

**HIGH RISK LIST 2019: RECOMMENDATIONS
TO REDUCE RISK OF WASTE, FRAUD AND
MISMANAGEMENT IN FEDERAL PROGRAMS**

HEARING

BEFORE THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE
ONE HUNDRED SIXTEENTH CONGRESS

FIRST SESSION

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WITNESSES

WEDNESDAY, MARCH 6, 2019

Hon. Eugene L. Dodaro, Comptroller General of the United States, U.S. Government Accountability Office; accompanied by Cathleen Berrick, Managing Director, Defense Capabilities and Management Team; Nikki Clowers, Managing Director, Health Care Team; Elizabeth Curda, Director, Education, Workforce and Income Security Team; Mark Gaffigan, Managing Director, Natural Resources and Environment Team; Nick Marinos, Director, Information Technology and Cybersecurity Team; and Chris Mihm, Managing Director, Strategic Issues Team	
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HIGH-RISK LIST 2019: RECOMMENDATIONS TO REDUCE RISK OF WASTE, FRAUD, AND MISMANAGEMENT IN FEDERAL PROGRAMS

WEDNESDAY, MARCH 6, 2019

U.S. SENATE,
COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Committee met, pursuant to notice, at 9:31 a.m., in room SD-342, Dirksen Senate Office Building, Hon. Ron Johnson, Chairman of the Committee, presiding.

Present: Senators Johnson, Lankford, Romney, Scott, Peters, Carper, Hassan, Harris, Sinema, and Rosen.

OPENING STATEMENT OF CHAIRMAN JOHNSON

Chairman JOHNSON. Good morning. This hearing will come to order.

I want to welcome the Comptroller General, Mr. Gene Dodaro, and everybody that has come here in the audience to really review a very important report. It is interesting, the Government Accountability Office (GAO), every Congress issues its High-Risk Report, and the goal of that High-Risk Report is very similar to this Committee's stated mission statement, which is to enhance the economic and national security of America and promote more efficient and effective government. I think that pretty well is the whole goal behind both your High-Risk Report as well as the Duplication Report.

I will just ask that my written statement be entered in the record,¹ without objection.

I will keep my comments pretty short, but I think it was pretty noteworthy—and it is in my statement—that since 2006, because of the recommendations made by GAO in their High-Risk Reports, Federal agencies have saved nearly \$350 billion, and in fiscal year (FY) 2018 the saving was \$47 billion alone. So it just shows where a little bit of attention—and Senator Scott is working on a little project as well in terms of just taking a look at efficiencies in terms of disaster spending with the Federal Emergency Management Agency (FEMA), that type of thing. Attention to detail is incredibly important.

The point I wanted to primarily make in this is I know I think last year the Duplication Report, one of my recommendations was to work with GAO to actually help Congress craft the legislation.

¹The prepared statement of Senator Johnson appears in the Appendix on page 39.

I was talking to my staff. We really were not able to do that effectively because so many of the recommendations in duplication had to do with getting agencies to cooperate. It is kind of hard to put that into legislative language.

My sense is the High-Risk Report might lend itself more toward potentially legislative solutions. Now, a lot of it would be outside of this Committee's jurisdiction, but I just wanted to make the point that it is important to hold this hearing so we raise the profile of what I consider an incredibly important report established by GAO, along with all your other detailed reports, but this is the one that kind of prioritizes areas. We need to get the attention of Secretaries and department heads and Deputy Secretaries. That is one way of doing it.

The other way of doing it is honestly just leading the horse to water, helping Congress craft the—where a legislative fix is required—I mean, so many of your recommendations can be carried out and need to be carried out by the agencies. But where there is a legislative fix required, I would just ask GAO to work very cooperatively with this Committee, and we can pass it along to other committees' jurisdiction as well. I have just found the easier you make things, the more likely they are to get done.

I just want to thank all of your staff for their dedicated efforts. These are excellent reports. They really guide the way and just the numbers pretty well speak for themselves—\$350 billion worth of savings since 2006 and \$47 billion just last year. That is pretty remarkable. So, again, thank you for all your efforts. Thank all your staff.

And with that, I will turn it over to Senator Peters.

OPENING STATEMENT OF SENATOR PETERS¹

Senator PETERS. Well, thank you, Mr. Chairman. I would like to join you in welcoming our Comptroller General Gene Dodaro to today's hearing.

Mr. Dodaro, thank you for joining us and for all of the hard work of the men and women that are a part of the GAO. You work very hard to hold the Federal Government accountable and to ensure that taxpayer dollars are being spent appropriately. As always, I look forward to your testimony here today.

Since 1990, the GAO has alerted Congress to areas that are considered "high risk" by providing this list of Federal agencies and programs that they have identified as vulnerable to fraud, waste, abuse, or mismanagement.

The High-Risk List is a road map to cut waste, save taxpayer dollars, and set our country on a course for a more fiscally responsible future. Yet Federal agencies and Congress have struggled to effectively address many of the problems that are identified in this report.

I believe that this failure is rooted in the dysfunctional budgeting and appropriations process that is filled with last-minute deadlines, continuing resolutions (CRs), and brinkmanship that leads to government shutdowns.

¹The prepared statement of Senator Peters appears in the Appendix on page 40.

Instead of thoroughly examining whether the programs we authorize and fund are serving the American people effectively, Congress routinely relies on stopgap spending measures and continuing resolutions that disrupt the regular order and really do not allow for meaningful oversight of taxpayer dollars.

This leads to governmental short-termism. Too often, we spend more money to lease office space over years or decades than it would cost to build and own that property. We did not invest effectively in Federal cybersecurity, and we are now paying for credit monitoring for over 20 million people in the wake of the Office of Personnel Management (OPM) breach.

Efforts we make now to prepare for and mitigate climate change could also save the Federal Government, farmers, homeowners, and small businesses billions of dollars in the coming years.

The Federal Government is also dragging its heels in addressing toxic chemicals. The sooner the Environmental Protection Agency (EPA) and other agencies act to address Perfluorooctanesulfonic acid (PFAS)—fluorinated chemicals that are harmful to human health—the more money we can save on billions of dollars of future cleanup and health care costs.

This pattern of waste and delay is particularly alarming at a time when our country is on course to reach a \$1 trillion deficit in the fiscal year coming up. Taxpayers in Michigan and across this country certainly deserve a whole lot better, and we simply cannot afford to continue down this same path.

As Members of Congress, it is our duty to root out waste and ensure that government is being held accountable to taxpayers. We must fulfill our obligation to conduct rigorous oversight and craft bipartisan, commonsense reforms to strengthen the programs that Americans have come to count on.

We must also look for smart ways to cut spending and save tax dollars, such as eliminating duplicative or overlapping efforts that end up costing us a whole lot more in the long run.

I appreciated the opportunity to work with my colleagues Senator Paul and Senator Lankford to enact legislation to increase government efficiency last Congress. I also look forward to reviewing Senator Lankford's "Waste Report" and finding new areas to work in a bipartisan way with Chairman Johnson and Members of this Committee to make our government function better.

We must make real progress on these goals—starting with today's hearing.

By examining the areas of concerns raised in today's hearing, we can focus on providing the proper funding and oversight of Federal programs that will enable us to rein in spending, reduce waste, and provide greater accountability for the American people.

And with that, Mr. Chairman, I look forward to the discussion. Chairman JOHNSON. Thank you, Senator Peters.

Mr. Dodaro, you are fully aware that we swear witnesses in, so if you will please stand and raise your right hand. Do you swear the testimony you will give before this Committee today will be the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. DODARO. I do.

Chairman JOHNSON. And, actually, we needed everybody else to stand as well, and I forgot to do that.

[Witnesses sworn.]

Chairman JOHNSON. You are all sworn in. Thank you. [Laughter.]

Gene Dodaro has been the Comptroller General of the U.S. Government Accountability Office since 2010 and has more than 40 years' experience at the agency, including as Acting Comptroller General, Chief Operating Officer (COO), and head of the Accounting and Information Management Division. Mr. Dodaro.

TESTIMONY OF HON. EUGENE L. DODARO,¹ COMPTROLLER GENERAL OF THE UNITED STATES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE; ACCOMPANIED BY CATHLEEN BERRICK, MANAGING DIRECTOR, DEFENSE CAPABILITIES AND MANAGEMENT TEAM; NIKKI CLOWERS, MANAGING DIRECTOR, HEALTH CARE TEAM; ELIZABETH CURDA, DIRECTOR, EDUCATION, WORKFORCE & INCOME SECURITY TEAM; MARK GAFFIGAN, MANAGING DIRECTOR, NATURAL RESOURCES AND ENVIRONMENT TEAM; NICK MARINOS, DIRECTOR, INFORMATION TECHNOLOGY AND CYBERSECURITY TEAM; AND CHRIS MIHM, MANAGING DIRECTOR, STRATEGIC ISSUES TEAM

Mr. DODARO. Thank you very much, Mr. Chairman. Good morning to you, Ranking Member Peters. Senator Romney, Senator Rosen, good morning to you both. I am very pleased to be here today to talk about GAO's high-risk update.

As you mentioned, Mr. Chairman, this program continues to be a valuable congressional oversight tool and produces tangible benefits for the American people. You mentioned the financial benefits that we have saved, approaching \$350 billion. A lot of that, I might point out, is where we have seen progress in the high-risk areas, Congress has had a hand in helping that progress. We have a two-page section in my written statement about all the actions Congress has taken through legislation, through authorization bills, and through appropriation bills to implement GAO's recommendations.

You asked where congressional action is needed. There is actually a note in our report next to each of the high-risk areas where Congress needs to act. And we can talk more about that, but we have specific recommendations to Congress, where appropriate, to remedy these high-risk areas.

Now, since our last update in 2017, we have seen some progress. Seven areas have improved. Two areas have improved to the point that we are taking them off the list. One is Department of Defense (DOD) supply chain management. Through efforts to implement our recommendations, DOD is now saving millions of dollars in inventory management, asset visibility, and material distribution, and DOD has strengthened its ability to help support military operations.

The second area we are taking off is mitigating weather satellite data gaps. The National Oceanic and Atmospheric Administration

¹The prepared statement of Mr. Dodaro appears in the Appendix on page 44.

(NOAA) launched a new satellite a year or so ago. It is now producing better weather forecasting information for the public, so there is a clear benefit there. And DOD is on track to update its polar orbiting weather satellites in the next couple of years. We think that program is on track now thanks to implementation of our recommendations. Both of these areas had congressional involvement, and I want to underscore that.

The majority of the 35 areas that are on the list have not really progressed very much, so substantial effort is really needed by the agencies and by Congress to help make further progress in these areas.

Three areas have actually regressed since our last assessment: acquisition at National Aeronautics and Space Administration (NASA), the EPA's oversight of toxic chemicals and assessments, and limiting the Federal Government's fiscal exposure by better managing climate change risk. All of those have moved backward in a number of areas.

There are many areas that need attention, but there are a few that I want to single out this morning for your special attention. One is the Pension Benefit Guaranty Corporation (PBGC). The multi-employer portion of the PBGC is expected to be insolvent by 2025. That basically means that 11 million Americans who are counting on that will not potentially have an adequate pension. The amounts that would be available to them if this went insolvent would be \$2,000 a year—hardly enough to qualify as an adequate pension.

The second area is the Federal role in housing finance. Fannie Mae and Freddie Mac are still in Federal conservatorship 10 years after the global financial crisis. The Federal Government has assumed all or most of the risk associated with housing programs. About 71 percent of all single-family mortgages are supported by the Federal Government, either directly or indirectly. The portfolio of Ginnie Mae has swollen to about \$2 trillion, the Federal Housing Administration (FHA) over \$1.2 trillion. There is tremendous exposure here. A lot of the lending in the mortgage area is being done by nonbanks, which are not regulated as much as the banking industry, and so this increases the risk. So this area is very important.

Cybersecurity and protecting the Nation, both the Federal Government systems, critical infrastructure protection, but also protecting the privacy of Americans, are important and we have many recommendations. Actually, last year—Mr. Chairman, you mentioned we do this update every 2 years. I have been so concerned about cybersecurity, we did a special update that I testified on last summer before Congress. We need a more comprehensive national and global strategy. We need to fix the problems. We still have over 700 GAO recommendations that have not been implemented. We do not know as much as we need to know in the Federal Government about critical infrastructure protection, the electricity grid, financial markets, telecommunications, and other areas. We have called for Congress to pass a comprehensive privacy protection framework for consumers. This is, we believe, is needed.

The 2020 Census, I have been before this Committee and talked about that before. That still needs a lot of attention. We are con-

cerned about lack of testing in the preparation for the 2020 Census, and I can talk more about that in the question and answer (Q&A).

I know you are also concerned in this Committee about the Department of Homeland Security (DHS). In that area, they have made a little bit of progress. We are tracking 30 performance measures. They now have 17 that they have fully met, but we have not really materially changed the overall rating. Financial management modernization continues to lag. Acquisition policies have been improved, but not consistently implemented. And morale continues to be a real problem there at the Department.

So there is a lot to talk about today. I will conclude my opening statement now, and I would be happy to engage in questions with the Committee. I underscore GAO's full support to work with this Committee and others in Congress to make these high-risk areas experience progress.

When I was before this Committee for my confirmation, one of the goals I set for myself was to not only identify all the high-risk areas across government, but to get them actually solved and off of the list. So that is definitely our goal, and I know this Committee shares that goal. I look forward to engaging with you today and beyond.

Thank you very much.

Chairman JOHNSON. Thank you, Mr. Dodaro.

Normally I would defer my questioning, but I am going to have to leave for another hearing here in about 10 minutes, so I do have a number of questions to ask you.

Let us start with DHS. It has been a troubled agency because it cobbled together 22 different agencies with different missions, and it has enormous responsibilities. Brock Long took over as being head of FEMA and within literally days was hit with just unprecedented hurricanes, fires, that type of thing. We just updated our chart of unaccompanied alien children (UAC) and family units coming to this country. In 5 months, we have 159,000 unaccompanied children and people coming in illegally as family units compared to 2014 where President Obama declared the humanitarian crisis of 120,000. So 2014, 120,000 as a humanitarian crisis. In 5 months, we are already at 159,000.

So the Secretary is, from my standpoint, dealing with crisis after crisis. It is kind of hard to get DHS management of 22 different agencies together. Can you just kind of speak to that basic reality of that Department?

Mr. DODARO. Yes. We placed DHS on the High-Risk List in 2003 the day it was created. They were compromised of 22 different departments and agencies, each of which had their own challenges to begin with.

Now, to be fair, they have made a lot of progress. They have set policies in place. They have strategies. They have come a long way, and we have reduced the scope of the high-risk area down to management integration of their basic functions on purchasing and acquisitions, financial management, human capital, and those type of areas. So they have a good plan. We have probably the best relationship that we have with any agency in working with them to make progress. We have agreed on these 30 measures they need to put in place, and they have made good progress.

Chairman JOHNSON. Again, you are seeing—

Mr. DODARO. I am seeing progress.

Chairman JOHNSON. You are seeing buy-in from management and from the Secretary.

Mr. DODARO. Yes. They have a plan. But they are down to the real tough issues right now, and that is really the problem. While they get a clean opinion on their financial statements, their financial management systems still require a lot of manual intervention to produce the financial statements. They have tried and failed a number of financial system modernizations. They are trying again now. For some components, FEMA and U.S. Immigration and Customs Enforcement (ICE), they do not even have a plan yet on how they are going to go forward on financial system modernization. They need more people with the right kind of skills in financial management.

For the morale issues, we have made recommendations. They have implemented our recommendations to have plans at the component agencies where they are having problems where you really have to manage at the detailed level in those situations. But they have not been successful in breaking through. They are still last out of the 20 largest Federal agencies in the Federal Government with an employee satisfaction score of only about 60-61 percent, I think. And we are going to dig in a little bit more there.

On the acquisition side, they have put in place a lot of good policies and practices. They have not fulfilled one of our recommendations to really assess the capabilities of their current acquisition staff and fill gaps if needed. And they have not really adhered to implementing their own policies and practices. As a result, the last time we looked, about half of their portfolio of major acquisitions were over cost and behind schedule.

So they have a road map. They just need to execute.

Chairman JOHNSON. Under our homeland security part of our Committee, we have four primary priorities. You mentioned three of them, or I mentioned: border security, cybersecurity, protecting our critical infrastructure. Last week, we held what I thought was an excellent roundtable on the threat of electromagnetic pulse (EMP) and geomagnetic disturbance (GMD) against our electrical grid, but our grid is vulnerable, whether it is a cyber attack or whether it is other kinetic attack or whatever.

I know in your testimony you are talking about—and Senator Peters has a bill that recognizes this, but the whole issue of attracting and then retaining personnel in cyber, in computer science, because the private sector pays so much more. That is a real issue.

I want to go to a different issue. We had the blue ribbon study panel come in here talking about the threats on biotreats. Their number one recommendation was somebody has to be in charge. Throughout all the departments, all these agencies, there are so many different agencies that have some part in different budgets in the whole biotreat. But we have the same issue, whether it is cybersecurity, whether it is protecting our critical infrastructure, things like the electrical grid.

I would like you to just kind of speak to that, from my standpoint, imperative. Somebody has to be in charge, and they have to have a high enough profile, they have to have direct access to the

President and top levels of government to really drive this process and consolidate all these responsibilities so we have a unity of effort, as we are trying to do with DHS, in some of these critical areas, like cyber, like protecting our critical infrastructure.

Mr. DODARO. Yes. Most of the high-risk areas we have added to the list in recent years have been areas where multiple Federal agencies need to work together in order to have an appropriate effort to address the problem.

Chairman JOHNSON. Let me stop you right there. So where you have seen that, have you really seen, without somebody in charge—I hate to use the word “czar,” but, I mean, that shows the concept. Have you seen those agencies ever really effectively work together?

Mr. DODARO. Not really, no. Many of our recommendations are focused on that. Our recommendations in the cyber area is to have a comprehensive national strategy that is both domestic and global. We need cyber diplomacy as well, because there are no international norms in this area. And while the government has put out national strategies—and we give this Administration and prior Administrations credit—still there is no implementation plan with clear roles and responsibilities, resources that are needed, metrics to decide how much progress is being made over time.

I put cybersecurity on the high-risk area across the entire Federal Government in 1997. We have been pushing for this. We put critical infrastructure protection on in 2003. I still do not believe there is enough of a sense of urgency in correcting the problems across the government, whether it is in individual agencies or across the government. I think the cyber risks are getting more complicated. With the Internet of Things (IoT), artificial intelligence (AI), and quantum computing on the horizon, this issue is going to get more complicated, not less, and these are global supply chain issues. And so we need a strong, comprehensive national strategy. We need leadership. The leadership has to come out of the White House in a number of these areas, and the National Security Council (NSC) is charged with this right now. We are doing an assessment right now to find out exactly who is in charge of what and how it is being executed since they eliminated the position of Cybersecurity Coordinator in the White House. So we are trying to pin down that very issue, and we will provide this Committee with a detailed report with our recommendations on that.

But you are exactly right. We need a strategy. It needs to have all the elements of a successful strategy, and it needs to be implemented and tracked over time.

Chairman JOHNSON. Again, I think urgency exists, but when the urgency is diffuse, we need somebody in charge in these different areas, whether it is bio, whether it is cyber, whether it is critical infrastructure. Because that is the only way you create the public pressure to have the urgency that is going to be required.

Mr. DODARO. I agree with you, Mr. Chairman. I agree with you. But you also need the urgency within individual departments and agencies. Given the OPM breach occurred several years ago, they still have not implemented our recommendations to address the vulnerabilities at OPM. So virtually every Federal department and agency has problems that they can fix themselves. There are national issues that need the leadership that you are talking about,

so you need both. I would not overlook the individual agencies and departments because every vulnerability that is not fixed is a vulnerability that can be exploited and cause the Federal Government great harm.

Chairman JOHNSON. Well, thank you. Now I will turn it over to Senator Peters, and I mean fully turn it over, probably, so thanks.

Senator PETERS. Well, thank you, Mr. Chairman. Do you want me to take the—

Chairman JOHNSON. Sure, sit in the big chair. [Laughter.]

Senator PETERS [Presiding.] I will sit here until Senator Lankford gets here.

Mr. Dodaro, I think it is quite evident that the EPA is facing some serious challenges in assessing and controlling a number of toxic chemicals, things that you have outlined in your report as well. I would argue that the EPA and the Department of Defense have consistently failed to take responsibility and protect Michigan residents and communities across the country from exposure to PFAS, which are harmful fluorinated chemicals, as you know.

I appreciated the GAO's participation last September when I convened the first Senate hearing on PFAS, and I want to follow up on the Federal Government's exposure to what could be considerable cleanup costs. While you have estimated the government's total environmental liability, has the GAO since determined the Federal cost of cleaning up PFAS contamination specifically?

Mr. DODARO. We have not been requested to do that and, therefore, have not, but we would be happy to work with you in designing some work where we could go in and try to determine that figure.

Senator PETERS. So there is some precedent for analyzing total costs related to clean up, health care, and liabilities for something as specific as PFAS? And how would you do that analysis kind of generally?

Mr. DODARO. I would have to talk to our experts and be able to figure out how to do it. We would start with what efforts the agencies have made to deal with it and find out what methodology they have used. Under Federal accounting standards, departments and agencies are supposed to determine their environmental liabilities and report them in their financial statements. The largest environmental liabilities that we have at the Federal Government are at the Department of Energy. This year they reported almost half a trillion dollars alone just at the Energy Department.

So all the departments and agencies are supposed to do this, so we would look at what the departments and agencies have done. We would look at best practices and how to develop such methodologies, and then we have a standing contract with the National Academy of Sciences (NAS), so we would bring in some experts in that area that have experience to advise us in developing an estimate, if one is not already available.

Senator PETERS. Well, I think we certainly need a coordinated, multiagency action plan to tackle the PFAS contamination crisis. But I am also concerned that an interagency review process could be used to delay action to protect health and safety, which we cannot allow to happen. This morning, along with three of my colleagues, I sent an oversight letter asking for information on how

the interagency process influenced the development of the PFAS Action Plan and if any agency tried to weaken EPA's plan to address drinking water contamination.

So my question for you, sir, is: Has GAO done a comprehensive assessment and evaluation of the Federal response to the PFAS contamination crisis, and looking specifically at how the EPA, DOD, the Office of Management and Budget (OMB), and the Department of Health and Human Services (HHS) have worked on this issue and what can be done better?

Mr. DODARO. We have looked at how DOD handles some of these chemicals for example, firefighting foam that is used at their military installations and bases. But we have not been asked to and have not done a comprehensive assessment in that area. But, again, we would be happy to work with you and other Members of the Committee if you want us to do one and to do that.

Senator PETERS. Well, I appreciate that. This is a priority for me. It is certainly a priority for the people of Michigan. I know many of my colleagues, Senator Hassan and others, have significant issues in their States as well. So I think we would all like to work—

Senator CARPER. Would the Senator yield for a moment?

Senator PETERS. Yes.

Senator CARPER. I have to run off to the Environment and Public Works Committee where we are having a hearing that starts in about a minute. This is an issue that has popped up all over the country. It is one we have been very much focused on. We very much appreciate your taking a look at it.

Thank you so much.

Senator PETERS. That is great. Senator Carper is a lead on a very important bill related to that. Thank you, Senator Carper, for your leadership on that bill.

The Federal Government suffers, as you have already mentioned, from a shortage of trained cybersecurity professionals for a number of reasons, including the recruitment and retention of these professionals. Can you talk about improvements agencies have made in shoring up our cybersecurity workforce? And, specifically, which agencies are making the most progress, in your estimation, and perhaps you could share some of those best practices for us?

Mr. DODARO. Yes, I will call our cybersecurity expert to the table, Mr. Nick Marinos, to help give you specifics. But one of the things that we found is Congress has put a lot of legislative requirements on agencies to assess their cybersecurity workforce gaps, and most of the agencies have not completed that task. So recently there has not been a full assessment in most parts of the Federal Government about their existing cybersecurity workforce and what gaps they need to fill in those areas. So that has been an important area. We have looked at that and made lots of recommendations to the agencies to be able to do that.

But this is an area where OPM has not provided enough leadership over time, in my opinion, to determine classification standards for the cyber workforce. There is really no planning ahead for this type of situation that we find ourselves in now. But Nick can give you more details.

Senator PETERS. Great. Thank you.

Mr. MARINOS. We completely agree, Senator, there is a significant shortage not only within the Federal Government but globally for cybersecurity talent. We have seen with respect to the Federal Government one of the biggest challenges have been—and we have heard this actually from chief information security officers (CISOs)—that you bring in great talent, you develop them into a great workforce, and they become the most competitive folks to actually leave government for higher-paying jobs in the private sector.

One of the things that I would mention, though, to kind of double down on what Mr. Dodaro mentioned, is the importance of agencies knowing what their current workforce is and then knowing what they are going to need. So, ultimately, the Federal agencies really do need to do a better job at really assessing what their gaps are.

Mr. DODARO. And, Senator Peters, I would mention, too, that I do not think this is necessarily an insurmountable issue. I wanted to expand our cybersecurity workforce at GAO. We just hired over 30 cybersecurity people. I have gone to colleges and universities—Carnegie Mellon, University of Maryland—where they have Cybercorps scholarship programs, and they are producing good people. Some of these people are going back for second careers, so they have a variety of experience, and we try to establish a pipeline where we can continue to recruit and bring people in.

So you have to work at this. There are a lot of flexibilities the agencies have been given. I am not minimizing the task associated with this, but I do think with concerted effort, greater results could be achieved.

Senator PETERS. I am out of time here, but just as part of looking at some of those gaps and how we make Federal service more attractive to folks, it seems to me we have rules that were made many years ago before people moved from job to job, and they go into the private sector, then come back because they believe in the mission of what we do here, but then they want to go back to the private sector. And yet people are limited in what level they can come into in the Federal Government based on rules. So those are the kinds of things that I am sure you have seen that we need to fix. We need to have a 21st Century personnel policy, particularly in cyber, but in other critical areas. Would that be an accurate statement?

Mr. DODARO. Absolutely. In 1980, GAO got its own personnel authority from OPM, and we got rid of the General Schedule (GS) classification system, and went to a broadband system where it is much easier to bring people in and out of the government. Actually, we have changed our whole recruiting approach so that we can facilitate that kind of activity, particularly with today's modern workforce. So we recruit all levels. In any one year, a number of people we hire are people we are hiring back into GAO, who had been there earlier, but went to the private sector, went to academia or some other place, and then come back to the organization. So with this different personnel structure, it would be a lot easier than it is under the GS structure.

Senator PETERS. All right. Thank you.

OPENING STATEMENT OF SENATOR LANKFORD

Senator LANKFORD [Presiding.] That could be the most earth-shattering personnel whole series of hearings conversation I have heard in a long time, that we got rid of the GS structure, we went to this, and it actually worked more effectively. We will follow up on that in the days ahead because there have been a lot of questions on that. So glad to have you in the dialogue. Senator Rosen.

OPENING STATEMENT OF SENATOR ROSEN

Senator ROSEN. Thank you for being here and for your report, and I want to kind of continue in this vein of not just cyber workforce but the information technology (IT) workforce in general and how we are preparing and planning and developing this people pipeline, maybe not just at the college level but even down starting in the junior high level.

I am a former computer programmer and systems analyst, and I am really concerned that IT staffing is an issue that comes up over and over again in this report. For example, there is a lack of staff to oversee the \$886 million contract for integrating IT systems needed, like you said, to conduct the census next year; problems with recruiting IT personnel for the Defense Department over and over again.

However, conversely, elsewhere in your report you point out that the Federal Government invests \$90 billion a year in IT, so this is concerning to me that we have a shortage, we are investing \$90 billion, and how our tax dollars are effectively spent.

But where I really think this is an issue is on workforce planning, training, and development. So I want to be sure that we are forecasting the need of IT professionals going forward across the spectrum, not just cyber. There are many areas in the IT world.

And so what I would like to do is to see if you would be willing to institute an analysis going forward of the needs that we are going to have, how we invest in our trained workforce and how we partner with our State, Federal, and community partners.

So do you have this analysis in your department for the next 5 to 10 years, as much as you can currently do, knowing that we could be rolling and changing it?

Mr. DODARO. This is one of the key issues that we have looked at. We have designated IT acquisitions and operations across the entire Federal Government as a high-risk area. Most of the \$90 billion that gets spent every year is spent to maintain existing legacy systems and not put new systems in place.

I worked with this Committee back in 1996 to actually create Chief Information Officers (CIOs) for the Federal Government to provide leadership. Congress strengthened the leadership requirements for the Chief Information Officers, but our recent work has shown that the Chief Information Officers and departments and agencies still do not have all the roles, responsibilities, and authorities to work on the IT workforce issues.

So this is a particular problem because you have to—

Senator ROSEN. Would you be willing to conduct an analysis of the need? So then we can go out to those junior high and high school counselors, college counselors, work with the businesses in our States to be sure that we are developing the skills and people,

especially kids or anyone who needs retraining, to enter this workforce.

Mr. DODARO. Well, that definitely needs to be done. We would not substitute our judgment for the management of the individual departments and agencies, however. So they would have to determine what their needs are.

Let me ask Nick Marinos, who is our cybersecurity expert, to tell us, but we have identified this as a high-risk area across the government.

Senator ROSEN. I want to ask you one more question about legacy systems. I know the importance of legacy systems. Like I said, I used to write computer code. But there also is an importance for transitioning from those legacy systems and having that bridge as technology and things change and the people who are able to maintain and support those legacy systems begin to retire or move on.

And so would you be willing to do an analysis of how we bridge from the legacy systems in smart ways, effective ways, on to newer technology and different platforms?

Mr. DODARO. Yes. We would be happy to work with you on that. In fact, we are currently examining how agencies are identifying and categorizing their IT positions, and we expect to issue a report next week on that subject. So perhaps after you take a look at the report, we could get together and work out what additional things you would like to have done.

Senator ROSEN. I would love to do that. This is a huge challenge as technology changes and challenges of the past are not challenges of the future and how do we bridge that in smart ways going forward.

Mr. DODARO. I agree with you, Senator Rosen. This is a very important issue, and we are committed to working with you on it.

Senator ROSEN. Perfect. Thank you.

Did you want to talk about cyber?

Mr. MARINOS. Yes, Senator. I think even more broadly to your comments with respect to the IT workforce, I think one thing to build on what Mr. Dodaro mentioned with respect to the authorities that are empowering our Chief Information Officers, we also find routinely across IT and cybersecurity issues that coordination among the C-suite entities within the Federal Government agencies is absolutely critical. That is the only way really to know that the IT workforce needs are really getting communicated effectively to the human capital office as well.

Senator ROSEN. So let me ask you this question, because we are here in Congress and we write legislation. So what do you think might be some effective ways that we can help promote and encourage our businesses, our institutions, our educational opportunities? How can we best partner to provide this workforce?

Mr. MARINOS. Well, one thing I would say is that Federal agencies have a lot of flexibility when it comes to the hiring authorities that they can use but quite frequently are only leveraging a small percentage of those. And so part of it is educating the human capital workforce on these critical areas of need. So as you have human capital officers and their staff making decisions ultimately on where to recruit, who to hire, how to make those decisions, and

they are informed about the technical issues. And so actually training is quite a substantial component of this.

Senator ROSEN. But does it go deeper than recruiting down to younger educational levels, so that the pipeline is already there by the time you are starting to get out of high school and people are thinking about what they are going to do next?

Mr. MARINOS. I absolutely agree, and I would say that with respect to the cybersecurity workforce side of things, we have explored and do routinely look at efforts within the Office of Personnel Management and DHS. There are programs that they are partnering on to really do that, look at the K–12 education aspect of this as well. And I completely agree, if we do not get people really focused and interested in these areas even before they enter into universities, then we are losing out on some very good talent.

Senator ROSEN. Thank you.

Mr. DODARO. I think in addition to what Nick just said, Congress' role could be also in addition.

Senator ROSEN. Yes.

Mr. DODARO. To do additional oversight over departments and agencies. I think that the congressional oversight in this area is to inquire what agencies are currently doing to manage their IT workforce, to get coherent answers from the agencies on what they are doing, because Congress could, as they have done in the past, give a lot of additional authorities, but if they are not being used effectively—

Senator ROSEN. Right. We have apprenticeships, grants, and work opportunity tax credits. We want to be sure that they are out there, not being wasted, and used in the best ways.

Mr. DODARO. That is my point. So I think you need both.

Senator ROSEN. Yes. Thank you. I appreciate it.

Mr. DODARO. Thank you.

Senator LANKFORD. Senator Romney.

OPENING STATEMENT OF SENATOR ROMNEY

Senator ROMNEY. Thank you. I appreciate the chance to speak with GAO this morning, and I appreciate your work, Mr. Dodaro. Obviously, the responsibility you have is massive. I cannot imagine any accounting firm in the country that has a client as big as this one or as dysfunctional sometimes as this one. And so I appreciate the work that you do and the work of your entire team. It is essential, and I wish we were more effective in responding to the identification of concerns that you bring to our attention.

I do not have to tell you that one of the great challenges of our Nation is a debt of about \$22 trillion, which is going to be growing by about \$1 trillion a year into the indefinite future. And if we were to take all the money that the Americans earned this last year, take all of the money that they earned and used it to pay down the debt, why, we would still have more debt to pay down. So it is becoming a very large number, and the interest on that debt is becoming a real challenge as well. I would note that that number is large and growing larger and certainly presents a certain risk to us.

Those of us who have run national campaigns—and there are quite a few in this chamber that have, and some are right now. [Laughter.]

Often talk about balancing the budget with just taking care of waste, fraud, and abuse. And I would like to ask a question which may be impossible to answer because it is not really in your purview to have to add all this together. I am wondering, if one were able to gather all of the waste, fraud, and abuse that exists throughout government and not to reach perfection, not nirvana, but a realistic, if you will, best demonstrated practice that might be employed in either governments or in corporate America, and to say if we were able to apply those techniques in Medicare, for instance, if we were to do it as effectively as the best insurer does in preventing waste, fraud, and abuse among their subscribers, if we were to take those kinds of practices and apply them throughout government, do you have a sense of what the number might be? How much number is available in waste, fraud, and abuse if we were just to apply the best practices that are reasonably existent? Because, for instance, there is a tax gap, which is worth half a trillion dollars, but we are not going to close the tax gap entirely. But being realistic, what kind of number might we be looking at?

Mr. DODARO. I think you are basically looking—in addition to the tax gap, the current most recent estimate of improper payments—these are payments that were made or were made in the wrong amounts—is \$140 billion in the last year. So you have that figure out there. But you are not going to eliminate all that either.

The bottom line is you can do a lot, and the amounts will be maybe in the tens of billions or hundreds of billions of dollars, but it will not be enough to deal with the unsustainable long-term fiscal path of the Federal Government.

The amount of debt to gross domestic product (GDP) right now is 78 percent, and it is on a path to exceed the historical high of 106 percent of gross domestic product for World War II. The Social Security program this year, both the Old Age portion and Disability, will be approaching \$1 trillion a year. Both Medicaid and Medicare are on track to achieve individually \$1 trillion by 2026. The Medicaid amount considers State spending as well, so it is not all Federal, but mostly. And the interest on the debt is expected to be \$928 billion, according to Congressional Budget Office (CBO), by 2029. So we are on track for just those areas alone to be \$4 trillion, sort of an opening bid before you fund anything else in the Federal Government.

There is considerable fraud, waste, and abuse in the Federal Government, but not enough to deal with the structural problem that we have between our expenditures and our revenues. It is going to require Congress to look at all the entitlement programs and the revenue side of government, in order to get it on a more sustainable path.

I have also recommended that Congress change how it tackles the debt ceiling issue. The current approach is divorced from the appropriations process, and all it does is authorize Treasury to borrow the money to pay the bills Congress and the President have already authorized. And when there is a concern about whether the Federal Government is going to raise the debt ceiling in time, as

we are right now—we are in a debt issuance suspension period. Treasury is taking extraordinary actions. They are actually borrowing against Federal retirement funds in order to pay the government's bills until they get the authority from Congress to borrow more. We did a study on the interest costs of borrowing money, if there is concern in the markets, it shows the interest rates go up; markets want more of a premium.

Also, some in the markets, Treasury security markets, are avoiding purchasing securities that might mature around the time Treasury could run out of cash. So it is distorting liquidity in the secondary markets. So it does not control the debt, it is causing our interest costs to go up, and it is distorting the markets. And so we need to have a different approach in this area.

We should do everything we can to reduce fraud, waste, and abuse in the Federal Government, but I have also recommended that Congress have a plan to deal with the long-term unsustainable nature of the Federal Government's budget and to change the debt ceiling. We need to do everything we can to never affect the full faith and credit of the Federal Government, which if we do not pay our bills on time, that would be broaching, I think, very dangerous territory.

Senator ROMNEY. Thank you. For some of us who have been outside Washington for our entire career, the fact that Washington did not grab the work that was done by Simpson-Bowles and the effort that was done by their group was a bit of a mystery. And it does sound like waste, fraud, and abuse might be able to come up with tens of billions of dollars or even \$100 billion, but that we have to address the structural challenge that we have, in particular with regard to some of our entitlement programs as well as other parts of our spending, to avoid, as you say, almost \$1 trillion in interest costs.

I had the occasion at the end of one of my unsuccessful campaigns to receive a call from a former Democrat President who said, "We cannot lead the world if we are paying interest like that." I hope you will help give us some encouragement to move in that direction.

I know my time is up. I want to underscore the comment made by our Chairman just before he had to leave for another committee hearing with regard to cybersecurity, and your agency's suggestions as to how we can organize an effort to actually implement true agency-to-agency cybersecurity would be helpful, and I think his point, which is you need someone or some group responsible for this across agencies and perhaps on a more strategic basis than hoping each agency will just do it on their own. I do not know how to go about doing that, but you might be able to give us some guidance in that regard.

Mr. DODARO. On that point, Senator Romney, the Department of Homeland Security does have central responsibility for working across the Federal departments and agencies. But to address fully cybersecurity issues, in our opinion, you also need to be able to work with the private sector and others. And so DHS is an important component of coordinating across the Federal Government, but to deal with cybersecurity issues, you need a national strategy to

deal with State and local governments as well as the private sector, and that has to be out of the White House.

Senator LANKFORD. Senator Hassan.

Senator HASSAN. Actually, I think Senator Sinema has a pressing problem, so I will yield to her.

Senator LANKFORD. Yes, Senator Sinema.

OPENING STATEMENT OF SENATOR SINEMA

Senator SINEMA. Thank you, Mr. Chairman. Thank you, Senator Hassan. And thank you so much, Mr. Dodaro, for being here today.

The GAO does important work, and I look forward to working with you and all of my colleagues to improve the effectiveness and efficiency of Federal programs. As you know, the Phoenix Department of Veterans Affairs (VA) was the epicenter of the VA crisis, and that crisis was the result of oversight, gross mismanagement, a broken scheduling system, and insufficient resources and staffing.

There has been progress, but I am concerned that the VA appears twice on the High-Risk List for access to care and its contracting practices. Our office continues to hear from veterans about problems accessing care and navigating the VA bureaucracy. Access to care is especially challenging in rural areas in our State where veterans have to navigate existing community care policies and transportation to facilities. I have heard from our Veterans Service Organization (VSO) leaders about veterans who actually forgo medical treatment because it is just too difficult to navigate the travel and the regulations.

As you know, Congress passed the VA Maintaining Internal Systems and Strengthening Integrated Outside Networks Act of 2018 (VA MISSION) to streamline and improve contracted care in the community, and under these recently released standards, veterans who have to wait more than 20 days or drive more than 30 minutes to get primary care can use this contracted care. I support that effort because our veterans deserve the best care. I am concerned that the GAO names the VA's acquisition policies and health care access programs as most at risk for waste, fraud, abuse, and mismanagement. This is, of course, very concerning because this is at the core of implementing the VA MISSION Act, and poor implementation of the act could further strain the issues that have been identified by the GAO and further put at risk the quality of care for our veterans.

So given the importance of the VA MISSION Act, which we are working to implement, and how important it is to improving health care access for veterans, how do you recommend that Congress exercise oversight on the MISSION Act and its implementation?

Mr. DODARO. I think one of the first things—and I have been joined by Ms. Nikki Clowers, who is head of our Health Care Team and does a lot of work at the Veterans Affairs department. Actually, it is on the High-Risk List three times. You caught two of them. The third one is in the disability area where we have their inability to process disability claims, and particularly appeals on disability claims, in a timely fashion.

So there is a lot of room for congressional oversight in this area. We placed the Veterans Health Care portion on the High-Risk List

in 2015. There has yet to be a comprehensive plan on how to address the high-risk issues that we identified in that area.

I have met with four VA Secretaries since then, and I met most recently with Secretary Robert Wilkie, and he has a modernization approach that he pledges that will address our high-risk areas. But there are a lot of details that need to be worked out and resources and commitments. We have met with the heads of the Veterans Health Administration (VHA). I met with the head of the Veterans Benefits Administration (VBA). We just put the acquisition area on the High-Risk List because of concerns about outdated policies and procedures. They have not updated their acquisition regulations in about 11 years. They have been working since 2011 on an update, and they still do not have the update available. Their approach to save money in the surgical and medical supplies areas produced limited savings. We found about 20 percent of their procurements are still emergency procurements where they are not going through all the competitive processes to get the benefits of lower costs.

So I will ask Nikki to explain a little bit more in the health care area, but these are areas I am very concerned about, and we are committed to working with Congress. But I think congressional oversight is absolutely essential.

Senator SINEMA. Thank you.

Ms. CLOWERS. Senator, you raise an important issue in terms of the Choice program, the program that we have right now in terms of veterans getting care in the community as they transition to the new program under the MISSION Act. We found a number of problems that veterans were experiencing under the Choice program, as well as providers in terms of timely payment to providers, as well as access to providers on the beneficiary side. For example, last summer, we were looking at the access and timeliness in terms of veterans getting care, and the policy states the veteran should be seen within 30 days under the Choice program. And when you just outlined the process, it could take up to 70 days for the veterans to receive care. And we went through the medical files and found cases where the time was exceeding that 30 days.

So we made a number of recommendations to VA to consider as they transition to the new program to make sure that the contracts are written in a way that will hold everyone accountable for providing timely access to care for the veterans.

Senator SINEMA. Thank you.

Of the five criteria that GAO uses to determine if a program can be taken off the High-Risk List, what is the area amongst those five criteria where the VA struggles the most? And how can we help the VA overcome that particular challenge?

Mr. DODARO. The number one issue is to get an action plan in place that outlines with specific milestones and measures and timeframes for being able to address those issues that we have struggled to get that. Without a good plan, you are really going to struggle to determine how to fix the problems and determine what kind of progress you are making.

The second area I would say is the leadership. I think the Secretary is committed to this. He has said that to me and my team. He has brought his team in to work with our team. We have people working with them as much as possible. But there has been a lot

of leadership instability at the VA at a lot of levels within the organization. So they need to have all the vacancies filled; they need to have some leadership stability; they need to really deal with the fundamental problems of the lack within VA of oversight and accountability. They really struggle with that. They are a very decentralized operation. You need to give discretion to the different areas, but you need to have some central oversight and accountability within VA.

Their policies are outdated in a lot of different areas. The training needs to be better developed. Over time we continually find that to be a problem where they may have a good policy, but the people have not been trained properly, and it has not been implemented.

So they have many fundamental management weaknesses. Their management structure at the VA is among the most challenged in the Federal Government, in my opinion, looking across the entire Federal Government. And that is why they have many areas on the list, and they need leadership, they need plans, and then they need follow up and holding people accountable for results, both within the VA, holding their managers accountable, but also Congress holding the VA accountable.

Senator SINEMA. Thank you.

Mr. Chairman, I see my time has expired. Thank you.

Senator LANKFORD. Thank you. Senator Hassan.

OPENING STATEMENT OF SENATOR HASSAN

Senator HASSAN. Thank you, Mr. Chairman and Ranking Member Peters. And good morning, Mr. Dodaro. Thank you so much for being here and for your service.

I want to try to touch on three different areas: one is to follow up a little bit on the issues of toxic chemicals generally; the second is on cybersecurity; and the third is on domestic terrorism, actually. So let us see how we can do here.

One of the high-risk entries in GAO's report examines EPA's challenges with assessing and controlling toxic chemicals. The report points out that EPA has made little progress on this task over the past 2 years, and, in fact, that EPA's leadership has actually become less committed to addressing these challenges.

Let me repeat that. The leadership has become less committed to assessing the public health threat of toxic chemicals, according to the High-Risk Report.

In particular, the report cites EPA's leadership decision to cut in half the funding for the Integrated Risk Information System (IRIS) program which identifies and assesses the health threats posed by chemicals. Deeply concerning to me and people in New Hampshire that even with growing evidence that toxic chemicals are infecting our drinking water supplies, the EPA's leadership wants to undermine and underfund one of its key tools for identifying these kinds of health risks.

In your view, sir, is this a conscious policy decision from the Administration to ignore these health concerns? Or have ineffective management practices led to inaction?

Mr. DODARO. We lowered the rating in leadership for two reasons: one was that there had not been a statement or commitment

to focus on the IRIS issue where we have seen that in the past Administration; and, second, they proposed budget cuts in those areas.

Congress ultimately said no to the budget cuts and held the budget stable at 2017 levels, but they still have to execute against that budget area. We just were not comfortable that they have stated a commitment. I will not speculate on their motives, but those are the facts. And that is why we lowered the rating. We would like to see more attention in that area. The IRIS program has not had a release of program outlook in December 2018, but we had fewer chemicals on it. Some assessments that they had started did not appear, so it was not clear why those disappeared and whether they plan to do that in the future.

I know you have other areas, so I will stop there.

Senator HASSAN. This is helpful, and I am actually going to follow up, and if I have to do questions for the record, I will. But, in your view, what level of funding does the IRIS program need to be truly effective?

Mr. DODARO. Well, we typically do not give specific numbers. That is a management responsibility in the agencies, but it has to be sufficient.

We make in our recommendations not only funding for IRIS but funding for implementation of Toxic Substances Control Act of 1976 (TSCA).

Senator HASSAN. Right.

Mr. DODARO. For example, they have proposed to have a fee. Whether the fee will cover the full cost or not—so both resource issues, are very important to focus on there.

Senator HASSAN. Well, I thank you for the focus. I am very frustrated to hear about EPA leadership's failure to take this particular public health threat seriously. People in New Hampshire have really struggled to get the Federal Government to acknowledge the public health threat of PFAS chemicals in their water supply, and they really do not appreciate the Administration's lack of urgency.

Do you have any recommendations about what steps their leadership, EPA's leadership, can take today to immediately address the public health crisis resulting from toxic chemicals in our water supplies?

Mr. DODARO. Yes, they need to prioritize the IRIS assessments that are put in place. They need to have an implementation plan for TSCA that has measures among other things. And we have detailed out a number of recommendations I would be happy to submit for the record.¹

Senator HASSAN. All right. Thank you for that.

Let us turn now to another issue that a couple of Members have also talked about. In its 2019 High-Risk Report, GAO states that Federal agencies and other entities must take urgent action to, among other things, "perform effective oversight" of efforts to secure the Federal Government from cyber attacks.

¹The information referenced by Mr. Dodaro appears in the Appendix on page 162.

Now, we have talked about the workforce issue, but could you quickly expand on what you mean by “increased oversight” and what you think this should look like?

Mr. DODARO. Yes. We have a listing—it is in my statement—of four critical areas that need attention and 10 specific actions that are needed. The first is a comprehensive national and global strategy that deals with emerging technologies, global supply chain risk, the workforce issue you mentioned. So we need a plan, a specific implementation plan, clear roles and responsibilities, resources, etc.

Second, we have to fix the problems that are known at the individual departments and agencies, effectively implement continuous diagnostics and monitoring and attention; add when there are incidents that happen, to respond quickly. We have not seen that in a lot of cases. And we have known weaknesses that are not being fixed. There is no excuse for that.

Senator HASSAN. OK.

Mr. DODARO. Third is understanding more of critical infrastructure protection in our country. Right now those standards are voluntary, so the Federal Government tries to encourage them. There are some areas they have regulatory authority, they can be more specific. But in most of the areas, it is pretty much voluntary. And so we do not really know how prepared the private sector is to secure critical infrastructure protection, some of which we rely on for both military and other homeland security purposes as well.

Last is improving the privacy of personally identifiable information (PII) and also dealing with information reselling on the Internet. Congress has really only dealt with that as it relates to health care information and consumer reporting. Other than that, there is really no framework, and the privacy laws have not been updated since 1974. So we have recommended that Congress legislate a comprehensive privacy security framework for the private sector.

Senator HASSAN. Excellent. Can you speak to whether agencies’ Inspectors General (IGs) are adequately equipped to perform this cybersecurity oversight?

Mr. DODARO. We look at what they do. We have worked with them on a methodology that we both share and both use the methodology. We are updating it now, and the IGs do a good job in those areas. Again, the problem is that they keep finding the same things and problems are not fixed, the same as we do. But we rely on them to cover agencies where we just do not have all the resources necessary.

Senator HASSAN. Do you think there would be a value in an independent Cyber Inspector General that could perform oversight both across the Federal interagency as well as for specific Federal agencies?

Mr. DODARO. I would not think that would be necessary.

Senator HASSAN. OK.

Mr. DODARO. We have the authority at GAO to look across departments and agencies. They have the authority within departments and agencies. So I think there is a potential for duplication there, just to give you my opinion.

Senator HASSAN. Right, and that is why I ask because the issue is we keep hearing that, despite good intentions, it is not happening; that there is a list of recommendations, and the question

becomes if there was somebody specifically designated across agency to actually also look at duplicative efforts and free up the other Inspectors General to do the other work, but really coordinate across agencies our cybersecurity efforts, whether that would have value.

Mr. DODARO. I think the problem is not lack of audit. The problem is lack of management, the intention to fix the problems identified in the audit. I think the auditors are perfectly well equipped and are highlighting the areas. They are just not getting fixed. And having another auditor find more problems is not really going to fix the problems that have already been identified.

Senator HASSAN. Got it. Yes.

Mr. DODARO. We made 3,000 recommendations just at the GAO alone since 2010; 700 of them are still not implemented.

Senator HASSAN. OK. That is great.

Thank you. I realize I am over time, and I appreciate your generosity.

Senator LANKFORD. Thank you.

Senator Hassan and I have worked on trying to solve the government shutdown issue together, and we have a piece of legislation that we will probably drop by at some point for you to be able to take a look at also, but there are multiple issues that you bring to our attention that require a solution, and I appreciate it. I appreciate that you bring it to the attention of all of us. This is something only Congress can do, and this is something the Administration can do. That is very helpful to be able to continue to get out.

Let me pick up a couple of things. One is keep doing the work you are doing and keep being as blunt as you can possibly be. Every one of your reports, when it goes through any kind of government editing process, everyone is always editing it and trying to make sure the right word is in there and it is not too harsh of a word and not too strong and make it as blunt as you can possibly make it. And so keep going, keep pushing back against the forces that say, "Make that more careful." Make it clear. So thanks. We appreciate the work you are doing on that.

On the debt ceiling, I would be interested to be able to finish that conversation that you started with Senator Romney as well. Are you making a recommendation for a process? Because, obviously, this is unique in the world in the way that we do a debt ceiling vote. No one else does it like we do, and probably for a good reason, no one else does it like we do. Do you have recommendations on that that you would want to present?

Mr. DODARO. Yes. We have highlighted three potential options that Congress could consider. One would be to set it within the budget resolution process each year, so when you make appropriation decisions and the revenue decisions, you can say, just like any household would say, here are our expenditures, here are our revenues, here is how much we are going to have to borrow. OK, we recognize that when we make the decisions on appropriations. I also think that the Budget Committees need to have a more holistic look at the government. Somebody needs to do it in the Congress. So that could be done that way.

Second, another option could be that Congress just authorize Treasury and say, OK, when you need more money to borrow

against, you can notify us, and we will disapprove it or not. So they can move forward unless Congress acts to say no.

The third option would be to just authorize Treasury to borrow whatever sums are necessary in order to execute decisions and laws that Congress has passed and the President has signed into law.

Up until 1917, Congress approved every borrowing in the Federal Government, but after World War I and then World War II, and the government got bigger, until it was not practical. So we arrived at this solution. So it was really a mechanical solution, and it is separate from the decisions that Congress makes on the budget and the allocation.

Part of the problem is two-thirds of the Federal Government's budget is on automatic pilot and does not even go through the appropriation process. There is no real look.

Now, one recommendation we have not formally made except orally is another improvement, I think, would be for Congress to agree on what the debt-to-GDP ratio should really be. What are we willing to tolerate? It just sort of is what it is.

Senator LANKFORD. It is.

Mr. DODARO. And we do not plan or manage on a budget standpoint, and there are many things that are not accounted for in the budget process—major disasters, for example. A lot of our fiscal exposures are not accounted for in the budget.

These estimates I was talking to Senator Romney about earlier are not even considering if we have a recession, there is another war, there are all these other major catastrophes and disasters. Congress does not have a game plan.

Senator LANKFORD. Last year, I was on the budget reform committee. It was an ad hoc committee, eight Democrats, eight Republicans, trying to be able to find a solution to how we fix the budgeting process. Obviously, debt ceiling was a major portion of that. It was very unfortunate that after a year's worth of work, that failed at the end, and it was really a trust issue, is the reason that failed at the end in December. I have talked to the Budget Committee about reviving some of those same issues. Senator Enzi is very committed to that. Senator Whitehouse and several others are very committed to getting that done.

I am hopeful that we can address that, but one of the things that came out of it was our blunt conversations with CBO when they said if you want to keep debt-to-GDP at 78 percent where it is right now, it does not get worse, and it is already bad—obviously, \$22 trillion in debt is bad, 78 percent debt-to-GDP is bad. If you want to just keep it at bad, you have to either increase taxes or decrease spending by \$400 billion a year every single year for the next 30 years. I think most of our colleagues do not realize that we have already tipped over. Is there a tipping point? We are over the tipping point. We are on the other side of it now. There is no will in Congress to raise taxes or decrease spending by \$400 billion a year this year, much less every single year for the next 30 years, just to be able to keep the status quo where we are debt-to-GDP.

I appreciate you raising this. The debt ceiling is a portion of the conversation. It used to be a useful tool. Now it is a destabilizing

tool that is there in the arsenal, and it will continue to be an issue for us.

I want to bounce a couple of issues, and Senator Peters has some additional questions, and I will probably have some additional as well.

You raised the issue of tribal issues on your High-Risk List for both the Federal Government's engagement with tribes and tribal members. I would like to be able to finish that conversation as well. There is some progress in areas I am grateful to be able to see, but I saw none of them as being met at this point.

Mr. DODARO. Yes, that is correct. There has been some progress, and we got some immediate attention right after we put it on the High-Risk List in 2017 with the update at that point in time. But there is still a lot of work that needs to be done in that area, and we need to see some consistent leadership. We put on the health care area, the education area, and then allowing them to use energy resources on their lands. So we have seen improvements in each of the areas, but they are not at the met level yet.

Senator LANKFORD. Have you looked at the coordination agency to agency? Because if you look at tribal connections and responsibilities, obviously it is not just Bureau of Indian Affairs (BIA). It is every agency has a tribal component to it as well on how they are actually working together for strategic focus.

Mr. DODARO. Yes, this is Mr. Mark Gaffigan. He is head of our Natural Resources and Environment Team that handles coordination for Indian issues.

Senator LANKFORD. OK.

Mr. GAFFIGAN. Yes, Senator, I think you are absolutely right, the coordination issue is key. In December 2018, the U.S. Commission on Civil Rights issued its most recent report on the Federal Government's commitment to tribal nations, and it is not meeting its commitment, and this is through a lot of areas across government. And even within GAO, we are talking about doing a more coordinated effort to look at these issues across government to ensure that we are doing a coordinated look at the audit and that the different agencies that are involved, whether it is education, health care, broadband on tribal lands, economic development, sustainable communities, environmental, it is all government all across the scheme of things, and we are definitely going to be looking at that.

Senator LANKFORD. OK. That would be very helpful, because even areas like criminal justice, BIA will say, well, that is not really us, the Department of Justice (DOJ) has that, and they have that in that certain wing, but it does not coordinate actually with BIA and the requests may have four different forms from four different entities to be able to do one thing and no one really knows who has the ball. And in Government, as we know, if everyone has the ball, no one has the ball. And it has become a really big issue in our tribal areas.

Mr. GAFFIGAN. Absolutely, Senator.

Senator LANKFORD. OK. Thank you. I appreciate that.

Senator Peters and I have worked a lot together on Federal real property, as you know because we poked you on it several times. We have passed some different pieces on it, on leasing properties. I want to just open up one thing on it, and that is, when I was

chairing the Financial Services and General Government (FSGG) Appropriations Committee, it was the first time I got into the financing and saw the Department of Transportation (DOT) building that we had leased for 15 years for \$700 million, and at the end of our 15 year lease had the opportunity to buy it for \$700 million.

Mr. DODARO. Yes.

Senator LANKFORD. We can never do that again. We have to figure out how to do this. And one of the big questions we have had is how we can work out a lease to own type process with a discounted purchase at the end. You have made some recommendations and ideas on that. We have to figure out how to be able to manage it better.

We lease buildings that we are going to have temporarily. We are probably going to have a Department of Transportation long term. That seems like an office we should probably own. We will probably do that more than 15 years.

Mr. DODARO. We will go out on a limb.

Senator LANKFORD. I am just reaching out into the future and just guessing that. [Laughter.]

Help us with this issue of what you have seen on the lease to discount purchase type structure.

Mr. DODARO. Well, first, the team gave me a note that the General Services Administration (GSA) plans to buy the DOT building this year.

Senator LANKFORD. Yes, we put that intentionally into the appropriations bill. That was in my Committee. I said, no, we cannot do this, so you are correct. We are purchasing that building.

Mr. DODARO. Right.

Senator LANKFORD. We are not going to continue leasing a building we should have owned a long time ago.

Mr. DODARO. Yes, there are three different areas that we focused on. One is to try to get GSA to focus on these high-value leases that it makes sense to look at whether you should purchase it or not. So they have agreed to do that finally. That took several years. So they are going to at least look at one this year. But they need a plan, and I think Congress needs to push them to go a little faster in that area. So at least they have agreed to do it. They have a plan to do it. So we will see. They have a target of trying to save a certain amount of money in doing that, which is an improvement.

They have also thought about having a capital—or made a proposal for a capital fund to set up to be capitalized to allow them to have some money to operate that the agencies would pay back. That needs congressional authority. They have not yet developed a legislative proposal to present to Congress, so that is another area.

A third recommendation that involves when you are going to lease and it makes sense to lease and there are improvements that need to be done to the property before you are ready to occupy it, right now that gets funded through the lessor, and then the government ends up paying interest costs on that. So our recommendation is to have GSA loan the money to the agency through the Federal Building Fund unless there would not be any interest cost necessarily, but it would save the government a lot of money to be able to do that.

So those are the three recommendations that we have had.

Senator LANKFORD. All right. That is very helpful. Senator Peters.

Senator PETERS. Good, and we want to continue to work with you on that area, and, Senator Lankford, thank you. We have to keep going down that path to make sure we are saving money long term for the government.

Mr. Dodaro, I wanted to talk a little bit more about cyber just briefly. We have already had a pretty full discussion of that and the threat and how we have to deal with preventing this. But, I was struck by the 2016 Federal Information Security Management Act of 2002 (FISMA) report that noted even beyond the well-known OPM breach, which got a lot of attention and impacted a huge number of folks, there were about 6,000 other incidents that impacted almost half a million individuals. They flew below the radar as far as press, but had a significant impact on people.

We have already talked about the challenges about cyber. My question to you is: Would providing impacted individuals early notice that their information has been compromised, would that help mitigate some of the damage?

Mr. DODARO. Well, I think there is definitely—in the Federal Government, there are breach notification requirements. I will ask Mr. Marinos, Nick, to explain that in a little bit more detail. But, definitely, I mean, people need to be notified.

Senator PETERS. The earlier, the better.

Mr. DODARO. The earlier, the better, so that they can take actions to protect themselves. Congress has now made it available for people to—the cost is free to freeze their credit, which is a good move for people to take if their information has been compromised. So, yes, they should be notified, and it should be as early as possible.

Senator PETERS. Can we do more?

Mr. MARINOS. Yes, Senator, I think we can. As Mr. Dodaro mentioned, Federal agencies have responsibility. I will highlight two key pieces of that.

One, they have a responsibility to be good stewards of the information that they collect on U.S. citizens for the purpose of their mission.

And then in addition to that, they are required by law to report major incidents to you, to Congress as well.

So what that really means is that we need to ensure that Federal agencies are doing a better job of identifying incidents when they are occurring, understanding the impact of those incidents, and then being able to communicate quickly to potential individuals that are affected as well as to Congress.

Senator PETERS. All right. Thank you.

The other issue that you brought up in the High-Risk List that I think we need to spend a little bit more time on is climate change and the impact of climate change in particular related to storms and the fact that we are seeing the severity of storms increase, and that is likely to continue in the years ahead. And it is driving big increases to the cost to the American taxpayers as we deal with these disasters.

It seems to me that investing some money up front in mitigation and planning to have more resiliency with our infrastructure is

critically important, and it is kind of back to the buying or leasing concept. If you build hardened assets that are not going to be destroyed in a storm, that is going to be cheaper than actually going in and fixing it and cleaning it up and then rebuilding.

Could you help us better understand the costs to our economy of climate change based on your analysis?

Mr. DODARO. The last several years have been some of the most costly in U.S. history—in 2017 in particular, several hundred billion dollars, I believe. We have had very costly storms. But the Federal Government's cost to respond to this since 2005 is approaching half a trillion dollars to be able to handle this area.

Now, the National Institute of Building Services estimates that for every dollar spent in hazard mitigation and resilience building saves \$6 later. And it states that if we went in the United States to the most recent international building standards, building codes, you could save \$11 for every dollar invested.

So I think there is a lot of material, but, Mark, can you explain the cost?

Mr. GAFFIGAN. Sure. NOAA estimates since 1980 there have been 241 billion-dollar events. That is an average of about six a year. But over the most recent years, it is averaging about 15 of those types of events a year, and the number 1 year was 2017, \$312 billion; the number 2 year was 2005, with Hurricane Katrina; 2012, \$128 billion; in 2018, it is the fourth highest year, \$91 billion in costs.

Mr. DODARO. And I would point out, Senator, those are direct costs. They do not consider lost productivity during that period of time or all the individual trauma that individuals go through, because it takes several years, as you know, to rebuild these areas. I mean, it is going to take a long time in Puerto Rico, for example, from the 2017 storms. We are looking at the results of the 2017 and 2018 disasters in terms of Federal recovery efforts.

Senator PETERS. Right. You mentioned some of the direct costs to the government, particularly to the military, and this is an area where the Department of Defense for a number of years has talked about this as a high risk, as you have at the GAO. I am just reminded during Hurricane Michael, a number of F-22 Raptors at Tyndall Air Force Base were damaged because they could not be moved prior to the storm. And the storm cost the Air Force an estimated \$3 billion to address the damage to the infrastructure as a result of that and the impact to the aircraft.

What specifically should the Department of Defense be doing?

Mr. DODARO. They need to have a plan to look ahead as they are building their infrastructure, modernizing their infrastructure, to build in resilience, climate resilience policies and procedures. They are starting to move in that direction. Congress required them to develop a plan and submit it to Congress, which they did, but many members of the Armed Services Committees were not satisfied with the plan, and so the Defense Department is now back preparing an additional plan to send to Congress. We will look at that plan once it is submitted and have additional recommendations, which we will share with this Committee.

They just need to put it in their planning activities and guidance. I mean, they have coastal issues with sea level rises. And the plan,

Senator Peters, for DOD needs to not only be domestic but international, because we have a lot of facilities around the world that are at risk in these areas as well.

So that is really the issue, is just better planning and making sure it gets built into their decisionmaking process as they go forward, because they have a massive amount of facilities.

Senator PETERS. They do.

Mr. DODARO. And they are threatened—you mentioned Tyndall Air Force Base, but also at Camp Lejeune, with Hurricane Florence, there was over \$3 billion of damage there as well. So this is very costly, and there is a lot that could be done to prevent this ahead of time.

I am also concerned that the Administration revoked the flood hazard mitigation standard that required buildings to be elevated to have a national standard in that area. The Flood Insurance Program is on the High-Risk List. Even though Congress has forgiven \$16 billion in debt, it still over \$20 billion in debt to the Treasury. It is not operating on an actuarially sound basis. So there is a lot of exposure for the Federal Government.

Senator PETERS. Yes, and I am glad you brought that up because to me that makes no sense whatsoever to rescind the flood risk management standard given all that you have said. So in your mind we need to have a standard. Is that a correct statement?

Mr. DODARO. Yes.

Senator PETERS. Great. Thank you.

Chairman JOHNSON [Presiding.] Senator Carper.

OPENING STATEMENT OF SENATOR CARPER

Senator CARPER. Thanks. Thanks, Mr. Chairman. Welcome. We welcome both of you this morning and are delighted you are here. Thank you to you and the folks you lead at GAO for the important work.

Our country's budget deficit last year in this country hit \$757 billion. This year we are looking at \$850 billion, next year maybe \$1 trillion. And I like to say everything I do, I know I can do better. We have to find a whole lot of ways to do things better in this country.

I have just come from a hearing in Environment and Public Works on surface transportation where we just basically are not raising through user fees anywhere close to the money we need to build our roads, highways, bridges, transit systems. And that is just not sustainable. We are just in an unsustainable direction. Thank you for helping us to restore some sanity to all of this.

The first question I have deals with chemical safety at EPA, and I just want to say thanks for being responsive on this front. But EPA's chemical safety efforts have been on GAO's High-Risk List, as you know, for years. And on Monday, GAO released a long report, one that I requested, on chemical safety. That report describes some disturbing developments about EPA's Integrated Risk Information System. It is called IRIS, which studies the health hazards posed by chemicals.

Here is my question. GAO's report said that, until recently, EPA's IRIS program had been implementing many of the recommendations made by both GAO and the National Academy of

Sciences. But the report also said that that progress was halted almost a year ago when EPA's political officials told the EPA's career staff to stop working on some of its reports, including the Formaldehyde Health Assessment. Is that correct?

Mr. DODARO. This is Mr. Gaffigan, who has led the effort on that report.

Senator CARPER. OK. Thank you.

Mr. GAFFIGAN. Thank you, Senator Carper. What had happened is EPA has an IRIS assessment plan in which they list all the chemicals they are working on at the current time. And as of May 2018, they had a list of about 20 or 22 chemicals that they were working on, including formaldehyde. They had checked in with the program offices because they do these studies on behalf of the program offices to meet their needs in assessing safety in various areas, in air, water, whatever it may be. And that May 2018 list was good to go, but they were told in June to hold off, that the leadership wanted to take a look at that list. They sent a survey out to the program offices to reconfirm their interest in those 20 or 22 chemicals. Eventually, the survey had 20 chemicals listed on it. There were two that were already at peer review, so it did not include those.

And then they got the answer back from the program offices, yes, indeed, we would like to look at these same 20. They reconfirmed that. But then later, in October, before they released the survey results, there was a further inquiry as to prioritization asking again the program offices to prioritize. Yet they did not provide any criteria for deciding how to prioritize.

The next thing that we were aware that happened is in December 2018. They released a new list. There were only 11 chemicals on EPA's internal memo and 13 on its publicly released list.

Senator CARPER. So almost cut in half.

Mr. GAFFIGAN. Almost cut in half, and there was no explanation as to why they decided to drop some chemicals. There are at least four chemicals in the later stages ready to go to peer review, including formaldehyde, that vanished. And so that raises a lot of uncertainty and questions about what happened and what was the rationale for doing that.

Senator CARPER. All right. Thank you. That is a very good explanation.

Just for my colleagues, let me just note for my colleagues that formaldehyde is a known carcinogen. It has been reported that EPA's career scientists have concluded that it causes leukemia. There have actually been chemical industry and congressional efforts to stall the publication of this report now for more than a decade.

I would ask, Mr. Dodaro, for you and Mark—GAO's report also found that initially EPA's Water and Superfund offices both said that they considered the completion of the formaldehyde report to be a priority. A priority. But after that, EPA's political officials asked for a new list of priorities, as Mark has mentioned, and magically vanishing, the formaldehyde report was not listed as a priority on this new list. That means EPA no longer plans to finish the formaldehyde report even though it has been ready for peer re-

view since 2017 and they have spent, I am told, about \$10 million on the research.

Do I have all that right?

Mr. GAFFIGAN. And I would just add, they have been working on it actually since 1997.

Senator CARPER. Wow, 21 years or 22 years.

Another question related to this, but I would ask again, Gene, of you and of Mark, did GAO learn why EPA's political officials asked for a new list of priorities that has resulted in a decision not to publish the Formaldehyde Health Assessment?

Mr. GAFFIGAN. This came in December toward the end of our report. We never were able to assess what the rationale was. There was some talk about trying to limit the budget, but as we had the conversation before, Congress did not support reductions for IRIS, whose budget makes up about half of the human health risk assessment area, which ended up about \$20 million in the President's budget requests. And in May, with that list of 20 chemicals, IRS officials felt they had the resources to do all 20 with their budget. So that explanation does not seem to make sense unless, in fact, they were trying to not spend as much money in IRIS.

Senator CARPER. Well, thank you both for the responses. Mark, especially, thank you. For an agency that is so concerned about so-called secret science that it is writing a rule against the topic, EPA appears to be going to great lengths to keep its own science secret. I would just note that for the record.

I have another question, and I will direct this one back to you, Gene. It deals with Medicare improper payments and the Payment Integrity Information Act. I understand there has been some progress in reducing the overall improper payment rate for Medicare. That is good. And while improper payments in Medicare remain unacceptably high, I believe your report notes that Centers for Medicare & Medicaid Services (CMS) has made some progress in addressing this issue.

Could you just take a moment, Gene, and share with us how CMS has been able to reduce its Medicare improper payment rate over the last couple of years? And is there any lesson from CMS that can be shared across the government where we have a lot of improper payments? Please.

Mr. DODARO. Yes. Ms. Nikki Clowers has joined me from the Health Care Team. I will give an answer, and then she can add to that.

Senator CARPER. Good.

Mr. DODARO. First, they have a Program Integrity Center for payment integrity that they have established, so they have a clear leadership in place for that center. They have increased the staff by over 200 people in that area over a period of time, so they have put more resources in it. And those are the two criteria on the High-Risk List: you have clear leadership, you have capacity. They have a fraud system they put in place to help them identify areas that they could look at more quickly in that area, and we have said that that system is working well, and they should expand it to other areas. So those are the things that they have done to improve it.

I will ask Nikki to add.

Ms. CLOWERS. In addition to what the Comptroller General mentioned, another effort was working with both private sector companies and other public agencies through a Healthcare Fraud Prevention Partnership to learn best practices and implement them.

The other issue is continuing to look at efforts on the prepayment side, to move away from the pay-and-chase model of putting the money out and then trying to claw back the money when it is deemed improper, because that takes time and it does not always work.

One of our outstanding recommendations for CMS is to seek legislative authority to allow their recovery auditors to conduct prepayment checks. They are one of the auditors that right now focuses primarily on post-payment issues, but through a demonstration where they were given in this one demonstration the authority to conduct prepayment checks, CMS deemed that successful. And so we have recommended CMS seek legislative authority to expand this.

Senator CARPER. Well, good. Mr. Chairman, I have been working on improper payments for some time, and, in fact, we have collaborated on legislation, I think it is called the “Payment Integrity Information Act,” which consolidates and updates existing improper payment laws while trying to make some key improvements in this area.

I would just add, Gene, I think your folks have been helpful to us in crafting the legislation. We appreciate that help, and I would just ask, do you think that Congress ought to pass the legislation and could it be helpful as we try to curb the \$140 billion plus made in improper payments?

Mr. DODARO. Yes.

Senator CARPER. Good. Thank you.

Chairman JOHNSON. I guess that was the right answer. [Laughter.]

Senator CARPER. I thought it was a very good answer.

Chairman JOHNSON. Unfortunately, improper payments, it is not going away.

Just real quick, I want to follow up with improper payments in Medicaid, which the Committee has done a fair amount of work, and I know that GAO has as well. I believe the figure was \$37 billion last year.

One of the drivers is Medicaid expansion that incentivizes States to provide the Medicaid expansion to potentially just the primary Medicaid population because they get a better—they are going to get a higher reimbursement from the Federal Government. Have you done any further work on that? Would you comment just on that area of improper payments?

Ms. CLOWERS. Senator, yes, we continue to look at the improper payment issues under the Medicaid program, and as you know, the rate is composed of three components, and one of them is the eligibility. This is one area that we are concerned about they froze the eligibility component since 2014 exactly for some of the reasons you were mentioning. With the expanded populations, there were new systems put in place, so they wanted the States to have time to implement them before they started measuring again.

They plan to start measuring this year, in 2019, but our concern with that is during this time we are not getting an accurate picture of the improper payments that could be made in the eligibility component. And it is at the exact time when things got more complicated, so you would want more additional scrutiny on those issues.

The other area that we have concerns about in the Medicaid improper payment area is the second component, which is managed care, and we have reports documenting that the managed care component does not account for all the program risk, in particular, the payments that go from the Federal Government to the State and from the State down to the managed care organizations. There are opportunities for over-repayments to come into play there and then get factored into the payments that are made the next year, sort of a compounding problem. So we have recommendations to CMS to address those issues.

Chairman JOHNSON. My concern with Medicaid is there are so many areas where we incentivize the States to game the system, and so they do. And we need to track that down, but the frustration is getting the information on how extensive this is, and the information does not exist. So I want to continue to work with GAO, the Inspector General, and CMS to try and get the information so that—again, these programs are already spending a lot of money. We have huge deficits. We cannot afford to be paying money to ineligible individuals. We cannot afford to have States game the system.

Mr. DODARO. I agree with you, Mr. Chairman. And I mentioned earlier that Medicaid is on a track by 2026, to be \$1 trillion a year, Federal and State money, just for the Medicaid program alone. And my concern is because of the limits on looking at the beneficiary eligibility determination.

Now, managed care is also half of the funding, so right now you are not really getting a good estimate on the improper payments of about half of Medicaid spending. So it conceivably could be a very underestimated figure, and more needs to be done. Also CMS is supposed to come out with a new disclosure on the supplemental payments that we talked about the last time I was here, and so we will look at that and give you our thoughts on that as soon as that is out. But we are definitely going to continue our work in this area, and the dialogue between CMS and the State auditors has continued based on your hearings. That is a good development as well.

Chairman JOHNSON. OK. One thing I have encouraged all the Members of this Committee—Senator Scott, I have deputized him in terms of taking a look at FEMA and some of the abuse, some of the waste we see in disaster spending, and he is in a perfect position to do that. But I am trying to get other Members to grab a hold of one of these issues. I think the Committee in general has looked at Medicaid, because I just think with the Medicaid expansion we have just created greater incentive for improper payments. And so I want to work very closely with you.

Mr. DODARO. OK.

Chairman JOHNSON. I guess Senator Lankford has a few questions as well.

Senator LANKFORD. I do. I just have about 75 more. [Laughter.] We are getting close to the end.

Mr. DODARO. You missed your chance when you were Chairman. Senator LANKFORD. I know. I could have just taken over from there.

You and I have talked about the Taxpayers Right-to-Know bill multiple times.

Mr. DODARO. Yes.

Senator LANKFORD. It has passed the House multiple times now and has been stuck here in the Senate. It has been the interest of some to say we really do not need the Taxpayers Right-to-Know Act, that it is not needed, there is data in other places and other ways, but that particular bill and that particular gathering of data is not necessary.

Do you have a perspective on that?

Mr. DODARO. Yes, I do not agree with that statement. I do not think it is that transparent or available in other formats at the level at which as I recall the Taxpayers Right-to-Know Act is asking for the information. It also pulls together what is the results of the spending. That is not really available. But it would bring it together in one effort at a more transparent and accountable and actionable information for Congress and the public to act on. So I think that Congress would do well to pass that legislation, but also make sure it gets implemented effectively. The Digital Accountability and Transparency (DATA) Act is still not implemented effectively because the information is not as accurate as it needs to be.

But the first step is to get the legislation passed, and I think it would be a good move for government accountability and transparency to have that legislation enacted.

Senator LANKFORD. We will keep nudging and pushing on that. I appreciate that very much.

Let us talk about the Federal disability programs. Have we talked about that yet this morning? Has that come up?

Mr. DODARO. Just once as it relates to VA.

Senator LANKFORD. OK. I would like to do the non-VA side of it, just in the disability programs and to be able to see—you highlighted some things that are affectionately called “the grid,” the vocational list, the giant dictionary of all occupations in America that is now well in excess of \$100 million to be able to compile this. I have been tracking it for 7 years and have heard over and over again next year, next year, next year, next year it is coming.

Now my understanding is it is actually next year that it is coming and that we are actually seeing some progress in this area on disability and on the vocational grid. I would love to be able to see what your team has seen as well.

Mr. DODARO. Yes, this is Ms. Elizabeth Curda, who is our expert in the disability area, Senator. She can give you an update.

Ms. CURDA. Yes, there are two systems in play here involved in updating the occupational information that the Social Security Administration (SSA) uses to decide disability claims.

The first is the Occupational Information System. That is what is very close to being completed. They are in their final year of data collection for that system using Bureau of Labor statistics surveys.

And they plan to start using that system in 2020, according to their most recent plans.

Now, the grid is another tool that SSA uses in addition to the Occupational Information System—when they have it implemented, they will be using it, but not yet. The grid is something that is a decisional tool that helps them decide what—they take all this information, medical, occupational, and they make a decision about what work this person with a disability could do in the current economy. That has not been updated, and that is why we have actually lowered their rating in the High-Risk List for action planning because they have not given us plans for how they plan to update that system and use it in conjunction with the new information—

Senator LANKFORD. So your concern is we are going to have the occupational list and not have any way to be able to implement that in 2020, so we will basically have a book and no way to use it.

Ms. CURDA. Potentially, yes.

Senator LANKFORD. OK. So what steps need to be taken at this point to be able to move that from I have the occupational list to actually transitioning that into a usable form in the grid?

Ms. CURDA. We would need to see an action plan for the use of the grid in terms of how they plan to change that. They have indicated they have plans to update it, but they have not given us any detailed action plan for that.

Senator LANKFORD. Do you remember offhand how long it has been since the vocational list has been updated?

Ms. CURDA. 1970s.

Senator LANKFORD. Yes, that is what I thought, it was the 1970s. I do recall the famous list of their elevator operator is in the vocational list, but there are no IT jobs listed at all because they were not around in the 1970s other than a punch card operator.

Ms. CURDA. I heard about this problem just last week when I was in West Virginia visiting with disability examiners, and they said this is a key problem for them to process claims.

Senator LANKFORD. It is an enormous issue for us to be able to say, yes, there is nothing available, no way to be able to help transition somebody.

One other quick question that I had and that is on the security clearance programs. There is a pretty massive transition that is happening right now into DOD and being able to manage this. I have seen some progress, you have listed some progress in trying to deal with our backlog. This affects all of our Federal hiring that the Chairman and I have worked so much on in trying to be able to bring to greater attention that we are exceeding 100 days for Federal hiring. A lot of that ends up being security clearance in the process, and so we are all very concerned. When DOD said no, we want to give this to OPM years ago, and now it is all going from OPM back to DOD, we are trying to figure out how that handoff is going. Can you give us an update?

Mr. DODARO. Ms. Cathy Berrick has been leading our work in that area, Senator. She can give you an update. It is moving, but there are still a lot of issues that need to be dealt with. She can detail those for you.

Ms. BERRICK. Sure. DOD is planning to assume responsibility for conducting investigations for all Federal workers. That is supposed to be transitioned by September 30th of this year. So they are doing some planning related to the National Background Information Services (NBIS), which is the information system that they are going to use to conduct investigations.

There is one key concern that they have, which is linking to the OPM legacy systems and the security issues that exist with those systems. DOD is ultimately planning to separate from those systems, but they are going to need to rely on them at least for a few years.

Another key area that the entire Performance Accountability Council (PAC), which governs the security clearance process within the Executive Branch, really needs to do is focus on the quality of investigations. They have been attempting to develop quality metrics since back in 2010. They have taken a couple of important steps to get there, but they still have not completed those metrics.

And then, finally, I would say although the Executive Branch has made some progress in reducing the investigative backlog, they were at about 720,000 a year and a half ago; they are at about 565,000 investigations right now backlogged. They do not have a plan for meeting their timeliness objectives for their investigations moving forward. They have made some tweaks here and there, but they really need a comprehensive plan. Just to give you a statistic—

Senator LANKFORD. Is that in process, by the way?

Ms. BERRICK. They are working on it, and there was just a big announcement last week that the Executive Branch is rolling out Trusted Workforce 2.0, which is a new strategy for conducting security clearances that involves continuous vetting. They made some key process improvements.

But just to give you a stat on the significance of this problem, last year only 3 percent of agencies within the Executive Branch met mandated and other established timeliness objectives for conducting background investigations for initial secret clearances, and for top secret it was only 13 percent of agencies met those requirements. So it is a big problem. There are some plans in place, but this issue has always been one of implementation.

If you go back, since the early 2000s, there has been a number of studies, a number of initiatives. The problem has always been the coordination among the agencies and actually executing on these plans.

Senator LANKFORD. Is there a congressional action that is required other than oversight at this point? Do they have what they need to be able to make the decisions and implement the way they need to?

Ms. BERRICK. I believe they do have what they need.

Senator LANKFORD. All right. That is helpful to know.

Mr. DODARO. Congress reinstated the requirement to get reports on the status of this effort. That was a good move by Congress. But, based on what we know of their current plans, I do not think they need anything else other than oversight at this point. However, if they do develop plans and we notice something, we will let you know.

Senator LANKFORD. I know it is a human resource (HR) issue for us, obviously, in the hiring and the process they would go through, but there is a larger HR issue just with the handoffs that you will have identified multiple times. If I go into many private businesses, they have a software system that, when they do the interview, all the information is dumped in the interview. If they decide to hire them, that same system will actually start getting them through all the forms that they need to do for hiring. That same system will also manage all of their personnel reviews they do on an annual basis, and when they retire, that same system will also do it, as well as their tax forms and their raises all go through this one system. We have about 19 different systems that do those same things, and I think 18 of them we would call “legacy” in the process, and none of them talk to each other. And that is not the way that it is going to be most effective to do it.

Have you seen any progress in agencies moving to a seamless system to be able to handle HR? Or is this still multiple different systems that are out there to be able to do the most straightforward personnel issues?

Mr. DODARO. Yes, this is Mr. Chris Mihm. He is the head of our Strategic Issues Team that looks at personnel matters. Chris.

Mr. MIHM. Senator, there are still too many legacy systems out there, is the short answer on that. One of the things—and this gets back to what you were talking about with Taxpayer Right-to-Know and the DATA Act. That data is going to help agencies identify, as the DATA Act is implemented, opportunities for shared services so they can bring together some of these legacy systems. So that is just a minor potential advantage going forward of better integration—not just in the HR area but across a whole series of back-office functions.

Senator LANKFORD. Right. I am just tired—and the Chairman, we have heard this over and over and over again—of a Federal employee that worked in two different agencies that goes to retire and it takes 6 to 9 months for them to start their retirement process because the two agencies did not talk to each other and because the handoff does not work, and now somebody that has worked 35 years for the Federal Government is waiting 6 months to start their retirement process because the data is not all together.

Mr. MIHM. And, sir, that is not just with the agency systems, which it is and we have found that there are problems in the agency systems, but just on the retirements with the Office of Personnel Management as well. They have huge backlogs in that. We have been urging them to get—it is the word you have been hearing all day. We have been urging them to get a plan in place in order to deal with their backlogs that they have in place to get a more—I mean, there are known spikes each year of when they have increases in retirements. They should be able to deal with those spikes much easier than just each year being caught with—

Senator LANKFORD. Again, a streamlined system where everything is consistent would make an enormous difference on that. It is not like it does not exist. I can go to Paycom, a huge national company, and they can put that off the shelf right now and be able to adapt that into a government system they could do. So it is do-

able software. It is not something new and radical. But we have to be able to help implement that.

Mr. MIHM. Yes, sir.

Senator LANKFORD. Mr. Chairman, thank you for allowing me to be able to come back and do another round of questions.

Chairman JOHNSON. I appreciate you, first of all, talking about the whole security clearance issue, which is big. Of course, the retirement system, part of it, it is still a paper system. They are in files in some cave. I cannot remember exactly which State, somewhat close at least, but—

Mr. DODARO. It is in Pennsylvania.

Chairman JOHNSON. There you go. So you are fully aware of that.

Again, General Dodaro, thank you. I thank all of the members of your team for providing testimony and for all your great work. You know better than anybody that you have so many things that you can take a look at. The analogy is use, it is like a mosquito in a nudist colony. It is a target-rich environment where you are looking for waste, fraud, and abuse in the Federal Government.

One of the things I am trying to get the Members of this Committee to do is to concentrate on an issue, one of those targets, and, utilize their staff in conjunction with our Committee staff and Inspectors General and the GAO to highlight the issue, because that is what it takes. You have to publicize the issue to create the incentive within the departments and agencies to actually take action. So that is what your High-Risk List does. That is what this hearing does. But that is really what I want Committee members to do. I would like them to look at the big things, prioritize it, let us go after the low-hanging fruit, the massive dollars. But, again, you have already done the \$350 billion since 2006, \$47 billion just last year, pretty remarkable results, and I am sure you and your team will keep investigating these things and even increase those savings. So, again, thank you for your testimony. Thank you for all your work.

The hearing record will remain open for 15 days until March 21 at 5 p.m. for the submission of statements and questions for the record.

This hearing is adjourned.

[Whereupon, at 11:22 a.m., the Committee was adjourned.]

A P P E N D I X

Opening Statement of Chairman Ron Johnson
High Risk List 2019: Recommendations to Reduce Risk of Waste, Fraud, and
Mismanagement in Federal Programs
Wednesday, March 6, 2019

As prepared for delivery:

At the beginning of each new Congress, the Government Accountability Office (GAO) issues a report highlighting federal government agencies and programs that present the greatest economic and national security risks. The goal of the High Risk report closely mirrors the mission statement of our committee: to enhance the economic and national security of America and promote more efficient, effective, and accountable government. GAO's report helps Congress focus on the highest priority items.

Federal agencies have saved nearly \$350 billion since 2006 by addressing high-risk areas on the GAO's list, with \$47 billion realized just last year. By addressing risks, we not only save taxpayer dollars, but create programs that run more efficiently and better serve the needs of the American people.

This year, GAO identified 35 government programs and agencies that are the most vulnerable to waste, fraud, abuse and mismanagement, or need complete transformation. This includes the addition of two new areas to the list, security clearance processing and Department of Veteran Affairs Acquisition Management. Several of the areas on the list have also been the focus of this committee's work over the last few years, including protecting federal networks, reducing improper payments, managing federal real property, hiring a skilled federal cyber workforce, creating a financially viable U.S. Postal Service, and reducing waste in the 2020 decennial census. The committee will continue to use this report as a guide as we work to find bipartisan solutions to these problems.

I am pleased to see that many agencies and programs have made progress in addressing risks. I am particularly encouraged that all the high risk areas at least partially met the "leadership commitment" criteria, with half fully meeting the criteria. I believe this indicates that the administration is taking these risks seriously, but we know more work must be done.

Testifying before the committee today is GAO Comptroller General Gene Dodaro. Comptroller General Dodaro has led the GAO since December 2010 and has been working at GAO for over 40 years. I want to thank the Comptroller General and all the hardworking men and women at GAO whom he represents. Your work is invaluable to the American people and I look forward to your testimony.

Opening Statement of Ranking Members Peters

High Risk List 2019: Recommendations to Reduce Risk of Waste,
Fraud, and Mismanagement in Federal Programs

Wednesday, March 6, 2019

Thank you, Mr. Chairman. I would like to join you in welcoming Comptroller General Gene Dodaro to today's hearing. Mr. Dodaro, thank you for joining us and for all of the hard work that the men and women of the GAO do to hold the federal government accountable and ensure taxpayer dollars are being spent appropriately. I look forward to hearing your testimony today.

Since 1990, the GAO has alerted Congress to areas that are considered 'high risk' - by providing this list of federal agencies and programs they have identified as vulnerable to fraud, waste, abuse or mismanagement.

The High Risk List is a roadmap to cut waste, save taxpayer dollars and set our country on a course for a more fiscally responsible future. Yet federal agencies and Congress have struggled to effectively address many of the problems identified in this report.

I believe this failure is rooted in a dysfunctional budgeting and appropriations process that is filled with last-

minute deadlines, continuing resolutions and brinksmanship that leads to government shutdowns.

Instead of thoroughly examining whether the programs we authorize and fund are serving the American people effectively - Congress routinely relies on stopgap spending measures and continuing resolutions that disrupt normal order and do not allow for meaningful oversight of how we use taxpayer dollars.

This leads to governmental short termism. Too often, we spend more money to lease office space over years or decades than it would cost to build and own what we need. We didn't invest effectively in federal cybersecurity and are now paying for credit monitoring for over 20 million people in the wake of the OPM breach.

Efforts we make now to prepare for and mitigate climate change could save the federal government, farmers, homeowners, and small businesses billions of dollars in the coming years.

The federal government is also dragging its heels in addressing toxic chemicals. The sooner EPA and other agencies act to address PFAS - fluorinated chemicals harmful to human health - the more money we can save on billions of dollars of future cleanup and health care costs.

This pattern of waste and delay is particularly alarming at a time when our country is on course to reach a \$1 trillion deficit this fiscal year. Taxpayers in Michigan and across the country deserve better - and we simply cannot afford to continue on this same path.

As Members of Congress - it is our duty to root out waste and ensure that government is being held accountable to taxpayers. We must fulfill our obligation to conduct rigorous oversight and craft bipartisan, commonsense reforms to strengthen the programs Americans count on.

We must also look for smart ways to cut spending and save tax dollars - such as eliminating duplicative or overlapping efforts that end up costing us more in the long run.

I appreciated having the opportunity to work with my colleagues - Senators Paul and Lankford - to enact legislation to increase government efficiency last Congress. I also look forward to reviewing Senator Lankford's "Waste Report" and finding new areas to work in a bipartisan way with Chairman Johnson and members of this committee to make our government function better.

We must make real progress on these goals - starting with today's hearing.

By examining the areas of concerns raised in today's hearing - and we can focus on providing the proper funding and oversight of federal programs that will enable us to rein in spending, reduce waste and provide greater accountability for the American people.

And with that, Mr. Chairman, I look forward to the discussion.

United States Government Accountability Office



Testimony

Before the Committee on Homeland
Security and Governmental Affairs, U.S.
Senate

For Release on Delivery
Expected at 9:30 a.m. ET
Wednesday, March 6, 2019

HIGH-RISK SERIES

Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas

Statement of Gene L. Dodaro,
Comptroller General of the United States

March 2019

HIGH-RISK SERIES

Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas

GAO Highlights

Highlights of GAO-19-0207, a statement before the Committee on Appropriations and Governmental Reform, U.S. House

Why GAO Did This Study

The federal government is one of the world's largest and most complex entities, with \$4.1 trillion in revenue in fiscal year 2016 funded a broad array of programs and operations. GAO's high-risk program identifies government operations with vulnerabilities to fraud, waste, abuse, and mismanagement, or in need of improvement to address security, efficiency, or effectiveness challenges.

This biennial update describes the status of high-risk areas, outlines actions that are still needed to assure future progress, and identifies two new high-risk areas resulting attention by the executive branch and Congress. Solutions to high-risk problems save billions of dollars, improve service to the public, and would strengthen government performance and accountability.

GAO uses five criteria to assess progress in addressing high-risk areas: (1) leadership commitment, (2) agency capacity, (3) an action plan, (4) monitoring efforts, and (5) demonstrated progress.

What GAO Recommends

This statement describes GAO's views on progress made and what remains to be done to bring about lasting solutions to high-risk areas. Substantial efforts are needed by the executive branch to achieve progress on high-risk areas. Addressing GAO's hundreds of open recommendations across the high-risk areas and continued congressional oversight and action are essential to achieving greater progress.

View GAO-19-0207 for more information. Contact: Christopher Helm at (302) 512-2800 or chelm@gaos.gov.

What GAO Found

The ratings for more than half of the 35 areas on the 2019 High-Risk List remain largely unchanged. Since GAO's last update in 2017, seven areas improved, three regressed, and two showed mixed progress by improving in some criteria but declining in others. Where there has been improvement in high-risk areas, congressional actions have been critical in spurring progress in addition to actions by executive agencies.

GAO is removing two of the seven areas with improved ratings from the High-Risk List because they met all of GAO's five criteria for removal. The first area, Department of Defense (DOD) Supply Chain Management, made progress on seven actions and outcomes related to monitoring and demonstrated progress that GAO recommended for improving supply chain management. For example, DOD improved the visibility of physical inventories, receipt processing, cargo tracking, and unit moves. Improvements in asset visibility have saved millions of dollars and allow DOD to better meet mission needs by providing assets where and when needed.

The second area, Mitigating Gaps in Weather Satellite Data, made significant progress in establishing and implementing plans to mitigate potential gaps. For example, the National Oceanic and Atmospheric Administration successfully launched a satellite, now called NOAA-20, in November 2017. NOAA-20 is operational and provides advanced weather data and forecasts. DOD developed plans and has taken actions to address gaps in weather data through its plans to launch the Weather System Follow-on-Microwave satellite in 2022.

There are two new areas on the High-Risk List since 2017. Added in 2018 outside of GAO's biennial high-risk update cycle, the Government-Wide Personnel Security Clearance Process faces significant challenges related to processing clearances in a timely fashion, measuring investigation quality, and ensuring information technology security. The second area, added in 2019, is Department of Veterans Affairs (VA) Acquisition Management. VA has one of the most significant acquisition functions in the federal government, both in obligations and number of contract actions. GAO identified seven contracting challenges for VA, such as outdated acquisition regulations and policies, lack of an effective medical supplies procurement strategy, and inadequate acquisition training.

Overall, 24 high-risk areas have either met or partially met all five criteria for removal from the list; 20 of these areas fully met at least one criterion. Ten high-risk areas have neither met nor partially met one or more criteria.

While progress is needed across all high-risk areas, GAO has identified nine that need especially focused executive and congressional attention, including Ensuring the Cybersecurity of the Nation, Resolving the Federal Role in Housing Finance, addressing Pension Benefit Guaranty Corporation Insurance Programs, Managing Risks and Improving VA Health Care, and ensuring an effective 2020 Decennial Census. Beyond these specific areas, focused attention is needed to address mission-critical skills gaps in 16 high-risk areas, confront three high-risk areas concerning health care and tax law enforcement that include billions of dollars in improper payments each year, and focus on a yawning tax gap.

GAO's 2019 High-Risk List

Strengthening the Foundation for Efficiency and Effectiveness

Strategic Human Capital Management
 Managing Federal Real Property
 Funding the Nation's Surface Transportation System^a
 Modernizing the U.S. Financial Regulatory System^a
 Resolving the Federal Role in Housing Finance^a
 USPS Financial Viability^a
 Management of Federal Oil and Gas Resources
 Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks^a
 Improving the Management of IT Acquisitions and Operations
 Improving Federal Management of Programs That Serve Tribes and Their Members^a
 2020 Decennial Census^a
 U.S. Government Environmental Liability^a

Transforming DOD Program Management

DOD Weapon Systems Acquisition
 DOD Financial Management
 DOD Business Systems Modernization
 DOD Support Infrastructure Management^a
 DOD Approach to Business Transformation

Ensuring Public Safety and Security

Government-wide Personnel Security Clearance Process (new)^a
 Ensuring the Cybersecurity of the Nation^a
 Strengthening Department of Homeland Security Management Functions
 Ensuring the Effective Protection of Technologies Critical to U.S. National Security Interests^a
 Improving Federal Oversight of Food Safety^a
 Protecting Public Health through Enhanced Oversight of Medical Products
 Transforming EPA's Processes for Assessing and Controlling Toxic Chemicals^a

Managing Federal Contracting More Effectively

VA Acquisition Management (new)
 DOE's Contract Management for the National Nuclear Security Administration and Office of Environmental Management^a
 NASA Acquisition Management^a
 DOD Contract Management

Assessing the Efficiency and Effectiveness of Tax Law Administration

Enforcement of Tax Laws^a

Modernizing and Safeguarding Insurance and Benefit Programs

Medicare Program & Improper Payments^a
 Strengthening Medicaid Program Integrity^a
 Improving and Modernizing Federal Disability Programs
 Pension Benefit Guaranty Corporation Insurance Programs^a
 National Flood Insurance Program^a
 Managing Risks and Improving VA Health Care^a

Source: GAO. | GAO-19-157SP

^aLegislation is likely to be necessary in order to effectively address this area.

Chairman Johnson, Ranking Member Peters, and Members of the Committee:

Since the early 1990s, our high-risk program has focused attention on government operations with greater vulnerabilities to fraud, waste, abuse, and mismanagement, or that are in need of transformation to address economy, efficiency, or effectiveness challenges. This effort, supported by this committee and the House of Representatives Committee on Oversight and Reform, has brought much needed attention to problems impeding effective government and costing billions of dollars each year.

We have made hundreds of recommendations to reduce the government's high-risk challenges. Executive agencies either have addressed or are addressing many of them and, as a result, progress is being made in a number of areas. Congress also continues to take important actions. For example, Congress has enacted a number of laws since our last report in February 2017 that are helping to make progress on high-risk issues. Financial benefits to the federal government due to progress in addressing high-risk areas over the past 13 years (fiscal year 2006 through fiscal year 2018) totaled nearly \$350 billion or an average of about \$27 billion per year. In fiscal year 2018, financial benefits were the highest we ever reported at nearly \$47 billion.¹

You asked me today to focus particularly on those high-risk areas that fall within the legislative jurisdiction of the Committee. Many of those are discussed throughout this statement. Appendix I contains the high-risk summaries for the following areas:

- Strategic Human Capital Management
- Managing Federal Real Property
- USPS Financial Viability
- Improving the Management of IT Acquisitions and Operations
- 2020 Decennial Census
- Government-wide Personnel Security Clearance Process
- Ensuring the Cybersecurity of the Nation
- Strengthening Department of Homeland Security Management Functions

Our 2019 High-Risk Report, which is being released today, describes (1) progress made addressing high-risk areas and the reasons for that

¹Financial benefits are based on actions taken in response to our work, such as reducing government expenditures, increasing revenues, or reallocating funds to other areas.

progress, and (2) actions that are still needed.² It also identifies two new high-risk areas—Government-wide Personnel Security Clearance Process and Department of Veterans Affairs (VA) Acquisition Management, and two high-risk areas we removed from the list because they demonstrated sufficient progress in managing risk—Department of Defense (DOD) Supply Chain Management and Mitigating Gaps in Weather Satellite Data.³

Substantial efforts are needed on the remaining high-risk areas to achieve greater progress and to address regress in some areas since the last high-risk update in 2017. Continued congressional attention and executive branch leadership attention remain key to success.

How We Rate High-Risk Areas

Our experience has shown that the key elements needed to make progress in high-risk areas are top-level attention by the administration and agency leaders grounded in the five criteria for removal from the High-Risk List, as well as any needed congressional action.⁴ The five criteria for removal that we issued in November 2000 are as follows:

- **Leadership commitment.** Demonstrated strong commitment and top leadership support.
- **Capacity.** Agency has the capacity (i.e., people and resources) to resolve the risk(s).
- **Action plan.** A corrective action plan exists that defines the root cause, solutions, and provides for substantially completing corrective measures, including steps necessary to implement solutions we recommended.
- **Monitoring.** A program has been instituted to monitor and independently validate the effectiveness and sustainability of corrective measures.

²GAO, *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas*, GAO-19-157SP (Washington, D.C.: Mar. 6, 2019).

³Government-wide Personnel Security Clearance Process was added to the High-Risk List in January 2018.

⁴GAO, *Determining Performance and Accountability Challenges and High Risks*, GAO-01-159SP (Washington, D.C.: November 2000).

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- **Demonstrated progress.** Ability to demonstrate progress in implementing corrective measures and in resolving the high-risk area.

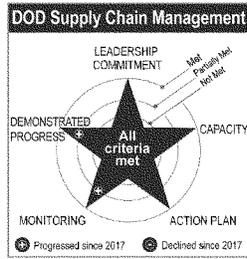
Starting in our 2015 update, we added clarity and specificity to our assessments by rating each high-risk area's progress on the five criteria and used the following definitions:

- **Met.** Actions have been taken that meet the criterion. There are no significant actions that need to be taken to further address this criterion.
- **Partially met.** Some, but not all, actions necessary to meet the criterion have been taken.
- **Not met.** Few, if any, actions towards meeting the criterion have been taken.

Changes to the 2019 High-Risk List

We are removing two areas—DOD Supply Chain Management and Mitigating Gaps in Weather Satellite Data—from the list due to the progress that was made in addressing the high-risk issues. As we have with areas previously removed from the High-Risk List, we will continue to monitor these areas to ensure that the improvements we have noted are sustained. If significant problems again arise, we will consider reapplying the high-risk designation. We added two areas to the High-Risk List since our 2017 update—Government-Wide Personnel Security Clearance Process and VA Acquisition Management.

DOD Supply Chain Management Removed From the High-Risk List



We are removing the area of DOD Supply Chain Management from the High-Risk List because, since 2017, DOD has addressed the remaining two criteria (monitoring and demonstrated progress) for the asset visibility and materiel distribution segments. Congressional attention, DOD leadership commitment, and our collaboration contributed to the successful outcome for this high-risk area, which had been on GAO’s High-Risk List since 1990.

DOD’s actions for the asset visibility segment of this high-risk area included (1) providing guidance for the military components to consider key attributes of successful performance measures during metric development for their improvement initiatives; (2) incorporating into after-action reports, information relating to performance measures; and (3) demonstrating sustained progress by, for example, increasing its visibility of assets through radio-frequency identification (RFID), an automated data-capture technology that can be used to electronically identify, track, and store information contained on a tag. According to DOD, the use of RFID tags to provide visibility of sustainment cargo at the tactical leg (i.e., the last segment of the distribution system) resulted in \$1.4 million annual cost savings.

DOD’s actions for the materiel distribution segment of this high-risk area included (1) making progress in developing its suite of distribution performance metrics; (2) incorporating distribution metrics, as appropriate, on the performance of all legs of the distribution system, including the tactical leg; (3) making progress in refining its Materiel Distribution Improvement Plan and incorporating additional actions based on interim progress and results; and (4) improving its capability to comprehensively measure distribution performance, identifying distribution problems and root cause, and implementing solutions. According to DOD, initiatives focused on distribution process and operational improvements have resulted in at least \$1.56 billion in distribution cost avoidances to date.

As we have with areas previously removed from the High-Risk List, we will continue to monitor this area to ensure that the improvements we have noted are sustained.⁵ Appendix II provides additional information on this high-risk area.

⁵For additional details on the reasons for removing this high-risk area, see p. 102 of this statement.

Mitigating Gaps in Weather Satellite Data Removed From the High-Risk List



Source: GAO analysis. | GAO-19-157SP

We are removing the area of Mitigating Gaps in Weather Satellite Data from the High-Risk List because—with strong congressional support and oversight—the National Oceanic and Atmospheric Administration (NOAA) and DOD have made significant progress since 2017 in establishing and implementing plans to mitigate potential gaps in weather satellite data.

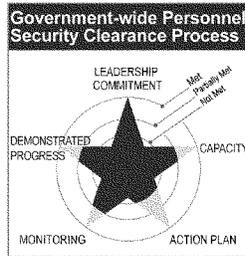
The United States relies on polar-orbiting satellites to provide a global perspective on weather every morning and afternoon. NOAA is responsible for the polar satellite program that crosses the equator in the afternoon while DOD is responsible for the polar satellite program that crosses the equator in the early morning orbit. NOAA's actions for polar-orbiting weather satellites that addressed the remaining criteria of action plan and demonstrated progress included (1) issuing three updates to its gap mitigation plan between January 2016 and February 2017 to address shortfalls we had identified previously; and (2) successfully launching the NOAA-20 satellite in November 2017, which is currently operational and is being used to provide advanced weather data and forecasts. Moreover, NOAA is also working to build and launch the next satellites in the polar satellite program.

DOD's actions for polar-orbiting weather satellites, pursuant to statutes and accompanying congressional direction, included DOD leadership (1) developing and implementing plans to acquire satellites as part of a family of systems to replace its aging legacy weather satellites, including awarding a contract for its Weather System Follow-on–Microwave program, planned for launch in 2022; (2) establishing plans to meet its highest-priority weather monitoring data collection needs that will not be covered by the Weather System Follow-on–Microwave program, including by acquiring and launching the Electro-Optical/Infrared Weather Systems satellite in 2024; and (3) monitoring the Weather System Follow-on–Microwave satellite program's progress toward addressing critical needs and assessing its operations and sustainment costs.

As we have with areas previously removed from the High-Risk List, we will continue to monitor this area to ensure that the improvements we have noted are sustained.⁶ Appendix II provides additional information on this high-risk area.

⁶For additional details on the reasons for removing this high-risk area, see p. 109 of this statement.

Government-wide Personnel Security Clearance Process Added to the High-Risk List



Source: GAO analysis. | GAO-19-1575P

Executive branch agencies are not meeting investigation timeliness objectives, and these processing delays have contributed to a significant backlog that the National Background Investigations Bureau (NBIB)—the agency responsible for personnel security clearance investigations—reported to be approximately 565,000 investigations as of February 2019. In addition, the executive branch has not finalized performance measures to ensure the quality of background investigations and some long-standing key reform initiatives remain incomplete. Further, information technology (IT) security concerns may delay planned milestones for the development of a new background investigation IT system.

We included the DOD program on our High-Risk List in 2005 and removed it in 2011 because of improvements in the timeliness of investigations and adjudications, and steps toward measuring the quality of the process. We put the government-wide personnel security clearance process on our High-Risk List in January 2018 because of significant challenges related to the timely processing of security clearances and completing the development of quality measures. In addition, the government's effort to reform the personnel security clearance process, starting with the enactment of the Intelligence Reform and Terrorism Prevention Act of 2004, has had mixed progress, and key reform efforts have not been implemented government-wide.⁷ Since adding this area to the High-Risk List, the Security Clearance, Suitability, and Credentialing Performance Accountability Council (PAC), including its four principal members—the Deputy Director for Management of the Office of Management and Budget (OMB), the Director of National Intelligence (DNI), the Under Secretary of Defense for Intelligence, and the Director of the Office of Personnel Management (OPM)—have not fully met the five criteria for high-risk removal.

Several issues contribute to the risks facing the government-wide personnel security clearance process:

- **Clearance processing delays.** Executive branch agencies are not meeting most investigation timeliness objectives. The percentage of executive branch agencies meeting established timeliness objectives for initial secret clearances, initial top secret clearances, and periodic reinvestigations decreased each year from fiscal years 2012 through 2018. For example, 97 percent of the executive branch agencies we

⁷Pub. L. No. 108-458, 118 Stat. 3638 (2004).

reviewed did not meet the timeliness objectives for initial secret clearance investigations in fiscal year 2018.

- **Lack of quality measures.** While the executive branch has taken steps to establish government-wide performance measures for the quality of background investigations—including establishing quality assessment standards and a quality assessment reporting tool—it is unclear when this effort will be completed.
- **Security clearance reform delays.** The executive branch has reformed many parts of the personnel security clearance process—such as updating adjudicative guidelines to establish common adjudicative criteria for security clearances; however, some long-standing key initiatives remain incomplete—such as completing plans to fully implement and monitor continuous evaluation.
- **IT security.** DOD is responsible for developing a new system to support background investigation processes, and DOD officials expressed concerns about the security of connecting to OPM's legacy systems since a 2015 data breach compromised OPM's background investigation systems and files for 21.5 million individuals. As of December 2018, OPM has not fully taken action on our priority recommendations to update its security plans, evaluate its security control assessments, and implement additional training opportunities.

However, since we added this area to our High-Risk List, the PAC has demonstrated progress in some areas. For example, NBIB reported that the backlog of background investigations decreased from almost 715,000 cases in January 2018 to approximately 565,000 cases in February 2019. NBIB officials credit an Executive Memorandum—issued jointly in June 2018 by the DNI and the Director of OPM and containing measures to reduce the investigation backlog—as a driver in backlog reduction.

Further, in response to a requirement in the Securely Expediting Clearances Through Reporting Transparency (SECRET) Act of 2018, in September 2018, NBIB reported to Congress, for each clearance level, (1) the size of the investigation backlog, (2) the average length of time to conduct an initial investigation and a periodic reinvestigation, and (3) a discussion of the factors contributing to investigation timeliness.⁸ The PAC is also reporting publicly on the progress of key reforms through www.performance.gov, and for fiscal year 2018, the website contains

⁸Pub. L. No. 115-173, § 3, 132 Stat. 1291, 1291–1292 (2018).

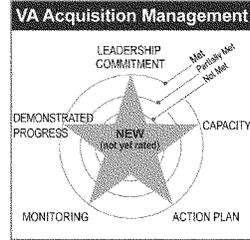
quarterly action plans and progress updates, which present figures on the average timeliness of initial investigations and periodic reinvestigations for the executive branch as a whole, investigation workload and backlog, and investigator headcounts.

We have made numerous recommendations to PAC members to address risks associated with the personnel security clearance process between 2011—when we removed DOD’s personnel security clearance program from the High-Risk List, and 2018—when we placed the government-wide personnel security clearance process on the High-Risk List. We consider 27 of these recommendations key to addressing the high-risk designation. Eight recommendations key to the high-risk designation have been implemented, including three since January 2018.

Nineteen of these key recommendations remain open—including recommendations that the principal members of the PAC (1) conduct an evidence-based review of investigation and adjudication timeliness objectives, (2) develop and report to Congress on investigation quality measures, (3) prioritize the timely completion of efforts to modernize and secure IT systems that affect clearance holders government-wide, and (4) develop and implement a comprehensive workforce plan that identifies the workforce needed to meet current and future demand for background investigations services and to reduce the investigations backlog.

See page 170 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

VA Acquisition Management Added to the High-Risk List



VA spends tens of billions of dollars to procure a wide range of goods and services—including medical supplies, IT, and construction of hospitals, clinics, and other facilities—to meet its mission of providing health care and other benefits to millions of veterans. VA has one of the most significant acquisition functions in the federal government, both in obligations and number of contract actions. The Veterans Health Administration (VHA) provides medical care to veterans and is by far the largest administration in the VA. Since we began focusing on VA’s acquisition management activities in 2015, we have reported numerous challenges in this area. Since 2015, we have made 31 recommendations, 21 of which remain open, that cover a range of areas to address challenges in VA’s acquisition management.

In fiscal year 2019, VA received the largest discretionary budget in its history—\$86.5 billion, about \$20 billion higher than in 2015. About a third of VA’s discretionary budget in fiscal year 2017, or \$26 billion, has been used to contract for goods and services. VA’s acquisition management continues to face challenges including (1) outdated acquisition regulations and policies; (2) lack of an effective medical supplies procurement strategy; (3) inadequate acquisition training; (4) contracting officer workload challenges; (5) lack of reliable data systems; (6) limited contract oversight and incomplete contract file documentation; and (7) leadership instability.

In light of these challenges and given the significant taxpayer investment, it is imperative that VA show sustained leadership commitment to take steps to improve the performance of its procurement function so that it can use its funding in the most efficient manner possible to meet the needs of those who served our country.

This area has been added to the High-Risk List for the following reasons in particular:

- **Outdated acquisition regulations and policies.** VA’s procurement policies have historically been outdated, disjointed, and difficult for contracting officers to use. In September 2016, we reported that the acquisition regulations contracting officers currently follow have not been fully updated since 2008 and that VA had been working on completing a comprehensive revision of its acquisition regulations since 2011. VA’s delay in updating this fundamental source of policy has impeded the ability of contracting officers to effectively carry out their duties. We recommended in September 2016 that VA identify measures to expedite the revision of its acquisition regulations and

clarify what policies are currently in effect. VA concurred with this recommendation but has not yet fully implemented it.

- **Lack of an effective medical supplies procurement strategy.** VA's Medical Surgical Prime Vendor-Next Generation (MSPV-NG) program for purchasing medical supplies to meet the needs of about 9 million veterans at 172 medical centers has not been effectively executed, nor is it in line with practices at leading hospitals that have launched similar programs. We reported in November 2017 that VA's approach to developing its catalog of supplies was rushed and lacked key stakeholder involvement and buy-in. As a result, VA was not able to accomplish some of the key efficiencies the program was intended to achieve, such as streamlining the purchase of medical supplies and saving money. We recommended in November 2017 that VA develop, document, and communicate to stakeholders an overarching strategy for the program. VA concurred with this recommendation and reported that it would develop a new strategy by March 2019.
- **Contracting officer workload challenges.** The majority of our reviews since 2015 have highlighted workload as a contributing factor to the challenges that contracting officers face. Most recently, in September 2018, we reported that about 54 percent of surveyed VA contracting officers said their workload was not reasonable. In addition, in September 2016, we reported that VHA contracting officers processed a large number of emergency procurements of routine medical supplies, which accounted for approximately 20 percent of VHA's overall contract actions in fiscal year 2016, with obligations totaling about \$1.9 billion.

Contracting officers told us that these frequent and urgent small-dollar transactions reduce contracting officers' efficiency and ability to take a strategic view of procurement needs. We recommended in November 2017 that VHA network contracting offices work with medical centers to identify opportunities to more strategically purchase goods and services frequently purchased on an emergency basis. VA concurred with this recommendation and reported in December 2018 that it is utilizing a supply chain dashboard to track items purchased on an emergency basis and determine which of those items to include on the catalog. VA noted that it added 13,300 items to the catalog from June 2018 to December 2018, including items often purchased on an emergency basis. We requested documentation showing which items added to the catalog were previously purchased on an emergency basis, but as of January 2019, VA had not yet provided it.

Among other things, VA should implement our 21 open recommendations and specifically needs to take the following steps to demonstrate greater leadership commitment and strategic planning to ensure efficient use of its acquisition funding and staffing resources:

- Prioritize completing the revision of its acquisition regulations, which has been in process since 2011.
- Develop, document, and communicate to stakeholders a strategy for the Medical Surgical Prime Vendor program to achieve overall program goals.
- Identify opportunities to strategically purchase goods and services that are frequently purchased on an emergency basis.

See page 210 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

**Emerging Issue Requiring
Close Attention: Federal
Efforts to Prevent Drug
Misuse**

In addition to specific areas that we have designated as high-risk, other important challenges facing our nation merit continuing close attention. One of these is the use of illicit drugs and the misuse of prescription drugs and the ways they affect individuals, their families, and the communities in which they live. Over 70,000 people died from drug overdoses in 2017—about 191 people every day—according to the Centers for Disease Control and Prevention, with the largest portion of these deaths attributed to opioids. Further, drug overdoses are the leading cause of death due to injuries in the United States. They are currently at their highest ever recorded level and, since 2011, have outnumbered deaths by firearms, motor vehicle crashes, suicide, and homicide, according to the Drug Enforcement Administration. The Council of Economic Advisors estimates that in 2015, the economic cost of the opioid crisis alone was more than \$500 billion when considering the value of lives lost due to opioid-related overdose.

Federal drug control efforts spanning prevention, treatment, interdiction, international operations, and law enforcement represent a considerable federal investment. According to the President's fiscal year 2019 budget, federal drug control funding for fiscal year 2017 was \$28.8 billion. Multiple federal agencies have ongoing efforts to respond to this crisis, including efforts to reduce the supply and demand for illicit drugs, to prevent misuse of prescription drugs, and to treat substance use disorders.

However, we previously found that many efforts lacked measures to gauge the success of the federal response. Further, we have long advocated an approach to decision-making based on risk management. Such an approach would (1) link agencies' plans and budgets to achieving their strategic goals, (2) assess values and risks of various courses of actions to help set priorities and allocate resources, and (3) provide for the use of performance measures to assess progress.

The Office of National Drug Control Policy (ONDCP) is responsible for overseeing and coordinating the implementation of U.S. drug policy, including developing the National Drug Control Strategy (Strategy). ONDCP released the 2019 Strategy on January 31, 2019. The Strategy focuses on approaches related to prevention, treatment and recovery, and steps to reduce the availability of illicit drugs in the United States. We will continue to monitor the extent to which ONDCP and other federal agencies are employing a risk management and coordinated approach to their efforts to limit drug misuse.

In particular, we have ongoing and planned work to assess ONDCP's operations, including its (1) leadership and coordination of efforts across the federal government; (2) the effects of the drug crisis on labor force participation and productivity and on people with disabilities and other vulnerable populations; (3) key federal efforts to reduce the availability of illicit drugs; and (4) agency efforts around drug education and prevention. We will determine whether this issue should be added to the High-Risk List once we have completed this ongoing and planned work.

High-Risk Areas That Made Progress

Agencies can show progress by addressing our five criteria for removal from the list: leadership commitment, capacity, action plan, monitoring, and demonstrated progress.⁹ As shown in table 1, 24 high-risk areas, or about two-thirds of all the areas, have met or partially met all five criteria for removal from our High-Risk List; 20 of these areas fully met at least one criterion. Compared with our last assessment, 7 high-risk areas showed progress in one or more of the five criteria without regressing in any of the criteria. Ten high-risk areas have neither met nor partially met one or more criteria. Two areas showed mixed progress by increasing in at least one criterion and also declining in at least one criterion. Three

⁹Additional detail on our high-risk criteria and ratings is in appendix I on page 69 of the report.

areas declined since 2017. These changes are indicated by the up and down arrows in table 1.

Table 1: 2017 High-Risk Areas Rated Against Five Criteria for Removal from GAO's High-Risk List

High-risk area	Change since 2017	Number of criteria		
		Met	Partially met	Not met
Department of Defense (DOD) Supply Chain Management	↑	5	0	0
Mitigating Gaps in Weather Satellite Data	↑	5	0	0
DOD Support Infrastructure Management	↑	2	3	0
Medicare Program & Improper Payments ^a	↑	2	3	0
DOD Financial Management	↑	1	3	1
DOE's Contract Management for the National Nuclear Security Administration and Office of Environmental Management	↑	1	3	1
DOD Business Systems Modernization	↑	0	5	0
DOD Approach to Business Transformation	↑↓	1	4	0
USPS Financial Viability	↑↓	1	3	1
NASA Acquisition Management	↓	1	4	0
Transforming the Environmental Protection Agency's (EPA) Processes for Assessing and Controlling Toxic Chemicals	↓	0	5	0
Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks	↓	0	3	2
Strengthening Department of Homeland Security Management Functions	•	3	2	0
DOD Contract Management	•	1	4	0
DOD Weapon Systems Acquisition	•	1	4	0
Enforcement of Tax Laws	•	1	4	0
Ensuring the Cybersecurity of the Nation	•	1	4	0
Improving the Management of IT Acquisitions and Operations	•	1	4	0
Managing Federal Real Property	•	1	4	0
Protecting Public Health through Enhanced Oversight of Medical Products	•	1	4	0
Strategic Human Capital Management	•	1	3	1
Ensuring the Effective Protection of Technologies Critical to U.S. National Security Interests	•	0	5	0
Improving and Modernizing Federal Disability Programs	•	0	5	0
Management of Federal Oil and Gas Resources	•	0	5	0
Modernizing the U.S. Financial Regulatory System	•	0	5	0
National Flood Insurance Program	•	0	5	0
Strengthening Medicaid Program Integrity	•	0	5	0
Resolving the Federal Role in Housing Finance	•	0	4	1

High-risk area	Change since 2017	Number of criteria		
		Met	Partially met	Not met
Improving Federal Oversight of Food Safety	•	0	3	2
Managing Risks and Improving VA Health Care	•	0	2	3
2020 Decennial Census ^b		1	4	0
Government-wide Personnel Security Clearance Process ^b		1	3	1
Improving Federal Management of Programs that Serve Tribes and Their Members ^b		0	5	0
U.S. Government's Environmental Liability ^b		0	1	4
Funding the Nation's Surface Transportation System ^c				
Pension Benefit Guaranty Corporation Insurance Programs ^c				

(↑ indicates one or more areas progressed; ↓ indicates one or more areas declined since 2017; ↑ ↓ indicates mixed progress; • indicates no change)
 Source: GAO | GAO-19-157SP

^aMedicare Program & Improper Payments was only rated on the Improper Payments program; we did not rate other elements of the Medicare program because the area is subject to frequent legislative updates and the program is in a state of transition.

^bFour areas are receiving ratings for the first time because they were newly added in 2017 and 2018.

^cTwo high-risk areas were not rated because addressing them primarily involves congressional action (Funding the Nation's Surface Transportation System and Pension Benefit Guaranty Corporation Insurance Programs).

Figure 1 shows that since our 2017 update, the most progress was made on the action plan criterion—four high-risk areas received higher ratings. We rated two areas lower on leadership commitment and two areas lower on monitoring.

Figure 1: High-Risk Areas' Progress and Regress on High-Risk Criteria Since 2017



Source: GAO analysis of criteria for removal from the High-Risk List status. | GAO-19-157SP

Leadership Attention Needed to Meet High-Risk Criteria

Table 2 shows that 17 of the 34 high-risk areas we rated have met the leadership commitment criterion while two high-risk area ratings regressed on leadership commitment from met to partially met since our last report.

Leadership commitment is the critical element for initiating and sustaining progress, and leaders provide needed support and accountability for managing risks. Leadership commitment is needed to make progress on the other four high-risk criteria. Table 2 shows that only three high-risk areas met the criterion for capacity, six met the criterion for action plan, and two met the criterion for demonstrated progress. One high-risk area—U.S. Government's Environmental Liability—has partially met only

one criterion since we added the area to our list in 2017 and the rest are not met.

Table 2: 2019 High-Risk Area Ratings on Five Criteria for Removal from GAO's High-Risk List

High-risk area	Criteria				
	Leadership commitment	Capacity	Action plan	Monitoring	Demonstrated progress
Department Of Defense (DOD) Supply Chain Management	★	★	★	★	★
Mitigating Gaps in Weather Satellite Data	★	★	★	★	★
Strengthening Department of Homeland Security Management Functions	★	☆	★	★	☆
Medicare Program & improper Payments*	★	★	☆	☆	☆
DOD Support Infrastructure Management	★	☆	★	☆	☆
2020 Decennial Census	★	☆	☆	☆	☆
DOD Contract Management	★	☆	☆	☆	☆
DOD Weapon Systems Acquisition	★	☆	☆	☆	☆
Enforcement of Tax Laws	★	☆	☆	☆	☆
Ensuring the Cybersecurity of the Nation	★	☆	☆	☆	☆
Improving the Management of Information Technology Acquisitions and Operations	★	☆	☆	☆	☆
Managing Federal Real Property	★	☆	☆	☆	☆
Protecting Public Health through Enhanced Oversight of Medical Products	★	☆	☆	☆	☆
DOD Approach to Business Transformation	☆	☆	★	☆	☆
NASA Acquisition Management	☆	☆	★	☆	☆
DOD Financial Management	★	☆	☆	☆	☆
Strategic Human Capital Management	★	☆	☆	☆	☆
Government-wide Personnel Security Clearance Process	★	☆	☆	☆	☆
DOE's Contract Management for the National Nuclear Security Administration and Office of Environmental Management	★	☆	☆	☆	☆

High-risk area	Criteria				
	Leadership commitment	Capacity	Action plan	Monitoring	Demonstrated progress
USPS Financial Viability	★	★	★	★	☆
DOD Business Systems Modernization	★	★	★	★	★
Ensuring the Effective Protection of Technologies Critical to U.S. National Security Interests	★	★	★	★	★
Improving and Modernizing Federal Disability Programs	★	★	★	★	★
Improving Federal Management of Programs that Serve Tribes and Their Members	★	★	★	★	★
Management of Federal Oil and Gas Resources	★	★	★	★	★
Modernizing the U.S. Financial Regulatory System	★	★	★	★	★
National Flood Insurance Program	★	★	★	★	★
Strengthening Medicaid Program Integrity	★	★	★	★	★
Transforming the Environmental Protection Agency's (EPA) Processes for Assessing and Controlling Toxic Chemicals	★	★	★	★	★
Resolving the Federal Role in Housing Finance	★	★	★	★	☆
Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks	★	★	★	☆	☆
Improving Federal Oversight of Food Safety	★	★	☆	☆	★
Managing Risks and Improving VA Health Care	★	☆	★	☆	☆
U.S. Government's Environmental Liability	★	☆	☆	☆	☆

Legend: ★ Met ☆ Partially Met ☆ Not Met

Source: GAO. | GAO-19-1575P

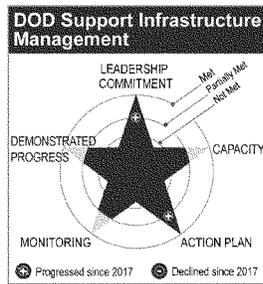
Notes: Two high-risk areas—Funding the Nation's Surface Transportation System and Pension Benefit Guaranty Corporation Insurance Programs—did not receive ratings against the five high-risk criteria because progress would primarily involve congressional action.

*Medicare Program & Improper Payments was only rated on the Improper Payments, and we did not rate other elements of the Medicare program

Progress in High-Risk Areas

As noted, seven areas showed improvement in one or more criterion without regressing in any criteria. Two areas showed sufficient progress to be removed from the High-Risk List. The other five high-risk areas remaining on the 2019 list demonstrated improvement and are described below. Three of these five improving high-risk areas are the responsibility

of the Department of Defense (DOD)—DOD Support Infrastructure Management, DOD Financial Management, and DOD Business Systems Modernization. The two other improving areas are Department of Energy's (DOE's) Contract Management for the National Nuclear Security Administration and Office of Environmental Management, and Medicare Program & Improper Payments.

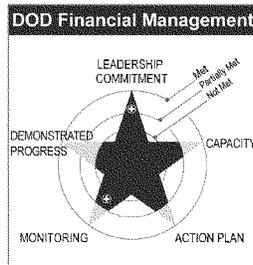


DOD Support Infrastructure Management: DOD manages a portfolio of real property assets that, as of fiscal year 2017, reportedly included about 586,000 facilities—including barracks, maintenance depots, commissaries, and office buildings. The combined replacement value of this portfolio is almost \$1.2 trillion and includes about 27 million acres of land at nearly 4,800 sites worldwide. This infrastructure is critical to maintaining military readiness, and the cost to build and maintain it represents a significant financial commitment. Since our 2017 High-Risk Report, DOD's rating for two criteria—leadership commitment and action plan—improved from partially met to met.

DOD has demonstrated leadership commitment by stating its commitment to addressing key recommendations we have made by, for example, (1) better forecasting the initial Base Realignment and Closure (BRAC) costs for military construction, IT, and relocating military personnel and equipment; (2) better aligning infrastructure to DOD force structure needs by, for example, improving the accuracy and sufficiency of its excess capacity estimates; and (3) pursuing an effort to consolidate and standardize leases, which includes analyzing whether it is feasible to relocate functions from commercial leased space to existing space on an installation, thereby reducing leases and better utilizing excess space.

DOD has developed action plans to better identify excess infrastructure and thus be positioned to dispose of it. For example, in the 2017 High-Risk Report, we stated that DOD's Real Property Efficiency Plan includes DOD's goals for reducing the footprint of its real property inventory and metrics to gauge progress, to be implemented by the end of 2020. We also found in 2018 that DOD was achieving cost savings and cost avoidances as it had begun using intergovernmental support agreements between military installations and local governments to obtain installation services, such as waste removal, grounds maintenance, and stray animal control. As a result of these and other actions, DOD now meets the action plan criterion for this high-risk area.

As of December 2018, 23 recommendations related to this high-risk area remain open. DOD continues to partially meet the criteria for capacity, monitoring, and demonstrated progress.



Source: GAO analysis. | GAO-19-1575P

See page 158 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

DOD Financial Management: Since our 2017 High-Risk Report, ratings for the DOD Financial Management high-risk area improved for the criteria of leadership commitment and monitoring. For the leadership commitment criterion, the high-risk area rating improved from partially met to met in 2019 due to several DOD leadership actions. For example, in 2018, DOD leadership met the goal of undergoing an agency-wide financial statement audit and established a process to remediate any audit findings—ultimately to improve the quality of financial information that is most valuable in managing the department’s day-to-day operations. In addition, according to a DOD official, audit remediation efforts have produced benefits in certain inventory processes that have led to operational improvements.

DOD leadership demonstrated its commitment to making needed improvements by developing a database that tracks hundreds of findings and recommendations that came out of the audits. In addition, senior leadership has been meeting bimonthly with military services’ leadership for updates on the status of corrective action plans to address audit findings and recommendations, and the Under Secretary of Defense (Comptroller) has been meeting frequently with the Secretary of Defense to review the plans.

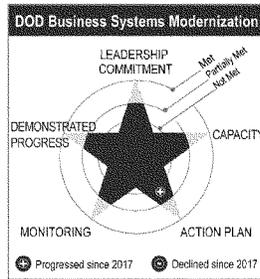
These same DOD actions also led to the high-risk area’s rating for the criterion of monitoring to improve from not met to partially met. For example, the database mentioned above is intended to capture, prioritize, and assign responsibility for auditor findings and related corrective action plans, which are meant to be used to measure progress towards achieving a clean audit opinion.

Further, DOD leadership has held frequent meetings to discuss the status of corrective action plans. In addition, DOD also established councils in certain areas (e.g., financial reporting) to review the status of audit remediation activities and challenges. All of these actions demonstrate an improvement in DOD’s monitoring activities for its financial management function.

However, DOD’s efforts to improve its financial management continue to be impaired by long-standing issues—including its decentralized environment; cultural resistance to change; lack of skilled financial management staff; ineffective processes, systems, and controls; incomplete corrective action plans; and the need for more effective monitoring and reporting. DOD remains one of the few federal entities that cannot accurately account for and report on its spending or assets.

As of December 2018, 53 recommendations for this high-risk area are open. The DOD Financial Management high-risk area continues to partially meet the capacity and action plan criteria and not meet the demonstrated progress criterion.

See page 147 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.



DOD Business Systems Modernization: DOD spends billions of dollars each year to acquire modernized systems, including systems that address key areas such as personnel, financial management, health care, and logistics. This high-risk area includes three critical challenges facing DOD: (1) improving business system acquisition management, (2) improving business system investment management, and (3) leveraging DOD's federated business enterprise architecture.

DOD's capacity for modernizing its business systems has improved over time and, since our 2017 High-Risk Report, DOD's overall rating for the criterion of action plan improved from not met to partially met in 2019. DOD established a plan for improving its federated business enterprise architecture (i.e., description of DOD's current and future business environment and a plan for transitioning to the future environment). Specifically, the rating improved for DOD's federated business enterprise architecture segment of the high-risk area because DOD's assistant deputy chief management officer approved a business architecture improvement plan in January 2017.

Since 2017, we have made 10 recommendations related to this high-risk issue. As of December 2018, 27 recommendations are open. The leadership, capacity, monitoring, and demonstrated progress criteria remain partially met as in 2017.

See page 152 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.



Source: GAO analysis. | GAO-19-1578P

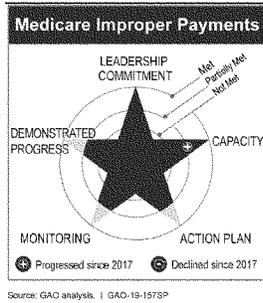
DOE's Contract Management for the National Nuclear Security Administration and Office of Environmental Management: DOE oversees a broad range of programs related to nuclear security, science, energy, and waste cleanup, among other areas. As the largest civilian contracting agency in the federal government, DOE relies primarily on contractors to carry out its programs. For instance, DOE spends about 90 percent of its annual budget on contracts and acquiring capital assets. In fiscal year 2018, DOE's budget was \$34.5 billion.

The high-risk area focuses on contracts, as well as major projects—those with an estimated cost of \$750 million or greater—managed by DOE's National Nuclear Security Administration (NNSA) and Office of Environmental Management (EM).

Since our 2017 High-Risk Report, DOE has made progress by improving from a not met to a partially met rating for the demonstrated progress criterion. Specifically, through its Office of Cost Estimating and Program Evaluation, NNSA has enhanced its capability to estimate costs and schedules, and to assess alternatives for programs and projects, among other things. NNSA also made progress by adopting best practices in several areas, such as those for estimating costs and schedules in nuclear weapons refurbishment activities and capital asset acquisitions. For example, we determined that DOE's revised cost estimate of \$17.2 billion to construct a Mixed Oxide Fuel Fabrication Facility to dispose of surplus, weapons-grade plutonium substantially met best practices—providing assurance that the estimated costs could be considered reliable. This finding contributed to DOE's reevaluation of the project and ultimate termination, in October 2018, in favor of a potentially less costly disposal approach.

Fifty-one of our recommendations were open as of December 2018; 15 recommendations were made since the last high-risk update in February 2017. DOE continues to meet the criterion of leadership commitment, partially meet the criteria for action plan and monitoring, and not meet the criterion for capacity.

See page 217 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.



Source: GAO analysis. | GAO-19-1575P

Medicare Program & Improper Payments: In calendar year 2017, Medicare, which is overseen by the Centers for Medicare & Medicaid Services (CMS), financed \$702 billion worth of health services for approximately 58 million elderly and disabled beneficiaries. Medicare faces a significant risk with improper payments—payments that either were made in an incorrect amount or should not have been made at all—which reached an estimated \$48 billion in fiscal year 2018.

Since our 2017 High-Risk Report, estimated improper payment rates declined more than one percent across the Medicare program. In addition, CMS' rating for the capacity criterion of the improper payments segment improved from partially met to met in 2019 due to several actions. First, the Center for Program Integrity's (CPI) budget and resources have increased over time and the agency has established work groups and interagency collaborations to extend its capacity. For example, CMS allocated more staff to CPI after Congress provided additional funding. CPI's full-time equivalent positions increased from 177 in 2011 to 419 in 2017.

Additionally, in August 2017, we reported that CMS's Fraud Prevention System, which analyzes claims to identify health care providers with suspect billing patterns, helped speed up certain fraud investigation processes. Further, the Healthcare Fraud Prevention Partnership helped improve information sharing among payers inside and outside of the government.

Since 1990, when we added Medicare to our High-Risk List, we have made many recommendations related to the Medicare program, 28 of which were made since the last high-risk update in February 2017. As of December 2018, more than 80 recommendations remain open. CMS continues to meet the criterion of leadership commitment and to partially meet the remaining three criteria of action plan, monitoring, and demonstrated progress.

See page 241 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Congressional Action Aided Progress on High-Risk Issues

Congress enacted several laws since our last report in February 2017 to help make progress on high-risk issues. Table 3 lists selected examples of congressional actions taken on high-risk areas.

Table 3: Examples of Congressional Actions Taken on High-Risk Areas

High-risk area	Congressional actions taken	How GAO work contributed to congressional actions	Impact on high-risk area
Department of Defense (DOD) Approach to Business Transformation	Section 901(c) of the National Defense Authorization Act (NDAA) for Fiscal Year 2017 created the position of Chief Management Officer (CMO) within DOD, effective February 1, 2018. ^a	The 2016 passage of the NDAA is consistent with our February 2005 report, in which we identified the need for DOD to have a full-time CMO position created through legislation, with responsibility, authority, and accountability for DOD's overall business transformation efforts.	Based on congressional direction, DOD established and is beginning to restructure its CMO office to fulfill its responsibilities given by Congress. Continued leadership commitment at the highest levels will help sustain focus on this business transformation. The longer this critical position is filled by someone in an acting capacity, the greater the risk that DOD's transformation efforts could be impacted. (Leadership commitment)
Improving the Management of Information Technology (IT) Acquisitions and Operations	Subtitle G of title X of the NDAA for Fiscal Year 2018 established a Technology Modernization Fund and Board, and allowed agencies to establish agency information technology system modernization and working capital funds. ^b	We identified the need to better manage the billions of dollars the federal government spends annually on legacy IT when we added this area to the High-Risk List in 2015. We further examined the government's heavy reliance on legacy IT systems in our 2016 report.	These provisions (1) allowed agencies to establish working capital funds for use in transitioning away from legacy IT systems and (2) created a technology modernization fund to help agencies retire and replace legacy systems, as well as acquire or develop new systems. (Capacity)
Government-wide Personnel Security Clearance Process	Section 925(k) of the NDAA for Fiscal Year 2018 requires the Director of National Intelligence, in coordination with the Chair and other principals of the Suitability, Security, and Credentialing Performance Accountability Council, to provide an annual assessment of any impediments to the timely processing of personnel security clearances. ^c	The 2017 passage of the NDAA is consistent with our December 2017 report, in which we asked Congress to consider both reinstating and adding to the requirement in the Intelligence Reform and Terrorism Prevention Act of 2004 for the executive branch to report to appropriate congressional committees annually on its background investigation process.	Annual assessments will help Congress monitor the timeliness of the executive branch's background investigations to monitor its own timeliness. The act requires the executive branch to report the length of time for initiating and conducting investigations and finalizing adjudications, and case load composition and costs, among other matters deemed relevant by Congress. (Monitoring)

High-risk area	Congressional actions taken	How GAO work contributed to congressional actions	Impact on high-risk area
Mitigating Gaps in Weather Satellite Data	Provisions of the NDAA for Fiscal Year 2015 limited the availability of certain funds until the Secretary of Defense submitted to congressional defense committees a plan related to weather satellites. ³ Similarly, the NDAA for Fiscal Year 2016 limited the availability of certain funds until (1) the Secretary of Defense briefed the congressional defense committees on a plan for cloud characterization and theater weather imagery, and (2) the Chairman of the Joint Chiefs of Staff certified to the committees that the plan would meet DOD requirements without negatively affecting commanders of combatant commands. ⁶	We found that DOD was slow to establish plans for its Weather System Follow-on–Microwave program in our 2017 High-Risk Report. We also found it had made little progress in determining how it would meet weather satellite requirements for cloud descriptions and area-specific weather imagery.	These provisions (1) encouraged DOD to develop and implement plans to address its weather satellite requirements and (2) helped Congress monitor DOD plans and actions to address these requirements. (Action plan)
Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks	Section 1234(a)(5) of the Disaster Recovery Reform Act of 2018 allows the President to set aside, with respect to each major disaster, a percentage of certain grants to use for pre-disaster hazard mitigation. Section 1206(a)(3) makes federal assistance available to state and local governments for building code administration and enforcement. ⁷	We found that federal investments in resilience could be more effective if post-disaster hazard mitigation efforts were balanced with resources for pre-disaster hazard mitigation, as part of a comprehensive resilience investment strategy. We also found that enhancing state and local disaster resilience could help reduce federal fiscal exposure.	These provisions could improve state and local resilience to disasters by increasing the amount of funding available for pre-disaster hazard mitigation and increasing state and local adoption and enforcement of the latest building codes. (Capacity)
Ensuring the Cybersecurity of the Nation	An explanatory statement accompanying the Consolidated Appropriations Act, 2018 directed the National Protection and Programs Directorate to brief the appropriations committees on its specific plans to address GAO recommendations including the National Cybersecurity and Communications Integration Center's (NCCIC) implementation of the recommendations for ensuring that it fulfills its statutory functions, such as sharing information about cyber threats, by timely reporting information that is relevant and actionable, and establishing appropriate performance metrics. ⁹	We reported that NCCIC had taken steps to perform each of the Department of Homeland Security's (DHS) statutorily required cybersecurity functions. However, the extent to which NCCIC performed the actions was unclear, in part, because the center had not yet established metrics and methods by which to evaluate its performance.	As of January 2019, DHS had fully addressed two of the nine recommendations we made to enhance the effectiveness and efficiency of NCCIC, and had taken initial actions toward addressing several others. (Demonstrated progress)

High-risk area	Congressional actions taken	How GAO work contributed to congressional actions	Impact on high-risk area
Managing Risks and Improving VA Health Care	The No Veterans Crisis Line Call Should Go Unanswered Act directs the Department of Veterans Affairs (VA) to develop a quality assurance document for carrying out the toll-free Veterans Crisis Line, and requires VA to develop a plan to ensure that each telephone call, text message, and other communication received is answered in a timely manner. ^h	About 6 months prior to the passage of this legislation, our May 2018 report identified the need for VA to take several steps to better test, track, and assess the performance of the Veterans Crisis Line in order to improve the timeliness and quality of its responses to veterans and others.	In July 2017, VA updated a quality assurance plan with measurable targets and time frames for key performance indicators needed to assess Veterans Crisis Line performance. VA also established an Executive Leadership Council in March 2017 to monitor data on the key performance indicators. These two actions will assist with the oversight and accountability of the Veterans Crisis Line, and the services provided to veterans. (Leadership commitment, Action plan, and Monitoring)
Improving Federal Management of Programs that Serve Tribes and Their Members	An explanatory statement accompanying the Consolidated Appropriations Act, 2018 directed the Indian Health Service (IHS) to report to the appropriations committees on the status of its efforts on improving wait times for patients seeking primary and urgent care, including an explanation of how these efforts will address GAO recommendations. ⁱ	We found that IHS had not conducted any systematic, agency-wide oversight of the timeliness of primary care in its federally operated facilities and recommended that IHS communicate specific agency-wide standards for patient wait times; monitor patient wait times; and ensure corrective actions are taken when standards are not met.	IHS developed specific standards for patient wait times and developed a plan and timeline for implementing an agency-wide standard for patient wait times. It is also in the process of updating its patient wait time policy to include emergency department wait times and developing automated data collection for wait times. (Leadership commitment, Action plan, Monitoring)

Source: GAO analysis. | GAO-19-1575P

^hPub. L. No. 114-328, § 901(c), 130 Stat. 2000, 2341 (2016).

ⁱPub. L. No. 115-91, §§ 1076–1078, 131 Stat. 1283, 1596–1594 (2017).

^jPub. L. No. 115-91, § 925(k)(1)(F), (3)(f), 131 Stat. 1283, 1530, 1532 (2017).

^kCarl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, § 1612, 128 Stat. 3292, 3628 (2014).

^lNational Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114-92, § 1615, 129 Stat. 726, 1105 (2015).

^mFAA Reauthorization Act of 2018, Pub. L. No. 115-254, div. D, §§ 1206(a)(3), 1234(a)(5) 132 Stat. 3186, 3440, 3462 (2018).

ⁿChairman Rodney P. Frelinghuysen of the Committee on Appropriations of the House of Representatives filed an explanatory statement relating to the House amendment of H.R. 1625 in the Congressional Record on March 22, 2016. 164 Cong. Rec. H2045, H2557. Section 4 of the Consolidated Appropriations Act, 2018, states that this explanatory statement shall have the same effect with respect to the allocation of funds and implementation of divisions A through L of the act as if it were a joint explanatory statement of a committee of conference. Pub. L. No. 115-141, § 4, 132 Stat. 348, 350 (2018).

^oPub. L. No. 114-247, 130 Stat. 996 (2016).

Chairman Rodney P. Frelinghuysen of the Committee on Appropriations of the House of Representatives filed an explanatory statement relating to the House amendment of H.R. 1525 in the Congressional Record on March 22, 2016. 164 Cong. Rec. H2045, H2628. Section 4 of the Consolidated Appropriations Act, 2018, states that this explanatory statement shall have the same effect with respect to the allocation of funds and implementation of divisions A through L of the act as if it were a joint explanatory statement of a committee of conference. Pub. L. No. 115-141, § 4, 132 Stat. 348, 350 (2018).

Congressional oversight also plays a vital role in addressing high-risk issues. For example, at a May 2018 hearing, we testified that the Census Bureau's (Bureau) cost estimate was not reliable, and that the actual cost could be higher than planned.¹⁰ Further, the Secretary of Commerce created a dedicated team to provide oversight and guidance to the Bureau on cost estimation.

In addition to its instrumental role in supporting progress in individual high-risk areas, Congress also enacted the following statutes that, if implemented effectively, will help foster progress on high-risk issues government-wide:

- **Fraud Reduction and Data Analytics Act of 2015 (FRDAA):**¹¹ FRDAA is intended to strengthen federal antifraud controls. FRDAA requires OMB to use our Fraud Risk Framework¹² to create guidelines for federal agencies to identify and assess fraud risks, and then design and implement control activities to prevent, detect, and respond to fraud. Agencies, as part of their annual financial reports beginning in fiscal year 2017, are further required to report on their fraud risks and their implementation of fraud reduction strategies, which should help Congress monitor agencies' progress in addressing and reducing fraud risks.

To aid federal agencies in better analyzing fraud risks, FRDAA requires OMB to establish a working group tasked with developing a plan for creating an interagency library of data analytics and data sets to facilitate the detection of fraud and the recovery of improper payments. This working group and the library should help agencies coordinate their fraud detection efforts and improve their ability to use data analytics to monitor databases for potential

¹⁰GAO, *2020 Census: Actions Needed to Mitigate Key Risks Jeopardizing a Cost-Effective and Secure Enumeration*, GAO-18-543T (May 8, 2018).

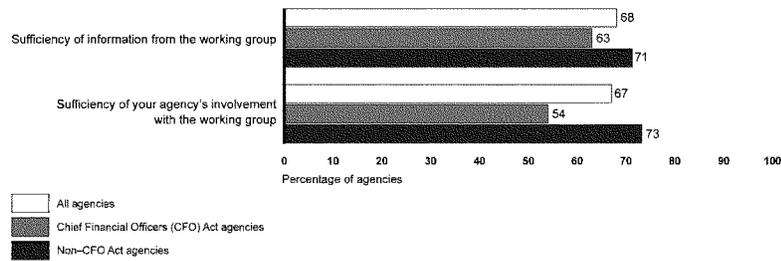
¹¹Pub. L. No. 114-186, 130 Stat. 546 (2016).

¹²GAO, *A Framework for Managing Fraud Risks in Federal Programs*, GAO-15-593SP (Washington, D.C.: July 2015).

improper payments. The billions of dollars in improper payments, some of which may be a result of fraud, are a central part of the Medicare Program, Medicaid Program, and Enforcement of Tax Laws (Earned Income Tax Credit) high-risk areas.

We reported in 2018 that, among other things, OMB did not involve all agencies subject to the act as required by FRDAA or hold the required minimum number of working-group meetings in 2017.¹³ As shown in figure 2, a majority of the 72 agencies surveyed indicated a lack of involvement with and information from the working group as challenges in implementing FRDAA. We made three recommendations, including that OMB ensure the working group meets FRDAA's requirements to involve all agencies that are subject to the act and ensure that mechanisms to share controls, best practices, and data-analytics techniques are in place. OMB did not concur with our recommendations. We continue to believe the recommendations are valid, as discussed in the 2018 report.

Figure 2: Percentage of Agencies That Identified Their Involvement with the Fraud Reduction and Data Analytics Act of 2015 Working Group as a Great or Moderate Challenge



Source: GAO analysis of survey data. | GAO-19-157SP

¹³GAO, *Fraud Risk Management: OMB Should Improve Guidelines and Working-Group Efforts to Support Agencies' Implementation of the Fraud Reduction and Data Analytics Act*, GAO-19-34 (Washington, D.C.: December 4, 2018).

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- **IT Acquisition Reform, statutory provisions known as the Federal Information Technology Acquisition Reform Act (FITARA):**¹⁴ FITARA, enacted in December 2014, was intended to improve how agencies acquire IT and better enable Congress to monitor agencies' progress in reducing duplication and achieving cost savings. Since the enactment of these provisions, OMB and federal agencies have paid greater attention to IT acquisition and operation, resulting in improvements to the government-wide management of this significant annual investment. These efforts have been motivated in part by sustained congressional support for improving implementation of this law, as highlighted in agencies' FITARA implementation scores issued biannually by the House Committee on Oversight and Reform.

This continuing oversight has produced positive results. For example, in the committee's December 2018 FITARA implementation scorecard, 18 of the 24 major federal agencies received the highest possible rating for their efforts to improve the management of software licenses, of which we have found there are thousands annually across the government. Seven months earlier, in the prior scorecard, only eight agencies had achieved this rating. Moreover, federal agencies have taken actions to address 106 of the 136 related recommendations that we have made in this area since 2014.

FITARA includes specific requirements related to seven areas: the federal data center consolidation initiative, enhanced transparency and improved risk management, agency Chief Information Officer authority enhancements, portfolio review, expansion of training and use of IT acquisition cadres, government-wide software purchasing, and maximizing the benefit of the federal strategic sourcing initiative.

In November 2017, Congress extended or removed the sunset dates of several of these statutory requirements that were originally to end in 2018 and 2019.¹⁵ While all of the 24 federal agencies covered by this law have developed FITARA implementation plans, the agencies need to effectively execute these plans. Successfully addressing FITARA requirements is

¹⁴FITARA was enacted into law as part of the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291 (2014), div. A, title VIII, subtitle D, §§ 831-837, 128 Stat. 3292, 3438-3450.

¹⁵FITARA Enhancement Act of 2017, Pub. L. No. 115-88, 131 Stat. 1278 (2017).

central to making progress in Improving the Management of IT Acquisitions and Operations, which has been on our High-Risk List since 2015.

- **Program Management Improvement Accountability Act (PMIAA):**¹⁶ Enacted in December 2016, the act is intended to improve program and project management in certain larger federal agencies. Among other things, the act requires the Deputy Director for Management of OMB to adopt and oversee implementation of government-wide standards, policies, and guidelines for program and project management in executive agencies. The act also requires the Deputy Director to conduct portfolio reviews to address programs we identify as high-risk. It further creates a Program Management Policy Council to act as the principal interagency forum for improving practices related to program and project management. The council is to review programs identified as high-risk and make recommendations to the Deputy Director or designee.

OMB has produced a general strategy for implementing the law through 2022 and met some initial milestones required by PMIAA. For example, in June 2018, OMB issued OMB Memorandum M-18-19, which includes: (1) agency guidance for implementing PMIAA, (2) a five-year strategic outline for improving program and project management, and (3) initial program management standards and principles.¹⁷ Further, agencies have designated Program Management Improvement Officers to guide their implementation of PMIAA.

According to OMB, it began implementing PMIAA's requirement to conduct portfolio reviews on high-risk areas by requiring relevant agencies to provide several items for discussion during the 2018 Strategic Review meetings. These annual meetings are to consist primarily of a discussion of agency progress towards each of the strategic objectives outlined in their strategic plans, but also cover other management topics such as enterprise risk management and high-risk area progress. According to OMB documents, in advance of these meetings, OMB required agencies to provide a high-level summary of (1) any disagreements with our

¹⁶Pub. L. No. 114-264, 130 Stat. 1371 (2016).

¹⁷Office of Management and Budget, *Improving the Management of Federal Programs and Projects through Implementing the Program Management Improvement Accountability Act (PMIAA)*, OMB Memorandum M-18-19 (Washington, D.C.: June 25, 2018).

recommendations, (2) progress barriers, and (3) actions needed by OMB, other agencies, or Congress to help the agency achieve progress towards removal from our High-Risk List.

OMB officials told us their 2018 Strategic Review meetings did not address each high-risk area but did address government-wide high-risk areas, such as cybersecurity, information technology, and strategic human capital as they related to the President's Management Agenda.

In the past, senior management officials from OMB, applicable agencies, and our agency have met to address areas where additional management attention could be beneficial to high-risk issues. These trilateral meetings, beginning in 2007 and pre-dating PMIAA's 2016 enactment, have continued across administrations.

However, OMB has organized only one of these high-risk meetings since the last high-risk update in 2017, on the Government-wide Personnel Security Clearance Process. In November 2018, OMB told us of plans to hold additional meetings on priority high-risk areas, including the 2020 Decennial Census, Strategic Human Capital Management, Ensuring the Cybersecurity of the Nation, National Aeronautics and Space Administration (NASA) Acquisition Management, and Managing Federal Real Property.

Effective implementation of PMIAA provides an important opportunity to enhance progress on high-risk areas by focusing leadership attention through the portfolio reviews and trilateral meetings. Further, a number of high-risk areas have longstanding or significant program and project management concerns, including the acquisition-related high-risk areas for DOD, DOE, NASA, and VA. These and other programs can benefit from improving program and project management. In December 2019, we will report on OMB's progress in implementing PMIAA, including what further steps it has taken to use the portfolio review process required in PMIAA to address issues on our High-Risk List.

Executive Branch Action on Our Recommendations Aided Progress on High-Risk Issues

Agency leaders took actions to implement our recommendations. These resulted in numerous improvements to programs and operation and improved service. Further, these actions to implement our recommendations resulted in significant financial benefits. Table 4 shows

some examples of the financial benefits achieved since our last High-Risk Report.

Table 4: Examples of GAO High-Risk Area Recommendations Leading to Financial Benefits

High-risk area	GAO recommendations leading to financial benefits	Financial benefits achieved
Strengthening Medicaid Program Integrity	In multiple reports, we found that demonstration spending limits approved by the Department of Health and Human Services (HHS) often were not budget neutral, as required by HHS policy. This increased the federal government's fiscal liability by billions of dollars. We recommended that HHS better ensure that valid methods are used to determine spending limits.	HHS responded by limiting the amount of unspent funds states may accrue and reducing the federal government's fiscal liability. As a result, the Centers for Medicare & Medicaid Services was able to identify a total of \$23.5 billion in financial benefits for fiscal year (FY) 2017.
Improving the Management of Information Technology (IT) Acquisitions and Operations	In multiple reports, we made recommendations for improving the management of IT portfolios, which resulted in reduced agency commodity IT spending and fewer duplicative investments.	Agencies have achieved about \$2.5 billion in savings from fiscal years 2012 to 2017 through the Office of Management and Budget's PortfolioStat that was intended to consolidate and eliminate duplicative systems. Agencies have the potential to achieve about \$3.5 billion in additional savings.
Resolving the Federal Role in Housing Finance	In June 2013, we recommended actions for the Federal Housing Administration (FHA) to increase returns on sales of foreclosed properties with FHA-insured mortgages.	FHA's actions in response to our recommendations improved its returns and led to financial benefits totaling about \$1.3 billion in 2017.
Medicare Program & Improper Payments	In December 2015, we recommended that Congress consider directing the Secretary of HHS to equalize payment rates between physician offices and hospital outpatient departments for evaluation and management services and to return the associated savings to the Medicare program.	This change in reimbursement resulted in estimated cost savings to the program of \$1.6 billion in FYs 2017 and 2018, and will result in additional savings going forward.
Enforcement of Tax Laws	In June 2015, we expressed concerns to Internal Revenue Service (IRS) officials about fraudsters potentially using taxpayer account information stolen in the 2014 and 2015 "Get Transcript" online service data breach to file multiple fraudulent returns and receive refunds. In response, IRS changed its authentication and monitoring procedures for accounts affected by the breach.	As a result of our suggestion and the new authentication procedures, in August 2017 we found that IRS prevented paying a total of \$480.2 million in fraudulent refunds in FYs 2015 and 2016. In 2018, we found that IRS prevented an additional \$110 million in FY 2017.
National Flood Insurance Program	Staff from the Federal Emergency Management Administration (FEMA) identified a number of actions that the agency has taken or has underway to address issues we raised related to its rate-setting methods in June 2011. In response to a congressional matter we made, congressional staff notified us that Congress passed the Biggert-Waters Flood Insurance Reform Act of 2012 which eliminated or phased out subsidized premium rates for several types of properties.	As a result of changes FEMA has made in rates for certain subsidized properties, we estimate that policyholders with these subsidized premiums paid \$338.4 million (net present value) more in premiums as of the end of FY 2017 than they would have paid prior to the enactment of the Biggert-Waters Act.

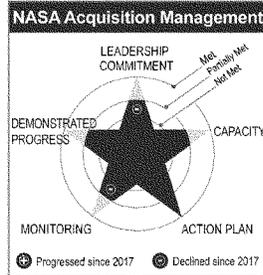
Source: GAO analysis. | GAO-19-1575P

High-Risk Areas Needing Significant Attention

In the 2 years since our last High-Risk Report, three areas—NASA Acquisition Management, Transforming EPA's Process for Assessing and Controlling Toxic Chemicals, and Limiting the Federal Government's Fiscal Exposure By Better Managing Climate Change Risks—have regressed in their ratings against our criteria for removal from the High-Risk List. In addition, while progress is needed across all high-risk areas, we have identified nine additional areas that require significant attention to address imminent, longstanding, or particularly broad issues affecting the nation.

Three High-Risk Areas That Regressed

NASA Acquisition Management



Source: GAO analysis. | GAO-19-1578P

NASA plans to invest billions of dollars in the coming years to explore space, improve its understanding of the Earth's environment, and conduct aeronautics research, among other things. We designated NASA's acquisition management as high risk in 1990 in view of NASA's history of persistent cost growth and schedule delays in the majority of its major projects.

Following several years of continuing a generally positive trend of limiting cost growth and schedule delays for its portfolio of major projects, we found that NASA's average launch delay increased from 7 to 12 months between May 2017 and May 2018. Further, the overall development cost growth increased from 15.6 percent to at least 18.8 percent over the same time period. NASA's largest science project, the James Webb Space Telescope, has experienced schedule delays of 81 months and cost growth of 95 percent since the project's cost and schedule baseline was first established in 2009.

NASA is at risk for continued cost growth and schedule delays in its portfolio of major projects. Since our 2017 high-risk update, we have lowered NASA acquisition management from meeting the rating to partially meeting the rating in two criteria—leadership commitment and monitoring. The other three criteria ratings remained the same as in 2017. Ratings for capacity and demonstrated progress remain partially met and the rating for action plan remains met.

Over the next several years, NASA plans to add new, large, and complex projects to the portfolio, including a lunar Gateway—currently being discussed as a platform in a lunar orbit to mature deep space exploration capabilities. In addition, many of NASA's current major projects, including

some of the most expensive ones, are in the phase of their life cycles when cost growth and schedule delays are most likely.

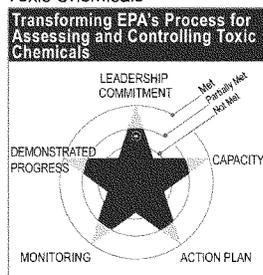
NASA acquisition management requires significant attention for the following reasons:

- NASA leadership has approved risky programmatic decisions for complex major projects, which compounded technical challenges. For example, leadership has approved some programs to proceed (1) with low cost and schedule reserves, (2) with overly aggressive schedules, and (3) without following best practices for establishing reliable cost and schedule baselines.
- NASA leadership has also not been transparent about cost and schedule estimates for some of its most expensive projects. Without transparency into these estimates, both NASA and Congress have limited data to inform decision making.
- NASA has not yet instituted a program for monitoring and independently validating the effectiveness and sustainability of the corrective action measures in its new action plan, which NASA finalized in December 2018.

In addition, while NASA has taken some steps to build capacity to help reduce acquisition risk, including updating tools aimed at improving cost and schedule estimates, other areas still require attention. For example, we reported in May 2018 that several major NASA projects experienced workforce challenges, including not having enough staff or staff with the right skills. NASA has also identified capability gaps in areas such as scheduling, earned value management, and cost estimating, and has efforts underway to try to improve capacity in these areas.

Since 2017, we have made 9 recommendations on this high-risk area, and as of December 2018, 15 recommendations remain open. These recommendations include that NASA needs to improve transparency of major project cost and schedule estimates, especially for its human spaceflight programs, as well as continue to build capacity to reduce acquisition risk. NASA will also need to implement its new action plan and track progress against it. See page 222 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Transforming EPA's Process for Assessing and Controlling Toxic Chemicals



Source: GAO analysis. | GAO-19-1575P

The Environmental Protection Agency's (EPA's) ability to effectively implement its mission of protecting public health and the environment is dependent on it assessing the risks posed by chemicals in a credible and timely manner. Such assessments are the cornerstone of scientifically sound environmental decisions, policies, and regulations under a variety of statutes.

Based on our work since our 2017 High-Risk Report, the overall rating for leadership commitment decreased from met to partially met due to limited information for completing chemical assessments and proposed budget cuts in the Integrated Risk Information System (IRIS) Program. The ratings for the remaining four criteria remain unchanged and are partially met.

The EPA Acting Administrator indicated his commitment to fulfill the agency's obligations under the Toxic Substances Control Act (TSCA) as amended by the 2016 Frank R. Lautenberg Chemical Safety for the 21 Century Act (Lautenberg Act) and ensure chemicals in the marketplace are safe for human health and the environment. Nonetheless, EPA needs to give more attention to several areas to fully realize the benefits of the new law, and to demonstrate additional progress in the IRIS Program, such as:

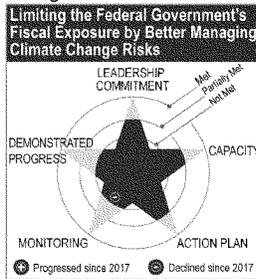
- While EPA released a document in late December 2018 called the IRIS Program Outlook, the Outlook fails to list the projected date for most of the assessments and includes no information regarding assessment prioritization—including how these assessments will meet program and regional office needs.
- The Lautenberg Act increases both EPA's responsibility for regulating chemicals and its workload. EPA recently issued a rule under the act to collect fees from certain companies to defray a portion of the implementation costs, but it is unclear whether the fees collected will be sufficient to support relevant parts of the program.
- EPA issued a First Year Implementation Plan in June 2016 noting that this document is intended to be a roadmap of major activities EPA will focus on during the initial year of implementation. As of mid-February 2019 the plan has not been updated, according to publically available information, although EPA had indicated that it is a living document that will be further developed over time.

EPA needs to ensure that the people and resources dedicated to the IRIS Program and TSCA implementation are sufficient. Our March 2019 report on chemical assessments provides information on what remains to

be done to address challenges in the IRIS program and implement the Lautenberg Act.¹⁸

Since we added this area to our High-Risk List in 2009, we have made 12 recommendations to EPA related to IRIS and TSCA. As of February 2019, seven recommendations remain open. See page 204 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Limiting the Federal Government's Fiscal Exposure by Better Managing Climate Change Risks



Source: GAO analysis. | GAO-19-1575P

Numerous studies have concluded that climate change poses risks to many environmental and economic systems and creates a significant fiscal risk to the federal government. The rising number of natural disasters and increasing reliance on the federal government for assistance is a key source of federal fiscal exposure. As of December 2018, total federal funding for disaster assistance since 2005 is approaching half a trillion dollars (about \$430 billion), most recently for catastrophic hurricanes, flooding, wildfires, and other losses in 2017 and 2018. The costliness of disasters is projected to increase as extreme weather events become more frequent and intense due to climate change. There are five areas where government-wide action is needed to reduce federal fiscal exposure, including, but not limited to, the federal government's role as (1) the insurer of property and crops; (2) the provider of disaster aid; (3) the owner or operator of infrastructure; (4) the leader of a strategic plan that coordinates federal efforts and informs state, local, and private-sector action; and (5) the provider of data and technical assistance to decision makers.

Neither global efforts to mitigate climate change causes nor regional adaptation efforts currently approach the scales needed to avoid substantial damages to the U.S. economy, environment, and human health over the coming decades, according to the November 2018 Fourth National Climate Assessment. Government-wide action is needed to improve the nation's resilience to natural hazards and reduce federal fiscal exposure to climate change impacts.

Congress continues to show its commitment to progress on this high-risk issue by enacting legislation. For example, in October 2018, the Disaster Recovery Reform Act was enacted, which, among other things, allows the President to set aside, with respect to each major disaster, a percentage

¹⁸GAO, *Chemical Assessments: Status of EPA's Efforts to Produce Assessments and Implement the Toxic Substances Control Act*. GAO-19-270. Washington, D.C.: March 4, 2019.

of certain grants to use for pre-disaster hazard mitigation. In addition, the National Defense Authorization Act of 2018, required, among other things, DOD to report on climate impacts to its installations. However, the federal government has not made measurable progress since 2017 to reduce its fiscal exposure to climate change, and in some cases, has revoked prior policies designed to do so. Specifically, since 2017, the ratings for four criteria remain unchanged—three at partially met and one at not met. The rating for one criterion—monitoring—regressed to not met.

Limiting the federal government's fiscal exposure to climate change requires significant attention because the federal government has revoked prior policies that had partially addressed this high-risk area and has not implemented several of our recommendations that could help reduce federal fiscal exposure. For example, since our 2017 high-risk update, the federal government:

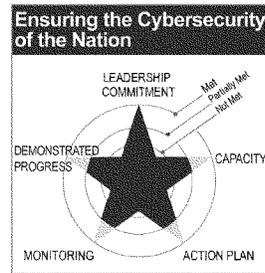
- revoked Executive Order 13690, which had established a government-wide federal flood risk management standard to improve the resilience of communities and federal assets against the impacts of flooding. This action could increase federal fiscal exposure, as taxpayer-funded projects may not last as long as intended because they are not required to account for future changes in climate-related risk.
- rescinded its guidance directing agencies to consider climate change in their National Environmental Policy Act of 1969 reviews for certain types of federal projects.
- has not implemented our July 2015 recommendation to establish a comprehensive investment strategy identifying, prioritizing, and implementing federal disaster resilience investments that could reduce federal fiscal exposure to climate change.
- has not implemented our November 2015 recommendations to create a national climate information system providing authoritative, accessible information useful for state, local, and private-sector decision making.

We have made 62 recommendations related to this high-risk area, 12 of which were made since our February 2017 high-risk update. As of December 2018, 25 remain open. The federal government needs a cohesive strategic approach with strong leadership and the authority to manage climate change risks across the entire range of federal activities.

See page 110 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Additional High-Risk Areas That Need Significant Attention

Ensuring the Cybersecurity of the Nation



Source: GAO analysis | GAO-19-1575P

Federal agencies and the nation's critical infrastructures—such as energy, transportation systems, communications, and financial services—are dependent on information technology systems to carry out operations. The security of these systems and the data they use is vital to public confidence and national security, prosperity, and well-being. The risks to systems underpinning the nation's critical infrastructure are increasing as security threats evolve and become more sophisticated.

We first designated information security as a government-wide high-risk area in 1997. This was expanded to include protecting cyber critical infrastructure in 2003 and protecting the privacy of personally identifiable information in 2015. In 2018, we updated this high-risk area to reflect the lack of a comprehensive cybersecurity strategy for the federal government.

Since 2010, we have made over 3,000 recommendations to agencies aimed at addressing cybersecurity shortcomings, including protecting cyber critical infrastructure, managing the cybersecurity workforce, and responding to cybersecurity incidents. Of those 3,000 recommendations, 448 were made since our last high-risk update in February 2017. Although many recommendations have been addressed, about 700 have not yet been implemented.

Despite the number of unimplemented recommendations, since our 2017 High-Risk Report, the administration has made progress in this high-risk area as it continues to meet the leadership commitment criterion through various actions. These include the President issuing (1) an executive order in May 2017 requiring federal agencies to take a variety of actions, including better managing their cybersecurity risks and coordinating to meet reporting requirements related to cybersecurity of federal networks

and critical infrastructure¹⁹ and (2) a National Security Strategy in December 2017 citing cybersecurity as a national priority and identifying needed actions. Further, the administration issued a government-wide reform plan and reorganization recommendations in June 2018 with, among other things, proposals for solving the federal cybersecurity workforce shortage. Additionally, the administration released a National Cyber Strategy in September 2018 outlining activities such as securing critical infrastructure, federal networks, and associated information.

However, additional actions are needed. We have identified four major cybersecurity challenges facing the nation: (1) establishing a comprehensive cybersecurity strategy and performing effective oversight, (2) securing federal systems and information, (3) protecting cyber critical infrastructure, and (4) protecting privacy and sensitive data. To address the four major cybersecurity challenges, we identified 10 critical actions the federal government and other entities need to take. These critical actions include, for example, developing and executing a more comprehensive federal strategy for national cybersecurity and global cyberspace; addressing cybersecurity workforce management challenges; and strengthening the federal role in protecting the cybersecurity of critical infrastructure (see figure 3).

¹⁹Executive Order 13,800, 82 Fed. Reg. 22,391 (May 16, 2017).

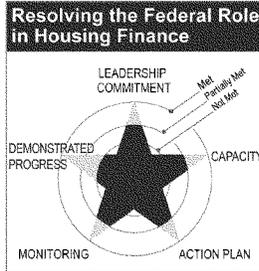
Figure 3: Ten Critical Actions Needed to Address Four Major Cybersecurity Challenges

Major challenges	Critical actions needed
Establishing a comprehensive cybersecurity strategy and performing effective oversight	 Develop and execute a more comprehensive federal strategy for national cybersecurity and global cyberspace.
	 Mitigate global supply chain risks (e.g., installation of malicious software or hardware).
	 Address cybersecurity workforce management challenges.
	 Ensure the security of emerging technologies (e.g., artificial intelligence and Internet of Things).
Securing federal systems and information	 Improve implementation of government-wide cybersecurity initiatives.
	 Address weaknesses in federal agency information security programs.
	 Enhance the federal response to cyber incidents.
Protecting cyber critical infrastructure	 Strengthen the federal role in protecting the cybersecurity of critical infrastructure (e.g., electricity grid and telecommunications networks).
Protecting privacy and sensitive data	 Improve federal efforts to protect privacy and sensitive data.
	 Appropriately limit the collection and use of personal information and ensure that it is obtained with appropriate knowledge or consent.

Source: GAO analysis. | GAO-19-157SP

Until these shortcomings are addressed, federal agencies' information and systems will be increasingly susceptible to the multitude of cyber-related threats that exist. See page 178 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Resolving the Federal Role in Housing Finance



Source: GAO analysis | GAO-19-1575P

The expanded federal role in housing finance that began during the 2007–2009 financial crisis has substantially increased the government's exposure to potential mortgage losses. Federally supported mortgages include those backed by the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac)—collectively, the enterprises—which the Federal Housing Finance Agency (FHFA) placed into government conservatorships in 2008. Federal support also occurs through Federal Housing Administration (FHA) mortgage insurance and Government National Mortgage Association (Ginnie Mae) guarantees on mortgage-backed securities. The substantial financial assistance the enterprises required during and after the crisis, coupled with the large fiscal exposure they and other federal mortgage entities represent today, underscore the need to reform the federal role in housing finance.

Delay in resolving the federal role in housing finance poses considerable risks. Through the enterprises, FHA, and Ginnie Mae, the federal government is exposed to potential losses on several trillion dollars in mortgage debt. A severe economic downturn could trigger significant taxpayer assistance to one or more of these entities.

Congress and federal agencies have taken some steps to facilitate the transition to a revised federal role, such as holding hearings, introducing legislation, issuing regulations, and developing market monitoring tools. For example, in 2013 and 2014, housing and regulatory agencies finalized rules designed to prevent a recurrence of risky practices in originating and securing mortgages that contributed to the financial crisis. Additionally, FHFA and the Consumer Financial Protection Bureau have developed a representative database of mortgage information that could be useful for examining the effect of mortgage market reforms. However, overall progress on resolving the federal role will be difficult to achieve until Congress provides further direction by enacting changes to the housing finance system.

Several issues contribute to the risks facing federal housing finance, including the following:

-
- More than 10 years after entering federal conservatorships, the enterprises' futures remain uncertain and billions of taxpayer dollars remain at risk. Under agreements with the Department of the Treasury (Treasury), the enterprises have received \$191.4 billion in capital support as of the end of fiscal year 2018 and have paid dividends to the department exceeding that amount. If they were to incur major additional losses, they would draw required amounts from their remaining \$254.1 billion in Treasury commitments. In addition, prolonged conservatorships could hinder development of the broader mortgage securities market by creating uncertainty and crowding out private investment.
 - Nonbanks (lenders and loan servicers that are not depository institutions) have played an increasingly large role in the mortgage market in recent years. While nonbanks have helped provide access to mortgage credit, they also may pose additional risks, in part because they are not federally regulated for safety and soundness. However, FHFA lacks statutory authority to examine nonbank mortgage servicers and other third parties who do business with and pose potential risks to the enterprises.
 - The statutory 2 percent capital requirement for FHA's \$1.26 trillion mortgage insurance fund is not based on a specified risk threshold, such as the economic conditions the fund would be expected to withstand. As a result, it may not provide an adequate financial cushion under scenarios in which Congress may anticipate the fund would be self-sufficient. During the last housing downturn, the fund's capital ratio fell below the required level and remained there for 6 consecutive years. At the end of fiscal year 2013, the fund required supplemental funds—about \$1.7 billion—for the first time in its history.

Six of our federal housing recommendations remain open, including those we made in June 2015 on assessing the effects of mortgage reforms already in place.

Further, as we previously recommended in November 2016 and January 2019, Congress should consider housing finance reform legislation that:

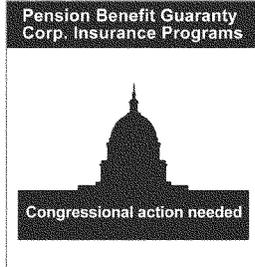
- establishes objectives for the future federal role in housing finance, including the role and structure of the enterprises within the housing finance system;
- provides a transition plan to a reformed system that enables the enterprises to exit federal conservatorship; and

- addresses all relevant federal entities, including FHA and Ginnie Mae.

As we recommended in March 2016 and November 2017, respectively, Congress also should consider granting FHFA explicit authority to examine nonbank servicers and other third parties that do business with the enterprises, and specifying the economic conditions FHA's insurance fund would be expected to withstand without a substantial risk of requiring supplemental funds. See page 95 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Due to the significance and risk associated with Resolving the Federal Role in Housing Finance, we are separating it from the high-risk area of Modernizing the U.S. Financial Regulatory System. These areas were combined in our 2017 High-Risk report. See page 95 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Pension Benefit Guaranty Corporation Insurance Programs



Source: GAO analysis. | GAO-19-157SP

The Pension Benefit Guaranty Corporation (PBGC) is responsible for insuring the defined benefit pension plans for nearly 37 million American workers and retirees, who participate in about 24,800 private sector plans. PBGC faces an uncertain financial future due, in part, to a long-term decline in the number of traditional defined benefit plans and the collective financial risk of the many underfunded pension plans that PBGC insures.

PBGC's financial portfolio is one of the largest of all federal government corporations. While PBGC's single employer program had a net surplus of about \$2.4 billion at the end of fiscal year 2018, its multiemployer program had a net deficit of about \$54 billion—or a combined net accumulated financial deficit of over \$51 billion. Its deficit has increased by nearly 45 percent since fiscal year 2013. PBGC has estimated that, without additional funding, its multiemployer insurance program will likely be exhausted by 2025 as a result of current and projected pension plan insolvencies. The agency's single-employer insurance program is also at risk due to the continuing decline of traditional defined benefit pension plans, as well as premiums that are not well aligned to the financial risk presented by the plans it insures.

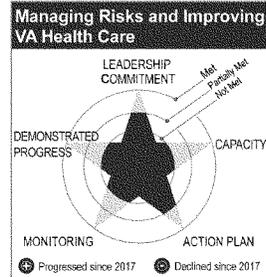
While Congress and PBGC have taken significant and positive steps to strengthen the agency in the past 5 years, challenges related to PBGC's funding and governance structure remain. Congress established a temporary Joint Select Committee on multiemployer pension plans in

2018—with the goal of improving the solvency of the multiemployer program. However, the committee did not release draft legislation. Addressing the significant financial risk and governance challenges that PBGC faces will require additional congressional action.

Over the years since we added PBGC to the High-Risk List, we have suggested a number of matters for congressional consideration, including: (1) authorizing a redesign of PBGC's single employer program premium structure to better align premium rates with sponsor risk; (2) adopting additional changes to PBGC's governance structure—in particular, expanding the composition of its board of directors; (3) strengthening funding requirements for plan sponsors as appropriate given national economic conditions; (4) working with PBGC to develop a strategy for funding PBGC claims over the long term as the defined benefit pension system continues to decline; and (5) enacting additional structural reforms to reinforce and stabilize the multiemployer system, and balance the needs and potential sacrifices of contributing employers, participants, and the federal government.

Absent additional steps to improve PBGC's finances, the long-term financial stability of the agency remains uncertain, and the retirement benefits of millions of American workers and retirees could be at risk of dramatic reductions. See page 267 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Managing Risks and Improving VA Health Care



Source: GAO analysis. | GAO-19-157SP

VA operates one of the largest health care delivery systems in the nation through its Veterans Health Administration (VHA), with 172 medical centers and more than 1,000 outpatient facilities organized into regional networks. VA has faced a growing demand by veterans for its health care services—due, in part, to the needs of an aging veteran population—and that trend is expected to continue. The total number of veterans enrolled in VA's health care system rose from 7.9 million to more than 9 million from fiscal year 2006 through fiscal year 2017. Over that same period, VHA's total budgetary resources have more than doubled, from \$37.8 billion in fiscal year 2006 to \$92.3 billion in fiscal year 2017.

Given the importance of VHA's mission, coupled with its lack of progress in addressing its high-risk designation, we continue to be concerned about VHA's ability to ensure its resources are being used effectively and efficiently to improve veterans' timely access to safe and high-quality health care. We have identified five areas of concern: (1) ambiguous policies and inconsistent processes; (2) inadequate oversight and

accountability; (3) IT challenges; (4) inadequate training for VA staff; and (5) unclear resource needs and allocation priorities. VHA has begun to address each of these areas but, prior to Secretary Robert Wilkie's July 2018 confirmation, its efforts were impeded by leadership instability. Since taking office, Secretary Wilkie has demonstrated his commitment to addressing the department's high-risk designation by, among other things, creating an office to direct an integrated, focused high-risk approach and communicating to VA leaders the importance of addressing our recommendations.

While VHA completed root cause analyses for each area of concern and developed an action plan in response, the plan lacks milestones and metrics needed to effectively monitor its implementation and demonstrate progress made in addressing the high-risk designation. Additionally, many of VHA's capacity-building initiatives are either in the initial stages of development or are lacking necessary funding and resources. As such, VHA has not made sufficient progress since our 2017 update to improve its overall ratings, as two high-risk criteria remain partially met and three criteria remain unmet.

We remain concerned about VHA's ability to oversee its programs, hold its workforce accountable, and avoid ambiguous policies and inconsistent processes that jeopardize its ability to provide safe, high-quality care to veterans:

- In November 2017, we reported that, due in part to misinterpretation or lack of awareness of VHA policy, VA medical center officials did not always document or conduct timely required reviews of providers when allegations were made against them. As a result, we concluded that VA medical center officials may have lacked necessary information to reasonably ensure that their providers were competent to provide safe, high-quality care to veterans and to grant approvals about these providers' privileges to perform specific clinical services at VA medical centers. We made four recommendations related to this and other findings, all of which remain open.
- In June 2018, we reported that VHA could not systematically monitor the timeliness of veterans' access to Veterans Choice Program (VCP) care because it lacked complete, reliable data to do so. We also found that veterans, who were referred to the VCP for routine care because health care services were not available in a timely manner, could potentially wait for care up to 70 calendar days if the maximum amount of time allowed by VA processes is used. This wait time exceeds the statutory requirement that veterans receive VCP care

within 30 days of the dates their VA health care providers indicated they should receive appointments, or if no such date existed, within 30 days of the veteran's preferred date. We made 10 recommendations related to this and other findings, all of which remain open.

- Similarly, in July 2018, we reported that VA collected data related to employee misconduct and disciplinary actions, but data fragmentation and reliability issues impeded department-wide analysis of those data. Additionally, we found that VA did not consistently ensure that allegations of misconduct involving senior officials were reviewed according to its investigative standards or ensure these officials were held accountable. We made 16 recommendations related to this and other findings, all of which remain open.
- In November 2018, we reported that VHA's suicide prevention media outreach activities declined in recent years due to leadership turnover and reorganization. Additionally, we found that VHA did not assign key leadership responsibilities or establish clear lines of reporting for its suicide prevention media outreach campaign, which hindered its ability to oversee the campaign. Consequently, we concluded that VHA may not be maximizing its reach with suicide prevention media content to veterans, especially those who are at-risk. This is inconsistent with VHA's efforts to reduce veteran suicides, which is VA's highest clinical priority. We made two recommendations related to this and other findings, both of which remain open.

VA needs to further develop its capacity-building initiatives and establish metrics to monitor and measure its progress addressing the high-risk areas of concern. It is also important that our recommendations continue to be implemented. The department has implemented 209 of the 353 recommendations related to VA health care that we made from January 1, 2010 through December 2018, but more than 125 recommendations remain open as of December 2018. This includes 17 that are older than 3 years. In addition to addressing our recommendations, VA needs to make systemic change to department management and oversight in order to fully address the high-risk issues and improve the health care provided to our nation's veterans.

See page 275 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Strategic Human Capital Management



Source: GAO analysis. | GAO-16-1573P

Mission-critical skills gaps both within federal agencies and across the federal workforce impede the government from cost-effectively serving the public and achieving results. For example, the difficulties in recruiting and retaining skilled health care providers and human resource staff at VHA's medical centers make it difficult to meet the health care needs of more than 9 million veterans. As a result, VHA's 168 medical centers have large staffing shortages, including physicians, registered nurses, physician assistants, psychologists, physical therapists, as well as human resource specialists and assistants.

OPM continues to demonstrate top leadership commitment through its numerous efforts to assist agencies' in addressing mission-critical skills gaps within their workforces. This includes providing guidance, training and on-going support for agencies on the use of comprehensive data analytic methods for identifying skills gaps and the development of strategies to address these gaps. However, since we first added strategic human capital management to our High-Risk List in 2001, we have reported on the need for agencies to address their workforce skills gaps.

As of December 2018, OPM had not fully implemented 29 of our recommendations made since 2012 relating to this high-risk area. Staffing shortages and the lack of skills among current staff not only affect individual agencies but also cut across the entire federal workforce in areas such as cybersecurity and acquisition management. Skills gaps caused by insufficient number of staff, inadequate workforce planning, and a lack of training in critical skills are contributing to our designating other areas as high-risk.

As table 5 shows, of the 34 other high-risk areas covered in this report, skills gaps played a significant role in 16 of the areas.

Table 5: Skills Gaps Related to High-Risk Areas

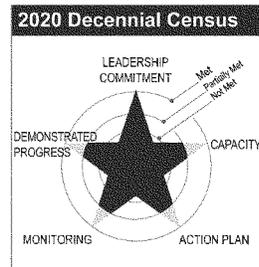
High-risk area	Examples of skills gaps and causes
2020 Decennial Census	Staffing: Lack of staff to oversee the \$896 million contract for integrating the Information Technology (IT) systems needed to conduct the 2020 Census.
Strengthening DHS Management Functions	Workforce Planning: Lack of guidance on how to identify critical cybersecurity and acquisition skills needed to support its new IT delivery model. Training: Insufficient technical skills to support its biometric identification services program.
DOD Business Systems Modernization	Workforce Planning: Incomplete assessment of the extent to which DOD personnel meet IT management knowledge and skill requirements. Staffing: Slow and inefficient hiring processes have led to challenges in recruiting and retaining qualified chief information officers (CIO) and IT personnel. Training: Statutorily required guidance and training for cross-functional team members and presidential appointees not completed.
DOD Financial Management	Staffing: Financial management staff remains insufficient in number, qualifications, and expertise.
DOD Contract Management	Staffing: Challenges in recruiting talent for acquisition management.
DOE's Contract Management for the National Nuclear Security Administration and Office of Environmental Management	Workforce Planning: Unmet critical staffing needs and evidence that the agency is understaffed across all functions. Staffing: Competing agency priorities and limited hiring have contributed to critical staff shortages to manage and oversee strategic materials programs.
U.S. Government's Environmental Liability	Workforce Planning: Lack of information to evaluate overall project and program performance, including number of staff and skills needed to meet its environmental management cleanup mission.
Improving Federal Management of Programs that Serve Tribes and Their Members	Staffing: Lack of expert staff to review proposals for wind and solar projects, or petroleum engineers to review oil and gas proposals. Additionally, shortages of health care providers, including physicians, nurses, midwives, dentists, and pharmacists. Training: Limited funding and lack of a safety training plan contributed to incomplete training to protect Bureau of Indian Education schools.
Management of Federal Oil and Gas Resources	Workforce Planning: Lacks plan for identifying key oil and gas positions and their respective technical competencies. No evaluation of the effectiveness of its recruitment and retention incentives as well as its student loan repayment program. Training: No evaluation of its training needs, training effectiveness, or opportunities for its bureaus to share training resources.
NASA Acquisition Management	Staffing and Skills: Lacks staff or staff with skills in the areas of avionics, flight software, systems engineering, business management, software development for certain acquisition projects, as well as gaps in areas such as cost estimating and earned value management capabilities.
Protecting Public Health Through Enhanced Oversight of Medical Products	Staffing: At times, significant gaps in staffing still remain during the time staff complete necessary processes to be stationed overseas.

High-risk area	Examples of skills gaps and causes
Improving and Modernizing Federal Disability Programs	Staffing: SSA's disability appeals plan calls for increased hiring to reduce disability appeals backlogs and improve timeliness, and VA has not completed hiring and planning efforts to ensure it has the capacity to comprehensively update its disability eligibility criteria.
VA Acquisition Management	Training: Lack of training for contracting officers.
Managing Risks and Improving VA Health Care	Workforce Planning: No annual tracking and reviewing of data related to IT skills needed in the future. Staffing: Insufficient number of community care staff and medical support assistants. Training: No assessment of the training needs or monitoring of completed training for patient advocate positions.
Ensuring the Cybersecurity of the Nation	Staffing and Training: The administration's June 2018 government reform plan includes recommendations for solving the federal cybersecurity workforce shortage, including prioritizing and accelerating efforts to reform how the federal government recruits, evaluates, selects, pays, and places cyber talent.
Improving the Management of IT Acquisitions and Operations	Workforce Planning: None of the 24 major federal agencies had IT management policies that fully addressed the role of their CIOs. The majority of the agencies minimally addressed or did not address their CIO's role in assessing agency IT workforce needs, and developing strategies and plans for meeting those needs.

Source: GAO analysis. | GAO-19-1578P

Over the years since we added this area to our High-Risk List, in addition to recommendations to address critical skills gaps in individual high-risk areas, we have made numerous recommendations to OPM related to this high-risk issue, 29 of which remain open. Agencies also need to take action to address mission-critical skills gaps within their own workforces – a root cause of many high-risk areas. See page 75 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

2020 Decennial Census



Source: GAO analysis. | GAO-19-1578P

The 2010 Census was the costliest in history at about \$12.3 billion; as of October 2017, the 2020 Census is projected to cost about \$15.6 billion, a 27 percent increase. For the 2020 Census, the U.S. Census Bureau (Bureau) plans to implement several innovations, including new IT systems. Implementing these innovations, along with other challenges, puts the Bureau's ability to conduct a cost-effective census at risk.

The decennial census is mandated by the U.S. Constitution and provides vital data for the nation. Census data are used, among other purposes, to apportion seats in the Congress and allocate billions of dollars in federal assistance to state and local governments. To ensure its success, this complicated and costly undertaking requires careful planning, risk management, and oversight. Census activities, some of which are new for the 2020 cycle, must be carried out on schedule to deliver the state apportionment counts to the President by December 31, 2020.

The Bureau and the Department of Commerce (Commerce) have strengthened leadership commitment with executive-level oversight of the 2020 Census by holding regular meetings on the status of IT systems and other risk areas. In addition, in 2017 Commerce designated a team to assist senior Bureau management with cost estimation challenges. These examples demonstrate both the Bureau's and Commerce's strong leadership commitment to implementing the 2020 Census.

One of the Bureau's major challenges is to control any further cost growth and develop cost estimates that are reliable and reflect best practices for the 2020 Census. According to the Bureau, the total cost of the 2020 Census is now estimated to be approximately \$15.6 billion, more than \$3 billion higher than previously estimated by the Bureau. The higher estimated life-cycle cost is due, in part, to the Bureau's failure to previously include all cost associated with the decennial census.

The Bureau's schedule for developing IT systems has experienced delays that have compressed the time available for system testing, integration testing, and security assessments. These schedule delays have contributed to systems experiencing problems after deployment, as well as cybersecurity challenges. For example, as of December 2018, the Bureau had identified nearly 1,100 system security weaknesses that needed to be addressed. Continued schedule management challenges may compress the time available for the remaining system testing and security assessments, and increase the risk that deployed systems will either not function as intended, have security vulnerabilities, or both.

As of January 2019, 30 of our recommendations related to this high-risk area had not been implemented. To make continued progress, the Bureau needs to ensure that its approach to strategic planning, IT management, cybersecurity, human capital management, internal collaboration, knowledge sharing, as well as risk and change management are all aligned toward delivering more cost-effective outcomes. Among other things, the Bureau needs to ensure cost growth is controlled and that the development and testing of key systems is completed and fully integrated with all census operations before the 2020 Census. In addition, the Bureau needs to address cybersecurity weaknesses in a timely manner and ensure that security risks are at an acceptable level before systems are deployed. See page 134 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

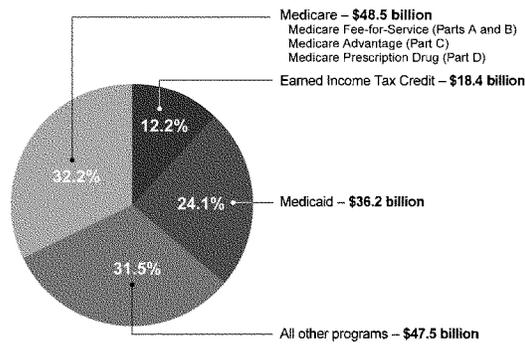
Medicare, Medicaid, and
Earned Income Tax Credit
Improper Payments

An improper payment is any payment that should not have been made or that was made in an incorrect amount (including overpayments and underpayments) under statutory, contractual, administrative, or other legally applicable requirements. Reducing improper payments—such as payments to ineligible recipients or duplicate payments—is critical to safeguarding federal funds. However, the federal government has consistently been unable to determine the full extent of improper payments and reasonably assure that appropriate actions are taken to reduce them.

Since 2003—when certain agencies were required by statute to begin reporting improper payments—cumulative improper payment estimates have totaled about \$1.5 trillion. As shown in figure 4, for fiscal year 2018, federal entities estimated about \$151 billion in improper payments. Medicare and Medicaid improper payments and the Earned Income Tax Credit (EITC) improper payments—a part of the Enforcement of Tax Laws high-risk area—accounted for about 68.5 percent of this total.

Federal spending for Medicare programs and Medicaid is expected to significantly increase in the coming years, so it is especially critical to take appropriate measures to reduce improper payments in these programs. Internal Revenue Service estimates also show that the EITC has consistently had a high improper payment rate. OMB has designated Medicare programs, Medicaid, and EITC as high-priority programs for improper payments, indicating they are amongst the highest-risk programs where the government can achieve the greatest return on investment for the taxpayer by ensuring that improper payments are eliminated.

Figure 4: Improper Payment Estimates Were Concentrated in Three Areas in Fiscal Year 2018

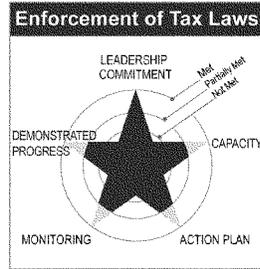


Source: GAO analysis of agencies' fiscal year 2018 data. | GAO-19-1575P

Our work has identified a number of strategic and specific actions agencies can take to reduce improper payments, which could yield significant savings, and help ensure that taxpayer funds are adequately safeguarded. Continued agency attention is needed to (1) identify susceptible programs, (2) develop reliable methodologies for estimating improper payments, (3) report as required by statute, and (4) implement effective corrective actions based on root cause analysis. Absent such continued efforts, the federal government cannot be assured that taxpayer funds are adequately safeguarded.

See pages 241, 250, and 235 of the report (respectively) for additional detail on the Medicare Program & Improper Payments, Strengthening Medicaid Program Integrity, and Enforcement of Tax Laws high-risk areas, including more details on actions that need to be taken.

Enforcement of Tax Laws



Source: GAO analysis. | GAO-19-1575P

The Internal Revenue Service (IRS) continues to face two pressing challenges in enforcing tax laws: addressing the tax gap—amounting to hundreds of billions of dollars each year when some taxpayers fail to pay the taxes that they owe—and combatting identity theft (IDT) refund fraud. Enforcement of Tax Laws has been on GAO’s high risk list since 1990.

IRS enforcement of tax laws helps fund the U.S. government by collecting revenue from noncompliant taxpayers and, perhaps more importantly, promoting voluntary compliance by giving taxpayers confidence that others are paying their fair share. In 2016, IRS estimated that the average annual net tax gap, the difference between taxes owed and taxes paid on time, was \$406 billion, on average, for tax years 2008-2010.

While IRS continues to demonstrate top leadership support to address the tax gap, IRS’s capacity to implement new initiatives and improve ongoing enforcement and taxpayer service programs remains a challenge. For example, IRS’s strategic plan includes a goal to facilitate voluntary compliance and deter noncompliance that could address the tax gap. However, IRS could do more to identify specific efforts for improving compliance in its strategic plan, measure the effects of compliance programs—such as those used for large partnerships—and develop specific quantitative goals to reduce the tax gap. Such efforts would help IRS make more effective use of its resources and gauge the success of its strategies.

The second challenge facing IRS is IDT refund fraud, which occurs when an identity thief files a fraudulent tax return using a legitimate taxpayer’s identifying information and claims a refund. IRS estimates that at least \$12.2 billion in individual IDT tax refund fraud was attempted in 2016, of which it prevented at least \$10.5 billion (86 percent). Of the amount attempted, IRS estimated that at least \$1.6 billion (14 percent) was paid.

IRS’s ability to combat IDT fraud continues to be challenged as more personally identifiable information has become readily available as a result of large-scale cyberattacks on various entities. This makes it more difficult for IRS to distinguish between fraudsters and legitimate taxpayers.

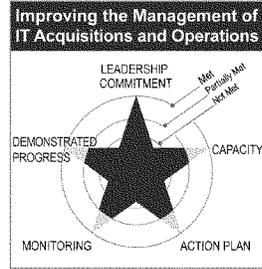
While IRS has demonstrated some progress by developing tools and programs to further detect and prevent IDT refund fraud, it has not completed updating its authentication procedures to be in compliance with new government standards. As a result, IRS may be missing an

opportunity to implement the most secure, robust technologies to protect taxpayers.

As of December 2018, 189 GAO recommendations related to this high-risk area had not been implemented. To make continued progress on closing the tax gap, IRS needs to re-establish goals for improving voluntary compliance and develop and document a strategy that outlines how it will use its data to help address this issue. Reducing the tax gap will also require targeted legislative actions, including additional third-party information reporting, enhanced electronic filing, expanded math error authority (also referred to as correctible error authority), and paid preparer regulation. To help stay on top of IDT refund fraud, IRS should develop a comprehensive process to evaluate alternative options for improving taxpayer authentication. Given that IDT refund fraud continues to be a challenge, targeted legislative action, such as requiring a scannable code on returns prepared electronically but filed on paper could help IRS address such fraud.

See page 235 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Improving the Management of IT Acquisitions and Operations



Source: GAO analysis. | GAO-19-1575P

The federal government currently invests more than \$90 billion annually in IT, and OMB has implemented several key initiatives intended to help better manage this investment. Additionally, enactment of FITARA, in conjunction with greater attention paid to the acquisition and operation of IT, has helped further improve the government-wide management of this significant annual investment.²⁰ OMB's current level of top leadership support and commitment to ensure that agencies successfully execute its guidance on implementing FITARA and related IT initiatives has helped this high-risk area meet the leadership commitment high-risk criteria.

Additional positive government-wide actions have enabled this high-risk area to partially meet the four remaining high-risk criteria. For example, OMB has established an IT Dashboard—a public website that provides detailed information on major IT investments at 26 federal agencies—and agencies' data center consolidation efforts have resulted in a total savings of slightly more than 80 percent of the agencies' planned \$5.7 billion in savings since 2011. However, major federal agencies have yet to fully

²⁰FITARA was enacted into law as part of the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015, Pub. L. No. 113-291, div. A, title VIII, subtitle D, §§ 831-837, 128 Stat. 3292, 3438-3450 (2014).

address the requirements of FITARA and realize billions of dollars in planned or possible savings and improved government performance through more efficient budgeting and management of IT.

As government-wide spending on IT increases every year, the need for appropriate stewardship of that investment increases as well. However, OMB and federal agencies have not made significant progress since 2017 in taking the steps needed to improve how these financial resources are budgeted and utilized. While OMB has continued to demonstrate its leadership commitment through guidance and sponsorship of key initiatives, agencies still have not fully implemented all requirements of FITARA, such as putting into place authorities the law requires for chief information officers (CIO). Additionally, while the President's Management Agenda has a goal to improve IT spending transparency, agencies are underreporting IT contract obligations by billions of dollars. OMB and the agencies also have not yet implemented hundreds of our recommendations on improving shortcomings in IT acquisitions and operations.

In an August 2018 review of the 24 federal agencies covered by FITARA, none had IT management policies that fully addressed the role of their CIOs consistent with federal laws and guidance. Specifically, the majority of the agencies only minimally addressed, or did not address, their CIO's role in assessing agency IT workforce needs and developing strategies and plans for meeting those needs. Correspondingly, the majority of the 24 CIOs acknowledged that they were not fully effective at implementing IT management responsibilities, such as IT strategic planning and investment management.

Further, in January 2018, we reported that the majority of 22 agencies did not identify all of their IT acquisition contracts, totaling about \$4.5 billion in IT-related contract obligations beyond those reported by agencies. In addition, in November 2018 we reported that four selected agencies lacked quality assurance processes for ensuring that billions of dollars requested in their IT budgets were informed by reliable cost information. Until agencies properly identify IT contracts and establish processes for ensuring the quality of cost data used to inform their budgets, agency CIOs are at risk of not having appropriate oversight of IT acquisitions and may lack adequate transparency into IT spending to make informed budget decisions.

As of December 2018, OMB and federal agencies had fully implemented only 59 percent of the recommendations we have made since fiscal year

2010 to address shortcomings in IT acquisitions and operations. OMB and agencies should work toward implementing our remaining 456 open recommendations related to this high-risk area. These remaining recommendations include 12 priority recommendations to agencies to, among other things, report all data center consolidation cost savings to OMB, plan to modernize or replace obsolete systems as needed, and improve their implementation of PortfolioStat—an initiative that is to consolidate and eliminate duplicative systems.

OMB and agencies need to take additional actions to (1) implement at least 80 percent of our open recommendations related to the management of IT acquisitions and operations, (2) ensure that a minimum of 80 percent of the government's major IT acquisitions deliver functionality every 12 months, and (3) achieve at least 80 percent of the over \$6 billion in planned PortfolioStat savings.

See page 123 of the report for additional detail on this high-risk area, including more details on actions that need to be taken.

Our high-risk program continues to be a top priority at GAO and we will maintain our emphasis on identifying high-risk issues across government and on providing recommendations and sustained attention to help address them, by working collaboratively with Congress, agency leaders, and OMB. As part of this effort, we hope to continue to participate in regular meetings with the OMB Deputy Director for Management and with top agency leaders to discuss progress in addressing high-risk areas. Such efforts have been critical for the progress that has been made.

This high-risk update is intended to help inform the oversight agenda for the 116th Congress and to guide efforts of the administration and agencies to improve government performance and reduce waste and risks.

Thank you, Chairman Johnson, Ranking Member Peters, and Members of the Committee. This concludes my testimony. I would be pleased to answer any questions.

For further information on this testimony, please contact J. Christopher Mihm at (202) 512-6806 or MihmJ@gao.gov. Contact points for the individual high-risk areas are listed in the report and on our high-risk website. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement.

Appendix I: Summaries of Selected High-Risk Areas

The following pages provide summaries of selected high-risk areas. These summaries are included in our High-Risk Report and are also available on our High-Risk List website, <http://www.gao.gov/highrisk/overview>.

Strategic Human Capital Management

The Office of Personnel Management and federal agencies must continue developing the capacity to measure and address existing mission-critical skills gaps, and use workforce analytics to predict and mitigate future gaps so agencies can effectively carry out their missions.

Why Area is High Risk
Mission-critical skills gaps both within federal agencies and across the federal workforce pose a high risk to the nation because they impede the government from cost-effectively serving the public and achieving results. This area was added to the High-Risk List in 2017.

Over time, with OPM and individual agencies, have identified skills gaps in such government-wide occupations in the fields of science, technology, engineering, mathematics, cybersecurity, and operations. Causes for these skills gaps vary; however, they often occur due to a short-term view of more human management and labor, such as robust workforce planning or training.

Additionally, the changing nature of federal work and the high percentage of employees eligible for retirement could produce gaps in leadership and technical knowledge, and could threaten to aggravate the problems created from existing skills gaps. For example, 31.8 percent of permanent federal employees who were scheduled to retire by September 30, 2017, will be eligible to retire in the next five years, with other agencies having particularly high levels of employees to retire.

Mission-critical skills gaps are a contributing factor in making other areas across the government high risk. Of the 34 other high-risk areas, skills gaps played a significant role in 19 areas, such as veterans' health care.

Contact Information
For additional information about the high-risk area, contact Project Director Jeff Galloway at (202) 612-2717 or gallowayj@oig.dhs.gov or Project Director Joseph D. Jones at (202) 612-2717 or jonesj@oig.dhs.gov.



For this high-risk area, all five criteria remain unchanged since our previous report in 2017.

Leadership commitment: met. The Office of Personnel Management (OPM) continues to demonstrate top leadership commitment through its numerous efforts to assist agencies in addressing mission-critical skills gaps within their workforces. OPM's regulation on strategic human capital management, which took effect in April 2017, requires executive branch agencies to issue human capital operating plans that, in part, must

describe the agencies' skills gaps and the strategies to be used for closing these gaps. OPM has provided guidance, training, and on-going support for agencies on the use of comprehensive data analytic methods for identifying skills gaps and the development of strategies to address these gaps. Additionally, the Director of OPM uses the Chief Human Capital Officers (CHCO) Council's quarterly meetings to review and discuss agency data on the closure of agency-specific skills gaps.

Capacity: partially met. OPM and the CHCO Council continue supporting the efforts of the Federal Agency Skills Teams (FAST), which consist of occupational leaders and CHCO representatives who are responsible for setting goals for closing skills gaps and using measurable targets and appropriate metrics. OPM staff meet quarterly with FASTs to provide guidance on the development of action plans and use of OPM's multi-factor model, a methodology for identifying skills gaps. In mid-2019, OPM plans to launch an automated version of the multi-factor model to facilitate and promote its use among FASTs.

Action plan: partially met. On a quarterly basis, OPM staff review and provide feedback to FASTs on the content of their action plans, such as the identification of the root causes for the skills gap, assignment of roles and responsibilities for implementing strategies, and the creation of outcome-oriented performance metrics. Additionally, OPM staff stated that they continue to train FAST members on applying OPM's multi-factor model, developing a sound action plan, and identifying strategies for addressing identified skills gaps.

 Strategic Human Capital Management

Monitoring: partially met. On a quarterly basis, OPM provides to agencies' management and FASTs a data dashboard of 12 metrics which gives a snapshot of agencies' progress on closing identified skills gaps. In March 2019, OPM plans to begin a "midterm" review of agencies' efforts to mitigate skills gaps by issuing a memo to agencies asking for the status on their specific skills gaps and a description of challenges encountered during their efforts.

Demonstrated progress: not met. On the one hand, OPM has, among other actions, issued a regulation and developed tools and processes that could help agencies better identify and address current and newly emerging skills gaps. Additionally, senior agency leaders are required to meet annually with OPM officials to hold high-level, data-driven discussions on agencies' progress towards meeting their human capital goals.

On the other hand, OPM needs to ensure that individual agencies implement guidance, tools, and training, and fully develop and implement effective strategies to mitigate and close skills gaps within their own workforces. For instance, the inability of the Veterans Health Administration's human resource staff to implement an effective recruitment strategy has affected the ability of its medical centers to maintain an adequate team of medical professionals to meet veterans' health care needs.

Agencies' critical skills gaps contributed to 16 other high-risk areas and are noted throughout this report. They include 2020 Decennial Census, Strengthening DHS Management Functions, DOD Business Systems Modernization, DOD Financial Management, DOD Contract Management, DOE's Contract Management for the National Nuclear Security Administration and Office of Environmental Management, U.S. Government's Environmental Liability, Improving Federal Management of Programs that Serve Tribes and Their Members, Management of Federal Oil and Gas Resources, NASA Acquisition Management, Protecting Public Health through Enhanced Oversight of Medical Products, Improving and Modernizing Federal Disability Programs, VA Acquisition Management, Managing Risks and Improving VA Health Care, Ensuring the Cybersecurity of the Nation, and Improving the Management of IT Acquisitions and Operations.

What Remains to Be Done Over the years since we added this area to our High-Risk List, in addition to recommendations to address critical skills gaps in individual high-risk areas, we have made numerous recommendations to OPM related to this high-risk issue, 29 of which remain open. OPM needs to fully address the recommendations in our January 2015 report which call on the Director of OPM to make more strategic use of government workforce data to build a predictive capacity for identifying and mitigating emerging skills gaps

across government. Our January 2015 report also recommended that OPM work with agency CHCOs to bolster the ability of agencies to assess workforce competencies by sharing competency surveys, lessons learned, and other tools and resources. Agencies also need to take action to address mission-critical skills gaps within their own workforces—a significant factor contributing to many high-risk areas.

Related GAO Products

Embassy Construction: Pace is Slower Than Projected, and State Could Make Program Improvements. GAO-18-653. Washington, D.C.: September 25, 2018.

Tax Administration: Opportunities Exist to Improve Monitoring and Transparency of Appeal Resolution Timeliness. GAO-18-659. Washington, D.C.: September 21, 2018.

Information Technology: IRS Needs to Take Actions to Address Significant Risks to Tax Processing. GAO-18-298. Washington, D.C.: June 28, 2018.

Cybersecurity Workforce: Agencies Need to Improve Baseline Assessments and Procedures for Coding Positions. GAO-18-466. Washington, D.C.: June 14, 2018.

Defense Acquisition Workforce: Opportunities Exist to Improve Practices for Developing Program Managers. GAO-18-217. Washington, D.C.: February 15, 2018.

Cybersecurity Workforce: Urgent Need for DHS to Take Actions to Identify Its Position and Critical Skill Requirements. GAO-18-175. Washington, D.C.: February 6, 2018.

Bureau of Prisons: Better Planning and Evaluation Could Help Ensure Effective Use of Retention Incentives. GAO-18-147. Washington, D.C.: December 7, 2017.

National Weather Service: Actions Have Been Taken to Fill Increasing Vacancies, but Opportunities Exist to Improve and Evaluate Hiring. GAO-17-364. Washington, D.C.: May 24, 2017.

Strategic Human Capital Management: NRC Could Better Manage the Size and Composition of Its Workforce by Further Incorporating Leading Practices. GAO-17-233. Washington, D.C.: April 27, 2017.

Veterans Health Administration: Actions Needed to Better Recruit and Retain Clinical and Administrative Staff. GAO-17-475T. Washington, D.C.: March 22, 2017.

Managing Federal Real Property

The federal government would save millions of dollars by disposing of unneeded buildings and reducing lease costs. Federal departments and agencies should also improve data reliability and federal facility security.

Why Area is High Risk
 The federal government's real estate portfolio is vast and diverse—including about 257,000 barracks buildings as of September 2015 that cost billions of dollars annually to operate and maintain. OMB and GSA both provide management support to agencies, OMB oversees federal policies and chairs the Federal Real Property Inspectors (FRPI) and the Federal Real Property Inspectors (FRPI) provides space for federal tenants and collects data on real property. Additionally, OMB has management-level responsibilities through the OMB-chaired Interagency Security Committee (ISC) that sets security standards, and its National Protective Service (NPS) protects about 6,000 federal buildings. Federal managers, however, rely on other agencies to reduce unneeded properties, produce reliable data, and follow Interagency Security Committee standards.
 Since federal real property management was placed on the High Risk List in 2013, the federal government has given high-level attention to the issue. However, federal agencies continue to face long-standing challenges, including (1) effectively disposing of excess and underutilized property, (2) paying too heavily on leases, (3) collecting reliable real property data for decision-making, and (4) protecting federal facilities.
Contact information
 For additional information about this high-risk area, contact Lori Planchette at (301) 301-2054.

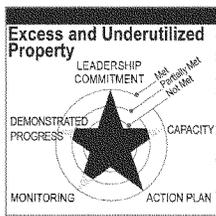


Source: GAO analysis. | GAO-19-1573P

Since our 2017 High-Risk Report, overall, the five criteria remain unchanged although there was progress within some individual segments. Three agencies involved in managing, tracking, and protecting federal real property government-wide—Office of Management and Budget (OMB), General Services Administration (GSA), and Department of Homeland Security (DHS)—have made steady progress over multiple administrations in addressing federal real property challenges. However, momentum has slowed,

due to delayed implementation of the Federal Assets Sale and Transfer Act of 2016 (FASTA) and decreased implementation of reforms by federal agencies. Over the years since we added this area to our High-Risk List, we have made numerous recommendations related to this high-risk issue, 40 of which were made since the last high-risk update in February 2017. As of December 2018, 63 recommendations are open

Excess and Underutilized Property



Source: GAO analysis. | GAO-19-1573P

Ratings for this segment remain unchanged since our 2017 High-Risk Report.

Leadership commitment: met. In 2015, OMB implemented our recommendation to issue government-wide guidance—the National Strategy for the Efficient Use of the Real Property (National Strategy)—which identified actions to reduce the size of the federal real property portfolio by prioritizing consolidation, co-location, and disposal actions, consistent with the Reduce the Footprint policy that required agencies to set goals for reducing unneeded space. An OMB official said that the National Strategy and Reduce the Footprint Policy are still in place.

Managing Federal Real Property

In 2016, FASTA established a 7-member civilian board to recommend unneeded federal buildings for disposal. However, the administration has not yet appointed a chair, a full board, or staff.

In 2018, the Administration released its plan on Delivering Government Solutions in the 21st Century. As part of this plan, the Administration proposed a series of improvements to streamline and accelerate the disposal of excess federal property. These improvements include reducing the number of steps needed to dispose of unneeded federal property and creating incentives for disposals by allowing agencies to retain the proceeds from sales.

Capacity: partially met. As noted in our 2017 high-risk update, OMB created the National Strategy and the Reduce the Footprint Policy to assist agencies, which represented positive steps. However, the National Strategy does not address the extent to which underlying challenges, such as budget limitations, impede agencies' abilities to dispose of or better use real property, nor does it offer guidance on how agencies can overcome these challenges. Once the board is appointed, FASTA has the potential to increase the federal government's capacity by establishing a process for identifying and disposing of unneeded federal buildings.

Action plan: met. We noted in 2017 that OMB had, through the Reduce the Footprint policy, established a government-wide action plan to (1) use property as efficiently as possible, and (2) reduce portfolios through annual reduction targets.

Monitoring: partially met. OMB and GSA monitor progress in meeting space reduction targets using the government-wide real property database called the Federal Real Property Profile (FRPP). However, the database is not yet sufficiently reliable to produce accurate results. The Department of Defense (DOD) has almost half of the federal government's buildings. However, OMB chose not to use DOD's real property data in reporting the 2017 results of the Reduce the Footprint policy—the most recent year for which data is available—because the data were not sufficiently reliable. We reported in 2018 that weaknesses in the quality of the DOD's real property data result, in part, because DOD has not developed a strategy to identify and address risks with accompanying time frames and performance metrics. Without such a strategy, DOD may miss the opportunity to reasonably ensure that the information needed for effective decision making by DOD, Congress, and other federal agencies is available to meet real property accountability and reporting objectives.

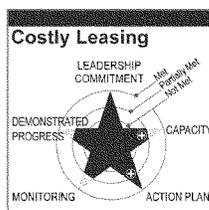
Demonstrated progress: partially met. The fiscal year 2016 results from Reduce the Footprint show progress with the federal government more than doubling its reduction goal. However, in fiscal year 2017, the federal government failed to reach the halfway point of its more modest reduction goal.

What Remains to Be Done As part of the reforms that OMB is considering, it should:

- identify alternative approaches to address underlying causes of real property problems and address the extent to which challenges impede progress, as we recommended in 2016; and
- refocus agency attention on meeting space reduction targets, as discussed.

Additionally, the Administration needs to appoint vacant FASTA board positions and hire staff.

Costly Leasing



Source: GAO analysis | GAO-19-1575P

The ratings for capacity and action plan improved since our 2017 High-Risk Report and the remaining three criteria remain unchanged.

Leadership commitment: met. OMB and GSA continue to take action to reduce costly leasing. For example, OMB proposed the creation of a capital revolving fund designed to facilitate ownership over operating leases for large-dollar buildings, although no action has been taken to implement it. An OMB staff member said that the legislative proposal to establish a capital fund was similar to an option we identified in a 2014 report. Additionally, GSA has developed a strategy to reduce leasing costs by a projected \$4.7 billion by fiscal year 2023, through steps that include focusing resources on high-value lease renewals.

Capacity: partially met. GSA made improvements and now partially meets the capacity criterion. Specifically, GSA implemented our September 2013 recommendation to develop a strategy to increase ownership investments for a prioritized list of high-value leases. These leases are for properties where it would be less expensive in the long run to own. GSA plans to purchase at least one leased building in 2019. In addition, as noted in our 2017 high-risk update, GSA could potentially help tenant agencies save millions of dollars from some leases by loaning them funds to improve newly leased spaces instead of agencies financing these costs with private-sector owners at private-sector interest rates. While GSA officials agreed that doing so would save money in interest fees, it has not yet developed a legislative proposal to obtain the needed authority, as we recommended in 2016.

Action plan: met. GSA has made improvements and now meets the action plan criterion. GSA created an action plan to purchase buildings when it is more cost-effective than leasing by establishing criteria to rank and prioritize leased spaces that would benefit from federal ownership as

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discussed above. Additionally, GSA is implementing strategies to better manage leases that include avoiding short-term extensions and identifying opportunities to enter into long-term and lower cost leases.

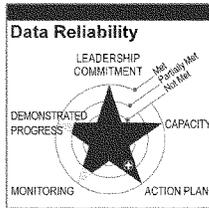
Monitoring: partially met. GSA continues to partially meet this criterion through implementation of the National Strategy, as noted in our 2017 high-risk update. However, GSA should also implement our recommendations to reduce the costs to tenants by exploring strategies to enhance competition for GSA leases and reducing unneeded fees.

Additionally, GSA has identified actions to better monitor leases at different points along the process in order to minimize the need to enter into short-term, costly lease extensions.

Demonstrated progress: partially met. GSA has made some progress in reducing the long-term costs of leasing by stemming the growth in leasing according to GSA data and committing to further reducing leasing costs. However, GSA must follow through on its plans to purchase leased buildings and reduce costs. GSA could also further reduce costs by loaning tenant agencies the funds needed to improve newly leased spaces but still needs to develop a legislative proposal to obtain authority to do so.

What Remains to Be Done GSA should develop a legislative proposal to obtain authority to loan agencies funds needed to improve newly leased spaces, as we recommended in 2016.

Data Reliability



Source: GAO analysis. | GAO-19-157SP

Ratings for one criterion improved since our 2017 High-Risk Report and the other four criteria remain unchanged.

Leadership commitment: met. In December 2017, GSA continued efforts to improve data reliability by completing a major effort to make the Federal Real Property Profile (FRPP) public. Also, as we reported in our 2017 High-Risk Report, GSA issued its Federal Real Property Data Validation and Verification (V&V) Guidance in May 2016 and required agencies to address 13,257 data anomalies it found in fiscal year 2016 data.

Capacity: met. OMB and GSA continue to help agencies' increase their capacity to submit accurate data. For example, GSA revised certain data elements' definitions in 2016 and incorporated them in the 2018 FRPP Data Dictionary. In addition, OMB and GSA have further increased the

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capacity of FRPP to act as a government-wide database since additional agencies are required to report.

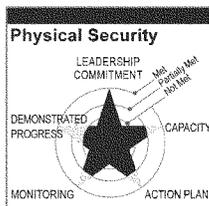
Action plan: met. GSA has made progress by developing an action plan in 2017 for federal agencies to develop processes to assess, address, and track FRPP data quality. Specifically, this plan identifies data elements to appropriately indicate data quality, identifies best practices and other methods that help agencies measure and assess improvements, and enables federal agencies to develop performance metrics.

Monitoring: partially met. While GSA required agencies to research the anomalies it found in its V&V process, only some agencies have identified and committed to correct mistakes. Further, of the 13,257 anomalies GSA identified in the fiscal year 2018 data, agencies overall acknowledged that less than 8 percent of the anomalies (1,004 anomalies) represented erroneous data to be corrected, while indicating that the others were correct. Furthermore, some agencies acknowledged less than 1 percent of the anomalies represented erroneous data. In addition, we found in 2018 that DOD did not correct discrepancies identified by its own V&V process.

Demonstrated progress: partially met. While GSA and some agencies have taken action to correct data, serious data reliability challenges remain with some individual agencies that undermine the reliability of the FRPP. In 2018, we found that DOD's real property data continue to be inaccurate and incomplete, and that DOD lacks a plan for making the necessary improvements.

What Remains to be Done OMB and GSA should continue working with federal agencies to improve the reliability of their real property data through V&V efforts and encouraging agencies to implement action plans to better assess, address, and track data quality, as discussed in the above action plan. In particular, DOD should take steps to ensure that DOD improves the reliability of its real property data, as we recommended in 2018.

Physical Security



Source: GAO analysis | GAO-19-157SP

Ratings for this segment remain unchanged since our 2017 High-Risk Report.

Leadership commitment: met. DHS's Federal Protective Service (FPS) continues to take action to address our recommendations. The Interagency Security Committee (ISC), an organization chaired by DHS that sets standards for physical security for federal nonmilitary facilities, also continues to implement the updated Risk Management Process—a consolidated set

of standards for physical security at federal facilities. In addition, in 2018, GSA, the Administrative Office of the U. S. Courts (AOUSC), the U.S. Marshals Service, and FPS implemented our 2017 recommendation to establish a national-level working forum for courthouse security, known as the Interagency Judicial Security Council.

Capacity: partially met. FPS has taken several actions to address identified physical security issues since our 2017 High-Risk Report. For example, in 2018 FPS improved its risk assessment tool to incorporate all necessary elements recommended by the ISC, which has now certified it. In 2018, FPS also addressed our recommendation related to improving training for instructors and identified actions to address our recommendations associated with tracking guard training. Finally, in 2018, FPS also implemented several actions associated with our recommendation to develop human capital-related performance measures to evaluate progress towards agency goals.

Some agencies may not have the capacity to conduct adequate risk assessments because their processes do not fully align with the ISC Risk Management Process. To improve their capacity, the U.S. Customs and Border Protection, Federal Aviation Administration, and the Department of Veterans' Affairs still need to complete an assessment of their policies against the ISC's standards in response to our 2017 and 2018 recommendations.

Action plan: partially met. In September 2018, FPS and GSA signed a memorandum of agreement (MOA) clarifying their respective roles and responsibilities for federal facility security. However, FPS, GSA, and the Department of Justice have not yet addressed our 2011 recommendation to address a number of courthouse security challenges. Specifically, FPS, the U.S. Marshals Service, AOUSC, and GSA are still working to finalize the draft MOA on courthouse security.

Monitoring: partially met. FPS continues to develop a system that will allow FPS to verify independently that FPS's contract guards are current on all training and certification requirements, and are taking steps to close

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this recommendation as implemented. FPS expects that system to be in place in 2019. In 2018, we also found that actions were needed to better address various emerging security threats to federal facilities.

Demonstrated progress: not met. The federal government has not demonstrated progress to improve physical security. Although agencies have taken some actions, time is needed for agencies to demonstrate the results of these actions. Additionally, agencies need to complete other actions. For example, once FPS, the U.S. Marshals Service, AOUSC, and GSA sign their MOA on courthouse security, they will be able to better protect federal facilities. Further, once FPS fully implements its guard management system and it interacts with its training system, FPS will be able to obtain information to assess its guards' capability to address physical security risks across its portfolio.

What Remains to be Done	<p>To improve the physical security of federal buildings, the following steps are necessary:</p> <ul style="list-style-type: none"> • Clarify roles and responsibilities for the protection of federal facilities by finalizing the MOA for federal courthouse security between GSA, FPS, the U.S. Marshals, and AOUSC, as we recommended in 2011. • FPS must validate training information being entered to ensure that guards are getting critical training, as we recommended in 2012. • Implement our recommendations for agencies to improve their monitoring of collaborative efforts to protect federal facilities, as we recommended in 2015. • Take actions to better address emerging security threats to federal facilities, as we recommended in 2018.
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Related GAO Products

Federal Facility Security: Actions Needed to Better Address Various Emerging Threats. GAO-19-32SU. Washington, D.C.: October 17, 2018.

Defense Real Property: DOD Needs to Take Additional Actions to Improve Management of Its Inventory Data. GAO-19-73. Washington, D.C.: November 13, 2018.

Federal Buildings: More Consideration of Operations and Maintenance Costs Could Better Inform the Design Excellence Program. GAO-18-420. Washington, D.C.: May 22, 2018.

Federal Real Property: Agencies Make Some Use of Telework in Space Planning but Need Additional Guidance. GAO-18-319. Washington, D.C.: March 22, 2018.

Managing Federal Real Property

Federal Buildings: Agencies Focus on Space Utilization As They Reduce Office and Warehouse Space. GAO-18-304. Washington, D.C.: March 8, 2018.

VA Facility Security: Policy Review and Improved Oversight Strategy Needed. GAO-18-201. Washington, D.C.: January 11, 2018.

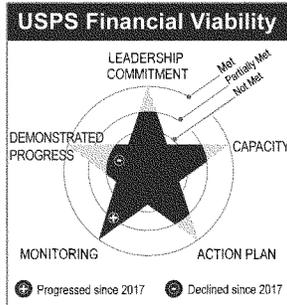
Federal Facility Security: Selected Agencies Should Improve Methods for Assessing and Monitoring Risk. GAO-18-72. Washington, D.C.: October 26, 2017.

Federal Real Property: GSA Should Inform Tenant Agencies When Leasing High-Security Space from Foreign Owners. GAO-17-195. Washington, D.C.: January 3, 2017.

USPS Financial Viability

Comprehensive legislative reform and additional cost-cutting are needed for the U.S. Postal Service (USPS) to achieve sustainable financial viability.

Why Area is High Risk
 USPS's financial viability has been on our High-Risk List due to the need for action to address USPS's poor financial condition. In July 2016, we reported that USPS's financial condition needed attention by Congress and the executive branch to address long-standing issues. USPS's financial viability continues to be high-risk because USPS cannot fund its current level of services and financial obligations from its revenues. As an independent establishment in the executive branch, USPS has long been expected to provide efficient, quality and universal postal services to all parts of the country while remaining self-financing. Specifically, USPS is expected to be financially self-sufficient by covering its expenses through revenues generated from the sale of its products and services. However, USPS is no longer able to do so. USPS's most profitable product—First-Class Mail—has experienced continuous declines for the foreseeable future, and USPS faces increasing competition in retail, profitable business shipping markets. Meanwhile, key costs, such as compensation and benefits, are rising.
Contact information
 For additional information about this high-risk area, contact Lori Pacheco at (202) 512-2834 or loripacheco@gao.gov.



Source: GAO analysis. | GAO-19-157SP

Since our 2017 High-Risk Report, ratings for one criterion improved, one regressed, and three remain unchanged. The monitoring progress criterion is now met, but the demonstrated progress criterion regressed to not met.

Removal of USPS's financial viability from the High-Risk List would require fundamental changes. Both Congress and USPS need to act to put it on a sustainable financial footing. USPS has lost \$69.0 billion over the past 11 fiscal years—including \$3.9 billion in fiscal year 2018—and has budgeted for a \$6.6 billion net loss in fiscal year 2019.

Leadership commitment: partially met. USPS continues to seek some legislative changes intended to improve its financial condition. For example, USPS has sought legislation that would integrate its retiree health program with Medicare, which would significantly reduce its total unfunded liabilities. USPS also has sought legislation that would require a rate increase for most mail. Further, USPS is seeking the elimination of the price cap that generally limits rate increases for most mail to the rate of inflation.

USPS has implemented limited initiatives to manage its labor costs, such as a small reduction to its workforce in fiscal year 2018 through attrition. USPS has stated that opportunities for further cost savings are limited under the existing legal framework and would do little to close its financial gap.

Capacity: partially met. USPS plans to increase capital spending in the coming decade to replace and modernize its infrastructure after years of reduced capital investment. For example, USPS plans to replace its aging fleet of delivery vehicles, which is intended to increase its capacity to deliver mail and packages in a more cost-efficient manner.

However, given the uncertainty of USPS's financial situation, the ability to carry out this spending may require tradeoffs with other commitments. USPS is only able to make capital investments and pay for its ongoing

USPS Financial Viability

operations by not making certain required federal payments to fund accrued retirement benefits.

Action plan: partially met. USPS issued its 5-year strategic plan for fiscal years 2017 to 2021 outlining its strategy for making progress towards financial viability, and developed annual performance plans that specify goals for each fiscal year. However, these plans fall short of maximizing what USPS can do within its existing authority to operate more efficiently and reduce its costs. For example, USPS has no plans to resume consolidating its processing facilities, recognizing that actions such as this would likely face stakeholder resistance.

Monitoring: met. USPS regularly monitors its financial condition and issues quarterly and independently-audited annual financial reports. The independent audits have consistently found that USPS's financial statements conform with U.S. generally accepted accounting principles and fairly present, in all material aspects, USPS's financial position at the end of each fiscal year, as well as the results of its operations and cash flows. USPS's quarterly and annual financial reports provide information on key trends and measures, such as (1) revenues and expenses; (2) unfunded liabilities; and (3) debt obligations. USPS publishes the reports on its public website and provides quarterly public webcasts on its financial results.

Demonstrated progress: not met. USPS's overall financial condition is deteriorating and unsustainable. The savings from USPS cost-reduction efforts have dwindled in recent years and although USPS has stated it will aggressively reduce costs within its control, USPS's plans will not achieve the kind of savings necessary to significantly reduce current operating costs. USPS expenses are now growing faster than its revenues, in part due to rising compensation and benefits costs combined with continuing declines in First-Class Mail. Further, USPS's total unfunded liabilities and debt were \$143 billion at the end of fiscal year 2018, an amount double its annual revenue.

As we testified in February 2017, a comprehensive package of legislative actions is needed to improve USPS's financial viability. In that testimony, we also stated that USPS's financial situation leaves Congress with difficult choices and trade-offs to achieve the broad-based restructuring that will be necessary for USPS to become financially sustainable.

In addition, USPS has missed \$48.2 billion in required payments for postal retiree health and pension benefits through fiscal year 2018, including \$42.6 billion in missed payments for retiree health benefits since fiscal year 2010, and \$5.6 billion for pension benefits since fiscal year 2014. USPS has stated that it missed these payments to minimize the risk of running out of cash, citing its precarious financial condition and the need to cover current and anticipated costs and any contingencies.

USPS Financial Viability

USPS appears likely to miss required payments for retiree health benefits for the foreseeable future. Based on Office of Personnel Management projections, the fund supporting postal retiree health benefits would be depleted in fiscal year 2030 if USPS continues to miss all payments. If the fund is depleted, USPS would be required by law to make the payments necessary to cover its share of health benefits premiums for postal retirees. However, current law does not address what would happen if USPS misses those payments. Depletion of the fund, together with USPS's potential inability to make remaining contributions, could affect postal retirees as well as USPS, customers, and other stakeholders, including the federal government.

What Remains to Be Done	As USPS has stated, it needs to aggressively pursue additional cost-reduction initiatives in areas in which it has managerial discretion. Because USPS actions under its existing authority will be insufficient to restore its financial viability, a balanced package of legislative reform continues to be needed.
Congressional Actions Needed	Congress should consider a comprehensive package of legislative actions to improve USPS's financial viability, including (1) facilitating USPS's ability to better align costs with revenues; (2) putting postal retiree health benefits on a more sustainable financial footing; and (3) requiring any binding arbitration in the negotiation process for USPS labor contracts to take USPS's financial condition into account. Congress should consider various options to better align USPS costs with revenues, and address constraints and legal restrictions that limit USPS's ability to reduce costs and improve efficiency.

Related GAO Products

Postal Retiree Health Benefits: Unsustainable Finances Need to Be Addressed. GAO-18-602. Washington, D.C.: August 31, 2018.

U.S. Postal Service: Projected Capital Spending and Processes for Addressing Uncertainties and Risks. GAO-18-515. Washington, D.C.: June 28, 2018.

International Mail: Information on Changes and Alternatives to the Terminal Dues System. GAO-18-112. Washington, D.C.: October 12, 2017.

U.S. Postal Service: Key Considerations for Potential Changes to USPS's Monopolies. GAO-17-543. Washington, D.C.: June 22, 2017.

U.S. Postal Service: Key Considerations for Restoring Fiscal Sustainability. GAO-17-404T. Washington, D.C.: February 7, 2017.

U.S. Postal Service: Continuing Financial Challenges and the Need for Postal Reform. GAO-16-651T. Washington, D.C.: May 11, 2016.

USPS Financial Viability

U.S. Postal Service: Financial Challenges Continue. GAO-16-268T.
Washington, D.C.: January 21, 2016.

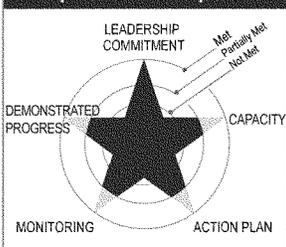
Improving the Management of IT Acquisitions and Operations

To better manage billions of dollars in information technology (IT) investments, the Office of Management and Budget (OMB) and other federal agencies should further implement the requirements of federal IT acquisition reforms.

Why Area is High Risk
 The executive branch has undertaken numerous initiatives to better manage the more than \$200 billion that is currently invested in IT. However, federal IT investments face recurring risks that could potentially add to federal debt and other costs. These investments often suffer from a lack of oversight and effective management, such as project planning, requirements definition, and program oversight and governance. In 2010, we added the government's management of IT acquisitions and operations to the high-risk list. Recognizing the severity of issues related to the government-wide management of IT, in December 2014, Congress and the President enacted federal IT acquisition reform legislation. In November 2017, the sunset date of several of these statutory provisions was extended or renewed. Among other things, these laws require covered agencies to: (1) advance agency CIO authority, (2) enhance transparency and improve risk management, (3) consolidate federal data centers, (4) review IT investment portfolios, (5) purchase government-wide software licenses, (6) maximize the benefit of federal strategic sourcing and (7) expand training and use of IT acquisition cadres.

Contact Information
 For additional information about this report, visit our contact page at www.gao.gov or call our toll-free line.

Improving the Management of IT Acquisitions and Operations



Source: GAO analysis. | GAO-19-1578P

Since our 2017 High-Risk Report, ratings for all five criteria remain unchanged.

Leadership commitment: met. OMB continues to demonstrate its leadership commitment by (1) issuing guidance for covered departments and agencies (agencies) to implement statutory provisions commonly referred to as the Federal Information Technology Acquisition Reform Act (FITARA), (2) optimizing federal data centers, and (3) acquiring and managing software licenses. It will be important for

OMB to maintain its current level of top leadership support and commitment to ensure that agencies successfully execute OMB's guidance on implementing FITARA and related IT initiatives. Sustained Congressional focus on implementing FITARA has led to improvement, as highlighted in agencies' FITARA implementation scores issued biannually by the House Committee on Oversight and Reform. However, further Executive branch and Congressional attention is required.

Capacity: partially met. OMB has established guidance for FITARA and related IT management practices that addresses how agencies are to implement roles and responsibilities. The guidance covers, among other things, enhancing the authority of federal chief information officers (CIO) and ensuring that program staff has the necessary knowledge and skills to effectively acquire IT. As we reported in August 2018, none of the 24 major federal agencies had IT management policies that fully addressed the role of their CIOs consistent with federal laws and guidance. The majority of the agencies minimally addressed or did not address their CIO's role in assessing agency IT workforce needs, and developing strategies and plans for meeting those needs. Correspondingly, the majority of the 24 CIOs acknowledged they were not fully effective at implementing IT workforce responsibilities.

In November 2016, we reported that while the five agencies we reviewed had demonstrated important progress in implementing key IT workforce planning activities, each had shortfalls. For example, four agencies had

not demonstrated an established IT workforce planning process. All five agencies either agreed or partially agreed with our recommendations and identified planned actions to address our recommendations to improve their IT workforce planning. However, as of December 2018, none of our recommendations had been fully implemented.

Action plan: partially met. In addition to requiring covered agencies to conduct self-assessments, OMB's FITARA implementation guidance requires agencies to develop and implement plans describing changes they will make to ensure that IT management responsibilities for CIOs and other senior agency officials are effectively implemented. These plans are to address the areas of IT management that we have identified as high risk, such as reviewing poorly performing investments, managing agencies' IT portfolios, and implementing incremental development. While all 24 major federal agencies have developed FITARA implementation plans, the agencies need to demonstrate additional progress in effectively implementing these plans. As of December 2018, our continuing work to monitor progress in this area showed that 22 of the 24 major federal agencies had publicly reported at least partial completion of their FITARA milestones; however, all 22 of those agencies also reported incomplete milestones.

Significant work remains for federal agencies to establish action plans to modernize or replace obsolete IT investments. In May 2016, we reported that agencies were using systems which had components that were, in some cases, at least 50 years old. To address this issue, we recommended that 12 agencies identify and plan to modernize or replace legacy systems, including establishing time frames, activities to be performed, and system functions to be replaced or enhanced. Of the 12 agencies, 10 either concurred or partially concurred with our recommendations, while 2 stated they had no comment. However, as of December 2018, only 3 of the 12 agencies had implemented our recommendation and made progress in planning to modernize their legacy systems.

Monitoring: partially met. The President's Management Agenda identified improving IT spending transparency as one of the Administration's 14 cross-agency priority goals and tasked OMB with leading the drive towards better agency reporting on IT spending.

In January 2018, we reported that the majority of 22 agencies that we reviewed did not identify all of their IT contracts, leaving about \$4.5 billion in IT-related contract obligations beyond those reported by agencies. Further, in November 2018, we reported that four selected agencies lacked quality assurance processes for ensuring that billions of dollars requested in their IT budgets were informed by reliable cost information. We made recommendations for those agencies to improve how IT acquisitions are identified and to establish procedures for ensuring IT budgets are informed by reliable cost information. Until agencies properly

identify IT acquisitions and establish processes for ensuring the quality of cost data used to inform their IT budgets, agency CIOs are at risk of not having appropriate oversight of IT acquisitions worth billions of dollars and not having adequate transparency into IT spending to make informed budget decisions.

OMB has taken action to improve monitoring through its IT Dashboard—a public website that provides detailed information on major IT investments at 26 federal agencies, including ratings from CIOs that should reflect the level of risk facing each investment. However, in June 2016, we reported that our assessments of IT Dashboard risk ratings showed more risk on the majority of agency IT investments we sampled than did the associated CIO ratings. Consequently, we made 25 recommendations to 15 agencies to improve their CIO's risk ratings; 12 agencies generally agreed with or did not comment on our recommendations, and 3 disagreed. As of December 2018, only 14 of the recommendations had been fully implemented. Agencies should continue to fully and accurately report on these risks to ensure their IT investments receive appropriate oversight.

An additional area of concern regarding the monitoring of IT acquisitions is agencies' reported use of incremental development; OMB policy requires that IT investments deliver functionality in 6-month increments. However, our May 2014 report found that delivery rate to be challenging for agencies and, thus, we recommended that OMB instead require increments of 12 months. While OMB disagreed with our recommendation, our continuing work in this area has found that most agencies have reported progress in improving the rate at which their IT acquisitions deliver functionality at the 12-month rate. Nonetheless, in November 2017, we reported that most agencies lacked the required policies intended to ensure adequate consideration of incremental development approaches for major IT investments and we made 19 recommendations to 17 agencies to address this issue. Eleven agencies agreed with our recommendations, 1 partially agreed, and 5 did not state whether they agreed or disagreed. As of December 2018, 11 of our 19 recommendations remained open.

Demonstrated progress: partially met. In our 2017 high-risk update, we identified agency plans to save \$5.3 billion from data center consolidation, a number which included \$3.3 billion planned through fiscal year 2015. Agencies subsequently reported achieving \$2.8 billion of that amount. In 2016, OMB issued new guidance on consolidating data centers and subsequently, a number of agencies revised their planned savings, resulting in \$2.4 billion planned from fiscal years 2016 through 2018. As of August 2018, our continuing work to monitor progress in this area has shown that over \$1.9 billion of that savings had been achieved. The total achieved savings of \$4.7 billion represents slightly more than 80 percent of the agencies' planned \$5.7 billion in savings since 2011. In our 2017 high-risk update, we cited this 80 percent target as one of several actions

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that should be taken and recognize the positive government-wide progress this demonstrates. However, improvement is still needed in other areas.

Since fiscal year 2010, we have made 1,242 recommendations to address shortcomings in IT acquisitions and operations; 514 since this area was added to the High-Risk List in February 2015. As of December 2018, OMB and federal agencies had fully implemented only 735 (or about 59 percent) of the total recommendations and only 169 (about 33 percent) of the recommendations made since February 2015. In addition, agencies have made progress in achieving about \$2.5 billion in savings across a key OMB initiative—PortfolioStat—intended to improve the management of IT investments by consolidating and eliminating duplicative systems, among other things. Through fiscal year 2016, agencies had saved almost \$1.8 billion, with more than \$754 million in fiscal year 2017. Nevertheless, agencies have approximately \$3.5 billion in their reported planned savings still to be achieved.

What Remains to Be Done As we have recommended, OMB and covered federal agencies should further implement the requirements of FITARA. OMB will need to provide sustained oversight to ensure that agency actions are completed and the desired results are achieved.

- Beyond implementing FITARA and OMB's guidance to improve the capacity to address our high-risk area, agencies need to implement our recent recommendations related to improving CIO authorities, as well as past recommendations on improving IT workforce planning practices.
- Agencies must establish action plans to modernize or replace obsolete IT investments.
- Agencies need to implement our recommendations to address weaknesses in their IT Dashboard reporting of investment risk and incremental development implementation.
- OMB and agencies should work toward implementing our remaining 456 open recommendations related to this high-risk area. These remaining recommendations include 12 priority recommendations for agencies to, among other things, report all data center consolidation cost savings to OMB, plan to modernize or replace obsolete systems as needed, and improve their implementation of PortfolioStat. OMB and agencies need to take additional actions to (1) implement at least 80 percent of our open recommendations related to the management of IT acquisitions and operations, (2) ensure that a minimum of 80 percent of the government's major IT acquisitions deliver functionality every 12 months, and (3) achieve at least 80 percent of the over \$6 billion in planned PortfolioStat savings.

**Related GAO
Products**

Information Technology: Departments Need to Improve Chief Information Officers' Review and Approval of IT Budgets. GAO-19-49. Washington, D.C.: November 13, 2018.

Federal Chief Information Officers: Critical Actions Needed to Address Shortcomings and Challenges in Implementing Responsibilities. GAO-18-93. Washington, D.C.: August 2, 2018.

Data Center Optimization: Continued Agency Actions Needed to Meet Goals and Address Prior Recommendations. GAO-18-264. Washington, D.C.: May 23, 2018.

Information Technology: Agencies Need to Involve Chief Information Officers in Reviewing Billions of Dollars in Acquisitions. GAO-18-42. Washington, D.C.: January 10, 2018.

Information Technology: OMB Needs to Report On and Improve Its Oversight of the Highest Priority Programs. GAO-18-51. Washington, D.C.: November 21, 2017.

Information Technology Reform: Agencies Need to Improve Certification of Incremental Development. GAO-18-148. Washington, D.C.: November 7, 2017.

Data Center Optimization: Agencies Need to Address Challenges and Improve Progress to Achieve Cost Savings Goal. GAO-17-448. Washington, D.C.: August 15, 2017.

Data Center Optimization: Agencies Need to Complete Plans to Address Inconsistencies in Reported Savings. GAO-17-388. Washington, D.C.: May 18, 2017.

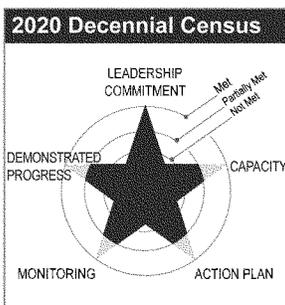
Information Technology: Opportunities for Improving Acquisitions and Operations. GAO-17-251SP. Washington, D.C.: April 11, 2017.

2020 Decennial Census

For the 2020 Census, the U.S. Census Bureau (Bureau) plans to implement several innovations, including new IT systems. The challenges associated with successfully implementing these innovations, along with other challenges, puts the Bureau's ability to conduct a cost-effective census at risk.

Why Area Is High Risk
 The U.S. Census is mandated by the Constitution and provides vital data for the nation. Census data are used among other purposes to apportion the seats of the U.S. House of Representatives, make congressional districts in each state, and allocate billions of dollars each year in federal financial assistance. Further, businesses use census data to market new services and products, and to better understand areas of demographic changes. The Census is seeking to control the cost of the census, which has been increasing with each decade. The 2020 Census is now expected to cost approximately \$10 billion. Moreover, the average cost for counting a household increased from about \$70 in 1970 to around \$22 in 2010 (in 2020 census dollars), in part because the nation's population is more difficult to count. The Bureau is also implementing several new innovations that require managing the processes of acquiring and analyzing new and modified IT systems. In addition, because the 2020 Census involves collecting personal information from over a billion individuals, it will be important that the Bureau addressed system security weaknesses in a timely manner, and that risks are at an acceptable level before systems are deployed.

Contact information
 For additional information about the high-risk areas, contact Robert Giesendorf at 202-512-3757 or rgiesendorf@gao.gov, or Paul Marroes at 202-512-4541 or pmarr@gao.gov.



Source: GAO analysis. | GAO-19-1673P

The 2020 Decennial Census was first added in 2017 as a high-risk area. Since then, the Bureau has met the criterion for leadership commitment and made progress on the other four criteria.

Leadership commitment: met. The Bureau and the Department of Commerce have strengthened this area with executive-level oversight of the 2020 Census by holding regular meetings on the status of IT systems and other risk areas. In addition, in 2017 the Department of Commerce designated a team to assist senior

Bureau management with cost estimation challenges. Moreover, on January 2, 2019, a new Director of the Census Bureau took office, a position that had been vacant since June 2017; and in June 2018 the once-vacant Deputy Director position was filled.

Capacity: partially met. To enhance the capacity of its Decennial Directorate, the Bureau brought in new leadership in October 2017 with significant experience in program execution. The Bureau also improved the cost estimation process of the decennial when it established guidance including:

- roles and responsibilities for oversight and approval of cost estimation processes,
- procedures requiring a detailed description of the steps taken to produce a high-quality cost estimate, and
- a process for updating the cost estimate and associated documents over the life of a project.

However, the Bureau continues to experience skills gaps in the government program management office overseeing the \$886 million contract for integrating the IT systems needed to conduct the 2020 Census. Specifically, as of November 2018, 21 of 44 positions in this office were vacant. These vacant positions add risk that the office may not be able to provide adequate oversight of contractor cost, schedule, and performance.

Action plan: partially met. In December 2018, the Bureau issued an updated operational plan for the 2020 Census that laid out risks, decisions made, issues to be resolved, and related milestones for each of its major operations. However, the 2020 Census schedule lacks a risk assessment and certain other best scheduling practices, which affects its overall reliability. In addition, during the 2018 End-to-End Test we found the Bureau's data management reporting system did not always provide accurate information because of a software issue. As a result, Bureau staff had to rely on multiple systems to manage field operations, making monitoring inefficient.

Monitoring: partially met. The Department of Commerce holds biweekly meetings with Bureau leadership to discuss the status of 2020 Census operations, including our open recommendations. To track performance of decennial census operations, the Bureau relied on reports to track progress against pre-set goals for a test conducted in 2018. According to the Bureau, these same reports will be used in 2020 to track progress.

The Bureau has also taken steps to improve its cost estimation process for 2020; however, it needs to implement a system to track and report variances between actual and expected cost elements. Further, the Bureau's schedule for developing IT systems during the 2018 End-to-End Test experienced delays that compressed the time available for system testing, integration testing, and security assessments. These schedule delays contributed to systems experiencing problems after deployment, as well as cybersecurity challenges. For example, as of December 2018, the Bureau had identified nearly 1,100 system security weaknesses that needed to be addressed.

Demonstrated progress: partially met. According to Department of Commerce officials, in the summer of 2018, the Bureau began conducting an analysis of oversight recommendations, including ours, to determine the root cause of shortfalls and set a timeline for addressing those recommendations and related root causes. We have standing quarterly meetings with Senior Bureau officials to discuss the status and expected actions for our open recommendations related to the 2020 Census. We also periodically meet with the Under Secretary for Economic Affairs to discuss the Department of Commerce's oversight of the decennial census.

The Bureau is also using the cost estimate as a management tool for making decisions and assessing tradeoffs. For example, the cost estimate served as the basis for the fiscal year 2019 funding request developed by the Bureau. The Bureau also said it used the 2020 Census cost estimate to establish cost controls during budget formulation activities and to monitor spending levels for fiscal year 2019 activities.

While these actions and others are important steps forward, we found that the Bureau scaled back testing of new innovations in 2017 and 2018.

 2020 Decennial Census

Specifically, the Bureau cancelled the field portion of the 2017 test and then conducted a full operational test in only one site—Providence County, Rhode Island—instead of three test sites as originally planned. Moreover, the Bureau did not test all 2020 Census systems and IT capabilities during its operational test. Not fully testing innovations and IT systems as designed, increases the risk that innovations and IT systems will not function as intended during the 2020 Census.

What Remains to Be Done

As of January 2019, we have made 97 recommendations related to the 2020 Census. The Bureau has implemented 67 of these recommendations and 30 remain open. The Department of Commerce generally agreed with our recommendations and is taking steps to implement them. Moreover, in our April 2018 priority recommendation letter to the Department of Commerce we identified 15 recommendations as priority—seven of which have been closed as implemented over the past year. To make continued progress, the Bureau needs to ensure its approach to strategic planning, IT management, cybersecurity, human capital management, internal collaboration, knowledge sharing, as well as risk and change management are aligned toward delivering more cost-effective outcomes. Specifically the Bureau needs to:

- fill vacant positions in its government program management office as needed to oversee the IT integration contractor;
- implement best practices for scheduling the thousands of activities that make up the 2020 Census;
- improve the management and oversight of its IT systems in order to meet milestones for system development and testing, and be ready for the major operations of the 2020 Census;
- address cybersecurity weaknesses in a timely manner and ensure that risks are at an acceptable level before systems are deployed;
- implement cost estimation best practices including a system to track and report variances between actual and expected costs for its 2020 Census cost estimate;
- resolve implementation issues that have arisen during testing, prior to the 2020 Census; and
- continue to address our recommendations, especially those designated priority recommendations.

Congressional Actions Needed

In 2017 and 2018, we testified in five congressional hearings focused on the progress of the Bureau's preparations for the decennial census. Going forward, continued congressional oversight will be needed to ensure decennial efforts stay on track, the Bureau has needed resources, and Bureau officials are held accountable for implementing the enumeration as planned.

**Related GAO
Products**

2020 Census: Additional Steps Needed to Finalize Readiness for Peak Field Operations, GAO-19-140. Washington, D.C.: December 10, 2018.

2020 Census: Continued Management Attention Needed to Address Challenges and Risks with Developing, Testing, and Securing IT Systems, GAO-18-655. Washington, D.C.: August 30, 2018.

2020 Census: Census Bureau Improved the Quality of Its Cost Estimation but Additional Steps Are Needed to Ensure Reliability, GAO-18-635. Washington, D.C.: August 17, 2018.

2020 Census: Bureau Has Made Progress with Its Scheduling, but Further Improvement Will Help Inform Management Decisions, GAO-18-589. Washington, D.C.: July 26, 2018.

2020 Census: Actions Needed to Address Challenges to Enumerating Hard-to-Count Groups, GAO-18-599. Washington, D.C.: July 26, 2018.

2020 Census: Actions Needed to Improve In-Field Address Canvassing Operation, GAO-18-414. Washington, D.C.: June 14, 2018.

2020 Census: Actions Needed to Mitigate Key Risks Jeopardizing a Cost-Effective and Secure Enumeration, GAO-18-543T. Washington, D.C.: May 8, 2018.

2020 Census: Continued Management Attention Needed to Mitigate Key Risks Jeopardizing a Cost-Effective and Secure Enumeration, GAO-18-416T. Washington, D.C.: April 18, 2018.

2020 Census: Actions Needed to Mitigate Key Risks Jeopardizing a Cost-Effective Enumeration, GAO-18-215T. Washington, D.C.: October 31, 2017.

2020 Census: Continued Management Attention Needed to Oversee Innovations, Develop and Secure IT Systems, and Improve Cost Estimation, GAO-18-141T. Washington, D.C.: October 12, 2017.

2020 Census: Bureau Is Taking Steps to Address Limitations of Administrative Records, GAO-17-664. Washington, D.C.: July 26, 2017.

Government-wide Personnel Security Clearance Process

The government-wide personnel security clearance process continues to face challenges in the timely processing of clearances, measuring the quality of investigations, and ensuring the security of related information technology (IT) systems.

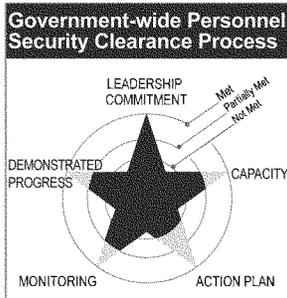
Why Area is High Risk
 This report for the government-wide personnel security clearance process on the High-Risk List in January 2018 because it faces significant challenges because of (1) the timely processing of clearances, (2) measuring investigation quality, and (3) ensuring IT security, among other things.

Timeliness. The executive branch has been unable to process personnel security clearances within established timeliness objectives, contributing to a backlog that the NBI reported to be approximately 500,000 cases as of February 2018.

Quality. A high-quality personnel security clearance process minimizes the risks of unauthorized disclosures of classified information and helps ensure that information about individuals with criminal histories or other questionable behavior is identified and assessed. While the executive branch has taken some steps to address quality, it has not established resources to ensure the quality of background investigations and adjudications and instead focused on reducing the backlog and reducing the investigation process.

IT Security. OIG is building and managing the development of the next-generation security systems, known as OIG regarding OIG legacy IT systems may delay planned milestones for the new system. OIG did not adequately assess actions taken to remediate identified weaknesses in its IT systems to ensure that key security controls are in place and operating as intended.

Contact Information
 For additional information about the High-Risk List, contact Deborah S. Farrell, 202-512-3804, or farrel@igps.gov.



Source: GAO analysis. | GAO-19-1575P

Since we added the government-wide personnel security clearance process to our High-Risk List in January 2018, the executive branch has taken some action and made some progress addressing our criteria for removal. The executive branch has met the criterion for leadership commitment, partially met the capacity, monitoring, and demonstrated progress criteria, and has not met the action plan criterion. In addition, the administration proposed transferring the background

investigation function from the Office of Personnel Management's (OPM) National Background Investigations Bureau (NBIB) to the Department of Defense (DOD) in June 2018, and plans to issue an Executive Order regarding the transfer.

Leadership commitment: met. The Security Clearance, Suitability, and Credentialing Performance Accountability Council (PAC), chaired by the Deputy Director for Management of the Office of Management and Budget (OMB), is the government-wide entity responsible for driving the implementation of and overseeing security clearance reform, among other reform efforts. The chair of the PAC, who is concurrently serving as the Acting Director of OPM, stated that the security clearance reform process is one of her top three government-wide priorities. Further, according to officials, the PAC assembled teams of stakeholders who meet regularly to focus on developing solutions to specific problems within the security clearance process. OPM and the Office of the Director of National Intelligence (ODNI) also issued a memo in June 2018 containing measures to reduce the backlog of background investigations. While the PAC has prioritized the prompt reduction of the backlog, it has not finalized a plan to reduce it to a manageable level or prioritized improving the timeliness of investigations.

Senior DOD officials expressed commitment to the administration's June 2018 transfer proposal and have planning efforts underway related to the transfer and the modernization of the personnel vetting process. Continued and coordinated leadership by the PAC will be important as it

**Government-wide Personnel Security
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works to complete other long-standing key reform initiatives, including the government-wide implementation of continuous evaluation. Focused leadership will also be critical throughout the transition of background investigative functions from OPM to DOD, as proposed by the administration, particularly during senior leadership changes at OPM and DOD.

Capacity: partially met. NBIB officials reported that NBIB has increased its workforce to approximately 8,700 federal and contract investigators to help address the investigations backlog. However, NBIB has not reported goals for increasing total investigator capacity or completed the development and implementation of a comprehensive strategic workforce plan, as we have recommended. Completing the workforce plan would better position the bureau to meet current and future demands for its services.

In addition, in August 2017, DOD submitted to the congressional defense committees a plan for the transfer of certain DOD background investigations from OPM's NBIB to DOD. This plan included estimates of the number of full-time equivalent employees necessary to execute the transfer. However, officials told us in November 2018 that the department is no longer using the plan because it was overcome by the administration's June 2018 organizational reform proposal for the complete transfer of the NBIB background investigation program from OPM to DOD. According to officials, DOD is now preparing for the transfer of all NBIB investigative functions by developing a new plan which is based on the total inventory of OPM's background investigations. In preparation for the transfer, DOD should consider our recommendation to the Director of NBIB to develop a strategic workforce plan as it assumes these responsibilities.

Executive Order 13467, as amended, which establishes the PAC, among other things, assigns the Secretary of Defense the role of developing and securely operating IT systems that support all background investigation processes conducted by NBIB (Exec. Order No. 13467, § 2.6(b), as amended through Exec. Order No. 13764, 82 Fed. Reg. 8115, 8126 (Jan. 17, 2017)). In addition, the National Defense Authorization Act (NDAA) for Fiscal Year 2018 included a provision that DOD conduct a review of the National Background Investigation Services (NBIS), the IT system it is developing to support background investigations, to determine whether certain enhancements are necessary (see Pub. L. No. 115-91, § 925(f) (2017)). According to officials, DOD has in place the resources needed for the development of NBIS, is actively identifying necessary system capabilities, and has begun small preliminary pilots of its services. However, according to officials, the necessary resources for full implementation of NBIS and the administration's transfer proposal remain unclear.

Action plan: not met. The leaders of the reform effort have developed various plans for more than a decade to improve the process. Most recently, in March 2018, the Director of National Intelligence (DNI) issued implementation guidelines for continuous evaluation—a process to review the background of clearance holders and individuals in sensitive positions at any time during the eligibility period. Further, DOD has begun reorganizing certain entities within the department that will enable DOD to begin the transfer of investigative functions from OPM's NBIB. While the DNI and OPM have issued a joint Executive Correspondence that contains measures clarifying and adjusting certain elements of investigation requirements, the PAC lacks plans, including goals and milestones, to (1) reduce the backlog to a manageable level; (2) meet timeliness objectives for security clearance investigations and adjudications; and (3) assess and address the potential effects of continuous evaluation on agency resources.

Officials from ODNI, DOD, and the PAC told us they are working on an initiative called Trusted Workforce 2.0, an effort to transform the fundamental approach to workforce vetting, and supporting policies that will also overhaul business processes and modernize the IT architecture. According to officials, this effort is an expansion of reform since our January 2018 high-risk designation that will consider both risk and trust. PAC and ODNI officials said Trusted Workforce 2.0 will focus on timeliness and quality goals in a future phase, after reducing the clearance backlog to a manageable level. The DNI and former Director of OPM committed to issuing this new policy framework and plans to transform vetting for the Executive Branch by the end of 2018. Officials told us in early 2019 that the issuance of related policies is expected throughout the calendar year.

Monitoring: partially met. The NDAA for Fiscal Year 2018 required the DNI, in coordination with the other PAC principals, to annually report for the prior fiscal year on the timeliness of initiations, investigations, and adjudications, by clearance level. This report is to cover both initial investigations and periodic reinvestigations for government and contractor employees (see Pub. L. No. 115-91, § 925(k)(1)). In November 2018, the DNI informed executive branch agencies that it intends to fulfill this and other legislative reporting requirements through a consolidated data call.

In September 2018, NBIB reported to Congress, for each clearance level, (1) the size of the investigation backlog, (2) the average length of time to conduct an initial investigation and a periodic reinvestigation, and (3) a discussion of the factors contributing to investigation timeliness. The PAC is also reporting publicly on the progress of key reforms through www.performance.gov, where OMB began tracking security clearance and suitability reform as a cross-agency priority goal in March 2014. For fiscal year 2018, www.performance.gov contains quarterly action plans and progress updates, which present figures on the average timeliness of

Government-wide Personnel Security Clearance Process

initial investigations and periodic reinvestigations for the executive branch as a whole, investigation workload and backlog, and investigator headcounts.

Our analysis of the latest available timeliness data showed that the number of executive branch agencies meeting investigative and adjudicative objectives decreased from fiscal years 2012 through 2018. Furthermore, the PAC has not implemented our December 2017 recommendation to conduct an evidence-based review of the investigation and adjudication timeliness objectives for completing the fastest 90 percent of initial secret and initial top secret security clearances. In addition, the PAC has not yet established performance measures to monitor investigation and adjudication quality, continuous evaluation implementation, and government-wide reciprocity.

Demonstrated progress: partially met. The PAC has demonstrated progress in some areas, specifically related to a reduction in the backlog of background investigations. NBIB officials report that the backlog decreased from almost 715,000 cases in January 2018—when we added the process to our High-Risk List—to approximately 565,000 cases in February 2019. Those officials credit an Executive Memorandum—issued jointly in June 2018 by the DNI and the Director of OPM and containing measures to reduce the investigation backlog—as a driver in backlog reduction. The measures adjust investigative requirements by, for example, temporarily allowing for video or telephone interviews in certain circumstances. We will continue to monitor the backlog and efforts to reduce it.

While members of the PAC have taken positive steps to improve continuous evaluation and reciprocity, including the DNI's March 2018 continuous evaluation implementation guidelines and November 2018 guidance providing requirements for reciprocity, the PAC has not demonstrated sustained progress to address other weaknesses we have identified. For example, PAC leaders have not completed the development of quality measures for investigations, and PAC officials told us they had not made plans to report quality to Congress.

Further, the PAC has not demonstrated measurable improvements with regards to the timeliness of background investigations and adjudications. In fiscal year 2018, the percent of agencies meeting the timeliness objectives in which the fastest 90 percent are to be completed within a specified number of days are presented in table 6 below.

Government-wide Personnel Security Clearance Process

Table 6: Percent of Executive Branch Agencies Meeting Security Clearance Processing Timeliness Objectives in Fiscal Year 2018

Phase	Type	Objective	Percentage Meeting Objective
Investigation	Initial Secret	40 days	3 percent
	Initial Top Secret	80 days	13 percent
	Periodic reinvestigations	150 days	13 percent
Adjudication	Initial Secret	20 days	44 percent
	Initial Top Secret	20 days	44 percent
	Periodic reinvestigations	30 days	65 percent

Source: GAO analysis of Office of the Director of National Intelligence data. | GAO-19-157SP

Agencies without delegated authority rely on OPM to conduct their background investigations, while agencies with delegated authority have been authorized to conduct their own background investigations. As such, investigative phase timeliness data for agencies without delegated authority is generally a reflection of OPM's timeliness. While the data ODNI provided shows that timeliness continues to decline, OPM officials stated that NBIB internal monitoring shows recent improvement in investigation timeliness.

What Remains to Be Done

We have made numerous recommendations to PAC members to address risks associated with the personnel security clearance process between 2011, when we removed DOD's personnel security clearance program from the High-Risk List and 2018, when we placed the government-wide personnel security clearance process on the High-Risk List. We consider 27 of those recommendations key to addressing the high-risk designation. Eight recommendations key to the high-risk designation have been implemented, including three since January 2018. Most recently, those recommendations implemented include ODNI formalizing plans and guidance for continuous evaluation. As of December 2018, 19 of these key recommendations remain open. Of the open recommendations, ODNI stated that it did not concur with our December 2017 recommendations on addressing investigation quality and timeliness, but did not provide specific information to explain why it did not concur.

In addition, in March 2018, we outlined necessary actions and outcomes—anchored in each of our five criteria for removal from the High-Risk List—and our prior recommendations that need to be addressed for this area to be removed. These actions and outcomes are outlined below and should be considered by all four agencies, unless a lead agency is indicated.

To continue to meet the leadership commitment criterion, these agencies should:

 Government-wide Personnel Security Clearance Process

- continue to demonstrate that the PAC is prioritizing the (1) prompt reduction of the government-wide investigative backlog to a manageable level; (2) improvement of the timeliness of background investigations; and (3) completion of long-standing, key reform initiatives;
- continue participating regularly in leadership meetings of the PAC principals;
- provide the necessary oversight and support to PAC members to effectively accomplish assigned reform initiatives, in accordance with the roles and responsibilities outlined in Executive Order 13467 (as amended), as Chair of the PAC (OMB); and
- oversee and support NBIB and DOD during the transition period while DOD stands up background investigative functions, to include supporting resource needs.

To make progress on meeting capacity, these agencies should:

- develop and implement a comprehensive strategic workforce plan that identifies the workforce needed to meet the current and future demand for its services, as well as reduce the current backlog to a manageable level (OPM, DOD);
- coordinate with responsible executive branch agencies to identify the resources needed to effectively implement personnel security clearance reform effort initiatives within established timeframes (OMB, ODNI, DOD); and
- develop long-term funding estimates for changes to the federal government's investigation practices resulting from the implementation of the 2012 Federal Investigative Standards. These long-term funding estimates should include, but not be limited to: (1) costs related to IT adjustments to enable government-wide data sharing; (2) costs related to implementing continuous evaluation; and (3) costs related to the changed frequency of periodic reinvestigations (OMB).

To make progress on an action plan, these agencies should:

- develop a plan, including goals and milestones, for reducing the backlog of background investigations to a manageable level;
- develop a government-wide plan, including goals and interim milestones, to meet timeliness objectives for initial personnel security clearances, periodic reinvestigations, and adjudications; and
- assess the potential effects of continuous evaluation on agency resources and develop a plan to address those effects, such as modifying the scope of periodic reinvestigations, changing the frequency of periodic reinvestigations, or replacing periodic reinvestigations for certain clearance holders (ODNI).

Government-wide Personnel Security
Clearance Process

To make progress on monitoring, these agencies should:

- develop and report to Congress annually on government-wide, results-oriented performance measures for the quality of security clearance background investigations and adjudications (ODNI);
- develop performance measures for continuous evaluation that agencies must track and regularly report to ODNI;
- develop metrics and government-wide baseline data for reciprocity determinations to measure the extent of reciprocity within the executive branch and report on those metrics to Congress (ODNI); and
- monitor the implementation of remedial actions intended to resolve known cybersecurity vulnerabilities, to include updating remedial action plans to reflect expected completion dates, and improve the timeliness of validating the effectiveness of actions taken to mitigate cybersecurity vulnerabilities that exposed agency information to cybersecurity incidents (OPM).

To improve on demonstrating progress, these agencies should:

- develop government-wide performance measures for the quality of background investigations and adjudications (OMB, ODNI);
- conduct an evidence-based review of the investigation and adjudication timeliness objectives for completing the fastest 90 percent of initial secret and initial top secret security clearances, and take action to adjust the objectives if appropriate;
- conduct an evidence-based review of the timeliness goal of 195 days for completing the fastest 90 percent of periodic reinvestigations and the associated goals for the different phases of periodic reinvestigations, and adjust the goal if appropriate; and
- improve and secure personnel security clearance IT systems, including implementing further security improvements to its IT environment, including contractor-operated systems, to ensure that key security controls are in place and operating as intended (OPM).

Congressional Actions Needed

The annual assessments of timeliness and quarterly briefings required by the NDAA for Fiscal Year 2018 will serve as mechanisms for Congress and the executive branch to monitor timeliness, costs, and continuous evaluation, among other things.

**Related GAO
Products**

Personnel Security Clearances: Additional Actions Needed to Implement Key Reforms and Improve Timely Processing of Investigations. GAO-18-431T. Washington, D.C.: March 7, 2018.

Personnel Security Clearances: Additional Actions Needed to Ensure Quality, Address Timeliness, and Reduce Investigation Backlog. GAO-18-29. Washington, D.C.: December 12, 2017.

Personnel Security Clearances: Plans Needed to Fully Implement and Oversee Continuous Evaluation of Clearance Holders. GAO-18-117. Washington, D.C.: November 21, 2017.

Information Security: OPM Has Improved Controls, but Further Efforts Are Needed. GAO-17-614. Washington, D.C.: August 3, 2017.

Information Security: Agencies Need to Improve Controls over Selected High-Impact Systems. GAO-16-501. Washington, D.C.: May 18, 2016.

Personnel Security Clearances: Funding Estimates and Government-wide Metrics Are Needed to Implement Long-Standing Reform Efforts. GAO-15-179SU. Washington, D.C.: April 23, 2015.

Ensuring the Cybersecurity of the Nation

Federal agencies and other entities need to take urgent actions to implement a comprehensive cybersecurity strategy, perform effective oversight, secure federal systems, and protect cyber critical infrastructure, privacy, and sensitive data.

Why Are We at High Risk

Federal agencies and other nation's critical infrastructures—such as energy, transportation systems, healthcare, and financial services—are dependent on information technology (IT) systems and sensitive data to carry out operations and to protect mission and report essential information. The security of these systems and data is vital to public confidence and national security, prosperity, and well-being.

Because many of these systems contain vast amounts of personally identifiable information (PII), agencies must protect the confidentiality, integrity, and availability of the information. In addition, they must effectively respond to data breaches and security incidents when they occur.

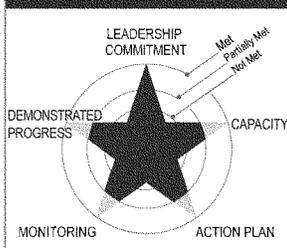
The risks to IT systems supporting the federal government and the nation's critical infrastructures are increasing, including insider threats from sitting or visiting employees, escalating and increasing threats from around the globe, and the emergence of new and more destructive attacks.

We have designated information security as a government-wide high-risk area since 1997. We expanded the high-risk area in 2003 to include protection of critical cyber infrastructure and, in 2015, to include protecting the privacy of PII.

Contact Information:

For additional information about this report, visit our contact list & listserve at <https://www.gao.gov/contact-us> or call us at (800) 451-3042 or (505) 522-2644. If you have any questions, please contact us at (505) 522-2644 or cyber@gaopress.com.

Ensuring the Cybersecurity of the Nation



Source: GAO analysis. | GAO-19-157SP

in December 2017, the President issued a National Security Strategy citing cybersecurity as a national priority and identifying needed actions, such as identifying and prioritizing risk and building defensible government networks.

The administration further described its planned approach to cybersecurity with the release of a National Cyber Strategy in September 2018. This national strategy outlines activities such as securing critical infrastructure, federal networks, and associated information, as well as developing the cybersecurity workforce. To lead the nation's cybersecurity response activities, in November 2018, the President signed the Cybersecurity and Infrastructure Security Agency Act of 2018 into law. Among other things, the law enables the Department of Homeland Security (DHS) to restructure the existing cybersecurity components within the National Protection and Programs Directorate to create a new cyber-focused agency.

Capacity: partially met. In June 2018, the administration issued a government-wide reform plan and reorganization recommendations that included, among other things, proposals for solving the federal cybersecurity workforce shortage. In particular, the plan notes the administration's intent to prioritize and accelerate ongoing efforts to reform the way that the federal government recruits, evaluates, selects, pays, and places cyber talent. The plan further states that, by the end of the first quarter of fiscal year 2019, all 24 major federal agencies, in coordination with DHS and the Office of Management and Budget (OMB), are to develop a critical list of vacancies across their organizations.

Since our previous 2017 High-Risk Report, our assessment of efforts to address all five criteria remains unchanged.

Leadership commitment: met. In May 2017, the President issued an executive order requiring federal agencies to take a variety of actions, including better managing their cybersecurity risks and coordinating to meet reporting requirements related to cybersecurity of federal networks and critical infrastructure. Further,

Nevertheless, the federal government continues to face challenges in ensuring that the nation's cybersecurity workforce has the appropriate skills. For example, we have previously reported that DHS and the Department of Defense had not fully addressed cybersecurity workforce management requirements set forth in federal laws. Further, as of June 2018, most of the 24 major federal agencies had not fully implemented all requirements associated with the Federal Cybersecurity Workforce Assessment Act of 2015. For example, three agencies had not conducted a baseline assessment to identify the extent to which their cybersecurity employees held professional certifications. As a result, these agencies may not be able to effectively gauge the competency of individuals who are charged with ensuring the confidentiality, integrity, and availability of federal information and information systems.

Action plan: partially met. In response to the May 2017 presidential executive order, DHS issued a cybersecurity strategy in May 2018 that articulated seven goals the department plans to accomplish in support of its mission related to managing national cybersecurity risks over the next 5 years. Further, OMB issued the Federal Cybersecurity Risk Assessment and Action Plan in August 2018. The assessment stated that OMB and DHS examined the capabilities of 96 civilian agencies across 76 cybersecurity metrics and found that 71 agencies had cybersecurity programs that were either at risk or at high risk. The assessment also stated that agencies were not equipped to determine how malicious actors seek to gain access to their information systems and data. The assessment identified core actions to address cybersecurity risks across the federal enterprise.

Additionally, the September 2018 National Cyber Strategy outlined the administration's approach to cybersecurity through a variety of priority actions, such as centralizing management and oversight of federal civilian cybersecurity. However, the strategy lacks key elements that we have previously reported can enhance the usefulness of a national strategy, including clearly defined roles and responsibilities, and information on the resources needed to carry out the goals and objectives. Although the strategy states that National Security Council staff are to coordinate with departments, agencies, and OMB to determine the resources needed to support the strategy's implementation, it is unclear what official maintains overall responsibility for coordinating these efforts, especially in light of the elimination of the White House Cybersecurity Coordinator position in May 2018.¹

Going forward, it will be critical for the White House to clearly define the roles and responsibilities of key agencies and officials in order to foster

¹The White House Cybersecurity Coordinator position was created in December 2009 to, among other things, coordinate interagency cybersecurity policies and strategies, and to develop a comprehensive national strategy to secure the nation's digital infrastructure.

effective coordination and hold agencies accountable for carrying out planned activities to address the cybersecurity challenges facing the nation. We have work underway examining federal roles and responsibilities for protecting the nation against cyber threats, including the implications of the decision to eliminate the cybersecurity coordinator position. We expect to report on the results of our work by the end of fiscal year 2019.

Monitoring: partially met. DHS has established the National Cybersecurity and Communications Integration Center (NCCIC), which functions as the 24/7 cyber monitoring, incident response, and management center for the federal civilian government. The United States Computer Emergency Readiness Team, one of several subcomponents of the NCCIC, is responsible for operating the National Cybersecurity Protection System. Operationally known as Einstein, this system is intended to provide DHS with situational awareness related to cybersecurity of entities across the federal government, through intrusion detection and prevention capabilities.

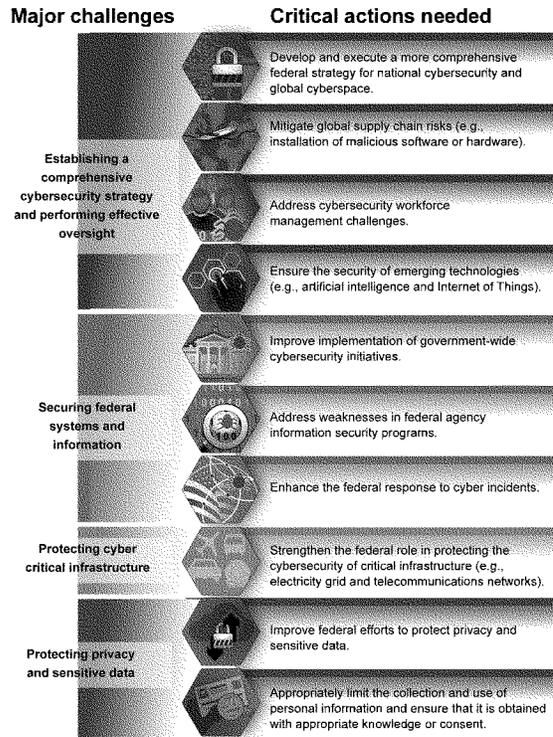
Nevertheless, DHS has continued to be challenged in measuring how the NCCIC is performing its functions in accordance with mandated implementing principles. For example, NCCIC is to provide timely technical assistance, risk management support, and incident response capabilities to federal and nonfederal entities; however, as of December 2018, it had not established measures or other procedures for ensuring the timeliness of these assessments, as we previously recommended.

We also continued to find persistent weaknesses in federal agencies' monitoring of their information security programs. The Federal Information Security Modernization Act of 2014 (and its predecessor the Federal Information Security Management Act of 2002) requires federal agencies in the executive branch to develop, document, and implement an information security program and evaluate it for effectiveness. Our numerous security control audits have identified hundreds of deficiencies related to agencies' implementation of effective security controls.

Demonstrated progress: partially met. Since 2010, we have made over 3,000 recommendations to agencies aimed at addressing cybersecurity challenges facing the government—448 of which were made since the last high-risk update in February 2017. Nevertheless, many agencies face challenges in safeguarding their information systems and information, in part because many of these recommendations have not been fully implemented. Of the roughly 3,000 recommendations made since 2010, nearly 700 had not been fully implemented as of December 2018. We have also designated 35 as priority recommendations, meaning that we believe these recommendations warrant priority attention from heads of key departments and agencies. As of December 2018, 26 of our priority recommendations had not been fully implemented.

What Remains to Be Done Based on our prior work, we have identified four major cybersecurity challenges: (1) establishing a comprehensive cybersecurity strategy and performing effective oversight, (2) securing federal systems and information, (3) protecting cyber critical infrastructure, and (4) protecting privacy and sensitive data. To address these challenges, we have identified 10 critical actions that the federal government and other entities need to take (see figure 5).

Figure 5: Ten Critical Actions Needed to Address Four Major Cybersecurity Challenges



Source: GAO analysis. | GAO-19-157SP

Congressional Actions Needed

We also have previously suggested that Congress consider amending laws, such as the Privacy Act of 1974 and the E-Government Act of 2002, because they may not consistently protect PII. Specifically, we found that while these laws and guidance set minimum requirements for agencies, they may not consistently protect PII in all circumstances of its collection and use throughout the federal government, and may not fully adhere to key privacy principles. However, the relevant revisions to the Privacy Act

Ensuring the Cybersecurity of the Nation

and the E-Government Act had not yet been enacted as of the date of this report.

Further, we suggested that Congress consider strengthening the consumer privacy framework and review issues such as the adequacy of consumers' ability to access, correct, and control their personal information; and privacy controls related to new technologies such as web tracking and mobile devices. However, these suggested changes had not yet been enacted as of the date of this report.

Related GAO Products

Information Security: OPM Has Implemented Many of GAO's 80 Recommendations, but Over One-Third Remain Open. GAO-19-143R. Washington, D.C.: November 13, 2018.

Cybersecurity: Office of Federal Student Aid Should Take Additional Steps to Oversee Non-School Partners' Protection of Borrower Information. GAO-18-518. Washington, D.C.: September 17, 2018.

High-Risk Series: Urgent Actions Are Needed to Address Cybersecurity Challenges Facing the Nation. GAO-18-622. Washington, D.C.: September 6, 2018.

Information Security: IRS Needs to Rectify Control Deficiencies That Limit Its Effectiveness in Protecting Sensitive Financial and Taxpayer Data. GAO-18-391. Washington, D.C.: July 31, 2018.

Data Protection: Actions Taken by Equifax and Federal Agencies in Response to the 2017 Breach. GAO-18-559. Washington, D.C.: August 30, 2018.

High-Risk Series: Urgent Actions Are Needed to Address Cybersecurity Challenges Facing the Nation. GAO-18-645T. Washington, D.C.: July 25, 2018.

Information Security: Supply Chain Risks Affecting Federal Agencies. GAO-18-667T. Washington, D.C.: July 12, 2018.

Electronic Health Information: CMS Oversight of Medicare Beneficiary Data Security Needs Improvement. GAO-18-210. Washington, D.C.: March 6, 2018.

Critical Infrastructure Protection: Additional Actions Are Essential for Assessing Cybersecurity Framework Adoption. GAO-18-211. Washington, D.C.: February 15, 2018.

Cybersecurity Workforce: Urgent Need for DHS to Take Actions to Identify Its Position and Critical Skill Requirements. GAO-18-175. Washington, D.C.: February 6, 2018.

Strengthening Department of Homeland Security Management Functions

The Department of Homeland Security (DHS) needs to continue implementing its Integrated Strategy for High-Risk Management with a particular focus on building its capacity in the areas of acquisition, information technology (IT), and financial management.

Why Does It High Risk
 In 2005, we designated implementing and transforming DHS as high risk because the department had to undertake 20 separate, several with major management challenges—into one department. Given the significant effort required to build and transform a department as large and complex as DHS, our initial high-risk designation addressed the department's implementation and transformation efforts to include associated management and programmatic challenges. Failure to effectively address these challenges could have serious consequences for U.S. national and economic security.

Since 2005, the focus of the high-risk area has evolved in tandem with DHS's institution and evolution. In September 2011, we reported in our assessment of DHS's progress that the department had implemented key homeland security mission and achieved important goals in key areas but continuing weaknesses in DHS's management functions had been a key factor impacting the department's implementation efforts.

As a result, in our 2013 high-risk update we narrowed the scope of the high-risk area to strengthening and integrating DHS management functions (human capital, acquisition, information technology, and financial).

Contact Information
 For additional information about this high-risk area, contact Chris Davis (404) 575-1913 or cdavis@gao.gov.



Source: GAO analysis. | GAO-19-1575P

Leadership commitment: met. DHS top leadership, including the Secretary and Deputy Secretary of Homeland Security, has continued to demonstrate exemplary commitment and support for addressing the department's management challenges. They have also taken actions to institutionalize this commitment to help ensure the long-term success of the department's efforts. One such effort is the Under Secretary for Management's Integrated Priorities initiative to strengthen the integration of DHS's business operations across the department. During monthly leadership meetings with the Under Secretary for Management, the department's Chief Executive Officers have been providing status updates on their respective actions to address this high-risk designation.

Capacity: partially met. With regard to acquisition staffing, DHS has analyzed components' acquisition program staffing assessments but has yet to conduct an in-depth analysis across components or develop a plan to address any gaps.

With regard to IT staffing, DHS has not identified or reported to Congress or the Office of Personnel Management (OPM) on its department-wide cybersecurity specialty areas of critical needs, such as cybersecurity management or incident response, as required by law. In February 2018, we recommended that DHS take steps to ensure that (1) its cybersecurity workforce procedures identify position vacancies and responsibilities, (2)

Since our 2017 High-Risk Report, ratings for all five criteria remain unchanged. DHS has continued its efforts to strengthen and integrate its acquisition, information technology, financial, and human capital management functions. It has continued to meet three out of five criteria for removal from the High-Risk List (leadership commitment, action plan, and monitoring) and partially meet the remaining two criteria (capacity and demonstrated progress).

cybersecurity workforce data are complete and accurate, and (3) plans for reporting critical needs are developed. DHS concurred and stated it planned to provide further evidence addressing the recommendations by the end of the first quarter of fiscal year 2019, which we will assess upon receipt.

With regard to financial management capacity, DHS has continued its efforts to identify and allocate resources for financial management but additional progress is needed. For example, DHS's financial statement auditor has identified several capacity-related issues, including resource limitations and inadequate management and staff training, as causes for the material weaknesses reported.

Action plan: met. In January 2011, DHS produced its first Integrated Strategy for High-Risk Management and has issued 14 updated versions, most recently in September 2018. The September 2018 strategy describes DHS's progress to-date and planned corrective actions to further strengthen its management functions. DHS's strategy and approach, if effectively implemented and sustained, provides a path for DHS to be removed from our High-Risk List.

Monitoring: met. In the most recent September 2018 Integrated Strategy for High-Risk Management, DHS included performance measures to monitor key management initiatives. For example, DHS monitors the percentage of components demonstrating effective internal controls for significant business processes as a way of gauging progress toward improving financial management. In addition, DHS is also better positioned to monitor its financial system modernization projects since it established a joint program management office in October 2017. This office is to, among other things, centralize program governance and streamline its decision-making processes, and provide DHS management with regular updates on the department's financial system modernization efforts.

Demonstrated progress: partially met. In 2010, we identified, and DHS agreed, that achieving 30 specific outcomes would be critical to addressing the challenges within the department's management areas. As of September 2018, DHS has fully addressed 17 of the 30 needed outcomes, mostly addressed 4, partially addressed 6, and initiated actions to address the remaining 3. Since our 2017 High-Risk Report, DHS has taken steps to fully address two human capital outcomes by demonstrating that components are basing hiring decisions and promotions on human capital competencies and strengthening employee

engagement efforts. In addition, DHS has fully addressed two IT outcomes by (1) providing ongoing oversight and support to troubled IT investments to help improve their cost, schedule, and performance; and (2) demonstrating significant progress in implementing its IT strategic workforce planning initiative.

Important progress and work remaining in key areas include:

- Acquisition management. DHS continues to face challenges in funding its acquisition portfolio. In May 2018, we found that recent enhancements to DHS's acquisition management, resource allocation, and requirements policies largely reflect key portfolio management practices. However, we also found that of the 24 major acquisition programs we assessed with approved schedule and cost goals, only 10 were on track to meet those goals during 2017—a decrease from 2016.

In addition, we found that DHS's portfolio of major acquisition programs is not affordable from fiscal years 2018 to 2022. DHS has taken steps to strengthen requirements development across the department, such as reestablishing the Joint Requirements Council in June 2014. However, opportunities remain to further strengthen DHS's acquisition process by using the Joint Requirements Council to impact DHS's budget. The council could better fulfill its mission by identifying overlapping or common requirements, and by making recommendations to senior leadership to help ensure that DHS uses its finite investment resources wisely, and maintains a balanced portfolio of investments that combine near-term operational improvements with long-term strategic planning.

- IT management. DHS has updated its approach for managing its portfolios of IT investments across all components. As part of the revised approach, the department is utilizing its capital planning and investment control process and the Joint Requirements Council to assess IT investments across the department on an ongoing basis. For example, as part of its capital planning process for the fiscal year 2020 budget, the Office of the Chief Information Officer worked with the components to assess each major IT investment to ensure alignment with DHS's functional portfolios, and to identify opportunities to share capabilities across components. This updated approach should enable DHS to identify potentially duplicative investments and opportunities for consolidating investments, as well as reduce component-specific investments.

Additionally, DHS has continued to take steps to enhance its information security program. In November 2018, the department's financial statement auditor reported that DHS had made progress in correcting its prior year IT security weaknesses. However, for the 15th consecutive year, the auditor designated deficiencies in IT systems controls as a material weakness for financial reporting purposes. Work also remains in implementing our six open recommendations concerning DHS's cybersecurity workforce assessment requirements.

- **Financial management.** DHS received a clean audit opinion on its financial statements for 6 consecutive years—fiscal years 2013 to 2018. However, its auditor reported two material weaknesses in the areas of financial reporting and information technology controls and financial systems, as well as instances of non-compliance with laws and regulations. These deficiencies hamper DHS's ability to provide reasonable assurance that its financial reporting is reliable and the department is in compliance with applicable laws and regulations. In addition, much work remains to modernize components' financial management systems and business processes.
- **Human capital management.** DHS has continued to strengthen its employee engagement efforts by implementing our 2012 recommendation to establish metrics of success within components' action plans for addressing its employee satisfaction problems. Further, DHS has conducted audits to better ensure components are basing hiring decisions and promotions on human capital competencies. In addition, OPM's 2018 Federal Employee Viewpoint Survey data showed that in the past 2 years, DHS's score on the Employee Engagement Index (EEI) increased by 4 points—from 56 in 2016 to 60 in 2018—which was 1 point more than the government wide increase over the same period. While this improvement is notable, DHS's current EEI score is 1 point below its EEI baseline score in 2010, suggesting that DHS is still working to regain lost ground after an 8 point drop between 2010 and 2015. DHS has considerable work ahead to improve its employee engagement as its 2018 EEI score ranked 20th among 20 large and very large federal agencies.
- **Management integration.** Since 2015, DHS has focused its efforts to address crosscutting management challenges through the establishment and monitoring of Integrated Priorities. The department updated these priorities in September 2017. Each priority includes goals, objectives, and measurable action plans that are monitored at monthly leadership meetings led by senior DHS officials, including the Under Secretary for Management. To achieve this outcome, DHS needs to continue to demonstrate sustainable progress integrating its

management functions within and across the department, as well as fully address the other 13 outcomes it has not yet fully achieved.

What Remains to Be Done

Over the years, we have made hundreds of recommendations related to DHS management functions and many have been implemented. Continued progress for this high-risk area depends primarily on addressing the remaining outcomes. In the coming years, DHS needs to continue implementing its Integrated Strategy for High-Risk Management to show measurable, sustainable progress in implementing corrective actions and achieving outcomes. In doing so, it remains important for DHS to

- maintain its current level of top leadership support and sustained commitment to ensure continued progress in executing its corrective actions through completion;
- continue to identify the people and resources necessary to make progress towards achieving outcomes, work to mitigate shortfalls and prioritize initiatives as needed, and communicate to senior leadership critical resource gaps;
- continue to implement its plan for addressing this high-risk area and periodically provide assessments of its progress to us and Congress;
- closely track and independently validate the effectiveness and sustainability of its corrective actions, and make midcourse adjustments as needed; and
- make continued progress in achieving the 13 outcomes it has not fully addressed and demonstrate that systems, personnel, and policies are in place to ensure that progress can be sustained over time.

**Related GAO
Products**

DHS Acquisitions: Additional Practices Could Help Components Better Develop Operational Requirements. GAO-18-550 Washington, D.C.: August 8, 2018.

Homeland Security Acquisitions: Leveraging Programs' Results Could Further DHS's Progress to Improve Portfolio Management. GAO-18-339SP Washington, D.C.: May 17, 2018.

Cybersecurity Workforce: Urgent Need for DHS to Take Actions to Identify Its Position and Critical Skill Requirements. GAO-18-175, Washington, D.C.: February 6, 2018.

DHS Financial Management: Better Use of Best Practices Could Help Manage System Modernization Project Risks. GAO-17-799 Washington, D.C.: September 26, 2017.

Homeland Security: Progress Made to Implement IT Reform, but Additional Chief Information Officer Involvement Needed. GAO-17-284 Washington, D.C.: May 18, 2017.

Homeland Security Acquisitions: Identifying All Non-Major Acquisitions Would Advance Ongoing Efforts to Improve Management. GAO-17-396 Washington, D.C.: April 13, 2017.

Homeland Security Acquisitions: Earlier Requirements Definition and Clear Documentation of Key Decisions Could Facilitate Ongoing Progress. GAO-17-346SP Washington, D.C.: April 6, 2017.

Appendix II: Areas Removed From the High-Risk List

The following pages provide overviews of the two areas removed from the High-Risk List. Each overview discusses (1) why the area was high risk, and (2) why the area is being removed from the list. Each of these high-risk areas is also described on our High-Risk List website, <http://www.gao.gov/highrisk/overview>.

DOD Supply Chain Management

We are removing this high-risk area because the Department of Defense (DOD) has made sufficient progress on the remaining seven actions and outcomes we recommended for improving supply chain management. Congressional attention, DOD leadership commitment, and our collaboration contributed to this successful outcome.

Why Area Was High Risk

DOD manages about 4.9 million secondary inventory items, such as spare parts, with a reported value of \$92.9 billion as of September 2017. Effective and efficient supply chain management is critical for (1) supporting the readiness and capabilities of the force and (2) helping to ensure that DOD avoids spending resources on unneeded inventory that could be better applied to other defense and national priorities. We define supply chain management as including three segments—inventory management, asset visibility, and materiel distribution.

DOD Supply Chain Management has been on our High-Risk List since 1990—starting with inventory management—because of inefficient and ineffective management practices leading to excess inventory. In 2005, we added asset visibility and materiel distribution to this high-risk area due to weaknesses identified during operations in Iraq and Afghanistan, including backlogs of hundreds of pallets and containers at distribution points.

In 2017, we removed inventory management from this area because DOD made key improvements, such as reducing on-order excess inventory by about \$600 million and addressing each of our high-risk criteria, resulting in demonstrable and sustained improvements.

Contact Information

For additional information about this high-risk area, contact Diana Maurer at 202-512-9627 or maurerd@gao.gov.

DOD Supply Chain Management



Source: GAO analysis. | GAO-19-157SP

From 2014 to 2017, we identified 18 actions and outcomes DOD needed to implement in order for its supply chain management to be removed from our High-Risk List. In our 2017 High-Risk Report, we reported that DOD had made progress in addressing 11 actions and met the criteria of leadership commitment, capacity, and action plan for asset visibility and materiel distribution. However, DOD needed to take additional actions to fully implement the remaining seven actions and outcomes related to the monitoring and demonstrated progress criteria (see figure 6).

Why High-Risk Area is Being Removed

From 2014 to 2017, we identified 18 actions and outcomes DOD needed to implement in order for its supply chain management to be removed from our High-Risk List. In our 2017 High-Risk Report, we reported that DOD had made progress in addressing 11 actions and met the criteria of leadership commitment, capacity, and action plan for asset visibility and materiel distribution. However, DOD needed to take additional actions to fully implement the remaining seven actions and outcomes related to the monitoring and demonstrated progress criteria (see figure 6).

Figure 6: Segments of GAO's Department of Defense's Supply Chain Management High-Risk Area



Asset visibility is DOD's ability to provide timely and accurate information on the location, quantity, condition, movement, and status of its inventory. DOD had weaknesses in maintaining visibility of supplies, such as problems with inadequate radio-frequency identification information to track all cargo movements.

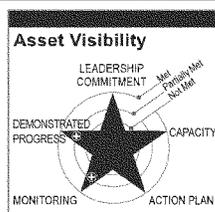


Materiel distribution is DOD's ability to operate its global distribution pipeline to deliver the right item, to the right place, at the right time, and at the right cost. DOD faced challenges in delivering supplies and equipment, including meeting delivery standards and timelines for cargo shipments as well as maintaining complete delivery data for surface shipments.

Source: GAO. | GAO-19-157SP

We are removing DOD Supply Chain Management from the High-Risk List because, since 2017, DOD has addressed the remaining two criteria (monitoring and demonstrated progress) for asset visibility and materiel distribution by addressing the seven actions and outcomes identified in our 2017 High-Risk Report.

Asset Visibility



Source: GAO analysis. | GAO-19-1575P

Since our 2017 High-Risk Report, DOD has continued to meet the criteria of leadership commitment, capacity, and action plan for asset visibility. Further, DOD has fully addressed the three remaining actions and outcomes we outlined in 2017 in order to mitigate or resolve long-standing weaknesses in asset visibility. Consequently, DOD has met the monitoring and demonstrated progress criteria for asset visibility to remove this area from our High-Risk List.

Leadership commitment: met. Senior leaders have continued to demonstrate commitment through their involvement in groups such as the Supply Chain Executive Steering Committee—senior-level officials responsible for overseeing asset visibility improvement efforts—and through the Asset Visibility Working Group, which identifies opportunities for improvement and monitors the implementation of initiatives by issuing its Strategy for Improving DOD Asset Visibility (Strategy) in 2014, 2015, and 2017.

Capacity: met. DOD continues to demonstrate that it has the capacity—personnel and resources—to improve asset visibility. For example, DOD's 2015 and 2017 Strategies advise the components to consider items such as staffing, materiel, and sustainment costs when documenting cost estimates for the initiatives in the Strategy, as we recommended in January 2015.

Action plan: met. A provision in the National Defense Authorization Act for Fiscal Year 2014 required DOD to submit to Congress a comprehensive strategy and implementation plans for improving asset tracking and in-transit visibility. In January 2014, DOD issued the Strategy and accompanying implementation plans, which outlined initiatives intended to improve asset visibility. DOD updated its 2014 Strategy in October 2015 and in August 2017.

Importantly, since 2017 DOD addressed the three remaining actions and outcomes related to the monitoring and demonstrated progress criteria through updates to and implementation of the Strategies (see table 7).

DOD Supply Chain Management

Table 7: Status of Asset Visibility Remaining Action Items Required to Remove Supply Chain Management from GAO's High-Risk List

Action items	Action item status	High-risk category
1. Incorporate the attributes of successful performance measures (e.g., clear, quantifiable, objective, and reliable), as appropriate, in subsequent updates to the Strategy for Improving DOD Asset Visibility	Met	Monitoring
2. Take steps to incorporate into after-action reports information relating to performance measures for the asset visibility initiatives	Met	Monitoring
3. Demonstrate sustained progress in implementing initiatives that result in measurable outcomes and progress towards realizing the goals and objectives in the Strategy for Improving DOD Asset Visibility	Met	Demonstrated progress

Source: GAO analysis and prior GAO report, | GAO-19-157SP

Monitoring: met. DOD provided guidance in its 2017 update to the Strategy for the military components to consider key attributes of successful performance measures during metric development for their improvement initiatives. As appropriate, the military components have followed the guidance and provided high-level summary metrics updates to the Asset Visibility Working Group. In addition, DOD has taken steps to monitor asset visibility by incorporating into after-action reports, as appropriate, information relating to performance measures. These after-action reports serve as closure documents and permanent records of each initiative's accomplishments.

Demonstrated progress: met. DOD has demonstrated sustained progress by completing 34 of the 39 initiatives to improve asset visibility and continues to monitor the remaining 5 initiatives. These initiatives have supported DOD's goals and objectives, which include: (1) improving visibility efficiencies of physical inventories, receipt processing, cargo tracking, and unit moves; (2) ensuring asset visibility data are discoverable, accessible, and understandable to support informed decision-making across the enterprise; and (3) increasing efficiencies for delivery accuracy and cycle times. Also, the Asset Visibility Working Group meets regularly to identify opportunities to further improve asset visibility within DOD.

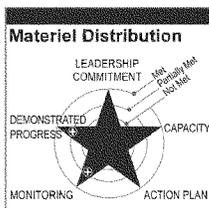
DOD has taken the following actions to demonstrate sustained progress: (1) created an integrated single portal system providing 7,500 users access to near-real-time, in-transit visibility of eight million lines of items of supply and transportation data; and (2) increased its visibility of assets through radio-frequency identification (RFID), an automated data-capture technology that can be used to electronically identify, track, and store information contained on a tag. There are two main types of RFID tags,

passive and active, which show whether assets are in-storage, in-transit, in-process, or in-use. Passive tags, such as mass transit passes, do not contain their own power source and cannot initiate communication with a reader; while active tags, such as an "E-Z pass," contain a power source and a transmitter, and send a continuous signal over longer distances.

DOD closed nine initiatives from its Strategies by implementing RFID technology. For example, the Marine Corps implemented long-range passive RFID for visibility and accountability of items, resulting in improvements that include an increased range for "reading" an item—from 30 feet to 240 feet—and reduced inventory cycle times from 12 days to 10 hours. Also, the Navy reported that the use of passive RFID technology to support the overhaul of its nuclear-powered attack submarines enabled the Navy to better track parts, resulting in 98 percent fewer missing components and an average cost avoidance of \$1.3 million per boat.

Additionally, according to DOD, the use of RFID tags to provide visibility of sustainment cargo at the tactical leg resulted in \$1.4 million annual cost savings. Further, DOD reported that the migration of the active RFID enterprise from a proprietary communication standard to a competitive multivendor environment reduced the cost of active RFID tags by half, resulting in an estimated \$5.7 million annual reduction in costs.

Materiel Distribution



Source: GAO analysis. | GAO-19-157SP

Since our 2017 High-Risk Report, DOD has continued to meet the criteria of leadership commitment, capacity, and action plan for materiel distribution. Further, DOD has fully addressed the four remaining actions and outcomes we outlined in 2017 in order to mitigate or resolve long-standing weaknesses in materiel distribution. Consequently, DOD has met the monitoring and demonstrated progress criteria for materiel distribution to remove this area from our High-Risk List.

Leadership commitment: met. Senior leaders continue to demonstrate commitment through their involvement in groups such as the Supply Chain Executive Steering Committee—senior-level officials responsible for overseeing materiel distribution corrective actions—and through the Distribution Working Group, which helped develop the Materiel Distribution Improvement Plan (Improvement Plan) in 2016.

Capacity: met. DOD has continued to demonstrate that it has the personnel and resources, such as key organizations and the associated

DOD Supply Chain Management

governance structure, to improve materiel distribution. The Improvement Plan recognizes that additional resources will be required to accomplish its corrective actions and close any identified performance gaps within the time frame specified.

Action plan: met. In 2016, DOD developed its corrective action plan to address the department's materiel distribution challenges. The Improvement Plan details specific goals and actions to better measure the end-to-end distribution process, ensure the accuracy of underlying data, and strengthen and integrate distribution policies and the governance structure.

Importantly, since 2017, DOD has fully addressed the four remaining actions and outcomes related to monitoring and demonstrated progress to mitigate or resolve long-standing weaknesses in materiel distribution (see table 8).

Table 8: Status of Materiel Distribution Remaining Action Items Required to Remove Supply Chain Management from GAO's High-Risk List

Action items	Action item status	High-risk category
1. Make progress in developing Department of Defense's (DOD's) suite of distribution performance metrics, improving the quality of data underlying those metrics, and sharing metrics information among stakeholders.	Met	Monitoring
2. Integrate distribution metrics data, including cost data, from the combatant commands and other DOD components, as appropriate, on the performance of all legs of the distribution system, including the tactical leg. ^a	Met	Monitoring
3. Refine existing actions in the Materiel Distribution Improvement Plan or incorporate additional actions based on interim progress and results, and update the Materiel Distribution Improvement Plan accordingly.	Met	Monitoring
4. Demonstrate that the actions implemented under its Materiel Distribution Improvement Plan improve its capability to comprehensively measure distribution performance, identify distribution problems and root causes, and identify and implement solutions.	Met	Demonstrated progress

Source: GAO analysis and prior GAO report, | GAO-19-157/SP

^aThe tactical leg is the last segment of the distribution system between the supply points in a military theater of operations and the forward operating bases and units.

Monitoring: met. DOD has monitored materiel distribution by making progress in developing its suite of distribution performance metrics, improving the quality of their underlying data, and sharing metrics information with stakeholders. For example, in January 2017, DOD developed a suite of performance metrics that provides a comprehensive picture of the distribution process, including whether supplies are

delivered on time and at sufficient quantity and quality. Also, DOD implemented checklists to assess the quality of data underlying each performance metric based on relevance, accuracy, comparability, and interpretability.

The checklists and their standards assist in identifying root causes and addressing areas where performance data quality may be lacking. DOD has also incorporated internal control requirements in its supply chain management guidance to increase confidence in the performance data. Additionally, DOD has revised its policy documents to require stakeholders to routinely capture and share distribution performance metrics, including cost data, and the department maintains websites to provide current performance information to distribution stakeholders.

DOD has also incorporated distribution metrics, as appropriate, on the performance of all legs of the distribution system, including the tactical leg (i.e., the last segment of the distribution system). We previously reported on DOD's deficiencies to accurately assess its distribution performance at the tactical leg, such as missing delivery dates for shipments in Afghanistan. Since that time, the geographic combatant commands have been tracking metrics at the tactical leg, including required delivery dates, to determine the movement and causes of delays for shipments, and have been sharing distribution performance information with the U.S. Transportation Command (TRANSCOM) through their deployment and distribution operations centers. DOD is implementing a cost framework to incorporate transportation costs for all legs of the distribution system, which will provide an additional metric for distribution stakeholders to assess the efficiency of the system. The first phase of the cost framework began operating in August 2018 and is expected to be fully implemented in 2019.

DOD is making progress in refining its Improvement Plan and is incorporating additional actions based on interim progress and results. Since DOD issued the Improvement Plan in September 2016, the agency has (1) documented the results and monitored the status of each corrective action, (2) revised completion dates as needed, and (3) periodically provided decision makers with summary action charts, plans, and milestones. DOD is also updating its instruction on management and oversight of the distribution enterprise to clarify the roles and responsibilities of all distribution stakeholders. DOD officials have not determined a date for when this instruction will be issued.

Demonstrated progress: met. DOD has demonstrated sustained progress in improving its capability to comprehensively measure distribution performance, identify distribution problems and root causes, and implement solutions. DOD has implemented 10 of 18 corrective actions in its Improvement Plan and is on track to implement the

DOD Supply Chain Management

remaining 8 by September 2019. Because of this progress, DOD's monthly shipment reports have assessed performance against enhanced metrics across the distribution system. For example, in December 2017, TRANSCOM investigated performance standards for truck deliveries from its Defense Logistics Agency warehouses in Bahrain to customers in Kuwait due to frequent delays in shipments. TRANSCOM determined that inadequate time for clearing customs in Kuwait resulted in an unrealistic delivery standard.

TRANSCOM, in coordination with distribution stakeholders, adjusted the delivery standard to adequately account for the in-theater customs process. In addition, TRANSCOM, in partnership with the Defense Logistics Agency and the General Services Administration, developed and implemented initiatives focused on distribution process and operational improvements to reduce costs and improve distribution services to the warfighter. According to DOD, these efforts have resulted in at least \$1.56 billion in distribution cost avoidances to date.

Monitoring After Removal

DOD has demonstrated commendable, sustained progress improving its supply chain management. This does not mean DOD has addressed all risk within this area. It remains imperative that senior leaders continue their efforts to implement initiatives and corrective actions to maintain visibility of supplies, track cargo movements, meet delivery standards, and maintain delivery data for shipments. Continued oversight and attention are also warranted given the recent reorganization of the Office of the Under Secretary of Defense for Acquisition and Sustainment and the resulting change in the oversight structure of Supply Chain Management. We will therefore continue to conduct oversight of supply chain management at DOD.

Related GAO Products

Defense Logistics: Improved Performance Measures and Information Needed for Assessing Asset Visibility Initiatives. GAO-17-183. Washington, D.C.: Mar. 16, 2017.

Defense Logistics: DOD Has Addressed Most Reporting Requirements and Continues to Refine its Asset Visibility Strategy. GAO-16-88. Washington, D.C.: Dec. 22, 2015.

Defense Logistics: Improvements Needed to Accurately Assess the Performance of DOD's Materiel Distribution Pipeline. GAO-15-226. Washington, D.C.: Feb. 26, 2015.

Mitigating Gaps in Weather Satellite Data

We are removing this high-risk area because—with strong congressional support and oversight—the National Oceanic and Atmospheric Administration (NOAA) and the Department of Defense (DOD) have made significant progress in establishing and implementing plans to mitigate potential gaps in weather satellite data.

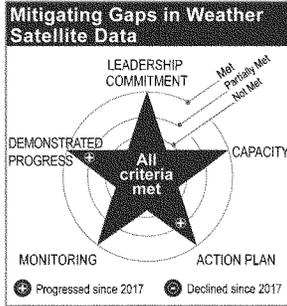
Why Area Was High Risk

The United States relies on two satellite systems to collect forecasts and observations: (1) polar-orbiting satellites that provide a global perspective every morning and afternoon and (2) geostationary satellites that maintain a fixed view of the nation. NOAA is responsible for the polar satellite program that covers the equator in the afternoon and for the geostationary satellite program. DOD is responsible for the other satellite program that covers the equator in the early morning orbit. These agencies are planning or executing major satellite acquisition programs to replace existing polar and geostationary satellites that are nearing the end of their useful life. They requested the report.

A gap in satellite data would result in less accurate and timely weather forecasts and warnings of extreme events—such as hurricanes and floods. Given the frequency of satellite data in weather forecasts, the likelihood of significant gaps in weather satellite data, and the potential impact of such gaps on the health and safety of the U.S. population and economy, we concluded that the potential gap in weather satellite data was a high-risk area and added it to the High-Risk List in 2013. While progress in completion of NOAA's program, we removed the geostationary satellite segment from the high-risk area in 2017.

Contact Information

For additional information about the high-risk area, contact Carol C. Harris at 202-512-4439 or carolc@gao.gov.



Source: GAO analysis. | GAO-19-1678P

Why High-Risk Area Is Being Removed

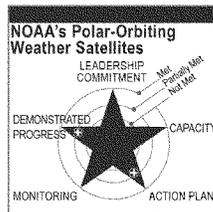
In our 2017 High-Risk Report, we reported that NOAA had fully implemented criteria associated with demonstrating leadership commitment, having the needed capacity to address risks, and monitoring progress.

We also reported that NOAA had partially implemented the criteria for establishing an action plan and demonstrating progress. In addition, our 2017 report noted DOD's slow progress in

establishing plans for its follow-on weather satellite program and for determining how it would fulfill other weather requirements in the early morning orbit.

Since that time, (1) NOAA has fully implemented actions in response to the remaining two criteria that had previously been partially implemented and (2) DOD, pursuant to statutes and accompanying congressional direction, established and began implementing plans both for its follow-on weather satellite program and for addressing the key requirements that were not included in that satellite program. Consequently, we are removing the need to mitigate gaps in weather satellite data from our High-Risk List.

NOAA's Polar-Orbiting Weather Satellites



Source: GAO analysis. | GAO-19-157SP

Since our last high-risk update in 2017, NOAA continues to meet the criteria of leadership commitment, capacity, and monitoring and now also meets the criteria of action plan and demonstrated progress.

Leadership commitment: met. NOAA program officials met the leadership commitment criteria in 2015 and have continued to sustain their strong leadership commitment to mitigating potential satellite data gaps since that time. For example,

NOAA issued and frequently updated its polar satellite gap mitigation plan, which identifies the specific technical, programmatic, and management steps the agency is taking to ensure that satellite mitigation options are viable. In addition, NOAA executives continue to oversee the acquisition of polar-orbiting satellites through monthly briefings on the cost, schedule, and risks affecting the satellites' development.

Capacity: met. NOAA continues to meet the criterion of improving its capacity to address the risk of a satellite data gap. In December 2014, we recommended that NOAA investigate ways to prioritize the gap mitigation projects with the greatest potential benefit to weather forecasting, such as by improving its high-performance computing capacity. NOAA agreed with this recommendation and implemented it. For example, NOAA upgraded its high-performance computers, which allowed the agency to move forward on multiple other mitigation activities, including experimenting with other data sources and assimilating these data into its weather models.

Action plan: met. NOAA now meets the criterion for having a plan to address the risk of a polar satellite data gap, which is an increase over its rating in 2017. In June 2012, we reported that, while NOAA officials communicated publicly and often about the risk of a polar satellite data gap, the agency had not established plans to mitigate the gap. We recommended that NOAA establish a gap mitigation plan, and the agency did so in February 2014. However, in December 2014, we recommended that NOAA revise its plan to address shortfalls, including (1) adding recovery time objectives for key products, (2) identifying opportunities for accelerating the calibration and validation of satellite data products, (3) providing an assessment of available alternatives based on their costs

and impacts, and (4) establishing a schedule with meaningful timelines and linkages among mitigation activities.

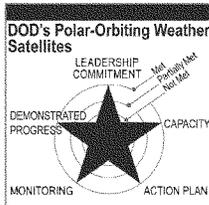
The agency agreed with the recommendation and subsequently addressed it. Specifically, NOAA issued three updates to its gap mitigation plan between January 2016 and February 2017. With the last of the updates, the agency addressed the shortfalls we had identified.

Monitoring: met. NOAA met this criterion in 2017, and continues to meet it now, by implementing our recommendations to more consistently and comprehensively monitor its progress on gap mitigation activities. For example, all three NOAA organizations responsible for gap mitigation projects regularly brief senior management on their progress.

Demonstrated progress: met. NOAA now meets the criterion for demonstrated progress, which is an increase over its prior rating. In our 2017 High-Risk Report, we noted that NOAA had identified 35 different gap mitigation projects and was making progress in implementing them. These projects fell into three general categories: (1) understanding the likelihood and impact of a gap, (2) reducing the likelihood of a gap, and (3) reducing the impact of a gap. Nevertheless, one of the most important steps in reducing the likelihood of a gap—keeping the launch of the next polar satellite on schedule—had encountered problems. Specifically, agency officials decided to delay the launch due to challenges in developing the ground system and a critical instrument on the spacecraft. This delay exacerbated the probability of a satellite data gap.

More recently, however, NOAA was able to demonstrate progress by successfully launching the satellite in November 2017. That satellite, now called NOAA-20, is currently operational and is being used to provide advanced weather data and forecasts. Moreover, the agency is also working to build and launch the next satellites in the polar satellite program.

DOD's Polar-Orbiting Weather Satellites



Source: GAO analysis. | GAO-19-1575P

Since our last high-risk update in 2017, DOD now meets all five high-risk criteria.

Leadership commitment: met. With strong congressional oversight, DOD now meets this criterion. Pursuant to enactment of the Carl Levin and Howard P. 'Buck' McKeon National Defense Authorization Act for

Fiscal Year 2015 (NDAA for FY 2015), the National Defense Authorization Act for Fiscal Year 2016 (NDAA for FY 2016), and the Consolidated Appropriations Act, 2016, DOD leadership committed to developing and implementing plans to address its weather satellite requirements. For example, in late 2017, the department awarded a contract for its Weather System Follow-on—Microwave satellite to fulfill core weather requirements.

Capacity: met. With strong congressional oversight, DOD now meets the capacity criterion. Specifically, the NDAA for FY 2015 restricted the availability of 50 percent of the FY 2015 funds authorized for the Weather Satellite Follow-on System (now called the Weather System Follow-on—Microwave satellite program) until DOD submitted to the congressional defense committees a plan to meet weather monitoring data collection requirements. In addition, the explanatory statement that accompanied the Consolidated Appropriations Act, 2016, recommended that the Air Force focus on ensuring that the next generation of weather satellites meet the full spectrum of requirements and work with civil stakeholders to leverage appropriate civil or international weather assets.

As called for in the law and the explanatory statement, DOD established plans to meet weather monitoring data collection needs, including by acquiring satellites as part of a family of systems to replace its aging legacy weather satellites. Additionally, DOD formally coordinated with NOAA on weather monitoring data collection efforts. In January 2017, the Air Force and NOAA signed a memorandum of agreement, and in November 2017, signed an annex to that agreement, to allow for the exchange of information and collaboration on a plan for collecting weather monitoring data. The Air Force and NOAA are now developing plans to relocate a residual NOAA satellite over the Indian Ocean, an area of concern for cloud characterization and area-specific weather imagery coverage.

Action plan: met. In our 2017 High-Risk Report, we reported that DOD was slow to establish plans for its Weather System Follow-on—Microwave program and had made little progress in determining how it would meet weather satellite requirements for cloud characterization and area-specific weather imagery. Pursuant to the NDAA for FY 2015, the NDAA for FY 2016, and the explanatory statement that accompanied the Consolidated Appropriations Act, 2016, the department developed and began implementing plans to address its weather satellite requirements. As mentioned above, in late 2017, the department awarded a contract for its Weather System Follow-on—Microwave satellite to fulfill core weather

requirements. Under this program, the department may launch a demonstration satellite in 2021 and plans to launch an operational satellite in 2022.

DOD also developed plans for providing its two highest-priority capabilities—cloud characterization and area-specific weather imagery data collection—that will not be covered by the Weather System Follow-on–Microwave satellite program. The department is planning a longer-term solution, called the Electro-Optical/Infrared Weather Systems program, to meet these needs, with a planned satellite launch in 2024. Meanwhile, DOD is in the process of acquiring a small prototype satellite, called the Operationally Responsive Space-8 satellite, to provide interim capabilities. DOD plans to launch Operationally Responsive Space-8 as early as 2022.

Monitoring: met. DOD now meets the monitoring criterion as evidenced by its actions to initiate a major acquisition program, the Weather System Follow-on–Microwave, and award a contract for the first satellite. In addition, program officials stated that they plan to monitor the program’s progress toward addressing critical needs and assess its operations and sustainment costs.

Demonstrated progress: met. DOD now meets the demonstrated progress criterion because it has developed plans and taken actions to address gaps in weather data through its plans to launch the Weather System Follow-on–Microwave satellite in 2022. The department also plans to launch the Electro-Optical/Infrared Weather Systems satellite in 2024 and provide interim capabilities beginning as early as 2022. By developing these plans, DOD has reduced the risk of a gap in weather satellite data and addressed the concerns about a lack of planning that we identified in our 2017 High-Risk Report. DOD’s effective implementation of its plans will be key to further reducing the risks of gaps in weather satellite data in the future.

Monitoring After Removal

Moving forward, we will continue to monitor both NOAA and DOD efforts to develop and launch the next satellites in their respective weather satellite programs. NOAA plans to launch its next geostationary weather satellite in 2021 and to launch its next polar weather satellite in 2022. DOD plans satellite launches in 2021 (potentially), 2022, and 2024. In addition, we will continue to monitor DOD’s efforts to develop long-term plans to meet its weather satellite requirements.

**Related GAO
Products**

Weapon Systems Annual Assessment: Knowledge Gaps Pose Risks to Sustaining Recent Positive Trends. GAO-18-360SP. Washington, D.C.: Apr. 25, 2018.

Satellite Acquisitions: Agencies May Recover a Limited Portion of Contract Value When Satellites Fail. GAO-17-490. Washington, D.C.: June 9, 2017.

Defense Acquisitions: Assessments of Selected Weapon Programs. GAO-17-333SP. Washington, D.C.: Mar. 30, 2017.

Defense Weather Satellites: DOD Faces Acquisition Challenges for Addressing Capability Needs. GAO-16-769T. Washington, D.C.: July 7, 2016.

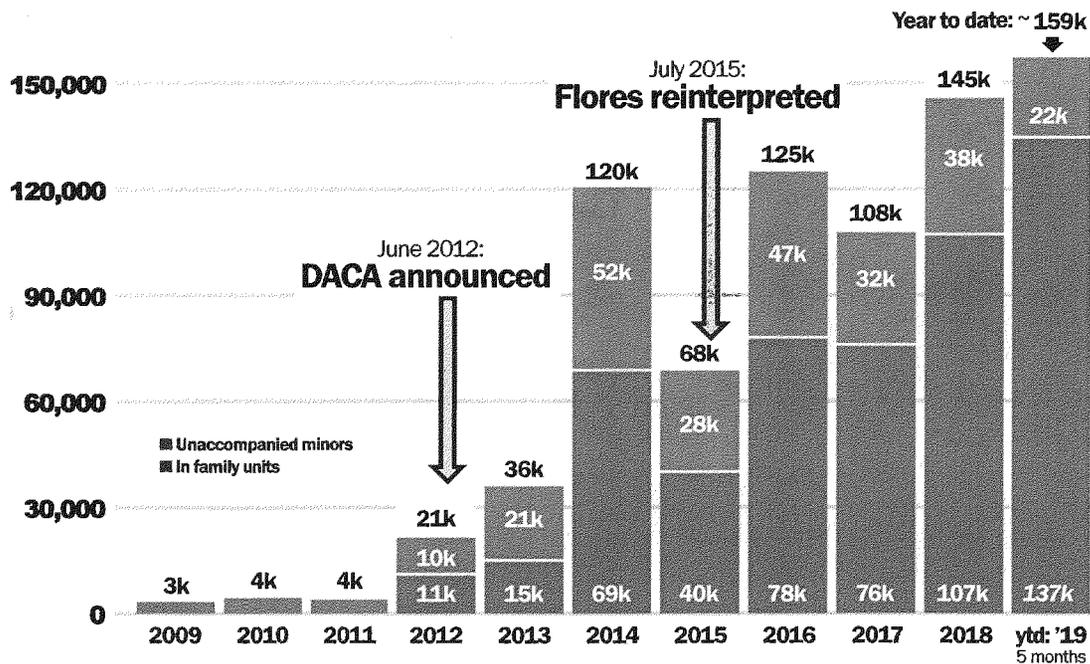
Polar Satellites: NOAA Faces Challenges and Uncertainties that Could Affect the Availability of Critical Weather Data. GAO-16-773T. Washington, D.C.: July 7, 2016.

Polar Weather Satellites: NOAA Is Working to Ensure Continuity but Needs to Quickly Address Information Security Weaknesses and Future Program Uncertainties. GAO-16-359. Washington, D.C.: May 17, 2016.

Defense Weather Satellites: Analysis of Alternatives Is Useful for Certain Capabilities, but Ineffective Coordination Limited Assessment of Two Capabilities. GAO-16-252R. Washington, D.C.: Mar. 10, 2016.

MINORS AND FAMILIES

UNACCOMPANIED MINORS, MEMBERS OF FAMILIES APPREHENDED AT SOUTHWEST BORDER



Customs and Border Protection. Federal fiscal years. Minors from El Salvador, Guatemala, Honduras. Families from all countries.

RON JOHNSON
U.S. SENATE

GAO Priority Recommendations to EPA Related to Toxic Chemicals

TSCA Related Recommendation:

Toxic Substances: EPA Has Increased Efforts to Assess and Control Chemicals but Could Strengthen Its Approach. Recommendation 3, GAO-13-249:

- **Recommendation:** To better position EPA to collect chemical toxicity and exposure-related data and ensure chemical safety under existing TSCA authority, while balancing its workload, and to better position EPA to ensure chemical safety under existing TSCA authority, the Administrator of EPA should direct the appropriate offices to develop strategies for addressing challenges that impede the agency's ability to meet its goal of ensuring chemical safety. At a minimum, the strategies should address challenges associated with: (1) obtaining toxicity and exposure data needed to conduct ongoing and future TSCA Work Plan risk assessments, (2) gaining access to toxicity and exposure data provided to the European Chemicals Agency, (3) working with processors and processor associations to obtain exposure-related data, (4) banning or limiting the use of chemicals under section 6 of TSCA and planned actions for overcoming these challenges—including a description of other actions the agency plans to pursue in lieu of banning or limiting the use of chemicals, and (5) identifying the resources needed to conduct risk assessments and implement risk management decisions in order to meet its goal of ensuring chemical safety.

IRIS Program Recommendations:

Chemical Assessments: Low Productivity and New Interagency Review Process Limit the Usefulness and Credibility of EPA's Integrated Risk Information System. Recommendation 5, GAO-08-440:

- **Recommendation:** To develop timely chemical risk information that EPA needs to effectively conduct its mission, the Administrator, EPA, should require the Office of Research and Development to re-evaluate its draft proposed changes to the IRIS assessment process in light of the issues raised in this report and ensure that any revised process periodically assesses the level of resources that should be dedicated to this significant program to meet user needs and maintain a viable IRIS database.

Chemical Assessments: Challenges Remain with EPA's Integrated Risk Information System Program, Recommendations 1, 2, 5, 6, GAO-12-42:

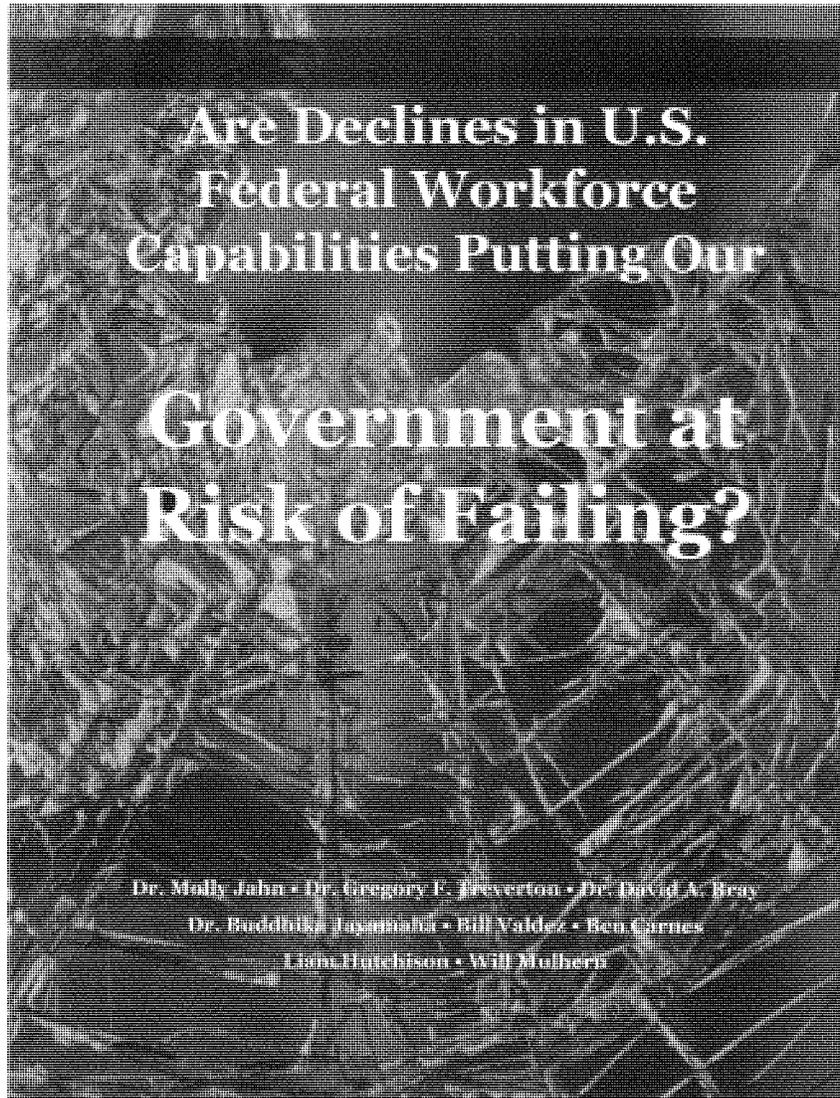
- **Recommendation 1:** To better ensure the credibility of IRIS assessments by enhancing their timeliness and certainty, the EPA Administrator should require the Office of Research and Development to assess the feasibility and appropriateness of the established time frames for each step in the IRIS assessment process and determine whether different time frames should be established, based on complexity or other criteria, for different types of IRIS assessments.
- **Recommendation 2:** To better ensure the credibility of IRIS assessments by enhancing their timeliness and certainty, the EPA Administrator should require the Office of Research and Development, should different time frames be necessary, to establish a

written policy that clearly describes the applicability of the time frames for each type of IRIS assessment and ensures that the time frames are realistic and provide greater predictability to stakeholders.

- **Recommendation 5:** To ensure that current and accurate information on chemicals that EPA plans to assess through IRIS is available to IRIS users—including stakeholders such as EPA program and regional offices, other federal agencies, and the public—the EPA Administrator should direct the Office of Research and Development to indicate in published IRIS agendas which chemicals EPA is actively assessing and when EPA plans to start assessments of the other listed chemicals.
- **Recommendation 6:** To ensure that current and accurate information on chemicals that EPA plans to assess through IRIS is available to IRIS users—including stakeholders such as EPA program and regional offices, other federal agencies, and the public—the EPA Administrator should direct the Office of Research and Development to update the IRIS Substance Assessment Tracking System (IRISTrack) to display all current information on the status of assessments of chemicals on the IRIS agenda, including projected and actual start dates, and projected and actual dates for completion of steps in the IRIS process, and keep this information current.

Chemical Assessments: An Agencywide Strategy May Help EPA Address Unmet Needs for Integrated Risk Information System Assessments, Recommendation 3, GAO-13-369:

- **Recommendation:** To ensure that EPA maximizes its limited resources and addresses the statutory, regulatory, and programmatic needs of EPA program offices and regions when IRIS toxicity assessments are not available, and once demand for the IRIS Program is determined, the EPA Administrator should direct the Deputy Administrator, in coordination with EPA's Science Advisor, to develop an agencywide strategy to address the unmet needs of EPA program offices and regions that includes, at a minimum: (1) coordination across EPA offices and with other federal research agencies to help identify and fill data gaps that preclude the agency from conducting IRIS toxicity assessments, and (2) guidance that describes alternative sources of toxicity information and when it would be appropriate to use them when IRIS values are not available, applicable, or current.



**Are Declines in U.S.
Federal Workforce
Capabilities Putting Our**

**Government at
Risk of Failing?**

**Dr. Mully Jahn • Dr. Gregory E. Frevertan • Dr. David A. Bray
Dr. Buddhika Jayamantha • Bill Valdez • Ben Carnes
Liam Hutchison • Will Mulhern**

Executive Brief

Has the U.S. Federal Government reached a point where critical operations might fail in stressful events that are likely to occur? This was this project's animating question. **Based on the data collected in this study, it appears the answer to these critical questions is yes.**

A weakening in the capacity of the government's workforce and its organizational structures is plainly evident, and so is a perceptible loss of collective resilience to detect and respond to adverse events. To test this conclusion, this study considered workforce trends given several dozen potential scenarios, ranging between those that are virtually certain to occur in the next year to other scenarios that are highly plausible in the near term.

The U.S. Executive Branch has hardly grown in sixty years – there were 1.8 million civilian employees in 1960, and 2.1 million in 2017.^{1,2} Yet over the same period the amount of money spent by the federal government has grown fivefold. To be sure, contracts and grants have filled part of the gap, but, still, both the amount and range of work required of the federal workforce has continued to go up, just as the scope and complexity of executive branch functions have also increased.² Government contractors, widely used to

plug the holes in our government, can only take up so much of the slack.

While the productivity of the United States and other nations around the world has increased since the 1960s, most of those productivity gains were related to manufacturing. In contrast, most of the roles of the U.S. Federal Government workforce associated with responding to emergent events, disruptions, and crises do not involve manufacturing – rather these roles involve complex sets of activities and discussions with multiple stakeholders. These actions typically span across several departments with the need to coordinate with local and state partners in ways that cannot be easily automated or streamlined in the same way that business pipelines can.

While some may think of digital technologies as solely increasing productivity, private sector firms and large organizations have not observed productivity gains similar to what has occurred in manufacturing resulting in what some have called the “productivity paradox”.³ Digital technologies provide for improved individual capabilities, however they also add to the expectations of public service – including the expectation of 24/7 availability, an increasing volume of emails read and data sets to analyze, increased interruptions during the day through different modes of communication, and multiple demands for

¹ “Executive Branch Civilian Employment since 1940,” *U.S. Office of Personnel Management*, 2014, <https://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/historical-tables/executive-branch-civilian-employment-since-1940/>

² Valdez, Bill, “Theory and Practice in Federal Government Executive Branch Leadership and

Administration,” in *The Handbook of Federal Government Leadership and Administration*, eds. Rosenbloom, Malone and Valdez, New York: Routledge, 2016.

³ “Understanding The Productivity Paradox”, *NPR Special Series: Planet Money*, 2017. <https://www.npr.org/2017/06/02/531173429/understanding-the-productivity-paradox>

attention throughout the course of week or emergency response event. Technologies have created new risks, including cybersecurity and misinformation challenges. Future combinations of automation and artificial intelligence (AI) may displace jobs that had to be done by humans, though for emergency response and other complex actions, research so far shows that the technology lacks maturity.⁴

As researchers our intent is not to make a case for a larger U.S. Federal Government. What we are concerned with are the capabilities of our nation's public service to respond effectively to crises. This may be achieved by addressing concerns unrelated to size, including remedying decreasing morale, addressing the challenges created by increasing politicization on what should be non-partisan activities, and updating legacy processes to be more effective in the digital era. Additional solutions include improving the effectiveness of hiring mechanisms, addressing key vacancies that go unfilled, and remedying the risk of the next generation not finding public service to be an attractive career option.

Several examples underscore just how bad the problem is for the U.S. Federal Government workforce:

- Almost 20 percent of the government's top managers, members of the Senior

⁴ "News Feature: What are the limits of deep learning?" *Proceedings of the National Academy of Sciences of the United States of America*, 2019.

<https://www.pnas.org/content/116/4/1074>

⁵ "FedScope: Federal Human Resources Data," *U.S. Office of Personnel Management*, last modified May, 2018, <https://www.fedscope.opm.gov/>. FedScope data exclude Foreign Service Officers, Department of Defense uniformed branches, and Intelligence Community Data. Hence, Foreign Service Officer data

Executive Service (SES), departed in the first twelve months of the current administration, and numbers have not fully recovered. In December of 2016 there were 8,281 Senior Executives. 1,506 of those SES members left government during 2017. New additions made up ground, but in December of 2017 a deficit of 377 SES members remained compared to one year prior.⁵

- There are five-fold more Federal workers over 60 than under 30 years old — less than 6 percent of the federal workforce is under 30 years old.⁶
- The last major revision to the civil service rules for recruiting, hiring and retention of the Federal workforce was 40 years ago, a time that predates the Internet. Looking at these staffing dynamics across agencies, the prospects are even bleaker.

A comprehensive analysis of those dynamics, noting trends through time, coupled with workshops and interviews, reveals a set of highly disconcerting trends:

- Increasing work overload, with clear impact on both "readiness" and retaining talent.
- More toxic workplaces were reported especially, but by no means only for women.

was gathered from the American Foreign Service Association as a supplement.

⁶ "Full-Time Permanent Age Distribution," *U.S. Office of Personnel Management*, 2017, <https://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/reports-publications/full-time-permanent-age-distributions/>.

- Complaint channels or social media are now weaponized to “take out” an employee or group, resulting in a chilling workplace climate and constant anxiety about the potential of false allegations for executives striving to do their best with constrained resources in demanding circumstances.
- Distrust of permanent civil servants by new political appointees, always present but usually fleeting, has become endemic. Having served under the other political party too often is a reason to marginalize non-partisan Senior Executives.
- Lack of rewards for action and innovation, yet clear risk of penalties, leading to “analysis paralysis” lest a decision later be judged wrong or politics misconstrue well-intended actions.
- The increasing polarization of Congress is visible in any number of objective measures, resulting in dysfunctional deliberations and an inability to perform legislative functions.^{7,8}
- An increasingly polarized polity, resulting in part from campaign financing changes, have made money more important in our politics.
- An increasing replacement of what was non-partisan Senior Executive roles with political appointees for at least the last half century.⁹
- The ever-present stress of major cyber threats, combined with new hybrid threats including misinformation, disinformation and other concerns, with the potential to disable substantial parts of government and discredit public processes: witness the recent ransomware attack on the City of Atlanta in 2018.

Six critical themes run through our study:

- All three branches of the U.S. Federal Government have failed to keep up with a rapidly changing world, opening enormous vulnerabilities and attack surfaces.
- Many private sector positions are vastly better remunerated and often more stable relative to public service, particularly at the senior most ranks of the civil service.

⁷ Kuzoian, Alex, “This 60-second animation shows how divided Congress has become over the last 60 years,” *Business Insider*, 2016.

https://www.youtube.com/watch?v=tEc2khfl_wqM with original research from Andris et al., 2015 (see full bibliography).

⁸ Wolf, Ryan, “Is America More Divided Than Ever?” *The Good Stuff*, 2016, https://www.youtube.com/watch?v=JRa5l_LQ32s.

The study’s findings point toward the more extreme plausible explanations for current trends and their future implications. Perhaps U.S. Federal Government civil servants are the canaries in the mines of the Nation, telling us that the air is growing dangerously foul. Perhaps not just the capacity of the U.S. Federal Government to respond to domestic and foreign crises is at risk, but

⁹ Valdez, Bill, “Theory and Practice in Federal Government Executive Branch Leadership and Administration,” in *The Handbook of Federal Government Leadership and Administration*, eds. Rosenbloom, Malone and Valdez, New York: Routledge, 2016.

also our civic norms and constitutional order.

Over the last several decades there has been no shortage of recommendations about how to reconstitute effective federal government. Given an increasingly strained workforce, this study raises the following points as recommendations:

- Layers of legacy processes, methods of interacting, and outdated technologies make embracing organizational agility — let alone building resilience to unanticipated events — difficult to achieve for the U.S. Federal Government
- Continuous adaptation requires public service to rethink how it organizes its human processes and technologies, asking hard questions about who does what work and how.
- Such adaptation includes creating “safe spaces” for those focused on the non-partisan work of public service. Those require the private sector’s explicit recognition that without these spaces, the United States will become increasingly politically polarized¹⁰, unstable, and unable to operate in either crisis or normal modes
- More specifically, the rapidly changing world requires new ways of organizing who does what work in public service and how to include more bottom-up, “entrepreneurial-on-the-inside” activities that reward employees that help public service adapt to changing demands of citizens and needs of the nation.
- If the U.S. private sector were willing to take a leadership role to help improve both local communities and the United States as a whole, in addition to pursuing profits, this too could improve the resilience of the country to future crises — after all, united we stand, divided we fall.¹¹
- Lastly: for “We the People” frank conversations with the public, private sector, media, and other social institutions of the United States need to continue, based on understanding the plurality the United States embodies and recognizing the investments needed in new forms of networked governance and collaboration if United States is to remain a pluralistic society not captured by only a few, privileged interests.

Indeed, the ultimate question from this study is one for the American people: what do they want from their government?

Is the current U.S. Federal Government — one that has challenges attracting and retaining talent, demeans non-partisan civil servants, prevents its workforce from making decisions, discourages a culture of learning and adapting, and risks failing when stressed by foreseeable contingencies — good enough for us, good enough to sustain and grow our economy, and good enough for our hopes and aspirations as a people?

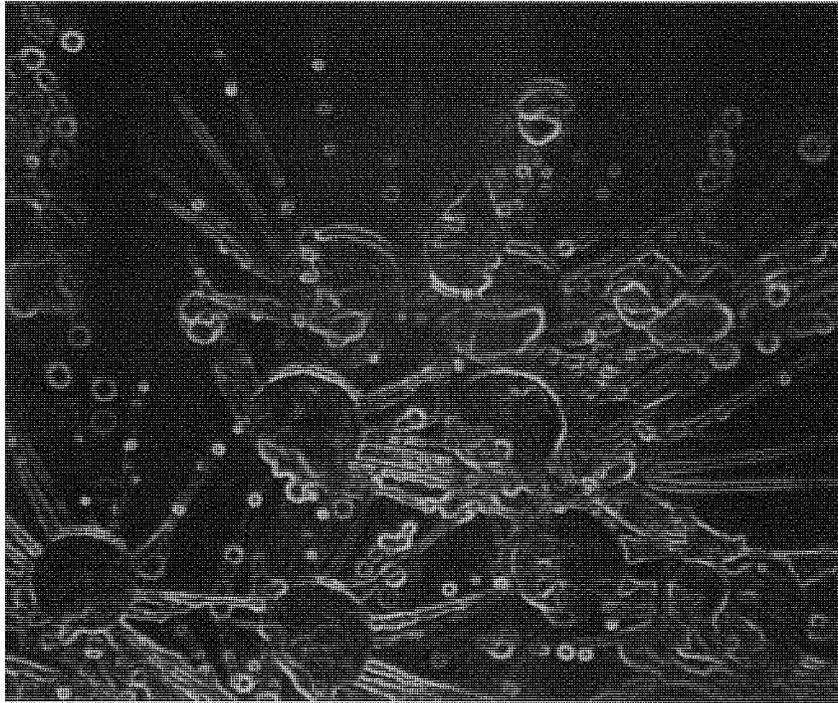
¹⁰ Bray, David A. “Three Meaningful Strategies for Managing Rapid Change,” *MIT Sloan Management Review*, 2017, <https://sloanreview.mit.edu/article/three-meaningful-strategies-for-managing-rapid-change/>

¹¹ Wingfield, Nick, Katie Thomas and Reed Abelson, “Amazon, Berkshire Hathaway and JPMorgan Team Up

to Try to Disrupt Health Care,” *The New York Times*, 2018, <https://www.nytimes.com/2018/01/30/technology/amazon-berkshire-hathaway-jpmorgan-health-care.html>.

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Study Findings: An Assessment of Current U.S. Federal Government Capacity

Section 1: Animating Concern and Methodology

Unexpected large-scale failures classically occur when underlying features of a situation of concern shift without being detected or without their implications being systematically re-evaluated. This project aims to address the possibility that critical assumptions regarding expected capabilities of the U.S. Federal Government may no longer hold as a result of changes in staffing, resources and/or working environments.

The results of this study sound an alert from the authors, several of whom have held senior positions in the U.S. Federal Government. This study aims to shed light on whether changes in staffing patterns may have taken the U.S. Federal Government to a point where there is risk of a significant failure, especially in a crisis, either modest or major.

It is worth noting the potential importance of the tendency to “normalize” our current circumstances by comparing them with other challenging periods in U.S. history. The story goes something like: “This may be extreme, but we’ve seen it before.” Commonly referenced times of challenge to U.S. democratic institutions include, for

example, the building of huge trusts in the 1870s and 1880s, or more recent events such as the Vietnam War protests, the civil rights movement, or Watergate. This tendency to normalize tends to obscure otherwise patently obvious indications that current circumstances may be very *abnormal*, representing cases that are unprecedented historically or constitutionally, or both.

Indeed, a deeply troubling finding of our study is that actions in the last several years appear inconsistent with simple short, medium and longer-term best interests of the United States. These actions, themselves, tend to normalize extreme situations, rogue behavior and may well enlarge vulnerabilities to serious compromise by actual or potential adversaries.

This study was undertaken as a non-partisan assessment of U.S. Federal Government, beginning with the most critical capacity — people — in particular, federal staffing at senior career and political appointee levels in the Executive Branch.¹² These positions are crucial both in setting the direction of government intent, and in executing actions. This study used staffing data from the Office of Personnel Management’s FedScope database¹³ along with supplemental staffing data from the American Foreign Service Association (AFSA).¹⁴ Data from the “Best Places to Work in the Federal Government” survey done by the

¹² Appendix A contains more detail on the study’s methods.

¹³ “FedScope: Federal Human Resources Data,” *U.S. Office of Personnel Management*, last modified May, 2018, <https://www.fedscope.opm.gov/>.

¹⁴ Foreign Service Statistics,” *American Foreign Service Association*, “accessed March, 2018, <http://www.afsa.org/foreign-service-statistics>.

Partnership for Public Service offered insight to job satisfaction rates and internal perceptions of organizational quality.¹⁵ In both, the study looked out for patterns, breaks in patterns, and outright anomalies. If some risks have become more visible in recent years, most have developed over time and across administrations of both parties. The assessments are rooted in what data is available.

This study examined three “capacity components” that directly impact the resilience of the Federal Government: staffing, resourcing and working environment. These three capacity components, of course, are strongly inter-related and when combined create an enormous drag on the ability of government to be resilient.

Our research suggested that changes in staffing levels and conditions were important. Indeed, it is possible that, in aggregate, the effects of these diverse shifts and unprecedented staffing conditions across the U.S. Federal Government may now, or in the future, reach a level that upsets typical assumptions about how the United States should be able to act or react in a situation of concern. These concerns about our assumptions about resilience of the U.S. Federal Government may occur if an entity within government:

- Receives a signal but is not empowered to interpret or transmit that information;

- If an action requires approval by multiple levels of management when one or more of those positions are not occupied; and/or
- If a position is occupied by an individual who is unwilling or unable to execute the required action.

The second component of capacity is resources. The study looked at trends by departments and sub-department administrative units. There, the net was wide but concentrated on government elements critical to the security of Americans, broadly defined. That included threats foreign and domestic, by purposive foes, so-called “natural disasters,” or cascading accidents.

The third component of capacity is working environment. Here, data was in short supply, and needed to be created. The first method was interviews conducted with experts on the government, and with officials and former officials. Then, in cooperation with the Senior Executives Association (SEA) three workshops assembled: first, academic and think-tank experts, then former members of the government’s Senior Executive Service (SES), and finally current service SES members. The workshops were followed up with a questionnaire.

A critical part of capacity of the U.S. Federal Government, or indeed, any complex organization, is inherently difficult to capture. Informal networks, inside government and outside, are critical to government function, and this study

¹⁵ “Best Places to Work in the Federal Government,” *Partnership for Public Service*, last modified January 26, 2017, <http://bestplacestowork.org/BPTW/>.

solicited anecdotal insights to indicate how these networks are shifting with changes in staffing and other dynamics. Indeed, both formal and informal extensions related to government function or capacity seem likely to become more and more important as the federal government becomes less the doer and more the grantor and contractor for matters of public interest.

Here, the most this study could do was bear in mind the importance of these networks and ask how they were affected by identified trends. For instance, reorganizations, however well-intended, usually have the effect of breaking up the informal networks at the edges of formal structure, and so at least cause delay while those networks, informal but critical, are rebuilt.

The next section of this report analyzes the quantitative data about agencies, budgets and staffing, again focusing on what seemed to be the most dangerous trends, discontinuous breaks in trends, or anomalies.

The third section discusses trends of concern, including the more qualitative trends that emerged from our interviews, workshops and questionnaire.

The fourth section lays out the ways in which stress tests might be constructed.

The fifth section considers drivers of change, a collection of possibilities that could, singly or in combination, underlie the patterns the study reports. This discussion of driving factors is not exhaustive but elaborates changes over time that may have worked in combination to distress government capacity.

The sixth section spells out our conclusions and recommendations. Neither conclusions nor recommendations are, or can be, definitive.

As a whole, this study seeks to contribute to a badly needed national conversation about what Americans think their government should have the capacity to do, especially in the face of severe stresses to our nation and collective future.

Figure 1. Total Government Employment, 1999–2017

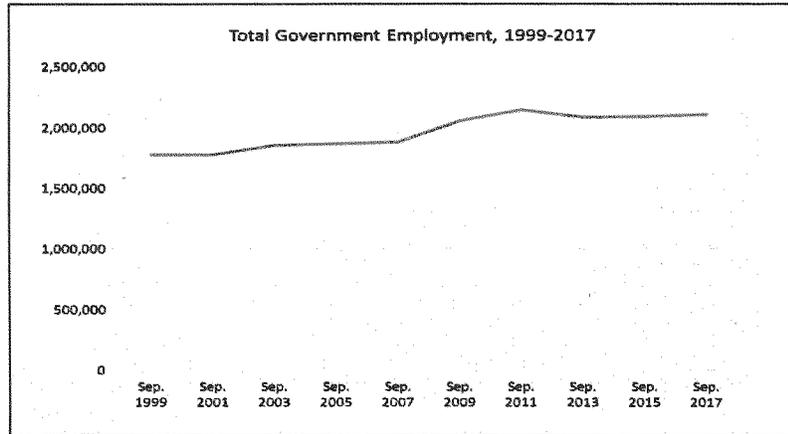


Figure 1 depicts change in overall number of federal employees between 1999 and 2017. The slope of the line indicates a small increase in staffing over time. Data from FedScope and American Foreign Service Association (AFSA).

Table 1. Change in Government Employment by Agency Size, 2013 to 2017

	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	% Change '13 to '16	% Change '16 to '17
Cabinet Level Agencies	1,903,328	1,883,381	1,909,728	1,935,686	1,929,401	1.7%	-0.3%
Large Independent Agencies (1000 or more employees)	163,497	162,042	161,421	160,647	157,938	-1.7%	-1.7%
Medium Independent Agencies (100-999 employees)	10,640	10,712	10,970	11,184	10,908	5.1%	-2.5%
Small Independent Agencies (less than 100 employees)	1,553	1,550	1,574	1,437	1,378	-7.3%	-4.0%
Agency - All	2,079,018	2,057,685	2,083,693	2,108,954	2,099,625	1.4%	-0.4%

Table 1 describes percent changes in federal government agencies between 2013 and 2017 based on agency size. Note the comparison between changes between 2013 and 2016 compared to changes between 2016 and 2017. Data from FedScope and American Foreign Service Association (AFSA).

Section 2: Study Findings

Existing datasets in search of observable U.S. Federal Government staffing patterns were reviewed as part of this study. The data depict trends in over-all federal employment, which has grown slightly since 2001 — see Figure 1 — but broadly hasn't changed much in the last 60 years.

When comparing the last two Administration transitions, far more senior officials departed from government in 2017 than in 2009. Between 2016 and 2017, the Department of State lost 10 percent of GS-15 staff and 13 percent of SES; the Department of Education lost 12 percent of its GS-15 staff and 7 percent of SES; for Department of Labor 6 percent and 7 percent, for Department of Defense 7 percent and 9 percent, and for the Department of Agriculture 3 percent and 12 percent. Another specific indicator of the turmoil was the number of GS-15s who left government *not* through retirement. More than twice as many cabinet-level GS-15s quit in 2017 as in 2009, a comparable point for the previous administration.¹⁶

Career diplomat roles in the State Department have also been severely affected. In total, there are vacancies in 28 ambassadorial posts customarily filled by the United States. An even greater number of posts have candidates who have been formally nominated but are not yet confirmed nearly two years into the administration.¹⁷

Certain large USG bureaucracies, such as the Department of Defense, may maintain steady staffing patterns by design. Such

consistency in larger bureaucracies may skew the overall trend, obscuring changes to staffing patterns in smaller federal agencies until a closer look is taken. In fact, existing data indicates that in addition to the expected declines during transitions when many officials leave government, significant and highly noticeable staffing pattern variations exist in both cabinet and non-cabinet level agencies — see Table 1.

Accordingly, the study sorts variations by agency size. Large independent agencies are classified as having 1000 or more employees, medium independent agencies are classified as 100-999 employees, small independent agencies as less than 100 employees. Negative changes in staffing patterns observably and directly correlate with agency size.

Examining Table 1, it is interesting to note that smaller agencies have a higher rate of negative change during the last administrative transition. Cabinet agencies have seen net positive (+1.7 percent) change over time, with only small negative variation (-0.3 percent) during the transition. Contrarily, small independent agencies have not only undergone net negative change over time (-7.5 percent), but also have the highest negative change in the 2017 transition (-4.1 percent).

These analyses beg further investigations that would require finer-grain data to assess how partisan and other ideological

¹⁶ "FedScope: Federal Human Resources Data," U.S. Office of Personnel Management, last modified May, 2018. <https://www.fedscope.opm.gov/>. Between 2005 and 2017, an average of 733 GS-15s quit each year. In 2009, 687 quit, and in 2017, 1,381 quit.

¹⁷ "Tracker: Current U.S. Ambassador," *American Foreign Service Association*, accessed November 19th, 2018. <http://www.afsa.org/list-ambassadorial-appointments>.

or economic interests correlate with these observable trends. Every federal agency, small or large, has its own core-constituency, which both advocates for and benefits from the agency's viability. To be sure, Congress is part of this process. It is hardly an accident that the Pentagon sub-contracted parts of its F-35 Joint Strike Fighter across forty-six states — a classic example of how larger federal agencies actively build constituencies and maintain reciprocal relationships with their constituents in the legislative branch.¹⁸ In contrast, smaller agencies generate relatively small amounts of contract money and have, again relative to the big departments, a small societal footprint. As a result, supporters or opponents of a specific agency in the legislative branch can and do play an outsized role in shaping those smaller federal agencies.

At the cabinet level, staffing trends during transitions between administrations are expected and relatively predictable. Comparing the most recent transition (2017) with earlier transitions (e.g., 2009) provides glimpses into administrative agendas, priorities and raise a series of puzzles. Over the seventeen-year period assessed in our study, the biggest workforce growth took place in Homeland Security (+26.7 percent), State (+24.0 percent), military-related Departments (+8.8 percent, +11.2 percent, 13.3 percent), Health and Human Services (+34.4 percent) and Veterans Affairs

¹⁸ Bender, Jeremy, Armin Rosen and Skye Gould, "This Map Shows Why The F-35 Has Turned Into A Trillion-Dollar Fiasco," *Business Insider*, 2014, <http://www.businessinsider.com/this-map-explains-the-f-35-fiasco-2014-8>. Every state except for Nebraska,

(+73.9 percent) — logical given the country's focus on foreign wars, terrorism, and health support for aging veteran and non-veteran citizens.

The biggest loser was Treasury (-39.4 percent), due almost entirely to the Internal Revenue Service (IRS). The agency's budget was cut, and the organization shed more than 15,000 employees between 2010 and 2016¹⁷. That change bad news for recovering money through catching tax fraud and it could represent an imminent risk to U.S. national security if the IRS's ability to monitor international money flows through tax receipts or the IRS incurs a major cyber breach.

The loss observed in the Department of Transportation (-13.9 percent) is mostly the transfer of the Coast Guard to Homeland Security. The other big employment losses are in "domestic" departments, given persistent pressure to cut that spending amidst growing budgets for defense and entitlements. Of those, perhaps the most salient for security is Agriculture (-12.5 percent) to the extent that the cuts might endanger the safety of food and water, especially in an emergency.¹⁹

Wyoming, Alaska and Hawaii have been positively impacted by this single program.

¹⁹ "FedScope: Federal Human Resources Data," *U.S. Office of Personnel Management*, last modified May, 2018, <https://www.fedscope.opm.gov/>.

Table 2. Employment Trends by Cabinet Department, 2000 to 2017

Employment Trends by Cabinet Department, 2000-2017	% Change '00 to '17	Avg. Yearly % Change '00 to '17	% Change '16 to '17	Difference Between Yearly Avg. and '16-'17
Employment as values				
TR-DEPARTMENT OF THE TREASURY	-2.3%	-2.3%	-4.8%	-2.5%
HU-DEPARTMENT OF HOUSING AND URSAN DEVELOPMENT	-23.5%	-1.4%	-2.9%	-1.5%
ED-DEPARTMENT OF EDUCATION	-17.7%	-1.0%	-3.3%	-2.3%
TD-DEPARTMENT OF TRANSPORTATION	-13.9%	-0.8%	-0.8%	0.1%
AG-DEPARTMENT OF AGRICULTURE	-12.5%	-0.7%	-3.3%	-2.6%
IN-DEPARTMENT OF THE INTERIOR	-8.7%	-0.5%	-3.9%	-3.4%
DJ-DEPARTMENT OF JUSTICE	-7.5%	-0.4%	-1.0%	-0.5%
DL-DEPARTMENT OF LABOR	-6.6%	-0.4%	-4.8%	-4.4%
DN-DEPARTMENT OF ENERGY	-6.5%	-0.4%	-2.6%	-2.2%
DD-DEPARTMENT OF DEFENSE	-3.2%	-0.2%	-1.6%	-1.4%
AF-DEPARTMENT OF THE AIR FORCE	8.8%	0.5%	-1.0%	-1.5%
CM-DEPARTMENT OF COMMERCE	10.5%	0.6%	-3.3%	-3.9%
AR-DEPARTMENT OF THE ARMY	11.2%	0.7%	-1.1%	-1.7%
NV-DEPARTMENT OF THE NAVY	13.3%	0.8%	-0.3%	-1.1%
ST-DEPARTMENT OF STATE	24.0%	1.4%	-3.4%	-4.8%
HS-DEPARTMENT OF HOMELAND SECURITY	26.7%	1.6%	-1.1%	-2.7%
HE-DEPARTMENT OF HEALTH AND HUMAN SERVICES	34.4%	2.0%	-2.0%	-4.0%
VA-DEPARTMENT OF VETERANS AFFAIRS	79.9%	4.7%	3.2%	-2.1%
Cabinet Level Agencies	21.4%	1.3%	-0.3%	-1.6%

Table 2 illustrates percent change of total employment in cabinet departments from 2000 to 2017. The figure also details the average yearly percent change for 2000 to 2017, 2016 to 2017, as well as the difference between these two rates.

Table 3 Negative Changes in Best Places to Work Scores in Large Agencies, 2016 to 2017

Large Agencies (More than 15,000 Full-Time Employees)			
	2016	2017	Change (2016-17)
Department of State	66.8	64	-2.8
Department of Justice	65.7	63.7	-2.0
Department of Veterans Affairs	56.7	56.1	-0.6
Intelligence Community	67	66.6	-0.4
Social Security Administration	63.1	63	-0.1

Table 3 depicts negative changes in Best Places to Work scores among selected large federal agencies between 2016 and 2017. Scores are based on a 100-point scale determined by a yearly survey about job satisfaction and organizational health conducted by the Partnership for Public Service and the Office of Personnel Management.

In the most recent transition, the data show the expected negative changes across agencies, but the exceptions are intriguing. The Department of Commerce had the highest positive change (+3.6 percent), even higher than the steadily increasing trends in the Department of Homeland Security (+3.5) and Veterans Affairs (+2.2). It is a plausible conjecture that the administration gave its trade agenda priority in an otherwise unwieldy transition.

Variations in negative trends are also suggestive. Departments of State (-3.4), Education (-6.9), Labor (-4.8) and Interior (-3.9) have the highest negative changes between 2016 and 2017. Based on qualitative and anecdotal assessments, these are also the departments in most turmoil, provoking most public controversy. One specific indicator of the turmoil was the number of GS-15s who left government *not* through retirement. More than twice as many GS-15s departed in 2017 when compared with 2009, a comparable point for the previous administration.²⁰

That said, the data is consistent with the administration's broader intention to cut the size of the federal bureaucracy by not staffing, which will, in the long-run, lock these agencies into a trend of ever decreasing operating budgets — a tendency long evident, especially in Republican administrations, but also consistent with the Clinton Administration's efforts to reduce the size of government.

²⁰ Ibid.

Public perception of federal agencies also plays a role. The State Department and its career civil servants long have been rhetorically painted as liberal in political persuasion at best and working against U.S. interests at worst. The Department of Education and the Department of Energy have been targeted for destruction since Reagan, based on arguments couched in free markets, states' rights, and buttressed more recently by heightened rhetoric against public education and zeal for privatizing education. There have been political groups that claim both the Departments of Labor and Interior have been harboring anti-business agendas — Labor because of its specific purpose and Interior because it controls vast swathes of federal land that otherwise could be available for private development.

Looking at the Best Places to Work results for large agencies, the general rankings did not change over the latest transition: DHS remained at the bottom and NASA at the top. Not surprisingly, perhaps, the biggest drops — depicted in Table 3 — over the transition were Departments of State and Justice, both very much in the sights of the new administration.²¹ Also not surprisingly, the biggest increases were the military services, very much in the favor of the new administration with budget increases to match. Among mid-size agencies, Education registered a small decline, while all others (save the National Credit Union Administration) registered increases. Among small agencies, notable declines included the Defense Nuclear Facilities Safety Board and the Overseas

²¹ "Best Places to Work in the Federal Government," *Partnership for Public Service*, last modified January 26, 2017, <http://bestplacestowork.org/BPTW/>.

Private Investment Corporation, long a political football.

Another defining change in federal employment over recent decades is the inflated ratio of budget to staff. The Legislative Branch staffing is increasingly overwhelmed. Recent workforce studies of the Legislative Branch suggest that each appropriations staffer in the House is responsible for 52 percent more federal dollars than he or she was just 16 years ago.²² The workload of Senate appropriations staffers has increased 30 percent during the same period. The same workforce study concludes there are still very real gender discrepancies both in terms of the types of jobs women hold on the committees, and their pay levels relative to men who hold the same titles.²³

Given these capacity deficiencies, Congress is unable to provide enough oversight of the \$4 trillion they appropriate each fiscal year. Until something changes, it is reasonable to expect the federal government to continue operating by way of short-term funding and omnibus legislation.

Similar dynamics have impacted the Executive Branch. While U.S. Federal Government spending is more than five times what it was in 1960, Executive Branch civilian personnel levels have only

modestly changed over the same period, growing from 1.8 to 2.1 million.²⁴

Multiple factors have combined to produce this shift in the ratio of budget dollars per worker.

First, advancements in communications technology have changed the nature of work: In the middle of the 20th century, bidirectional communication interfaces between the public, private sector, and government were primarily in-person or by postal mail. With the advent of the world wide web, mobile phones, and eventually smart phones, the federal workforce is now expected to be "tethered to their devices" 24/7 able to respond to any emergent issue. As is the case in the private sector, such advancements in digital technologies have increased the pace at which individuals and organizations can operate.

To this first point, while some may think of digital technologies as solely increasing productivity, private sector firms and large organizations have not observed productivity gains similar to what has occurred in manufacturing resulting in what some have called the "productivity paradox".²⁵ Digital technologies provide for improved individual capabilities, however they also add to the expectations of public service – including the expectation of 24/7 availability, an

²² Burgat, Casey, Ryan Dukeman, "Human Capital and Institutional Decline in Congressional Appropriations Committees," *R Street*, 2018, <https://www.rstreet.org/2018/12/14/human-capital-and-institutional-decline-in-congressional-appropriations-committees/>.

²³ *Ibid.*

²⁴ Valdez, Bill, "Theory and Practice in Federal Government Executive Branch Leadership and

Administration," in *The Handbook of Federal Government Leadership and Administration*, eds. Rosenbloom, Malone and Valdez, New York: Routledge, 2016.

²⁵ "Understanding The Productivity Paradox", *NPR Special Series: Planet Money*, 2017. <https://www.npr.org/2017/06/02/531173429/understanding-the-productivity-paradox>

increasing volume of emails read and data sets to analyze, increased interruptions during the day through different modes of communication, and multiple demands for attention throughout the course of week or emergency response event. Technologies have created new risks, including cybersecurity and misinformation challenges. Future combinations of automation and artificial intelligence (AI) may displace jobs that had to be done by humans, though for emergency response and other complex actions, research so far shows that the technology lacks maturity.²⁶

Second, and perhaps more importantly, federal government agencies have come to rely on a large labor force of grant and contract workers to fulfil their missions. In a 2017 paper titled *The True Size of Government*, government affairs scholar Paul Light estimated that the federal workforce includes 3.7 million contract employees and 1.6 million grant employees in addition to the 2 million civil servants employed directly by the government. Not including 492,000 postal workers and 1.3 million active-duty military personnel, Light's analysis places

the true size of government at about 7.3 million workers.²⁷

In 2017, the federal government, with an overall operating budget of \$4.0 trillion,²⁸ spent \$500 billion on contract spending,²⁹ and \$700 billion on grants and cooperative agreements (including \$441 billion in non-discretionary grants for Health and Human Services programs like Medicaid and Medicare).^{30,31}

To this second point, this full picture of government employment places an emphasis on the role of federal employees as managers of a larger enterprise. For contract and grant operations, executive oversight is provided by the supporting federal agency. At an employment ratio of 2.6 grant or contract employees for each federal employee, civil servants are now responsible for the management of a workforce more than twice as large as their own.²¹ The rise of contract labor, the stagnant size of the federal workforce, and the growth of the federal budget depicts the federal government's dominant role as a funder, rather than a doer, and characterizes the nature of workload stress for federal employees as they manage

²⁶ "News Feature: What are the limits of deep learning?" *Proceedings of the National Academy of Sciences of the United States of America*, 2019.

<https://www.pnas.org/content/116/4/1074>

²⁷ Light, Paul C. "The True Size of Government: Tracking Washington's Blended Workforce, 1984-2015." *The Volcker Alliance*. 2017.

<https://www.volckeralliance.org/publications/true-size-government>.

²⁸ "The Federal Budget in 2017: An Infographic," *Congressional Budget Office*, 2017, <https://www.cbo.gov/publication/53624>.

²⁹ "DataLab: Contract Explorer," *USpending.gov* – Bureau of Fiscal Service, U.S. Department of Treasury,

2017, [https://datalab.usaspending.gov/contract-explorer.html?search=Contract spending in Fiscal Year 2017](https://datalab.usaspending.gov/contract-explorer.html?search=Contract%20spending%20in%20Fiscal%20Year%202017).

³⁰ "2017 Year in Review: Federal Grant Highlights," *Health and Human Services, U.S. Office of Management and Budget – Grants.gov*, 2017, <https://blog.grants.gov/2018/01/02/2017-year-in-review-federal-grant-highlights/>.

³¹ "2017 TAGGS Annual Report," *Health and Human Services – Tracking Accountability in Government Grant Spending*, 2017, <https://taggs.hhs.gov/2017AnnualReport/>.

large-scale missions across public and private boundaries.

The balance of internal and external labor also underscores the need for a modernized federal workforce, where institutional and technological arrangements are intentionally designed for the managerial tasks at hand. The lack of appropriate staffing in Congress highlights the systemic nature of the workforce problem: How can an understaffed Legislative Branch take decisive action to address the concerns of an understaffed Executive Branch?

As researchers our intent is not to make a case for a larger U.S. Federal Government. What we are concerned with are the capabilities of our nation's public service to respond effectively to crises. This may be achieved by addressing concerns unrelated to size, including remedying decreasing morale, addressing the challenges created by increasing politicization on what should be non-partisan activities, and updating legacy processes to be more effective in the digital era. Additional solutions include improving the effectiveness of hiring mechanisms, addressing key vacancies that go unfilled, and remedying the risk of the next generation not finding public service to be an attractive career option.

Moreover, while the productivity of the United States and other nations around the world has increased since the 1960s, most of those productivity gains were related to manufacturing. In contrast, most of the roles of the U.S. Federal Government workforce associated with responding to emergent events, disruptions, and crises do not involve manufacturing — rather these roles

involve complex sets of activities and discussions with multiple stakeholders. These actions typically span across several departments with the need to coordinate with local and state partners in ways that cannot be easily automated or streamlined in the same way that business pipelines can.

Taken together, these questions raise questions about whether the workforce we have is prepared to respond effectively to major crises or a set of smaller multi-state crises?

Section 3: Trends of Concern

The study data was supplemented with a series of workshops that convened current and former members of the Senior Executive Service (SES), followed by an optional, anonymous questionnaire. What emerged from this work was a clear set of highly disconcerting trends, several with long histories, specifically:

- Increasing work overload and a lack of enough time or necessary resources to address even ordinary duties and particularly to work through hard or new problems. There was clear recognition of the potential detrimental impacts to “readiness” as well as to retaining talent and attractive workplaces.
- More toxic workplaces, with an emphasis on recent and in some cases extreme collateral damage done by allegations of inappropriate sexual behavior — sometimes accurate but sometimes not and yet difficult to defend. The “weaponization” of complaint channels was cited as a specific tactic with potentially very serious consequences for the ability of individuals to take stands or make decisions.
- Evidence that non-partisan Senior Executives are marginalized or are reluctant to contribute during times of crisis unless given clear roles, responsibilities and authorities by political leadership, which includes dynamics that either remove autonomy of decision from non-partisan Senior

Executives or make them reluctant to take timely decisions.

- Lack of rewards for action, yet plenty of penalties, motivating members of the workforce to opt for “analysis paralysis” lest they make a decision that is later judged wrong and be penalized for it.
- The bureaucracy is fatally risk adverse and as a result chooses inaction to action during critical times.

Together, these trends defined a set of major patterns that highlight the potential for serious but not readily discerned dysfunction in the overall federal workforce, particularly the senior workforce. The conversations included several highly disturbing anecdotes — for instance, stories of both men and women crying in Pentagon hallways, language of “bleeding talent,” “experience is suspect,” and “one decision your political superior disagrees with and your career is over.” Many of our participants, especially women, described the working environment of some parts of the U.S. Federal Government as newly and extraordinarily toxic.

The basis for work overload is plain: inflation-adjusted spending by the U.S. Federal Government is more than five times what it was in 1960, executive branch responsibilities have grown increasingly broad and complex, and civilian personnel has hardly changed, growing from 1.8 to 2.1 million.³²

The civil service lost 400,000 employees between 1992 and 1999.³³ With no intake,

³² Valdez, Bill, “Theory and Practice in Federal Government Executive Branch Leadership and Administration,” in *The Handbook of Federal Government Leadership and Administration*, eds.

Rosenbloom, Malone and Valdez, New York: Routledge, 2016.

³³ “Executive Branch Civilian Employment Since 1940,” *U.S. Office of Personnel Management*, 2014,

the age distribution of the service skewed. Only 6 percent of federal government employees are under age 30 and there are twice as many over age 60.³⁴ It takes more than twice as long for the government to hire someone as for private industry.³⁵ And salaries have hardly kept pace: the maximum salary for a chief information officer is \$189,600 — a fraction of what they could earn in the private sector.³⁶

One working group looked at success cases abroad when the United States took a whole of government approach. Success depended on people talking and knowing they had to talk, but several years later only two in the group were still in government. Killing intake was like Middle Age bloodletting use of leeches, one interlocutor said, risking that the best and brightest would leave, draining the lifeblood of the civil service and weakening the entire workforce.

Furthermore, programs to train skilled early-career academics and professionals for government and national security service have never been fully funded or supported. Programs such as the Pathways internship program, the Presidential Management Fellows program and the Boren Fellows continue but they are

<https://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/historical-tables/executive-branch-civilian-employment-since-1940/>. According to Henderson (see full bibliography) of the Naval Postgraduate School in Monterey, budget cuts and personnel reductions that happened were largely in response to the end of the Cold War.

³⁴ “Full-Time Permanent Age Distribution,” U.S. Office of Personnel Management, 2017, <https://www.opm.gov/policy-data-oversight/data-analysis-documentation/federal-employment-reports/reports-publications/full-time-permanent-age-distributions/>.

³⁵ Katz, Eric, “The Federal Government Has Gotten Slower at Hiring New Employees for 5 Consecutive

limited and are not informed by workforce analytics that might identify critical skill gaps. Moreover, the implicit social contract in federal employment — trading income for security — was upset by hiring freezes and furloughs, including at the Defense Department.

Toxic workplaces plainly compound the stress of overwork. The culture of many government organizations, perhaps especially those in national security, has long been bad; as one woman put it: “sailors talk like sailors.” Now, women in senior civil services positions have lots of alternatives, and workplaces made toxic by sexual harassment drive them away. At State, there were, for instance, 400 cases of harassment investigated in 2017, and the same number in the first four months of 2018, according to a roundtable participant familiar with the matter. Between 2016 and 2017, a larger percentage of female SES officers and GS-15s left the Pentagon than did males at the same levels.³⁷ The counterpart of sexual harassment is the weaponization of the complaint process leading to investigations. As part of this study, we heard several stories about male bosses being unfairly targeted by complaints, then investigations that both required

Years,” *Government Executive*, 2018, <https://cdn.govexec.com/b/interstitial.html?v=8.15.0&rf=https%3A%2F%2Fwww.govexec.com%2Fmanagement%2F2018%2F03%2Ffederal-government-has-gotten-slower-hiring-new-employees-five-consecutive-years%2F146348%2F>.

³⁶ “2018 Executive and Senior Level Employee Pay Tables,” U.S. Office of Personnel Management, 2018, <https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/2018/executive-senior-level>.

³⁷ “FedScope: Federal Human Resources Data,” *U.S. Office of Personnel Management*, last modified May, 2018, <https://www.fedscope.opm.gov/>.

them to spend money defending themselves and nearly ruined their careers.

Relations between permanent civil servants and the political appointee superiors have always been somewhat fraught. This tension has expanded in favor of political appointees over the past decades: in 1961, Kennedy had the ability to make fewer than 300 political appointments to his staff, in 2009, Obama had authority to appoint more than 3,000 staffers. Since the 1980s, executive branch leadership has been increasingly dictated by legislation and executive orders, both of which have served to politicize executive branch leadership and diminish the traditional managerial role played by career executives.³⁸ The appointees are bound to be suspicious of the civil servants because, after all, they had worked for the “other guys” if the presidency had changed party. All three of the study leads (Bray, Jahn, and Treverton) have experienced the relationship on both sides. In earlier years, though, the suspicion usually didn’t last long: political appointees first realized that they couldn’t get anything done without the civil servants, and not long after that, realized that as a general and principled rule, civil servants regarded themselves as working for the country, not any party.

That seems to have changed, even dramatically. Our interlocutors spoke of dissent channels being leaked, resulting in what they regarded as “witch hunts.” One participant spoke of a 2016 Inspector General’s report that cited 550,000 calls to IG hotlines, from a total federal workforce of 2.1 million government employees. When we asked participants

how many leaders would provide top cover if need be, the answer was “not many.” High level SES officials are tasked with keeping the ship of state afloat during transitions, with administration’s slow and slower getting people confirmed. When they arrive, the political appointees don’t trust the officials and so want to start over. Then they criticize officials for not getting it done. As one participant put it: “experience is cause for suspicion.” And the cycle gets worse to the point that it is almost a myth that there is a civil service. Each party believes the civil service is people from the other party who burrowed in. The military is accorded trust, not civil servants. Each change in administration is like a hostile corporate take-over. In the process the civil service becomes demoralized and paralyzed.

Partly as a result of the poisoned link between civil servants and political appointees, risk aversion seems on the rise. Civil servants worry that if the decision they make is the wrong one, it will be the end of their careers. Here, too, there always was tension: the average tenure of political appointees is less than two years, and they want to achieve the administration’s goals quickly, and so may be prepared to take risks that their civil service subordinates worry that they will have to clean up and live with.

Risk aversion is also increased by the extent of “Monday-morning quarterbacking” in fragmented media. Risks and responses often are mischaracterized by the media, and by the time they are cleaned up, careers of senior executives may be over. Even more challenging, some media outlets are hiring

³⁸ Valdez, Bill, “Theory and Practice in Federal Government Executive Branch Leadership and Administration,” in *The Handbook of Federal Government Leadership and Administration*, eds.

Rosenbloom, Malone and Valdez, New York: Routledge, 2016.

young women to get compromising photos of leaders.

At the same time, for U.S. Federal Government senior executives, errors often are not permitted and efforts to cooperate across agencies frequently are not rewarded by political leadership. Even as the world becomes more interconnected, the government has become more siloed. One IRS employee wanted to move to another agency but was held back by a superior, and eventually had to quit to move. Career senior executives feel less empowered to make decisions, a process that began to accelerate in Obama administration with more oversight of career people.

Do these trends risk that the government will lack capacity in a stressing event? The most frequent answer was that it is less prepared. It is losing capacity, as talent departs or — as in the cyber world — it is impossible to recruit. The composition of the federal workforce is more of a concern than its size: in the 20th century it was largely clerical, but that it not what the workforce of the 21st century should look like.

One person spoke of the government “bleeding,” especially loss of talent to major technology companies. It is not just this administration, for the trends have been in motion since before 9/11. Different agencies don’t even speak same language, and technology hardens stovepipes. Getting access is a huge problem, given legacy systems and architecture. People want to move forward but don’t know how to. One open source collaborative distribution spread to 500, but to get access required personally identifiable information (PII).

On the positive side, technology, like automation, machine learning, and artificial intelligence, potentially could

help, provided the government has the organization and competence to adopt it. Our interlocutors cited a trifecta of obstacles: leaders don’t understand technology, and neither do mission owners. And procurement can’t get it. Acquisition is likely to be risk averse to avoid running afoul of the department Inspector Generals (IGs). Procurements of commercial technology have declined, not increased, over the last ten years. Procurement officers, IGs, contracts people: none really understand technology was what we heard in our conversations as part of this study.

The situation is not all black and white, for some leaders know how to work the system and they recognize that taking calculated risks is imperative. The Enterprise Risk Management Assessment, to be done by all agencies, will be a rich base for analysis once fully implemented throughout government. A 2010 law sought to enable cross agency teams. Now, there is a process to do it, but one not used enough. The same law required data-driven reviews of objectives.

Section 4: Stress Testing

To set up a portfolio of potential stress tests to examine the functional consequences of the structural staffing trends, participants were asked for their feedback on the likelihood of several dozen departures or crises. These potential scenarios were divided between those virtually certain in the next year and ones that are highly plausible over the next several years.

The point was to see if (1) the participants thought that there was increasing stress facing the U.S. Federal Government, and (2) to solicit their views on whether the U.S. Federal Government had the capacity to respond to such events or lacked the collective resilience to recover from them. For this study we developed lists of stresses that are as unbiased as is possible to best consider which parts of the federal government would need to respond, and how important each stress is based on the potential for significant large-scale failures or lapses of consequence.

While it was beyond the scope of this preliminary assessment to formally apply techniques of stress testing, a collection of potential stressors was developed to characterize the kinds of exigencies government must endure. These stressors are presented in two categories — stressors virtually certain to occur this year, and stressors that are distinctly plausible or likely in the next several years.

In the first category is the near-certainty that voter suppression, social media, gerrymandering and cybersecurity will bear on the legitimacy of future elections, including national, state and local elections. The second category ranges from an economic recession, to a cyber-

attack much more damaging than those seen to date on major U.S. Federal Government and financial institutions, to hurricanes flooding the Gulf and East coasts at the same time as record wildfires burn across California. These lists could be used for spot checks to define which parts of the federal government would potentially be engaged, and, in general terms, how important each part is. Based on available data, this analysis can yield rough judgments with the goal of identifying examples of potential high-risk stresses.

Governmental stresses that are virtually certain to occur in the next year:

- Formally unconstitutional challenges to voter rights, gerrymandering and cybersecurity lapses bear on legitimacy of local, state and national elections.
- Investigations by the House of Representatives are certain to increase oversight of the administration, potentially widening the already huge political divide in Washington.
- Misinformation/disinformation campaigns aimed at enhancing discord in American civic discourse across all issues including immigration, gun rights.
- Hybrid threats targeted at citizens, e.g., mass shooting victims, public officials, intelligence officials (OPM hack of cleared federal employees in 2012).
- Major “natural” disaster or cyberattack produces long-term major grid failure (Puerto Rico).
- Hate groups spark outbreaks of civic unrest exploited by U.S. adversaries (Houston, 2016, Charlottesville, 2017).
- African swine fever outbreak in Europe.

- Worst year for global famine since WWII and worst year for migration in history.
- Worst year for losses to wildfires in U.S. history.
- Very hot year relative to history of the United States
- Extremely low snow pack in the Western United States
- Extreme political polarization seizes many parts of government housekeeping duties at the same time.
- Major foreign policy crisis.
- Xi exercises “permanent” dictatorial power in China.
- Abusive attacks surface for hybrid threat provided by Facebook and Twitter and raises pressure for government intervention/regulation.
- Foot and mouth disease outbreak in United States
- Major recession.
- Multiple sequential and coordinated attacks sparked by domestic terrorism (gun or explosive or dirty bomb) in large public gatherings.
- Major hack of agricultural harvesting equipment halts agricultural harvest for several weeks during peak harvest season wreaking havoc on global commodity markets and local/regional rural economies and disruptions in food supply chains (Siemens hack, 11/17).
- Major hack of shipping infrastructure e.g., Maersk hack 2017 resulted in lost ships, cargoes stalled.
- Major Mississippi flood (a “bigger than 750” year flood wipes out shipping infrastructure causing long term disruption to flow of goods and a slow-moving global food security crisis).

Governmental stresses plausible in next several years:

- North Korean missile test lands between Hawaii and California.
- WannaCry or other cyberattack on key U.S. Federal Government or financial institutions e.g., Equifax.
- Low compliance in the United States with food safety regulations (insurance, HACCP) fails to prevent widespread multi-drug resistant illness, panic is spread by misinformation on social media.
- Multidrug-resistant plasmids appear in foodborne pathogen, highlighting broad lack of compliance with new food safety laws.³⁹
- “The Big One” occurs — specifically a massive earthquake — happens in California.
- Hurricane brings massive coastal flooding in Louisiana, Gulf of Mexico or East Coast, interrupts energy at the same time record breaking wildfires hit west.
- Key infrastructure fails throughout the United States, including roads and bridges, locks and dams, electrical grid security.

³⁹ Ellis, Carole, Multidrug-Resistant Gene Found in Salmonella, *Contagion Live*, 2017,

<http://www.contagionlive.com/news/multidrugresistant-gene-found-in-salmonella>.

- Global undersea cable failure, either due to inadvertent degradation or intentional sabotage.⁴⁰

This study provides these stresses to give a sense of the looming challenges confronting what we, as researchers, believe to be an increasingly eroded U.S. Federal Government workforce. Were our research to continue, the next step would be to make rough judgments of how capable each government component is to perform the required tasks to address these potential crises.

In this report there is not scope enough to run full tests on each stressor, yet readers can consider them for themselves as representative of looming challenges to a strained workforce. As one small example, consider what might happen if simultaneous nuclear negotiations with Iran and North Korea had to occur. The task would fall on the State Department, especially its nuclear experts. Given both the numbers and the turmoil at State, it is hard to have confidence that the department would be able to muster the needed capacity to manage these dialogues. The unfortunate consequential impact to both the United States and the world as a result of this strain on the workforce could be sizable.

⁴⁰ Beale, Jonathan, "Russia a 'risk' to undersea cables, defence chief warns," *BBC News*, 2017, <https://www.bbc.com/news/uk-42362500>.

Section 5: Drivers of Change in Federal Bureaucracy

In part, traditional partisan ideology can explain trends in federal employment data. Since its founding the United States has experienced an internal tension between a robust federal government and the rights of states. Consequently, minimizing federal capacity is seen as a means of building state level autonomy. There is a solid constituent basis of the Republican Party that uses this frame as a justification to systematically remove power from the federal government and with aligned intent, take actions to make government less effective.

Currently, political oscillations have driven these traditional party-line tensions to new heights across government. Tracking Congress as a measure of partisanship across government, during the 112th Congress the number of votes that cut exclusively across party lines, with no “boundary spanners” across parties, was at a sixty-year high.⁴¹ No longer are legislative compromises the order of the day; instead it appears as if both political parties are operating under a mutually reinforcing “winner take all” principle.

The results of the recent mid-term Congressional elections demonstrate this widening chasm. The House flipped primarily because of increasingly blue suburban districts that were formerly Republican strongholds. Orange County’s delegation, which has been 100% Republican in the past, is now 100%

⁴¹ Andris et al., “The Rise of Partisanship and Super-Cooperators in the U.S. House of Representatives,” *PLoS ONE* 10(4): e0123507, 2015, <http://doi.org/10.1371/journal.pone.0123507>.

⁴² Kiley, Jocelyn, “In polarized era, fewer Americans hold a mix of conservative and liberal views,” *Pew Research Center*, 2017, <http://www.pewresearch.org/fact-tank/2017/10/23/in->

Democratic. Similarly, the 116th Congressional delegation of New England states is comprised of 30 Democrats, 2 Independents, and 1 lone Republican.

Partisanship at high levels of government is observed alongside a similar trend in the general public. In 2004, nearly half of all Americans held a mix of conservative and liberal views. In 2017, only one third had mixed opinions on political issues.⁴² Media polarization no doubt plays a role in this trend, for example, 47 percent of consistent conservatives cite Fox News as their main news source, while expressing greater distrust than trust for 24 of the 36 news sources measured in the survey. At the same time, fully 88 percent of consistent conservative voters say they trust Fox News, compared to only 6 percent of consistent liberal voters.⁴³

The polarization also extends to where people live, in what kind of neighborhoods, and even affects economic decisions. For instance, in one set of recent experiments, people were willing to work for less money for fellow partisans, and the effect was large, as large as the effect of more “normal” factors like relevant employment experience. When presented with a purchasing opportunity, consumers were almost twice as likely to engage in a transaction when their partisanship matched the seller’s. And finally, three-quarters of the subjects in one experiment refused a higher monetary payment to themselves if it would also help the other party — thus, they preferred

[polarized-era-fewer-americans-hold-a-mix-of-conservative-and-liberal-views/](http://www.pewresearch.org/fact-tank/2017/10/23/in-polarized-era-fewer-americans-hold-a-mix-of-conservative-and-liberal-views/).

⁴³ Mitchell, Amy, Jeffrey Gottfried, Jocelyn Kiley, Katerina Eva Mutsa, “Political Polarization and Media Habits,” *Pew Research Center*, 2014, <http://www.journalism.org/2014/10/21/political-polarization-media-habits/>.

to make themselves worse off so that they would not benefit the other party.⁴⁴

Changes in campaign finance laws have altered the way public will is reflected in office, often exacerbating underlying divisions. In the past two decades, laws and, more so, Supreme Court rulings — the Bipartisan Campaign Reform Law Act of 2002, popularly known as McCain-Feingold act⁴⁵ and judicial outcomes such as *Buckley v. Valeo* (1976), *Citizens United v. FEC* (2010)⁴⁶, and *McCutcheon v. FEC* (2013)⁴⁷ have fundamentally altered the U.S. campaign finance system. Studies agree that the structural changes in campaign finance and interest representation put the median voter at a democratic disadvantage vis-a-vis organized economic interests and economic elites.⁴⁸ Yet the lack of fine-grained data and the complexity inherent to the political process makes it hard to draw specific, causal conclusions.⁴⁹

Broad trends in financing by both disclosed and undisclosed donors,

however, are clear. For example, in the first presidential election since the *Citizens United* decision, spending in federal elections by outside groups tripled from around 150 million dollars to over a billion dollars.⁵⁰ Outside group spending consists of money spent independent of and without coordinating with candidate committees. While constitutional, these issue specific political communications aimed at mobilizing voters usually deepen existing societal divisions and deepen polarization, makes compromises costly for lawmakers and feeds into legislative gridlock.

Overall spending on political campaigns is also on the rise — a report by the Bipartisan Policy Center on campaign finance pointed out that “one media tracking firm, Borrell Associates, estimates total advertising spending for all races — federal, state, and local — in the 2016 election to be \$9.8 billion, a \$400 million increase over 2012.”⁵¹

⁴⁴ McConnell, Christopher, Yotam Margalit, Neil Malhotra, Matthew Levendusky, “Research: Political Polarization Is Changing How Americans Work and Shop,” *Harvard Business Review*, 2017, <https://hbr.org/2017/05/research-political-polarization-is-changing-how-americans-work-and-shop>.

⁴⁵ This case established the legal framework for independent unlimited private campaign spending (as long as it is not coordinated with the candidate) and opposed the spending limits in place by the Federal Election Campaign Act of 1971.

⁴⁶ This case established the legal framework that the free speech clause of the first amendment to the constitution prohibits the government from restricting independent expenditures for political communications (i.e. political advertising) non-profit and for-profit corporations, unions and other civil society groups.

⁴⁷ This case established the case that it is unconstitutional to limit individual donations to a

political party or a federal election committee over a two-year period per the Federal Election Campaign Act.

⁴⁸ Gilens, Martin and Benjamin I. Page, “Testing Theories of American Politics: Elites, Interest Groups and Average Citizens,” *Perspectives on Politics*, Vol. 12, No. 3 (2014).

⁴⁹ Persily, Nathaniel, Benjamin L. Ginsberg, and Robert F. Bauer, “Campaign Finance in the United States: Assessing an Era of Fundamental Change,” *Bipartisan Policy Center*, 2018, <https://bipartisanpolicy.org/wp-content/uploads/2018/01/BPC-Democracy-Campaign-Finance-in-the-United-States.pdf>.

⁵⁰ “8 Charts That Show How Political Spending Has Exploded Since *Citizens United*,” *Common Cause*, 2015, <https://www.commoncause.org/democracy-wire/8-charts-that-show-how-money-has-exploded/>, data from Center for Responsive Politics.

⁵¹ Persily, Nathaniel, Benjamin L. Ginsberg, and Robert F. Bauer, “Campaign Finance in the United States: Assessing an Era of Fundamental Change,” *Bipartisan*

Analysis of political shifts offers cause and context for changes in the bureaucracy itself. With spending by the U.S. Federal Government increasing fivefold since 1950, but civilian personnel hardly budging, the U.S. Federal Government has become less the doer and more the funder.⁵² In other words, functions of government are increasingly outsourced and executed by the private sector.

To be sure, private sector, and public-private partnerships are better at providing some services than the government, but the extreme shift toward outsourcing of government work raises questions of how the benefits of government resources are reaped, especially in the context of a steadily upward trend in income inequality since 1980.⁵³ Context must also be provided that, compared to other advanced industrial democracies, the U.S. Federal Government is out-funded by 7 to 10, or even 20 percent of annual GDP compared to other nations.⁵⁴ The relative funding numbers for the United States have for the most part not changed over forty years.

Policy Center, 2018, <https://bipartisanpolicy.org/wp-content/uploads/2018/01/BPC-Democracy-Campaign-Finance-in-the-United-States.pdf>

⁵² Valdez, Bill, "Theory and Practice in Federal Government Executive Branch Leadership and Administration," in *The Handbook of Federal Government Leadership and Administration*, eds. Rosenbloom, Malone and Valdez, New York: Routledge, 2016.

⁵³ "GINI index (World Bank estimate)," *The World Bank, Development Research Group*, 2016, <https://data.worldbank.org/indicator/SI.POV.GINI?end=2016&locations=US&start=1979&type=shaded&view=chart>

⁵⁴ "Revenue Statistics – OECD countries: Comparative tables," *Organisation for Economic Co-Operation and Development*, 2016, <https://stats.oecd.org/index.aspx?DataSetCode=rev>.

Section 6: Reflections and Recommendations

This study has established that the U.S. Federal Government and its workforce are in an unprecedented condition. Further, modern interconnectedness creates both enormous threats and monumental opportunities to redesign government services and government-anchored communities to be more effective and more resilient. This includes designing government agencies to better address both new and familiar suites of challenges.

For instance, millions of medical devices on which the lives of many Americans depend are highly vulnerable to hacking, essentially completely unsecured against nefarious actors; so, too, is the equipment used to harvest the United States' vast agricultural production. Terrorism and warfare are evolving in ways not yet foreseen, while the stresses of climate change are already well underway, far surpassing earlier and more conservative estimates.

In fact, these stresses are so monumental that an adversary might find great potential to strike during an extreme event, which are occurring much more rapidly at larger and larger scales. The year 2018 saw the largest wildfire in U.S. history, and enormous losses to flood and drought, while 2016 and 2017 each surpassed any other year in history for the magnitude of financial losses to extreme

⁵⁵ Halvorsen, Jeff, "The second 1,000-year rainstorm in two years engulfed Ellicott City. Here's how it happened," *The Washington Post*, 2018, https://www.washingtonpost.com/news/capital-weather-gang/wp/2018/05/28/the-second-1000-year-rainstorm-in-two-years-engulfed-ellicott-city-heres-how-it-happened/?noredirect=on&utm_term=.ff9fc7c722b2

events. These events always have overwhelming local effects. On May 27, 2018, Ellicott City, Maryland, experienced its second 1 in 1,000-year flood in two years.⁵⁵

On the topic of collective resilience:

- On one hand, modern public service confronts a rapidly changing external environment that requires continuous adaptation as a strategic imperative; yet on the other hand, layers of legacy processes, methods of interacting, and outdated technologies make embracing that organizational agility — let alone building resilience to unanticipated events — difficult to achieve for the U.S. Federal Government
- That continuous adaptation requires public service to rethink how it organizes its human processes and technologies, asking hard questions about who does what work and how
- Such adaption includes creating "safe spaces" for those focused on the non-partisan work of public service. Those require the private sector's explicit recognition that without these spaces, the United States will become increasingly politically polarized⁵⁶, unstable, and unable to operate in either crisis or normal modes
- More specifically, the rapidly changing world requires new ways of organizing who does what work in public service and how to include bottom-up, more "entrepreneurial-on-the-inside" activities not typically associated with

⁵⁶ Bray, David A, "Three Meaningful Strategies for Managing Rapid Change," *MIT Sloan Management Review*, 2017, <https://sloanreview.mit.edu/article/three-meaningful-strategies-for-managing-rapid-change/>

how public service has functioned in the past

- If the U.S. private sector were willing to take a leadership role to help improve both local communities and the United States as a whole, in addition to pursuing profits, this too could improve the resilience of the country to future crises – after all, united we stand, divided we fall.⁵⁷
- Lastly: for “We the People” frank conversations with the public, private sector, media, and other social institutions of the United States need to continue, based on understanding the plurality the United States embodies and recognizing the investments needed in new forms of networked governance and collaboration if United States is to remain a pluralistic society not captured by only a few, privileged interests.

The ability to adapt in the face of new pressures, stresses, and novel situations increasingly determines whether

⁵⁷ Wingfield, Nick, Katie Thomas and Reed Abelson, “Amazon, Berkshire Hathaway and JPMorgan Team Up to Try to Disrupt Health Care,” *The New York Times*, 2018, <https://www.nytimes.com/2018/01/30/technology/amazon-berkshire-hathaway-jpmorgan-health-care.html>.

⁵⁸ Bray, David A., Charles Rath. “Cultivating Resilience: A Modern Day Organizational Imperative,” in *The Handbook of Federal Government Leadership and Administration*. Edited by Rosenbloom, Malone and Valdez. New York: Routledge, 2016.

⁵⁹ “Leadership for America: Rebuilding the Public Service,” *National Commission on the Public Service*, 1989, http://www.washingtonpost.com/wp-srv/opinions/documents/Leadership_for_America_Rebuilding_the_Public_Service.pdf

⁶⁰ “Urgent Business for America: Revitalizing the Federal Government for the 21st Century,” *National*

organizations survive in our rapidly changing worlds⁶¹. The same can be said of nations, societies, and ways of life too.

Scores of eminent scholars and experts have made legions of recommendations to address these trends of concern in federal staffing which are occurring at all levels, along with the dismantling and lagging of federal capabilities and functions. This study stands on their shoulders.

Seminal reports from the National Commission on the Public Service in 1989⁵⁹ and 2003,⁶⁰ and ongoing work from the National Academy of Public Administration,⁶¹ the Volcker Alliance,⁶² and the Government Accountability Office⁶³ have provided a rich backdrop of scholarship for renewal and reform. Recommendations from these bodies consider a range of scopes and scales, but many of our recommendations build upon similar themes, such as restoring pride in civil service, reducing the number of political appointees across government, significantly increasing wages and wage flexibility across civil service, federating

Commission on the Public Service, 2003, <https://www.brookings.edu/wp-content/uploads/2016/06/01governance.pdf>.

⁶¹ “No Time to Wait: Building a Public Service for the 21st Century,” *National Academy of Public Administration*, 2017, https://www.napawash.org/uploads/Academy_Studies/No-Time-to-Wait_Building-a-Public-Service-for-the-21st-Century.pdf.

⁶² “Preparing Tomorrow’s Public Service: What the Next Generation Needs,” *The Volcker Alliance*, 2018, https://www.volckeralliance.org/sites/default/files/attachments/Preparing_Tomorrow%27s_Public_Service.pdf.

⁶³ “Strategic Human Capital Management,” *U.S. Government Accountability Office – High-Risk Series*, 2017, <https://www.gao.gov/assets/690/682765.pdf>.

and diversifying personnel systems to meet the needs of specific agencies, and placing greater emphasis on missions, rather than bureaucratic processes. Opportunities for implementation vary across political moments and administrations, but, in any case, inaction cannot be attributed to a lack of quality scholarship.

In recognition of this existing body of work, our recommendations strike a simpler, framing tone:

- This study represents the first of its type to do a comprehensive and systematic assessment of staffing trends across all federal departments for which public data exist and to further assess these shifts in head counts regarding their implications for shifts in capability and function. This study recommends that a systematic, regular, comprehensive census for federal staffing should be regularly undertaken by OPM and reviewed by Congress. The degradation of the civil service must be recognized as a major threat to U.S. sovereignty, national stability, security and prosperity, and continually monitored as such. It is not a concern that can be safely kept in public administration silos — the alarm must be sounded and tended to by all manner of concerned citizens and leaders, or the functions of our government will continue to weaken.
- Second, it has become clear to us that, at its heart, this is not an issue about civil service, but an issue about the size and quality of the U.S. Federal Government generally. For which kind of government do we, as citizens, advocate? A small one incapable of tending to crises, or a more robust institution equipped to manage the

complex challenges of our time? The nation's answers to that question contain the roots of the tensions the American people currently face.

Given the limits of our data sets and the novelty of our approaches, this study does not attempt to give a definitive answer as to what the long-term future of the U.S. Federal Government is, or if these trends will reverse themselves on their own without focused, definitive intervention (although as researchers we view that as unlikely, potentially impossible). Also, as noted earlier, this study does not seek to make the case that the workforce should be larger, simply that our nation's public service should have the capabilities to respond effectively to emergencies and different types of crisis scenarios. What we as researchers can say is that the data sets show that such a growing weakness in the ability of the U.S. Federal Government to respond to crises, and the increasing missed opportunities to improve collective resilience in our turbulent world, have been occurring for the last few decades.

As researchers, we conclude noting that history tells us that irrevocable systemic failures happen with the acquiescence of a mostly passive majority against the backdrop of long-term, hard to detect erosions of institutions and norms. Given the analyses presented in our study, it would be a great folly to take any comfort in doing nothing when so many shocks, some incremental and others dramatic, increasingly constitute clear and present dangers to the institutional configurations that provide the foundation for the United States and our continued hopes and aspirations for an open, pluralistic union of many.

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Appendix A: Research Methods

This study aims not at theory-building but rather employs inductive reasoning from what data is available. It also is different from most assessments of the United States Government (USG), which typically assess variations in policy outcomes across time and space, say for example, welfare state retrenchment, changes in U.S. grand strategy or U.S. trade policy. In contrast, this study makes the United States Federal Government the object of analysis. Long-term trends and anomalies in USG in effect becomes the dependent variable. However, the authors of this study are amply aware of the limitations such broad-scope conditions impose on their analyses, the difficulties they face in maintaining consistent analytical boundary conditions and the challenges inherent to focusing on and along different levels of analysis when they are all also fundamentally related.

What to look for, where, and how when the object of analysis professes to be an unwieldy beast? At the broadest macro-level, the entire USG edifice is built on the foundational scaffolding of checks and balances. "Ambition must be made to counteract ambition"⁶⁴ and consequently the executive, judicial and legislative branches at the analytical level remain fiercely protective of their predetermined jurisdictional boundaries and remain independent of each other. These predetermined jurisdictional boundaries are not so clearly delineated and therefore always remain in a state of tension and evolution. Indeed, much of American

political development and the evolution of the republic over time has been characterized precisely by these tensions as these branches reacted to or reflected wider social trends. As they do, there are informal affinities and relationships that engender across these branches along partisan, ideational, and even patronage lines to name a few. That elemental reality, ties that binds across branches both formally and informally, compromises both their purported independence and their analytical autonomy.

Premised on this reality, the authors analyze component — sub-units — of the government. They recognize that an analytical sub-unit at a specific level of analyses will always have its own internal characters, rules, norms and processes unique to it. But the same sub-unit, as unique as it may be, is also subject to, shaped by, and will evolve along general characters, rules, norms and processes as the rest of the federal bureaucracy. Take the judicial branch, for example, at the broadest macro-level of analysis. The three main branches are analytically autonomous and independent of each other. There are bureaucratic processes unique to say the Judicial branch that define and shape it over time. And yet, irrespective of its uniqueness defined by its independence and autonomy, it is still very much shaped by the overall federal constitutional structure in place.

Quantitatively, the study in its inductive analyses draws primarily on descriptive and plausible quasi-correlational

⁶⁴ Madison, James. *The Federalist Papers*. "Federalist No. 51." 1788. http://avalon.law.yale.edu/18th_century/fed51.asp

assertions and refrains from controlling for variables. Authors based their broad inferences and highlight trends of concern based on a large-scale, time series data set that is representative of overall USG staffing trends. Simultaneously, authors assessed singular variations across time specific to sub-units of analysis, (different branches of the government, and agencies for example), with the collection of data specific to agencies and branches. Authors also conducted series of anonymized surveys across civil service ranks and gathered data on individual perceptions. They work as a proxy measure to assess congruities and or incongruities between observed trends in the broader data sets versus participant perceptions of reality. The same survey data sets provide the jumping off point for authors on their qualitative assessments.

Research Assistants scraped FedScope, the public-facing database for OPM, as a logical first step to explore trends in federal staffing.⁶⁵ They began by methodically capturing a time-series dataset on staffing across each cabinet department from the middle of 2000 (9 months into George W. Bush administration) through Obama and Trump administrations. This first step captured some of the macro-level trends across administrations and allowed the research group to get both familiar with FedScope and refine data collection pertaining to independent agencies.

Broad federal staffing data was separated along GS-15, SES, Excepted Service, etc., across cabinet departments and federal

agencies with the objective of assessing broad trends across the government. In addition, members of the Senior Executives Association looked at SES employment history, mass transfers of SES, individual transfers of SES, separations and accessions of GS-15s and SES, overall employment trends, overall accessions and separations, employment by department, ratio of SES to total government and ratio of GS-15 to total government.

This data was complimented with publicly available resources from news outlets known for their veracity and fact checking. They further complimented the data from the Best Places to Work Surveys documenting short term and long-term trends. Best Places to Work surveys was used as a proxy measure for employee morale.

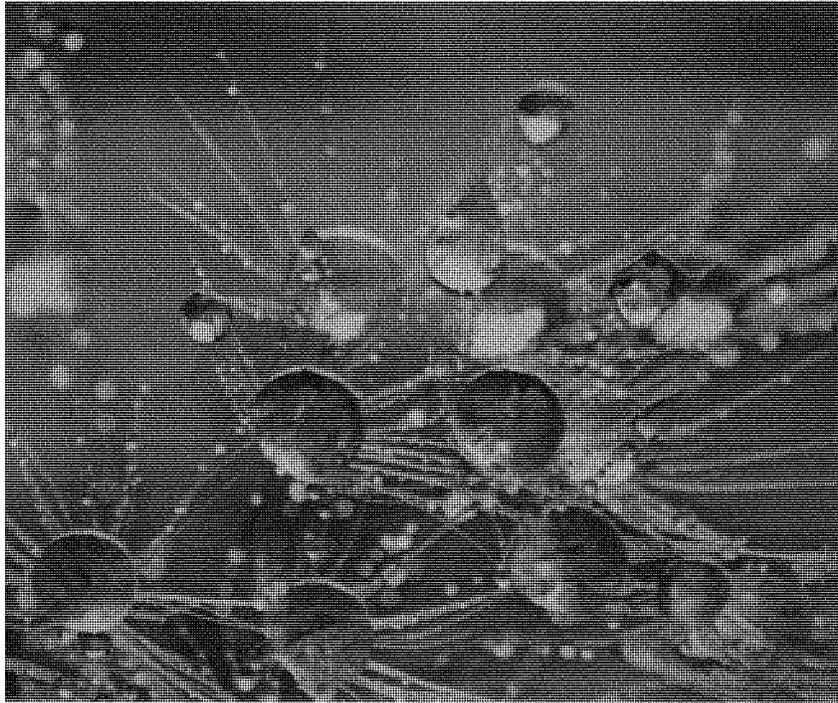
Qualitatively, the study relies on *participant-observation* (in fact, authors themselves bring years of USG experience to bear), *in-depth unstructured interviews*, and *in-depth structured-focus groups* with the GS-15 and SES level participants. Participation was purely voluntary, and no-incentives were built into the research design to compel participation. Participant observation help authors gather data on “naturally occurring phenomena”, meaning processes and changes unique to sub-units in their normal context. In-depth interviews and focus-groups also helped authors gather individual experiences and perceptions and elicited valuable data on issues of concern and changes in work

⁶⁵ FedScope data exclude Foreign Service Officers, Department of Defense uniformed branches, and Intelligence Community Data. Foreign Service Officer

data was gathered from the American Foreign Service Association to supplement data from FedScope.

norms and culture. Elicited qualitative data was then used to explicate the observed anomalies and trends of concern from quantitative data, enabling broad inferences on changes in work culture and norms overtime at the macro level as well as independent agency level.

The date of this written version of our study's findings, is 25 Jan 2019. We thank everyone who provided valuable feedback to different draft iterations of this paper.



Appendix B: Acknowledgements

The authors would like to thank all those who supported this study, to include the Senior Executive Association and the multiple individuals who participated with the in-person interviews and data collection for this paper. We also thank the feedback we received on working drafts of this paper from the Volcker Alliance, Partnership for Public Service, and the National Academy of Public Administration.

Data sets used for this study came from FedScope; photos used for this publication were licensed CCo by Pixabay.com for reuse. Lastly, a big thank you goes to all who continue to support and believe in a “Government of the People, By the People, and For the People.”



Appendix C: About the Authors

Dr. Molly Jahn leads a global alliance of research organizations focused on building and testing modern knowledge systems for sustainability. At the University of Wisconsin, she has been named a Wisconsin Institutes of Discovery Fellow, and holds appointments in the Department of Agronomy, the Center for Sustainability and the Global Environment (SAGE), and the Global Health Institute. She holds adjunct appointments at the US Department of Energy's Los Alamos National Laboratory and at Columbia University, and was the first Lillian Martin Fellow at the University of Oxford's Martin School. She has previously served as dean of the University of Wisconsin's College of Agricultural and Life Sciences (CALS) and Director of the Wisconsin Agricultural Experiment Station (WAES). From 2009-10, she served as Deputy and Acting Under Secretary of Research, Education, and Economics at the U.S. Department of Agriculture. She consults globally for businesses, governments, philanthropic organizations, and international multi-lateral institutions focused on agriculture, food, water and energy security, systemic risks originating in food system failures, life sciences and environment.

Dr. Greg Treverton is a member of APCO's International Advisory Council, previously served as chair of the U.S. National Intelligence Council (NIC), the Director of National Intelligence's interagency arm for both current intelligence support to senior policymakers and more strategic analysis. He served earlier in government on the staff of the first Senate Select Committee on Intelligence, on the National Security

Council staff and as vice chair of the NIC. He was for many years at the RAND Corporation, where he directed several centers, most recently the RAND Center for Global Risk and Security.

Dr. David Bray has served in a variety of leadership roles in turbulent environments, including bioterrorism preparedness and response from 2000-2005, time on the ground in Afghanistan in 2009, serving as the non-partisan Executive Director for a bipartisan National Commission on R&D, and providing leadership as a non-partisan Senior Executive and CIO at the FCC for four years. He was named one of the "24 Americans Who Are Changing the World" under 40 by Business Insider. He was also named a Young Global Leader by the World Economic Forum for 2016-2021. Since 2017, David has served as Executive Director for the People-Centered Internet coalition co-founded by Vint Cerf and focused on providing support and expertise for community-focused projects that measurably improve people's lives using the Internet. He serves on advisory Boards and provides strategy to start-ups espousing human-centric principles regarding collaboration, technology, and decision-making in turbulent, challenging environments. He also serves on Oxford Social Data Science Advisory Board at the University of Oxford and is a Senior Fellow with the Institute for Human-Machine Cognition.

Dr. Buddhika Jayamaha brings his political science and security studies background to the study of human and food system security. At the Jahn Research Group, he looks at how internal conflict dynamics in countries with weak institutions influence the food system and shape multi-state food crisis. He also brings his experience and interests in the use of Geo-Spatial data in complex humanitarian emergencies from International Crisis Mappers. Jay holds a Ph.D. in political science from Northwestern University where he did research on how combatant-state relations shape wartime authority structures with case studies in Iraq, Iraqi-Kurdistan, Turkey, and Nepal. Prior to Northwestern Jay served in the US Army as an Airborne Infantryman in the 82nd Airborne Division.

Bill Valdez was appointed as the President of the Senior Executives Association (SEA) in September 2016. As President, Bill sets SEA's overall strategic direction and is focused on strengthening the Senior Executive Service (SES) through legislative and policy initiatives, building a leadership pipeline for the Executive Branch, and establishing SEA as a thought leader in the Washington, DC policy debates that impact not only the SES, but all civil service employees. His career with the Department of Energy spanned over 20 years and he was a senior advisor at the White House Office of Science and Technology Policy (OSTP) in the 1990s.

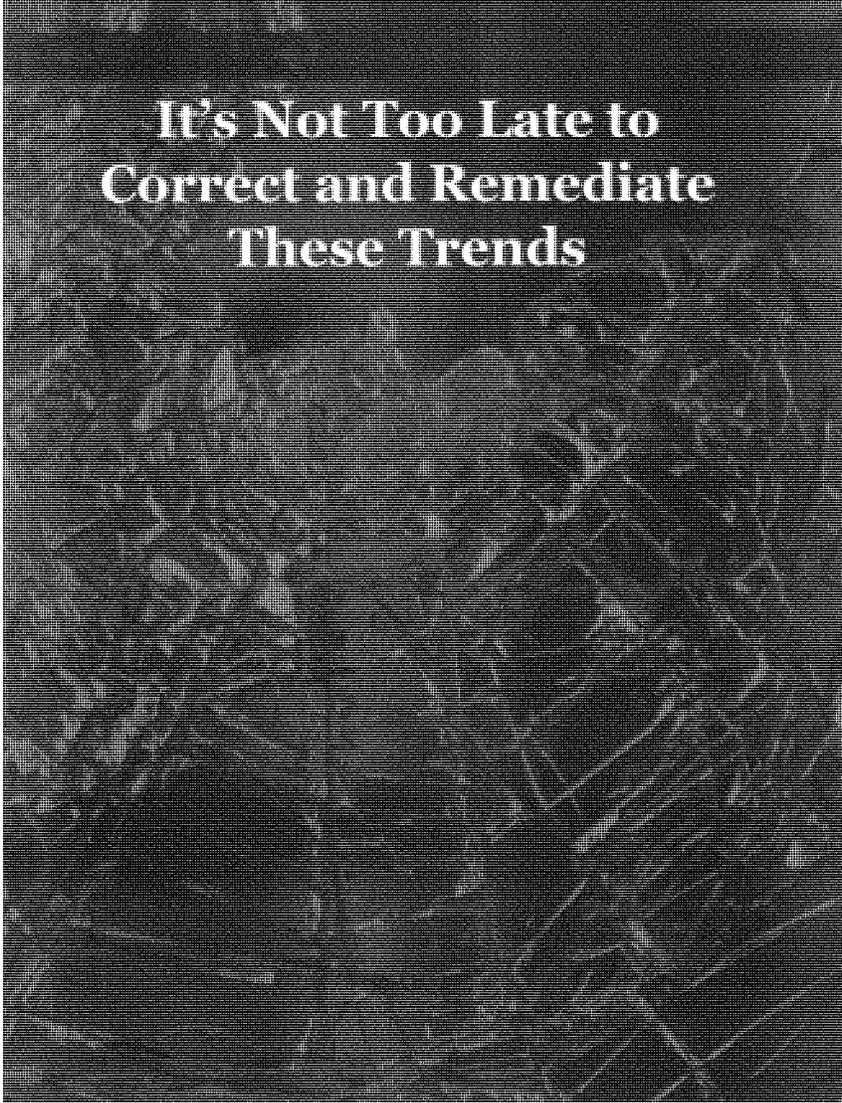
Ben Carnes is a legislative and communications associate at Shaw Bransford & Roth, P.C. He is a tech-savvy public relations specialist with diverse background in politics, broadcast media,

and media production. Seven years of experience as Congressional Communications Director for two Members of Congress, most recently handling press operations for Congressman Darrell Issa (CA-49) and the R Street Institute, a Washington, D.C.-based public policy think-tank.

Liam Hutchison is a research specialist with the Jahn Research Group. He holds a B.S. from UW-Madison in Agricultural and Applied Economics, with academic interests ranging across the social and environmental sciences. His senior thesis examined the intersections of climate change and consumer behavior through a study of the U.S. advertising industry and the norms it helps create. As an essential counterpoint to broad-view academic research, Liam engages in systems change at a local level. Specifically, he is involved with movements toward sustainability and justice on matters of education, race and environment.

Will Mulhern is a graduate student at the Johns Hopkins University School of Advanced International Studies pursuing an MA in international economics and energy, resources and environment. Previously, he worked as a research specialist at the Jahn Research Group, where he conducted research on food systems, climate change, risk, extreme weather events, and human security. Prior to becoming a research specialist, he worked as an undergraduate research assistant for two years while obtaining both a B.S. (with Distinction) in Environmental Sciences and a B.A. (with Distinction) in Environmental Studies at the University of Wisconsin-Madison.

**It's Not Too Late to
Correct and Remediate
These Trends**



**Post-Hearing Questions for the Record
Submitted to the Honorable Gene L. Dodaro
From Ranking Member Gary C. Peters**

**“High Risk List 2019: Recommendations to Reduce Risk of Waste, Fraud, and
Mismanagement in Federal Programs”**

March 6, 2019

Transforming EPA’s Processes for Assessing and Controlling Toxic Chemicals

1. Has GAO made any specific recommendations to DOD regarding the costs of limiting future PFAS exposure and if so, what were some of the recommendations GAO made?

In our report, [GAO-17-151](#), *Military Base Realignment and Closures: DOD Has Improved Environmental Cleanup Reporting but Should Obtain and Share More Information*, we included one recommendation that addresses the need for military departments to document estimates of the costs of cleanup of perfluorinated compounds from Base Realignment and Closure (BRAC) properties, as follows:

- To provide Congress with better visibility over the costs for the environmental cleanup of properties from all BRAC rounds to inform future funding decisions, we recommend that the Secretary of Defense direct the Secretaries of the military departments to include in future annual reports to Congress that environmental cleanup costs will increase due to the cleanup of perfluorinated compounds and other emerging contaminants, and to include best estimates of these costs as additional information becomes available.

In response to this recommendation, the Department of Defense (DOD) added additional language to its report to Congress. In the fiscal year 2016 Defense Environmental Programs Annual Report to Congress (issued June 2018), DOD stated that it expects that environmental cleanup costs will increase due to the investigation and cleanup of perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) and that, as additional information becomes available, DOD will include a best estimate of these costs in its environmental cleanup costs. DOD further stated that as of December 31, 2016, the Department has spent approximately \$202 million on sampling, analysis, and response actions to address PFOS and PFOA. With this additional cost information, Congress will have better visibility into the expected significant costs and efforts associated with the cleanup of emerging contaminants and will be able to make better informed funding decisions.

2. Has GAO faced specific push back in discussions with DOD that may indicate DOD disagrees with the foundational challenges related to contaminants?

No, GAO has not faced specific push back in discussions with DOD that may indicate DOD disagrees with the foundational challenges related to contaminants.

DOD concurred with the recommendations in [GAO-17-151](#) and [GAO-18-78](#) on emerging contaminants in drinking water. DOD expressed concern about two related issues: (1) that there were no federal cleanup standards that could serve as a clear benchmark to measure against, and (2) that DOD often takes voluntary action to address emerging contaminants while other parties that may have similar liabilities may not do so, because of a lack of legal requirements.

3. As GAO was conducting its assessment of EPA’s processes for assessing and controlling toxic chemicals, which recommendations do you believe should be the highest priority for the agency to implement in order to adequately address public health threats to drinking water, such as PFAS contamination?

As we noted in our March 2019 High-Risk report and April 2019 priority recommendation letter to EPA, there are seven recommendations that remain open and are identified as recommendations focused on improving EPA’s process of assessing and managing toxic chemicals.⁸ While these are broad recommendations that are not focused on particular chemical contaminants, they support changes to how chemical assessments are done, which could facilitate risk management efforts that address public health threats, including PFAS, in drinking water. These recommendations generally concern timeliness and transparency of the chemical assessment process. Specifically, we recommended that EPA

- Direct the appropriate offices to develop strategies for addressing challenges that impede the agency’s ability to meet its goal of ensuring chemical safety. At a minimum, the strategies should address challenges associated with: (1) obtaining toxicity and exposure data needed to conduct ongoing and future TSCA Work Plan risk assessments, (2) gaining access to toxicity and exposure data provided to the European Chemicals Agency, (3) working with processors and processor associations to obtain exposure-related data, (4) banning or limiting the use of chemicals under section 6 of TSCA and planned actions for overcoming these challenges—including a description of other actions the agency plans to pursue in lieu of banning or limiting the use of chemicals, and (5) identifying the resources needed to conduct risk assessments and implement risk management decisions in order to meet its goal of ensuring chemical safety. ([GAO-13-249](#))
- Require the Office of Research and Development to re-evaluate its draft proposed changes to the IRIS assessment process in light of the issues raised in this report and ensure that any revised process periodically assesses the level of resources that should be dedicated to this significant program to meet user needs and maintain a viable IRIS database. ([GAO-08-440](#))
- Require the Office of Research and Development to assess the feasibility and appropriateness of the established time frames for each step in the IRIS assessment process and determine whether different time frames should be established, based on complexity or other criteria, for different types of IRIS assessments. ([GAO-12-42](#))

⁸GAO, *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas*, [GAO-19-157SP](#) (Washington, D.C.: Mar. 6, 2019) and GAO, *Priority Open Recommendations: Environmental Protection Agency*, [GAO-19-308SP](#) (Washington, D. C.: April 19, 2019).

- Require the Office of Research and Development, should different time frames be necessary, to establish a written policy that clearly describes the applicability of the time frames for each type of IRIS assessment and ensures that the time frames are realistic and provide greater predictability to stakeholders. (GAO-12-42)
- Direct the Office of Research and Development to indicate in published IRIS agendas which chemicals EPA is actively assessing and when EPA plans to start assessments of the other listed chemicals. (GAO-12-42)
- Direct the Office of Research and Development to update the IRIS Substance Assessment Tracking System (IRISTrack) to display all current information on the status of assessments of chemicals on the IRIS agenda, including projected and actual start dates, and projected and actual dates for completion of steps in the IRIS process, and keep this information current. (GAO-12-42)
- Once demand for the IRIS Program is determined, develop an agencywide strategy to address the unmet needs of EPA program offices and regions that includes, at a minimum: (1) coordination across EPA offices and with other federal research agencies to help identify and fill data gaps that preclude the agency from conducting IRIS toxicity assessments, and (2) guidance that describes alternative sources of toxicity information and when it would be appropriate to use them when IRIS values are not available, applicable, or current. (GAO-13-369)

4. Have you had any discussions with EPA that may indicate that the agency disagrees with your assessment on how it assesses toxic contamination and protects communities from threats?

In the agency comments to our recent report, *Chemical Assessments: Status of EPA's Efforts to Produce Assessments and Implement the Toxic Substances Control Act (GAO-19-270)*, the agency indicated that GAO's review was helpful and that EPA welcomes continuing discussions with our staff. As of April 2019, EPA has generally expressed interest in working with GAO to address open recommendations related to our toxic chemicals work. We hope to continue to have productive working relationships with EPA and work together to consider next steps. If that changes, we will inform the Committee.

Cybersecurity

5. The federal government suffers from a shortage of trained cybersecurity professionals for a number of reasons, including recruitment and retention challenges. In recent years, Congress has provided a series of enhanced authorities to help agencies hire and retain cybersecurity professionals. Have you identified additional steps Congress can take to assist federal agencies with recruiting the necessary cyber security professionals we need?

Congress can assist agencies in hiring and retaining cybersecurity professionals by overseeing and holding agencies accountable for implementing the enhanced hiring

authorities that it has provided. Our work has shown that agencies have not fully executed these authorities. For example, we have previously reported that agencies generally rely on a small number of the available hiring authorities to hire personnel.⁹ In addition, through the Border Patrol Agent Pay Reform Act of 2014, Congress provided the Department of Homeland Security (DHS) with expanded hiring authorities to help the department better recruit and hire qualified cyber professionals.¹⁰ However, as of March 2018, DHS had not fully used these new authorities to hire needed cybersecurity personnel.¹¹

Congress can also oversee and hold agencies accountable for accurately identifying their cybersecurity workforce positions and areas of critical need. In March 2019, we reported that most agencies likely miscategorized the cybersecurity work roles of many of their information technology, cybersecurity, and cyber-related positions.¹² Without accurate information, the agencies' ability to effectively identify their critical cyber staffing needs will be impaired.

By continuing to hold congressional hearings to oversee agency performance and hold agencies to account, Congress can assist agencies in accurately identifying their critical cybersecurity staffing needs and using the appropriate hiring authorities to effectively recruit and expeditiously hire the cybersecurity professionals they need.

6. GAO has made over 3000 recommendations specifically concerning cyber, but approximately 700 of those recommendations have not been implemented. Do you have a sense of what role the shortage of cybersecurity professionals in the federal government is contributing to the unmet recommendations?

Although we have not specifically studied if cybersecurity personnel shortages have impacted the ability of federal agencies to implement our recommendations, our work suggests that such an impact exists. In August 2016, we reported that chief information security officers (CISO) of the 24 major departments and agencies covered by the Chief Financial Officers Act of 1990 had identified challenges with having sufficient staff to oversee security activities effectively and with ensuring that personnel assigned to highly technical roles had sufficient expertise in the skill sets needed. The CISOs noted that a lack of expertise among staff limited their ability to evaluate risk, support internal testing of information technology security, or oversee the security of information technology acquisitions.¹³ Many of our unimplemented recommendations pertain to these types of

⁹GAO, *Federal Hiring: OPM Needs to Improve Management and Oversight of Hiring Authorities*, [GAO-16-521](#) (Washington, D.C.: Aug. 2, 2016).

¹⁰Border Patrol Agent Pay Reform Act of 2014, Pub. L. No. 113-277, §§ 3-4, 128 Stat. 2995, 3005-10 (2014), 6 U.S.C. §§ 146, 658.

¹¹*Examining DHS's Efforts to Strengthen Its Cybersecurity Workforce*, Joint Hearing Before the Subcommittee on Cybersecurity and Infrastructure Protection and the Subcommittee on Oversight and Management Efficiency of the Committee on Homeland Security House of Representatives, 115th Congress, Serial No. 115-52 (March 7, 2018).

¹²GAO, *Cybersecurity Workforce: Agencies Need to Accurately Categorize Positions to Effectively Identify Critical Staffing Needs*, [GAO-19-144](#) (Washington, D.C.: Mar. 12, 2019).

¹³GAO, *Federal Chief Information Security Officers: Opportunities Exist to Improve Roles and Address Challenges to Authority*, [GAO-16-686](#) (Washington, D.C.: Aug. 26, 2016).

security activities. We have noticed that agencies sometimes find it necessary to utilize contractors to assist agency personnel with implementing our recommendations.

Although a shortage of cybersecurity personnel may have contributed to the large number of our outstanding recommendations related to cybersecurity, other factors may also have impacted agencies' ability to implement our recommendations. For example, competing agency priorities, ineffective cybersecurity practices, and incomplete implementation of an agency-wide information security program have also likely contributed to agencies not implementing many of our recommendations.

- 7. Both the White House and DHS recently issued cyber security strategies. Getting those strategies on paper is important, but they are a 30,000 foot view of a nuanced issue and leave a lot to be desired. The strategies did not clearly delineate roles and responsibilities or resources needed to implement them. In GAO's conversations with agencies regarding the strategies, has GAO made progress in identifying when more specific and concrete proposals and implementation plans will be released and how they will be integrated into operations to help address critical risks across government?**

We have work underway examining the White House and DHS's recent efforts to establish and implement a comprehensive federal strategy for national cybersecurity and global cyberspace. Among other related areas, the review is focused on assessing the extent to which specific proposals and implementation plans have been developed. We expect to complete our review by the end of calendar year 2019.

We reported in September 2018 that, although the recent White House and DHS cybersecurity strategies provided a good foundation toward establishing a more comprehensive strategy, more effort was needed to address all of the desirable characteristics of a national strategy that we have previously recommended. For example, the White House and DHS strategies generally did not include milestones and performance measures to gauge results, nor did they describe the resources needed to carry out the goals and objective.

Moreover, most of the strategy documents lacked clearly defined roles and responsibilities for key agencies, such as the Department of Defense and the Office of Management and Budget (OMB), which contribute substantially to the nation's cybersecurity programs. We concluded that, ultimately, a more clearly defined, coordinated, and comprehensive approach to planning and executing an overall strategy would likely lead to significant progress in furthering strategic goals and lessening persistent weaknesses.

- 8. The fiscal year 2016 FISMA Report noted that even beyond the well-known OPM breach – there were about 6,000 other incidents that impacted almost 500,000 individuals. Can you discuss how challenges in Federal cybersecurity lead to these breaches?**

Federal agencies face several challenges with implementing cybersecurity, which, if not effectively implemented, could lead to incidents involving data breaches. Agencies have

been challenged in sufficiently protecting their information systems from various cyber and internal threats, thereby exposing the information—including personally identifiable information—on those systems to increased risk of unauthorized use, disclosure, modification, and destruction. For example, our work has consistently found that agencies do not install software updates timely to correct known vulnerabilities in their systems. Malicious adversaries can then exploit these vulnerabilities, potentially leading to breaches of sensitive and personal data.

We have also found that agencies have been challenged with assuring that their contractors, who process information on the agencies' behalf, implement effective control over the agencies' information. As demonstrated by the Office of Personnel Management (OPM) data breach, cyber attackers can sometimes gain illicit entry to agency systems and information through the agency's contractors or business partners.

In addition, agencies have been challenged in identifying and mitigating vulnerabilities on their systems. For example, we have noted that agencies do not consistently perform in-depth evaluations of their own security processes and controls, and do not identify many of the security vulnerabilities that we find during our examinations. These vulnerabilities can expose personally identifiable information on agency systems to increased risk of compromise.

9. Both the White House and DHS recently issued cybersecurity strategies. The strategies did not clearly delineate roles and responsibilities or resources needed to implement them. Do these proposals provide enough detail, structure, and guidance to agencies – if implemented – to move cybersecurity off the GAO high risk list?

As we state in our recent update to the cybersecurity high-risk area contained within the March 2019 High-Risk report,¹⁴ the White House's National Cyber Strategy lacks key elements that we have previously noted could enhance the usefulness of a national strategy. These elements include clearly defined roles and responsibilities, and information on the resources needed to carry out the goals and objectives detailed within the strategy. We point out that, although the strategy states that National Security Council staff are to coordinate with departments, agencies, and OMB to determine the resources needed to support the strategy's implementation, it is unclear what official maintains overall responsibility for coordinating these efforts, especially in light of the elimination of the White House Cybersecurity Coordinator position in May 2018. As we stress in our update, going forward, it will be critical for the White House to clearly define the roles and responsibilities of key agencies and officials in order to foster effective coordination and hold agencies accountable for carrying out planned activities to address the cybersecurity challenges facing the nation.

We have also previously reported that, although the DHS Cybersecurity Strategy identified a variety of actions the agency planned to take to perform its cybersecurity mission, the strategy did not articulate the resources needed to carry out these actions and requirements.¹⁵ Without information on the specific resources needed, federal agencies may not be

¹⁴GAO-19-157SP.

¹⁵GAO-18-622.

positioned to allocate such resources and investments and, therefore, may be hindered in their ability to meet national cybersecurity priorities.

Managing Climate Change Risks

10. Climate change is driving big increases in the cost of disasters to American taxpayers. In 2018, I visited Michigan’s Upper Peninsula to witness the devastation caused by major rains and mudslides. What can we do to ensure our infrastructure is ready for the impacts of more extreme storms?

To ensure our infrastructure is ready for the impacts of more extreme weather, the federal government needs to:

- incorporate climate change resilience into agencies’ infrastructure and facility planning processes, such as DOD’s efforts to implement our prior recommendations to consider climate change impacts for its installations ([GAO-14-446](#); [GAO-18-206](#));
- account for climate change in National Environmental Policy Act of 1969 (NEPA) analyses of infrastructure projects([GAO-13-242](#)); and
- work with relevant professional associations to incorporate forward-looking climate change information into structural design standards, voluntary certifications, and building codes ([GAO-17-3](#)).

We have also reported that the January 2015 federal flood risk management standard would have enhanced the resilience of future federal investments in, and affecting floodplains, by ensuring these projects addressed current and future flood risk ([GAO-17-317](#)).

11. In the High Risk List report, GAO highlights the federal government’s inability to track the effectiveness of federal investments in disaster resilience government-wide. Without a full accounting of the total federal exposure to climate change, as well as a lack of understanding of the effectiveness of investments in mitigation, how do we know if we’re moving the needle?

The short answer is that the government does not know. Without a strategy to coordinate and guide federal investments in resilience and mechanisms to monitor the effectiveness of these investments, we will not know whether these efforts are reducing federal fiscal exposure to climate change. We have made multiple recommendations since 2011 to the Executive Office of the President (EOP) to address these issues and develop a government-wide strategy to guide the nation’s efforts to adapt to climate change. EOP has not implemented them.

Additionally, the federal government has yet to implement our July 2015 priority recommendation to establish a comprehensive investment strategy to identify, prioritize, and implement federal disaster resilience investments ([GAO-15-515](#)). The Federal Emergency

Management Agency (FEMA) and its partners have developed a draft National Mitigation Investment Strategy (NMIS) that may address this recommendation but it is too early to assess its responsiveness because it has not been finalized.

- 12. In the report, you referenced the Trump Administration’s move to rescind the Federal Flood Risk Management Standard Executive Order as an example of regression in leadership support for adapting to climate change risks. This EO would have required infrastructure be rebuilt to a higher standard following a disaster to ensure we aren’t throwing federal dollars at projects that will just be destroyed the next time extreme weather hits. During the hearing you affirmed the importance of the Flood Risk Management Standard. Additionally, do you believe a risk management standard would save taxpayer dollars?**

Yes. In our 2017 High-Risk Report ([GAO-17-317](#)), we reported that implementing the January 2015 federal flood risk management standard—which directed agencies to have federally funded projects investments in, and affecting, floodplains to meet a certain elevation level—would have enhanced federal flood resilience by ensuring agencies addressed current and future flood risk. In turn, this would reduce taxpayers’ fiscal exposure to flood risk.

- 13. In 2015, then President Barack Obama issued Executive Order 13690 that established a federal flood risk management standard intended to “improve the resilience of communities and Federal assets against the impacts of flooding,” which are expected to increase over time due to climate change. In 2017, President Trump revoked this order and not long after came Hurricanes Harvey, Irma, and Maria, contributing to the deadliest hurricane season since 2005. The National Institute of Building Sciences (NIBS) released the Natural Hazard Mitigation Saves: 2018 Interim Report finds that the nation can save \$6 in future disaster costs, for every \$1 spent on pre-hazard mitigation.**

Did the decision to revoke this order increase federal fiscal exposure to taxpayer-funded projects, and if so, how?

Yes. Taxpayer-funded facilities and infrastructure built to current standards based on historical conditions may not last as long as intended because they do not account for future changes in climate-related risk over the lifespan of the project.

Are there any specific policy recommendations GAO could make to remedy this?

We have made several recommendations to help enhance the resilience of taxpayer-funded projects and other types of projects that are covered by federal flood insurance or disaster relief, many of which are summarized in the [“What Remains to be Done”](#) section of our [High Risk List website](#), such as:

[Developing a national strategy to manage climate change risks](#): To address federal fiscal exposure, the federal government needs a cohesive strategic approach with clear priorities

that directs federal efforts toward common goals, such as improving climate resilience. Additionally, because state and local decisions drive much of federal fiscal exposure, coordination between levels of government is essential. We have made multiple recommendations to the EOP to do so, but efforts to date under this and prior administrations have not met our criteria for removal from the High-Risk list.

Providing technical assistance to decision makers: Providing federal, state, local and private-sector decisions makers with climate information and technical assistance to translate the information for decision-making could help manage fiscal exposure to climate change risks. In November 2015 ([GAO-16-37](#)) we reported on options to provide climate information and technical assistance to decision makers and found that:

- A key federal role in a national climate information system would be to provide authoritative data and quality assurance guidelines for how to use the data.
- A nonfederal entity would be better positioned to provide on-the-ground technical assistance and facilitate connections between decision makers and intermediaries with expertise.

We have made multiple recommendations to the EOP to address this issue; however, the EOP has yet to implement them.

Incorporating climate change into infrastructure planning: We recommended in April 2013 ([GAO-13-242](#)) that the Council on Environmental Quality (CEQ) finalize guidance on how agencies can consider climate change impacts, such as sea-level rise, in their National Environmental Policy Act of 1969 (NEPA) reviews of proposed federal actions. CEQ had implemented this recommendation in 2016, but later rescinded its guidance in April 2017.

Establishing a comprehensive resilience investment strategy: The federal government has yet to implement our July 2015 priority recommendation to establish a comprehensive investment strategy to identify, prioritize, and implement federal disaster resilience investments ([GAO-15-515](#)). FEMA and its partners have developed a draft National Mitigation Investment Strategy (NMIS) that may address this recommendation but it is too early to assess its responsiveness because it has not been finalized.

Improving resilience to flood risks: The federal government has yet to implement our October 2014 ([GAO-15-28](#)) recommendation to incentivize flood resilience by incorporating it into the floodplain management minimum standards, nor our 2017 ([GAO-17-425](#)) Matter for Congress to address the structural challenges in the National Flood Insurance Program through comprehensive reform to improve the program's solvency and enhance the nation's resilience to flood risk.

Incorporating forward-looking information into building codes and design standards: In November 2016 ([GAO-17-3](#)) we recommended that the National Institute of Standards and Technology (NIST) should work with other federal agencies to provide the best available forward-looking climate information to standards-developing organizations for their consideration in building code, voluntary certifications, and design standards development to enhance resilience. This recommendation remains open.

- 14. The GAO report mentions the ongoing work on managed retreat from vulnerable areas as an option to reduce communities' exposure to climate change impacts, yet there is not a federal effort currently – either mandated by congress or by one agency to consolidate federal funds that are going to support buyouts and planning for retreat for either inland flooding or sea level rise. If we want to spend taxpayer dollars wisely, does GAO believe that the federal government should be tracking grants and providing nationwide analysis on the impact of future flooding and the type of retreat that will be needed and when it will be needed?**

It is too early for us to weigh in on this issue because we are collecting information for our ongoing work on managed retreat; we expect to issue a report in the fall of 2019. We have also recently begun a separate review examining federal programs for buying out at-risk properties.

Managing Federal Real Property

- 15. For over 16 years the federal real property portfolio has been on the GAO's high risk report. What has caused the federal government to rely so heavily on the use of leasing as opposed to construction or purchasing of buildings? Does this cost us money in the long run?**

Federal agencies may use operating leases over less-costly alternatives such as construction because they appear “cheaper” in the budget. Upfront funding is the best way to ensure recognition of commitments embodied in budgeting decisions and maintain government-wide fiscal control. Under these rules, for a construction or purchase project, the full cost of the project must be recorded in the budget in the year in which the budget authority is to be made available. Operating leases were intended for short-term needs, and thus, under the scorekeeping rules, only the amount needed to cover the first year's lease payments plus cancellation costs need to be recorded in the budget.

For operating leases funded by the General Services Administration's (GSA's) Federal Buildings Fund (which is self-insuring), only the budget authority needed to cover the annual payments is required to be scored. GSA does not have to include cancellation costs.¹⁶ Thus, an operating lease may potentially appear “cheaper” in the budget than a construction or purchase project, or a capital lease, even though it may cost more over time. Using an operating lease—or successive operating leases—for a long-term space need may result in resource allocation decisions for which the budgeting process may not have considered the full financial commitment over the full length of time the space need exists.

- 16. Would a revolving fund – authorizing direct GSA loans to agencies – or other changes help address this problem?**

¹⁶OMB Circular A-11, App. B. Budget authority authorizes an agency to enter into financial obligations that will result in immediate or future outlays involving federal government funds.

We have not fully assessed the Administration's capital revolving fund proposal, but we did describe a similar option in a 2014 report. In that report, titled *Capital Financing: Alternative Approaches to Budgeting for Federal Real Property*, we examined (1) agency experiences funding federal real property projects, (2) some of the alternative funding mechanisms selected agencies use, as well as agency experiences using selected mechanisms, and (3) alternative budgetary structures within the current unified budget that may potentially help Congress and agencies better recognize the cost of real property projects and associated returns, promoting both transparency and fiscal control.¹⁷ In it, we note that creating a revolving fund with borrowing authority (e.g., a capital acquisition fund) or a dedicated fund with permanent, indefinite budget authority could enable the recognition of costs and returns associated with complex real property projects upfront and over time. However, these options would require establishing new account structures and may present different challenges compared to discretionary budget authority options.

17. Could you describe at greater length the effects of the FASTA Board not being appointed and staff not being hired?

The full benefits have not been realized in the over two years since the passage of the Federal Assets Sale and Transfer Act (FASTA) of 2016 and cannot be realized until the civilian board is in place and begins operations. In 2011, we reported on the benefits of an independent board to identify unused federal properties for sale.¹⁸ The goal of this board would be to streamline the disposal process and reduce both the time it takes for the government to dispose of property and the amount the government pays to maintain property. Specifically, the independent board would recommend federal properties for disposal or consolidation after receiving recommendations from civilian landholding agencies and independently review the agencies' recommendations.

Grouping all disposal and consolidation decisions into one set of proposals for Congress to consider in its entirety could help to limit local stakeholder influences at any individual site. Similarly, in our 2017 High Risk update, we reported that FASTA may help limit stakeholder influence by establishing an independent board to identify and recommend at least five high-value civilian federal buildings for disposal within 180 days after the board members are appointed, as well as develop recommendations to dispose and redevelop federal civilian real properties.¹⁹

18. When your report refers to emerging security threats, are there particular investments or decisions that Congress should be making now to ensure that federal property is well protected in the years to come?

¹⁷GAO, *Capital Financing: Alternative Approaches to Budgeting for Federal Real Property*, [GAO-14-239](#) (Washington, D.C.: Mar. 12, 2014).

¹⁸GAO, *Federal Real Property: Proposed Civilian Board Could Address Disposal of Unneeded Facilities*, [GAO-11-704T](#) (Washington, D.C.: June 9, 2011).

¹⁹GAO, *High Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others*, [GAO-17-317](#) (Washington, D.C.: Feb. 15, 2017); Pub. L. No. 114-287, 130 Stat. 1463 (Dec. 16, 2016).

We recently identified actions needed to better address various emerging threats, but the report is restricted as it contains controlled unclassified information.²⁰ Members of Congress or congressional staff who wish to obtain one or more of these products should call or e-mail the Congressional Relations Office (202) 512-4400 or congre1@gao.gov. Congress could help by encouraging agencies to better address emerging threats to federal facility security.

Strengthening Department of Homeland Security Management Functions

19. I understand that the U.S. Coast Guard, FEMA, and ICE, have only recently begun – or have yet to begin – financial system modernization efforts. Can you explain the importance of modernizing these systems and the risks of inaction?

At a minimum, financial management systems should provide federal managers with reliable, useful, and timely financial information to support day-to-day decision-making. Absent extensive manual intervention, the financial management systems at the U.S. Coast Guard, FEMA, and the U.S. Immigrations and Customs Enforcement (ICE) do not provide such information.

Financial system modernization efforts are underway at all three entities, but DHS management has not determined the resources needed to complete these efforts at FEMA and ICE. The discovery phase of these two modernization projects provides essential information for determining the implementation schedule and finalizing cost estimates that are needed prior to approving the projects. Until recently, DHS was unable to estimate when the discovery phases would be completed for both projects. However, in its March 2019 bi-annual update to GAO, DHS projected that the FEMA discovery phase would end in December 2020; it remained undetermined for ICE. Until DHS determines its needs and requirements, these financial system modernization efforts will continue to face delays. DHS expects to complete modernization of its U.S. Coast Guard system in October 2020. It has not projected completion dates for FEMA and ICE.

Until these modernization efforts are successfully completed, management at the U.S. Coast Guard, FEMA, and ICE will continue to lack the complete range of information needed for accountability, performance management and reporting, and decision making.

20. DHS spent \$6.5 billion dollars in 2017 on equipment investments and contracting. How is DHS doing in ensuring that huge sum of money is not being wasted and is being used on equipment that suits the needs of CBP or TSA officers?

- DHS has made incremental improvements to the management of its major acquisition programs. For example, in 2017 we found that, for the first time since GAO began its annual assessment, all of the programs in our review had department-approved

²⁰*Federal Facility Security: Actions Needed to Better Address Various Emerging Threats*. GAO-19-32SU. Washington, D.C., Oct 17, 2018.

baselines with cost, schedule, and performance goals. However, we have found that DHS has struggled to consistently apply its acquisition policy, which has led to execution challenges for some of its major acquisition programs. For example, during 2017, less than half of the major acquisition programs we reviewed with approved schedule and cost goals were on track.

- DHS has taken steps to strengthen requirements development across the department, such as reestablishing the Joint Requirements Council in June 2014. However, opportunities remain to further strengthen DHS's acquisition process by using the Joint Requirements Council to impact DHS's budget. The council could better fulfill its mission by identifying overlapping or common requirements between DHS components, and by making recommendations to senior leadership to help ensure that DHS uses its finite investment resources wisely to meet the needs of users like CBP and TSA officers.

Funding the Nation's Surface Transportation System

21. Can you elaborate on the potential long-term costs if Congress is unable to enact a sustainable funding source for surface transportation?

In terms of funding to sustain the Highway Trust Fund, the Congressional Budget Office estimated in January 2019 that \$159 billion in additional funding would be needed from 2022 through 2029 to maintain current spending levels on surface transportation programs. If this level is not achieved through a sustainable funding source, it would likely be authorized from general revenues. Congress has already transferred about \$141 billion in general revenues to the Fund 8 times from 2008 through 2015. Continuing to transfer funds from general revenues may not be sustainable, given competing demands and the federal government's long-term fiscal challenges.

22. Beginning in 2008, GAO suggested that Congress consider a fundamental reexamination of surface transportation spending programs to improve performance and accountability. Subsequently, toward this end, Congress passed the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21) and the 2015 FAST Act. Are there additional steps Congress should take to improve the implementation of the performance-based approach to surface transportation funding that was established in the 2015 FAST Act and the 2012 Moving Ahead for Progress in the 21st Century Act (MAP-21)?

No additional steps are needed at this time. The Department of Transportation (DOT) and states are still in the process of implementing this approach. DOT completed the first step in implementing this approach—publishing rules to establish national performance measures—in 2017. States began setting targets based on these performance measures in 2018 and DOT will be evaluating whether grantees have met or made significant progress toward their targets. In 2017 GAO recommended that the Federal Highway Administration (FHWA)—which administers the bulk of state transportation grants—develop an implementation plan for Transportation Performance Management that includes goals, specific actions, and

timelines; FHWA has taken action to fulfill that recommendation. Also, GAO is currently examining the status of DOT and state implementation of the performance-based approach for traffic safety measures.

(103310)

**Post-Hearing Questions for the Record
Submitted to Hon. Gene L. Dodaro
From Senator Kamala Harris**

**“High Risk List: Recommendations to Reduce Risk of
Waste, Fraud, and Mismanagement in Federal Programs”**

March 6, 2019

Climate Change and Federal Fiscal Exposure:

The GAO high-risk report notes that numerous studies highlight the risks to environmental and economic systems due to climate change. Climate change is expected to impact both the frequency and severity of a range of natural hazards including wildfires, floods, drought events, and heatwaves. Given this reality and the costs of providing disaster relief after damaging storms occur, not to mention the risk to human lives, the federal government should be taking immediate steps to mitigate against loss of life and property. Yet, the report notes that since the 2017 GAO report, the federal government has not made measurable progress to reduce fiscal exposure by better managing climate change risks through its role in five key areas: (1) as an insurer of property and crops; (2) as a provider of disaster relief; (3) as the owner and operator of infrastructure; (4) as the leader of a National Climate Strategic Plan; and (5) as a provider of technical assistance to decision makers.

The report mentions multiple recent Executive Orders that have limited progress, and in some cases, led to regression in limiting fiscal exposure to climate risks.

1. What has been the cumulative impact of these Executive Orders?

The net effect is that the federal government has not made measurable progress to reduce its fiscal exposure to climate change and in certain cases, federal fiscal exposure may increase, which ultimately increases the cost to American taxpayers. For example:

- The August 15, 2017 E.O. 13807 revoked the January 30, 2015 Executive Order that established a federal flood risk management standard that would have enhanced federal flood resilience by ensuring agencies addressed current and future flood risk.
- As directed by the March 2017 E.O. 13783, the Council on Environmental Quality (CEQ) rescinded its guidance directing agencies to consider climate change impacts, such as sea-level rise, in their National Environmental Policy Act (NEPA) reviews.

As a result of these and other policy decisions, taxpayer-funded projects may not last as long as intended because they do not account for future changes in climate-related risk, which increases the federal government’s long-term fiscal exposure.

Enhancing resilience by reducing or eliminating long-term risk to people and property from natural hazards is one way to reduce these fiscal exposures. For example, the National Institute of Building Sciences (NIBS) released the *Natural Hazard Mitigation Saves: 2018 Interim Report*, which finds that the nation can save \$6 in future disaster costs, for every \$1

spent on pre-hazard mitigation. NIBS also found that adopting the most recent international building codes could yield a return of \$11 in avoided future disaster costs for every \$1 invested.

Additionally, monitoring and demonstrated progress are high-risk criteria that are not met across the federal government's role in all five key areas, including in the federal government's role as a leader of a National Climate Strategic Plan.

2. How does the lack of monitoring and demonstrated progress translate to additional fiscal exposure to climate change?

Based on our high-risk criteria, monitoring results and demonstrating progress are critical for allocating limited federal resources effectively. Without a strategy to coordinate and guide federal efforts to reduce federal fiscal exposure across all five key areas and mechanisms to monitor the success of these efforts, the federal government will not know whether it is making any progress at reducing federal fiscal exposure to climate change. As a result, the federal government could, for example, invest billions of dollars in various resilience efforts that ultimately could have minimal effect on overall fiscal exposure.

We have made multiple recommendations since 2011 to the Executive Office of the President (EOP) to address these issues and develop a government-wide strategy with clear priorities, goals and measures to guide the nation's efforts to adapt to climate change. EOP has not implemented them.

Need for a Federal Data Breach Requirement

The Government Accountability Office (GAO) high-risk report continues to warn that the federal government has not yet articulated a clear and comprehensive cybersecurity strategy. The report suggests that federal laws governing privacy do not consistently protect Americans' sensitive personal information, which is a crucial element of any effective cybersecurity strategy. Furthermore, the report states that the federal government should strengthen requirements that federal agencies protect personal data. When unsecured personal data is exposed during a data breach, criminal networks and hostile foreign governments use that data to target not just consumers, but our nation's critical infrastructure and security.

3. What has the government done to improve its response to data breaches?

The Department of Homeland Security (DHS) and other federal agencies have taken steps to implement key practices for detecting and responding to data breaches, but agencies still have much work to do to fully implement all the capabilities that they should have in place. For example, the National Institute of Standards and Technology (NIST) recommends that federal agencies deploy intrusion detection and prevention capabilities.¹ These capabilities

¹NIST, *Security and Privacy Controls for Federal Information Systems and Organizations*, Special Publication 800-53, Revision 4 (Gaithersburg, M.D.: Apr. 2013); and NIST, *Guide to Intrusion Detection and Prevention Systems*, Special Publication 800-94 (Gaithersburg, MD.: Feb. 2007).

include monitoring cloud services, using host-based intrusion prevention systems, monitoring external and internal network traffic, and using a security information and event management system. However, during interviews that we conducted in 2018 of 23 large federal agencies, officials told us that they often had not implemented many of these capabilities.² Such inconsistent implementation exposes federal systems and the information they contain to additional risk.

In addition, at the government-wide level, DHS is tasked by the Federal Cybersecurity Enhancement Act of 2015 to develop and implement, in coordination with the Office of Management and Budget (OMB), an intrusion assessment plan to proactively detect, identify, and remove intruders in agency information systems on a routine basis. However, DHS has made mixed progress in carrying out this mission. For example, the department developed an intrusion assessment plan, deployed the National Cybersecurity Protection System to offer intrusion detection and prevention capabilities to agencies, and is providing tools and services to agencies to monitor their networks through its Continuous Diagnostics and Mitigation program, which is intended to improve capabilities to detect and prevent intrusions.

On the other hand, at the time of our review in 2018, the National Cybersecurity Protection System had limitations in detecting certain types of traffic, and agencies were not sending all appropriate traffic through the system. Further, the Continuous Diagnostics and Mitigation program was behind at meeting planned implementation dates, and agencies had requested additional training and guidance for these services. In addition, most of the 23 agencies we reviewed had not fully implemented any of the phases of the Continuous Diagnostics and Mitigation program.

We made recommendations to (1) OMB to report on implementation of the defense-in-depth strategy described in the intrusion assessment plan and (2) DHS to identify obstacles and impediments affecting agencies' abilities to implement intrusion detection and prevention capabilities. OMB responded that it is working closely with DHS to provide strategic direction in assessing gaps in intrusion detection and prevention capabilities and modernizing the manner in which these capabilities are delivered to the federal government. DHS stated that it concurred with our recommendation and aimed to implement it in 2019.

4. Do you believe federal agencies should be required to notify individuals if they are impacted by a data breach?

In our view, OMB has provided guidance³ to federal agencies on responding to data breaches that reflects a reasonable approach for notifying individuals potentially impacted by such

²GAO, *Information Security: Agencies Need to Improve Implementation of Federal Approach to Securing Systems and Protecting against Intrusions*, GAO-19-105, (Washington, D.C.: Dec. 18, 2018).

³The Federal Information Security Modernization Act of 2014 requires the Director of OMB ensure that data breach notification policies and guidelines require notice by the affected agency to affected individuals, which shall be provided as expeditiously as practicable and without unreasonable delay after the agency discovers the unauthorized acquisition or access. Pub. L. No. 113-283, § 2(d), 128 Stat. 3073, 3085 (Dec. 18, 2014).

breaches.⁴ OMB requires agencies to assess the risk of harm when deciding whether notification of affected individuals is appropriate. Factors that agencies are to consider include the nature and sensitivity of the personally identifiable information (PII) that was potentially compromised in the breach, the likelihood of unauthorized access and use of the PII, and the circumstances of the breach.

If notification is required because of the potential for harm, agencies are to notify individuals potentially affected by a breach as expeditiously as practicable and without unreasonable delay. OMB's guidance reflects the need for agencies to make judgement calls on a case-by-case basis regarding the value and appropriateness of notifying affected individuals about a data breach.

We continue to believe that a vital factor in protecting personal privacy is ensuring that databases of PII maintained by government agencies, or on their behalf, are protected from data breaches. As we stated in our recent High Risk Series update on cybersecurity, federal efforts to protect privacy and sensitive data certainly can be improved.⁵ When data breaches do occur that expose individuals to a significant risk of harm, prompt notification of affected individuals allows those individuals to take actions, such as implementing a credit freeze, to help protect themselves from harm such as identity theft. In that regard, appropriate notification of affected individuals is an important aspect of an effective data breach response program.

The widely-accepted Fair Information Practice Principles state that individuals should have the means of learning about the use of their personal information, which we believe reinforces the importance of breach notification. In a 2013 report, we noted that the current statutory framework for consumer privacy does not fully reflect the Fair Information Practice Principles, and we recommended that Congress consider strengthening that framework.⁶ Earlier this year, we reiterated that Congress should consider developing comprehensive legislation on internet privacy that would enhance consumer protections and provide flexibility to address a rapidly evolving internet environment.⁷

Security Clearance Backlog

Many of the cybersecurity roles that we need to fill in the federal government require a security clearance. The current backlog in issuing security clearances hampers the government's ability to recruit and retain talent. At the same time, we must ensure that background investigations for security clearances remain thorough and rigorous in order to ensure that the individuals we entrust to protect our national security are properly vetted. The report mentions that the Office of

⁴OMB, *Preparing for and Responding to a Breach of Personally Identifiable Information*, OMB Memorandum M-17-12, (Washington, D.C.: Jan. 3, 2017).

⁵GAO, *High-Risk Series: Urgent Actions Are Needed to Address Cybersecurity Challenges Facing the Nation*, [GAO-18-622](#) (Washington, D.C.: Sept. 6, 2018).

⁶GAO, *Information Resellers: Consumer Privacy Framework Needs to Reflect Changes in Technology and the Marketplace*, [GAO-13-663](#) (Washington, D.C.: Sept. 25, 2013).

⁷GAO, *Internet Privacy: Additional Federal Authority Could Enhance Consumer Protection and Provide Flexibility*, [GAO-19-52](#) (Washington, D.C.: Jan. 15, 2019).

Personnel Management (OPM) has not sufficiently monitored the actions being taken to improve the IT systems that are used to process clearances.

5. Do you think that updating these legacy IT systems can reduce the backlog by speeding up the time it takes to complete investigations, while also making those investigations more secure?

GAO has not identified a causal link between the size of the backlog at OPM's National Background Investigations Bureau (NBIB), the timeliness of the personnel security clearance process, and OPM's legacy IT systems. As noted in our recent work, DOD is responsible for developing a new system to support background investigation processes. Specifically, Executive Order 13467, as amended, assigns the Secretary of Defense the role of developing and securely operating IT systems that support all background investigation processes conducted by NBIB. Securing the legacy systems is a joint effort by DOD and OPM, according to an October 2016 Memorandum of Agreement between the two agencies regarding the roles, responsibilities, and expectations of each party throughout the entire lifecycle of OPM's use of DOD's IT systems in support of the background investigation process. According to officials, DOD has in place the resources needed for the development of the IT system it is developing to support background investigations, the National Background Investigative Services (NBIS), is actively identifying necessary system capabilities, and has begun small preliminary pilots of its services. Those officials said they have no plans to rely on OPM legacy systems as a component of NBIS architecture in the future.

However, those DOD officials also stated that they are building NBIS to support the current background investigation process, which continues to rely on OPM legacy IT systems in the short term. As of December 2018, OPM has not implemented GAO's recommendations related to improving controls of its legacy systems, including those that support security clearance background investigations. In particular, the relevant recommendations on which OPM has not taken action to improve agency information security programs, include:

- updating security plans for selected systems to ensure that all controls specific to high-impact systems are addressed, including a rationale if the control is not implemented, and where other plans are cross-referenced, ensure that the other system's plan appropriately addresses the control ([GAO-16-501](#)).
- providing and tracking specialized training for all individuals, including contractors, who have significant security responsibilities ([GAO-16-501](#)).
- re-evaluating security control assessments to ensure that they comprehensively test technical controls ([GAO-16-501](#)).
- improving the timeliness of validating evidence associated with actions taken to address the United States Computer Emergency Readiness Team (US-CERT) recommendations ([GAO-17-614](#)).
- developing and implementing role-based training requirements for staff using Continuous Diagnostics and Mitigation tools ([GAO-17-614](#)).

6. **There are parts of the federal government that specialize in working with agencies to improve IT systems and streamline programs, including 18F and the U.S. Digital Service. Do you recommend that OPM work with either of these services to see if they can help make improvements happen?**

We have previously reported that working with 18F and U.S. Digital Services has been beneficial. In April 2016, we reported that, by hiring technology and software development experts and using leading software development practices, both 18F and U.S. Digital Service have provided a variety of useful services to federal agencies. Most surveyed agency project managers that partnered with 18F and U.S. Digital Services were satisfied with the services provided. We also reported in August 2016 that U.S. Digital Service had provided assistance to the OPM's Federal Investigative Services for systems transformation. Around that time, OPM indicated that it planned to establish a Digital Service Team, but OMB had not yet established a charter for the Digital Service Team.

