to ensure that government participation in ACT-IAC stayed strong in a turbulent transition year. Small businesses are getting more attention, too, but industry/government dialogue has been the top priority as Mead continues to ensure that government needs are driving ACT-IAC's agenda.

John Mengucci

Chief Operating Officer
CACI

Market strategy architect. Mengucci developed and has subsequently driven CACI's market-based strategy since he joined the company in 2012 as chief operating officer and president of U.S. operations. His efforts, and a pair of large acquisitions that happened during the same period, positioned the company to better serve its agency customers and secure \$6 billion in contract awards during CACI's 2017 fiscal year. Mengucci also assumed more responsibility over the firm's strategic growth plans and acquisition integration activities as it seeks to position itself for larger, longer and more complex technology solutions partnerships with agencies.



Conor McGrath



Brett McMillen



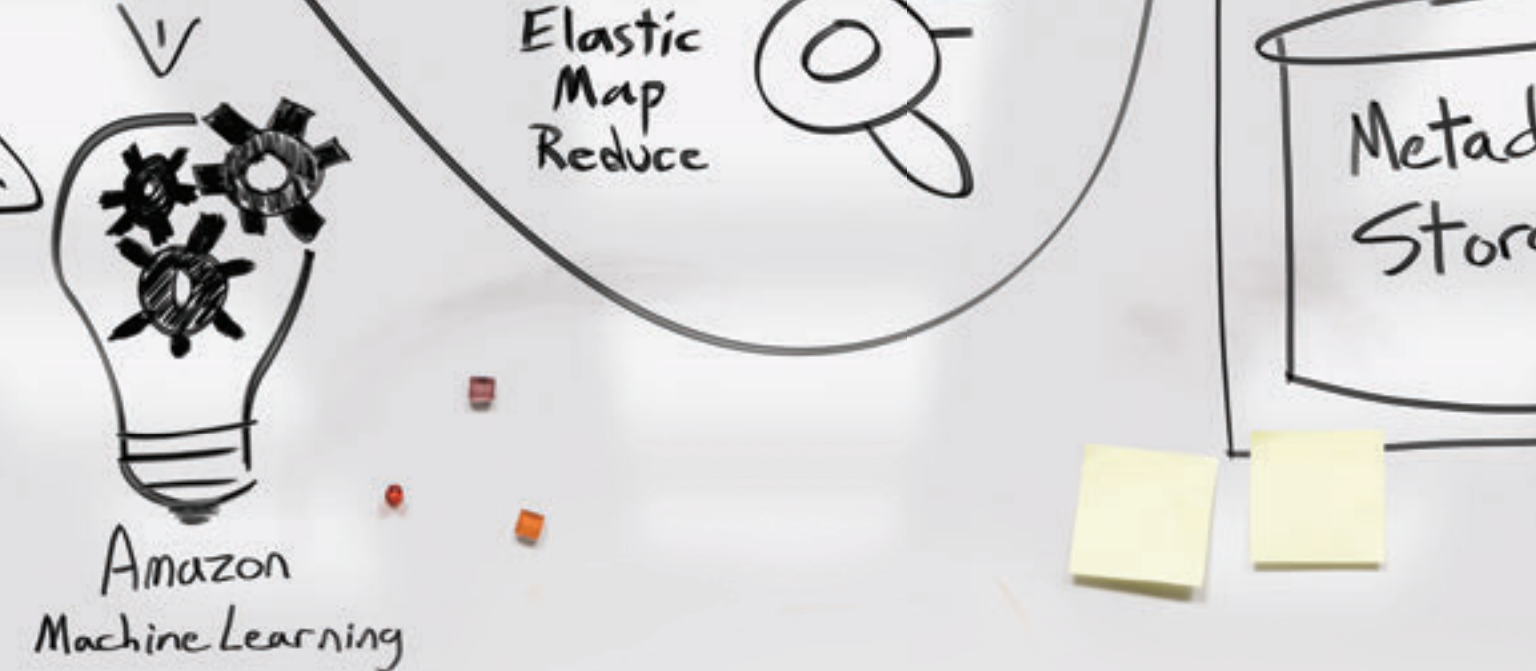
Col. James (Darby) F. McNulty



Mitzi I. Mead



John Mengucci



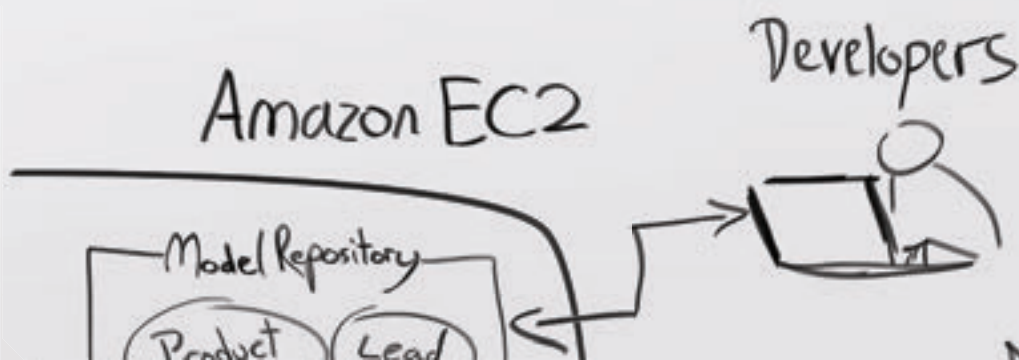
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Meagan Metzger

CEO and Founder
Dcode

Educating the innovators. Tapping into Silicon Valley-type talent has been the government's stated goal for nearly a decade, yet innovative companies still face daunting barriers to entry. With Dcode, Metzger is teaching those firms how to overcome the obstacles and understand how federal IT works. In 2017, she saw 27 firms graduate from the technology accelerator program. And although the emphasis is on providing the tools, context and connections to help companies survive the long haul in federal contracting, the short-term dividends are obvious as well: Dcode companies won 21 contract awards in 2017.

Vicki D. Michetti

Director, Defense Industrial Base
Cybersecurity Program
Department of Defense

Secure sharing. Better information sharing with contractors is essential to DOD's security posture, but it requires trust that has not always been present. Michetti has created that safe space for collaboration through the Defense Industrial Base Cybersecurity Program. After the National Institute of Standards and Technology finalized guidelines for protecting unclassified information in nonfederal systems, she spent 2017 making that guidance work for a diverse range of companies. She modified the eligibility criteria so that all cleared defense contractors can

participate and allowed companies to determine their level of participation. As one Federal 100 judge said, Michetti "has taken this to new heights."

Steven R. Muck

Director, Privacy and Information
Sharing, Office of the CIO
Department of the Navy

Privacy protector. Muck has championed efforts to reduce the use of Social Security numbers as the primary administrative identifier of Navy Department employees, including civilians, military personnel and government contractors. Limiting the reliance on this identifier helps protect employees against the growing problem of identity theft and fraud. He is also responsible for ending the practice of requiring Pentagon visitors to write or say their SSN for identification when checking in at the visitor center, which now has secure keypads for visitors to type their SSNs. "This is Steve's passion," said Kelly Fletcher, the department's acting CIO. "He works the issue in his spare time."

Mamta Patel Nagaraja

Science Engagement and
Communications, Science Mission
Directorate
NASA

Delivering the eclipse. Last year's solar eclipse captivated the nation. And if you were among the more than 90 million people who viewed NASA's eclipse website, you can thank Nagaraja. She coordinated with five contractor teams to set up the live-

streaming web page and video series about the eclipse. Her behind-the-scenes work to plan, test, integrate and launch an IT architecture capable of supporting massive, unpredictable traffic levels took months. She gathered a wealth of information captured by 11 spacecraft, three airplanes, dozens of high-altitude balloons, TV crews and even astronauts on the International Space Station and made it all available for public consumption.

Brig. Gen. (retired) Kevin J. Nally

CIO
U.S. Secret Service

The bodyguards' bodyguard. While the Secret Service is busy protecting the president, Nally protects the Secret Service. He helped the agency achieve a near-perfect Federal Information Security Management Act score in 2017 while publishing 20 policies related to IT modernization and security. His work was so respected within the Department of Homeland Security that other components copied his approach, and he is credited with helping to initiate similar standardization of cybersecurity efforts across the department. "My staff knows where we're going, and in terms of empowering them, I do my best to give them the resources to accomplish the plan and get to the vision," Nally said.



Meagan Metzger



Vicki D. Michetti



Steven R. Muck



Mamta Patel
Nagaraja



Brig. Gen.
(retired) Kevin
J. Nally

Vicky Niblett

Deputy Assistant Commissioner,
Integrated Award Environment, Office
of Systems Management, Federal
Acquisition Service

General Services Administration

Acquisition environmental activist. The GSA-led Integrated Award Environment, which is at the center of the federal acquisition and grant-making community, includes SAM.gov, FedBizOpps, the Federal Procurement Data System and vendor past-performance systems. Many of those legacy systems collect data that is essential to the government's work, but they have struggled with modernization. Niblett encouraged her team to reimagine IAE and embrace a vision for a unified SAM.gov as the trusted, essential place to seamlessly connect with government. Her advocacy of user-centered design principles, agile practices and a focus on delivery has resulted in cost savings and improvements to the existing legacy systems.

Adelaide O'Brien

Research Director, Government Digital
Transformation Strategies
IDC Government Insights

Sharing the secrets of successful transformation. Technology is certainly part of digital transformation, but O'Brien stresses that it involves so much more. "When we talk about digital tech, we talk about government actually changing how it serves citizens," she said. "Providing better services involves a cultural change." In 2017, O'Brien worked with agencies on all the major technology fronts — including big data, cognitive comput-

ing, artificial intelligence and cloud — to improve business processes and make better data-driven decisions at all levels. She also transformed ACT-IAC's communities of interest, helping those industry/government groups better share their findings with one another.

Col. Joseph A. Papenfus

Chief, Current Operations, CIO/G6
U.S. Army

A Swiss Army knife for CIO/G6. Papenfus developed an in-depth Theater Engagement Plan to ensure that resources and technology are being effectively allocated to Army commands across the globe. In the cybersecurity realm, he synchronized efforts in support of the Army's implementation of the Defense Department's Cybersecurity Scorecard, and his leadership was instrumental in helping the Army's lead sister services with overall compliance and operational risk mitigation. In addition, Papenfus helped formulate action plans for the Army's role in hurricane relief, ensuring quick and effective response to new developments.

Scott Pawlowski

Chief of Cultural and Natural Resources
National Park Service

Underwater Indiana Jones. Pawlowski put together and led a public/private team of 40 volunteer scientists, technologists and archivists who digitally modeled the wreckage of USS Arizona, which sank during the attack on Pearl Harbor in World War II, to better understand changes at

the historic site. Under his leadership, the team developed an innovative way to use 3D imaging underwater by combining three technologies for the first time — a repeatable and scalable approach that has since been released into the public domain.

Jim Piché

Sector Director, Federal Systems
Integration and Management Center
General Services Administration

CDM innovator. Thanks to Piché's efforts, it is easier for federal buyers to find a Special Item Number at GSA than ever before. He has been instrumental in setting up SINS on GSA schedules to make crucial cybersecurity services such as Continuous Diagnostics and Mitigation easier to find and buy. He has also made CDM tools readily available on the Alliant contract through a total integrated solution and moved CDM support to the cloud. Under his watch, Alliant's Secure Enterprise Network Systems, Services and Support task order for a civilian agency classified IT network was awarded without a hitch.



Vicky Niblett



Adelaide O'Brien



Col. Joseph A.
Papenfus



Jim Piché

Hildi Pineda

Chief Growth Officer
AbleVets LLC

Veteran services innovator. As the Department of Veterans Affairs works to improve relationships with those who have served in the military, Pineda is focused on the technology solutions that can bridge service gaps when veterans transition out of the military and back to civilian life. Her work at AbleVets has helped the VA improve the sharing of patient information with the Defense Department, allowed veterans to self-schedule doctor's appointments online and incorporated enhanced cybersecurity measures into various VA applications. Pineda is also working on optimizing VA call centers to give veterans quick, efficient access to services.

Michael Powers

IT Security Manager
NASA

Space agency cyber czar. When agencies were directed to shore up their cybersecurity in the wake of the Office of Personnel Management breach, NASA officials knew their bevy of public-facing websites would be a particular challenge. But thanks to Powers, the agency was able to achieve the highest compliance rate in government: More than 99 percent of its 3,000-plus live websites are now using HTTPS. The agency also decommissioned 1,000 sites that were no longer needed. "We basically locked the doors and windows so they can't get in," Powers said. "Securing the federal government's websites from various attackers is very gratifying."

Tom Ragland

Business Development Executive
Dell EMC Federal

DHS' industry connector. Ragland's role at Dell EMC was new in 2017, but his role as a connector for the homeland security community is long-standing. Such commitment and connections were especially needed last year, when the Federal Emergency Management Agency scrambled to respond to an unprecedented string of devastating hurricanes. The personal meetings Ragland coordinated between Dell Technologies CEO Michael Dell and FEMA leaders put critical equipment on the ground almost immediately in Florida, Texas and Puerto Rico. Ragland also created the AFCEA Homeland Security Conference, giving the Department of Homeland Security and industry a much-needed collaboration space.

Trent F. Randall

Senior Solutions Architect
Department of the Interior

FireNet's facilitator. Because of his outside-the-box approach to mission-critical problems, Randall was asked to solve a long-standing challenge facing the interagency fire community: finding a way to enable critically needed collaboration and communication among a diverse group of stakeholders with differing credentialing, authentication and other information assurance requirements. The result is FireNet, a revolutionary cloud-based platform that gives dispatch centers and fire camps a single, secure point of access through which they can share information regardless of

affiliation or agency. Today, FireNet supports federal agencies and will grow to include state, tribal and local governments in addition to volunteers and other firefighting partners.

Alfred Rivera

Director, Development and Business Center
Defense Information Systems Agency

Remaking DOD IT. Rivera has brought creative problem-solving, strategic insight and management expertise to DISA's Development and Business Center and the 1,200 military service members and civilians under his direction. In 2017, he led the design, development and implementation of milCloud 2.0, DISA's first on-premises and fully commercial cloud service. He also championed modernization efforts for the Defense Department through the testing and implementation of zero-day network defenses, break-and-inspect analysis, endpoint security solutions and data analytics. In addition, he reduced the number of legacy security stacks without compromising DOD's information networks.



Hildi Pineda



Michael Powers



Tom Ragland



Trent F. Randall



Alfred Rivera

McKinsey&Company

Congratulations

to the winners of the Fed100!

Thank you for your
leadership, innovation and
commitment to public service.

Will Roper

Director, Strategic Capabilities Office,
Office of the Secretary of Defense
Department of Defense

Acquisition alchemist. Roper's ability to balance modernization demands and the costs of ongoing operations is part of what landed him a new job as the Air Force's assistant secretary for acquisition, technology and logistics. Confirmed for that role in February, Roper is now responsible for ushering in major changes to that service's acquisition processes. Many of his accomplishments are not for attribution — to keep adversaries from catching up, he once said, “you just don't talk about your best capabilities” — but the Federal 100 judges praised Roper for transforming DOD's approach to advanced technologies.

Kris Rowley

Chief Data Officer, Office of the CIO
General Services Administration

Demanding better data management. Rowley has forged a model of data management for the rest of the government by providing secure, cost-effective data management solutions that can improve efficiency. His project, Data2Decision, provides a secure setting to share data from across GSA and other agencies that can help officials make informed decisions on an array of topics. As useful as it sounds, Rowley initially had to convince executives that his project had value. “We did this without a mandate,” he said. “There was no requirement. We just thought it would be better.”

Col. William M. Russell

Project Manager, General Fund
Enterprise Business System
U.S. Army

The numbers man. Russell drove the modernization of GFEBS, which standardizes, streamlines and shares critical data across the active Army, the Army National Guard and the Army Reserve. Its core financial management system provides distribution and execution of appropriated funds, cost management and financial reporting. He also oversaw a complex source selection for the Army Contract Writing System in 11 months — six months ahead of the published goal and one year faster than projects of similar size and complexity. Thanks to his efforts, the contract was also awarded for \$100 million less than the original estimate and will deliver capability 20 months sooner than planned.

Paul Saladna

Enterprise Architect
NTT Data

Modernizing “the beast.” Saladna updated the Air Force's 420 legacy logistics data systems, which included more than 1 million lines of code written in Cobol and thousands more written in the C programming language. He moved all those activities onto a modern system while staying ahead of schedule. Based on commercial tools, the new environment already has trimmed operational costs and proven to be more sustainable. Saladna's devotion to the project began 11 months before the Air Force

even released the solicitation, when he conducted a study of potential solutions. Once the work began, he was involved in every aspect of modernization.

Alvin Salehi

Senior Technology Advisor, White House
Office of Management and Budget

Open source all-star. When Code.gov launched in November 2016, the repository started with 45 projects. Now, thanks to the commitment of folks like Salehi, the site hosts more than 3,000. Throughout 2017, he and his team demonstrated the value of the platform, which promotes code sharing and collaboration to help the government reduce duplicative software development and save millions of taxpayer dollars. Salehi's efforts also involved helping agencies implement open-source software policies while making more efficient use of feds' brainpower. “This platform is for everyone — both technical and non-technical — who wants to make our nation's technology systems better,” he said.



Will Roper



Kris Rowley



Col. William M.
Russell



Paul Saladna



Alvin Salehi

Craig P. Schaefer

Program Manager, DOD Healthcare Management System Modernization Program Executive Office, Defense Healthcare Management Systems Department of Defense

EHR evangelist. DOD is in the midst of an ambitious project to switch from multiple legacy electronic health record systems to a single commercial system. When the new integrated EHR went live at four sites in the Pacific Northwest last November, it represented a major milestone for Schaefer, the leader accountable for putting the new system in place. He is well suited to the job of leading the highly complex integration because of his knack for “being strategic and looking long term while managing day-to-day” activities, said Stacy Cummings, program executive officer at DHMS.

Brian Scott

Assistant Director for Strategic Integration, Strategy, Policy and Plans National Protection and Programs Directorate Department of Homeland Security

Cyber collaborator. Scott was asked by the National Security Council to lead a governmentwide effort to address a high-priority cybersecurity risk to the federal supply chain. He led the group in developing strategic objectives and tactics — including legislative, policy and regulatory actions — identifying risks, creating mitigation strategies, and assigning roles and responsibilities across the federal government. The initiative also required collaborating with state and

local agencies and the private sector while keeping Congress briefed on the situation. Thanks to Scott’s efforts, the result was a well-coordinated governmentwide response to a critical cyberthreat.

Raj Shah

Managing Partner, Defense Innovation Unit Experimental Department of Defense

Determined innovator. Shah, a former Air Force pilot, was tapped to run the Defense Department’s experimental division in 2016. Under his leadership, DIUx had awarded \$184 million to fund 59 pilot projects by the end of 2017 — a nearly 500 percent jump compared to its 2016 fourth-quarter results. He also played a key role on two follow-on production contracts in the areas of artificial intelligence, human systems, IT and space. Shah is the founder of the Nanubhai Education Foundation, which provides access to higher education for financially vulnerable students in rural India. He recently decided to return to the private sector.

Matthew B. Shallbetter

Director of Security Design and Innovation Department of Health and Human Services

HHS’ silo-buster. Shallbetter earned buy-in and support from CIOs, chief information security officers and others at 12 Security Operations Centers to create the HHS Cyber Automation Program. Previously, HHS’ central SOC had zero visibility into the other operational divisions’ centers and

therefore operated with incomplete data. Shallbetter changed the culture to increase interagency collaboration, which has allowed HHS to operate in a more holistic way. HHS divisions are now able to share important data across teams in real time, resulting in more coordinated IT and cybersecurity efforts for some of the most public-facing federal agencies.

Cynthia Shelton

Senior Director for Special Program Sales CenturyLink

Network protector. The Department of Homeland Security’s Einstein system is a cornerstone of federal cybersecurity. It detects and blocks cyberattacks targeting civilian agency systems while giving DHS governmentwide situational awareness. Shelton — an Air Force Academy graduate and former intelligence officer — has been instrumental in ensuring that DHS has the resources to make Einstein as powerful as possible. Her team also worked closely with DHS officials in 2017 to deliver important new functionality for Enhanced Cybersecurity Services, a program that protects government-approved critical infrastructure entities.



Craig P. Schaefer



Brian Scott



Raj Shah



Matthew B. Shallbetter



Cynthia Shelton

Todd Simpson

CIO

Food and Drug Administration

Data wrangling at scale. Simpson recognized that the exponential growth in data at the FDA required an enterprise-level solution, especially since timely analysis could mean the difference between life and death. He led the creation of the Enterprise Business Intelligence Center of Excellence to overcome a decentralized structure that resulted in unnecessary data duplication and a lack of knowledge about how to use various tools to their fullest potential. Simpson's focus on bringing modern technology and collaborative processes to the FDA is saving time, money and effort while accelerating the adoption of new capabilities and processes.

Vincent N. Sritapan

Division Mobile Security Program Manager, Science and Technology Directorate

Department of Homeland Security

Mobile maven. Sritapan oversees projects that fortify the security posture of the mobile devices federal employees use. He was the lead author of the "Study on Mobile Device Security" report DHS delivered to Congress in 2017 to document threats and gaps in mobile device security, applications and networks. It also recommended best practices and standards. Sritapan solicited and incorporated feedback from industry, academia, the National Institute of Standards and Technology and the Defense Department to get a full picture of the risks associated with an increasingly mobile workplace.

Gary E. Stevens

*Director, Cybersecurity Strategy
Department of Veterans Affairs*

The risk terminator. Stevens oversaw unparalleled improvements in enterprisewide security at the VA in 2017, including a 98 percent reduction in prohibited software, 92 percent remediation of critical and high vulnerabilities in medical devices, and a 56 percent reduction in remediation time for critical cyber vulnerabilities across the department. He credits his diverse background for his success as a cross-agency bridge builder. "I was in the military, I worked as a consultant in the civilian world, I was a contractor, and now I'm in government," Stevens said. "Everybody is here fulfilling a certain role."

Tom Suder

*Founder and President
Advanced Technology Academic
Research Center*

Mobility mobilizer. ATARC is known for convening groups from government, academia and industry, but Suder knows events alone are not enough. "You have these great conversations...then everyone decamps and goes their separate ways," he said. To change that, the two-time Federal 100 winner set up working groups that convened weekly via telephone to make sure projects were implemented to improve government service. In all, he worked with 160 people from 75 organizations to deliver a 235-page report to the White House on improving the federal government's use of mobile technology.

Robin P. Swan

*Deputy Director,
Office of Business Transformation
Department of the Army*

Transformative visionary. Swan led development of the Army's first comprehensive business strategy, which outlines how the Army will transform to reduce costs and improve mission effectiveness. His team assessed the technical health and business value of 700 applications, resulting in specific action plans for modernizing, consolidating and eliminating systems. As a result, the Army will save hundreds of millions of dollars. Congress commended the Army for its results and requested that the Defense Department adopt the same approach at the enterprise level. In addition, Swan spearheaded the establishment of the Army's shared-services center for enterprise resource planning and Business Process Reengineering Center of Excellence.



Todd Simpson



*Vincent N.
Sritapan*



Gary E. Stevens



Tom Suder



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Kyle Tuberson

Vice President
ICF

Flu bug watcher. Tuberson brings both leadership expertise and technical and analytical skills to government challenges that demand data-driven decision-making. In 2017, he led a team that worked with the Centers for Disease Control and Prevention to develop a platform that predicts outbreaks of flu in schools by using a flow of census, news outlet and social media data to create a complete picture of where and how the disease was spreading across the country. He also advocated for the use of streaming analytics to notify school districts in real time of potential flu outbreaks — a timely application given the intensity of this winter's flu season.

David A. Vargas

Director, Human Resources Line of Business
Office of Personnel Management

Human capital hero. Vargas' 2017 achievement was actually a two-year undertaking: to establish a unified, governmentwide human capital framework. "That's never quite been defined," he said. "Every agency does it differently, everyone has their own view." Until now. Besides the Human Capital Federal Integrated Business Framework, he also helped create an employee digital record that incorporates blockchain and public/private collaboration. His policy, technology and acquisition efforts are creating a common, modernized user experience that's spreading across government. The Unified Shared Services

Management office adopted his data standardization approach to mission-support functions, and several agencies, including the Treasury Department, have adopted the human capital framework.

John P. Wagner

Deputy Executive Assistant
Commissioner, Office of Field Operations
Customs and Border Protection

Exit innovator. CBP was at a crossroads, facing the need for heightened security while the volume of international airline travelers left customs officers struggling to keep up. Wagner was instrumental in easing those bottlenecks in 2017, and his vision for the Biometric Exit program transformed the out-processing of foreign visitors. He worked with airlines, airport authorities and CBP IT leaders to develop a system for collecting biometric data while passengers are boarding a plane to depart the U.S. With no new personnel or physical infrastructure, CBP now has a solution that captures vital traveler data and requires just two seconds per passenger at the boarding gate.

Dave Wajsgras

President, Raytheon Intelligence, Information and Services
Raytheon

Protect and modernize. Last year, Wajsgras pushed his team to deliver innovations faster and worked to position Raytheon's IIS as a leader in cyber, analytics and automation. His team won the Department of Homeland Security's Development, Operations and Maintenance contract to

defend against cyberthreats targeted at the .gov domain. The program protects the networks of more than 100 federal, state and local agencies and 16 critical infrastructure sectors. In addition, Wajsgras helped sponsor the largest cyber defense competition of its kind, giving college students from across the country the opportunity to test their skills at protecting a network against cyberthreats.

James (Jim) Walker

Shared Services Portfolio Manager,
NASA Shared Services Center
NASA

Space-age shared services. Walker introduced process robotics to NASA to help drive down the cost of transactional work, increase capacity and enhance accuracy. He submitted a proposal to automate a cumbersome funds disbursement process as part of the annual NASA Innovation Kick Start Competition — going up against far sexier space-oriented innovations. That labor-intensive disbursement process requires 150-plus manual keystrokes in multiple applications across all NASA centers. Walker secured funding for his idea, proved its value on a pilot basis and now plans to begin offering "robotics as a service" to all NASA centers this year.



Kyle Tuberson



David A. Vargas



John P. Wagner



Dave Wajsgras



James (Jim)
Walker

Gary Washington

Deputy CIO and Acting CIO
Department of Agriculture

Captain Modernization. When the Office of American Innovation launched new centers of excellence dedicated to IT modernization, USDA was the first agency to sign up. In addition to being a pilot participant, Washington helped oversee a reprioritization of IT at the agency while serving as acting CIO. (He took over the post permanently earlier this year.) He said getting buy-in on IT modernization from agency leaders, including Secretary Sonny Perdue, was a major contributing factor to his success. "One of the great challenges [of modernization] is culture, getting folks to think differently about how services are delivered," Washington said.

Susan Wedge

Vice President, Public Service Digital and Cognitive Leader
IBM Services

AI evangelist. In a year when everyone seemed to be talking about blockchain and artificial intelligence, Wedge set out to make government applications a reality. Under her leadership, IBM opened a digital studio space that gives federal partners access to the tools and expertise that are driving digital reinvention for private-sector innovators. Similar transformation in government requires a tailored approach, and Wedge was instrumental in identifying and providing the

needed adjustments. She also collaborated with multiple agencies to launch blockchain pilot projects and helped shift the conversation about cognitive computing from sci-fi speculation to practical use cases.

Dorsy Yoffie

Deputy Director,
Unified Shared Services Management
General Services Administration

Government whisperer. Yoffie has been able to bring federal agencies with different goals and incentives into the growing group of shared-services enthusiasts. She became the second employee at USSM during the waning days of the Obama administration and held steady to her commitment to shared services, which the Trump administration has emphasized. She has been instrumental in developing the Federal Integrated Business Framework, which will allow the government to identify and capitalize on common business needs across agencies that cloud-based solutions can address more effectively than the existing siloed approach.

Aleksandar Zelenovic

Strategy and Consulting Lead, Public Sector
Sapient Consulting

Blockchain boundary breaker. Zelenovic led Sapient's collaboration with the General Services Administration to implement the first blockchain project for a procurement activity in the world — in either the government or commercial sector. As a result, GSA was able to automate many previously manual functions for

its IT Schedule 70 contract vehicle, cutting cycle times from 110 days to just a few days. It is also expected to reduce legacy maintenance costs by 90 percent. And in keeping with the overall agile development mission, Zelenovic's team designed, developed and tested a workable model in only eight weeks before its implementation at GSA.

Bill Zielinski

Deputy Assistant Commissioner,
IT Category, Federal Acquisition Service
General Services Administration

Categorically fearless. Zielinski had the daunting job of setting the strategy for the \$54 billion federal agencies spend on IT in GSA's six buying categories. He also worked with key White House offices to link the Trump administration's IT modernization and cybersecurity initiatives with acquisition strategies and goals. He was a major contributor to the IT Modernization Plan and developed small-agency network and security opportunities identified in the plan. At the same time, he led program development efforts for major GSA contracts, including Enterprise Infrastructure Solutions, Alliant 2 and Veterans Technology Services.



Gary Washington



Susan Wedge



Dorsy Yoffie



Aleksandar Zelenovic



Bill Zielinski

Modernizing with the citizen in mind

Agencies are rising to the challenge of providing a satisfying user experience despite the roadblocks to innovation

FCW gathered a group of federal leaders on Feb. 28 to discuss whether and how agencies are making progress on citizen engagement. Perhaps not surprisingly, participants said the key to providing better services is often not technology but people. Agencies need visionary leaders and employees who are empowered to try new approaches to serving a public that increasingly demands the sort of seamless customer experience they get from commercial online services.

In the course of the conversation, participants also discussed the creative ways they are finding around obstacles, including cultural resistance. And though agencies differ in their level of engagement with the general public, all agreed that improving the way they provide services is absolutely essential.

The discussion was on the record but not for individual attribution (see Page 58 for a list of participants), and the quotes have been edited for length and clarity. Here's what the group had to say.

The operational benefits of engagement

"In my experience, there has been a real appetite to optimize, but we have separated the operational and programmatic backbone from the engagement side," one executive said. "We're doing optimization, but we're not doing synergy. The challenge arises when you have people who are driven by one of those imperatives or the other. As an example, we made a very critical operational programmatic platform that was open to the world, so it's certainly engaging, it's certainly telling our story, but it's also advancing our operations and limiting the administrative load."

Another participant agreed that the two activities go hand in hand. "We're pushing to have human-centric design involved in our IT modernization efforts to ensure that we're solving the right problem for the right users at the right point in their journey. Then we'll see the operational benefits as well."

One of their colleagues cited dramatic growth in product management as an encouraging sign that agencies are making progress on citizen engagement. "18F and the Digital Services Playbook are industry best practices for finding the right product for the right user at the right time. It

takes a lot of work to get there in the government, but I've seen exponential growth in just one year of people wanting to do that and trying to do that and asking for help."

But others shared their frustration with some familiar obstacles. "I feel like there's so much inertia in government generally, and then when you go into the world of IT, there's even more inertia," a participant said. "People will say, 'We do focus on the user.' And the answer that we've given is, 'We're going to go out and actually talk to them. We're going to stand behind them and watch how they interact with our tools. We're going to record it, and we're going to go back and review it.' If you've gotten the buy-in to accept that what the user is saying is valid, the tech piece is easy."

A number of participants said the Paperwork Reduction Act stymies their efforts to gather feedback from the public. "We try to work with organizations outside the federal government that may have data because, due to PRA, we can't actually ask our customers whether or not they like what we're doing or if it's useful to them," one executive said. "We are severely hampered in what data we can gather."

GameChanger

GAME CHANGING TECHNOLOGY TO MEET AGENCY MISSIONS

REGULATION OVERLOAD

With new and evolving federal mandates, maintaining compliance is a major challenge.

FISMA. FIPS 140-2. FedRAMP. Cloud First. Every year, it seems federal agencies are being asked to comply with more IT-related regulations. While these mandates are critical for smooth, safe, cost-effective government operations, they also can be confusing.

Yet noncompliance isn't an option. Not only does it result in sanctions against agencies, but avoiding compliance can expose sensitive data to serious risks, disrupt services, and even lead to financial loss. There's no doubt achieving and maintaining compliance is a complex process, at best. Determining which mandates are critical, which requirements overlap,

and how to enforce and maintain compliance is a constant struggle.

Other concerns include lack of personnel, time, and budget. Agencies don't often have qualified personnel who can both understand the requirements and thoroughly implement them. Many turn to external consultants to help, which can add costs and an additional level of management complexity.

Time is another inhibiting factor. In the past, updates to hardware, firmware, and software were released a few times per year. Today, updates are released almost weekly. Every update must not only be implemented, but first

verified for compliance with applicable regulations. And typically, agencies don't have a budget line item allocated for compliance. It's up to agencies to carve one out from an existing IT budget—often the maintenance budget—to ensure compliance.

Achieving and maintaining compliance takes much focus, knowledge, time, and hard work. Experts suggest the best way to reach these goals is by automating as much of the process as possible. With the right technology, agencies can automate controls, testing, and schedule compliance scans that will flag issues requiring eventual remediation.

FEDERAL MANDATES AND WHAT THEY MEAN

A partial list of the most widespread federal regulations	What is it?	Who needs to comply?	Major compliance challenges
FISMA	Requires information security controls using a risk-based approach	All federal agencies, state agencies that administer federal programs, and private firms that support federal programs, sell services to the federal government, or receive federal grant money	Layer 2 network discovery, collection and mapping of devices to services/applications, device classification, inventory maintenance, and proper security controls
FEDRAMP	A standardized approach to security assessment, authorization and continuous monitoring for cloud products and services	Federal cloud deployments and service models at the low and moderate risk impact levels	Complete system inventory, effective vulnerability testing, accurate system boundary definitions
FITARA	Agency CIOs control IT investments; agencies must provide OMB with a comprehensive inventory of data centers	Noncompliant processes, improper delegations, improper approval processes, undocumented approvals	Gaps in budget formulation, execution, acquisition and workforce
FIPS 140-2	Required for procurement of IT systems for the federal government	Federal agencies, g contractors, and state/local government projects spending federal money	Use only FIPS approved/NIST recommended crypto algorithms; Crypto must be implemented in a NIST validated crypto module
Common Criteria	Security products that have met this certification are eligible for purchase by federal agencies	Federal agencies and select state/local agencies	N/A
President's Cybersecurity Mandate	Requires federal agencies to implement NIST's Cybersecurity Framework (NIST 800-53)	Federal agencies and select state/local agencies	The relatively vague nature of the wording leaves the details of implementation to individual agencies
Cloud First	Embrace cloud first, before resorting to other options	Federal agencies and select state/local agencies	Budget/justifying ROI, security concerns

THE ROAD TO THE CLOUD REMAINS BUMPY

Conflicting requirements can muddy the waters, but cloud migration is still a priority.

Despite a federal policy requiring agencies to move some services to the cloud and adopt more cloud services over time, no federal agency has met the goal of moving 15 percent of their infrastructure to the cloud, according to the Federal CIO Council. That same report also found FedRAMP has not accelerated the adoption of new cloud services as expected.

The reasons no agency has met the “Cloud First” requirements—part of the U.S. CIO’s 25-point action plan to improve government’s acquisition and use of IT assets—are complex. They include budget and return-on-investment concerns, worries about security, and the sheer complexity of compliance.

Lingering security issues remain a major concern for agencies, even though there has been significant progress on that front. Cloud service providers now must become certified through Federal Risk Authorization Management Program (FedRAMP), a framework for ensuring security and enforcing policy. Yet agencies still worry about security. They conduct their own security assessments for potential cloud providers. After implementation, it’s also up to agencies to monitor the security of their own applications and data in the cloud.

Compliance with the Cloud First directive can be tricky because of other regulations agencies also must follow. Mandates like FISMA and FITARA, for example, have some requirements that make cloud adoption more difficult, such as spending and oversight rules.

For all of these reasons, cloud adoption continues to proceed at a slower-than-expected pace. According

to a recent survey from Grant Thornton and PSC, one-third of federal CIOs interviewed said their agencies have moved to the cloud in some capacity, but only 5 percent are satisfied with their progress.

That same survey found moving to the cloud is one of the top priorities for federal CIOs. That makes sense. The benefits of moving workloads to the cloud are clear. They include greater flexibility and scalability, and the pay-as-you-go model helps agencies move more spending from capital expenditures to operational expenditures. Most importantly, the elasticity and vast capacity of the cloud helps agencies use critical technologies like big data analytics, which go a long way toward improving government agency efficiency.

The push for more cloud-enabled services in government isn’t going away any time soon. In fact, it’s getting even stronger. The White House, for example, is insisting federal agencies adopt more cloud services during 2018. Some requirements include modernizing the Trusted Internet Connections (TIC)

and National Cybersecurity Protection System (NCPS) programs, improving contract vehicles to help agencies acquire commercial cloud products that meet government standards, accelerate adoption of cloud e-mail and collaboration tools, and bolster security shared services.

There is help for agencies needing additional funds or motivation. The new Modernizing Government Technology (MGT) Act makes money available for agencies to jumpstart their cloud adoption programs. The Cloud Center for Excellence, a new interagency working group, is developing best practices to help agencies move forward more quickly with adopting cloud technologies. It also has developed the Cloud Adoption Survival, Tips, Lessons Learned and Experiences (CASTLE) guide to help agencies plan for cloud services. And finally, FedRAMP’s Agency Authorization Playbook, designed to help agencies move to the cloud, is an invaluable resource. It outlines each step of the process and provides many links and templates to help agencies succeed.



THE CHALLENGE OF CONTINUOUS COMPLIANCE

Cutting edge technologies help government agencies stay ahead of compliance.

Agencies are doing a lot these days to increase efficiency and productivity, save money, improve citizen services, and boost reliability and security. Achieving these goals means adopting modern methods and technologies, such as virtualization, cloud computing, and containers.

Virtualization, for example, saves space and provides the flexibility to simultaneously run several, potentially different, operating systems on the same hardware. This lets IT staff test new configurations and systems quickly without using all available resources. It can also help streamline policy enforcement.

Cloud computing is another government agency game changer. The benefits of moving workloads to the cloud are well known. They include elastic scalability, flexibility, always-on availability, and frequently better security than local servers. Using cloud resources can also help enforce regulatory compliance, because cloud hosting providers working with the government must comply with strict security requirements and processes. Cloud Service Providers also have more skilled personnel to meet their 24x7x365 SLAs.

Containerization takes efficiency and independence a step further. This technology essentially puts an entire run-time environment — applications, libraries, configuration files, and even the operating system — into a container within a cloud environment. Virtualization gives independence from specific hardware versions, and containers give independence from specific versions of operating systems. Developers can test applications quickly. Containers can be spun up almost instantly and be split into modules or micro-services.

While these are transformational technologies, they can also present challenges when it comes to meeting requirements like NIST SP 800-53 rev 4, NIST SP 800-171, FedRAMP, FISMA, PCI-DSS, HIPAA, and CJIS. Many of these technologies aren't fully compliant out of the box, or may fall out of compliance over time as systems are patched and upgraded.

One example is NIST SP 800-53 rev 4. Virtualization may support some of the mandate's controls, but falls short on complying with others without some sort of remediation. In the case of AC02 (Account Management) for example, a virtualization platform typically supports only single factor authentication. The regulation requires multifactor authentication. A virtualization platform, by default, only allows root account sharing and default passwords, and defaults to administrative privileges for all operations. AC02 prohibits default passwords and full admin privileges, instead requiring limited access privileges based on intended system use.

The goal, says Hemma Prafullchandra, CTO of HyTrust, is to find a way to ensure all systems work well together while remaining compliant. "It's about automating as much as possible, taking advantage of built-in APIs, leveraging insights from existing security tools, and making sure everything works across all technologies in the environment, all while ensuring consistency and continuous compliance," she says.

The best way to achieve these goals is to rely on a single solution that can achieve and maintain applicable controls and compliance requirements. HyTrust's cloud security policy framework (CloudSPF)

ensure workloads (virtual machines and containers) in the private, hybrid and public cloud, remain consistently compliant. It does this by continuously monitoring and enforcing security processes that bridge gaps between the technology itself and regulatory requirements. It can also conduct initial discovery of compliance sensitive data, which must be continually monitored to ensure all controls are appropriately applied.

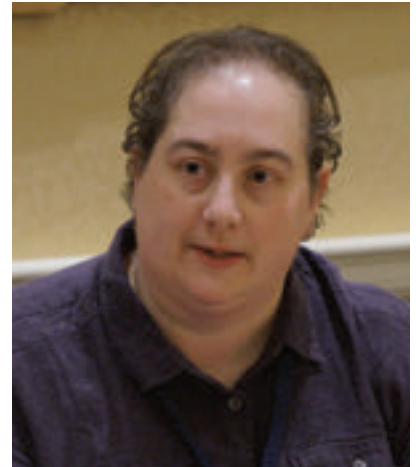
Agencies can be confident their virtualized and/or containerized workloads will remain compliant with automated enforcement of:

- Least privilege access and separation of duties for all administrative changes, including secondary approvals,
- Customized configuration hardening on a pre-defined schedule of cloud infrastructure and workloads,
- Tightly defined boundaries of where the workloads can operate,
- Prevention of unauthorized creation and replication of the workloads, and
- Encryption and Decryption of the workloads at-rest.

HyTrust's solutions gives agencies the flexibility to achieve compliance during their transformational journey. "It's all about continuous visibility and automated enforcement of security controls, which is the best way, by far, to maintain compliance," says Prafullchandra.



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Another agreed that the legislation “is a pain point. We’re being expected to navigate it at the same time we’re getting pressure to engage citizens.”

However, one of their colleagues pointed out that there might be a good reason for the limitation. “Could it be to avoid overlapping customers? You come into a world where every single person wants to get feedback on every single thing. It gets to the point where you say, ‘Stop asking me about it.’”

“We should work on that, but it shouldn’t stop us,” another participant said. “We also think for any given tool, once we get to five people in user testing, we keep hearing the same things over and over. Do we need a survey of a thousand respondents? Not really. We just call people on the phone.”

Honoring the (legacy) pioneers

One executive offered some insight into the path to better citizen engagement. “I think the way we got here

informs how we get out of it. We got here in part because we haven’t been able to make trade-offs or prioritize as a government. And part of it is that you have 172 task-based applications that were built because you have one person who had a particular need and didn’t have any incentive to work with other parts of the organization. And then the next person who had a very similar need bought something and so on. And of course, everyone said, ‘We’re all very different so we can’t possibly coordinate.’”

Fortunately, the executive added, “user-centric design and a product mindset can help you get past your organizational barriers and remember why we’re here in the first place — which is to do a thing that benefits people. Suddenly, the approach changes, and people say, ‘Yeah, it is stupid that we have three things that do exactly the same job. Maybe we should just have one thing that does

that job really well.’”

A number of participants agreed that agencies need to be mindful of how they ended up with the systems they have now — and the people involved.

“Part of what we’re dealing with when we talk about legacy systems is the pioneers of the past,” one executive said. “In some ways, you have a coalition of the willing who have proven their capacity to do this before. Whether they did it right or effectively may be up for debate, but I think we have to be very careful of the narrative if we really want to do things that are going to stick.”

Others cautioned against focusing too much on any of the individual players. While the honor-the-pioneers idea has merit, one said, “we have to change structures and we have to change expectations. We have to change how we approach our budgeting internally. We have to change



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Software Enables Innovation

By creating a Modern Software Factory within their IT department, agencies can make the most of what they have while innovating and modernizing.



Bruce Triner

Vice President, Federal

CA Technologies

A **s** **p** **o** **l** **i** **c** **y** **m** **a** **k** **e** **r** **s** in Washington continue to debate information technology strategy, IT professionals in federal agencies need to be ready to put it all into place to better serve the agency's objectives and the public interest. After all, public policy on technology is really about having the tools to deliver on IT priorities, turning ideas into results, and making abstract concepts a reality. This often means innovating at record speeds; but not necessarily with record funding.

The government IT community must hone its ability to anticipate change, innovate quickly, and focus on the end-user. As a result, agencies need to look at ways to use what they have in new ways—and the most important thing they have is information. The trick is to leverage the right tools to make the most of that information.

One way to do that is by adopting elements of what CA Technologies calls the Modern Software Factory. People drive

innovation: The federal IT professionals and the information technology community that supports them. Today, this innovation is both accelerated and greatly enhanced by building a modern software factory within their enterprise.

There are four key components to the Modern Software

Factory. The first is agility, or the ability to make use of agile approaches at scale. After all, the government has a customer base of 350 million people (domestically). That means not only adding agility to processes, but also having a platform that is transformative. This can help drive a cultural shift from the

Four Aspects of a Modern Software Factory

- **Agility:** Forgo the waterfall approach for one that is more flexible and enables failure and fixes throughout the process, not after deployment.
- **Automation:** Make task completion repeatable and rapid to free resources and unclog bottlenecks.
- **Maximize application performance and insight:** Monitor continuously to ensure decisions and technical changes can be made on-the-fly with real data.
- **Security:** Build security into applications from the start to protect both your agency and its customers.

notion of “build to last” and toward “build to change.”

Another element is automation. Rapid, repeatable task completion saves time and money and accelerates the desired results. Agencies become more agile and responsive if they can incorporate elements of today’s workforce into the development process as they build out applications and conduct performance and systems tests, in preparation of delivering a solution to the ultimate user community.

The third component is maximizing application performance and insight. This involves continuous monitoring to ensure you can make decisions and technical changes at a moment’s notice and with real information.

The fourth component is security. One doesn’t need to look any further than news reports about the latest breaches to know that security has to be a priority. Still, 68 percent of developers say they would put something new into production ahead of testing security. The Modern Software Factory incorporates security into the development process so this decision never has to be made by developers. Security is at the core of this process.

Clearly, building a Modern Software Factory takes work. Generally speaking, people don’t like change. It can damage the ego, or even hurt morale, especially when some find they are less in demand. Some may have to take time to learn new skills. Finally, risk always looms large when a new technology goes into production at scale.

“To meet missions and mandates, the entire ecosystem of government IT must rethink and refashion how government designs, builds, and delivers experiences for people.”

So what do agencies stand to gain? With the Modern Software Factory approach, they can expect to see:

- Enhanced trust. As citizen engagement and confidence in government systems grow, so too will adoption.
- Better value and user experiences which provide real fiscal savings now.
- Digital experiences that are on par with how citizens interact with the private sector.
- Speed, which is a necessity in the Digital Age.
- Reliability because services will always be available via any channel through which users seek to engage.

Implementing a Modern Software Factory clearly requires a change in thinking. It takes time to take root, but the goals are to shift toward agility, automation, and security while putting user experience

first and bringing customers into the testing phases. Like the laws government passes, the systems and applications it builds have historically been built to last. Agencies need to think in terms of “built-to-change,” where IT is at the center and branches off to cultivate a shift in internal culture, evolving business processes and tools, and technologies that enable both. To meet missions and mandates, the entire ecosystem of government IT must rethink and refashion how government designs, builds, and delivers experiences for people.

At the heart of this is information—the new currency. The Modern Software Factory can help agencies make the most of their information assets to glean actionable and highly valued information. And that’s crucial because the information you collect today will inform the systems you build in the future.



Take a tour of CA Technologies’ Modern Factory here: <https://www.ca.com/us/software-factory/tour.html>



how we do our projects. We have to rethink how we do our acquisitions to support these outcomes. There are a lot of structural things that have caused people to bang their heads on the table. And I worry that if we're not honest with ourselves to say, 'Hero or not, the structure needs some change, we need to move in a different direction,' we're setting ourselves and them up for failure."

Another executive noted that agencies often don't have a clear-cut incentive to enhance their services. "One of the structural barriers to improvement in government is the fact that, for a lot of services, we are a monopoly. We are the only people who do this thing, so if you want to use it, you've got to jump through whatever crazy hoops we come up with. It's very hard to measure and explain the value of changing it. It's not an immediate one-to-one improvement. It's a much longer tail in terms of seeing how the value of your investment plays out."

A colleague agreed, saying: "You're right, we are a monopoly. But what if you weren't? I think one of the things that we don't ask ourselves enough is: If this was privatized or if a competitor was allowed to enter the market, what would make you different?"

One executive said there is another way to frame the discussion. "In terms of investment, we started talking about the cost of doing nothing. What is this legacy system costing you? We'll put together an end-to-end map that shows our customer journey across the organizational silos. We won't show who's responsible for what, but we'll say customers had a really poor experience trying to do this in their journey."

"We haven't been shy about telling our entire leadership team, 'A customer once said working with [our agency] is like working in Dante's Inferno,'" the executive continued. "Everybody in the agency can see this quote. What are we going to do about this?"

Likewise, another participant said, "most people will respond to something that is data-driven or puts a human face on it."

The need for 'audacious' leaders

The group discussed the pressure to adapt to the kind of services and user experience that Amazon and Apple offer, but one participant pointed out that "both of the companies we just mentioned have incredible clarity from the top about the fact that their business model is X."

The government, by comparison, can struggle to find that mission clarity. "It's really interesting to step back and say, 'Today, what business can I be in that is actually useful in a value proposition versus what I've been doing?'" the executive said. "That's a really scary question because I can look at a lot of our work and say, 'I'm not sure we should be doing that anymore.'"

That's why the cultural aspects of change cannot be overlooked, the participant added. "When you're trying to change structure, you're telling someone they're irrelevant or that they need to shift or whatever. The question is: Do we have commanders, if you will — in whatever shape that takes — who are audacious enough to say, 'We've been in this business. We have an amazing history, but the business we need to be in now to be relevant is X?'"

One agency representative explained how a user-centric focus can spread through an organization. "Our innovation design group started to creep into the territory of our policy shop and started to think, 'Hey, you're really talking about how we do business.' And the family got bigger because the policy shop realized, 'If we integrate this into our learning

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and programming structure, then we add our relevance to it.”

Then the procurement and legal teams got involved, “and now they function as a family, which is really critical because they validate that this is legal, this is safe, and you should do it.”

“You do good work, and good work then leads to more good work, and success builds on success,” one executive said. “We have to do a lot of carrots because we don’t really have sticks. And if you can’t hire a village of people, you can always empower the people you have.”

Another participant agreed, saying, “There are people in the trenches who are hungry to do the right thing. For any of it to work, you fundamentally have to have empowered people and have them pointed in the right direction.” ■



FCW
PERSPECTIVES

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Note: FCW Editor-in-Chief Troy K. Schneider led the roundtable discussion. The Feb. 28 gathering was underwritten by General Dynamics IT, but both the substance of the discussion and the recap on these pages are strictly editorial products. Neither General Dynamics IT nor any of the roundtable participants had input beyond their Feb. 28 comments.

GENERAL DYNAMICS
Information Technology

GameChanger

GAME CHANGING TECHNOLOGY TO MEET AGENCY MISSIONS

BRING FEDERAL IT INTO THE 21ST CENTURY

IT modernization efforts hinge on replacing legacy systems and moving workloads to the cloud.

It's no secret that legacy IT systems are hampering the efforts of federal agencies to move ahead with 21st century technologies. Older IT systems—some as old as 50 years, according to GAO—compromise security, waste money, and impede progress. According to a recent report from the CIO Council, aging infrastructure is considered a major roadblock to innovation and significant obstacle to meeting citizen and employee expectation.

Over the past decade, there have been numerous initiatives and mandates encouraging agencies to modernize IT infrastructures, such as the Data Center Optimization Initiative (DCOI) and the Federal Information Technology Acquisition Reform Act (FITARA). While there has been notable progress, lack of funding is the primary factor holding agencies back from moving full-speed ahead.

Federal lawmakers think they have finally gotten it right with the Modernizing Government Technology Act of 2017, signed into law in December. The MGT Act makes \$500 million available to support IT modernization throughout the federal government.

“By incentivizing the transition to modern technology, we will allow the government to harness cutting-edge technologies, use each dollar more efficiently, strengthen our digital infrastructure and improve government services for everyone,” says Rep. Will Hurd (R-Texas) in a statement. Hurd chairs the IT subcommittee of the House Oversight and Government Reform Committee and was instrumental in helping pass this bill.

The law will place many positive changes within reach. Agencies can use the funds to improve, retire, or replace existing IT systems; saving money and increasing efficiency. Agencies also can use the new funding for modern cybersecurity solutions to improve security.

In a way, eliminating legacy IT and improving cybersecurity go hand-in-hand, since older systems don't often work with modern security solutions. One study, “Security Breaches in the U.S. Federal Government,” found agencies that transition to newer technologies reduce exposure to security breaches by five percent for every one percentage point they invest in modernizing infrastructure.

Agencies also can use the funding to transition legacy IT systems to the cloud or shared services. This could make a real difference in the number

of agencies that adopt more cloud services, instead of remaining on the fence. Moving to the cloud also helps agencies consolidate data centers.

The money will also help agencies modernize networks. This is a critical step to enabling adoption of significant modern technologies and applications, from Internet of Things (IoT) and big data analytics to artificial intelligence and ubiquitous mobility. IoT technology in the form of internet-connected sensors are clearly part of the future of government. Federal agencies have already started using IoT, helping track and manage everything from data centers and lighting to inventory and vehicle diagnostics.

With these changes, agencies can improve service delivery, foster process innovation, and ultimately save billions in taxpayer dollars.



THE MGT ACT IN A NUTSHELL

Here's a quick look at some of the key tenets of the MGT Act:

- **Improve, retire, or replace** existing IT systems to enhance cybersecurity and improve efficiency and effectiveness
- **Transition legacy IT systems** to cloud computing and other innovative platforms and technologies
- **Support efforts** to provide adequate, risk-based, and cost-effective IT capabilities to address evolving threats to information security

GameChanger

GAME CHANGING TECHNOLOGY TO MEET AGENCY MISSIONS

FROM LEGACY IT TO THE CLOUD

Moving more functions to the cloud conveys many benefits, like agility, collaboration, and cost-savings.

The recently passed Modernizing Government Technology (MGT) Act gives agencies the motivation and funding to modernize their IT infrastructures in ways that will help them take advantage of 21st century technologies and processes. Two of the most important ways agencies can do this is by replacing legacy systems and moving more applications, infrastructure, and development to the cloud.

According to the Government Accountability Office (GAO), the federal government has 28 systems that are at least 25 years old. Some are nearly 50 years old. These systems are often still critical to helping agencies fulfill mission requirements, however they are also inefficient, expensive, and time-consuming to maintain and upgrade. They are also far less secure than systems developed with newer technology.

Legacy systems often can't support modern functionality required to run the government more efficiently, such as digital citizen services, real-time information access and mobile connectivity, and app development and support.

Besides these liabilities, legacy technology is expensive. The federal government spends \$80 billion each year on IT systems, 80 percent of which is spent maintaining outdated, legacy systems, according to Information Technology Subcommittee Chairman Will Hurd (R-Tex.).

With the funds provided by the MGT Act, agencies can take concrete steps forward. The first step is conducting a full evaluation of each legacy system to determine which are best suited for replacement and which can be

modernized. Both have value, but some systems are better for one particular approach. It might make more sense to retrofit an existing system with modern capabilities, for example, when the core functionality would be difficult or impossible to replace. This approach also helps agencies phase in new functionality at a gradual pace. On the other side of this approach, when business processes have become more interactive or modern processes like data analytics have become important, it makes sense to replace systems outright.

Whether legacy systems are retrofitted or replaced, the cloud is often the most

maintaining on-premises infrastructure, agencies can take advantage of infrastructure in the cloud. This eliminates the need to maintain, update, and refresh servers and storage in house. Porting applications to the cloud, such as ERP systems and office suites, reduces the need for agency staff to troubleshoot. Finally, agencies can even take advantage of cloud-based platforms for testing and development.

Taking greater advantage of the cloud provides significant cost savings and increased productivity, along with less involvement of agency IT staff. Cloud adoption also streamlines deployments

NEARLY ALL AGENCIES HAVE AT LEAST SOME CLOUD-ENABLED APPLICATIONS OR INFRASTRUCTURE IN PLACE TODAY.

logical landing place. While the federal government has long urged agencies to take greater advantage of the cloud, a report by the CIO Council found that no agency has met the goal of moving 15 percent of infrastructure to the cloud. That same report also found FedRAMP has not accelerated new cloud service adoption, as was expected. There are many reasons for the slower-than-anticipated cloud adoption; including resistance to change, security concerns, and lack of funding.

Nearly all agencies have at least some cloud-enabled applications or infrastructure in place today. Many would like to port more functions to the cloud. The primary benefits of the cloud are clear: instead of owning and

and helps users remotely and securely access applications, infrastructure, and platforms. This increases productivity and encourages collaboration.

When approached in concert, reducing reliance on legacy systems and moving more functions to the cloud can help agencies reach their larger long-term goals. These sweeping goals of modernization efforts include increasing automation, agility, and interoperability; improving citizen service; facilitating greater degrees of collaboration and shared services; introducing capabilities like predictive analytics and internet-based sensors; and helping government agencies adopt and make the best use of modern technologies and processes.



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GAME CHANGING TECHNOLOGY TO MEET AGENCY MISSIONS

ADOPTING CLOUD TECHNOLOGY ON YOUR OWN TERMS

When it comes to moving to the cloud, agencies must ensure the cloud platform meets their requirements.

With the Modernizing Government Technology (MGT) Act as a catalyst, agencies are motivated to move more applications and data to cloud-based platforms. Although the funds made available through the MGT Act will ease the way, agencies know there are more hurdles to overcome in their efforts to become truly cloud-centered.

The first challenge continues to be cost. While the MGT Act provides financial resources, it requires agencies to repay the funds within three years with the savings they achieve, so any investment using MGT funds must have a near-immediate positive return on investment (ROI). The second hurdle is security, which has been a concern for agencies for years. Though cloud vendors like Amazon, Azure, and Google have robust security for their cloud offerings, it's important to ensure that all vendors are certified at the highest federal security standards to minimize entry points for would-be attackers.

Perhaps the most daunting challenges center around data mobility. Agencies must not only find a way to move data to the cloud, but also find a solution that allows them to move at their own pace. Since it's not possible to move everything to the cloud at once, agencies must first transition to a hybrid-cloud model that leverages the cloud for some services and on-premises environments for others.

"Agencies trying to protect both existing applications on-premises and newer workloads native to the cloud are finding the current tools they are using aren't prepared to handle both types of workloads," says Rolland Miller, Director of Solution Architecture

at Rubrik, a company that provides intelligent data management solutions.

The solution, he says, is finding a data management orchestrator that protects data on-premises, at the edge, and in the cloud. By bridging the gap between on-premises and cloud workloads, agencies can move workloads and services to the cloud when it makes sense—not by necessity. With these capabilities, agencies also can expect higher ROI in the form of cost avoidance. By implementing solutions that provide fast recovery times, speedy backups for applications, full cloud mobility and intuitive user interfaces, agencies

Command was searching for a way to manage data across public and private cloud environments, it chose Rubrik Cloud Data Management, a software-defined platform that unifies backup, recovery, and other data management services in a single secure fabric. That move yielded cost savings and improved service to sailors and their families who have 24/7 coverage across 500 sites without interruptions.

Security is another critical factor for the Navy. Miller recommends agencies looking for a comprehensive data management solution make security

AGENCIES MUST NOT ONLY FIND A WAY TO MOVE DATA TO THE CLOUD, BUT ALSO FIND A SOLUTION THAT ALLOWS THEM TO MOVE AT THEIR OWN PACE.

can avoid having to buy software and hardware, storage platforms from different vendors, and reduce operational resources.

Using this approach, Miller reports his company sees organizations save as much as 60 percent in lifecycle cost avoidance. With numbers like those, agencies will be able to repay the money they borrowed via the MGT Act and better support their missions.

By using a platform that provides full data mobility—on-premises, in the cloud, and in hybrid environments—agencies are now able to access the data they need for predictive analytics. Agencies can also easily spin up new applications in cloud services and attach the right data sources to those applications quickly and securely.

When the U.S. Navy Installations

a top priority by ensuring that federal security standards are met. Rubrik, for example, is certified for FIPS 140-2 Level 2 for both data at rest and data in motion. It also meets Common Criteria EAL2, the DoD's Unified Capabilities Approved Products List (UC APL), and the Navy's DADMS. The combination of a vendor having specific certifications and the ability to move and protect data on premises, at the edge, and in the cloud is the right choice for federal agencies.



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New IT firms find common ground

Some nontraditional IT companies are banding together to change the federal marketplace through collaboration and mutual support

BY STEVE KELMAN

I have written frequently on FCW.com about new, nontraditional IT vendors in the federal marketplace and how they are delivering services in a different way from traditional contractors. It's a sign of the growing presence of such contractors in the federal IT ecosystem that last summer a number of them, with no fanfare, created a sort of support group to help one another in the federal marketplace.

The group originally used the non-descript moniker Community of Practice but recently changed its name to the notably more ambitious Digital Services Coalition. The coalition has 56 individual members from 20 firms. About half of them have at least one federal contract; most of the rest serve state and local customers, and a few are still exclusively commercial but trying to enter the government marketplace.

The Digital Services Coalition is the brainchild of Robert Rasmussen, CEO of a small IT firm called Agile Six Applications. The "agile" references agile IT development, while "six" is a nod to military jargon for watching a comrade's back. (Rasmussen is a Navy vet, and "I've got your six" refers to one's 6:00 position, the blind spot directly behind.)

After leaving the Navy, Rasmussen

worked for a series of government contractors, but then his cousin sold a business he had started, which gave the two of them a few years' income cushion to try something new. "Read-



Some vendors approach social events with a hope that a competitor will drink a bit too much and reveal company secrets.

ing the Digital Services Playbook," Rasmussen told me, "I was inspired to become part of that new market." The result was Agile Six.

Rasmussen got advice from people

at the U.S. Digital Service and connected with a contracting officer at the Centers for Medicare and Medicaid Services who was interested in discovering new, nontraditional IT contractors. Agile Six won its first job there.

A different cultural mindset

The Digital Services Coalition's members believe in delivering IT in a new way and also believe in having their companies interact with one another in a more collaborative way than traditional IT contractors typically "network."

Such contractors frequently team or engage in formal collaboration to win business, but the mindset tends to include a very large dose of wariness about other firms in the space. Most have heard stories of company representatives who come to government-sponsored industry days hoping a competitor will reveal information of competitive value. Vendors often discuss how to "ghost" a competitor's proposal to uncover weaknesses they can discuss in their own bid, almost always by indirection, to discredit the competitor's proposal in the eyes of the customer agency.

And vendors often approach after-hours social events with a secret hope that someone, perhaps having drunk a

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The CGI logo is displayed in a bold, red, sans-serif font. The letters 'C', 'G', and 'I' are connected and have a thick, blocky appearance. The background of the entire page is a photograph of the United States Capitol building, showing its iconic dome and classical columns, with an American flag flying on a tall pole in the foreground. The sky is a clear, bright blue with some light clouds.

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bit too much, will reveal information the listener can exploit for competitive advantage.

“In the traditional space,” Rasmussen said, “people are bartering information, stealing and using information, or hoarding information. ‘Capture management’ has a hostile ring. The [business development] culture is cannibalistic.”

The Digital Services Coalition is based on a very different cultural mindset — one that believes new firms in the government IT space should cooperate more than compete and create an environment in which, in Rasmussen’s words, “other member firms have your back, so you don’t need to be so careful about watching your back.” They seek information sharing, not information hoarding.

Coalition membership is by invitation only; members are either people Rasmussen knows and trusts or people who have been recommended by an existing member.

The criteria for membership are an innovative ethos (“question the status quo”) and public advocacy for the principles in the USDS playbook. The animating idea is to have a group of people who really trust one another. “We need to protect hatchlings from the sharks,” Rasmussen said.

Many of Agile Six’s current partners are not in the Digital Services Coalition, he added. “They are cautious. They’ve gotten the same advice from other firms in the Beltway. But that’s not the future I want to build.”

Information sharing, not hoarding

The element of information sharing that is closest to interactions among traditional contractors — and probably the most important collaborative work the coalition members do — is using the organization to locate possible teaming partners. The main difference is that this approach saves on the costs of partnering. The coalition provides a pre-vetted group of contractors with

similar values, which is a more efficient way to identify partners.

Rasmussen also has a fascinating take on prime/sub relationships. “We aim to team with partners (as subs or primes) that understand our values and respect the role of autonomy and agility,” he said. “A prime does not need to be a controlling influence in a technical project. Sometimes a sub brings the real talent, in which case a prime needs to trust that and let them lead from the backseat.”

There’s more to this group than just helping with teaming, however. The aim is for members to share information and insights that might help other firms in dealing with the government market.

Having people willing to help in this way is harder, and hence less common, than connecting as possible teaming partners. Members did offer examples of such sharing, however.

“We had one of the members who mentioned they were trying to reimagine their capabilities deck and asked if anyone was willing to share what they have for inspiration,” one coalition participant told me. “We along with at least one other firm responded and passed along our working copy.”

Another member said: “Every year, veteran-owned small businesses are invited to the National Veterans Small Business Engagement conference. My first two years, I didn’t know anyone and had no idea how to start. This year, as a prime contractor, we knew hundreds of people, and dozens of firms sought us out. We were able to share that exposure with a member who knew nobody and make sure they shared our access. I asked my senior vice president to make sure this company got invited to all the important social events and introduced to key government folks.”

‘Plenty of work to go around’

Why are members willing to do this? One reason is that they believe bring-

ing more nontraditional IT contractors into the government ecosystem helps all of them. Some of them also remember that their companies have a mission to help the government, and one way to contribute is to help new entrants.

One member CEO told me his company “has a passion for solving civic issues by providing better tech. Yes, we’ll compete on some engagements, but...we want the ‘good guys’ to all win, and there is plenty of work to go around.”

Members note that sharing has its limits, however. Proprietary information must be protected, and there is the risk of free riding — gaining the benefits of collaboration but not contributing to the effort.

That will be the challenge for the Digital Services Coalition. If free riding spreads, the win-win collaborations could continue, but the mutual assistance might wither away. I suggested to Rasmussen that one way his group might avoid that situation would be for members to have a way to recognize others who have given useful advice — an approach often used to help maintain communities of practice in companies and government agencies.

“At this point, 5 percent or less of government is looking at us,” Rasmussen said, “but it’s growing and it’s the future. That’s why the bigs are interested in us.”

The existence of the Digital Services Coalition is a sign of success for the new nontraditional vendors, but as those companies grow, Rasmussen doesn’t want them to lose their souls. ■

Steve Kelman is a professor of public management at Harvard University’s Kennedy School of Government and former administrator of the Office of Federal Procurement Policy. His blog can be found at fcw.com/thelectern.

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SEWP V HITS ITS STRIDE

Building on its solid foundation, this contract vehicle continues to improve.

TWO YEARS INTO the latest iteration of the venerable federal technology acquisition contract, SEWP V is truly hitting its stride. The many participants are now quite familiar with the vendors, scope, ordering, and buying processes and other changes in the contract. What's probably surprised most of them is the ambition that still pervades the now 25-year-old Government-Wide Acquisition Contract (GWAC) procurement vehicle.

Awarded in May 2015, the 10-year, \$30 billion SEWP V (Solutions for Enterprise-Wide Procurement fifth iteration) contract still focuses on selling fundamental IT products such as desktop computers, servers, and peripheral equipment. It also includes tablets, networking equipment, and more importantly, security solutions.

However, SEWP V also increasingly provides for the services agencies need to set up, configure, and integrate those products into their current infrastructure.

Product-based services such as maintenance, warranty, product training, site planning, installation and initial implementation and product-based engineering services are all available as part of the scope of SEWP V. They can also be delivered on their own; not as part of any product purchase.

"Product-based solutions are certainly within the scope of SEWP V," says Carroll Genovese, SEWP program manager for CDW•G. "As a Value-Added IT Solutions provider we often provide those kinds of solutions and services for our customer."



With SEWP's history as a products contract, the services part of SEWP V is not as well known. SEWP has added even more services into the new contract, says Joanne Woytek, the NASA SEWP program manager, but it's taken a while to get that message over to users. "It has taken a couple of years to educate customers on being able to obtain product-based services — and not just products — through SEWP," she says.

SO FAR, SO GOOD

So far, SEWP V shows all the signs of being a roaring success. In FY2016, it booked \$3.1 billion from some 29,000 new orders; with order modifications adding another \$700 million. For FY2017, those numbers rose to \$3.8 billion from 32,000 orders; with another \$900 million from modifications.

That year-over-year 20 percent increase in dollar amounts from just a 10 percent increase in the number of transactions shows agencies are using SEWP V for more consolidated and strategic purchasing, says Woytek. The first quarter of FY2018

showed that trend to be continuing.

The goal now is to provide the tools, concepts, reports, and functionality to help agency leaders with more complete insight and understanding of their agency's IT purchases. Two items in particular have contributed to having more CIOs and other acquisition leaders view SEWP V as a strategic tool, says Woytek. They can get specific reports on their own agency's IT purchases, and there's now an "agency catalog concept" that lets an agency set aside a piece of the huge overall SEWP catalog that includes just those products and services that meet agency requirements.

If an agency wants to standardize on a certain set of printers, for example, they can define the specifications they need. Then the SEWP program office will provide an interface to the SEWP catalog that shows just the printers that meet those requirements.

"Regardless of overall numbers and usage tied to a specific initiative," says Woytek, "the focus on strategic solutions has fed



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into a better understanding by agencies on how a more strategic and consolidated acquisition process can provide more control, understanding, and efficiencies in the acquisition process."

SEWP has done a great job with strategic sourcing, says Genovese. The contract's streamlined processes for such functions as issuing requests for proposals helped customers procure the strategic sourcing products. Agencies are still familiarizing themselves of the benefits of strategic sourcing. "But so far the numbers (from SEWP) are doing well," he says, "and we only expect more orders and more agencies using the contract for that purpose."

REFINED FOCUS

One aspect of SEWP V that puts it ahead of other contracts so far is the ability to focus on specific IT manufacturers in order to lessen supply chain risks. In other words, SEWP V can ensure certain products come from a specific source or vendor.

To tackle these issues, SEWP V includes the Established Authorized Reseller Program (EARP), which is active and operative by default, although it can be deactivated by the government customer. And through this program, SEWP can let customers receive quotes from authorized resellers of just 15 IT manufacturers. However, those include most of the major IT companies, such as Cisco, Oracle, HP, Dell, and so on.

For all the other 5,700 or so manufacturers from whom agencies can acquire technology,

SEWP V provides its government customers with a verification file that shows what the verified relationship is between the manufacturer and reseller by contract line item. The definition of "authorized reseller" can vary almost from company to company. To Genovese, it means SEWP V contractors must have a direct relationship with those

SEWP is in the works.

- During 2018, SEWP will be highlighting those companies that have been certified against the ISO 20243 standard, which aims to reduce the risk of maliciously tainted and counterfeit products.

The SEWP program office also plans to add more staffing and infrastructure to focus on such aspects as strategic solutions,

"A more strategic and consolidated acquisition process can provide more control, understanding, and efficiencies."

—Joanne Woytek, NASA SEWP program manager

manufacturers in order to respond to request for quotes that fall under the EARP program. SEWP's own definition is the manufacturer has to consider a purchase by the government through that reseller to be legitimate.

The SEWP program office is also planning what will be called a "capabilities page," which government customers will be able to check on the specialties of the 140-plus contract holders on SEWP V claim for themselves.

Other updates to SEWP, and new additions in process, include:

- There is now an Order Status tool that displays the historical and current status of orders.

- Q&A functionality was added to the RFQ process, standardizing contract holder questions and government responses.

- A commercial product catalog to provide an easy way for customers to locate and purchase common commercial items on

RFQ and order fulfillment, and to provide a "high availability" infrastructure. It will also be extending its famously extensive outreach efforts, with more online interfaces between the industry and the SEWP program beyond those that exist for current contract holders to add to its onsite training, webinars, and informational video clips.

Because of these developments and the ever-improving focus on customer service, ease of use, and the ability to add products and solutions to the contract in a matter of hours, SEWP V will almost certainly continue to be the GWAC front-runner for the foreseeable future, says Genovese.

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The top mergers and acquisitions of 2017

More than 100 deals closed last year — here are some that are expected to have the biggest impact on the federal IT market

BY NICK WAKEMAN

In 2017, more than 100 mergers and acquisitions closed in the government market, and for the companies involved, they were transformative events. For buyers, the deals represent opportunities to add new contracts, new capabilities and scale. It helps them crack new markets and gain critical skill sets.

For sellers, the reasons vary widely. For company founders, it can mean retirement has come. For spin-offs from large businesses, it is often about shaping portfolios and jettisoning a business that no longer fits with a firm's core strategies. And in other cases, being acquired is an opportunity to join forces with a large organization that can bring more resources and support.

Washington Technology tracked and evaluated those deals and has identified the best among them. The mergers and acquisitions below stand out because of what they say about trends in the market and how companies are positioning themselves to pursue new opportunities.

Single best deal

Buyer: Booz Allen Hamilton

Acquisition: Aquilent

Value: \$250 million

Why: The deal bolsters Booz Allen's capabilities in digital, agile, DevOps and cloud capabilities. Aquilent was growing rapidly with customers at the Department of Health and Human Services, U.S. Postal Service, General Services Administration and other federal agencies.

Booz Allen doesn't make large acquisitions often, and this was a large one. It fits well with the firm's 2020 strategy to infuse its consulting capabilities with technology services and to target growth areas such as digital and cloud computing.

Top dealmaker (made two or more deals)

Buyer: CSRA

Acquisitions: NES Associates and Praxis Engineering

Value: \$105 million for NES and \$235 million for Praxis

Why: These were the first deals CSRA made after being created by the spin-off from Computer Sciences Corp. and the merger with SRA International.

NES added skills in IT infrastructure, network operations, data center and

applications-related services, particularly with defense customers. Praxis solidified CSRA's footprint with the National Security Agency and other intelligence community customers for which it provides software and systems engineering. Its work focuses on mission application development and engagement, meaning it has deep relationships at the agencies and intimately supports their mission.

Honorable mention: Accenture's acquisitions of Phase One Consulting Group, VeriSign's iDefense Security Intelligence Services and Endgame's federal government business.

Best merger of equals

Buyer: TeraThink

Acquisition: Dominion Consulting

Value: Not disclosed, but the combined entity has \$80 million in annual revenue

Why: True mergers of equals are rare in the government market, but these two firms came together and melded management teams and operations. Their combined skills include customer transformation, automation, agile development, enterprise applications and cloud computing. They have both defense and civilian customers.

The merger creates a larger platform for making more acquisitions and pursuing larger contracts.

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We commend this year's Federal 100 Award honorees - including our own Chief Operating Officer, John Mengucci - for outstanding contributions to the federal IT community. This award recognizes him as a leader whose vision, passion, and innovation are transforming government and its ability to deliver on critical missions.

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Best intelligence-related deal

Buyer: KeyW Corp.

Acquisition: Sotera Defense Solutions

Value: \$235 million

Why: With this deal, KeyW doubled its size and made the company the largest publicly traded firm focused solely on the intelligence community. Sotera brought KeyW access to several large indefinite-delivery, indefinite-quantity contracts just as government buyers increasingly turn to those vehicles for their buying needs. Sotera added 1,100 employees to the 1,000 KeyW already had. In total, 80 percent hold security clearances.

The increase in size and new contract vehicles are allowing KeyW to pursue contracts that were previously out of reach.

Best divestiture

Seller: Harris Corp.

Buyer: Veritas Capital

Business: Harris IT

Value: \$690 million

Why: Harris wanted to jettison its IT business so it could focus on its electronics and platform-centric work; Veritas Capital was happy to oblige. For \$690 million, Veritas picked up about \$1 billion in annual revenue. Within a few months, it installed Stu Shea as CEO, and Harris IT adopted the name Peraton. Shea has been building a management team and creating a distinct culture, and Peraton has already been winning contracts, including a \$578 million logistics deal with the Transportation Security Administration.

Best private equity deal

Buyer: Arlington Capital Partners

Acquisition: Xebec

Value: Not disclosed

Why: Private equity firm Arlington Capital has created another platform in the government market by buying Xebec, which has roots in the intelligence community. As 2018 got underway, Arlington Capital acquired Integrity

Applications Inc. and plans to merge it with Xebec. IAI also focuses on the intelligence community and has capabilities in human intelligence and IT services. The pattern is a familiar one for Arlington Capital: Another platform, Polaris Alpha, continues to make deals in the federal market.

Honorable mention: Private equity firm H.I.G.'s acquisitions of NCI and Whitney, Bradley and Brown.

Market newcomer

Buyer: Belcan

Acquisitions: Kemtah Group and Schafer Corp.

Value: Not disclosed

Why: Cincinnati-based engineering firm Belcan was founded in 1958 but didn't join the government market until 2016, when it acquired Intercom Consulting and Federal Systems Corp. In 2017, it followed those deals with two more — Kemtah Group and Schafer Corp. After closing those deals, Belcan — which itself was acquired by private equity firm AE Industrial Partners in 2015 —

created a government segment. The firm's leaders say more deals are on the way.

Best of the rest

ManTech International acquired InfoZen for \$180 million, adding IT modernization skills and broadening its customer base.

ECS Federal bought InfoReliance for an undisclosed amount. The deal gives ECS more solutions capabilities in the areas of cloud and cybersecurity and boosts the company above \$500 million in annual revenue.

Salient CRGT acquired Information Innovators for an undisclosed amount. The acquisition brings health care clients at the Department of Health and Human Services, the Food and Drug Administration, the Defense Health Agency and the Department of Veterans Affairs. Salient CRGT also added \$200 million in revenue, pushing its total above \$500 million and pushing the company solidly into the middle tier of government contractors.

The outlook for 2018

Merger and acquisition activity in the government market never stops. So while looking back at the deals that closed in 2017, it also is important to consider what the year ahead will bring.

In 2018, that outlook is particularly noteworthy because two of our top dealmakers in 2017 are already acquisition targets.

- **ECS Federal** is being acquired by staffing services firm **On Assignment** for \$775 million. That deal is expected to close by April 2, and the current management team led by CEO George Wilson will stay in place. "Same strategy, same management team, more resources," he said.

- **General Dynamics** is buying **CSRA** for \$6.8 billion in cash and the

assumption of \$1.8 billion in debt. The deal, which is expected to close by the end of June, will create a business with \$9.9 billion in annual IT revenue.

- In May, a complex three-way deal will merge the public-sector business of **DXC Technology** with **Vencore** and **KeyPoint Government Solutions**. This will create a new publicly traded company with about \$4.3 billion in annual revenue.

Those acquisitions will create new, potentially dominant players in the market and are early candidates for the top deals of 2018. But if 2017, with its 102 deals, is any indication, these three will be far from the only ones in the government space that will reshape the competitive landscape.

— Nick Wakeman



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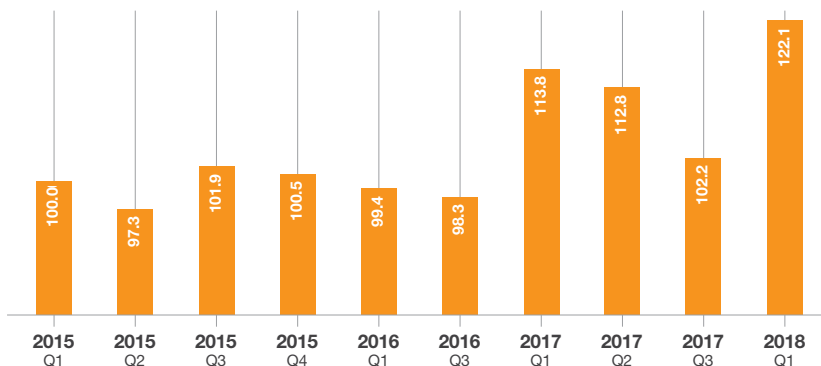
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How contractors see today's federal IT

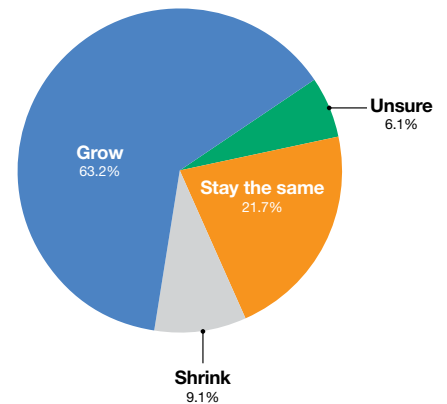
According to Washington Technology's 2018 Contractor Confidence Index, industry is increasingly bullish on the federal IT market, but there are questions and concerns that could temper that optimism.

Confidence rebounds...



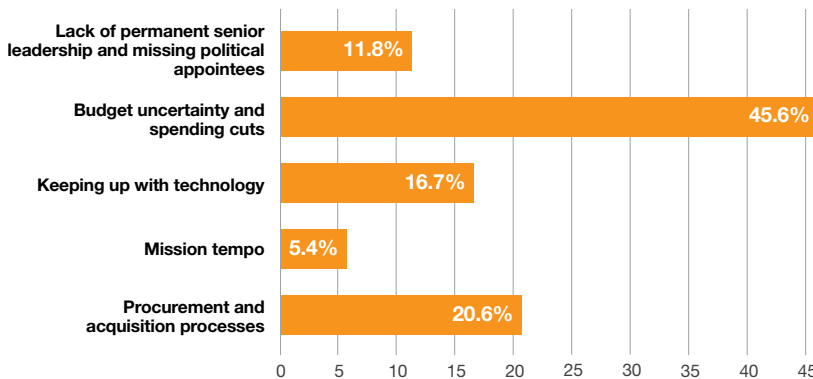
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