



July 2016

FEDERAL TELEWORK

Better Guidance Could Help Agencies Calculate Benefits and Costs

GAO Highlights

Highlights of [GAO-16-551](#), a report to congressional requesters

Why GAO Did This Study

With over 1 million federal employees eligible for telework in 2013, federal agencies are fully engaged in incorporating telework as a standard human capital flexibility. GAO was asked to review the benefits and costs associated with agency telework programs. This report (1) identifies the reported benefits and costs associated with federal agency telework programs and assesses the extent to which selected agencies have supporting data; and (2) identifies some of the key resources that federal agencies can use to help calculate benefits and costs associated with their telework programs.

For this review, GAO selected six agencies—DOT, EPA, FDIC, GSA, MSPB, and USDA—based on criteria that included agency size and reported cost savings from telework. GAO analyzed selected agencies' documents and interviewed agency officials to assess the extent that these agencies had supporting data. GAO also compiled and reviewed potential resources for agencies.

What GAO Recommends

GAO recommends that the Director of OPM should include cost savings questions in future telework data calls and provide clarifying guidance on options for developing supporting data for benefits and costs. OPM concurred with both recommendations. OPM will include cost savings questions from previous surveys in the 2016 agency telework survey. OPM will work with the CHCO Council to develop more guidance for agencies on evaluating the benefits and costs of telework programs.

View [GAO-16-551](#). For more information, contact Yvonne D. Jones at (202) 512-6806 or jonesy@gao.gov.

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What GAO Found

Benefits associated with telework programs include continuity of operations and reduced employee absences, based on GAO's literature review and the experiences of six selected agencies. The benefits most frequently cited by the selected agencies—the Department of Transportation (DOT), Environmental Protection Agency (EPA), Federal Deposit Insurance Corporation (FDIC), General Services Administration (GSA), Merit Systems Protection Board (MSPB), and the United States Department of Agriculture (USDA)—were improved recruitment/retention, increased productivity, and improved work/life balance. Ongoing costs of telework programs include training and managing the telework program and one-time costs include information technology set up. The ongoing cost most frequently cited by the selected agencies was personnel costs. However, GAO found that the selected agencies had little data to support the benefits or costs associated with their telework programs. All of the selected agencies could provide some supporting documentation for some of the benefits and only two could provide supporting documentation for some of the costs.

The Office of Personnel Management (OPM) collects data on telework via its annual data call and consults with the Chief Human Capital Officers (CHCO) Council about its annual telework report to Congress. However, GAO found substantial declines in agency reporting of telework cost savings to OPM. For example, in 2012, agencies reported 66 examples of telework cost savings, but a year later they reported 29 examples. Amidst this decline, OPM decided to collect less information about cost savings—a key benefit of telework. OPM asked agencies for cost savings information in 2011, 2012, and 2013 but did not in its 2014-2015 agency data request. The Telework Enhancement Act of 2010 requires an annual assessment of agencies in meeting established outcome goals. Assessments that include information on benefits, net costs savings, and costs can help decision makers in determining the overall effects of their telework programs and the progress achieved. OPM officials stated that they streamlined the annual data request to focus on the act's requirements, which do not explicitly include reporting on cost savings. However, as a result of this decision Congress will have less information to assess the value of telework.

OPM provides resources to agencies to help them with their telework programs, but may be missing other opportunities to help agencies better identify the net cost savings associated with their telework programs. The resources OPM offers include fee-for-service assistance to help implement or improve existing telework programs and training and webinars on responding to its annual data call. However, OPM guidance lacks information about how agencies can use existing data collection efforts to more readily identify benefits of their telework programs, and OPM has not provided guidance on how agencies should calculate the costs of their programs. By not taking advantage of existing data sources or having guidance on calculating costs, agencies are limited in their efforts to evaluate the net cost savings associated with their telework programs. As a result, Congress does not have the information it needs to assess the true value of telework, which could impact its ability to provide oversight of telework across the federal government.

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Abbreviations

act	Telework Enhancement Act of 2010
CFO	chief financial officers
CHCO	chief human capital officers
COOP	continuity of operations
DOT	Department of Transportation
EPA	Environmental Protection Agency
FDIC	Federal Deposit Insurance Corporation
GSA	General Services Administration
IT	information technology
MSPB	Merit Systems Protection Board
OIG	Office of the Inspector General
OMB	Office of Management and Budget
OPM	Office of Personnel Management
ROI	return on investment
TMO	telework managing officer
tool	GSA Carbon Footprint Tool
USDA	United States Department of Agriculture

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July 15, 2016

The Honorable Elijah E. Cummings
Ranking Member
Committee on Oversight and Government Reform
House of Representatives

The Honorable Stephen F. Lynch
House of Representatives

With over 1 million federal employees eligible (about 45 percent of federal employees) for telework in 2013, federal agencies are fully engaged in incorporating telework as a standard human capital flexibility. The Telework Enhancement Act of 2010 (act) requires an assessment of agency progress in achieving established telework outcome goals such as reduced energy use and real estate costs.¹ Many of these outcome goals reflect benefits and cost savings agencies can achieve through telework. Studies suggest there is a range of benefits, cost savings, and costs associated with telework, but agencies can face challenges with evaluating the extent to which telework benefits the agency and at what cost. With so many employees eligible, it is a good management practice for agencies to understand the value of their telework programs.

You asked us to review the benefits and costs associated with agency telework programs. This report identifies (1) the reported benefits and costs associated with federal agency telework programs and assesses the extent to which selected agencies have supporting data; and (2) some of the key resources that federal agencies can use to help calculate benefits and costs associated with their telework programs. For the purposes of this report, we are including benefits that are quantifiable such as cost savings from reduced federal real estate use and benefits that are not monetized, such as environmental impacts. We are defining costs incurred as one-time costs and ongoing costs. For example, one-time costs include one-time information technology (IT) set up and ongoing costs include personnel costs.

¹Pub. L. No. 111-292, 124 Stat. 3165 (Dec. 9, 2010), codified primarily at chapter 65 of title 5 of the United States Code.

To respond to these objectives, we selected a nongeneralizable sample of six agencies—Department of Transportation (DOT), Environmental Protection Agency (EPA), Federal Deposit Insurance Corporation (FDIC), General Services Administration (GSA), Merit Systems Protection Board (MSPB), and United States Department of Agriculture (USDA)—based on agency reported cost savings, identification as a telework leader by the Office of Personnel Management (OPM), recipient of a 2013 Mobile Work Exchange Award, reported use of telework to achieve agency goals, core missions related to telework benefits, and agency size.² We also reviewed guidance for setting and evaluating telework program goals.

To identify reported benefits and costs associated with federal agency telework programs, we conducted a literature review to identify and create an inventory of the reported benefits and costs. We analyzed selected agencies' documents and conducted semi-structured interviews with agency officials on benefits, costs incurred, supporting data for benefits and costs incurred, challenges associated with calculating benefits and costs incurred, and potential risks associated with telework programs and methods to address the risks.³ We also reviewed OPM's 2012, 2013, and 2014 annual telework reports to Congress and agencies' 2013 responses to OPM on telework participation, telework-related outcome goals, cost savings, barriers to telework implementation, and actions taken to address those barriers. To determine the reliability of the data that OPM used in the 2014 annual report to Congress, we reviewed our prior data reliability assessments conducted on OPM's 2011 data call and consulted knowledgeable OPM officials about OPM's data collection methods. We have determined that the data is sufficiently reliable for the purposes of our review.

To identify available resources that federal agencies can use to help calculate benefits and costs incurred, we compiled and reviewed a list of potential resources from our literature review and information from OPM

²Mobile Work Exchange is a public-private partnership focused on demonstrating the value of mobility and telework. OPM collaborated with Mobile Work Exchange on a report on federal agency mobility and telework best practices. Mobile Work Exchange gave awards in 2013 to agencies to recognize excellence in government telework and mobility programs.

³We reviewed whether the selected agencies had supporting data and not the quality of the supporting data because that was outside of the scope of this review.

and the selected agencies. For more detailed information on our objectives, scope, and methodology, please see appendix I.

We conducted this performance audit from April 2015 to July 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Telework Enhancement Act of 2010 and Agency and OPM Roles and Responsibilities

In drafting the Telework Enhancement Act of 2010, Congress recognized that telework was an important tool and that legislation was needed to help agencies overcome their resistance to telework. The act established a framework of requirements for executive agencies to meet in implementing telework. These requirements include notifying all employees of their eligibility to telework and establishing agency telework participation goals. The act also requires each executive agency to designate a telework managing officer (TMO) who develops telework policy, serves as an advisor for agency leadership, and is a resource for managers and employees.

The act assigns OPM major leadership responsibilities including (1) providing policy and policy guidance for telework; (2) assisting each agency in establishing appropriate qualitative and quantitative measures and teleworking goals;⁴ (3) identifying best practices and recommendations for the federal government and reviewing the outcomes associated with an increase in telework, including effects on energy consumption, job creation and availability, urban transportation patterns, and the ability to anticipate the dispersal of work during periods of

⁴We previously recommended that OPM assist agencies with goal setting in relation to telework. While OPM responded that this should only apply to participation goals, the law requires OPM to assist each agency in establishing measures and telework goals, without such limitation. To the extent the agency intends to establish a telework-related outcome goal, OPM should provide assistance. GAO, *Federal Telework: Office of Personnel Management's 2012 Telework Report Shows Opportunities for Improvement*, [GAO-13-298R](#) (Washington D.C.: June 28, 2013).

emergency; and (4) submitting an annual report to Congress addressing the telework program of each executive agency that includes an assessment of each agency's progress in meeting outcome goals that the agency may have established, such as the impact of telework on recruitment and retention and energy use, among others.⁵

The act also requires each executive agency to submit an annual report on the agency's efforts to promote telework to the Chair and Vice Chair of the Chief Human Capital Officers (CHCO) Council. In addition, the act requires OPM to consult with the CHCO Council in submitting its annual report to Congress addressing the telework programs of each executive agency.⁶ The CHCO Council receives updates from OPM on agencies' annual telework reports and discusses their implications and promising practices. Telework was discussed at the February 2016 meeting.⁷

Telework Participation

As shown in figure 1, three key areas of telework participation have increased, according to OPM's 2014 annual report. OPM reported that, from 2011 to 2012, the number of employees eligible for telework increased from 684,589 to 1,020,034 (an increase of about 49 percent), and the number of employees that had telework agreements increased from 144,851 to 267,227 (an 84 percent increase). While we have previously reported on data limitations related to OPM's telework report, OPM's report provides useful context about the status of telework in the federal government and is the most comprehensive source of information on telework in the executive branch.⁸

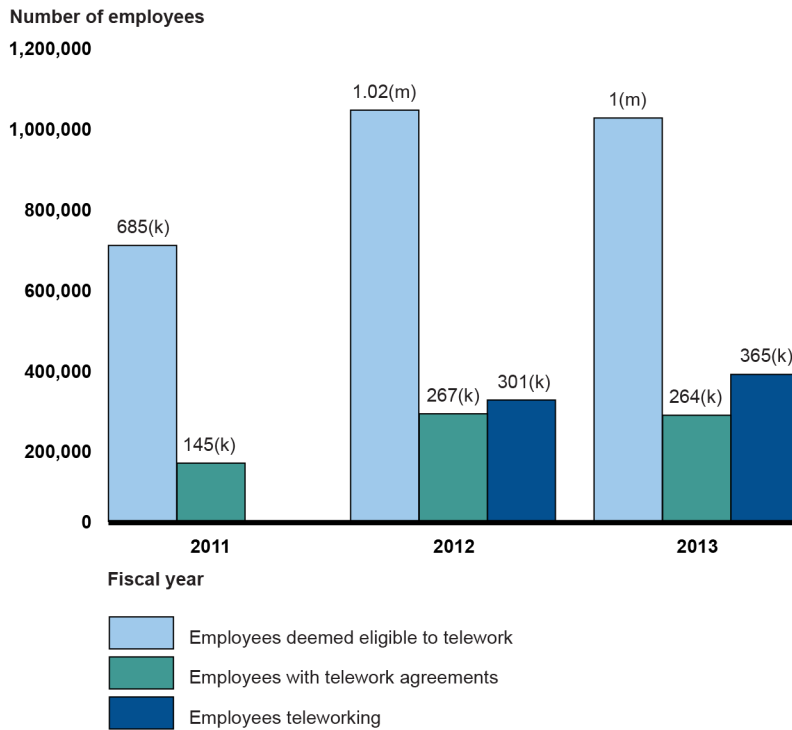
⁵In 2012, we reported that OPM had been concerned about the reliability of telework data it receives from executive agencies over the prior decade. GAO, *Federal Telework: Program Measurement Continues to Confront Data Reliability Issues*, [GAO-12-519](#) (Washington, D.C.: Apr. 19, 2012).

⁶The CHCO Council advises on and coordinates the human capital activities of member agencies. The council is composed of the Director of OPM, who serves as chairman; the Deputy Director for Management of the Office of Management and Budget (OMB), who acts as vice chairman; the CHCOs of the 15 executive departments; and the CHCOs of 12 additional agencies designated by the OPM Director.

⁷OPM has reported on each year's data call in the following year's report on the status of telework in the federal government. So, for example, the 2012 report presents information based on the 2011 data call.

⁸We described challenges related to year-to-year comparisons because not all agencies had data to answer each question. [GAO-12-519](#).

Figure 1: Increases in Number of Employees That Were Eligible for Telework, Had Telework Agreements, and Were Teleworking



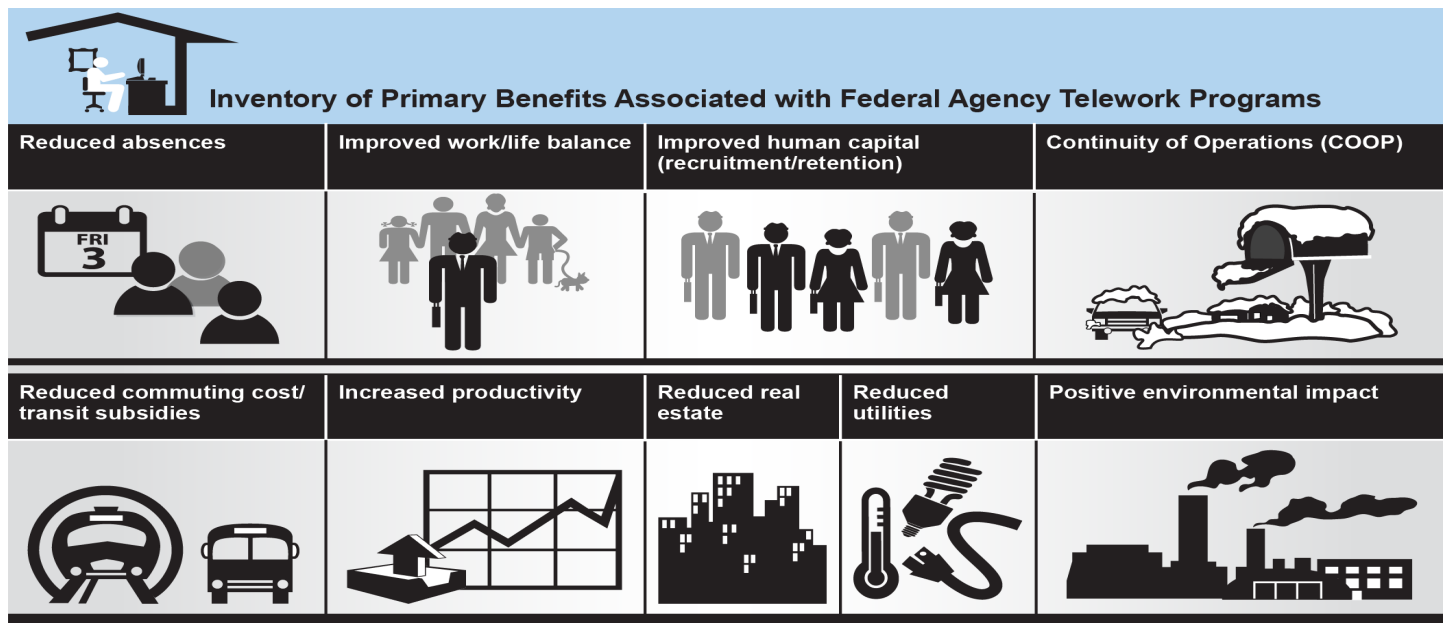
Source: GAO analysis of Office of Personnel Management (OPM) data and OPM, *2014 Status of Telework in the Federal Government Report to Congress*. | GAO-16-551

Note: The *2014 Status of Telework in the Federal Government Report to Congress* stated that different numbers of agencies responded to each of the telework participation questions each year. Eighty-two agencies reported on the number of telework-eligible employees in 2011, 83 in 2012, and 86 in 2013. Eighty-two agencies reported on the number of telework agreements in 2011, 81 in 2012, and 83 in 2013. Seventy-five agencies reported on the number of employees teleworking in 2012 and 81 in 2013. OPM did not collect data on the number of employees that teleworked in fiscal year 2011 and thus we did not include this information.

Selected Agencies Identified Benefits and Costs Associated with Telework, but Generally Lacked Supporting Data

Figure 2 shows telework benefits we identified associated with federal agency telework programs, based on a literature review and the experiences of the six selected agencies whose telework programs we examined. These benefits included reduced employee absences, improved work/life balance, improved recruitment and retention, maintaining continuity of operations (COOP) during designated emergencies or inclement weather, reduced commuting costs/transit subsidies, increased productivity, reduced real estate costs, reduced utilities, and positive environmental impacts, such as reduced greenhouse emissions.

Figure 2: Inventory of Primary Benefits Associated with Federal Agency Telework Programs



Source: GAO analysis of literature review of benefits associated with telework programs and the experiences of the six selected agencies. | GAO-16-551

All Selected Agencies Identified Benefits

All six selected agencies identified benefits associated with their telework programs. Specifically, all six selected agencies identified human capital (improved recruitment/retention), improved work/life balance, and increased productivity and five of them identified reduced utilities, reduced commuting costs/transit subsidies and reduced employee absences as benefits (see table 1). For example, USDA officials reported that the agency highlights telework as an agency benefit during hiring events to recruit and attract veterans and persons with disabilities. The officials also said they have been able to retain staff who, because they can telework, choose to relocate from their established duty stations and continue working at the agency rather than retire. In addition, FDIC officials reported that their telework program contributes to improved work/life balance for their employees due to reduced commuting time.

Four of the six agencies identified COOP, reduced real estate use, and positive environmental impact as benefits of their telework programs (see table 1). For example, a FDIC official said that FDIC was able to reduce the amount of office space it leased because eligible teleworkers opted to relinquish their dedicated office space and telework from home or at an

approved alternate work site when not working at an insured depository institution.

Table 1: Most Frequently Identified Benefits of Telework at Six Selected Agencies

Telework benefits	Number of agencies
Improved human capital (recruitment/retention)	6
Improved work/life balance	6
Increased productivity	6
Reduced utilities	5
Reduced commuting costs/transit subsidies	5
Reduced employee absences	5
Continuity of operations	4
Reduced real estate	4
Positive environmental impact	4

Source: GAO analysis of agency reported telework information. | GAO-16-551

Government-wide Telework-Related Outcome Goals Include Benefits That We Identified

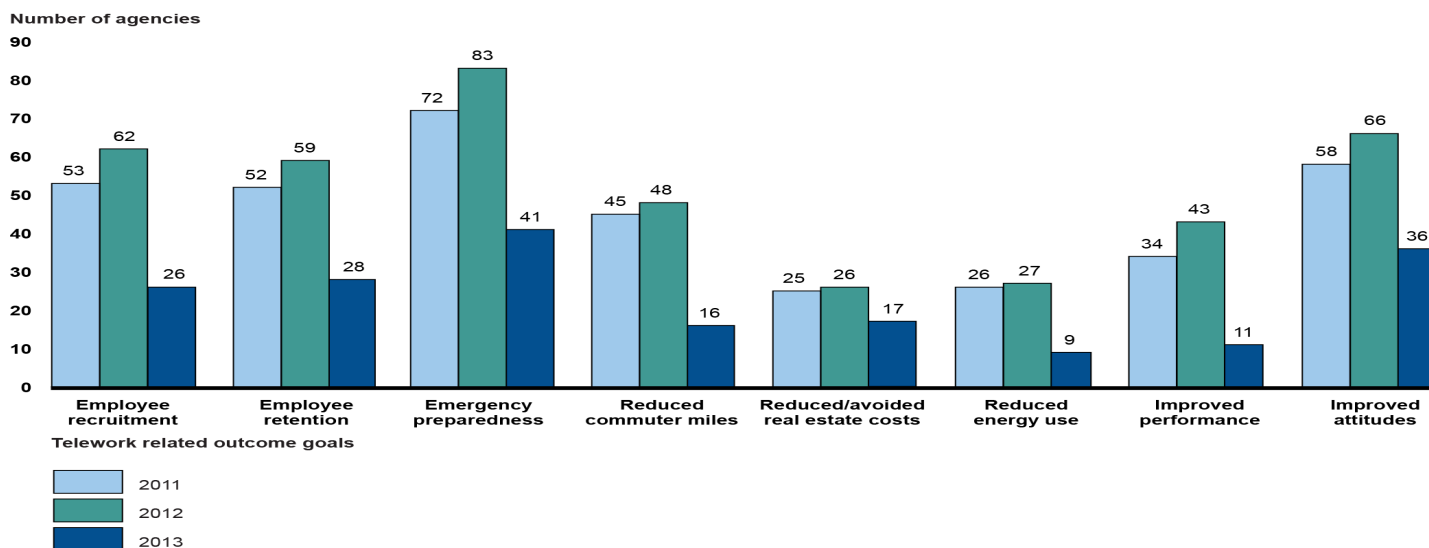
Beginning in 2011, OPM also began collecting data on agency progress in setting and achieving outcome goals including telework benefits that we identified in our inventory, such as employee recruitment and retention.⁹ The number of agencies government-wide that set and assessed the progress of their telework-related outcome goals substantially decreased between 2012 and 2013, according to OPM's 2014 annual report.¹⁰ (see figure 3). Fewer agencies reported setting a goal for emergency preparedness—83 agencies in 2012 compared to 41 in 2013. Likewise, fewer agencies reported setting goals for employee recruitment as a telework related outcome goal—62 agencies in 2012 compared to 26 in 2013. OPM officials noted in the 2014 report that agencies set ambitious telework-related outcome goals in the early implementation of the act and as agency telework programs matured,

⁹However, we have previously noted that OPM reported that many agencies do not have the systems capacity to collect all requested telework data, which has consequences for data quality standards, including reliability. [GAO-13-298R](#).

¹⁰In 2011, 87 agencies responded to questions about telework-related outcome goals and 89 agencies responded in both 2012 and 2013, according to the 2014 annual report and OPM officials.

agencies began to identify and set fewer telework-related outcome goals to track and assess progress.¹¹

Figure 3: Change in the Number of Agencies That Set Telework-Related Outcome Goals



Source: Office of Personnel Management (OPM), 2014 Status of Telework in the Federal Government Report to Congress. | GAO-16-551

Note: In 2011, 87 agencies responded to questions about telework-related outcome goals and 89 agencies responded in both 2012 and 2013, according to the OPM 2014 telework report and OPM officials.

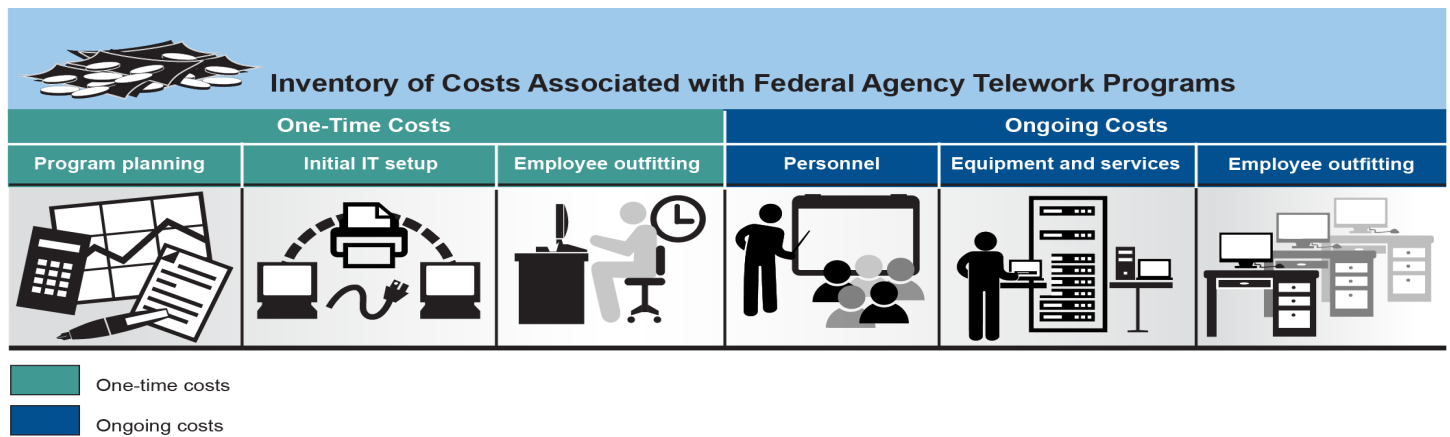
Costs Associated with Agencies' Telework Programs

Figure 4 shows the costs associated with telework that we identified for federal agency telework programs based on a literature review and the experiences of the six selected agencies in our review. Unlike benefits, OPM's annual report does not include information on costs associated with agency telework programs. Agencies may incur one-time costs for implementing their telework program and ongoing costs to maintain their telework program. One-time costs may include program planning, initial information technology (IT) setup, or employee outfitting costs.¹² Ongoing costs may include personnel costs associated with required training and administrative costs of staff managing the telework program.

¹¹The act does not require agencies to set specified telework-related outcome goals.

¹²One-time employee outfitting costs are costs for implementing a telework program, such as purchasing laptops. Ongoing employee outfitting costs are costs to maintain a telework program, such as purchasing computers for new teleworkers.

Figure 4: Inventory of Costs Associated with Federal Agency Telework Programs



Source: GAO analysis of literature review of costs associated with telework programs and the experiences of the six selected agencies. | GAO-16-551

Note: One-time employee outfitting costs are costs for implementing a telework program, such as purchasing laptops. Ongoing employee outfitting costs are costs to maintain a telework program, such as purchasing computers for new teleworkers.

Five of the six selected agencies identified ongoing costs associated with their telework programs, including personnel and technology related costs. The cost of personnel was the most frequently identified ongoing cost associated with these five agency telework programs. Personnel costs can include salaries for telework coordinators or employee training costs. For example, EPA identified employee training as an ongoing personnel cost because all employees are required to participate in telework training to remain telework eligible. Managers who supervise teleworkers also receive training. In addition, USDA officials reported ongoing costs to purchase additional remote access software to accommodate annual increases in teleworkers to the network and maintain the required licenses annually. MSPB did not identify any costs associated with its telework program. None of the six selected agencies identified one-time costs associated with implementing their telework programs.

Selected Agencies Had Little Supporting Data for Benefits and Costs

The act does not require agencies to provide supporting data to OPM for benefits or costs incurred. We defined supporting data as having both a data source and a corresponding methodology. Supporting data can be quantitative or qualitative. For example, emissions reductions connected to telework can be measured in metric tons of carbon emissions avoided. Cost savings can include reduced spending on transit subsidies or utility bills. Qualitative support for benefits might include responses from survey

questions or results from focus groups indicating that telework has improved work/life balance.

Selected Agencies Had Supporting Data for Some Benefits

Supporting data for benefits from all of the selected agencies are shown in figure 5.

Figure 5: Selected Agencies Had Some Supporting Data for Telework Benefits

Benefit	DOT	EPA	FDIC	GSA	MSPB	USDA
Improved human capital (recruitment, retention)						
Improved work/life balance						
Reduced commuting costs/transit subsidies						
Reduced utilities						
Increased productivity						
Reduced employee absences						
Reduced real estate						
Continuity of operations						
Positive environmental impact						
Other (reduced work-related costs for employees, reduced stress levels and improved health, reasonable accommodations, reduced administrative leave, and increased job satisfaction/employee morale)			 	 		

Agency had supporting data for the benefit
 Agency identified benefit but did not provide supporting data
 Agency did not identify this as a benefit

Source: GAO analysis of selected agencies' reported telework information (Department of Transportation (DOT), Environmental Protection Agency (EPA), Federal Deposit Insurance Corporation (FDIC), General Services Administration (GSA), Merit Systems Protection Board (MSPB), and United States Department of Agriculture (USDA)). | GAO-16-551

Note: The selected agencies also identified other benefits, but these benefits were only identified once, except for reduced administrative leave and increased job satisfaction/employee morale which were identified by two agencies. GSA and USDA each identified multiple other benefits, which is shown with multiple icons in the other row.

Specifically, all of the selected agencies had supporting data for 1 to 7 of the benefits that they identified.

- DOT had supporting data for 1 of the 10 benefits (reducing environmental impact) that it identified. The agency reported avoiding approximately 21.7 million kg of carbon dioxide emissions in fiscal year 2014, which is equal to 1.7 kg on average per employee, per day.¹³
- EPA had supporting data for 1 of the 9 benefits it identified: reduced environmental impact. EPA reported avoiding 10,791 telework-related metric tons of carbon dioxide emissions in 2014 as compared to 2011.
- FDIC had supporting data for 4 of the 8 benefits it identified.¹⁴ FDIC conducted a telework survey of managers and employees in 2008 which suggests that telework contributed to retaining employees, work/life balance, and increased productivity.¹⁵
- GSA had supporting data for 5 of the 12 benefits it identified: work/life balance, transit subsidies, environmental impact, reduced paid administrative leave, and increased job satisfaction/employee morale. To calculate costs savings for reduced transit subsidies from teleworking, GSA officials obtained a transit subsidy participation list from DOT for fiscal year 2013 through fiscal year 2015 and compared it against reported telework hours for the same period to calculate a cost savings of \$926,872 in 2015 based on telework-related reduced use of transit subsidies in comparison with 2013. GSA officials also reported that from fiscal year 2013 through fiscal year 2015, employees used 45,426 fewer hours of paid administrative leave during worksite closures and they teleworked about 202,886 hours more. According to GSA officials, these figures represent its emphasis on enabling and requiring employees to telework when agency worksites are closed, which previously would have resulted in the use of only paid administrative leave.

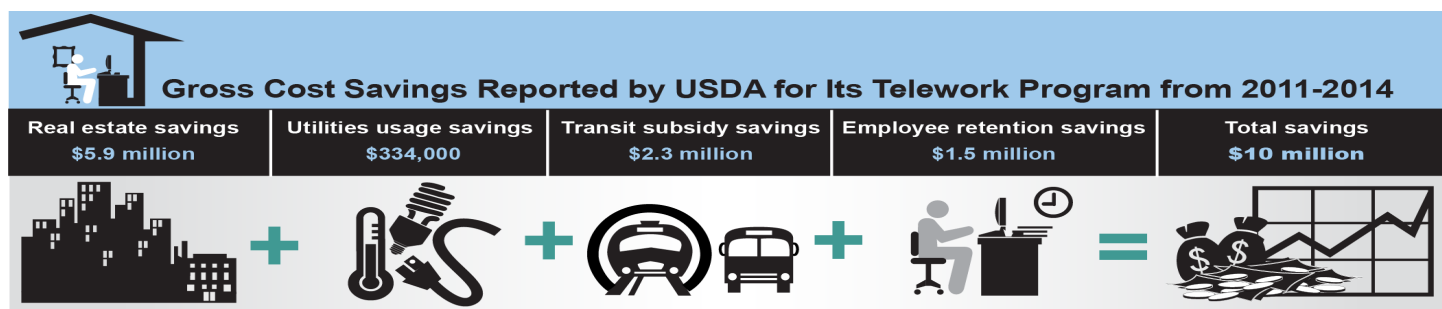
¹³We did not assess the examples of supporting data that the selected agencies provided.

¹⁴Since FDIC initiated the agency's telework program in 2003, we included supporting data that predated the 2010 act.

¹⁵In addition, FDIC officials provided a methodology for calculating real estate savings; however, they said they did not share the actual cost savings amounts because of sensitivity over that information in connection with continuing union negotiations.

- MSPB officials had supporting data for 1 of the 5 benefits identified. An MSPB official cited employee satisfaction data related to the impact of telework on work/life balance from the Federal Employee Viewpoint Survey.¹⁶
- USDA had supporting data and corresponding methodologies for 7 of the 10 benefits it identified: employee retention, work/life balance, transit subsidies, utilities, real estate, environmental impact and employee satisfaction. USDA provided cost savings from 2011 to 2014 information for 4 of these benefits, as shown in figure 6. For example, USDA identified at least 32 cases of employees who accepted full-time telework arrangements in place of retirement, allowing the agency to retain experienced employees and saving an estimated \$1.5 million from reduced or eliminated commuter costs and reduced salaries due to changes in locality pay, among other things.¹⁷ USDA used information from multiple sources to quantify benefits and savings attributable to telework. For example, its Office of Operations provided data for real estate and utilities cost savings and National Finance Center data were used for transit subsidy savings.

Figure 6: Gross Cost Savings Reported by USDA for Its Telework Program from 2011-2014



Source: GAO analysis of United States Department of Agriculture (USDA) information. | GAO-16-551

¹⁶The Office of Personnel Management Federal Employee Viewpoint Survey is a tool that measures employees' perceptions of whether and to what extent conditions characterizing successful organizations are present in their agencies.

¹⁷The Office of Personnel Management refers to full-time telework as remote work.

OPM Is Collecting Less
Information on Cost Savings

Officials from DOT, GSA, and MSPB reported various reasons that they did not have supporting data for some of the benefits that they identified. First, DOT and MSPB officials said that they do not track data on some identified benefits. For example, DOT officials said that they do not have tracking systems or data sources to calculate specific COOP cost savings associated with teleworking. Second, DOT and GSA officials said that in many cases, the telework benefits are not distinguishable from those of other activities. For example, DOT officials said that a number of programs contribute toward reaching goals and it is difficult to ascertain the extent to which telework contributes to their accomplishment.

OPM did not include questions about cost savings associated with telework in the 2014-2015 data call on telework. OPM had asked questions about costs savings in its 2011, 2012, and 2013 telework data calls and added additional questions on the amount of cost savings and the methodology for calculating the savings in the 2013 telework data call in response to our recommendation.¹⁸ OPM officials told us that they had asked specific questions on cost savings in previous telework data calls as part of their effort to help agencies set and evaluate their goals. OPM officials said they streamlined the 2014-2015 data call to focus on the requirements of the act, which does not specifically require OPM to include questions on overall cost savings associated with telework programs. In addition, they said that the survey still provides opportunities for agencies to describe cost savings as agencies were asked to describe their progress in achieving each outcome goal listed in the act as well as any other outcomes goals, including the data and methodology used to assess progress. OPM officials said they believe that they were successful in their 3 year effort to get agencies to set outcome goals, including cost savings, and to evaluate the success in meeting their goals.

In 2013, about 20 percent of agencies (17 of 89) reported achieving 29 different instances of cost savings from telework which included rent for office space, utilities, human capital (such as using telework for retention), reduced employee absences, and parking and/or transportation subsidies, according to OPM's 2014 annual report and our analysis of the 2013 telework data call results. The report also stated that 4 agencies reported a corresponding dollar savings amount. For example, the

¹⁸[GAO-13-298R](#).

Election Assistance Commission reported yearly rental savings of \$750,000 and that it obtained the data from an existing agency real estate report. In addition, IRS reported telework enabled it to close 22 small offices and save \$410,539. Each of the 4 agencies that reported a dollar savings amount also reported a corresponding methodology for determining the costs.

However, from 2012 to 2013, there was a decrease in the number of cost savings reported associated with federal telework programs and the number of agencies that were planning to track cost savings, according to the 2014 OPM report. Agencies reported fewer examples of cost savings (from 66 to 29) in 2013 than in 2012 and the number of agencies reporting that planning was underway to assess cost savings decreased from 31 to 18, according to the 2014 OPM report and our analysis of the 2013 telework data call results. About 60 percent of agencies (54 of 89) reported that they were unable to track any cost savings, according to OPM's 2014 annual report. The report noted that agencies have had difficulty establishing and linking cost savings directly to telework programs. Establishing cost savings through telework remains a work in progress and agencies also often do not track such investments, according to the report. None of the selected agencies' officials said that they were planning to collect additional cost savings information. For example, EPA officials said that the agency might collect additional data when it identified new telework goals and measures, and USDA officials said that no additional data were necessary.

The act requires an assessment of each agency's progress in achieving established telework-related outcome goals. Outcome goals such as emergency preparedness and reduced energy use reflect the benefits agencies can achieve and, in some cases, the cost savings that relate to reduced real estate or utilities paid. We have previously found that federal agencies should establish measurable telework program goals and processes, procedures, or a tracking system to collect data to evaluate the telework program, and that complete and reliable information is vital to assessing effectiveness.¹⁹ Federal internal control standards also

¹⁹GAO, *Affordable Rental Housing: Assistance is Provided by Federal, State, and Local Programs, but There Is Incomplete Information on Collective Performance*, [GAO-15-645](#), (Washington, D.C.: Sept. 15, 2015) and *Human Capital: Further Guidance, Assistance, and Coordination Can Improve Federal Telework Efforts*, [GAO-03-679](#), (Washington, D.C.: July 18, 2003).

Two Selected Agencies Had Supporting Data for Some Costs Incurred

suggest that to ensure that management's objectives are carried out, activities need to be established to monitor performance measures and indicators, including validating the integrity of the measures and indicators.²⁰

However, with no information being required on cost savings as a part of OPM's data call and agencies' plans to reduce collection of this data in the future, agencies will have less information to assess the value of their telework programs than they currently do. In the current fiscal climate, cost savings is an important measure of the success of telework programs, according to OPM's 2014 report.

Of the six selected agencies we reviewed, five identified costs incurred, but only two—FDIC and GSA—provided supporting data, as shown in figure 7. For example, FDIC officials reported that they had ongoing costs from financial reimbursements to encourage employees to elect the full-time telework option and opt out of office space in field offices during field office lease expirations. The option allows FDIC to rent less real estate space. FDIC officials stated that they calculated these costs by multiplying the dollar value of the one-time reimbursement for costs associated with equipment not otherwise provided by FDIC (up to \$500) or the ongoing outfitting cost payment (up to \$480 annually for costs associated with multiple phone lines and high-speed Internet) by the number of employees receiving it.²¹ GSA officials reported total ongoing salary costs of about \$245,290 for 2 percent of the salaries of GSA's 34 telework coordinators and 20 percent of the salary of its agency telework coordinator. GSA officials stated that they multiplied the average full-time equivalent costs by the percentage of time used by each official in a coordinator role. GSA officials also reported that 14,300 employees have completed mandatory telework training since 2011 at a salary cost of about \$62 per employee, which equals about \$884,600 in salary costs associated with training.

²⁰GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#), (Washington, D.C.: November 1999).

²¹FDIC officials stated that the FDIC reimbursement option is only for eligible employees that elect its home-based option during field office lease expirations. Employees are restricted to a \$40 per month reimbursement limit. FDIC officials said that the limit per month is substantially lower than the average industry costs of phone and internet service plan, and thus guards against an employee receiving reimbursements for personal use.

Figure 7: Two of the Six Selected Agencies Had Supporting Data for Costs Associated with Telework

Cost	DOT	EPA	FDIC	GSA	MSPB	USDA
One-time costs						
Ongoing costs						

- Agency had supporting data for the cost incurred
- Agency identified cost incurred but did not provide supporting data
- Agency did not report this as a cost incurred

Source: GAO analysis of selected agencies' reported telework information (Department of Transportation (DOT), Environmental Protection Agency (EPA), Federal Deposit Insurance Corporation (FDIC), General Services Administration (GSA), Merit Systems Protection Board (MSPB), and United States Department of Agriculture (USDA)). | GAO-16-551

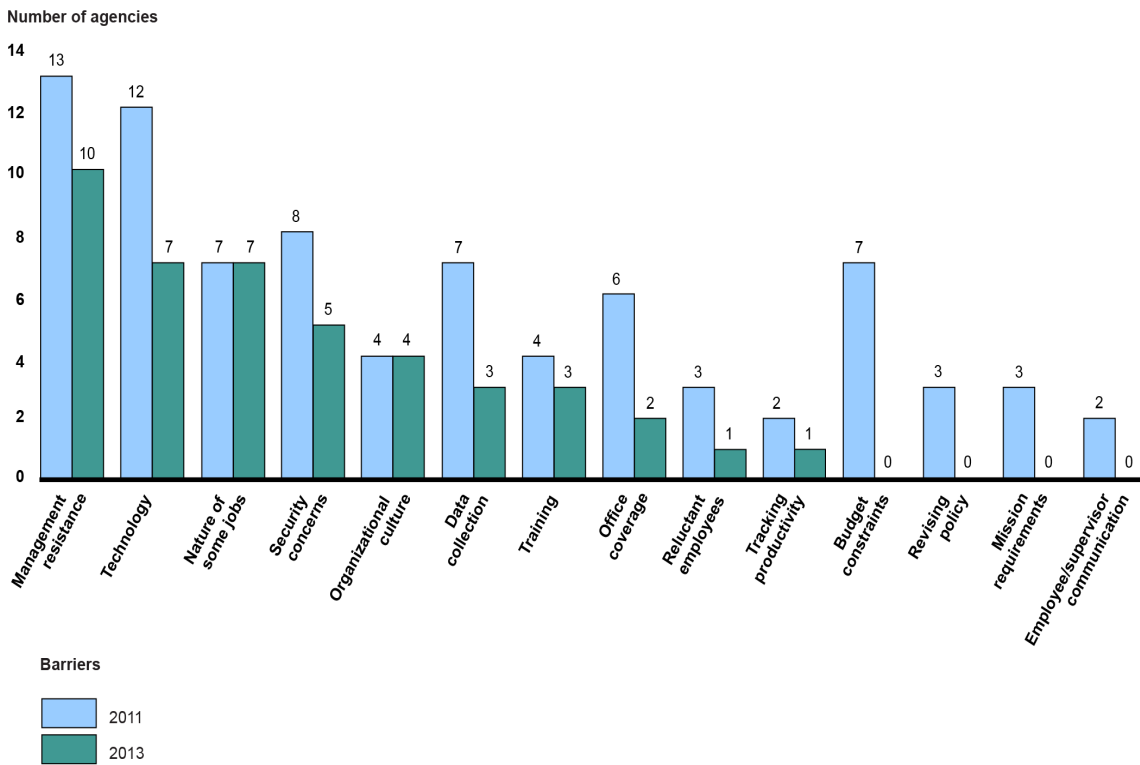
Note: One-time costs incurred include one-time IT set-up, such as network changes, employee outfitting costs, and one-time program planning and development. Ongoing costs incurred include ongoing personnel costs and equipment and services, such as IT maintenance.

Officials from DOT, EPA, GSA, FDIC, and MSPB also reported various reasons why they did not have supporting data for some costs incurred. DOT, GSA, and MSPB officials stated that telework is part of normal business operations and they cannot easily or meaningfully distinguish telework costs incurred from routine business costs. According to EPA and MSPB officials, both agencies' telework programs evolved from bargaining units' requests for flexible work schedules over 15 years ago. Therefore, associated costs incurred have been considered normal operating costs in some cases and thus not tracked as telework-related costs incurred. FDIC officials said that they were unable to provide information on start-up costs for their agency's telework program, which began in 2003, because they were past the mandatory retention period for any records. In addition, according to the 2014 OPM report, obtaining data to calculate energy use and environmental impact is challenging for agencies and often may require cross-agency collaboration or data that are not currently being collected.

Agencies Identified and Partially Addressed Barriers to Telework and Risks

In the 2011 and 2013 OPM data calls, agencies reported on barriers to telework participation and steps taken to address the barriers. Our analysis shows that, government-wide, agencies identified fewer barriers to telework participation in 2013 than 2011, as shown in figure 8. However, management resistance remains the most frequently reported barrier to telework, according to OPM.

Figure 8: Government-wide Agencies Reported Fewer Instances of Barriers to Telework Participation



Sources: GAO analysis of the Office of Personnel Management’s (OPM) report, *2012 Status of Telework in the Federal Government* and the 2013 OPM telework data call results. | GAO-16-551

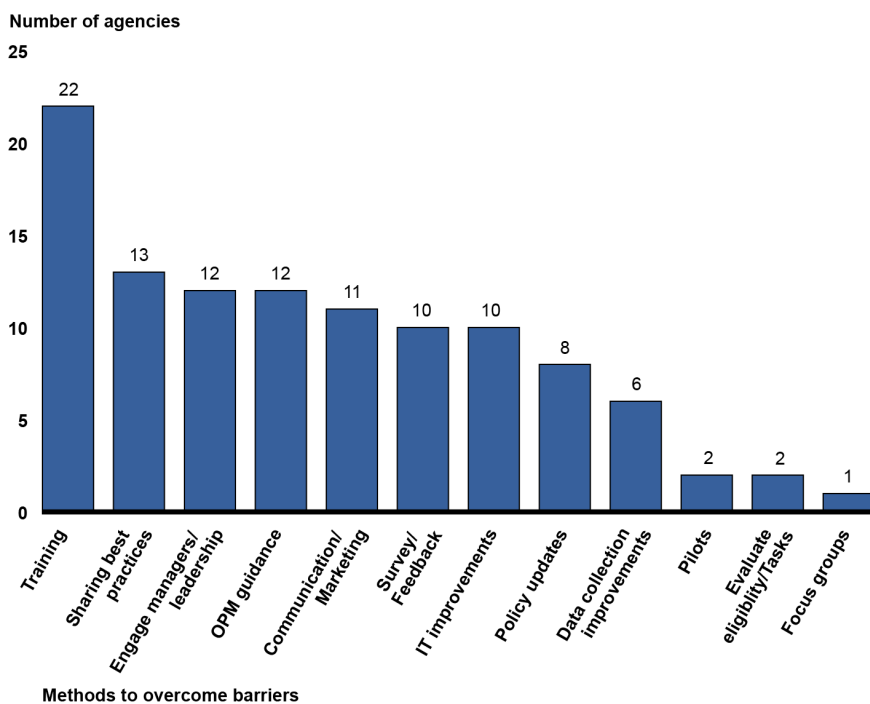
Note: Eighty-seven agencies responded to the question about barriers in the 2011 data call and 89 in the 2013 data call. The 2012 data call information was reported in an incompatible format and so we did not include it in the figure.

Among the six selected agencies we reviewed, DOT, EPA, MSPB, and USDA reported certain barriers to telework participation in the 2014 OPM report. DOT reported barriers, including IT security and funding issues, management resistance (for example, managers/supervisors who may not be fully comfortable managing employees working offsite), and organizational cultures. EPA reported that managers and supervisors have been uncomfortable with telework. MSPB also reported that some managers were not comfortable approving telework agreements for some job series. Finally, USDA reported barriers including IT infrastructure and secure remote access, employee desire and ability to use telework tools, and budgetary limitations related to purchasing equipment to support telework consistently across the department.

OPM’s 2014 annual report also stated that agencies are taking steps to overcome barriers to telework participation (see figure 9). Among the selected agencies, DOT, EPA, GSA, MSPB, and USDA reported

addressing barriers in OPM's 2014 report. For example, DOT reported providing training for employees and managers, marketing for telework via intranet, all hands meetings, memorandums to employees, and including a performance standard in SES performance plans in support of telework. GSA reported that its mobility and telework policy addresses unfamiliarity with telework or hesitation to participate.

Figure 9: Methods Agencies Government-wide Reported to Overcome Barriers to Telework Participation



Source: GAO analysis of Office of Personnel Management (OPM) data. | GAO-16-551

Note: Eighty-eight agencies responded to the data call item on overcoming barriers, according to OPM officials.

Officials from two of the six selected agencies (DOT and USDA) also identified potential risks associated with their telework programs. Risk assessment is the identification and analysis of relevant risks associated with achieving objectives, deciding how to manage the risk, and identifying what corresponding actions should be taken. DOT officials identified risks related to technology, IT security and IT funding, management resistance, and organizational culture. USDA officials identified risks related to management resistance and technology.

DOT and USDA officials stated that they had taken steps to manage risks associated with their telework programs. EPA and GSA officials also identified activities related to risk mitigation. Officials from DOT, EPA, GSA, and USDA stated that they provided telework training for managers and employees. For example, USDA officials reported that the agency requires supervisors to complete all telework training. DOT and GSA officials stated that they provided clear messaging and information. Specifically, DOT officials said that they internally market and encourage telework as a means to continue operations (e.g., when options for “unscheduled telework” have been announced by OPM) and provide telework policy guidance to employees, supervisors, and managers on an ongoing basis. GSA officials also said that ongoing communication across GSA supports employees’ understanding of the flexibilities available to them, and their responsibilities in regard to telework participation. USDA officials said that they addressed management resistance by incorporating telework into managers’ performance plans to make managers accountable for providing employees the necessary training and equipment for effective implementation of telework. DOT and USDA stated that they addressed technology issues relating to telework. For example, DOT reported that it periodically updates its computers and remote access technologies to contend with emerging data security threats.

Officials from FDIC and GSA also stated that they identified risks related to fraud, waste and/or abuse associated with their telework programs, while DOT, EPA, MSPB, and USDA officials did not. In the initial stages of implementing its telework program, FDIC identified potential risks associated with its telework program that included a possible decline in productivity, access to sensitive information off-site, and time and attendance concerns, according to FDIC officials. FDIC has taken steps to mitigate risks and help prevent fraud, waste, and abuse through a range of control activities. Among other actions, it issued a directive on telework that clearly delineates program guidelines and responsibilities, provided training on telework and information security to staff, and made telework participation subject to the employee/supervisor agreement, program participation eligibility, and adherence to the telework policy.

Inspectors general at some of the selected agencies have noted fraud and other risks in those agencies’ telework programs. GSA officials noted six Office of the Inspector General (OIG) recommendations from a 2015 audit that related to (1) tracking telework agreements, (2) recording duty stations and using correct locality pay for all virtual employees, (3) timekeeping for teleworkers, (4) controls over transit subsidies, (5)

completion of required telework training, and (6) ensuring GSA telework training addressed requirements of its telework policy.²² GSA officials reported they took actions to address each recommendation that included (1) implementing a tracking tool for telework agreements and updating its policy, (2) verifying official duty stations and adjusting pay appropriately, (3) enhancing timekeeping controls for teleworking, (4) reviewing transit subsidies and working with DOT to transition to an automated transit subsidy application, (5) developing tracking for telework training completion, and (6) developing updated telework training.

In 2014 and 2015, EPA's OIG reported on four cases of time and attendance fraud involving telework at the agency. First, the OIG investigated an EPA manager who entered and approved fraudulent time and attendance records for an employee who exclusively teleworked for several years, which cost the government more than \$500,000. Second, the OIG found evidence that a senior executive knew about but took no action regarding an arrangement between a supervisor and employee during which the employee had been teleworking for more than 20 years with very little substantive work produced.²³ Third, an executive prepared and approved false telework time and attendance records for an employee who was suffering from a debilitating disease and was not working.²⁴ Fourth, the OIG reported that EPA fired an employee for misconduct that included falsely claiming telework hours on numerous occasions.²⁵ While the OIG noted that EPA has begun to change its time and attendance policies and practices, it identified a culture of complacency among some EPA supervisors regarding time and attendance controls, and taking prompt action against employees, and

²²General Services Administration Office of the Inspector General, *GSA's Program for Managing Virtual Employees and Teleworkers Needs Improvement*, A130019/C/6/F15001 (Kansas City, MO: Jan., 16, 2015).

²³Environmental Protection Agency Office of the Inspector General, *The Office of the Inspector General's Cases of Employee Misconduct at the Environmental Protection Agency* (Washington, D.C.: May 7, 2014).

²⁴Environmental Protection Agency Office of the Inspector General, *Semiannual Report to Congress, October 1, 2014-March 31, 2015*, EPA-350-R-15-001 (Washington, D.C.: May 2015).

²⁵Environmental Protection Agency Office of the Inspector General, *Semiannual Report to Congress, April 1, 2015-Sept. 30, 2015*, EPA-350-R-15-002 (Washington, D.C.: Nov. 2015).

the OIG recommended that the agency take measures to communicate its commitment to internal controls.²⁶

Although both DOT and EPA reported that they did not identify telework risks associated with fraud, waste, or abuse, both reported taking actions to avoid these risks. While EPA did not identify telework risks associated with fraud, waste, or abuse in response to our questions, EPA officials did describe actions the agency had taken to avoid such risks. EPA adopted a new policy that requires employees to complete telework training prior to being approved to telework, to annually recertify their telework agreements, and to document their time and attendance telework status. In the event of fraud, waste, or abuse, the policy allows management to modify or terminate a telework agreement at any time.

In addition, the Census and Commerce OIGs also reported on cases of abuse and waste involving, but not limited to, telework. First, in 2015, the Census OIG reported that employees in its Census Hiring and Employment Check office engaged in time and attendance abuse—some of which involved employees who claimed to telework a full day with evidence showing they performed little or no work at all.²⁷ Second, the Department of Commerce OIG uncovered waste in 2014 at the U.S. Patent and Trademark Office’s Patent Trial and Appeal Board.²⁸ At one office, the Patent Trial and Appeal Board paid the employees approximately \$5 million for time in which employees were not working.

DOT did not identify telework risks associated with fraud, waste, or abuse, but it reported occasionally issuing preemptive guidance to hedge against potential risks. For example, in 2014, DOT reported issuing internal guidance reminding employees and managers to be diligent in accounting for work hours while teleworking and code telework hours in the time and attendance system.

²⁶Environmental Protection Agency Office of the Inspector General, *FY2015 EPA Management Challenges*, 15-N-0164 (Washington, D.C.: May 28, 2015).

²⁷U.S. Census Bureau, *Allegations of Time and Attendance Fraud and Other Misconduct by Employees in the Census Hiring and Employment Check Office*, 14-0790 (Washington, D.C.: Sept. 14, 2015).

²⁸U.S. Department of Commerce Office of Inspector General/Office of Inspections, *U.S. Patent and Trademark Office: Review of Waste and Mismanagement at the Patent Trial and Appeal Board*, 13-1077 (Washington, D.C.: July 28, 2014).

Lack of Guidance Limits Agencies' Ability to Better Determine Benefits and Costs Incurred

OPM Resources for Agencies

OPM provides three types of telework assistance to agencies. First, OPM offers training and webinars on responding to the telework data call. The training includes standards for setting and evaluating goals and identifies some data sources available to evaluate telework-related agency outcome goals. An OPM official stated that a large majority of officials responsible for completing the telework data call participated in the 2014-2015 training sessions. Information presented in the training sessions is not available in other forms such as guidance or policies, but general information on setting and evaluating goals is available through OPM resources which are posted on telework.gov, according to OPM officials.

Second, OPM collaborated with Mobile Work Exchange to develop and publish *Measuring Telework and Mobility Return on Investment: A Snapshot of Agency Best Practices in 2014* on methodologies and guidance to measure agency return on investment (ROI) on telework programs. The report also highlights a variety of tools and best practices for measuring telework ROI across the federal government. The report is intended to be a snapshot in time and has not been updated since publication, according to Mobile Work Exchange.

Third, OPM offers various services for a fee to help agencies implement or improve an existing telework program. Services include an evaluation of existing telework policies and practices, a telework satisfaction survey that establishes a baseline to track progress, telework training sessions, and a program evaluation. OPM officials stated that they also have identified ROI factors and indicators to measure telework programs. OPM officials reported that the most frequent services agencies ask for are telework training and the telework satisfaction survey, but that no agency has thus far asked for telework ROI.

In addition, OPM officials said that Global Workplace Analytics conducts key telework research related to federal agencies calculating benefits and costs associated with implementing their telework programs.²⁹ They stated that the Global Workplace Analytics calculator is comprehensive and based on solid research.

Existing Data Collection That Can Assist Telework Benefits Calculations

Some of the data many agencies may already collect for requirements under an Office of Management and Budget (OMB) memorandum and an executive order could also be of use for calculating the benefits associated with telework (see table 2). Agencies can apply a cost allocation approach to help calculate the amount of benefits associated with telework in instances where agencies collect data that are not directly related to telework. EPA and GSA are already using the data for this purpose.

²⁹Global Workplace Analytics is an independent research and consulting firm that specializes in making the management case for emerging workplace trends such as telework, office hoteling, and flexible work. See Kate Lister and Tom Harnish, *Federal Telework-Return on Taxpayer Investment* (Dec. 19, 2013). In this white paper, the author's offer a range of estimates for a number of parameters for their calculator, Workplace Savings Calculator™, which is a registered trademark of Global Workforce Analytics.

Table 2: OMB Memorandum and Executive Order Data Requirements Have the Potential to Help Measure Telework Benefits

Office of Management and Budget (OMB) memorandum and executive order	Requirements for data collection	Potential telework benefit
OMB Management Procedures Memorandum 2015-01: <i>Implementation of OMB Memorandum M-12-12 Section 3: Reduce the Footprint</i> (Mar. 25, 2015) ^a	This 2015 OMB memorandum requires agencies covered under the Chief Financial Officers (CFO) Act to develop and annually submit a Five-Year Real Property Efficiency Plan to the General Services Administration and OMB starting in 2015 which will describe the agency’s overall approach to managing its real property, provide a rationale for its optimum portfolio, and drive the disposal of real property, efficiency improvements (including cost-effective alternatives such as teleworking and hoteling), and cost saving measures.	<ul style="list-style-type: none"> • Reduced real estate
Executive Order 13693, <i>Planning for Federal Sustainability in the Next Decade</i> , 80 Fed. Reg. 15871 (Mar. 25, 2015) and implementing instructions.	Under this 2015 executive order, agencies are required to measure, report, and reduce their greenhouse gas emissions. The agencies are required to submit and annually update a Strategic Sustainability Performance Plan which identifies agency goals and metrics associated with greenhouse gas emission reduction targets. ^b	<ul style="list-style-type: none"> • Reduced real estate • Reduced commuting costs/transit subsidies • Reduced utilities • Positive environmental impact

Source: GAO analysis of an OMB memorandum and executive order. | GAO-16-551

^aSection 3 of OMB Memorandum M-12-12 provides that as of May 2012, agencies are generally not to increase the size of their civilian real estate inventory. Office of Management and Budget, *Promoting Efficient Spending to Support Agency Operations*, Memorandum M-12-12 (May 11, 2012).

^bUnder the executive order and implementing guidance, agencies defined as “contributing agencies” may limit content of this plan to an executive summary of agency action to meet the requirements of the order. Generally, contributing agencies are those agencies not subject to the CFO Act.

Under OMB’s Reduce the Footprint memorandum, CFO Act agencies are required to submit plans that include the efficient use of office space and to identify cost-effective alternatives to the acquisition of additional office space, such as teleworking and hoteling.³⁰ Agencies are also required to specify annual reduction targets for domestic office and warehouse space. If an agency requires less office space due to teleworking and

³⁰Agencies covered under the CFO Act are listed at 31 U.S.C. § 901(b). The 24 CFO Act agencies are the Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, the Interior, Justice, Labor, State, Transportation, the Treasury, and Veterans Affairs, as well as the Agency for International Development, Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, and Social Security Administration.

consolidates that space, this could result in agencies meeting reduction targets, disposing of surplus properties, and using their real estate more efficiently. DOT's 2016-2020 plan identified telework as a strategy to consolidate office space and improve space management. DOT identified the introduction of full-time telework as a contributing factor to closing the Federal Highway Administration Legal Services and Resource Center office in San Francisco, resulting in a reduction of 9,804 rentable square feet.³¹ In addition, according to DOT, it anticipates that the combination of alternative work schedules, telework, and shared workspace scenarios will reduce the office workspaces designed in the future by at least 10 percent. GSA also identified telework as a contributing factor to its headquarters renovation which resulted in a 40 percent reduction in office space and \$24.6 million in annual rent savings.

Executive Order 13693 on planning for federal sustainability and its implementing instructions requires agencies to submit and annually update a plan focused on, among other things, specific agency strategies to accomplish greenhouse gas emissions reduction targets, including approaches for achieving the goals and quantifiable metrics for agency implementation. The data generated to measure a reduction in greenhouse gas emissions could be partially a result of telework reducing real estate use, utilities, and commuting. For example, GSA calculated the environmental impact associated with its telework program by using data generated for this order. In addition, EPA's 2014 plan recognized that telework contributed to the agency's reduction of greenhouse gas emissions by about 40 percent from fiscal year 2008 to fiscal year 2013 because its telework program allowed staff to work from an alternate location.³² The plan noted that telework decreased the greenhouse gas emissions associated with employee commuting by reducing the number of days employees commute to work each week.

GSA also created the Carbon Footprint Tool (tool) to help agencies meet the executive order's requirements, which can be used to calculate greenhouse gas emissions avoided from teleworking. The tool calculates, measures, and reports greenhouse gas emission reductions. The tool

³¹Department of Transportation, *Real Property Efficiency Plan (2016-2020) Reduce the Footprint Implementation* (Oct. 1, 2015).

³²Environmental Protection Agency, *U.S. Environmental Protection Agency 2014 Strategic Sustainability Performance Plan*, (June 30, 2014).

allows agencies to change the number of teleworkers to calculate the impact on greenhouse gas emissions. For example, GSA used data generated by the tool to calculate avoided emissions from telework. GSA estimated that telework in fiscal year 2013 avoided over 8,800 metric tons of carbon dioxide equivalent.

Net Savings Central to Determining the Value of Telework

OPM may be missing an opportunity to advise agencies of options that can inform the assessment of the agency's progress in meeting outcome goals and contribute to understanding the full value of the telework program. OPM has guidance on calculating telework benefits in various resources but none on costs incurred. OPM's 2014-2015 telework data call includes a list of data sources and examples of measures or metrics, which include the amount of spending on transit subsidies and the percentage of employees expressing satisfaction with their jobs. In addition, the data call has information on establishing good goals, choosing a time frame, choosing a method for assessing a goal, selecting a metric/measure, and finding sources of data. OPM's training materials on the data call also include similar information. OPM officials stated that there is also information on setting goals and evaluating telework programs, including discussion of a range of benefits associated with telework programs in several resources, in telework.gov, the *Guide to Telework in the Federal Government*, and webinars for agency human resource professionals.³³

While the act requires OPM to report on the progress of agencies that have set outcome goals reflecting telework benefits, it does not require OPM to report on costs associated with telework programs. In addition, the OPM data call does not include questions on costs incurred and OPM's data call training materials do not discuss the types of costs that agencies' telework programs may incur. Moreover, OPM's guidance lacks information on the existing data collection that can assist telework benefits calculations discussed previously, specifically under Executive Order 13693 and OMB's Reduce the Footprint memorandum.

Given the focus on increasing access to telework as embodied in the provisions of the act, it is essential that agencies understand the true

³³Office of Personnel Management, *Guide to Telework in the Federal Government*, ES/WLW-04-11 (Washington, D.C.: April 2011).

effects of their telework programs. The act requires an assessment of each agency's progress in meeting established telework-related outcome goals. An evaluation of benefits and costs, which would assist agencies in identifying net cost savings, provides a systematic framework for assessing telework programs. Thus, an agency's potential to realize net cost savings depends on its ability to develop data on costs incurred from implementing the telework program. We have previously found that federal agencies should establish measurable telework program goals and processes, procedures or a tracking system to collect data to evaluate their telework programs, and that complete and reliable information is vital to assessing effectiveness.³⁴

OPM officials said that it is difficult to provide government-wide guidance on evaluating telework programs as agency use of telework to achieve goals varies. Furthermore, OPM officials stated that it is difficult to identify the effects of telework because it requires extensive research design and a staff with the expertise and skills to conduct rigorous evaluations. For example, OPM officials said that agencies vary in the resources available to them to track and evaluate telework programs. In addition, OPM officials said they do not have the resources to target and assist each agency in establishing appropriate qualitative and quantitative measures and teleworking goals. OPM officials also stated that agencies may not be aware of all the available resources, including OPM's services for a fee. However, the CHCO Council provides an additional avenue for OPM to engage agencies on telework. As mentioned, the council receives updates from OPM on agencies' annual telework reports and discusses their implications and promising practices. Telework was discussed at the February 2016 meeting.

While we recognize that providing this guidance could be challenging, some of the agencies we reviewed told us that they could benefit from having such guidance. DOT reported that it would be useful to have standard government-wide guidance on translating qualitative telework programmatic outcomes into quantifiable cost savings data. GSA officials also stated that, although the 2014 report on which OPM collaborated with Mobile Work Exchange, *Measuring Telework and Mobility Return on Investment: A Snapshot of Agency Best Practices*, is helpful to quantify

³⁴GAO, *Human Capital: Further Guidance, Assistance, and Coordination Can Improve Federal Telework Efforts*, [GAO-03-679](#) (Washington, D.C.: July 18, 2003).

some benefits related to their telework program, there are no available guidance or tools that provide a holistic solution to evaluating telework programs.

By not taking advantage of data sources that can inform on benefits nor providing guidance on costs associated with telework, agency assessments may be less informative about the net cost savings of telework and, ultimately, the value of telework. Further, Congress will have less information to understand the full value of the telework program which could affect its ability to oversee telework across the federal government.

Conclusions

Telework is a tool that has the potential to impact agencies' performance and costs. A better understanding of the benefits achieved and costs incurred via telework can help an agency determine the value of this tool. Given that agency employees are increasingly using telework, it is important that agencies examine the impact of using this tool on their performance and cost bottom lines. Even though agencies are not required to report on costs incurred by the act, Congress has a clear interest in the value of this flexibility offered to the federal workforce. Congress signaled its interest by assigning OPM a role in reporting an assessment of each agency's progress in meeting telework outcome goals that reflect benefits, such as the impact on recruitment and retention and energy use. However, agencies continue to face challenges in quantifying the impact of telework, identifying costs incurred, and translating benefits into quantifiable cost savings. OPM can work with the CHCO Council on methods to assist agencies in assessing the benefits and costs associated with their telework programs.

OPM did not ask agencies about cost savings in its 2014-2015 telework data call despite a substantial decrease in the number of cost savings examples reported associated with telework programs and the number of agencies planning on tracking telework cost savings. However, the act requires an assessment of each agency's progress in meeting telework-related outcome goals that reflect the benefits agencies can achieve and, in some cases, these may be cost savings. In the current fiscal climate, cost savings is an important measure of the success of telework programs and the absence of these questions will likely result in agencies reporting even more limited cost savings information than they do currently.

The six selected agencies had little supporting data for either the benefits or costs associated with their telework programs. Such supporting data are important to inform decision making about the value of telework. Moreover, without data on net benefits including cost savings associated with telework, agencies have incomplete information to determine the value of telework through assessing whether the benefits being achieved outweigh the costs incurred. Congress also will not have the information it needs to oversee federal telework programs as OPM will not be reporting this information to Congress.

Recommendations for Executive Action

We recommend the Director of OPM take the following actions:

1. To help ensure that agencies are reporting cost savings associated with their telework programs, include cost savings questions in future telework data calls.
2. To help agencies determine the value of their telework programs, working with the Chief Human Capital Officers Council, provide clarifying guidance on options for developing supporting data for benefits and costs associated with agency telework programs. For example, the guidance could identify potential data sources, such as the data generated in response to requirements under OMB Reduce the Footprint Memorandum 2015-01 and Executive Order 13693.

Agency Comments and Our Evaluation

We provided a draft of this report to the Acting Director of OPM, Secretary of DOT, Administrator of EPA, Chairman of FDIC, Administrator of GSA, Chairman of MSPB, Deputy Assistant Inspector General for Audit of USDA, and the Executive Director of the CHCO Council. OPM provided written comments (reproduced in appendix II). OPM concurred with our recommendation to include cost savings questions in future telework data calls beginning with the 2016 telework data call. OPM also concurred with our second recommendation and said it would work with the CHCO Council to support agency efforts to determine the value of their telework programs by developing clarifying guidance for agencies with CHCO input and by hosting a CHCO academy session focused on evaluating the benefits and costs of telework programs.

None of the other agencies provided comments on the report's findings, conclusions, or recommendations. However, three agencies (FDIC, EPA, and OPM) provided technical comments that were incorporated, as appropriate.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 17 days from the report date. At that time, we will send copies of this report to OPM, DOT, EPA, FDIC, GSA, MSPB, and USDA as well as interested congressional committees and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-6806 or jonesy@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.



Yvonne D. Jones
Director, Strategic Issues

Appendix I: Objectives, Scope, and Methodology

This report identifies (1) the reported benefits and costs associated with federal agency telework programs and assesses the extent to which selected agencies have supporting data; and (2) some of the key resources that federal agencies can use to help calculate benefits and costs associated with their telework programs. For our review, we included benefits that are quantifiable such as cost savings from reduced real estate use and benefits that are non-monetized such as environmental impacts. We defined costs incurred as one-time and ongoing costs. One-time costs incurred include one-time information technology set-up, such as system software. Ongoing costs incurred include ongoing personnel costs and equipment and services, such as information technology maintenance.

To address both of our objectives we reviewed our previous work on agency telework programs, the Telework Enhancement Act of 2010 (act), and guidance for setting and evaluating telework program goals. We also reviewed Office of Personnel Management (OPM) and General Services Administration (GSA) documents related to agency telework programs. In addition, we interviewed key OPM officials from the offices of Human Resource Solutions and Employee Services and received answers to written questions from the Acting Executive Director of the Chief Human Capital Officers Council on the council's involvement with telework.

We reviewed OPM's 2012, 2013, and 2014 annual reports to Congress and agencies' 2013 responses to OPM on telework participation, telework-related outcome goals, costs savings associated with telework programs, barriers to telework participation, and actions taken to address those barriers. To determine the reliability of the data that OPM used in the 2014 annual report to Congress, we reviewed our prior data reliability assessments conducted on OPM's 2011 data call. In addition, we consulted knowledgeable OPM officials about OPM's data collection methods over time for its 2011, 2012, and 2013 telework data calls since the enactment of the act. We did this to determine if significant changes had occurred that might affect the reliability of the data in the 2014 annual report. For the purposes of our review, we have determined that the data are sufficiently reliable for providing contextual information on agencies reporting telework participation, telework-related outcome goals, cost savings from telework, barriers to telework participation, and methods to overcoming these barriers.

To identify the selected agencies, we compiled a universe of agencies that had: reported achieving cost savings or a methodology for calculating cost savings associated with telework programs in the 2013 OPM data

call, been identified by OPM as a leader, or were recipients of a 2013 telework Mobile Work Exchange award.¹ We then selected the agencies from this universe by considering the criteria above as well as the size of the agency and agencies that had reported achieving agency goals using their telework program in the 2013 OPM telework data call, reported cost savings in multiple areas, and had core missions directly linked to telework benefits.² We selected a nongeneralizable sample of six agencies: Environmental Protection Agency (EPA), Federal Deposit Insurance Corporation (FDIC), General Services Administration (GSA), Merit Systems Protection Board (MSPB), Department of Transportation (DOT), and United States Department of Agriculture (USDA). Initially we had also selected the United States Patent and Trade Office. However, we excluded that office because of a recent IG report that there was potential fraud related to its telework program and our 2013 report that questioned its reported cost savings associated with its telework program.³

To identify and create an inventory of the reported benefits and costs associated with federal agency telework programs, we conducted a literature search encompassing public and private sector organizations' telework programs and identified two reports that discussed the benefits and costs incurred by federal agency telework programs. We also identified a third report focused on nonfederal telework programs that provided a more detailed review of one-time and ongoing costs associated with implementing and maintaining telework programs. In addition, we conducted another literature review to check that the inventory was not missing any key benefits or costs incurred. We also

¹Mobile Work Exchange is a public-private partnership focused on demonstrating the value of mobility and telework. OPM collaborated with Mobile Work Exchange on a report on federal agency mobility and telework best practices. Mobile Work Exchange gave awards in 2013 to agencies to recognize excellence in government telework and mobility programs.

²We compared the agencies' missions with the telework benefits that we identified to determine which agencies had core missions directly linked to the identified telework benefits.

³Department of Commerce, Office of Inspector General, *Abuse of USPTO's Telework Program: Ensuring Oversight, Accountability and Quality*, OIG-15-009-T (Washington, D.C.: Nov. 18, 2014) and GAO, *Federal Real Property: Selected Agencies Plan to Use Workforce Mobility to Reduce Space, but Most Efforts Are Too New to Have Realized Savings*, [GAO-14-41](#) (Washington, D.C., Oct. 17, 2013).

asked the selected agencies which benefits and costs were associated with their telework programs.

To assess the extent to which selected agencies have supporting data for identified benefits and costs associated with their telework programs, we reviewed selected agencies' policies, guidance, and other relevant documents related to their telework programs. In addition, we conducted semi-structured interviews with selected agency officials on benefits, costs incurred, and challenges associated with calculating benefits and costs incurred. We analyzed this information to assess the extent that the selected agencies have supporting data for the benefits and costs associated with telework programs that the agencies identified. We defined supporting data as having both a data source and a corresponding methodology. Supporting data can be quantitative, monetized, or qualitative. For example, emissions reductions connected to telework can be measured in metric tons of carbon emissions reduced or avoided. Cost savings can include spending on transit subsidies or utility bills. Qualitative support for benefits might include responses from open-ended survey questions or results from focus groups indicating that telework has improved work/life balance. We reviewed whether the selected agencies had supporting data and not the quality of the supporting data because this was outside of the scope of our review. We present the examples of supporting data for contextual purposes only. Since FDIC initiated the agency's telework program in 2003, we included supporting data that pre-dated the 2010 act.

We used our previous report that found that agencies should establish measurable telework program goals and processes, procedures or a tracking system to collect data to evaluate the telework program.⁴ We also utilized OPM's 2013 telework data call, which includes guidance for setting and evaluating telework program goals and directs agencies to select metrics/measures and identify data sources to evaluate telework program goals.⁵ In addition, we used our federal internal controls standards, which state that activities need to be established to monitor performance measures and indicators and information should be

⁴GAO, *Human Capital: Further Guidance, Assistance, and Coordination Can Improve Federal Telework Efforts*, [GAO-03-679](#) (Washington, D.C.: July 18, 2003).

⁵Office of Personnel Management, *2014 Status of Telework in the Federal Government Report to Congress*, (Washington, D.C.: November 2015).

recorded and communicated to management that enables them to carry out their internal control and other responsibilities.⁶

To review whether agencies had identified potential risks associated with telework programs and methods to address them, we reviewed the 2012, 2013, and 2014 OPM telework annual reports and agencies' 2013 telework data call responses to OPM on barriers to telework participation. We also asked the selected agencies semi-structured interview questions on risks associated with telework programs and how the agencies had addressed the risks. In addition, we reviewed relevant reports on potential fraud, waste, or abuse related to agency telework programs.

To identify available resources that federal agencies can use to help calculate benefits and costs incurred, we compiled a list of potential resources from our literature review and information from OPM and the selected agencies. We reviewed the resources and determined which ones were helpful through reviewing the documents and, in some cases, asking the relevant agency or organization clarifying questions. We also asked GSA follow-up questions about the Carbon Footprint Calculator and OPM about its relevant resources.

To assess the Global Workforce Analytics calculator, we reviewed documents summarizing the calculator and the set of assumptions using the Office of Management and Budget's (OMB) Circular A-94 Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs.⁷ In addition, we interviewed the creator of the calculator and asked detailed questions about some of its assumptions. In general, we found that the creators of the calculator supported the assumptions employed by citing studies and the findings of others. However, we noted certain limitations in the literature cited. Specifically, we noted that because much of the literature supporting the assumptions was based on the private sector, there is less demonstrated applicability to the federal government. For example, the calculator claimed unused sick days due to telework as a financial benefit to the organization, given that unused sick days are

⁶GAO, *Internal Control: Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: Nov. 1999).

⁷Office of Management and Budget, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, Circular No. A-94. Revised (Washington, D.C.: Oct. 29, 1992).

forfeited at the end of the year, which is not true for the federal government (although the authors note that this can be adjusted in the calculator). In addition, the paper assumes cost savings because of a reduced footprint due to real estate savings. However, the paper does not take into account that employees may tend to telework on similar days, reducing the ability to achieve savings by sharing office space.

In addition, OMB guidance on benefit-cost analysis suggests that uncertainty be incorporated into a benefit-cost estimate and estimates of outcomes presented with a range. In this way, policy makers can determine not just what the most likely outcome is, but the distribution of outcomes that are within the range of possibility. The calculator can produce high and low estimates (by using different assumptions). However, a limitation is that it does not automatically produce ranges of estimates.

We conducted this performance audit from April 2015 to July 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Comments from the Office of Personnel Management



Employee Services

UNITED STATES OFFICE OF PERSONNEL MANAGEMENT

Washington, DC 20415

JUN 29 2016

Yvonne D. Jones
Director
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Jones:

Thank you for providing us the opportunity to respond to the Government Accountability Office (GAO) draft report, *Federal Telework: Better Guidance Could Help Agencies Calculate Benefits and Costs Incurred*, GAO-16-551, GAO job code number 451145.

We recognize that even the most well run programs benefit from external evaluations, and we appreciate your input as we continue to enhance our programs. Responses to your recommendations are provided below.

Recommendation:

- 1) To help ensure that agencies are reporting cost savings associated with their telework programs, include cost savings questions in future telework data calls.**

We concur. As noted in the report, the Telework Enhancement Act of 2010 does not require OPM to collect information on cost savings. Following an extensive, three-year evaluation of Federal telework programs, the 2014-15 Telework Data Call was streamlined to meet the specific reporting requirements of the law. While the survey did not include individual questions about cost savings, agencies were still provided with an opportunity to describe cost savings in response to questions asking them to describe their progress in achieving specific outcome goals.

OPM appreciates the value of information related to cost savings associated with telework and will include cost savings questions from previous surveys in the 2016 Telework Data Call.

- 2) To help agencies determine the value of their telework programs, working with the Chief Human Officers Council, provide clarifying guidance on options for developing supporting data for benefits and costs associated with agency telework programs. For example, the guidance could identify potential data sources, such as the data generated in response to requirements under OMB Reduce the Footprint Memorandum No. 2015-01 and Executive Order 13693.**

We concur. OPM currently provides guidance on evaluating outcomes associated with telework programs through multiple sources, including information posted on telework.gov, webinars for agency human resources professionals, annual training for the Telework Data Call, and OPM's Standards for Setting and Evaluating Telework Program Goals. In addition, OPM's annual Federal Employee Viewpoint Survey collects data that agencies can use to assess telework participation and associated benefits. Although OPM's government-wide telework policy office lacks the resources to evaluate the costs and benefits of individual agency programs, OPM offers fee for service assistance in this area.

OPM will work with the Chief Human Capital Officers (CHCO) Council to further support agency efforts to determine the value of their telework programs by developing clarifying guidance for agencies with CHCO input and hosting a CHCO Academy session focused on evaluating the costs and benefits of telework programs.

I appreciate the opportunity to respond to this draft report. If you have any questions regarding our response, please contact Ms. Janet Barnes, Director, Internal Oversight & Compliance, (202) 606-3207, and Janet.Barnes@opm.gov.

Sincerely,



Mark D. Reinhold
Associate Director for Employee Services
and Chief Human Capital Officer

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact:

Yvonne D. Jones, (202) 512-6806 or jonesy@gao.gov

Staff

Acknowledgments:

In addition to the contact named above, Signora May (Assistant Director) and Maya Chakko (Analyst-in-Charge) supervised this review and the development of the resulting report. Crystal Bernard, Benjamin Bolitzer, Karin Fangman, Ellen Grady, Erik Kjeldgaard, Judith Kordahl, Steven Putansu, Robert Robinson, Stewart Small, and Colleen Taylor made key contributions to this report.

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