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INFORMATION TECHNOLOGY

OMB's Dashboard Has Increased Transparency and Oversight, but Improvements Needed

GAO

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Why GAO Did This Study

Federal IT spending has risen to an estimated $79 billion for fiscal year 2011. To improve transparency and oversight of this spending, in June 2009 the Office of Management and Budget (OMB) deployed a public website, known as the IT Dashboard, which provides information on federal agencies' major IT investments, including assessments of actual performance against cost and schedule targets (referred to as ratings). According to OMB, these data are intended to provide both a near real-time and historical perspective of the performance of these investments.

GAO was asked to (1) examine the accuracy of the cost and schedule performance ratings on the Dashboard for selected investments and (2) determine whether the data on the Dashboard are used as a management tool to make improvements to IT investments. To do so, GAO selected 8 major investments from 5 agencies with large IT budgets, compared its analyses of the selected investments' performance to the ratings on the Dashboard, and interviewed agency officials about their use of the Dashboard to manage investments.

What GAO Recommends

GAO recommends that OMB report on its planned changes to the Dashboard to improve the accuracy of performance information and provide guidance to agencies that standardizes milestone reporting. OMB agreed with these recommendations, but disagreed with aspects of the draft report that GAO addressed, as appropriate.

View GAO-10-701 or key components.
For more information, contact David A. Powner at (202) 512-9286 or pownerd@gao.gov.

What GAO Found

The cost and schedule ratings on OMB's Dashboard were not always accurate for the selected investments. GAO found that 4 of the 8 selected investments had notable discrepancies on either their cost or schedule ratings. For example, the Dashboard indicated one investment had a less than 5 percent variance on cost every month from July 2009 through January 2010. GAO's analysis shows the investment's cost performance in December 2009 through January 2010 had a variance of 10 percent to less than 15 percent. Additionally, another investment on the Dashboard reported that it had been less than 30 days behind schedule since July 2009. However, investment data GAO examined showed that from September to December 2009 it was behind schedule greater than or equal to 30 days and less than 90 days.

A primary reason for the data inaccuracies was that while the Dashboard was intended to represent near real-time performance information, the cost and schedule ratings did not take into consideration current performance. As a result, the ratings were based on outdated information. For example, cost ratings for each of the investments were based on data between 2 months and almost 2 years old. As of July 1, 2010, OMB plans to release an updated version of the Dashboard in July that includes ratings that factor in the performance of ongoing milestones. Another issue with the ratings was the wide variation in the number of milestones agencies reported, which was partly because OMB's guidance to agencies was too general. Having too many milestones can mask recent performance problems because the performance of every milestone (dated and recent) is equally averaged into the ratings. Specifically, investments that perform well during many previously completed milestones and then start performing poorly on a few recently completed milestones can maintain ratings that still reflect good performance. Conversely, having too few milestones limits the amount of information available to rate performance and allows agencies to potentially skew the ratings. OMB officials stated that they have recently chartered a working group with the intention of developing guidance for standardizing milestone reporting. However, until such guidance is available, the ratings may continue to have accuracy issues.

Officials at three of the five agencies stated they were not using the Dashboard to manage their investments because they maintain they already had existing means to do so; officials at the other two agencies indicated that they were using the Dashboard to supplement their existing management processes. OMB officials indicated that they relied on the Dashboard as a management tool, including using the Dashboard's investment trend data to identify and address issues with investments' performance. According to OMB officials, the Dashboard was one of the key sources of information that they used to determine if an investment requires additional oversight. In addition, the Federal Chief Information Officer (CIO) stated that the Dashboard has greatly improved oversight capabilities compared to previously used mechanisms. He also stated that the Dashboard has increased the accountability of agencies' CIOs and established much needed visibility.

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United States Government Accountability Office

Contents

Figures

Abbreviations

CIO	chief information officer
DOD	Department of Defense
DOE	Department of Energy
DOJ	Department of Justice
EVM	earned value management
HHS	Department of Health and Human Services
IT	information technology
OMB	Office of Management and Budget
USDA	Department of Agriculture

United States Government Accountability Office
Washington, DC 20548

July 16, 2010

The Honorable Susan M. Collins
Ranking Member
Committee on Homeland Security and
Governmental Affairs
United States Senate

The Honorable Thomas R. Carper
Chairman
Subcommittee on Federal Financial Management,
Government Information, Federal Services,
   and International Security
Committee on Homeland Security and
   Governmental Affairs
United States Senate

Billions of taxpayer dollars are spent on information technology (IT)
investments each year; federal IT spending has now risen to an estimated
$79 billion for fiscal year 2011. During the past several years, we have
issued several reports and testimonies and made numerous
recommendations to the Office of Management and Budget (OMB) to
improve the transparency, oversight, and management of the federal
government's IT investments.[1] In June 2009, OMB deployed a public
website, known as the IT Dashboard, which provides detailed information
on federal agencies' major IT investments, including assessments of actual
performance against cost and schedule targets (referred to as ratings) for
approximately 800 major federal IT investments. The Dashboard aims to
improve the transparency and oversight of these investments.

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[1]GAO, *Information Technology: Management and Oversight of Projects Totaling Billions
of Dollars Need Attention*, GAO-09-624T (Washington, D.C.: Apr. 28, 2009); GAO,
*Information Technology: OMB and Agencies Need to Improve Planning, Management,
and Oversight of Projects Totaling Billions of Dollars*, GAO-08-1051T (Washington, D.C.:
July 31, 2008); GAO, *Information Technology: Further Improvements Needed to Identify
and Oversee Poorly Planned and Performing Projects*, GAO-07-1211T (Washington, D.C.:
Sept. 20, 2007); GAO, *Information Technology: Improvements Needed to More Accurately
Identify and Better Oversee Risky Projects Totaling Billions of Dollars*, GAO-06-1099T
(Washington, D.C.: Sept. 7, 2006); GAO, *Information Technology: Agencies and OMB
Should Strengthen Processes for Identifying and Overseeing High Risk Projects*,
GAO-06-647 (Washington, D.C.: June 15, 2006).

This report responds to your request that we (1) examine the accuracy of the cost and schedule performance ratings on the Dashboard for selected investments and (2) determine whether the data on the Dashboard are used as a management tool to make improvements to IT investments.

To address our first objective, we selected five agencies—the Departments of Agriculture (USDA), Defense (DOD), Energy (DOE), Health and Human Services (HHS), and Justice (DOJ)—and ten investments[2] to review. To select these agencies and investments, we first identified ten agencies with large IT budgets, and then identified the five largest investments at each of the ten agencies. In narrowing the list to five agencies and ten total investments, we considered several factors to ensure there were two viable investments at each agency, such as selecting investments that were not part of our ongoing audit work and providing a balance of investment sizes. We then collected and analyzed monthly investment performance reports from the ten investments. We compared our analyses of each investment's performance to the ratings on the Dashboard to determine if the information was consistent. We also reviewed and analyzed OMB's and the selected agencies' processes for populating and updating the Dashboard. Additionally, we interviewed officials from OMB and the agencies to obtain further information on their efforts to ensure the accuracy of the data on the Dashboard. We did not test the adequacy of the agency or contractor cost-accounting systems. Our evaluation of these cost data was based on the documentation the agencies provided.

To address our second objective, we interviewed officials and analyzed documentation at the selected agencies to determine the extent to which they use the data on the Dashboard to make management decisions. We also attended one of OMB's TechStat sessions, which are reviews of selected IT investments between OMB and agencies.

We conducted this performance audit from January to July 2010, 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

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[2]The ten investments are: DOD's Joint Precision Approach and Landing System and Maneuver Control System, DOE's Integrated Management Navigation System and Sequoia Platform, DOJ's Law Enforcement Wireless Communication System and Unified Financial Management System, HHS's BioSense Program and Electronic Research Administration System, and USDA's Financial Management Modernization Initiative and Risk Management Agency-13 Program. See appendix II for descriptions of each investment.

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. Further details of our objectives, scope, and methodology are provided in appendix I.

Background

Each year, OMB and federal agencies work together to determine how much the government plans to spend on IT projects and how these funds are to be allocated. Planned federal IT spending has now risen to an estimated $79.4 billion for fiscal year 2011, a 1.2 percent increase from the 2010 level of $78.4 billion. OMB plays a key role in helping federal agencies manage their investments by working with them to better plan, justify, and determine how much they need to spend on projects and how to manage approved projects.

To assist agencies in managing their investments, Congress enacted the Clinger-Cohen Act of 1996, which requires OMB to establish processes to analyze, track, and evaluate the risks and results of major capital investments in information systems made by federal agencies and report to Congress on the net program performance benefits achieved as a result of these investments.[3] Further, the act places responsibility for managing investments with the heads of agencies and establishes chief information officers (CIO) to advise and assist agency heads in carrying out this responsibility. Another key law is the E-Government Act of 2002, which requires OMB to report annually to Congress on the status of e-government.[4] In these reports, referred to as the Implementation of the E-Government Act reports, OMB is to describe the Administration's use of e-government principles to improve government performance and the delivery of information and services to the public.

To help carry out its oversight role and assist the agencies in carrying out their responsibilities as assigned by the Clinger-Cohen Act, OMB developed a Management Watch List in 2003 and a High Risk List in 2005 to focus executive attention and to ensure better planning and tracking of major IT investments. Consistent with the Clinger-Cohen Act, OMB reported on the status of investments on the Management Watch List and High Risk List in its annual budget documents.

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[3]40 U.S.C. § 11302(c).

[4]44 U.S.C. § 3606.

Over the past several years, we have reported and testified on OMB's initiatives to highlight troubled projects, justify investments, and use project management tools.[5] We have made multiple recommendations to OMB and federal agencies to improve these initiatives to further enhance the oversight and transparency of federal projects. Among other things, we recommended that OMB develop a central list of projects and their deficiencies and analyze that list to develop governmentwide and agency assessments of the progress and risks of the investments, identifying opportunities for continued improvement.[6] In addition, in 2006 we also recommended that OMB develop a single aggregate list of high-risk projects and their deficiencies and use that list to report to Congress on progress made in correcting high-risk problems.[7] As a result, OMB started publicly releasing aggregate data on its Management Watch List and disclosing the projects' deficiencies. Furthermore, OMB issued governmentwide and agency assessments of the projects on the Management Watch List and identified risks and opportunities for improvement, including risk management and security.

Table 1 provides a historical perspective of the number of projects on the Management Watch List and their associated budgets for the period of time during which OMB updated the Management Watch List. The table shows that while the number of projects and their associated budgets on the list generally decreased, the number of projects on the Management Watch List increased by 239 projects and $13 billion for fiscal year 2009, and represented a significant percentage of the total budget.

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[5]GAO-09-624T; GAO, *Information Technology: Treasury Needs to Better Define and Implement Its Earned Value Management Policy*, GAO-08-951 (Washington, D.C.: Sept. 22, 2008); GAO-07-1211T; GAO-06-1099T; GAO-06-647; GAO, *Information Technology: OMB Can Make More Effective Use of Its Investment Reviews*, GAO-05-276 (Washington, D.C.: Apr. 15, 2005); and GAO, *Air Traffic Control: FAA Uses Earned Value Techniques to Help Manage Information Technology Acquisitions, but Needs to Clarify Policy and Strengthen Oversight*, GAO-08-756 (Washington, D.C.: July 18, 2008).

[6]GAO-05-276.

[7]GAO-06-647.

Table 1: Management Watch List Projects and Their Associated Budgets for Fiscal Years 2004-2009

Dollars in billions

Fiscal year	Number of major federal IT projects	Associated budget	Number of Management Watch List projects	Associated budget	Percentage of federal IT projects on Management Watch List	Percentage of budget
2004	1400	$59.0	771	$20.9	55%	35%
2005	1200	60.0	621	22.0	52	37
2006	1087	65.0	342	15.0	31	23
2007	857	64.0	263	9.9	31	15
2008	840	65.0	346	14.0	41	22
2009	810	70.7	585	27.0	72	38

Source: GAO analysis of OMB data.

OMB's Dashboard Publicizes Investment Details and Performance Status

More recently, to further improve the transparency into and oversight of agencies' IT investments, and to address data quality issues, in June 2009, OMB publicly deployed a Web site, known as the IT Dashboard, which replaced the Management Watch List and High Risk List. It displays information on federal agencies' cost, schedule, and performance information for the approximately 800 major federal IT investments at 28 federal agencies. According to OMB, these data are intended to provide a near real-time perspective of the performance of these investments, as well as a historical perspective. Further, the public display of these data are intended to allow OMB, other oversight bodies, and the general public to hold the government agencies accountable for results and progress.

The Dashboard was initially deployed in June 2009 based on each agency's Exhibit 53 and Exhibit 300 submissions.[8] After the initial population of data, agency CIOs have been responsible for updating cost, schedule, and performance fields on a monthly basis, which is a major improvement from the quarterly reporting cycle OMB previously used for the Management Watch List and High Risk List.

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[8]Exhibit 53s list all of the IT projects and their associated costs within a federal organization. An exhibit 300 is also called the Capital Asset Plan and Business Case. It is used to justify resource requests for major IT investments and is intended to enable an agency to demonstrate to its own management, as well as to OMB, that a major project is well planned.

For each major investment, the Dashboard provides performance ratings on cost and schedule, a CIO evaluation, and an overall rating which is based on the cost, schedule, and CIO ratings. The cost rating is determined by a formula that calculates the amount by which an investment's aggregated actual costs deviate from the aggregated planned costs. Table 2 displays the rating scale and associated category for cost variations.

Table 2: Dashboard Cost Rating Scale

Variance from planned costs	Rating	Category
<5%	10	Green
>=5% and <10%	9	Green
>=10% and <15%	8	Yellow
>=15% and <20%	7	Yellow
>=20% and <25%	6	Yellow
>=25% and <30%	5	Yellow
>=30% and <35%	4	Yellow
>=35% and <40%	3	Yellow
>=40% and <45%	2	Red
>=45% and <50%	1	Red
>=50%	0	Red

Source: OMB's Dashboard.

Note: Green = Normal; Yellow = Needs attention; Red = Significant concerns.

An investment's schedule rating is calculated by determining the average days late or early. Table 3 displays the rating scale and associated category for schedule deviations.

Table 3: Dashboard Schedule Rating Scale

| Average days late	Rating	Category
<30	10	Green
>=30 and <90	5	Yellow
>=90	0	Red

Source: OMB's Dashboard.

Note: Green = Normal; Yellow = Needs attention; Red = Significant concerns.

Each major investment on the Dashboard also includes a rating determined by the agency CIO, which is based on his or her evaluation of the performance of each investment. The rating is expected to take into consideration the following criteria: risk management, requirements

management, contractor oversight, historical performance, and human capital. This rating is to be updated when new information becomes available that would impact the assessment of a given investment.

Lastly, the Dashboard calculates an overall rating for each major investment. Figure 1 identifies the Dashboard's overall ratings scale. This overall rating is an average of the cost, schedule, and CIO ratings, with each representing one-third of the overall rating. However, when the CIO's rating is lower than both the cost and schedule ratings, the CIO's rating will be the overall rating. Of the 792 major investments on the Dashboard as of May 2010, 540 (68 percent) were green, 204 (26 percent) were yellow, and 48 (6 percent) were red.

Figure 1: Dashboard Overall Ratings
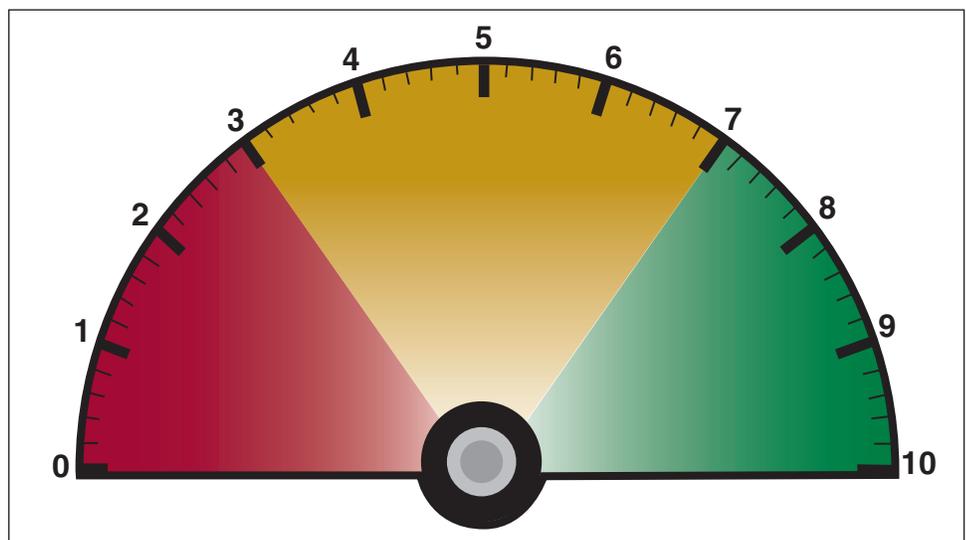
Source: GAO based on OMB's Dashboard.

Earned Value Management Provides Additional Insight on Program Cost and Schedule

Earned value management is a technique that integrates the technical, cost, and schedule parameters of a development contract and measures progress against them. During the planning phase, a performance measurement baseline is developed by assigning and scheduling budget resources for defined work. As work is performed and measured against the baseline, the corresponding budget value is "earned." Using this earned value metric, cost and schedule variances, as well as cost and time to complete estimates, can be determined and analyzed.

Without knowing the planned cost of completed work and work in progress (i.e., the earned value), it is difficult to determine a program's true status. Earned value allows for this key information, which provides an objective view of program status and is necessary for understanding the health of a program. As a result, earned value management can alert program managers to potential problems sooner than using expenditures alone, thereby reducing the chance and magnitude of cost overruns and schedule slippages. Moreover, earned value management directly supports the institutionalization of key processes for acquiring and developing systems and the ability to effectively manage investments—areas that are often found to be inadequate on the basis of our assessments of major IT investments. In August 2005, OMB issued guidance that all major and high-risk development projects, among other things, develop comprehensive policies to ensure that their major IT investments use earned value management to manage their investments.

Performance Ratings on the Dashboard Were Not Always Accurate

Cost and schedule performance ratings were not always accurate for the selected investments we reviewed. A key reason for the inaccuracies is that the Dashboard's cost and schedule ratings do not reflect current performance. Another issue with the ratings is that large inconsistencies exist in the number of milestones that agencies report on the Dashboard.

Cost and Schedule Performance Ratings Were Not Always Accurate

The cost and schedule performance ratings of selected investments were not always accurate. There were several instances of inaccurate cost ratings; however, two investments experienced notable discrepancies while the other discrepancies were not as dramatic. Specifically, 5 of the 8 selected investments[9] on the Dashboard had inaccurate cost ratings: BioSense, Financial Management Modernization Initiative, Joint Precision Approach and Landing System, Law Enforcement Wireless

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[9]We were unable to compare the performance of 2 of the investments—Electronic Research Administration and Integrated Management Navigation System—due to the Electronic Research Administration investment not using standard earned value management practices and Integrated Management Navigation System using a method of earned value management that does not adequately allow us to assess ongoing milestones. As a result, we determined that the earned value data was not sufficient for our purposes of rating cost and schedule performance. In addition, for the 10 selected investments, we did not assess whether each investment had met cost estimating best practices. As a result, we were unable to determine whether each investment's earned value management data is overly optimistic. Overly optimistic performance data may result in a program costing more and taking longer than planned. See appendix II for descriptions of each investment.

Communication, and Unified Financial Management System. For example, the Dashboard rated the Law Enforcement Wireless Communication investment a 10 for cost (less than 5 percent variance) every month from July 2009 through January 2010. However, our analysis shows the investment's cost rating during December 2009 and January 2010 is equivalent to an 8 (a variance of 10 percent to less than 15 percent). Accordingly, this investment's cost performance should have been rated a "yellow" instead of a "green," meaning it needed attention. Further, the Dashboard's cost rating for the Financial Management Modernization Initiative reported that this investment was "yellow," while it should have been "green" for 7 months. Maneuver Control System, Sequoia Platform, and Risk Management Agency-13 are the three investments that had accurate cost ratings. Figure 2 shows the comparison of selected investments' Dashboard cost ratings to GAO's ratings for the months of July 2009-January 2010.

Figure 2: Comparison of Selected Investments' Dashboard Cost Ratings to GAO's Ratings

Agency	Investment		2009 July	Aug.	Sept.	Oct.	Nov.	Dec.	2010 Jan.
DOD	Joint Precision Approach and Landing System	Dashboard	10	10	10	10	10	10	10
		GAO	9	10	10	10	10	10	10
	Maneuver Control System	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	10	10	10	10	10
DOE	Sequoia Platform	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	10	10	10	10	10
DOJ	Law Enforcement Wireless Communication	Dashboard	10	10	10	10	10	10	10
		GAO	10	9	9	9	9	8	8
	Unified Financial Management System	Dashboard	10	10	10	10	10	10	10
		GAO	9	9	9	9	9	9	9
HHS	BioSense[a]	Dashboard	9	–	–	–	–	–	–
		GAO	10	–	–	–	–	–	–
USDA	Financial Management Modernization Initiative	Dashboard	8	8	8	8	8	8	8
		GAO	10	10	10	10	10	10	10
	Risk Management Agency-13	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	10	10	10	10	10

Key

■ Normal

■ Needs attention

Source: OMB's Dashboard and GAO analysis.

Note: See appendix II for descriptions of each investment.

[a]BioSense's development work was completed in July 2009. This was the only month we could assess its performance.

There were fewer instances of discrepancies with the schedule ratings; however, these discrepancies were also notable. Specifically, of the 8 selected investments, the Dashboard's schedule ratings were inaccurate for 2 investments: Risk Management Agency-13 and the Unified Financial Management System. The Unified Financial Management System's last completed milestone was in May 2009 and the Dashboard rating for the investment's schedule has been a 10 since July 2009. However, investment data we examined showed the schedule rating should have been a 5 (greater than or equal to 30 days and less than 90 days behind schedule) from September 2009 through December 2009. As a result, this investment's schedule performance should have been rated a "yellow"

GAO-10-701 Information Technology

instead of a "green" for those months. Additionally, the Dashboard's schedule rating for Risk Management Agency-13 reported that this investment was "red" for two months, while it should have been "green," and "yellow" for four months, when it should have been "green." BioSense, Financial Management Modernization Initiative, Joint Precision Approach and Landing System, Law Enforcement Wireless Communication, Maneuver Control System, and Sequoia Platform are the 6 investments that had accurate schedule ratings. Figure 3 shows the comparison of selected investments' Dashboard schedule ratings to GAO's ratings for the months of July 2009-January 2010.

Figure 3: Comparison of Selected Investments' Dashboard Schedule Ratings to GAO's Ratings

| Agency | Investment | | 2009 | | | | | | 2010 |
			July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.
DOD	Joint Precision Approach and Landing System	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	10	10	10	10	10
	Maneuver Control System	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	10	10	10	10	10
DOE	Sequoia Platform	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	10	10	10	10	10
DOJ	Law Enforcement Wireless Communication	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	10	10	10	10	10
	Unified Financial Management System	Dashboard	10	10	10	10	10	10	10
		GAO	10	10	5	5	5	5	10
HHS	BioSense[a]	Dashboard	10	–	–	–	–	–	–
		GAO	10	–	–	–	–	–	–
USDA	Financial Management Modernization Initiative	Dashboard	10	10	10	10	5	5	5
		GAO	10	10	10	10	5	5	5
	Risk Management Agency-13	Dashboard	10	5	5	5	5	0	0
		GAO	10	10	10	10	10	10	10

Key

■ Normal

■ Needs attention

■ Significant concerns

Source: OMB's Dashboard and GAO analysis.

[a] BioSense's development work was completed in July 2009. This was the only month we could assess its performance.

In addition to determining that cost and schedule ratings are not always accurate, we found other data inaccuracies. Specifically, rebaseline information[10] on the Dashboard was not always accurate. Best practices and GAO's Cost Estimating Guide state that a rebaseline should occur when the current cost and schedule baseline does not adequately represent the amount of work to be completed, causing difficulty in monitoring progress of the program.[11] However, OMB reports all major and minor corrections to planned information on the Dashboard, including typographical fixes, as a rebaseline. More specifically, while the Dashboard allows agencies to provide reasons for baseline changes, the current version of the Dashboard, at a high level, identifies all changes to planned information as rebaselines. For example, according to the Dashboard, DOJ's Law Enforcement Wireless Communication investment has been rebaselined four times. However, program officials stated that the program has only been rebaselined once. Similarly, the Dashboard shows that the Sequoia Platform and Integrated Management Navigation System investments at DOE have both been rebaselined four times. However, program officials stated that neither of these programs had actually been rebaselined. Rather, they stated that this number represents instances in which they made minor corrections to the data on the Dashboard. Table 4 shows the selected investments whose program officials reported a lower number of rebaselines than what was reported on the Dashboard.

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[10]At times, a project's cost, schedule, and performance goals—known as its baseline—are modified to reflect changed development circumstances. These changes—called rebaselining—can be done for valid reasons, but can also be used to mask cost overruns and schedule delays.

[11]GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*, GAO-09-3SP (Washington, D.C.: Mar. 2, 2009), p. 23.

Table 4: Selected Investments Whose Program Officials Reported a Lower Number of Rebaselines Than What was Reported on the Dashboard

Agency	Investment	Rebaselines reported on Dashboard	Rebaselines reported by program officials
DOE	Integrated Management Navigation System	4	0
	Sequoia Platform	4	0
DOJ	Law Enforcement Wireless Communication	4	1
HHS	Electronic Research Administration	1	0

Source: OMB's Dashboard and data provided by program officials.

Mixing corrections with the number of true rebaselines overstates instances where an investment has rebaselined, which can divert management attention from areas truly needing oversight. OMB officials stated that they intentionally designed the Dashboard this way because they wanted to discourage agencies from modifying data on the Dashboard in order to hold them accountable for the information they report. Further, OMB officials noted that any agency needing to make a data correction may do so through a manual process. However, the officials agreed that including corrections in with the number of rebaselines is problematic and they will consider tracking corrections and rebaselines separately.

Subsequent to the completion of our audit work, OMB provided us with its new guidance on managing IT baselines, which was issued on June 28, 2010. The guidance, among other things, describes when agencies should report baseline changes on the Dashboard. Additionally, OMB provided documentation of the specific modifications that will be made in an upcoming release of the Dashboard to improve the way baseline changes are displayed.

Cost and Schedule Ratings Do Not Reflect Current Performance and Wide Variation in Milestone Reporting Exists

A primary reason why the cost and schedule ratings were not always accurate is that the cost and schedule ratings do not take current performance into consideration for many investments on the Dashboard, though it is intended to represent near real-time performance information on all major IT investments. Specifically, as of April 2010, the formula to calculate the cost ratings on the Dashboard intentionally only factored in completed portions of the investments (referred to as milestones) to determine cost ratings. As such, milestones that are currently under way

are not taken into account.[12] Table 5 identifies each selected investment's last completed milestone and the number of days that the Dashboard's cost rating is out of date for each selected investment.

Table 5: Number of Days the Cost Rating is Outdated for Each Selected Investment

Agency	Investment	Last completed milestone date	Number of days cost rating is outdated, as of April 21, 2010
DOD	Joint Precision Approach and Landing System	07/15/2008	645
	Maneuver Control System	No completed milestone	--
DOE	Integrated Management Navigation System	01/04/2010	107
	Sequoia Platform	02/12/2010	68
DOJ	Law Enforcement Wireless Communication	No completed milestone	--
	Unified Financial Management System	05/15/2009	341
HHS	BioSense[a]	11/30/2009	142
	Electronic Research Administration	09/30/2009	203
USDA	Financial Management Modernization Initiative	11/27/2009	145
	Risk Management Agency-13	09/30/2009	203

Source: OMB's Dashboard and GAO analysis.

[a]BioSense's development work was completed in July 2009.

OMB officials agreed that the ratings not factoring in current performance is an area needing improvement and said that they are planning on upgrading the Dashboard application in July 2010 to include updated cost and schedule formulas that factor in the performance of ongoing milestones; however, they have not yet made this change. One step OMB has taken toward collecting the information needed for the new formulas is that it now requires agencies to provide information on their investment milestones' planned and actual start dates. In addition, OMB officials stated that they plan to use a previously unused data field—percent

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[12]The schedule rating is calculated slightly different. In addition to factoring in completed milestones, it also includes overdue milestones, but similar to the cost rating, it does not include the performance of ongoing milestones.

GAO-10-701 Information Technology

complete. These are key data points necessary to calculate the performance of ongoing milestones.

Another issue with the ratings is that there were wide variations in the number of milestones agencies reported. For example, DOE's Integrated Management Navigation System investment lists 314 milestones, whereas DOD's Joint Precision Approach and Landing System investment lists 6. Having too many milestones may mask recent performance problems because the performance of every milestone (i.e., historical and recently completed) is equally averaged into the ratings. Specifically, investments that perform well during many previously completed milestones and then start performing poorly on a few recently completed milestones can maintain ratings that still reflect good performance. A more appropriate approach could be to give additional weight to recently completed and ongoing milestones when calculating the ratings. Too many detailed milestones also defeat the purpose of an executive-level reporting tool. Conversely, having too few milestones can limit the amount of information available to track work and rate performance and allows agencies to potentially skew the performance ratings.

In commenting on a draft of this report, the Federal CIO stated that OMB has a new version of the Dashboard that implements updated cost and schedule calculations. He stated that the new calculations greatly increase the weight of current activities. As of July 1, 2010, this updated Dashboard had not been released. An OMB analyst subsequently told us that the agency plans to release the new version in July 2010. Additionally, OMB officials have provided us with documentation of the new calculations and demonstrated the new version of the Dashboard that will be released soon. The Federal CIO also added that OMB will consider additional changes to the ratings in the future.

Table 6 demonstrates the large inconsistencies in the number of milestones reported for each selected investment.

Table 6: Number of Milestones per Selected Investment

Agency	Investment	Milestones per investment
DOD	Joint Precision Approach and Landing System	6
	Maneuver Control System	5
DOE	Integrated Management Navigation System	314
	Sequoia Platform	26
DOJ	Law Enforcement Wireless Communication	19
	Unified Financial Management System	32
HHS	BioSense	50
	Electronic Research Administration	54
USDA	Financial Management Modernization Initiative	10
	Risk Management Agency-13	8

Source: OMB's Dashboard.

In June 2009, OMB issued guidance that agencies are responsible for providing quality data and, at minimum, should provide milestones that consist of major segments of the investment, referred to as work breakdown structure level 2, but prefers that agencies provide lower-level milestones within each segment (work breakdown structure level 3). A work breakdown structure is the cornerstone of every program because it defines in detail the work necessary to accomplish a program's objectives. Standardizing a work breakdown structure is considered a best practice because it enables an organization to collect and share data among programs. Further, standardizing work breakdown structures allows data to be shared across organizations.

However, certain agencies are not following OMB's guidance and list milestones that they consider to be at work breakdown structure level 1, which are high-level milestones. Specifically, of the 5 agencies we reviewed, officials at DOD, USDA, and DOE stated that they were reporting work breakdown structure level 1 milestones to the Dashboard for each of their selected investments. OMB officials acknowledge that not all agencies are following their guidance, but stated that OMB analysts are working with agencies to try to improve compliance. Furthermore, the guidance that OMB has provided is not clear on the level of detail that it wants agencies to report in their milestones and has left it to the agencies to individually interpret their general guidance. Specifically, while OMB

states that agencies should report milestones that are, at a minimum, work breakdown structure level 2, there is no commonly accepted definition among federal agencies on the level of detail that should comprise each of these levels. OMB officials acknowledged that they have not provided clear guidance, but recently stated that they have begun exploring ways to ensure more uniformity across agencies' reporting. Specifically, in commenting on a draft of this report, the Federal CIO stated that OMB has recently chartered a working group comprised of representatives from several federal agencies, with the intention of developing clear guidance for standardizing and improving investment activity reporting.

OMB and agencies acknowledge that additional improvements can be made beyond the cost and schedule ratings and have taken certain steps to try to improve the accuracy of the data. For example, OMB implemented an automated monthly data upload process and created a series of data validation rules that detect common data entry errors, such as investment milestone start dates that occur after completion dates. In addition, four of the five agencies we reviewed indicated that they have processes in place aimed at improving the accuracy of the data. For instance, HHS has established a process wherein an official has been assigned responsibility for ensuring the Dashboard is accurately updated. Further, DOJ has developed an automated process to find missing data elements in the information to be uploaded on the Dashboard.

Despite these efforts, until OMB upgrades the Dashboard application to improve the accuracy of the cost and schedule ratings to include ongoing milestones, explains the outcome of these improvements in its next annual report to Congress on the Implementation of the E-Government Act (which is a key mechanism for reporting on the implementation of the Dashboard), provides clear and consistent guidance to agencies that standardizes milestone reporting, and ensures agencies comply with the new guidance, the Dashboard's cost and schedule ratings will likely continue to experience data accuracy issues.

Use of the Dashboard as a Management Tool Varies

Officials at three of the five agencies we reviewed—DOD, DOJ, and HHS—stated that they are not using the Dashboard to manage their investments, and the other two agencies, DOE and USDA, indicated that they are using the Dashboard to manage their investments.

Specifically, officials from the three agencies are not using the Dashboard to manage their investments because they have other existing means to do so:

- DOD officials indicated that they use the department's Capital Planning and Investment Control process to track IT investment data—including cost and schedule.

- DOJ uses an internal dashboard that the office of the CIO developed that provides for more detailed management of investments than OMB's Dashboard.

- HHS officials said they use a portfolio investment management tool, which they indicated provides greater insight into their investments.

  Officials from the other two agencies—DOE and USDA— noted that they are using the Dashboard as a management tool to supplement their existing internal processes to manage their IT investments.

- DOE officials stated that since their current process is based on a quarterly review cycle, the monthly reporting nature of the Dashboard has allowed officials to gain more frequent insight into investment performance. As a result, DOE officials say that they are able to identify potential issues before these issues present problems for investments.

- USDA officials stated that they use the ratings on the Dashboard to identify investments that appear to be problematic and hold meetings with the investments' program managers to discuss corrective actions.

  Additionally, in OMB's fiscal year 2009 Report to Congress on the Implementation of the E-Government Act of 2002, 11 agencies reported on how the Dashboard has increased their visibility and awareness of IT investments. For example, the Department of Veterans' Affairs terminated 12 IT projects, partly because of the increased visibility that the CIO obtained from the Dashboard.

  OMB indicated that it is using the Dashboard to manage IT investments. Specifically, OMB analysts are using the Dashboard's investment trend data to track changes and identify issues with investments' performance in a timely manner and are also using the Dashboard to identify and drive investment data quality issues. The Federal CIO stated that the Dashboard has greatly improved oversight capabilities compared to previously used mechanisms. He also stated that the Dashboard has increased the accountability of agencies' CIOs and established much-needed visibility. According to OMB officials, the Dashboard is one of the key sources of information that OMB analysts use to identify investments that are experiencing performance problems and select them for a TechStat

session—a review of selected IT investments between OMB and agency leadership that is led by the Federal CIO. OMB has identified factors that may result in a TechStat session, such as policy interests, Dashboard data inconsistencies, recurring patterns of problems, and/or an OMB analyst's concerns with an investment. As of June 2010, OMB officials indicated that 27 TechStat sessions have been held with federal agencies. According to OMB, this program enables the government to improve or terminate IT investments that are experiencing performance problems.

Conclusions

OMB has taken significant steps to enhance the oversight, transparency, and accountability of federal IT investments by creating its IT Dashboard. However, the cost and schedule ratings on the Dashboard were not always accurate. Further, the rebaseline data were not always accurate. The cost and schedule inaccuracies were due, in part, to calculations of ratings that did not factor in current performance. Additionally, there were large inconsistencies in the number of milestones that agencies report on the Dashboard because OMB has not fully defined the level of detail that federal agencies should use to populate the Dashboard and several selected agencies decided not to follow OMB's general guidance. Moreover, the performance of historical and recently completed milestones are equally averaged in the cost and schedule ratings, which is counter to OMB's goal to report near real-time performance on the Dashboard. While the use of the Dashboard as a management tool varies, OMB has efforts under way to include the performance of ongoing milestones and its officials acknowledge that additional improvements are needed. Nevertheless, until OMB explains in its next annual Implementation of the E-Government Act report how the upgrade to the Dashboard application has improved the accuracy of the cost and schedule ratings, and provides clear and consistent guidance that enables agencies to report standardized information on their milestones, the accuracy of the data on the Dashboard may continue to be in question.

Recommendations for Executive Action

To better ensure that the IT Dashboard provides meaningful ratings and accurate investment data, we are recommending that the Director of OMB take the following two actions:

- include in its next annual Implementation of the E-Government Act report the effect of planned formula changes on the accuracy of data; and

- develop and issue clear guidance that standardizes milestone reporting on the Dashboard.

In addition, we are recommending that the Secretaries of the Departments of Agriculture, Defense, and Energy direct their Chief Information Officers to ensure that they comply with OMB's guidance on standardized milestone reporting, once it is available.

Agency Comments and Our Evaluation

We received written comments on a draft of this report from the Federal CIO and DOE's Associate CIO for IT Planning, Architecture, and E-Government. Letters from these agencies are reprinted in appendixes III and IV. In addition, we received technical comments via e-mail from a Coordinator at HHS, which we incorporated where appropriate. In addition, the Deputy CIO from USDA, the Principal Director to the Deputy Assistant Secretary of Defense for Resources from DOD, and an Audit Liaison Specialist from DOJ indicated via e-mail that they had reviewed the draft report and did not have any comments.

In OMB's comments on our draft report, which contained four recommendations to the OMB Director, the Federal CIO stated that he agreed with two recommendations and disagreed with two because of actions OMB has recently taken. After reviewing these actions, we agreed that they addressed our concerns and will not make these two recommendations.

OMB agreed with our recommendation that it include in its next annual Implementation of the E-Government Act report how the planned formula changes have improved the accuracy of data.

OMB agreed with our recommendation that it develop and issue clear guidance that standardizes milestone reporting on the Dashboard. Additionally, the Federal CIO asked that we update the report to reflect that they have recently chartered a working group comprised of representatives from several federal agencies, with the intention of developing clear guidance for standardizing and improving investment activity reporting. We have incorporated this additional information into the report.

In response to our draft recommendation that OMB revise the IT Dashboard and its guidance so that only major changes to investments are considered to be rebaselines, OMB provided us with its new guidance on managing IT baselines, which was issued on June 28, 2010. The guidance, among other things, describes when agencies should report baseline changes on the Dashboard. OMB also provided documentation of the specific modifications that will be made in an upcoming release of the

Dashboard to improve the way baseline changes are displayed. We agree that these recent changes address our recommendation. As such, we updated the report to acknowledge and include this additional information, where appropriate.

Regarding our recommendation that OMB consider weighing recently completed and ongoing milestones more heavily than historical milestones in the cost and schedule ratings, the Federal CIO stated that OMB has a new version of the Dashboard that implements updated cost and schedule calculations. He stated that the new calculations greatly increase the weight of current activities. As previously stated, as of July 1, 2010, this updated Dashboard had not been released. An OMB analyst subsequently told us that the agency plans to release the new version in July 2010. Additionally, OMB officials have provided us with documentation of the new calculations and demonstrated the new version of the Dashboard that will be released soon. The Federal CIO also added that OMB will consider additional changes to the ratings in the future. We agree that these recent changes address our recommendation. As such, we updated the report to acknowledge and include this additional information, where appropriate. Additionally, OMB will report on the effect of the upcoming changes to the calculations in its next annual Implementation of the E-Government Act report.

OMB also provided additional comments, which we address in appendix III.

In DOE's comments on our draft report, the Associate CIO for IT Planning, Architecture, and E-Government indicated that she agreed with our assessment of the implementation of the IT Dashboard across federal agencies and with the recommendations presented to OMB. Additionally, in response to our recommendation that the CIO of DOE comply with OMB guidance on milestone reporting once it is available, the Associate CIO stated that once OMB releases the additional guidance, DOE officials will work to ensure the appropriate level of detail is reported on the Dashboard. DOE also provided an additional comment, which we address in appendix IV.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to interested congressional committees; the Director of the Office of Management and Budget; the Secretaries of the Departments of Agriculture, Defense,

Energy, Health and Human Services, and Justice; and other interested parties. In addition, the report will be available at no charge on our Web site at http://www.gao.gov.

If you or your staffs have any questions on the matters discussed in this report, please contact me at (202) 512-9286 or pownerd@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 major contributions to this report are listed in appendix V.

David A. Powner
Director, Information Technology
  Management Issues

Appendix I: Objectives, Scope, and Methodology

Our objectives were to (1) examine the accuracy of the cost and schedule performance ratings on the Dashboard for selected investments and (2) determine whether the data on the Dashboard are used as a management tool to make improvements to IT investments.

To address both objectives, we selected five agencies and ten investments to review. To select these agencies and investments, we first identified ten agencies with large IT budgets as reported in the Office of Management and Budget's (OMB) fiscal year 2010 Exhibit 53. We then identified the five largest investments at each of the ten agencies, according to the fiscal year 2010 budget, that were spending more than half of their budget on IT development, modernization, and enhancement work, and were primarily carried out by contractors. In narrowing the list to five agencies and ten total investments, we considered several factors to ensure there were two viable investments at each agency:

- The investment is not part of our ongoing audit work related to cost, schedule, and technical performance.

- The investment is not part of a recent governmentwide earned value management review. [1]

- The investment has not been highlighted as an investment needing significant attention.

- The collective list of investments creates a balance of investment sizes to include both larger and smaller investments.

The five agencies are: the Departments of Agriculture (USDA), Defense (DOD), Energy (DOE), Health and Human Services (HHS), and Justice (DOJ).

The ten investments are: USDA's Financial Management Modernization Initiative and Risk Management Agency-13 Program; DOD's Joint Precision Approach and Landing System and Maneuver Control System; DOE's Integrated Management Navigation System and Sequoia Platform; HHS's BioSense Program and Electronic Research Administration System; DOJ's

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[1]GAO, *Information Technology: Agencies Need to Improve the Implementation and Use of Earned Value Techniques to Help Manage Major System Acquisitions*, GAO-10-2 (Washington, D.C.: Oct. 8, 2009).

Law Enforcement Wireless Communication and Unified Financial
Management System (see appendix II for descriptions of each investment).

To address the first objective, we evaluated earned value data of the
selected investments to determine their cost and schedule performance
and compared it to the ratings on the Dashboard. The investment earned
value data was contained in contractor earned value management
performance reports obtained from the programs. To perform this
analysis, we compared the investment's cumulative cost variance for each
month from July 2009 through January 2010 to the cost variance reported
on the Dashboard for those months. Similarly, we calculated the number
of months each investment was ahead or behind schedule over the same
period on the Dashboard. We also assessed 13 months of investment data
to analyze trends in cost and schedule performances. To further assess the
accuracy of the cost data, we compared it with other available supporting
program documents, including monthly and quarterly investment program
management reports; electronically tested the data to identify obvious
problems with completeness or accuracy; and interviewed agency and
program officials about the data and earned value management systems.
For the purposes of this report, we determined that the cost data at eight
of the investments were sufficiently reliable to use for our assessment. For
the two remaining investments, we determined that based on their
methods of earned value management, the data would not allow us to
sufficiently assess and rate monthly investment performance. We did not
test the adequacy of the agency or contractor cost-accounting systems.
Our evaluation of these cost data was based on the documentation the
agency provided.

We also reviewed and analyzed OMB's and the selected agencies'
processes for populating and updating the Dashboard. Additionally, we
interviewed officials from OMB and the selected agencies and reviewed
OMB guidance to obtain additional information on OMB's and agencies'
efforts to ensure the accuracy of the investment performance data and
cost and schedule performance ratings on the Dashboard. We used the
information provided by OMB and agency officials to identify the factors
contributing to inaccurate cost and schedule performance ratings on the
Dashboard. Moreover, we used this information to examine the accuracy
of the rebaseline information on the Dashboard, we interviewed agency
and program officials about the number of rebaselines each investment
has had, and compared these data with the rebaseline information listed
on the Dashboard.

To address our second objective, we analyzed related agency
documentation to assess what policies or procedures they have
implemented for using the data on the Dashboard to make management
decisions. We also interviewed agency and program officials regarding the
extent to which they use the data on the Dashboard as a management tool.
Additionally, we attended one of OMB's TechStat sessions, which are
reviews of selected IT investments between OMB and agencies.

We conducted this performance audit from January to July 2010 at the
selected agencies' offices in the Washington, D.C., metropolitan area. Our
work was done 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: Selected Investment Descriptions

Below are descriptions of each of the selected investments that are included in this review.

Department of Agriculture (USDA)

Financial Management Modernization Initiative

The Financial Management Modernization Initiative is USDA's financial management system modernization program. It is intended to be the central financial system for USDA and is to consolidate the current financial management system environment from 19 legacy systems into one Web-based system.

Risk Management Agency-13

USDA's Risk Management Agency-13 program is intended to support the reengineering of all business systems associated with the crop insurance program and provide a central financial system that will provide Web-based tools and applications for accessing Risk Management Agency data.[1]

Department of Defense (DOD)

Joint Precision Approach and Landing System

DOD's Joint Precision Approach and Landing System investment is intended to provide a precision approach and landing capability for all DOD ground and airborne systems. It is intended to enable U.S. forces to safely land aircraft on any suitable surface worldwide (land and sea), with ceiling and/or visibility the limiting factor.

Maneuver Control System

DOD's maneuver control system investment is intended to provide, among other things, the warfighter environment and collaborative and situational awareness tools used to support executive decision making, planning, rehearsal, and execution management. This system is to be used throughout the Army to provide a common view of critical information.

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[1]Federal crop insurance provides protection for participating farmers against the financial losses caused by droughts, floods, or other natural disasters and against the risk of crop price fluctuations.

Department of Energy (DOE)

Integrated Management Navigation System

DOE's Integrated Management Navigation System consists of 5 major projects and is intended to standardize and integrate accounting, data warehouse, human resource, procurement, and budget processes throughout DOE. The Integrated Management Navigation System incorporates enterprisewide projects from DOE's Office of the Chief Financial Officer, Office of Human Capital Management, and Office of Management.

Sequoia Platform

DOE's Sequoia Platform is a supercomputer being developed for use by three weapons laboratories—Los Alamos, Lawrence Livermore, and Sandia National Laboratories—to contribute dramatically to the national security enterprise. This supercomputer will also be used in maintaining the nuclear deterrence and areas of nonproliferation, nuclear counterterrorism, and support to the intelligence community.

Department of Health and Human Services (HHS)

BioSense

HHS's BioSense program is intended to improve the nation's capabilities for disease detection, monitoring, and near real-time health situational awareness by creating a system that uses data from existing health-related databases to identify patterns of disease symptoms prior to specific diagnoses.[2]

Electronic Research Administration

HHS's Electronic Research Administration program is the National Institutes of Health's system for conducting interactive electronic transactions for the receipt, review, monitoring, and administration of grant awards to biomedical investigators worldwide. It is also intended to provide the technology capabilities for the agency to efficiently and effectively perform grants administration functions.

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[2]Situational awareness is the knowledge of the size, location, and rate of spread of an outbreak.

Department of Justice (DOJ)

Law Enforcement Wireless Communication

DOJ's Law Enforcement Wireless Communication System, also known as the Integrated Wireless Network, is to support the replacement and modernization of failing radio systems and achieve communication standards at DOJ's law enforcement agencies. This program is intended to provide all four law enforcement components with a shared unified radio network, which should eliminate redundant coverage and duplicative radio sites, while providing efficient and comparable coverage.

Unified Financial Management System

DOJ's Unified Financial Management System is to improve the existing and future financial management and procurement operations across DOJ. Upon full implementation, the Unified Financial Management System will replace five financial management systems and multiple procurement systems with an integrated commercial off-the-shelf solution. This is to streamline and standardize business processes and procedures across the DOJ components.

Table 7 provides additional details for each of the selected investments in our review.

Table 7: Investment Management Details

Agency	Bureau	Program name	Program start date	Program end date	Prime contractor
DOD	Department of the Navy	Joint Precision Approach and Landing System	1995	2024	Raytheon
	Department of the Army	Maneuver Control System	2005	2018	General Dynamics
DOE	Departmental Administration	Integrated Management Navigation System	2000	2015	IBM
	National Nuclear Security Administration	Sequoia Platform	2009	2012	LLNS
DOJ	Justice Management Division	Law Enforcement Wireless Communication	2005	2015	General Dynamics
	Justice Management Division	Unified Financial Management System	2001	2021	IBM
HHS	Centers for Disease Control and Prevention	BioSense	2003	2015	SAIC
	National Institutes of Health	Electronic Research Administration	1994	2018	ICF/Z-Tech, LTS, PMC, RN Solutions, SAIC, and Wyle
USDA	Departmental Administration	Financial Management Modernization Initiative	2008	2011	Accenture LLP
	Risk Management Agency	Risk Management Agency-13	2006	2011	SAIC

Source: OMB's Dashboard and data from program officials.

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

JUN 2 5 2010

Mr. David A. Powner
U.S. Government Accountability Office
441 G Street, NW
Washington, D.C. 20548

Dear Mr. Powner:

OMB appreciates GAO's analysis of the IT Dashboard contained in the draft report "OMB's Dashboard Has Increased Transparency, but Data Accuracy Improvements Needed" (GAO-10-71). After review of this draft, we have several concerns, which we organized into the following three categories: 1) objections to some recommendations in the draft report, 2) concerns with the lack of findings related to improvements in transparency and oversight, and 3) other concerns with specific findings throughout the report.

OMB has several concerns related to GAO's four recommendations, found on page 20 of the draft report. In summary, OMB accepts one recommendation, requests removal of two, and requests rewording of one to reflect progress made since initiation of this report.

OMB believes we have implemented the fourth recommendation to consider weighing recently completed and ongoing milestones more heavily than historical milestones, and therefore request removal of this recommendation from the final report. In June 2010, OMB implemented updated cost and schedule calculations as part of the new release of the IT Dashboard. The updated calculations greatly increase the weight of current and ongoing activities in relation to historical milestones, as recommended, and we do not rule out the use of additional adjustments to the formula as we assess these calculations in the future.

Development of these calculations began prior to the beta release of the IT Dashboard, in collaboration with the formation of a cost and schedule working group comprised of subject matter experts from several major agencies. As clearly signaled in the FAQs from launch, the plan was always for the original calculations to be temporary because of the inability to factor in ongoing activities due to known limits of the available data. The group advised requiring the collection of planned start date, actual start date, actual percent complete and planned percent complete. The start date fields were added as new fields in the A-11 Exhibit 300 schema for FY 2011, and planned and actual percent complete were required for all activities replacing the "percent complete" from the previous schema, which was required only for milestones representing development, modernization and enhancements.

Regarding the first recommendation, to revise guidance on re-baselines, OMB believes that GAO's findings do not adequately address changes already made to re-baseline guidance

and implementation since the launch of the IT Dashboard, and requests removal of this recommendation. Prior to the launch of the IT Dashboard, reporting of re-baselines was inconsistent and widely unreported as required. Today, all changes to the baseline are recorded by the system and clearly displayed on the investment dashboard and in data feeds, along with agency-provided reasons for the change. Contrary to GAO's findings, the reasons given do allow agencies to differentiate between minor and major changes to the baseline. OMB acknowledges that this differentiation of re-baselines was not adequately presented in the previous release, and has made changes in the new release to make this differentiation clearer.

On the third recommendation, OMB requests GAO adjust the report to reflect the full progress achieved. OMB has chartered a working group with the primary task of developing clear guidance for standardizing and improving investment activity reporting. This group is comprised of several subject matter experts from a cross-section of major agencies, including HUD, EPA, Interior, DoD, VA, and DOT. In June 2010, additional guidance will be issued to amend previous baseline management policies. This memorandum provides policy direction regarding development of agency IT investment baseline management policies and defines a common structure for IT investment baseline management policy with the goal of improving transparency, performance management, and effective investment oversight. Exhibit 300 for FY 2012 and the IT Dashboard schema are in the process of being updated to reflect this change in policy, and results will be visible in the IT Dashboard with the release of the new schema this fall.

On the second recommendation, OMB agrees with GAO's recommendation to address how the recently updated cost and schedule calculations have improved the accuracy of the data in the next annual Implementation of the E-Government Act report.

See comment 1.

OMB also has a general concern with the report's lack of information about the first half of the thesis, namely that the IT "Dashboard has increased transparency and oversight." In the "What GAO Found" section of the Highlights page, virtually no mention is made as to how the IT Dashboard has improved transparency, accountability, and oversight. To address this omission, OMB suggests insertion of one or more of the following improvements that have been made as a result of the IT Dashboard:

- In the FY 2009 E-Government Act report, numerous agencies reported on how the IT Dashboard had increased the visibility of IT investment management within the agency and increased scrutiny of investment data by the most senior leadership of agencies.

- Last July, the Department of Veterans Affairs (VA) halted 45 IT projects that were significantly behind schedule or over budget, identified in part thanks to the IT Dashboard. In terminating 12 of these projects, the VA avoided $54 million in wasteful spending during fiscal year 2010.

- Building on the foundation of the IT Dashboard, OMB launched face-to-face, evidence-based reviews of IT programs called TechStat Accountability Sessions. These sessions enable Government officials to collaborate with one another to turn around or halt IT investments that do not produce dividends for the American people. Since January 2010, OMB has conducted 27 of these sessions with the responsible agencies.

- Trend data collected over the past year allows OMB analysts and the public to track changes in investments over time and identify issues more timely and target investments for more in-depth reviews.

- OMB observed significant increases in data clean-up activities and more rigorous internal agency review processes prior to monthly reporting across the Federal agencies. Specifically, immediately upon release of the IT Dashboard, we saw a marked improvement in the quality of agency-reported contract numbers. Just prior to launch, analysis of the legacy data showed only 455 matches with contract Procurement Identifier in USASpending.gov. Today, the match rate has more than quadrupled to 1,914.

- Agencies are paying greater attention to the impact of changing planned data and informing OMB of changes to investment baselines. Prior to the launch of the IT Dashboard, reporting of re-baselines was inconsistent and widely unreported as required. Today, all changes to the baseline are recorded by the system and clearly displayed on the investment dashboard and in data feeds, along with agency-provided reasons for the change.

- A lack of timely performance data and clear lines of accountability have been historical impediments to the ability to identify potential failures early on. By dramatically increasing the frequency of major investment reporting from yearly to monthly, we greatly improved oversight capabilities.

- By placing the CIO's picture on each investment page and requiring them to rate each investment, a clear point of accountability was established and long-needed visibility was given to CIOs government-wide. By enabling CIO ratings to override cost and schedule ratings, a mechanism was provided to overcome some of the concerns with the early IT Dashboard calculations.

Finally, OMB is concerned about findings throughout the report related to data quality, cost and schedule calculations, and management baseline changes and requests that GAO update the report to address the following:

See comment 2.

- **Data quality.** The IT Dashboard has brought into focus data quality issues which have existed for years and should not be directly attributed to the IT Dashboard itself. For example, only after the IT Dashboard began using milestone data for meaningful analysis did the need to collect activity start dates and separate percentage complete fields become

apparent. OMB immediately established a policy to collect this information on the same day we launched and included these new data fields as part of the BY 2010 Circular A-11 update released summer of 2009. Just one year later, the IT Dashboard contains start dates for every one of the nearly 800 major investments, which has enabled more current cost and schedule calculations today.

See comment 3.

- **Cost and schedule calculations.** OMB disagrees with the characterization of cost and schedule ratings as "inaccurate" throughout the report. This statement is misleading for four major reasons. First, it could be interpreted to imply a binary standard for accuracy (i.e. the calculation is either "inaccurate" or "accurate"), and presumes that the agency systems or GAO's own calculations set the standard for accuracy. GAO's report states that the primary data on cost and schedule was obtained from agency earned value reports, which generally cover only the contract portion of the investment. IT Dashboard calculations cover a broader set of activities (development and operational activities) performed by both contractor and government resources. A direct comparison of EVM reports against IT Dashboard calculations is therefore not appropriate.

See comment 4.

Second, the methodology selected by GAO as the standard for accuracy in this report relies on quality and consistency of agency EVM reports. OMB recognizes that the availability and quality of EVM data varies significantly by investment and by agency, calling into question the reliability of any methodology which relies upon this data. As GAO states in this report, for two of the ten investments it chose for its analysis, "the earned value data was not sufficient for our purposes of rating cost and schedule performance." It is in recognition of this very fact that OMB worked with agencies to develop a calculation that did not rely solely upon EVM outputs that OMB could apply consistently across all agencies.

See comment 5.

Third, the word "inaccurate" as applied to the IT Dashboard calculations could be easily construed by the public to mean that the calculation was defective or not performing as designed. As GAO has not attempted to demonstrate how the calculations used were not accurately and consistently applied to the entire dataset and transparent to the public, we assume this not to be the case and ask that the report clarifies that the calculation performs as designed.

See comment 6.

Finally, by GAO's own assessment, the severity of the discrepancies of the cost ratings was not dramatic. In fact, given that these figures were calculated from entirely separate sources using different methodologies, OMB believes the discrepancies between the cost calculation ratings, as displayed in table 4, to be remarkably small.

See comment 7.

- **OMB guidance.** OMB believes that the report overstates the impact of OMB's "vague" guidance on data quality and underemphasizes the responsibility of agencies as the providers of the data. While OMB acknowledges the need to assess and improve

See comment 8.

guidance on an ongoing basis, in some cases clear existing guidance is not always being followed by some agencies. For example, DoD agrees that the milestone data it supplies is not at WBS level 2 or 3, but cites internal policy as to why it reports at a higher level. Another example is the ever-improving but still inadequate match rate on contracts data, yielding a "Contractor's name match not found" message on the investment dashboard page. Adherence to existing guidance would have a significant impact on the quality of the data in the IT Dashboard. As such cases arise, OMB analysts notify the agency, direct the agency to take corrective actions, and monitor their progress. Improvements to data quality have on numerous occasions been the subject of TechStat action items. OMB plays an important role in defining frameworks and standards for data quality; however, the ultimate responsibility for data quality lies in the agency. This should be made clear throughout the report.

- **Baseline changes.** On page 12, the report mischaracterizes the manner in which the IT Dashboard collects and presents baseline corrections or changes. According to IT Dashboard guidance, available in the FAQs on the site, "Only baselines approved in accordance with agency policy should be entered into the IT Dashboard by an authorized user." While the IT Dashboard did previously identify changes to the baselines at the top level as re-baselines, it has also always allowed agencies to differentiate between various types of re-baselines and provide reasons for those baseline changes. This includes provisions for data corrections. The full set of reasons provided is as follows:

  - *External - Direct Mandate* - Re-baselined/Planning change made due to investment-specific budget changes mandated by Congress or OMB. For example, Congressional rescissions or OMB budget decisions.
  - *External - Agency Mandate* - Re-baselined/Planning changes made due to agency budget changes resulting from OMB, Congressional, or legislative action. For example, Fund disaster recovery efforts, legislation directing all agencies to take across-the-board reduction, leaving each agency with discretion to make the cut.
  - *External - Phase Gate* - Re-baselined/Planning changes due to a change from one investment life-cycle phase to another (i.e., planning, acquisition, mixed life cycle, operations and maintenance) where cost and schedule milestones are expected to change significantly.
  - *External – Protest* - Re-baselined/Planning changes due to sustained long-term protest of contract.
  - *Internal - Bureau Mandate* - Agency internal factors are re-baselined due to Department to bureau budget changes (e.g., Department Passback) that necessitate a change to the previously approved baseline.
  - *Internal - IRB Mandate* - Agency internal factors are re-baselined due to agency investment review board approved changes in requirements, performance measures or scope (including enhancements and feature changes).

See comment 9.

- *Internal - Technological Change* - Agency internal factors are re-baselined due to major technology changes or process innovations requiring changes to investment's cost, schedule or performance (usually to reduce cost/time to deployment).
- *Internal - Poor Performance* - Agency internal factors are re-baselined due to significant poor project performance and leadership change.
- *Internal - Contractor Performance* - Agency internal factors are re-baselined due to poor contractor performance requiring contractor change.
- *Internal - Inaccurate Baseline* - Agency internal factors are re-baselined due to inaccuracies in the original baseline.
- *Internal – Other*

In addition, agencies wishing to make changes contrary to this policy (e.g. to make data corrections) have always been granted the ability by OMB to make specific changes through the back end of the system, avoiding unnecessary and inaccurate "re-baseline" designations on the IT Dashboard. To do so, agencies are asked to send a written request to the assigned OMB analyst for review, who approves the specific edits. In most cases, these changes can be made within 24 hours of request.

With the launch of the beta release of the IT Dashboard in June 2009, we made the decision to fundamentally change the way OMB exercises its IT investment oversight function. No longer would data be locked up in PDFs on agency websites, in varying formats with inconsistent display of information and updated only once a year. Under the new model, data would be dynamic, readily available and updated monthly, and easily consumable by the public, who should serve as a new partner in overseeing the Federal government's $80 billion investment in information technology.

We launched the IT Dashboard as a beta product, well-aware of the challenges posed by the quality and consistency of the data and the mechanisms to collect it. We did so recognizing that these challenges would take time and effort to overcome, but would not be as far along as we are today had we not taken these early steps toward transparency. In the interest of promoting the use of transparency to drive positive change in the way our government operates, we hope that GAO takes these facts into strong consideration in the final version of this report.

Sincerely,
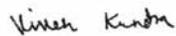
Vivek Kundra

Vivek Kundra
Federal Chief Information Officer

The following is GAO's response to the Office of Management and
Budget's (OMB) additional comments.

GAO Comments

1. We agree that the Dashboard has increased transparency,
   accountability, and oversight; therefore, we updated the report to
   discuss additional uses of the Dashboard, such as the use of trend
   data, improved oversight capabilities, and enhancements to agencies'
   investment management processes. We also updated the number of
   Techstat sessions that have taken place.

2. While additional data quality issues need to be addressed in the
   Dashboard, we agree that the Dashboard is an improvement when
   compared to OMB's previous oversight tools such as the Management
   Watch List and High Risk List. As such, we modified the report to
   highlight these improvements. For example, we added to the report
   that the Dashboard's monthly reporting cycle is a significant
   improvement in the quality of the data from the Management Watch
   List and High Risk List, which were updated on a quarterly basis.

3. As stated in the report, we found that the ratings were not always
   accurate. We based this characterization on the fact that there were
   several instances in which the ratings were inconsistent with the
   performance indicated in our analysis of the investments' earned value
   management (EVM) reports and were notably different (e.g., ratings of
   "green" versus "yellow"). We agree that EVM data generally only
   covers the contracted development parts of the investments. As such,
   as part of our methodology, we specifically selected investments
   where the majority of each investment was focused on development
   efforts (versus operational) and primarily carried out by contractors.[1]
   As such, we maintain that the comparison between the selected
   investments' Dashboard ratings and the performance indicated in their
   EVM reports is a fair assessment.

4. We acknowledge that the quality of EVM reports can vary. As such, we
   took steps to ensure that the EVM reports we used were reliable
   enough to evaluate the ratings on the Dashboard, and as OMB's
   comments indicate, we discounted two of the ten selected investments
   after determining that their data was insufficient for our needs. We do

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[1]During the course of our review, we found that one of the investments we selected
(BioSense), had completed its development work in July 2009. Therefore, as we note in the
report, July 2009 was the only month we assessed its performance.

not state that OMB should base their ratings solely on EVM data.

5. We agree that the original cost and schedule calculations are performing as planned (i.e., are not defective) and we further clarified this point in the report. We also note that planned changes to the rating calculations will incorporate current performance. However, these calculations, as originally planned and implemented, do not factor in the performance of ongoing milestones, which we and OMB agree is an area for improvement.

6. We agree that the severity of the discrepancies were not always dramatic. However, 4 of the 8 investments had notable discrepancies on either their cost or schedule ratings. Specifically, as demonstrated in the report, there were multiple instances in which the ratings were discrepant enough to change the color of the ratings. The difference between a "green" rating (i.e., normal performance) and a "yellow" rating (i.e., needs attention) is the difference between whether an investment is flagged for needing attention or not, which we believe is an important point to highlight.

7. We agree that agencies have a responsibility to provide quality milestone data; however, we maintain that OMB's existing guidance on which milestones to report is too general for agencies to ensure they are reporting consistently. OMB acknowledges that this is an area for improvement and has established a working group to address this issue.

8. As previously discussed, on June 28, 2010, OMB issued its new guidance on managing IT baselines. This guidance, among other things, describes when agencies should report baselines changes to the Dashboard. Officials also provided information on the upcoming release of the Dashboard—which is intended to be released in July 2010—that will change the way baseline changes are displayed. We agree that these recent changes address the issues we identified.

9. We acknowledge that the Dashboard has made significant improvements to oversight and transparency, in comparison to OMB's previous methods of overseeing IT investments, and we have added additional information to the background of the report to highlight this point.

Appendix IV: Comments from the Department of Energy

Department of Energy
Washington, DC 20585

June 3, 2010

Mr. David A. Powner
Director, Information Technology Management Issues
General Accountability Office

Dear Mr. Powner:

Thank you for the opportunity to respond to the U.S. General Accountability Office's draft report entitled "OMB's Dashboard Has Increased Transparency and Oversight, but Data Accuracy Improvements Needed". In general, we agree with your assessment of the implementation of the IT Dashboard across federal agencies and with the recommendations that are presented to the Office of Management and Budget (OMB).

We have the following comments to the report that we would like to provide for your consideration:

See comment 1.

1. There is a section of the report that indicates OMB released guidance in June 2009, requesting agencies provide milestones at level 2 in their investments' work breakdown structures. It is worth noting that until March 2010, investments were unable to transmit milestones at a level lower than level 1. The system at OMB would not accept lower-level milestones, and would in fact, double-count any sub-milestones reported below level 1. For that reason, investments reported milestones at level 1 and are currently working to report milestones at level 2 for future Dashboard submissions to OMB.

2. In addition, there is a recommendation for Chief Information Officers to ensure compliance with OMB guidance on milestone reporting that has not been issued. OMB has indicated that agencies should report milestones at level 2; however, as stated in your report, there is no commonly accepted definition among federal agencies on the level of details that should comprise level 2. Once OMB releases this additional guidance, we will work with our Program and Staff Offices to ensure the appropriate level of detail is reported to the Dashboard. We will also work with OMB on the timing of when the updated milestones can be reflected on the Dashboard. Typically new milestones are posted once the final budget is submitted to OMB, which occurred in March 2010 for the BY 2011 budget. If this same timeline is followed for the upcoming budget cycle, the Department will not be able to report level 2 milestones on the Dashboard until the next refresh of data which may not occur until March 2011, unless OMB allows agencies to update milestones prior to that timeframe.

Again, thank you for the opportunity to review this report. If you have any questions related to this letter, please feel free to contact me at (202) 586-3705.

Sincerely,

TheAnne Gordon
Associate Chief Information Officer for IT Planning, Architecture, and E-Government

Printed with soy ink on recycled paper

The following is GAO's response to the Department of Energy's (DOE)
additional comment.

GAO Comment

OMB's guidance required agencies to provide data at one consistent work
breakdown structure level, rather than a mix of multiple levels. OMB and
others confirmed that agencies were able to transmit milestones at a single
consistent level. For this report, we observed agencies uploading at levels
1 through 4 and, thus, disagree that agencies were unable to transmit
milestones lower than level 1.

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

David A. Powner at (202) 512-9286 or pownerd@gao.gov

Staff Acknowledgments

In addition to the contact name above, the following staff also made key contributions to this report: Shannin O'Neill, Assistant Director; Carol Cha; Eric Costello; Rebecca Eyler; Emily Longcore; Bradley Roach; and Kevin Walsh.