IT Modernization Centers of Excellence Case Study

Second Draft

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Part I: Introduction

In recent years, the rapid advancement of digital customer services has generated incredible convenience for consumers. The pervasiveness of mobile applications, sleek and intuitive user-interfaces, and optimized customer-centered design for nearly any service has made instant gratification an expectation for most consumers. At any moment, you can order a pizza, groceries, or a gourmet meal to your home through your phone and have it delivered within minutes. You can make investments, doctors' appointments, file insurance claims, or deposit checks without the slightest inconvenience. Companies compete to create the easiest access to service for consumers.

By contrast, when it comes to interfacing with the U.S. government or seeking any service from a Federal department or agency, the experience can be frustratingly slow and antiquated. Finding the correct office to contact, getting a person on the phone, filling out paper forms to be scanned and faxed, and months long processing times are all common complaints individuals have when interfacing with government entities. The experience is all-the-more frustrating given the convenience Americans are accustomed to with commercial interactions.

However, there is a movement that has started in the Federal government that was conceived in a White House office, based on conversations with the leaders of the world's most innovative companies, given life by a team of tech experts in the General Services Administration, and currently being operationalized in the forward-thinking U.S. Department of Agriculture that stands to fundamentally and holistically change the nature of government services delivery. Part of a broader government initiative, the particular effort has been named the "IT Modernization Centers of Excellence," and is focused on delivering a much higher level of change than simply updating computer systems or updating one minor application at a time. The Centers of Excellence (CoEs) are attempting to redesign the manner in which government services are delivered to U.S. citizens, bringing them into the modern era and creating the capacity for change that will allow Federal departments and agencies to rapidly adapt and keep up with the pace of change in the private sector.

The success of any organization often rests on the ability to manage change, adapt to shifting demand, and effectively integrate emerging technology. This case of how the U.S. government is pursuing change management in IT modernization represents organizational change on a scale unmatched in the private sector. The idea that the government must adapt to operate more like the private sector holds significant promise but also overlooks the unique responsibilities, statutory demands, and "failure is not an option" obligations that make government a uniquely challenging enterprise.

The challenge of Federal IT modernization is daunting. The scale of the problem is larger than any private sector entity has ever faced. The FY2019 projection for Federal IT spending is $83.4 Billion, with a workforce of roughly 80,000 employees. For context, the rule of thumb has been that most Fortune 500 companies spend 5% of their revenue on IT.[1] Analyzing the top 10 companies of the Fortune 500, the firms average $229.2 Billion in revenue.[2] This means that the 10 largest companies in America spend an estimated average of $11.46 Billion on IT per year. Thus, the Federal government's IT spending is at least 8 times the scale of the largest private sector companies.

[1] https://searchcio.techtarget.com/magazineContent/How-Company-Size-Relates-to-IT-Spending
[2] Fortune 500. http://fortune.com/fortune500/

This case of modernizing the processes, procedures, and culture across dozens of Federal departments and agencies on such a massive scale offers insight where government experience can inform private sector thinking. This is a story about change management on a scale seldom seen.

Initial Conditions

On January 19, 2017, the eve of the first Presidential transition in eight years, the Federal Chief Information Officer Council (CIOC) released the "State of Federal Information Technology" (SOFIT) Report. A comprehensive detailing of the status of IT systems in the Federal Government, the report provides a time marker that defines the condition of Federal IT at the moment of turnover between two administrations.

Broadly, as noted by the SOFIT Report, despite massive budget outlays over $80 Billion collectively, nearly every Federal worker could tell you that their IT systems were generations old. With robust acquisition processes and detailed contracting requirements, the processes of updating and fielding new equipment is structurally more difficult in the government, but there were broader structural problems as well. For instance, the fragmented management system made wide-scale modernization and sharing of best practices nearly impossible, as there are 24 major departments and agencies within the Federal government and each has many subcomponents often controlling their own IT systems. At the time of the SOFIT report, there were over 160 Chief Information Officers (CIOs) within the primary 24 agencies, and most of the them operated discreet IT systems. For instance, the US Department of Agriculture had 22 Chief Information Officers within the department as each component maintained a separate CIO, many of whom did not directly report to primary USDA CIO.

The problem developed organically over decades, as each department has grown a demand for IT over the past decades during the internet revolution, but IT was perceived as secondary to many of the department's missions. Thus, the departments and agencies have generations-old IT infrastructure, much of which was developed in a haphazard manner as the internet emerged. Over many decades, as information technology proved to offer valuable tools for Federal departments and agencies, organizations began acquiring and organically developing systems to automate and assist business functions, such as payroll management, basic data management, and basic manual functions.

As early at 1994, however, the fundamental challenges of modernizing government IT were surfacing. The SOFIT report highlights a 1994 Senate report that raises some of the same challenges that persist today: "Compared to the private sector, the government spends too much time and effort developing unique software programs and hardware rather than buying commercially available products."[3] Then, as is the case today, much of the budget, which is appropriated through Congress, goes to maintaining legacy systems rather than modernizing.

Finally, as a result of the ground-up nature with which these systems were developed, the design of the systems were not customer-centered. Rather than focusing on citizen needs as a starting point to design websites and data support, much of the legacy government IT was developed to support back-end support with websites developed as an afterthought. From government websites, which are the most tangible points of interaction with the public, to the back-end processing and usability of government data, the public is served by the IT systems supporting the departments and agencies of the Federal government, and there was a broad sense that government was not keeping up with private

[3] Computer Chaos 1994

sector standards or citizen demands. Not only was Federal IT outdated, the processes were slower to modernize, compared to the private sector. Thus, each year the IT would fall farther and farther behind.

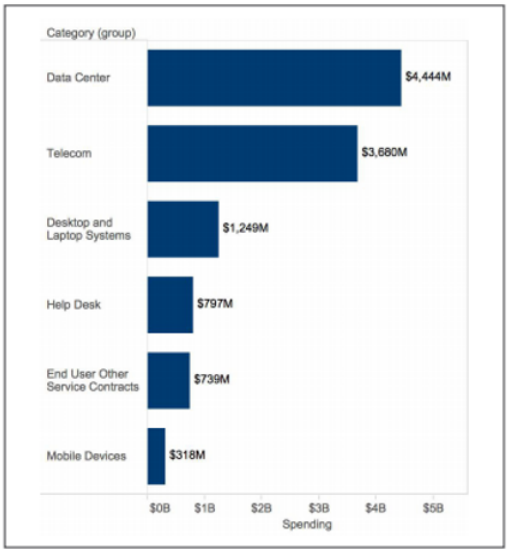
Illustrating The Problem

Compounding the problem, many incoming CIOs inherited the legacy architecture of decades-old IT, which perform vital functions and absorb much of the budget outlay simply to continue operation, leaving little funding available for transformation or modernization. As the SOFIT report notes, "of the $88.7 billion in Federal IT spending planned for fiscal year 2016, approximately $34.7 billion (43%) is to be spent on IT infrastructure."[4] Accordingly, a chief complaint of many CIOs was that their inherited obsolete IT infrastructure was a major impediment to providing the expected demands of citizens and their own employees. With IT appropriations requiring spending for operations and maintenance of legacy program, much needed investment in transformation was impossible.

One illustrating example, for instance, is data management. As figure 1 shows, the vast majority of spending on IT infrastructure in FY2016 was data centers, which were the repositories of data applications, maintaining very valuable government data. Data centers are an example of a largely antiquated, high cost, legacy solution to maintaining data that require real estate, physical hardware and software, and personnel to operate the facilities on a 24-hour a day basis. A GAO report cited, "the growth in the number of Federal data centers, many offering similar services and resources" as a major source of unnecessary spending and duplicated effort.[5]

By 2016, most major corporations were moving their data to cloud storage, which enabled significant cost savings compared to maintaining physical data centers. With spending on data centers requiring such a significant share of annual spending, the majority of CIOs in the Federal government understood the value of cloud data storage for cutting costs and harnessing the value of usable technology.

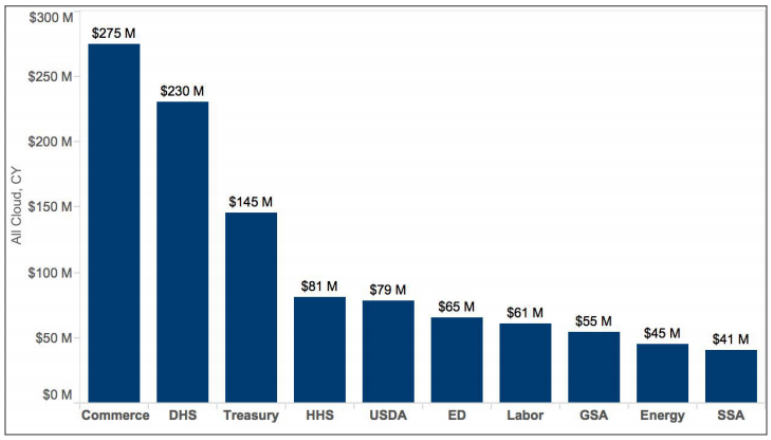
Figure 1: IT Infrastructure Spending (FY2016)[6]:



[4] CIO REPORT Citation
[5] CIO Report – GAO citation
[6] SOFIT

In fact, the SOFIT report noted that the Office of Management and Budget (OMB) issued guidance to encourage departments to move from data centers to adopt cloud storage, but Figure 2 shows that no department had succeeded in allocating much funding to cloud adoption as of FY2016, as even the highest spending department allocated a small fraction of their IT budget to cloud adoption.

Figure 2: Total Cloud Spending for Top 10 Civilian Agencies (FY2016)[7]:



Particularly, the SOFIT report cited "longstanding Federal procurement policies, geared towards long-term, large scale investments," as preventing the "more incremental, agile acquisition model offered by cloud providers."[8] Additionally, a number of Federal policies conflicted with moving data to the cloud, including the "Trusted Internet Connections" initiative, run by the Department of Homeland Security, which was adopted to provide a layer of security for connecting to external network connections, but which was not written in an era of Cloud capability. Thus, the confusion of whether or not cloud providers were TIC compliant caused confusion and significant delay in adoption. Facing potentially conflicting guidance from OMB to adopt cloud solutions and DHS guidance to ensure TIC compliance, many risk-averse CIOs simply avoided cloud as a solution.

Ultimately, the seemingly eternal conflict cited by the SOFIT report was that, "the need for upfront capital planning and investment to adhere to Federal budget cycles does not align with the pace of innovation which, in turn, slows the pace of adoption."[9] On the date of the SOFIT report release, the incoming administration was optimistic of some of the solutions to address the problems laid out in the report, but the state of Federal IT was in question and major transformations were needed, though it was unclear how such transformations would overcome the inherent challenges of funding consistent innovation in government departments.

A New Solution

Changing Presidential Administrations can represent a tidal wave of turnover across the Federal government, with new leadership and ideologies driving strategies and policies in the departments and

[7] SOFIT
[8] SOFIT
[9] SOFIT

agencies. However, IT modernization efforts have proven to be an area of consistency and non-partisanship, more of a relay race than a political back-and-forth, with each administration building on the successes and challenges of the efforts of the previous years.

Taking office on January 20, 2017, the incoming administration arrived with a mandate to bring private sector thinking, expertise, and practices to provide new approaches to solving long term, intractable government problems. On March 27, 2017, a Presidential Memorandum created the Office of American Innovation, to be headed by the Senior Advisor to the President, Jared Kushner to act on that mandate. The purpose of the office would be to "make recommendations to the President on policies and plans that improve Government operations and services, improve the quality of life for Americans now and in the future, and spur job creation."[10] As stated by the Presidential Memorandum, "This office will bring together the best ideas from Government, the private sector, and other thought leaders to ensure that America is ready to solve today's most intractable problems, and is positioned to meet tomorrow's challenges and opportunities. The office will focus on implementing policies and scaling proven private-sector models to spur job creation and innovation."[11]

Among the team of staff empowered to bring this transformation to reality was Chris Liddell, Reed Cordish, and Matt Lira. Before joining the Administration, Chris Liddell, Assistant to the President for Strategic Initiatives, had an esteemed business career including prior service as CEO of a number of companies and CFO of Microsoft and General Motors. Reed Cordish, Assistant to the President for Intergovernmental Affairs and Technology Initiatives, also came from a private sector background, having served as an executive in the real estate investment and development industries. While Chris and Reed brought significant business insight and experience to the team, Matt Lira, Special Assistant to the President for Innovation Policy and Initiatives, had significant experience with government technology, having previously served on the senior staff of various House leadership offices.

Shortly after formation, leaders in the Office of American Innovation sought to address IT modernization as one of the core areas to improve citizen services. Armed with an analysis of the current state of Federal IT and the purview of which previous modernization initiatives had failed or proven successful, the OAI team determined that "short-termism" of previous attempts limited the scope of success and thus formed a strategy to create lasting infrastructure for long term change and improvement. Rather than project by project attempts that make one-off updates, meeting short-term goals, the team decided that the modernization effort must take a long-term outlook beyond the expected term of any one administration. The approach departs from what is typical of most administrations that typically focus on the flaws of their predecessors and dismantle any legacy initiatives, but IT leaders have collectively determined that such a cycle prevents meaningful progress.

Because of the interconnected nature of IT systems and processes, a holistic approach at identifying and overcoming the barriers of progress was defined, which crucially focused on building capacity for long-term transformation. Underlying this effort was a fundamental understanding that IT modernization was a nonpartisan effort, focused on improving government and serving citizens better, which relied on being a mechanism that lasted for multiple administrations, measured by progress on specific deliverables. The previous administration made progress at modernization, but the private sector was progressing much faster, so each year the government was falling farther behind. As a result, the solution to IT modernization necessarily needed to be a major process and cultural improvement.

[10] OAI PM

[11] https://www.whitehouse.gov/presidential-actions/presidential-memorandum-white-house-office-american-innovation/

On January 19, 2017 the State of Federal IT Report laid out the bold statement that the government had "reached a point where we need to invest the time and money necessary to transform the way we do business in the government. Otherwise, our current path will continue to become increasingly unstable." With over 300 million US citizens as the customer base, 2 million government workers as the empowered actors, and budgets approaching $100 Billion, the stakes of the transformation are high. Armed with that information, the largest IT transformation in history was begun.

Part 2: Key Agencies

Because the landscape of Federal IT is so large, there are many organizations that have responsibilities in managing the enterprise from policy, statutory, funding, and oversight perspectives. Before detailing the recent transformation, it is helpful to explain the agencies and people involved. While Congress maintains budgetary and oversight powers driving many of the policies of Federal IT, the Executive Branch maintains significant control in operational execution of any IT policies.

American Technology Council

The American Technology Council was formed by Executive Order in May, 2017 and has responsibility to devise government-wide technology strategy. The 19 members of the council are all government employees and include the President, Vice President, several Cabinet Members, and the leaders of the Federal Technology organizations. The principle functions of the Council include coordinating a strategy for Federal IT and tech service delivery, advising the President on tech policy, and overseeing implementation.[12]

Office of Management and Budget

Within the Executive Office of the President, the Office of Management and Budget (OMB) oversees development of the President's budget and management of the federal workforce, including "oversight of agency performance, human capital, Federal procurement, financial management, and information technology."[13] Given the many facets of oversight of departments and agencies from OMB, the organization has many functions that directly impact and guide Federal IT policy. One additional function of OMB is to coordinate and publish the President's Management Agenda, which lays out major initiatives to improve the effectiveness and efficiency of Federal resources. The Office of the Federal Chief Information Officer (OFCIO) is the authority through which OMB issues technology policies that guide department and agency CIOs. In addition to the OFCIO, OMB also issues policy guidelines through the Office of Federal Procurement Policy and the Office of Performance and Personnel Management.

Office of the Federal Chief Information Officer

Created by the E-Government Act of 2002, the Office of the Federal Chief Information Officer is housed in the OMB and oversees Federal IT policy, spending, and strategic planning. In this capacity, the OFCIO oversees the CIO Council, which is "designated the principal interagency forum for improving agency practices related to the design, acquisition, development, modernization, use, operation, sharing

[12] https://www.whitehouse.gov/presidential-actions/presidential-executive-order-establishment-american-technology-council/
[13] https://www.whitehouse.gov/omb/

and performance of Federal Government information resources."[14] As noted previously, the CIO Council is the entity that prepared and released the State of Federal IT Report (SOFIT).

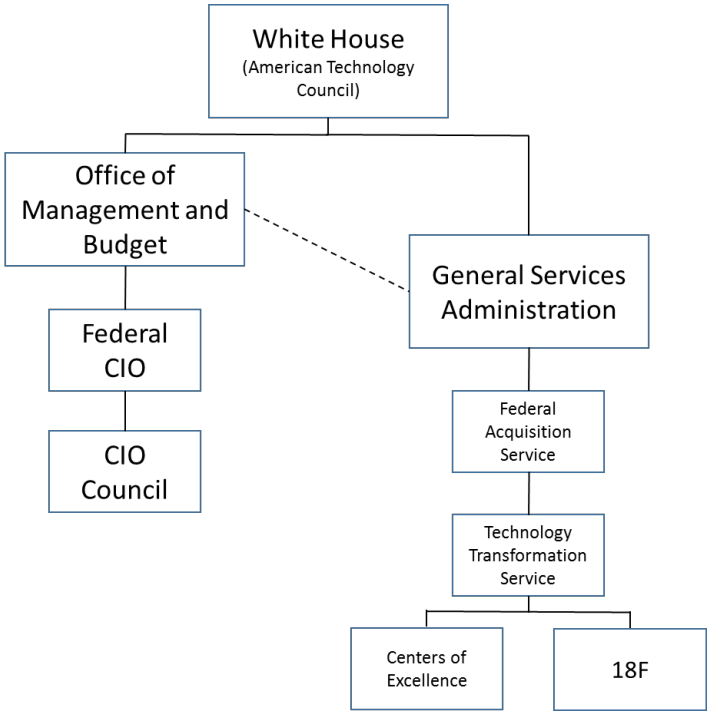
General Services Administration

Itself an independent agency of the Federal government, the General Services Administration (GSA) was created to "streamline the administrative work of the Federal government." The modern mission of the organization is to "deliver value and savings in real estate, acquisition, technology, and other mission-support services across government."[15] OMB maintains oversight of GSA, similar to all other departments and agencies, but GSA plays a significant role in establishing government-wide policies and regulations guiding acquisition and management practices.

Technology Transformation Services

A subcomponent of the Federal Acquisition Service within GSA, the Technology Transformation Services exist to "improve the public's experience with the government by helping agencies build, buy and share technology that allows them to better serve the public."[16] Through multiple offices and initiatives, TTS is comprised of technology experts from different disciplines, including software engineering, digital product development, data services, etc. The office exists to provide IT services to the agencies and departments of the Federal government and was selected to house the IT Modernization Centers of Excellence.

Figure 3: Executive Branch Technology Policy Offices



[14] https://www.gpo.gov/fdsys/pkg/PLAW-107publ347/html/PLAW-107publ347.htm
[15] https://www.gsa.gov/about-us/background-and-history
[16] https://www.gsa.gov/about-us/organization/federal-acquisition-service/technology-transformation-services

Part 3: Timeline of Major Events

Given the scale of government, the task of transformation is no small matter. Changing an organization as complex, fragmented, and territorial as the Federal government requires multi-faceted approaches. As such, the Administration pursued a many-pronged strategy with major initiatives to create the infrastructure for change. To give context to the actions of the first efforts, the following events are all critical pieces in addressing the larger challenge of transformation.

American Technology Council - May 1, 2017

Established by Executive Order, the American Technology Council (ATC) created a forum to guide interagency coordination for tech modernization throughout the Federal government. The Executive Order mandates that the Federal government "must transform and modernize its information technology and how it uses and delivers digital services."[17] As Director of the ATC, Chris Liddell convened leading technology company CEOs for a summit on 21 June, 2017 to help guide the approach for modernization initiatives.[18]

Cybersecurity Executive Order – May 11, 2017

The Presidential Executive Order on Strengthening the Cybersecurity of Federal Networks and Critical Infrastructure mandated many outcomes related to cybersecurity and government networks, but one significant aspect of the order was to require the ATC Director to coordinate an IT Modernization Report, detailing the status of existing IT modernization efforts.[19]

IT Modernization Report – Dec 13, 2017

The "Report to the President on IT Modernization" was submitted to the President, as required by the Cybersecurity Executive Order. The IT Modernization report highlighted a number of priority areas, including consolidation of network infrastructure and migration to shared and cloud-based services. The report included more than 50 actions, which are being led by the Federal CIO.[20] Many of the actions promote moving to a "more secure, agile, and cost effective infrastructure, much of which will be provided by shared services."[21]

GSA Centers of Excellence - October 24, 2017

In response to a White House request, on October 24, 2017, the GSA established the "Centers of Excellence" to support IT transformation at client agencies. The five centers, each focused on a specific area, such as cloud adoption, were designed to deploy experts to client agencies to support modernization projects. The Centers of Excellence would prove to be a key capability in the strategy to operationalize modernization efforts in the departments and agencies of the Federal government and are discussed at length later in this case.

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[17] https://www.whitehouse.gov/presidential-actions/presidential-executive-order-establishment-american-technology-council/
[18] https://www.whitehouse.gov/articles/american-technology-council-summit-modernize-government-services/
[19] https://www.whitehouse.gov/presidential-actions/presidential-executive-order-strengthening-cybersecurity-federal-networks-critical-infrastructure/
[20] https://itmodernization.cio.gov/
[21] https://www.whitehouse.gov/articles/final-modernization-report/

Modernizing Government Technology Act / Technology Modernization Fund – Dec 12, 2017 / March 22, 2018 / June 7, 2018

The Technology Modernization Fund (TMF) was created as a working-capital fund for departments in the government to borrow from to fund investment in major IT modernization efforts. The $100 million fund is designed to fund high-impact modernization projects that have the potential to generate significant savings in future years, which will fund the repayment of the original funds.[22] The TMF was signed into law on Dec 12, 2017 as part of the National Defense Authorization Act and on June 7, 2018 made their first project selections. The Department of Energy was awarded $15 million to fund enterprise cloud email migration. The Department of Housing and Urban Development was awarded $20 million to fund mainframe application migration. The Department of Agriculture was awarded $10 million to fund the Farmers.gov Customer Experience Portal.[23]

President's Management Agenda – March 20, 2018

For the first time, IT Modernization was included as a "Key Driver of Transformation" in the President's Management Agenda (PMA). The PMA is released by the Office of Management and Budget as a tool for the President to set a strategy for improving the management of the government. The PMA emphasized the need for modernizing IT as part of a strategy to improve the effectiveness with which government agencies deliver services to citizens and effectively allocate taxpayer dollars.

Chief Information Officers Executive Order – May 15, 2018

Addressing major IT resource management deficiencies and disparities across departments, an Executive Order was signed, titled "Enhancing the Effectiveness of Agency Chief Information Officers."[24] This Executive Order directed changes to enhance the effectiveness of Chief Information Officers in the Federal departments and agencies, empowering them with the resources and control to improve digital service delivery to citizens.

Through these substantial policy mandates, the Administration demonstrated a strong commitment to modernizing government IT systems and citizen services early in the term. With key personnel in place in the departments and agencies responsible for operationalizing the policies, the stage was set for modernization to begin.

Part 4: Centers of Excellence

The signature initiative and central operationalized approach to modernizing IT in the Federal government has been the GSA's IT Modernization Centers of Excellence (CoEs). Overseen directly by Joanne Collins Smee, the Director of the Technology Transformation Service, the CoE concept is the central tool through which the larger vision of IT Modernization will be brought to life across the government.

Vision, Mission, and Leadership

[22] https://emerging.digital.gov/TMF/
[23] ibid
[24] https://www.whitehouse.gov/presidential-actions/executive-order-enhancing-effectiveness-agency-chief-information-officers/

Previous efforts at modernization operated on an ad-hoc, project by project basis, fixing citizen-facing services but rarely addressing the back-end operations and connective functions needed for holistic reform. From that perspective, the incoming administration was guided early on by the vision that meaningful reform would require multi-year, institutional efforts that would address underlying problems and create the infrastructure for long term and continuous modernization.

During the June 2017 CEO summit, the resounding message from the nation's tech executives was to focus effort on one of two approaches. The first option was a horizontal approach, to modernize one aspect of tech government-wide. This type of effort would focus on getting all government agencies to move their data to the cloud, for instance, which would create meaningful impact across the scale of government. The second option was a vertical approach, to focus on one department and completely overhaul all aspects of their IT operation.

For the ATC, this framing helped solidify the Administration's approach to focus vertically and create the centralized infrastructure to holistically modernize executive departments. To that end, the government needed an internal organization that could centralize technical knowledge and transformation expertise that could embed with a department and assist in large scale, holistic transformation. On the basis of the recommendations from the nation's top tech executives and operational analysis, the Centers of Excellence were born.

CoE Concept

Speaking at an event in DC on July 12, 2017, Chris Liddell made the first public mentions of the CoE concept that the Administration had been developing. Starting with the premise that the "function of government is to develop services that make citizens' lives easier," he noted that previous attempts at IT modernization made some progress but had been fragmented and small-scale. He outlined the intention to bring "together a structure, give it some resources, and really turbocharge it, and have centers of excellence that really push [technology transformation] forward progressively across the government."[25] In the private sector, he noted, a company seeking large scale transformation "would have a central entity which would have the expertise in a particular aspect – whether it's cloud services or data center consolidation… and you would literally start with one division and get that done and move on to the next one."[26]

By October 2017, the Technology Transformation Services (TTS) of the General Services Administration announced their decision to launch an office to serve as a hub of knowledge to be deployed to assist departments with modernization. TTS had procurement authority, contracting expertise, and maintained a team of government tech experts working on legacy modernization efforts. By creating the CoE office in GSA, the concept took a first step toward becoming a lasting piece of the government modernization architecture and institutionalizing a major change management resource. With proven success, the CoE model would be able to scale the skills and best practices of modernization across the government.

By early 2018, the formalized mission of the CoE office was to "accelerate IT modernization to improve the citizen experience, improve outcomes, and reduce legacy IT spending across the

[25] https://www.fedscoop.com/liddell-wants-centers-excellence-model-government-innovation/
[26] https://www.fedscoop.com/liddell-wants-centers-excellence-model-government-innovation/

government."[27] By centralizing top government tech talent, leveraging private sector best practices, and operating with a teaming mindset to collaborate across government departments and agencies, the Centers of Excellence could provide implementation assistance alongside host departments and also utilize their insights to shape policy requirements.

A crucial feature of the CoE concept is that they operate using a cost-recovery model, which means that the department utilizing CoE services is required to repay the GSA for all of the costs associated. This cost requirement creates the relationship that the host department is effectually the client of the CoE services, which forces the Centers of Excellence to focus on precisely defining and delivering on client needs. If a client department is not satisfied with the direction or quality of CoE work, they will simply stop utilizing the service.

In a practical example, when the U.S. Department of Agriculture teams with the Centers of Excellence to initiate an IT modernization effort, the GSA sends Centers of Excellence staff to embed with USDA employees to undergo the process. Likely, many contracts will be awarded to fill key work as part of the transformation, and the CoE team will help administer those contracts through the GSA apparatus. In the end, however, the USDA must repay the GSA for the cost of the contracts and also for the labor of the CoE employees.

This cost-recovery function might not seem revolutionary, but prior modernization efforts were funded independently by teams that had their own appropriation, at no cost to the host department. In those cases, the departments had less control over the work product provided throughout the effort, which could undermine the client relationship. There are cases that suit both models, but any effort to holistically transform an agency requires a strong team mentality and mutual buy-in.

As one CoE employee described, having the CoEs team with the host departments and utilize the cost-recovery model to ensure the client relationship, the message from the CoE effort is, "We are not doing this transformation TO you. We are not doing this transformation FOR you. We are doing this transformation WITH you."

The Centers of Excellence

Leadership:

With the concept taking shape, the immediate challenge to the administration was to find the personnel with the change management and technology transformation skills to ensure successful implementation. Within the General Services Administration, the Centers of Excellence are led by Joanne Collins Smee, the Director of the Technology Transformation Service. Joanne was recruited into government in 2017 by the White House to help develop and implement the CoE concept. Prior to that, she was a senior executive at IBM with 25 years of experience offering technology solutions to companies worldwide. For an initiative seeking to bring private sector thinking and progress to government transformation, the hiring of an experienced private-sector leader was a crucial first step.

While Joanne maintains a broad purview of the entire TTS portfolio, she brought in a highly experienced government tech executive, Bob DeLuca, to serve as the Executive Director of the Centers of Excellence. A West Point graduate and former Army Officer with significant private sector and

[27] https://coe.gsa.gov/mission/

government tech experience, Bob came to the CoE team from his position as the Chief Information Officer of the Overseas Private Investment Corporation, a U.S. Government Agency that helps American businesses invest in emerging markets. Hiring an Executive Director with CIO experience was a crucial achievement for validation of the CoE concept. Most government departments and agencies are hierarchically "siloed," particularly at executive levels, which means that once an individual has achieved the CIO position atop a department, there is very little precedent for changing jobs within government. However, Bob was convinced of the promise of the CoE concept and brought his executive expertise to the CoEs to help communicate value directly to client CIOs. Along with his Deputy Director, Brian Whittaker, and support contractors Rachel Jackson and Julie Berarducci, Bob has overseen the daily operations of the Centers of Excellence and has utilized his experience as an agency CIO to shape the concept.

The Team

In its current iteration, there are five Centers of Excellence that focus on distinct but interconnected areas of transformation: Cloud Adoption, Contact Center of the Future, Customer Experience, Service Delivery Analytics, and IT Infrastructure Optimization.

Customer Experience:

One of the fundamental failings as government IT developed over the past decades was that the systems were not designed as primarily citizen-serving entities as a first principle. While these transformations are often branded as IT modernization, the underlying motive for change is actually improving citizen services, and by focusing on customer-centered design, the Customer Experience CoE helps deliver meaningful improvement for citizens. Working alongside client departments to better understand citizen needs and helping deliver positive experiences to users is the key value. The Customer Experience team helps client departments map customer journeys and interview users to intelligently design services to support those needs as a primary consideration.

Cloud Adoption:

As described previously, most department CIOs are convinced of the promise of migrating data to cloud storage, but there has been relatively little movement in that direction in previous years. The Cloud Adoption CoE exists to help with a comprehensive cloud adoption strategy, from analyzing current systems and applications to overseeing the movement of data and applications to cloud services. The cloud adoption CoE maintains the expertise and experience with both the technology, regulations, and procedures to accelerate adoption enterprise-wide. Migrating from a data center to the cloud is a monumental transformation, and the more informed the effort, the more likely the future success.

IT Infrastructure Optimization:

From a holistic perspective, there is no area of transformation more foundational than reevaluating and implementing an effective IT infrastructure. Hand-in-hand with cloud adoption, a crucial aspect of infrastructure planning is determining an optimized strategy for consolidating data centers and networks, assessing underlying architecture and selecting appropriate business models. The Infrastructure Optimization CoE helps department CIOs address major strategic planning activities that are often left un-addressed in more limited modernization efforts.

Service Delivery Analytics:

Leveraging data analytics for continual process improvement has been foundational in much of the improved service in the private sector for decades. The Service Delivery Analytics CoE brings that discipline to departments to help leverage data for key insights about process improvement and metric definition and measurement. This CoE brings immediate value to client departments by creating interactive dashboards, helping define helpful metrics, and improving reporting so that departments can utilize data for rapid feedback analysis and ensuring processes are data-driven.

Contact Center:

Creating responsive and helpful touchpoints with citizens is the most immediate means of demonstrating government value to customers. Contact centers are often the immediate portals through which departments communicate with and receive inquiries from citizens, and outdated, unhelpful websites or frustrating automated call centers can immediately stifle citizen accessibility to government services and erodes faith in the institutions. The Contact Center CoE leverages data-driven strategies and private-sector-based practices to optimize the services they offer citizens through direct contact.

Acquisition Professionals:

In addition to the five technical expertise areas, the CoEs offer acquisition professionals to optimize contract development and ensure the correct type of contract-vehicles are written and executed. Departments rely on contractors to execute and implement many aspects of their operations, including acquiring and maintaining new hardware and software services, and armed with properly structured vehicles, these experiences can be much more effective for client departments.

Moving Forward

With the management team in place, and the CoEs formed, the initial employment of the concept was set to begin in late 2017. Agencies across the government showed extensive interest to serve as the first client, or "lighthouse" agency, but a thorough selection process yielded the U.S. Department of Agriculture as the clear choice to pilot the CoE concept.

In his previous role as Governor of Georgia, Secretary Perdue had led significant IT transformation with a great deal of success and was prepared to do the same at USDA. From the Secretary, through the executive team and including the USDA Chief Information Officer, there was an obvious eagerness to utilize CoE services, not only to transform the agency but to help test and prove the change model itself.

Part 5: USDA Case Study

For all of the promise that the Centers of Excellence hold for transformation, one of the truly remarkable developments from the early employment of the concept has been the integration with the U.S. Department of Agriculture. Operation and function control of Federal IT resources exist within the departments and agencies of the government. Any centralized effort for reform relies completely on the manner in which changes are embraced and implemented in the field. From that perspective, the

case of USDA embracing the CoE concept and forming a truly integrated team is one of the most notable interagency, collaborative achievements in recent history.

Secretary Perdue's Vision:

"On my first day as secretary, I told our employees that I wanted USDA to be the most effective, most efficient, and best managed department in the federal government," recalled Secretary Sonny Perdue, announcing a new set of reforms to the women and men of his Department.[28] An accomplished executive and former State Governor, Secretary Perdue's vision for the USDA during his time in office was reform-minded from the beginning. Seeking to streamline, eliminate redundancies, and, above all, provide better service to customers, the American citizens, the new Secretary presented a grand vision early in his tenure. Central to the reforms was to modernize the department's IT systems and to align them with customer-focused design. From nearly any corner of the USDA, employees could recite the new mantra that the department must be "facts-based and data-driven, with a decision-making mindset that is customer-focused.[29]

The USDA workforce consists of over 100,000 employees, geographically dispersed over 4,500 locations across the country. For scale reference, there are over 3,300 IT professionals in the department and over 970 in the Office of the Chief Information Officer.[30] As the new Administration took office, there were 29 subcomponent agencies within the department and 22 individuals with the title Chief Information Officer, as nearly each of the agencies maintained their own IT systems, websites, databases, and so on. The redundancy of work and the unnecessary fragmentation of IT control were a drag on the efficiency of the department.

Prior to engaging the Centers of Excellence, USDA leadership had charted a course of realignment and improvements for customer service and efficiency, but the overlap of CoE expertise offerings and the areas the department sought to reform made the teaming a perfect fit. Among the major changes, USDA consolidated the 29 agencies into 17 subcomponent agencies, and restructured the CIO roles so that there was only one Chief Information Officer with 8 subordinate Assistant CIOs, each responsible for a particular mission area. Additionally, the CIO was elevated in the organization to report directly to the Secretary, as IT strategy was to be considered operationally vital to better serve citizen needs.

CoE Teaming:

On December 14, 2017, the White House announced that the Centers of Excellence would partner with the USDA in the first combined effort to modernize IT utilizing the new concept.[31] With GSA employees from the Centers of Excellence embedding with USDA employees, the effort would occur in two phases. The first phase would last six months, from April through September 2018, and the team would conduct thorough analysis of the current state of systems at USDA and develop a strategy

[28] https://www.usda.gov/media/press-releases/2017/09/07/secretary-perdue-announces-usda-improvements-customer-service
[29] https://www.usda.gov/our-agency/about-usda/our-secretary
[30] Interview with Gary Washington CIO
[31] https://www.nextgov.com/it-modernization/2017/12/white-house-unveils-it-modernization-center-excellence/144572/

and process for success. The subsequent phase would focus on implementation of the strategy. This announcement, that the USDA would be the "lighthouse" department for the CoE concept signaled that the progress to be made would raise awareness among other departments of the value offered by the CoEs. Underlying the announcement, however, was the understanding that the two organizations would operate with aligned goals of both modernizing USDA but also to helping to build and shape the CoE capacity in the process. USDA would not only be the first client of the CoEs but would also hold a cornerstone in building what would hopefully become a significant, lasting piece of modernization infrastructure within the Federal government for decades to come.

To reinforce the teaming mentality and shared goals of the combined team, leaders intentionally designed processes and procedures to break down organizational barriers and encourage collaboration. USDA Chief Information Officer Gary Washington and his team created shared space in the west wing of the USDA's Whitten Building on the national mall that has served as the headquarters of the department since 1908.[32]

Each CoE was staffed with both GSA and USDA employees as well as contracted industry partners to support the work. Internally, the USDA created a competition among IT professionals in the department to be selected to work on the modernization effort. Prior to the IT agency consolidation, due to the stove-piped nature of the subcomponent agencies, IT professionals being sent to work on a project outside of their agency signaled negative performance and would potentially harm career progression within the department. For instance, if an IT worker in the Farm Service Agency was sent to work outside of the agency, that did not signal positive performance and career outlook. However, by making the competition department-wide and clearly signaling favorable treatment due to working on a core department-wide effort, many of the most talented USDA employees competed to work on the modernization effort.

As the team started work, analyzing and developing a strategy for modernization, weekly team meetings, team building functions, and interconnected projects between functional areas created a shared sense of energy and unity among the group. The technical and change management expertise of the GSA employees was compounded by the organizational and substantive expertise of the USDA employees. Within months, as USDA Gary Washington says, "you couldn't tell which team members were from USDA and which were from GSA. They are all completed embedded on one team."[33]

Meaningful Progress:

Early achievements also helped propel the sense of momentum. The team immediately delivered progress toward the USDA stated goal to consolidate 39 existing data center to just two facilities. In February, 2018, the team launched Farmers.gov, a consolidated and interactive website that provides easy accessibility to several resources and functions for the convenience of American farmers, such as scheduling automatic payments for farm loans, digitally filing forms, or setting up appointments at local USDA offices. Within less than two months, citizen farmers would already experience dramatically improved customer experiences thanks to the team.

[32] https://www.gsa.gov/historic-buildings/jamie-l-whitten-federal-building-washington-dc
[33] Interview with Gary Washington.

Phase I of the combined team officially started in April 2018, with a six month time horizon. Engaging with contracted industry partners to assist with broader private sector expertise, the first phase focused on user-focused research to help identify problems and understand user experiences and then design the strategy for modernization using technical data and analysis. The formal outcome of Phase I will be delivered in September, 2018 will include a desired end state of reforms and a transition plan roadmap detailing how to get there. However, within the first few months of Phase I, significant progress has been made in each CoE, including:[34]

- Customer Experience
    - Field interviews in Virginia, New York, Georgia, Oklahoma and North Dakota to capture the voice of the customer
    - Developed a customer journey map for farm loans to chart the steps of the process and identify points for improvement for loan officers and borrowers
- Contact Center
    - Completed a comprehensive inventory of existing external-facing contact centers and documented current customer journeys by mapping existing phone trees
    - Identified best-in-class contact center features enabling mission, increasing customer satisfaction, and reducing costs
- IT Infrastructure Optimization
    - Facilitated closing 19 data centers to date, representing millions of dollars in cost savings, while assisting agencies with data migration planning
    - Developed methodology to calculate the real estate value of data centers closed in the USDA data center portfolio
- Data and Analytics
    - Developed the "Tell Sonny" Dashboard to directly capture feedback from citizens to give other CoEs insight into topics and trends that are of concern to customers
    - Developed a CXO Dashboard for use internally by USDA executives that will share key metrics across agencies to facilitate informed decisions
- Cloud Adoption
    - Generated significant cost avoidance by leveraging authorized cloud solutions for a new data platform
    - Initiated cloud readiness assessments to transition 4 of the major USDA agencies to the cloud

Current State:

While early tangible results indicate that the model is successful, perhaps the most important indicator that the teaming concept has promise for major transformation is the palpable excitement evident when speaking with anyone from the USDA / CoE team. These individuals are witnessing the progress, are uniformly amazed by the pace of change, and are, by all accounts, very excited to be forming a highly impactful institution within the government for future results. "I'd never have thought that we would be making progress on this scale, at this pace," said one USDA employee. While USDA had a vision for modernization, the CoE team has helped accelerate that change, refine the vision, and empowered the USDA team to aspire to new heights. As USDA CIO Washington notes, "When you bring

[34] https://coe.gsa.gov/centers-of-excellence/

in a third party with an objective point of view that's been there, done that, it really helps change the thinking, you know, which helps change the culture," he added.[35]

The team is currently forming the contract request and scale of work for Phase II, the implementation phase, to begin later in 2018. As Secretary Perdue noted to the combined team in a June 2018 meeting, "This is what matters to people… can they call in and get an answer, get the help they need?" Thus far, focusing major transformation on customer experience, finding cost efficiency through streamlining, and creating the infrastructure to help leverage the latest technology, the American citizens have a lot to be proud of in the USDA modernization effort.

Part 6: Lessons Learned

On a back corner in the main meeting room of the combined modernization team in the Department of Agriculture, there is a forgotten laminated poster board that likely escapes the attention of most people. Like a memento from a distant history of the department, the board is labelled "Technology Adoption Map" from November 2016, just one year prior to the CoEs. Likely just a forgotten relic that didn't get taken down in the rush to fill the spaces, the poster is a vast matrix with columns and rows meant to depict the adoption of the latest tech tools. On the left border of the vertical axis, there are 18 "initiatives" listed, including "use of agile application development, use of internet of things," and "use of social networking." Across the top of the horizontal Axis, each of the 22 subcomponent agencies from the previous agency structure are listed. The corresponding boxes within the chart are color-coded to show stages of adoption. Some of the boxes are shaded blue, with a "Pilot Use" designation, but most of the board is covered with lighter blue "interested" or gray "No Current Interest" designations.

With the perspective of the subsequent 18 months, this poster is an incredible contrast that highlights the progress from the new modernization approach. The matrix is fragmented, nebulous, and focused on tech tools rather than underlying business processes, but the most telling difference is that the November 2016 snapshot does not mention the term "customer" even once. The second phase of the Centers of Excellence engagement will not conclude until 2019, and ultimately no judgement of success or failure can be made until then, but there are many clear signs of progress and there have been many insightful lessons learned from the work thus far that can inform future government modernization and any change management effort more broadly.

- <u>Executive sponsorship is crucial</u>

Significant change must have the support of top leaders in an organization. The time and resources required to holistically modernize a large entity require persistent support throughout the leadership of an organization. Having Secretary Perdue and his team actively seek participation with the CoEs was critical. Because he shared his vision for reform publicly and widely with the department, all levels of leadership understood modernization to be a major priority, which helped leaders at all levels

[35] https://www.fedscoop.com/usda-it-modernization-centers-of-excellence-white-house-gsa-office-of-american-innovation/

buy-in to the effort. In the private sector, clients are paying for a modernization service, so there is a contractual component to ensuring that providers are giving clients what they need. However, in the government, change initiatives and policies are frequently ordered from the top down, but without the deep commitment and desire to be a part of successfully forming and implementing the change, success is much less likely.

- Transformation requires long-term holistic change rather than quick, superficial fixes

Particularly for government agencies that have not developed holistic IT strategies to directly support their operations, the need to modernize is more likely to be served by addressing underlying processes than simply buying new technology or updating a website. In the case of USDA, the department addressed structural reform to limit redundancy and elevate the role of CIO, but leaders also fundamentally reorganized their IT strategy to be customer-focused and data-driven at every decision. Along with this lesson, a best practice has been to set long-term, ambitious goals but provide tangible, near-term deadlines to drive progress every day. The long-term horizon signals permanence to the team and helps generate buy-in, but and tangible deadlines create work outcomes and show progress in the near term. Likewise, progress can stall very easily if there is no constant push to achieve milestones. In the USDA example, the Phase I and Phase II constructs were crucial to signal the long-term nature but also divided the work nicely to give immediate goals. As one USDA employee noted, "If you would have asked me a year ago if we would be making this kind of progress at this pace, I would have said, 'not here, not now.'"[36]

- A centralized, internal team of experts to assist with transformation is a productive model

Having an internal office, such as the Centers of Excellence within GSA, with broad knowledge of strategy and implementation that can be deployed to departments and assist with transformation during dedicated efforts is a model of human capital allocation that makes sense. By having broad exposure to many departments within a larger organization, and the experience of having implemented change in prior efforts, these experts will be a welcome resource to departments undergoing modernization.

Also, because of cultural concerns, having the experts be from within the larger organization helps with credibility. At USDA, the GSA folks were welcomed and quickly integrated into the team because they were fellow government employees, which added a layer of inherent trust and mutual appreciation of different skills. USDA Deputy CIO Francisco Salguero said, "Many times, just hiring outside consultants, they don't understand government perspectives or processes. CoEs are familiar with government initiatives already."

The GSA lead of the customer experience CoE, for instance, did not have intimate knowledge of farmers or the USDA farm loan process, but the USDA team-member did, and likewise, the CoE lead had significant experience mapping customer journeys, whereas the USDA hadn't had that experience before.

Creating the competition among USDA employees to join the modernization team was a crucial signal that the effort was valued within the organization and ensured the best internal IT professionals were working on the effort. Having the USDA work directly alongside GSA counterparts also gave the

[36] Interview w USDA employee.

department employees an exposure to a broad view of external considerations and strategic thinking that they will be able to drawn from in future years as the transformation initiatives continue. As USDA CIO Gary Washington says, the internal discussion went from a hesitant, "we've never done this before (at USDA)" to "let's see how we can get this done right."[37] The motivation and sense of achievement among the USDA team, he said, was tangible.

Finally, the cost-recovery basis of the CoE concept ensures that the GSA team's interests are aligned with the USDA client. As Francisco Salguero says, the GSA team "Even though they are only (at USDA) for a relatively short time, their incentives are aligned with us to make long term change."[38] Ultimately, the process is mutually reinforcing; as the CoEs evolve, they can better serve the USDA, which then improves the CoE model, generates better results at USDA and makes the team more attractive for future engagements with other departments.

- <u>User-centered design must be a primary consideration in government</u>

Ultimately, the government exists to support citizens; unfortunately, most IT systems and strategies within government haven't developed with that end directly in mind. Back-end support structures, data analytics, and certainly user interfaces such as websites and contact centers, must all be foundationally developed to serve citizens better. As Customer Experience CoE Lead Simchah Suveyke-Bogin reflected, "this project is more broadly about improving business practices and using IT to scale improving citizen services."[39] Throughout the CoE initiative, the team has engaged with farmers, ranchers, loan officers, borrowers, and any other citizens that engage with USDA to obtain their input and make their considerations a key part of the conversation about how to transform.

- <u>New leadership teams are well served by closely analyzing all previous and existing modernization efforts before setting a new strategy</u>

Often, a new Administration or new leadership will enter office and simply scrap all previous efforts, choosing to create a new course, which not only disregards significant effort but also undermines the career employees' faith that any new initiative will last longer than the current Administration. Instead, value is added when new leaders become deeply familiar with efforts from the past and the current state and build on the momentum of what has worked, changing direction only where necessary. In this case, the Administration built on the infrastructure of the previous Administration by engaging the Technology Transformation Services in the GSA and the multitude of talented public servants in the agency. However, the new leadership was able to build from that infrastructure and add new mechanisms that are intentionally non-partisan and long-term minded to leave a lasting effort at improving government well beyond the next change in Administration.

- <u>Having the right personnel is crucial</u>

Among the most notable observations anyone that enters the CoE spaces at USDA will notice is the enthusiasm and energy with which people there operate. This type of esprit has often been attributed by team members to the leadership and personalities of everyone involved. From the White House perspective, hiring an accomplished private sector executive in Joanne Collins Smee was critical,

[37] Interview with Gary Washingotn
[38] Francisco Salgiero interview
[39] Interview with Simchah Suveyke-Bogin

as she has significant experience with the technology and managing large-scale change. In turn, Joanne's effort to hire Bob DeLuca as Executive Director has been a very successful venture, as his day-to-day leadership and oversight of the team has built a culture where every employee is excited about their work and is passionate about improving the systems. Finally, USDA Secretary Sonny Perdue's selection of Gary Washington as the Chief Information Officer was a key decision, as Mr. Washington has proven to be an agent of change and has made extraordinary efforts to embrace the Centers of Excellence and ensure that his nearly 1,000 employees made every effort to capitalize on the opportunity to improve and reform their IT systems.