



September 2021

IT MODERNIZATION

USDA Needs to Improve Oversight of Farm Production and Conservation Mission Area



A Century of Non-Partisan Fact-Based Work

GAO@100 Highlights

Highlights of [GAO-21-512](#), a report to congressional requesters

Why GAO Did This Study

In 2017, USDA combined three of its agencies under the FPAC mission area to, among other things, improve customer service for farmers, ranchers, and foresters. For fiscal year 2020, FPAC reported obligating a total of \$229 million on IT investments to support its mission.

GAO was requested to review USDA's IT modernization efforts to improve customer service for farmers and ranchers. For this report, GAO examined the extent to which (1) USDA and FPAC are effectively overseeing the development of Farmers.gov; and (2) FPAC's IT workforce planning, efforts to reduce duplication and overlap, and customer service are consistent with leading practices. To do so, GAO compared key Farmers.gov documentation to USDA's IT investment oversight policies and procedures. GAO also compared departmental documentation to leading practices for IT workforce planning, duplication and overlap, and customer service. For both objectives, GAO interviewed cognizant agency officials to obtain their views and verify the information provided.

What GAO Recommends

GAO is making 15 recommendations to USDA to strengthen program oversight and address key IT leading practices supporting its IT modernization. USDA concurred with all recommendations and described actions it is taking to implement each of them.

View [GAO-21-512](#). For more information, contact Vijay D'Souza, 202-512-6240, dsouzav@gao.gov

September 2021

IT MODERNIZATION

USDA Needs to Improve Oversight of Farm Production and Conservation Mission Area

What GAO Found

In 2018, the United States Department of Agriculture's (USDA) Farm Production and Conservation (FPAC) mission area launched Farmers.gov to provide farmers, ranchers, and foresters with online self-service applications and business tools. USDA and FPAC have provided minimal oversight for Farmers.gov. Specifically, the governance boards did not conduct reviews at predefined checkpoints for Farmers.gov, as required by USDA's governance framework (see figure). This lack of oversight has allowed FPAC to proceed without developing key program documentation for Farmers.gov, such as project plans and cost and schedule estimates. Further, employee feedback on elements of Farmers.gov already deployed have raised a number of questions on the (1) usability of applications or tools that have already been deployed, and (2) risks that ongoing development efforts and software enhancements will produce deliverables that do not meet customer needs. Improving USDA oversight of Farmers.gov and developing repeatable processes that align Agile methodology to USDA's governance framework can help address these concerns and lead to enhanced service for intended customers.

Status of Required Governance Reviews and Key Documentation for the Farm Production and Conservation's Farmers.gov program, as of April 2021

Gates 1 and 2 | Initiation and investment

Required final documents:

- ✘ Project management plan
- ✘ Mission needs statement (including cost estimate)
- ✘ Project schedule (draft)

Required reviews and approvals:

- ✔ IAB review and approval
- ✘ E-Board review and approval

Gates 3, 4, and 5 | Requirements, design, development and test

Required final documents:

- ✘ Earned value management report
- ✘ Business case

Required reviews and approvals:

- ✘ IAB review and approval
- ✘ E-Board review and approval

E-Board (Executive Information Technology Investment Review Board), IAB (Integrated Advisory Board)

✘ Not completed ✔ Completed

Source: GAO analysis of U.S. Department of Agriculture and Farm Production and Conservation mission area data. | GAO-21-512

FPAC had not fully implemented key leading practices supporting IT workforce planning, duplication and overlap, and customer service that are necessary to ensure success. Specifically, FPAC had not implemented seven of eight IT workforce planning activities. Until it does, FPAC will be limited in its ability to address gaps in knowledge and skills. Further, while FPAC had several IT modernization initiatives underway as of March 2021 to maximize efficiencies and reduce IT duplication and overlap, it had not developed a mission area strategic plan that included the associated performance goals and measures to monitor IT program performance against efficiency goals. Moreover, while FPAC had actions and plans to address customer service measures and associated targets and goals, it had yet to fully implement this activity. Implementation of these key IT modernization practices would provide greater assurance that FPAC is meeting the needs of farmers, ranchers, and foresters.

Contents

Letter		1
	Background	4
	USDA and FPAC Have Provided Minimal Oversight for Farmers.gov	19
	FPAC Has Not Fully Implemented Key Leading Practices Supporting IT Workforce Planning, Duplication and Overlap, and Customer Service	28
	Conclusions	34
	Recommendations for Executive Action	34
	Agency Comments and Our Evaluation	37
Appendix I	Objectives, Scope, and Methodology	39
Appendix II	Comments from the Department of Agriculture	45
Appendix III	GAO Contacts and Staff Acknowledgments	49
Tables		
	Table 1: Key Required Documents by Decision-Gate Review for Farmers.gov	13
	Table 2: Workforce Planning Steps and Corresponding Activities	17
	Table 3: Farm Production and Conservation (FPAC) Implementation of Key Information Technology (IT) Workforce Planning Activities as of March 2021	29
	Table 4: FPAC IT Modernization Initiatives to Maximize Efficiencies and Reduce Duplication and Overlap, as of March 2021	31
	Table 5: Evaluation Criteria Associated with the Key Information Technology (IT) Workforce Planning Activities	41
Figures		
	Figure 1: USDA Farm Production and Conservation Mission Area Organization	5
	Figure 2: U.S. Department of Agriculture's Governance Framework and Farm Production and Conservation Mission Area Investment Review Boards	8

Figure 3: USDA Integrated IT Governance Framework Decision-Gate Reviews	10
Figure 4: Status of Farmers.gov Decision-Gate Reviews and Associated Documentation as of April 2021	25

Abbreviations

CIO	chief information officer
E-Board	Executive Information Technology Investment Review Board
EVM	Earned value management
FITARA	Provisions of the <i>National Defense Acquisition Act for Fiscal Year 2015</i> commonly known as the <i>Federal Information Technology Acquisition Reform Act of 2014</i>
FPAC	Farm Production and Conservation
FSA	Farm Service Agency
GPRA	<i>Government Performance and Results Act</i>
IT	information technology
ITIM	Information Technology Investment Management framework
IAB	Integrated Advisory Board
IRB	Investment Review Board
NRCS	Natural Resources Conservation Service
OMB	Office of Management and Budget
RMA	Risk Management Agency
SAFe	Scaled Agile Framework
SDLC	system development lifecycle
USDA	United States Department of Agriculture

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September 23, 2021

The Honorable Debbie Stabenow
Chair
Committee on Agriculture, Nutrition, and Forestry
United States Senate

The Honorable Gary C. Peters
Chair
Committee on Homeland Security and Governmental Affairs
United States Senate

For decades, Congress has authorized many federal farm programs through major pieces of legislation known as Farm Bills.¹ The programs authorized and renewed in Farm Bills are to, among other things, help farmers manage the risks inherent in farming and promote economic development in rural areas. The United States Department of Agriculture's (USDA) information technology (IT) infrastructure enables farmers, ranchers, and other customers to enroll in programs, access services, and exchange information.

In May 2017, in response to the 2014 Farm Bill,² USDA announced a major initiative to provide better customer service to U.S. farmers, ranchers, and foresters, and to improve efficiency.³ Part of this initiative was the establishment of the Farm Production and Conservation (FPAC) mission area within the department to consolidate certain USDA component agencies' operations, including IT. The agencies included in this consolidation initiative were the Farm Service Agency (FSA), Risk Management Agency (RMA), and the Natural Resources Conservation Service (NRCS).

In addition, in November 2017, the Secretary of Agriculture announced the formation of a business center within the FPAC mission area to

¹The most recent Farm Bill was enacted in December 2018. *Agriculture Improvement Act of 2018*; Pub. L. No. 115-334, 132 Stat. 4490, 4988 (2018).

²The *Agricultural Act of 2014*, Pub. L. No. 113-79, 128 Stat. 649.

³U.S. Department of Agriculture, *Advancing U.S. Agricultural Trade and Improving Service to Agricultural Producers*, Secretary's Memorandum 1076-017 (Washington, D.C.: May 11, 2017).

provide mission-support activities, including IT, to the component agencies included in the consolidation.⁴ These activities were intended to, in part, help improve the IT workflow and reduce the overlap of IT roles among the three FPAC agencies, while at the same time improving customer service for farmers, ranchers, and foresters.

One of FPAC's key IT initiatives is Farmers.gov.⁵ Launched in February 2018, Farmers.gov is intended to provide farmers, ranchers, and foresters with online self-service applications, educational materials, engagement opportunities, and business tools.

We have previously reported that modernizing IT is a challenge across the federal government, including at USDA. Specifically, in February 2015, we added "Improving the Management of Information Technology Acquisitions and Operations" to our high risk list.⁶

You requested that we review USDA's IT modernization efforts to improve customer service for farmers and ranchers. The specific objectives of this review were to determine the extent to which: (1) USDA and FPAC are effectively overseeing the development of Farmers.gov and (2) FPAC's IT workforce planning, efforts to reduce duplication and overlap, and customer service activities are consistent with best practices.

To address the first objective, we reviewed the department's IT investment oversight policies and procedures, such as the USDA *Integrated IT Governance Framework*, the *FPAC Business Center System Development Life Cycle Document*, and governance board charters. We compared these documents to GAO's Information Technology Investment Management (ITIM) framework and GAO's Agile

⁴U.S. Department of Agriculture, *Improving Customer Service and Efficiency*, Secretary's Memorandum 1076-018 (Washington, D.C.: Nov. 14, 2017).

⁵Farmers.gov, a "major" IT investment, is part of the FPAC-FBC-1001 Customer Engagement and Management Services investment.

⁶GAO, *High-Risk Series: An Update*, [GAO-15-290](#) (Washington, D.C.: Feb. 11, 2015). Also, in June 2015, we reported that the Farm Service Agency, now part of FPAC, oversaw the Modernize and Innovate the Delivery of Agricultural Systems (MIDAS) program development and envisioned it as a single platform to host data, tools, and applications for administering farm program benefits that would be integrated with USDA financial, geospatial, and data warehouse systems. GAO, *Farm Program Modernization: Farm Service Agency Needs to Demonstrate the Capacity to Manage IT Initiatives*, [GAO-15-506](#) (Washington, D.C.: Jun. 18, 2015).

Assessment Guide.⁷ In addition, we requested key Farmers.gov program planning documents and assessed the documents provided against the department's IT investment oversight policies and procedures.

To address the second objective, we reviewed program documents, such as those discussing FPAC's IT workforce planning activities and competencies, policies and initiatives intended to reduce duplication and overlap in the mission area, and customer service and experience surveys and the associated results. We compared these documents to federal laws and executive orders, including the *GPRA (Government Performance and Results Act) Modernization Act of 2010*; the provisions of the *National Defense Authorization Act for Fiscal Year 2015* commonly known as the *Federal Information Technology Acquisition Reform Act of 2014* (FITARA); and executive orders on customer service.⁸ We also compared the documents to guidance, including relevant Office of Management and Budget (OMB) guidance; GAO's IT workforce planning framework that identified four workforce planning steps and eight activities, including assessing gaps in competencies and skills, and developing strategies and plans to address those gaps; and GAO's reports on fragmentation, overlap, and duplication, and on customer service.⁹

⁷GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, [GAO-04-394G](#) (Washington, D.C.: Mar. 2004); *Agile Assessment Guide: Best Practices for Agile Adoption and Implementation*, [GAO-20-590G](#) (Washington, D.C.: Sep. 2020).

⁸*GPRA (Government Performance and Results Act) Modernization Act of 2010*, Pub. L. No. 111-352, 124 Stat. 3866 (Jan. 4, 2011); *Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015*, Div. A, Title VIII, Subtitle D—*Federal Information Technology Acquisition Reform*, Pub. L. No. 113-291, (Dec. 19, 2014).

⁹OMB, *Preparation, Submission, and Execution of the Budget*, Circular No. A-11 (Washington, D.C.: Aug. 6, 2021); OMB, *Managing Information as a Strategic Resource*, Circular No. A-130 (Washington, D.C.: July 27, 2016); GAO, *IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps*, [GAO-17-8](#) (Washington, D.C.: November 30 2016); GAO, *Information Technology, Agencies Need to Fully Implement Key Workforce Planning Activities*, [GAO-20-129](#), (Washington, D.C., Oct. 30, 2019); GAO, *Fragmentation, Overlap, and Duplication: An Evaluation and Management Guide*, [GAO-15-49SP](#) (Washington, D.C.: Apr. 14, 2015); GAO, *Managing for Results: Selected Agencies Need to Take Additional Efforts to Improve Customer Service*, [GAO-15-84](#) (Washington D.C., Oct. 24, 2014).

For both objectives, we interviewed cognizant agency officials to obtain their views and verify the information provided. See appendix I for a more detailed discussion of our objectives, scope, and methodology.

We conducted this performance audit from March 2020 through September 2021 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

Established by the Secretary of Agriculture in June 2017, the FPAC mission area is the department's focal point for the nation's agricultural producers (farmers and ranchers), other stewards of private agricultural lands (conservationists), and non-industrial private forest lands (foresters).¹⁰ The FPAC Business Center, the centralized office for mission-support activities for FSA, RMA, and NRCS, subsequently began operations in October 2018. Figure 1 provides a depiction of the FPAC mission area.

¹⁰The USDA mission areas are listed at <https://www.usda.gov/our-agency/about-usda/mission-areas>.

Figure 1: USDA Farm Production and Conservation Mission Area Organization



Source: GAO summary of Farm Production and Conservation mission area data. | GAO-21-512

FPAC agencies employ approximately 21,000 people in over 3,000 offices nationwide, including 50 state and over 2,100 county offices, where employees provide direct service to the public. The FPAC agencies are tasked with implementing programs designed to mitigate the financial and other risks of farming through crop insurance services, conservation programs and technical assistance, and commodity lending and disaster programs. In fiscal year 2019, U.S. farmers, ranchers, and foresters received more than \$71 billion in USDA payments, administered by FPAC agencies.

The Business Center, with around 1,400 employees, handles financial management, budgeting, human resources, IT, acquisition and procurement, and customer experiences for the combined FPAC mission area. Approximately 340 of the 1,400 employees are in the Business Center’s IT division, which is responsible for managing the FPAC component agencies’ IT resources and activities. Those responsibilities

include IT strategic planning, governance, development, operations, and customer support.

FPAC officials stated that the current structure has consolidated multiple agency roles from FSA, RMA, and NRCS into single-mission-area roles, which has reduced the number of required senior executive service and supervisory managers. The current management structure includes a single assistant chief information officer (CIO), assistant chief technology officer, assistant chief data officer, chief architect, and chief security officer. In the past, each of the three agencies within FPAC would have had an official to fill each of those work roles.

USDA Governance Framework

In June 2018, USDA released the most recent version of its *Integrated Information Technology Governance Framework* (governance framework) to manage and oversee IT investments over their life cycle—from initiation to disposition.¹¹ Originally released in 2013, the governance framework applies to all new and existing major USDA IT investments and projects, including Farmers.gov. In fiscal year 2020, FPAC obligated a total of \$229 million for its major and non-major IT investments.

The governance framework outlines three governing bodies that are responsible for providing executive-level oversight to ensure the accountability and success of IT investments. These governing bodies are the Investment Review Boards (IRB), the Integrated Advisory Board (IAB), and the Executive Information Technology Investment Review Board (E-Board):

- The IRBs are made up of senior officials within their respective component agencies, whose responsibilities are to lead the process of prioritizing USDA IT needs, make decisions on final IT budgeting proposals, and work with mission-area staff to ensure the needs receive funding.
- The IAB is made up of USDA department-level technology managers. It is responsible for ensuring that all technological decisions associated with major IT investment reviews are aligned with organizational goals, strategies, objectives, and mission needs. The USDA Associate CIO of the Information Resource Management Center serves as the board's Chair and the USDA Deputy Associate CIO serves as the Vice Chair. In addition, the board includes

¹¹USDA; *Integrated Information Technology Governance Framework*, Version 3.3 (June 2018).

representation from the agency's enterprise architecture committee and capital planning and investment control administrators, among others. The IAB is to review, prioritize, and evaluate IT investments submitted by component agency IRBs, and submit technical recommendations to the E-Board for consideration.

- The E-Board is made up of USDA department-level senior managers and is responsible for ensuring that proposed IT investments contribute to the Secretary's strategic vision and mission requirements and employ sound investment methodologies, among other things. The USDA Deputy Secretary serves as the E-Board Chair and the USDA CIO serves as the Vice Chair. In carrying out its responsibilities, the E-Board is to review investment proposals, monitor ongoing investments against baselines, and provide investment and governance recommendations to the Secretary of Agriculture, who has final IT governance decision authority.

Major IT investments are to be approved by the relevant agency IRBs before they can be moved along in the governance framework to the IAB and E-Board. The governance boards may recommend an investment to a higher-ranking board or approving authority. For example, the IAB recommends investments to the E-Board for review, and the E-Board recommends investments to the USDA Secretary for final approval.

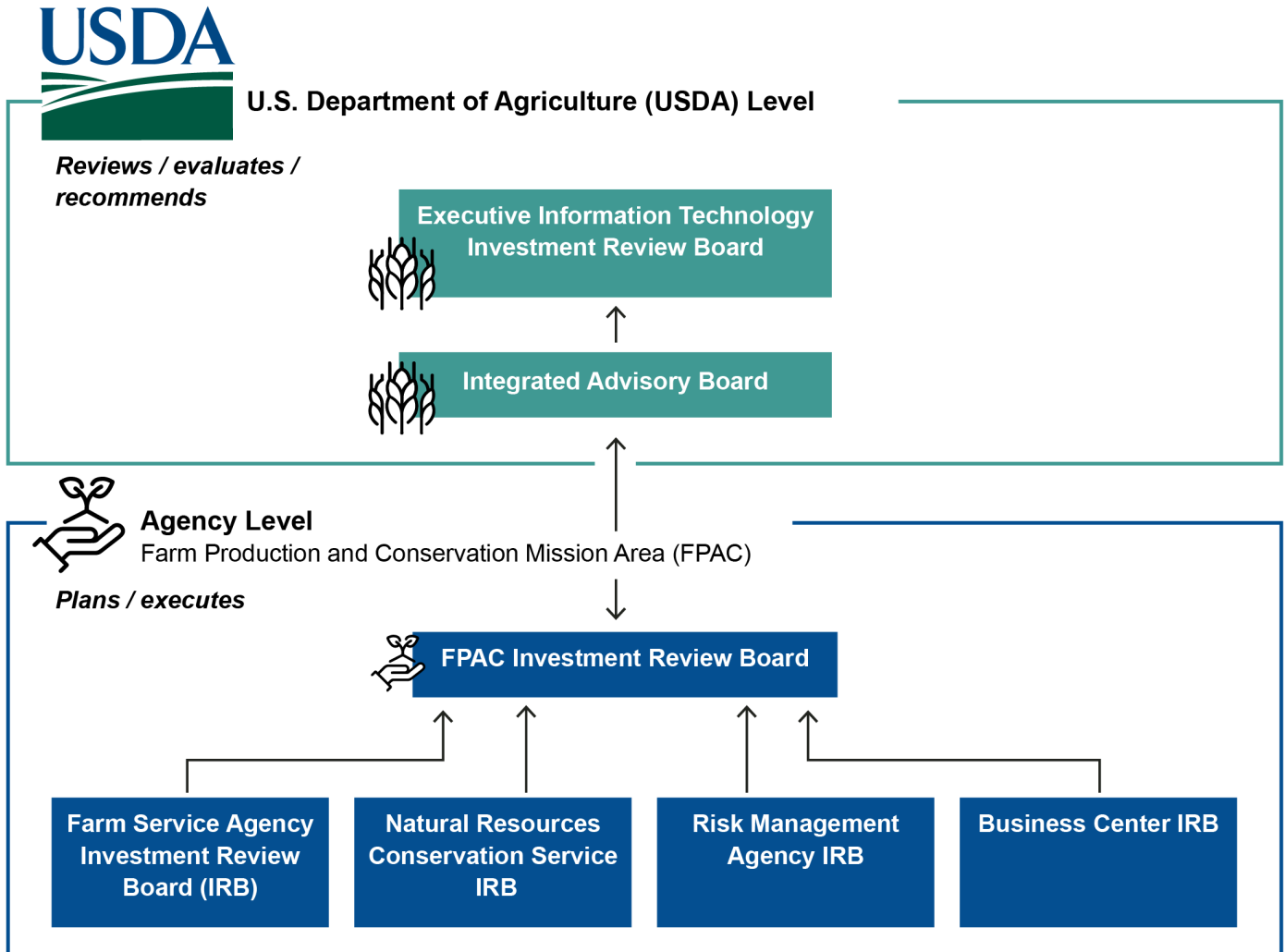
For its part, FPAC has established five IRBs: one mission-area IRB in March 2018 and four component agency IRBs.¹² The assistant CIO for FPAC serves as executive secretariat of each of the five FPAC IRBs.

Major FPAC investments are to be initially reviewed by the relevant component agency IRB and then the mission-area IRB. However, given that Farmers.gov was launched in February 2018, and the FPAC mission-area IRB was not chartered until March 2018, the mission-area IRB was not involved in overseeing the initiation of Farmers.gov.¹³ Figure 2 provides an illustration of USDA's governance framework, including the FPAC mission area.

¹²FPAC chartered IRBs for FSA, RMA, and the Business Center in December, August, and September 2019, respectively, and chartered an IRB for NRCS in July 2020.

¹³The FPAC Business Center was not established until October 2018.

Figure 2: U.S. Department of Agriculture’s Governance Framework and Farm Production and Conservation Mission Area Investment Review Boards



Source: GAO analysis of U.S. Department of Agriculture and Farm Production and Conservation mission area data; images: Skellen.stock.adobe.com. | GAO-21-512

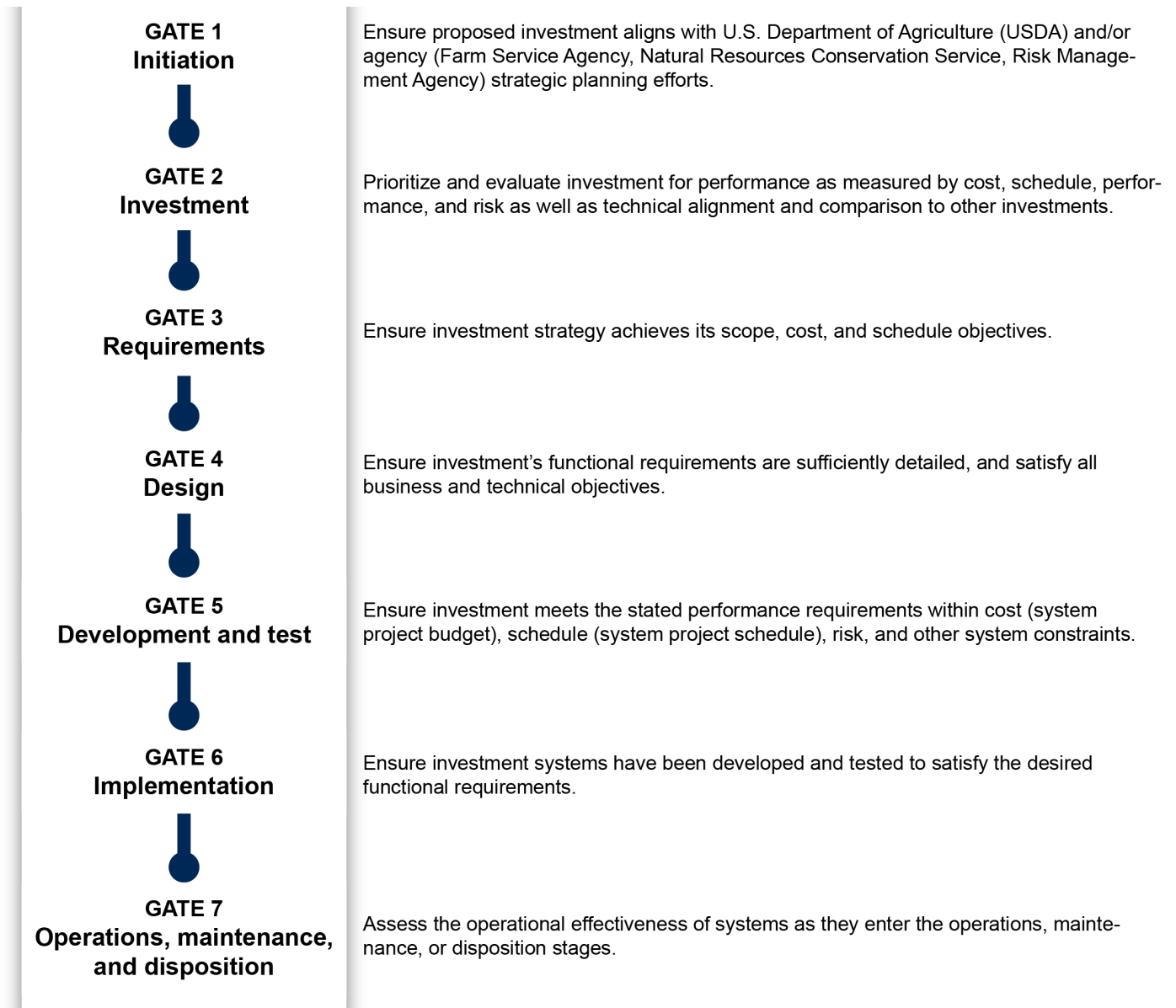
The governance framework also consists of seven standard decision-gate reviews, required at various stages of an investment’s life cycle: (1) initiation; (2) investment; (3) requirements; (4) design; (5) development and testing; (6) implementation; and (7) operations, maintenance, and disposition.

As part of the decision-gate reviews, the governance boards are to evaluate required documents, such as program and risk management plans, cost and schedule estimates, and change management plans.

Additionally, USDA's governance framework supports iterative and incremental development of investments.¹⁴ Further, investments can seek approval to waive, combine, or modify the decision-gate reviews and associated documents through a tailoring agreement. The standard decision-gate reviews are described in figure 3.

¹⁴Incremental or modular development is where an investment may be broken down into discrete projects, increments, or useful segments, each of which is undertaken to develop and implement the products and capabilities that the larger investment must deliver. Dividing investments into smaller parts helps to reduce investment risk, deliver capabilities more rapidly, and permit easier adoption of newer and emerging technologies.

Figure 3: USDA Integrated IT Governance Framework Decision-Gate Reviews



Source: GAO analysis of U.S. Department of Agriculture data. | GAO-21-512

In addition, in April 2020, FPAC established a system development life-cycle (SDLC) process guide that is part of the USDA governance framework.¹⁵ The SDLC supports a process for developing software for the FPAC mission area with defined required deliverables and activities necessary for each phase of the development processes. SDLC phases include vision and strategy; release planning; development cycle; production deployment; and implement and measure.

Overview of Farmers.gov

Farmers.gov is part of the Customer Engagement and Management Services investment, which is considered a major USDA IT investment.¹⁶ According to USDA's May 2021 update to OMB, the estimated life-cycle cost for the investment is approximately \$167 million over 5 years (spanning fiscal years 2019-2023), with approximately \$48 million expected to be obligated in fiscal year 2021.¹⁷ Initial development of Farmers.gov was in partnership with the General Services Administration's (GSA) IT Modernization Centers of Excellence initiative; development was subsequently moved to FPAC management.¹⁸

As part of Farmers.gov, in February 2018, USDA launched a public-facing website (for the general public, including farmers, ranchers, conservationists, and foresters, among others) and has plans for ongoing development and enhancement of the program. The initiative was intended to increase efficiency and productivity while continuing traditional relationships between local USDA offices and agricultural producers, conservationists, and foresters. The department also developed a transactional portal for authenticated users, such as USDA employees or farmers and ranchers with appropriate credentials, to conduct business.

¹⁵USDA, FPAC Business Center, *System Development Lifecycle Document* (April 16, 2020).

¹⁶In its A-11 guidance, the Office of Management and Budget (OMB) defines a major IT investment as one requiring special management attention because of its importance to the mission or function to the government; significant program or policy implications; high executive visibility; or high development, operating, or maintenance costs. Farmers.gov is a part of a major IT investment for USDA.

¹⁷USDA, *Fiscal Year 22 Business Case: Capital Asset Summary for FPAC-FBC-1001 Customer Engagement and Management Services*, May 19, 2021.

¹⁸The Centers of Excellence initiative is part of the General Services Administration (GSA) Technology Transformation Services intended to accelerate IT modernization at federal agencies by applying private-sector innovation to government services. The dollar figure above does not include development costs for the program while working with GSA.

The website is to provide the public with relevant news and policy information as well as several self-service tools. One of these online tools, developed in coordination with GSA's Centers of Excellence—the Farm Loan Discovery Tool—is intended to allow a potential farm-loan borrower to input information about why they would like to borrow money. The tool then could provide preliminary information on what amount the borrower may be eligible for and contact information for the potential borrower to obtain more detailed information.

The transactional portal is to allow eligible users to log in to view loan information, history, and payments for USDA farm loans. These users may also track current and past conservation practices and electronically sign conservation documents.

The Farmers.gov website and portal encompasses a number of projects, such as an Acreage Reporting pilot, the Wildfire and Hurricane Indemnity Program (WHIP) and WHIP Plus, and the Market Facilitation Program.¹⁹ For example, the Business Center developed a Farmers.gov tool intended to help FPAC staff assist agricultural producers in signing up for WHIP Plus. Created as part of the disaster relief package passed by Congress in June 2019, this program is to provide disaster payments to agricultural producers to offset losses from hurricanes, wildfires, and other qualifying natural disasters that occurred in calendar years 2018 and 2019.²⁰ As part of the disaster relief package, Congress made more than \$3 billion available to affected producers through this program.²¹

Although these projects were initially deployed in fiscal year 2020, additional software development and enhancements are planned through at least fiscal year 2023. Specifically, among other things, the FPAC Business Center intends to develop additional software to (1) enable

¹⁹Acreage Reporting helps USDA agencies collect data on crops from agricultural producers to document the crops grown on their farm or ranch and their intended uses. The Wildfire and Hurricane Indemnity Program Plus provides disaster payments to agricultural producers to offset losses from hurricanes, wildfires, and other qualifying natural disasters that occurred in 2018 and 2019. The Market Facilitation Program provides direct payments to help producers affected by tariffs that result in the loss of exports. GAO reported that in 2019, the Market Facilitation Program alone distributed \$14.5 billion in payments to farming operations. [GAO, *USDA Market Facilitation Program: Information on Payments for 2019*, [GAO-20-700R](#) (Washington, D.C.: Aug. 2020).]

²⁰Agricultural Disaster and Indemnity Programs; Final Rule, 85 Fed. Reg. 48518 (September 13, 2019) (to be codified at 7 C.F.R. pts. 460, 760, 1416).

²¹*Additional Supplemental Appropriations for Disaster Relief Act of 2019*, Pub. L. No. 116-20, 133 Stat. 871.

additional producers to view their farm loan information, (2) facilitate electronic signatures on certain conservation documents, and (3) support improved data sharing between RMA and FSA.

Farmers.gov has an approved tailoring agreement to consolidate selected decision-gate reviews and to modify or waive certain associated documents. The tailoring agreement notes that the modification was needed to incorporate Agile software development methodologies into the investment. The IAB approved this tailoring agreement in January 2018.

Specifically, members of the IAB approved Farmers.gov to consolidate the initiation and investment decision-gate reviews (Gates 1 and 2), and the requirements, design, and development and test decision-gate reviews (Gates 3, 4, and 5), while maintaining the implementation decision-gate review (Gate 6), and the operations, maintenance, and disposition decision-gate review (Gate 7) as separate reviews. According to FPAC officials, as of April 2021, Farmers.gov was in the implementation decision-gate review (Gate 6).

Table 1 identifies the key documents for Farmers.gov that are required at the various decision-gate reviews, as documented in the investment’s tailoring agreement.

Table 1: Key Required Documents by Decision-Gate Review for Farmers.gov

	Gates 1 and 2: Initiation and investment	Gates 3, 4, and 5: Requirements, design, development and test	Gate 6: Implementation	Gate 7: Operations, maintenance, and disposition
Project management plan	Final ^a	Update	Update	—
Cost estimate	Waived – incorporated into <i>mission needs statement</i> ^b	—	—	—
Mission needs statement	Final	—	—	—
Requirements management plan	Draft	Final	—	—
Project schedule	Draft	Update	Update	Update
Work breakdown structure	—	Final	—	—
Change management plan	Draft	Final	—	—

	Gates 1 and 2: Initiation and investment	Gates 3, 4, and 5: Requirements, design, development and test	Gate 6: Implementation	Gate 7: Operations, maintenance, and disposition
Communication management plan	Draft	Final	—	—
Risk management plan	Draft	Final	—	—
Acquisition strategy	Draft	Final	—	—
Quality management plan	Draft	Final	—	—
Independent verification and validation plan	—	Final	—	—
Business case	Draft	Final	Update	Update
Earned value management report	—	Update	Update	Update

Source: GAO analysis of U.S. Department of Agriculture, Farm Production and Conservation mission area documentation. | GAO-21-512

^aFinal = document required in final format at gate; “—” = document not required at this gate; Draft = draft version of the document; Update = updated version of the document.

^bA mission needs statement identifies the business need for a proposed investment, along with the proposed investment’s purpose, goals, and scope.

Overview of Leading Practices for IT Modernization

Over the past decade, we have identified a variety of practices that support effective IT modernization within agencies.²² Specifically, we noted that effective planning and management practices are essential for the success of large, complex IT modernization efforts. Our reviews of these practices, as they are applied in federal agencies, have shown that such practices can significantly increase the likelihood of delivering promised system capabilities on time and within budget. Among other areas, these practices address: Agile software development, IT workforce planning, IT duplication and overlap, and customer service.

²²See, for example, GAO, *Agile Assessment Guide: Best Practices for Agile Adoption and Implementation*, [GAO-20-590G](#) (Washington, D.C.: Sept. 28, 2020); GAO, *IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps*, [GAO-17-8](#) (Washington, D.C.: Nov. 30, 2016); GAO, *Fragmentation, Overlap, and Duplication: An Evaluation and Management Guide*, [GAO-15-49SP](#) (Washington, D.C.: April 14, 2015); GAO, *Managing for Results: Selected Agencies Need to Take Additional Efforts to Improve Customer Service*, [GAO-15-84](#) (Washington, D.C., Oct. 24, 2014).

Agile Software Development

Agile software development—one form of incremental development—calls for the rapid delivery of software.²³ A well-known feature of Agile software development is iterative product development and delivery—that is, the development of software in segments that are continuously evaluated on their functionality, quality, and customer satisfaction. This method is well suited for software programs for which the final product is to include distinct features, some of which may be discovered during the process rather than planned at the beginning. These frequent iterations can effectively measure progress and allow developers to respond quickly to feedback from customers, thus, reducing technical and programmatic risk. With its emphasis on early and continuous delivery of working software, Agile can be a valuable tool for federal agencies in mitigating schedule and budget risks.²⁴

One way to implement Agile development is by using the Scaled Agile Framework (SAFe).²⁵ As discussed in GAO's Agile Assessment Guide, SAFe is a governance model used to align and collaborate on product delivery for modest-to-large numbers of Agile software development teams. The framework is intended to provide a scalable and flexible governance approach that defines roles, artifacts, and processes for Agile software development across all levels of an organization.²⁶

In September 2020, we reported that, to successfully meet the demands of rapid development, Agile teams use repeatable processes to establish consistency, thus, providing a baseline against which improvements can be evaluated and adapted. Repeatable processes are not to impede the creativity of the Agile team by repeating the same steps in the same way every time the team operates. Rather, they characterize how to approach the Agile cadence, which is the length of the development cycle for each iteration. Because iterations have short cadences (often 2-4 weeks in

²³Agile software development supports the delivery of software in small, short increments rather than in the typically long, sequential phases. More a philosophy than a methodology, Agile emphasizes this early and continuous software delivery, as well as using collaborative teams, and measuring progress with working software. [GAO-20-590G](#).

²⁴[GAO-20-590G](#).

²⁵GAO's recent Agile Assessment Guide lists 13 different commonly used Agile frameworks, including the Scaled Agile Framework. [GAO-20-590G](#).

²⁶The description of SAFe is as of May 2020 and is based on SAFe V5.0.

duration), consistency is important as practices will be repeated dozens of times a year.²⁷

IT Workforce Planning

We have reported that one of the critical factors in ensuring successful major IT acquisitions is that program staff have the necessary knowledge and skills.²⁸ We have also reported that effective workforce planning is key to addressing the federal government's IT challenges and ensuring that agencies have staff with the necessary knowledge, skills, and abilities to execute a range of management functions that support agencies' missions and goals.²⁹ Further, we have noted that effectively implementing workforce planning activities can facilitate the success of major IT acquisitions.³⁰

To this end, in November 2016, we issued an IT workforce planning framework that identified four workforce planning steps and eight activities, including assessing gaps in competencies and skills, and developing strategies and plans to address those gaps. The workforce planning framework is based on relevant laws and guidance issued since the mid-1990s, including the *Clinger-Cohen Act of 1996* (which includes provisions regarding requirements for IT personnel), the *Federal Information Technology Acquisition Reform Act of 2014* (FITARA), and OMB guidance.³¹ Table 2 identifies the four workforce planning steps and related activities.

²⁷[GAO-20-590G](#).

²⁸GAO, *High-Risk Series: An Update*, [GAO-15-290](#) (Washington, D.C.: Feb. 11, 2015).

²⁹GAO, *IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps*, [GAO-17-8](#) (Washington, D.C.: Nov. 30, 2016).

³⁰[GAO-17-8](#).

³¹*Clinger-Cohen Act of 1996*, Pub. L. No. 104-106, § 5125(c)(3) (Feb. 10, 1996); *Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015*, Div. A, Title VIII, Subtitle D—*Federal Information Technology Acquisition Reform*, Pub. L. No. 113-291, (Dec. 19, 2014); *GPRA (Government Performance and Results Act) Modernization Act of 2010*, Pub. L. No. 111-352, 124 Stat. 3866 (Jan. 4, 2011); OMB, *Preparation, Submission, and Execution of the Budget*, Circular No. A-11 (Washington, D.C.: August 2021); OMB, *Managing Information as a Strategic Resource*, Circular A-130 (Washington, D.C.: July 27, 2016); GAO, *Fragmentation, Overlap, and Duplication: An Evaluation and Management Guide*, [GAO-15-49SP](#) (Washington, D.C.: April 14, 2015).

Table 2: Workforce Planning Steps and Corresponding Activities

Step 1: Set the strategic direction for IT workforce planning

Activity 1: Establish and maintain a workforce planning process

Activity 2: Develop competency and staffing requirements

Step 2: Analyze the IT workforce to identify skill gaps

Activity 3: Assess competency and staffing needs regularly

Activity 4: Assess gaps in competencies and staffing

Step 3: Develop strategies and implement activities to address IT skill gaps

Activity 5: Develop strategies and plans to address gaps in competencies and staffing

Activity 6: Implement activities that address gaps (including IT acquisition cadres, cross-functional training of acquisition and program personnel, career paths for program managers, plans to strengthen program management, and use of special hiring authorities)

Step 4: Monitor and report progress in addressing IT skill gaps

Activity 7: Monitor the agency's progress in addressing competency and staffing gaps

Activity 8: Report to agency leadership on progress in addressing competency and staffing gaps

Source: GAO, *IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps*, [GAO-17-8](#) | GAO-21-512

Reducing IT Duplication and Overlap

Since 2011, we have reported that, when federal departments and agencies reduce fragmentation, overlap, and duplication, they can save taxpayer money by streamlining work on similar or different parts of the same goal (fragmentation). They can also save taxpayer money by identifying whether similar goals or services exist or whether they are providing similar services (overlap), or by determining if parallel work is being done or if services are being provided by several entities (duplication).³² GAO has issued a guide on how to evaluate and manage programs to reduce fragmentation, duplication, and overlap.³³

³²GAO, *Opportunities to Reduce Potential Duplication in Government Programs, Save Tax Dollars, and Enhance Revenue*, [GAO-11-318SP](#) (Washington, D.C.: Mar. 01, 2011); *2020 Annual Report: Additional Opportunities to Reduce Fragmentation, Overlap, and Duplication and Achieve Billions in Financial Benefits*, [GAO-20-440S](#) (Washington, D.C.: May 19, 2020).

³³GAO, *Fragmentation, Overlap, and Duplication: An Evaluation and Management Guide*, [GAO-15-49SP](#) (Washington, D.C.: April 14, 2015).

Further, federal law and guidance have emphasized the importance of developing a multiyear strategy to reduce IT duplication and overlap. This includes documenting performance goals and measures and monitoring program performance against goals and measures.³⁴ One of USDA's stated intents in realigning agencies into the FPAC mission area and establishing the FPAC Business Center as a standalone agency was to increase operational efficiency, including in terms of IT.³⁵

Customer Service

Government guidance for customer service states that the federal government should be customer-driven and customer-focused. While executive orders, memorandums, and guidance³⁶ for customer service do not include strict guidelines for how to implement customer service, we have previously found that a fundamental element in an organization's efforts to manage for successful results is an ability to set meaningful goals for performance and to measure progress toward those goals.³⁷

Customer-service executive orders, memorandums, and guidance also note the importance of setting clear customer service standards and expectations. Specifically, Executive Order 13571 stated that agencies should set "clear customer service standards and expectations, including, where appropriate, performance goals for customer service required by the *GPRA (Government Performance and Results Act) Modernization Act*

³⁴*Clinger-Cohen Act of 1996*, Pub. L. No. 104-106, § 5125(c)(3) (Feb. 10, 1996); *Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015*, Div. A, Title VIII, Subtitle D—*Federal Information Technology Acquisition Reform*, Pub. L. No. 113-291, (Dec. 19, 2014); *GPRA (Government Performance and Results Act) Modernization Act of 2010*, Pub. L. No. 111-352, 124 Stat. 3866 (Jan. 4, 2011); OMB, *Preparation, Submission, and Execution of the Budget*, Circular No. A-11 (Washington, D.C.: August 2021); OMB, *Managing Information as a Strategic Resource*, Circular No. A-130 (Washington, D.C.: July 27, 2016).

³⁵GAO, *More Could Be Done to Assess Effectiveness and Impact of Business Centers*, [GAO-20-243](#) (Washington, D.C.: Feb. 19, 2020).

³⁶*GPRA Modernization Act of 2010*; which significantly enhanced the *Government Performance and Results Act of 1993*, Pub. L. No. 103-62, 107 Stat. 285 (Aug. 3, 1993); Executive Order No. 13571 (Apr. 27, 2011), *Streamlining Service Delivery and Improving Customer Service*, 76 Fed. Reg. 24,339 (May 2, 2011); and Executive Order No. 12862, *Setting Customer Service Standards* (Sept. 11, 1993), 58 Fed. Reg. 48,257 (Sept. 14, 1993).

³⁷GAO, *Managing for Results: Selected Agencies Need to Take Additional Efforts to Improve Customer Service*, [GAO-15-84](#) (Washington, D.C., Oct. 24, 2014).

of 2010.”³⁸ The executive order also noted that agencies should solicit customer feedback on federal government services and use such feedback regularly to make service improvement.

In addition, *GPRA* and the related updates provided in the *GPRA Modernization Act of 2010*, define a performance goal as a “target level of performance expressed as a tangible, measurable objective, against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate.”³⁹ Further, our prior work has found that performance information can be used across a range of management functions to improve results, from setting program priorities and allocating resources to taking corrective action to solve program problems.

Customer-service standards should include, among other things, performance measures and targets or goals for performance. In 2018, OMB updated its guidance on preparing, submitting, and executing budgets, to include a section on improving the customer experience. This section includes specific requirements for measuring such service.⁴⁰ Although standards may vary from agency to agency based on need and mission, each agency’s standards should include targets or goals and performance measures in order to improve customer service moving forward.

USDA and FPAC Have Provided Minimal Oversight for Farmers.gov

Although required to do so, USDA and FPAC have not provided needed oversight of Farmers.gov. Specifically, the department’s governance boards (the E-Board and the IAB) have not conducted required Farmers.gov decision-gate reviews at predefined checkpoints. This lack of oversight has allowed FPAC to proceed without developing key program documentation for Farmers.gov, such as project plans, and cost and schedule estimates. Further, employee feedback, on elements of Farmers.gov already deployed, have identified a number of usability concerns. Improving USDA oversight of Farmers.gov and developing repeatable processes that align Agile methodology to USDA’s

³⁸ *Streamlining Service Delivery and Improving Customer Service*, Exec. Ord. No. 13571, § 2(c) (Apr. 27, 2011).

³⁹ 31 U.S.C. § 1115(h)(9).

⁴⁰ OMB, *Preparation, Submission, and Execution of the Budget, Sec. 280: Managing Customer Experience and Improving Service Delivery*, Circular No. A-11 (Washington, D.C.: June 2018) (Revised August 2021).

governance framework can help address these concerns and lead to enhanced service for intended customers.

Governance Boards Have Not Conducted Decision-Gate Reviews for Farmers.gov

USDA's governance framework states that investments, such as Farmers.gov, should receive E-Board approval before proceeding through the initial decision-gate. It further notes that both governance boards, the E-Board and IAB, should conduct decision-gate reviews for IT investments at predefined checkpoints or milestones, based on key documentation, to ensure continuous oversight and timely delivery in meeting planned cost, schedule, and performance objectives.

However, in September 2020, the USDA Office of Inspector General found that the department's Office of the CIO did not obtain concurrence from the E-Board (as was required) before beginning the Centers of Excellence initiative, of which Farmers.gov was originally a part.⁴¹ Further, according to a May 2018 memo, the IAB sent its recommendation for the initiation and investment decision-gate review (Gates 1 and 2) for Farmers.gov to the USDA CIO for review and approval instead of to the E-Board, which was contrary to the procedures outlined in the governance framework.

USDA officials, including the Deputy Associate CIO for the Information Resource Management Center, stated that, in 2018, when the IAB had reviewed and approved the initiation and investment decision-gate review (Gates 1 and 2) for the initiative, the E-Board was not conducting regular meetings. Thus, according to the officials, the USDA CIO reviewed and approved IAB-recommended investments and then briefed the E-Board chair informally. The officials noted that, as of March 2021, E-Board review sessions had not been reinstated. As a result, the E-Board also was not involved in subsequent decision-gate reviews, such as the requirements, design, and development and test decision-gate review (Gates 3, 4, and 5).

In addition, the IAB has not conducted all of the required decision-gate reviews and approvals at the predefined checkpoints for Farmers.gov. Specifically, as of April 2021 Farmers.gov was at the implementation decision-gate review (Gate 6), but the IAB had not reviewed or approved the requirements, design, and development and test decision-gate (Gates 3, 4, and 5), as required. According to FPAC officials, FPAC conducted

⁴¹USDA, Office of Inspector General, *Implementation of the IT Modernization Centers of Excellence Improvements*, Inspection Report: 50801-0001-12 (Washington, D.C.: September 2020).

informal meetings with the CIO and the Deputy Secretary to discuss Farmers.gov. However, the officials said that there were no approval memos or minutes for these meetings.

Lack of Board Involvement Has Allowed FPAC to Not Develop Key Program Documents

Entry and exit criteria ensure the adequacy of the project's management quality, soundness, and feasibility to move forward to a subsequent decision-gate review. Entry and exit criteria consist of required input and output deliverables, respectively. Specifically, USDA's governance framework outlines deliverables expected for each decision-gate review, such as a project management plan and associated artifacts as described in table 1, a business case, and cost and schedule information for the initiation and investment decision-gate review (Gates 1 and 2) and the requirements, design, and development and test decision-gate review (Gates 3, 4, and 5). As noted earlier, the framework is intended to support Agile development approaches through approved tailoring agreements, which allow for modified decision gate reviews and required documents.

However, although the IAB reviewed the initiation and investment decision gates (Gates 1 and 2) for Farmers.gov, the review was not based on required documentation. The lack of oversight has resulted in FPAC proceeding without developing key program documentation for Farmers.gov, such as project plans, and cost and schedule estimates. These were required to meet the established entry and exit criteria for each decision-gate review and the tailoring agreement for Farmers.gov. The following are examples of key documents that FPAC had not developed:

- **Project management plan:** According to the governance framework, a project management plan is required to provide sufficient cost and schedule estimates so that the IT governance boards can make an informed decision about approving an investment or project for future life-cycle phases. In addition, the Farmers.gov tailoring agreement indicates that a project management plan should have been finalized in the initiation and investment decision-gate review (Gates 1 and 2).

Further, according to the governance framework and tailoring agreement, accompanying planning artifacts, such as the requirements management plan; change management plan; risk management plan; and quality management plan, among others, are to be finalized in the requirements, design, and development and test decision-gate review (Gates 3, 4, and 5).

While FPAC developed a risk management plan, it did not develop the other required planning artifacts described in table 1.⁴² Specifically, FPAC officials could not provide evidence that the project management plan; mission needs statement; project schedule; requirements management plan; quality management plan; independent verification and validation plan; acquisition strategy; change management plan; communication management plan; and work breakdown structure had been developed.

FPAC officials stated that, according to the SAFe methodology, formal plans, such as the project management plan, are not necessary. However, this is inconsistent with the USDA governance framework, tailoring agreement for the investment, and GAO's Agile Assessment Guide.⁴³ Our guide notes that effective program management can help programs achieve strategic goals and increases the likelihood that a program will deliver promised capabilities on time and within budget. Program management encompasses many disciplined practices needed to execute and oversee a program, including requirements development and management, acquisition strategy development, and program monitoring and control (e.g., cost and schedule estimating). For example, according to the Agile guide, having a documented strategy for developing and managing requirements helps to ensure that the final product will function as intended. Developing the requirements includes planning activities, such as establishing program objectives to outline the course of action required to attain the desired end result and developing plans for understanding and managing the work.

If a project management plan with cost and schedule estimates and associated artifacts is not completed in accordance with the USDA governance framework, tailoring agreement, and relevant Agile guidance, USDA and FPAC will not have insight into the progress of performance indicators. As a result, they will risk not being able to make informed oversight decisions for Farmers.gov.

- **Business case:** According to the governance framework, a business case should be developed for each investment to describe the reasons for a selected investment and expected benefits. The governance framework notes that the business case should include

⁴²USDA, *Farmers.gov Agile Program Management Office Risk and Issue Management Guide Version 4.0* (March 31, 2020).

⁴³[GAO-20-590G](#).

artifacts, such as high-level requirements, an analysis of proposed alternative solutions, assumptions, constraints, and a cost-benefit analysis. According to the tailoring agreement, a finalized business case is required for the requirements, design, and development and test decision-gate reviews (Gates 3, 4, and 5).

In August 2018, the FPAC Business Center developed a high-level business case to document the benefits, costs, and goals of IT modernization at FPAC. However, FPAC could not provide evidence that it had developed a business case for Farmers.gov. Instead, we reviewed the federal IT Dashboard, which reflected the department's justification for the investment in terms of business needs, expected benefits, and an estimated life-cycle cost.⁴⁴

FPAC also did not develop the other documents associated with the business case that are required by the framework, such as high-level requirements, an analysis of proposed alternative solutions, assumptions, constraints, and a cost-benefit analysis. Without the accompanying documents, oversight boards will lack essential information to evaluate and monitor program performance and progress against cost and schedule expectations.

- **Earned Value Management:** According to the governance framework, one of its objectives is to improve project performance by employing repeatable processes for earned value management (EVM).⁴⁵ Specifically, using EVM can provide additional insight into the relationship between scope, cost, and schedule, and these integrated data can be used to better inform management decisions. Agile program budgets may be fixed for a single iteration, but, if requirements are not completed at the end of an iteration, management may need information to provide justification for additional funds and a change in the scope or schedule. Cost estimating can provide managers with valuable information about the budget needed to maintain a certain level of support.⁴⁶ The

⁴⁴The federal IT Dashboard (itdashboard.gov) is a public website run by OMB. The Dashboard reports on major IT investments, including ratings from CIOs which should reflect the level of risk facing an investment and includes cost, schedule, and performance data.

⁴⁵EVM measures the value of work accomplished in a given period and compares it with the planned value of work scheduled for that period and with the actual cost of work accomplished.

⁴⁶[GAO-20-590G](#).

Farmers.gov tailoring agreement indicates that EVM reports are required for the requirements, design, and development and test decision-gate review (Gates 3, 4, and 5). Further, according to the Agile Assessment Guide, in order to track performance for Agile related projects, agencies should use methods, such as an EVM system, that at a minimum, track schedule, cost, and estimate at completion.⁴⁷

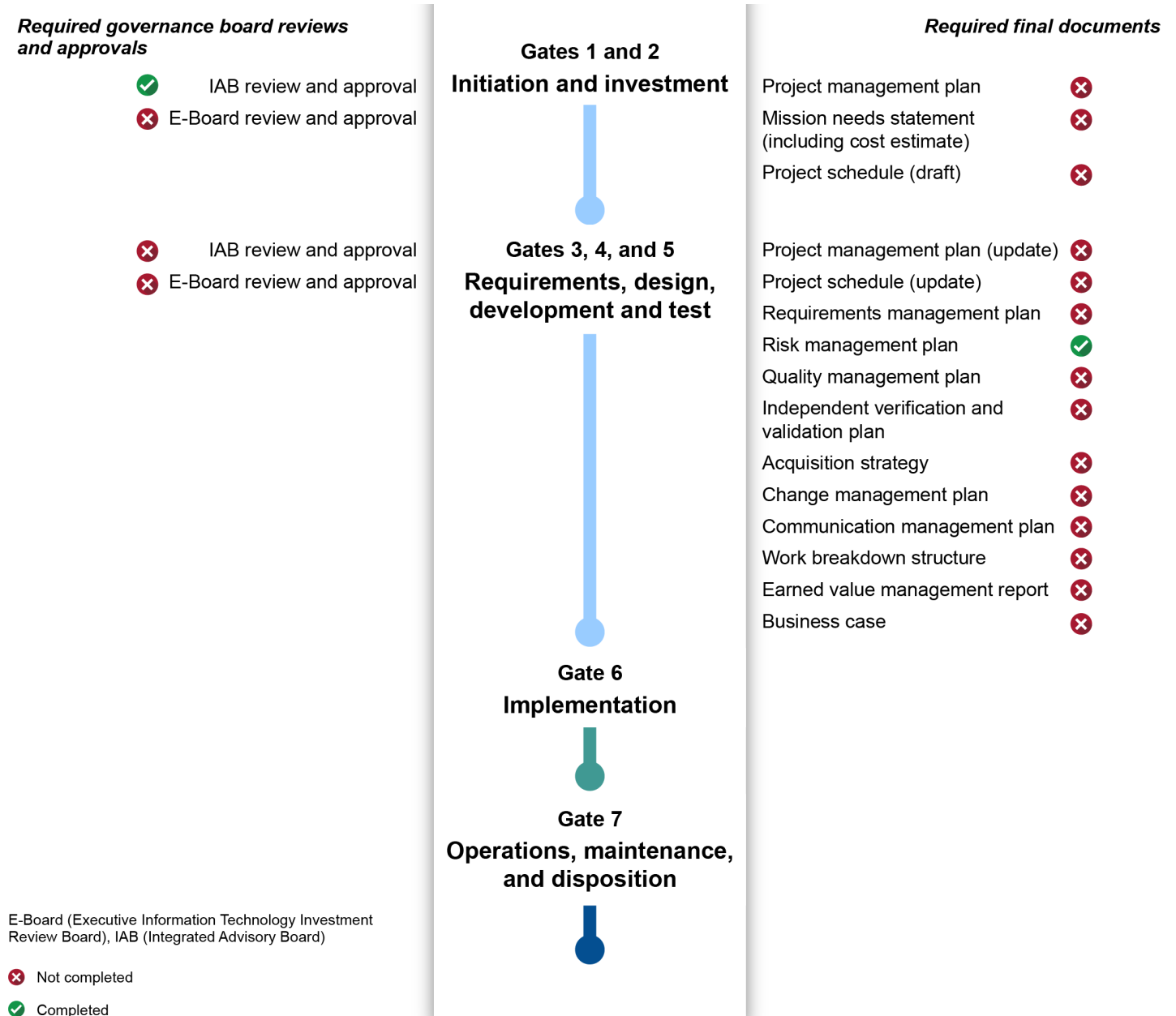
However, FPAC is not using EVM to track the cost and schedule for Farmers.gov. A program official stated that, instead of the EVM method, Farmers.gov uses SAFe methodology tools, such as story points, to calculate actual versus estimated performance. Although the use of story points allows for the collection of data that can be used to measure the value of work accomplished by the Farmers.gov development team, FPAC officials did not identify and evaluate cost and schedule variance for Farmers.gov under the SAFe methodology.

In addition, GAO's Agile Assessment Guide notes that while developers should use relative estimation, such as story points, to maintain a sustainable software development pace and predict work commitments, relative estimation methods do not provide a consistent measure that can be used to develop a cost estimate. This lack of consistency can create a challenge for cost estimators to normalize the data received from the program's reporting metrics.⁴⁸ If investment progress is not measured by cost and schedule, governance boards will not be able to effectively monitor performance and evaluate the impact of the investment against cost and schedule expectations. Figure 4 illustrates the status of Farmers.gov decision-gate reviews and associated documentation as of April 2021.

⁴⁷[GAO-20-590G](#).

⁴⁸[GAO-20-590G](#).

Figure 4: Status of Farmers.gov Decision-Gate Reviews and Associated Documentation as of April 2021



Source: GAO analysis of U.S. Department of Agriculture and Farm Production and Conservation mission area data. | GAO-21-512

FPAC officials, including the Farmers.gov program manager, claimed that, since the development team is using the SAFe methodology for Farmers.gov, formal documentation is not required. However, the tailoring agreement requires these artifacts. Further, the officials stated that they use a document repository software to document Agile-related activities and work products for Farmers.gov. However, as noted above, these work products, such as story points, are not equivalent to the required documents from the governance framework and the approved Farmers.gov tailoring agreement.

GAO's Agile Assessment Guide notes that when making the transition to Agile, sponsors may need to make structural changes at the organization level in order to support the iterative nature of Agile.⁴⁹ These changes include allowing programs that are applying Agile methods to tailor life cycle activities, including technical reviews, and associated artifacts to their cadence of delivery. Although FPAC documented an approved tailoring agreement, they did not request further changes to the artifacts discussed above, in order to meet Agile software development needs associated with Farmers.gov.

Absence of Oversight and Key Program Documents Places Farmers.Gov at Risk

The absence of the E-Board and the IAB in overseeing Farmers.gov poses an increased risk of Farmers.gov not meeting USDA and FPAC mission objectives. Further, the lack of required documentation for Farmers.gov raises questions about (1) the usability of applications or tools that have already been deployed, and (2) the risks that ongoing development efforts and software enhancements will produce deliverables that do not meet customer needs.

Such questions have also been raised in recent USDA IT customer service surveys. Specifically, responses to the surveys conducted in 2019 and 2020 included comments from employees who identified themselves as users of Farmers.gov applications or tools. While we were not able to generalize the survey results due to limitations in USDA's methodology, we are able to provide examples of employee feedback on already-deployed elements of Farmers.gov. In these narrative comments, employees stated, among other things, that the portal was slow, complicated, and not user friendly. One respondent noted that some farmers' and ranchers' ownership types (such as trusts) had limited ability to use the self-service applications of Farmers.gov, because only individual owners were provided access. FPAC officials noted that, in

⁴⁹[GAO-20-590G](#).

August 2020, the agency expanded access to users acting on behalf of another customer, or as a member of a trust, provided the user was individually authenticated.

Farmers.gov Oversight Impeded by Lack of Implementation Guidance for Agile

USDA's and FPAC's challenges in providing oversight for Farmers.gov are due, in part, to the lack of clearly documented guidance for how a program office should apply Agile development methodologies, such as the SAFe methodology, in a manner that is consistent with the department's expectations for IT investment oversight. We previously reported that agencies have experienced challenges adopting Agile development methodologies, in part, due to the lack of clear guidance for Agile software development.⁵⁰ The GAO Agile Assessment Guide notes that implementing leading practices for Agile adoption—such as ensuring that acquisition policies and procedures support Agile methods and establishing agency guidance that is appropriate for Agile acquisition strategies—can increase the likelihood that an organization will achieve successful outcomes through these methods.⁵¹ Further, the guide states that it is best practice for Agile teams to use repeatable processes to establish consistency in Agile implementation. In addition, the FPAC SDLC, which is part of the USDA governance framework, supports various delivery methodologies (e.g., Agile and SAFe) and provides flexibility to tailor artifacts, decision gate reviews, and governance board reviews to meet unique product development needs.

However, FPAC has not developed guidance that supports a consistent and repeatable process for how a program office should apply Agile development methodologies in a manner that is consistent with the department's expectations. Specifically, FPAC has not provided documentation detailing how outputs from the use of the SAFe methodology align with the requirements of the governance framework.

For example, as previously discussed, the governance framework identifies a number of documents that programs, such as Farmers.gov, are required to have at the various decision-gate reviews. These documents include a project management plan, business case, and EVM

⁵⁰GAO, *Space Command and Control: Comprehensive Planning and Oversight Could Help DOD Acquire Critical Capabilities and Address Challenges*, [GAO-20-146](#) (Washington, D.C.: October 30, 2019); GAO, *Oil and Gas: Interior Should Strengthen Management of Key Data Systems Used to Oversee Development on Federal Lands*, [GAO-21-209](#) (Washington, D.C.: May 27, 2021).

⁵¹[GAO-20-590G](#).

reports, among others. However, neither FPAC's SDLC guide nor the program's development methodology (SAFe) address which Agile-related activities and work products are to be used as inputs when developing such documentation.

According to FPAC officials, the mission area does not typically document guidance for how it should apply the development methodology. The officials further noted that the SAFe methodology has not been fully adopted across all the Farmers.gov projects due to a lack of program staff familiarity with Farmers.gov development. For example, the Acreage Reporting pilot was delivered in a hybrid model, which can range from an almost-full sequential software development approach to a partial SAFe methodology approach. Until FPAC provides guidance for a consistent and repeatable process detailing the alignment of the SAFe methodology with established oversight processes, it will lack effective IT investment oversight over the progress of the cost, schedule, and performance objectives associated with Farmers.gov.

FPAC Has Not Fully Implemented Key Leading Practices Supporting IT Workforce Planning, Duplication and Overlap, and Customer Service

We have previously identified key leading practices that support effective IT modernization within agencies, including implementing IT workforce planning, reducing IT duplication and overlap, and improving the customer service experience. FPAC had partially implemented a few of the activities associated with these three leading practices. Specifically, the FPAC mission area had not implemented seven of eight IT workforce planning activities, and had not fully addressed reducing IT duplication and overlap. Further, while FPAC had actions and plans to address customer service measures and associated targets and goals, it had yet to fully implement this activity. Implementation of these key IT modernization practices would provide greater assurance that FPAC is meeting the needs of farmers, ranchers, and foresters.

FPAC Had Not Implemented Seven of Eight IT Workforce Planning Activities

GAO's workforce planning framework identifies eight key activities, based on federal laws, guidance, and best practices, that are critical to adequately assessing and addressing gaps in IT knowledge, skills, and abilities needed to execute a range of management functions that support agencies' missions and goals.⁵² As previously noted, these activities include establishing and maintaining a workforce planning process, and developing competency and staffing requirements, among other things.

⁵²[GAO-17-8](#).

FPAC had partially implemented one of the eight activities (to develop competency and staffing requirements), but had not implemented the other seven activities. Table 3 provides our assessment of FPAC's progress in implementing the IT workforce planning activities, as of March 2021.

Table 3: Farm Production and Conservation (FPAC) Implementation of Key Information Technology (IT) Workforce Planning Activities as of March 2021

Key activities	Rating ^a	Description
Activity 1: Establish and maintain a workforce planning process	Not implemented	FPAC did not have a documented workforce planning process that described how the agency would implement key IT workforce planning activities. According to USDA officials, a USDA IT Workforce Planning Process was established and included in the USDA IT Workforce Plan for fiscal years 2020-2022. According to FPAC officials, the mission area may use the USDA process to develop its IT workforce planning process after a review with leadership in the fourth quarter of 2021.
Activity 2: Develop competency and staffing requirements	Partially implemented	FPAC had developed competency requirements for its IT staff. Specifically, in September 2019, FPAC developed occupation-specific, foundational, and leadership IT competency requirements for 18 IT positions, including program and supervisory managers, and eight IT functional roles spanning information security, customer service, policy and planning, among other areas. However, while FPAC had developed overall staffing targets (staffing ceilings) for its component agencies, it had not developed specific numeric requirements for its 18 IT occupations. FPAC officials stated that the development of these requirements was dependent on the completion of the overall department wide IT workforce planning activity from the departmental Chief Information Officer.
Activity 3: Assess competency and staffing needs regularly	Not implemented	FPAC initially developed its IT competency requirements in September 2019, but had not assessed its mission level IT competency needs. FPAC officials stated that, once a department-wide IT competency model is implemented, FPAC intends to assess its IT workforce competency needs. Moreover, FPAC had not assessed IT staffing needs because, as previously stated, FPAC had not developed staffing requirements for its mission critical occupations.
Activity 4: Assess gaps in competencies and staffing	Not implemented	FPAC had not assessed gaps in IT competencies and staffing because, as previously stated, FPAC had not developed staffing requirements and assessed competency and staffing needs.
Activity 5: Develop strategies and plans to address gaps in competencies and staffing	Not implemented	FPAC had not developed strategies and plans to address IT competency and staffing gaps because, as previously stated, it had not yet assessed mission level gaps in IT competencies and staffing.
Activity 6: Implement activities that address gaps	Not implemented	FPAC had not implemented activities to address IT gaps because, as previously stated, it had not yet developed mission level strategies and plans to address gaps in IT competencies and staffing.
Activity 7: Monitor the agency's progress in addressing competency and staffing gaps	Not implemented	FPAC had not monitored the agency's progress in addressing IT-specific competency and staffing gaps because, as previously stated, it had not implemented strategies and plans to address gaps.

Key activities	Rating ^a	Description
Activity 8: Report to agency leadership on progress in addressing competency and staffing gaps	Not implemented	FPAC had not reported to agency leadership on IT competency and staffing gaps because, as previously stated, it had not implemented strategies and plans to address gaps.

Source: GAO analysis of U.S. Department of Agriculture, FPAC documentation. | GAO-21-512

^aWe considered an activity to be fully implemented if the mission area addressed all of the evaluation criteria for an activity; partially implemented if the mission area addressed some, but not all of the underlying evaluation criteria for the activity; and not implemented if the mission area did not address any of the underlying evaluation criteria for the activity.

FPAC officials acknowledged that they had not addressed key workforce planning activities, such as developing IT staffing requirements, assessing competency gaps, or developing strategies to address them. The officials stated that completion of these activities was dependent on ongoing department-level efforts. Specifically, in April 2019, USDA established an IT Workforce Standing Committee to, among other things, design the IT workforce planning cycle, share best practices, and assist in the ongoing department-wide adoption of the USDA IT workforce plan. This USDA plan was subsequently issued in June 2020.⁵³ The plan states, among other things, that it is to guide the mission areas in defining goals, objectives, and strategies to cultivate an effective IT workforce. Accordingly, it is incumbent upon FPAC to make it a priority to fully implement all of the key IT workforce planning activities. Until it does so, the mission area will be limited in its ability to address gaps in knowledge and skills that are critical to the success of major IT acquisitions.

Selected Activities to Reduce IT Duplication and Overlap, but FPAC Has Not Established a Strategy

Federal law and guidance have emphasized the importance of developing a multiyear strategy to reduce IT duplication and overlap, including documenting and monitoring performance goals and measures.⁵⁴ FITARA and OMB require that agencies should eliminate and reduce duplication and waste through the development of a multiyear strategy within the IT portfolio, including for component-level investments. Further, FPAC is to develop an IT strategic plan that aligns with agency needs, goals, and objectives—and to measure its progress against that plan.

⁵³USDA, Office of the Chief Information Officer, *USDA IT Workforce Plan FY2020-FY2022 Version 1.2* (June 2020).

⁵⁴This includes the *Clinger-Cohen Act of 1996*; the *Federal Information Technology Acquisition Reform Act of 2014* (FITARA); the *GPRRA (Government Performance and Results) Modernization Act of 2010*; OMB Circular No. A-11; OMB, Circular No. A-130 and [GAO-15-49SP](#).

FPAC had several IT modernization initiatives underway to maximize efficiencies and reduce IT duplication and overlap. These initiatives included consolidating data centers, reducing IT service contracts, migrating certain applications to the cloud, and migrating IT service desks. Table 4 provides more information on the purpose and status of these initiatives to maximize efficiencies and reduce duplication and overlap.

Table 4: FPAC IT Modernization Initiatives to Maximize Efficiencies and Reduce Duplication and Overlap, as of March 2021

Initiative	Purpose	Status
Data Center Consolidation	Reduce and consolidate data centers in FPAC. Results of the consolidation initiative include the consolidation of six FPAC data centers. USDA reported over \$57 million in data center-related cost savings and avoidances from the start of fiscal year 2017 through fiscal year 2020 [includes FPAC].	Completed
Information Solutions Division Procurement Needs Assessment and Acquisition Strategy	Reduce IT service contracts in the IT contract portfolio for the FPAC mission area. FPAC officials noted that the restructured IT contract portfolio is expected to reduce the number of IT service contracts by 50% within 2 years, decreasing contract administration costs and increasing focus on proactive contract performance monitoring and outcomes.	In progress
FPAC Cloud Migration and Development, Security and Operations Adoption	Maximize efficiencies for IT operations process along with data center hosting, security, and software development within FPAC. FPAC officials noted that 90% of locally managed applications can move to the cloud.	In progress
FPAC IT Service Desk Consolidation Initiative	Consolidate access to 12 service desk teams into a single service desk for all FPAC IT customers.	In progress

FPAC = Farm Production and Conservation mission area

Source: GAO summary of U.S. Department of Agriculture, FPAC information. | GAO-21-512

Despite having these modernization initiatives to reduce duplication and overlap, FPAC had not developed a mission area strategic plan that included the associated performance goals and measures to monitor IT program performance against efficiency goals. As an initial step to develop such a strategy, FPAC officials including the Assistant CIO for FPAC, stated that they were in the process of developing a 5-year IT roadmap to identify areas of consolidation to reduce any potential overlap or duplication, which they said would be used as a strategic document. The Assistant CIO for FPAC noted that the roadmap would be updated to reflect the new administration's priorities and direction by October 2021.

However, FPAC had not outlined how the 5-year roadmap would incorporate performance goals and measures for maximizing efficiencies and reducing IT duplication and overlap. Specifically, FPAC had not defined the level of performance to be achieved related to reducing IT duplication and overlap, or identified the indicators to be used in measuring progress towards the ongoing initiatives' goals.

Until FPAC has a strategy to guide its duplication and overlap initiatives and the associated performance goals and measures to monitor IT program performance, it will lack insight to effectively demonstrate how the technology and information resources goals map to the agency's mission and organizational priorities. It may also miss opportunities for achieving financial savings and improving the efficiency and effectiveness of its programs.

FPAC Customer-Service Improvement is Ongoing but Focus on Goals and Associated Measures Is Needed

In addition to being critical for duplication and overlap, performance goals and measures are fundamental to an organization's efforts to improve customer service.⁵⁵ Measuring performance allows organizations to track the progress they are making toward their goals and gives managers crucial information on which to base their organizational and management decisions.⁵⁶ Specifically, in monitoring and improving customer service, agencies should develop customer-service measures and performance

⁵⁵GAO, *Managing for Results: Executive Branch Should More Fully Implement the GPRA Modernization Act to Address Pressing Governance Challenges*, [GAO-13-518](#) (Washington, D.C.: June 26, 2013).

⁵⁶See for example, GAO, *Small Business Administration: Additional Guidance on Documenting Credit Elsewhere Decisions Could Improve 7(a) Program Oversight*, [GAO-09-228](#) (Washington, D.C.: Feb. 12, 2009) and *Small Business Administration: Additional Measures Needed to Assess 7(a) Loan Program's Performance*, [GAO-07-769](#) (Washington, D.C.: July 13, 2007).

targets or goals to track their progress in improving on these measures. Further, as of 2018, OMB guidance requires certain actions of agencies that are “high impact service providers” for customer service (which includes FPAC mission-area agencies, FSA and NRCS), to include surveying customers and measuring customer service performance and ensuring transparency through public reporting of the customer feedback.⁵⁷

However, the FPAC mission area had not yet developed quantifiable measures, targets, and goals for customer-service. In October 2020, the mission area conducted its first customer-service survey of producers, such as farmers and ranchers. Agency officials stated that they intend for the survey to be the first of a series of annual surveys, with the second one planned for summer 2021. According to agency officials, the results of the surveys could allow the agency to develop performance baselines associated with specific measures.

FPAC officials stated that they had completed their analysis of the results of the producer survey by April 2021. Agency officials, including the FPAC director for customer experience, noted that using the survey results, the mission area had begun to develop performance baselines that reflect customer-driven data. According to the officials, this includes developing initial measures and targets to be tested and measured annually.

However, as of August 2021, the FPAC officials had not publicly released producer survey results and plans for addressing customer feedback. The officials did not state when the results would be released. They added that they were waiting for the new administration to review the survey results.

While it is important for agencies to solicit a customer’s level of satisfaction for services provided, as was done by FPAC, such feedback should be conducted in addition to having a set of predetermined customer-service standards that include measures to track progress and associated performance targets or goals. Until FPAC develops these baselines with customer service measures and performance goals to

⁵⁷Specifically, OMB Circular A-11 identified 25 federal organizations as high impact service providers due to the scale and impact of their public-facing services. The designation is intended to transform the way the federal government delivers the customer experience and is to raise the standard of customer experience across government. The two specific services within FPAC are FSA and Farmers.gov and NRCS and “NRCS of the Future.”

reach, it will not be able to determine the extent to which the standards are being met in its three combined agencies; it also will not be able to develop strategies to close performance gaps. Further, without releasing the customer survey results and plans to the public, FPAC may not be able to ensure transparency and accountability to show that it is receiving and acting upon customer feedback to drive performance improvement and service recovery.

Conclusions

Although both USDA and FPAC have documented IT oversight processes that address key practices, there has been minimal oversight of Farmers.gov. The lack of governance board required decision-gate reviews for Farmers.gov at predefined checkpoints has allowed FPAC to not develop key program documentation for Farmers.gov. This can be attributed to a key governance board (the E-Board) not meeting regularly, and to the lack of a clearly documented process for how a program office should apply Agile development methodologies consistent with the department's IT oversight expectations. Improved oversight of Farmers.gov can help alleviate employee feedback concerns and lead to enhance customer service.

Since its establishment in May 2017, the FPAC mission area has partially implemented a few of the activities associated with key leading practices that support effective IT modernization within agencies. Regarding workforce planning, FPAC has not fully addressed eight key activities. Until the mission area implements these activities, it will risk not being able to anticipate and respond to changing staffing needs when developing, implementing, and operating critical IT systems. FPAC has successfully consolidated activities and reduced duplication in selected areas. Including appropriate goals and measures to reduce duplication and overlap in its IT strategic plan could provide further efficiencies and savings. In addition, while the mission area has conducted a customer service survey, it has not yet established baselines and measures for customer service performance, or targets and goals associated with the progress. Moreover, FPAC has yet to establish a date for when it would release the survey results and plans for addressing the feedback to the public. Doing so would help ensure that FPAC is meeting the needs of its customers by providing transparency.

Recommendations for Executive Action

We are making a total of 15 recommendations to the Secretary of Agriculture. Specifically:

The Secretary of Agriculture should direct the E-Board to establish and execute a regular schedule to review, approve, and recommend IT investments. (Recommendation 1)

The Secretary of Agriculture should direct the E-Board to consider the extent to which it should review and approve decision points that have passed and the associated required documents for Farmers.gov, in accordance with the requirements of the *USDA Integrated IT Governance Framework* and the approved tailoring agreement. (Recommendation 2)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the FPAC Assistant Chief Information Officer to provide clearly documented guidance that supports a consistent and repeatable process for how a program office should apply Agile development methodologies in a manner that is consistent with the department's expectations for IT oversight. (Recommendation 3)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of establishing and maintaining a workforce planning process. (Recommendation 4)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of developing competency and staffing requirements. (Recommendation 5)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of assessing competency and staffing needs regularly. (Recommendation 6)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of assessing gaps in competencies and staffing. (Recommendation 7)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of developing strategies and plans to address gaps in competencies and staffing. (Recommendation 8)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of implementing activities that address gaps in competencies and staffing. (Recommendation 9)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of monitoring the agency's progress in addressing competency and staffing gaps. (Recommendation 10)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Business Center Chief Operating Officer to have the FPAC mission area implement the key IT workforce planning activity of reporting to agency leadership on progress in addressing competency and staffing gaps. (Recommendation 11)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Assistant Chief Information Officer to have the FPAC mission area develop a strategic plan, in alignment with departmental policies and procedures, to include performance goals and measures for maximizing efficiencies and reducing IT duplication and overlap. (Recommendation 12)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Assistant Chief Information Officer to have the FPAC mission area monitor IT program performance against efficiency goals and measures documented in its plan for maximizing efficiencies and reducing IT duplication and overlap. (Recommendation 13)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Director for Customer Experience to establish baselines and measures for customer

service performance, and targets and goals associated with the progress. (Recommendation 14)

The Secretary of Agriculture should ensure that the Under Secretary for Farm Production and Conservation (FPAC) directs the Director for Customer Experience to establish a timeframe for releasing the customer service survey results and plans for addressing the customer feedback to the public. (Recommendation 15)

Agency Comments and Our Evaluation

USDA provided written comments on a draft of this report, which are reprinted in appendix II. In its comments, the department concurred with all 15 of our recommendations and described planned or ongoing actions for implementing each of them.

With regard to recommendations 1 and 2, the department stated that the USDA Deputy Secretary had approved an updated E-Board charter. It added that, since the update, the E-Board has met and is holding recurring meetings. The department also noted that the E-Board plans to provide concurrence on regularly scheduled IAB reviews and approvals for major IT investments, such as Farmers.gov. Further, the department stated that the E-Board would review and approve passed decision points associated with Farmers.gov and the appropriate documents required in accordance with requirements.

For recommendation 3, the department agreed that clear, documented Agile policies and guidance are necessary to mature its software development practices. The department added that this would include policies and guidance for the expansion of training for multi-functional groups of business and IT professionals to better manage complex programs.

For recommendations 4 through 11, the department stated that it had established an IT Workforce Standing Committee to address department-wide workforce planning initiatives, with FPAC as an active participant of the committee. The department noted that this committee is making progress on standardized position descriptions and IT competency models, with additional progress expected in fiscal year 2022 on the full range of issues identified in our report.

For recommendations 12 and 13, the department stated that FPAC is updating a draft 5-year IT plan to help reduce overlap and provide a roadmap for IT modernization. It added that the roadmap is to include methods to track progress and measure efficiencies, which is expected to

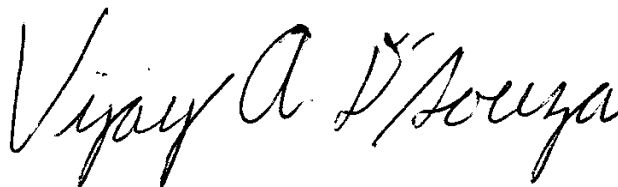
enable USDA and FPAC to monitor progress toward reducing IT overlap and duplication.

Regarding recommendations 14 and 15, the department stated that the FPAC Customer Experience Division plans to use the Producer Satisfaction Survey results to establish performance indicators and baselines for measuring customer satisfaction. The department indicated that it would make survey improvements to reach underserved groups to provide a more accurate baseline. The department also stated that it planned to propose that the performance indicators be included in the USDA Strategic Plan and used within FPAC.

If implemented as described, the actions that USDA plans to take or has already taken in response to the recommendations should help achieve operational efficiencies. We also received technical comments, which we incorporated in this report as appropriate.

We are sending copies of this report to the appropriate congressional committees and the Secretary of Agriculture. In addition, the report will be available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-6240 or at dsouzav@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.



Vijay A. D'Souza
Director, Information Technology and Cybersecurity

Appendix I: Objectives, Scope, and Methodology

The objectives of our study were to assess the extent to which (1) the U.S. Department of Agriculture (USDA) and its Farm Production and Conservation (FPAC) mission area are effectively overseeing the development of Farmers.gov and (2) FPAC's information technology (IT) workforce planning, efforts to reduce duplication and overlap, and customer service activities are consistent with best practices.

To address our first objective, we identified key practices in GAO's Information Technology Investment Management (ITIM) framework and GAO's Agile Assessment Guide.¹ We identified best practices surrounding Agile adoption, including repeatable processes, acquisition policies and procedures, and implementation of traditional program monitoring and control for Agile development. We then reviewed departmental and component agency policy documents, such as the USDA *Integrated IT Governance Framework*, the FPAC system development life-cycle guide, and governance board charters for the Executive Information Technology Investment Review Board (E-Board) and the Integrated Advisory Board.² We compared these documents to the ITIM framework and Agile guide practices.

In addition, we requested Farmers.gov project planning and cost and schedule documents, such as the project management plan; requirements management plan; change management plan; risk management plan; independent verification and validation plan; communications management plan; acquisition strategy; project schedule; work breakdown structure; mission needs statement consisting of a cost estimate; quality management plan; business case; and earned value management reports. We requested these documents because they are foundational to providing IT investment oversight according to the selected ITIM practices and the USDA *Integrated IT Governance Framework*. In response to our requests, we received the output of the program's Agile document repository and compared those documents to the requirements laid out in the governance documents.

¹GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, [GAO-04-394G](#) (Washington, D.C.: Mar. 2004); *Agile Assessment Guide: Best Practices for Agile Adoption and Implementation*, [GAO-20-590G](#) (Washington, D.C.: Sep. 2020).

²USDA; *Integrated Information Technology Governance Framework: Guidebook*, Version 3.3 (June 2018).

To address our second objective, we reviewed program documents and compared them to laws, executive orders, and guidance. Specifically, to assess FPAC's implementation of best practices regarding IT workforce planning, we compared FPAC documents and activities against our workforce planning framework, which includes four steps and eight key activities, based on federal laws, guidance, and best practices (see table 2 in this report).³ We then requested relevant FPAC IT workforce and human capital policies and documentation on IT workforce competency and staffing needs identification and assessments. We compared the policies and documents with the workforce planning steps and activities found in our framework using the evaluation criteria established in our 2020 report. These evaluation criteria are outlined in table 5.

³GAO, *IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps*, [GAO-17-8](#) (Washington, D.C.: November 30, 2016). GAO issued the IT workforce planning framework based on relevant laws and guidance issued since the mid-1990s, including the *Clinger-Cohen Act of 1996*; the *Federal Information Technology Acquisition Reform Act of 2014* (FITARA); Office of Management and Budget guidance; and the Office of Personnel Management's Workforce Planning Model, and prior GAO reports. We subsequently revised the framework with additional evaluation criteria as documented in GAO, *Information Technology: Agencies Need to Fully Implement Key Workforce Planning Activities*, [GAO-20-129](#), (Washington, D.C.: Oct. 30, 2019).

Appendix I: Objectives, Scope, and Methodology

Table 5: Evaluation Criteria Associated with the Key Information Technology (IT) Workforce Planning Activities

Activity	Evaluation criteria
Establish and maintain a workforce planning process	<p>The agency has a documented IT workforce planning process that describes how the agency will implement key IT workforce planning activities, including those identified in the IT workforce planning framework. The process also defines the chief information officer’s and others’ roles and responsibilities for implementing the activities; is aligned with mission goals and objectives; and addresses both agency-level and component-level workforce, including how the agency is to maintain visibility and oversight into component-level workforce planning efforts (as applicable).</p> <p>The agency periodically updated the process.</p>
Develop competency and staffing requirements	<p>The agency has developed a set of competency requirements for its IT workforce, including leadership positions.</p> <p>The agency has developed staffing requirements for its IT workforce, which include projections over several years.</p>
Assess competency and staffing needs regularly	<p>The agency periodically assessed competency needs for its IT workforce.</p> <p>The agency periodically assessed staffing needs for its IT workforce.</p>
Assess gaps in competencies and staffing	<p>The agency periodically assessed gaps in competencies for its IT workforce.</p> <p>The agency periodically assessed gaps in staffing for its IT workforce.</p>
Develop strategies and plans to address gaps in competencies and staffing	<p>The agency developed strategies and plans to address identified competency gaps, including specific actions and milestones that are linked to a gap.</p> <p>The agency developed strategies and plans to address identified staffing gaps, including specific actions and milestones that are linked to a gap.</p>
Implement activities that address gaps	<p>The agency has implemented strategies and plans to address identified gaps in competencies and staffing.</p> <p>The agency has implemented other efforts to assist with addressing competency and staffing needs, including the following efforts identified in the Federal Information Technology Acquisition Reform Act: IT acquisition cadres, cross-functional training of acquisition and program personnel, career paths for program managers, plans to strengthen program management, and use of special hiring authorities.</p>
Monitor the agency’s progress in addressing competency and staffing gaps	<p>The agency tracked progress in the implementation of strategies and plans to address gaps in competencies.</p> <p>The agency tracked progress in the implementation of strategies and plans to address gaps in staffing.</p>
Report to agency leadership on progress in addressing competency and staffing gaps	<p>The agency periodically reported to agency leadership on progress in implementing strategies and plans to address gaps in competencies.</p> <p>The agency periodically reported to agency leadership on progress in implementing strategies and plans to address gaps in staffing.</p>

Source: GAO-20-129 | GAO-21-512

To assess FPAC’s progress in reducing IT duplication and overlap within the mission area, we reviewed federal laws and guidance including the *GPRA Modernization Act of 2010*, the *Federal Information Technology*

Acquisition Reform Act of 2014, and relevant OMB guidance,⁴ and GAO's evaluation and management guide on fragmentation, overlap, and duplication to determine best practices for reducing IT duplication and overlap.⁵ Based on the laws and guidance, we identified the following two recommended practices for reducing IT duplication and overlap: developing a multiyear strategy to reduce IT duplication and overlap, and documenting performance goals and measures and monitoring program performance against goals and measures.

We then reviewed relevant USDA and FPAC policies, procedures, and documentation, including departmental regulations, strategic plans, and quarterly reports to determine if the department and mission area documented and monitored performance goals and measures as it relates to reducing IT duplication and overlap. We compared the USDA and FPAC policies, procedures, and documentation to the recommended practices to determine the extent to which FPAC's IT modernization efforts resulted in reduction of IT duplication and overlap.

To analyze the mission area's progress in improving customer service, we reviewed our relevant prior work on customer service that identified key elements of effective customer service standards.⁶ The key elements we selected for assessing customer service standards include requirements found in the *GPRRA Modernization Act of 2010*, executive orders, and OMB guidance and memorandums that focus on how customer service standards should include targets or goals and tangible

⁴Carl Levin and Howard P. "Buck" McKeon *National Defense Authorization Act for Fiscal Year 2015*, Div. A, Title VIII, Subtitle D—*Federal Information Technology Acquisition Reform*, Pub. L. No. 113-291, (Dec. 19, 2014); *GPRRA (Government Performance and Results Act) Modernization Act of 2010*, Pub. L. No. 111-352, 124 Stat. 3866 (Jan. 4, 2011); OMB, *Preparation, Submission, and Execution of the Budget*, Circular No. A-11 (Revised August 2021); OMB, *Managing Information as a Strategic Resource*, Circular A-130 (Washington, D.C.: July 27, 2016).

⁵GAO, *Fragmentation, Overlap, and Duplication: An Evaluation and Management Guide*, [GAO-15-49SP](#) (Washington, D.C.: April 14, 2015).

⁶GAO, *Managing for Results: Selected Agencies Need to Take Additional Efforts to Improve Customer Service*, [GAO-15-84](#) (Washington D.C.: Oct. 24, 2014).

measures to determine progress.⁷ We compared these criteria with department and FPAC information on customer service surveys and feedback mechanisms. In addition, we reviewed OMB guidance on customer service for high impact service providers, which includes two of the FPAC agencies, the Farm Service Agency and the Natural Resources Conservation Service.⁸ We evaluated the mission area's customer service survey methodology and preliminary results to determine whether the mission area was meeting the customer service requirements for high impact service providers.

Additionally, we assessed the reliability of the customer service survey data and information that USDA and FPAC reported. Specifically, we reviewed documentation and interviewed USDA officials about the internal IT and external producer customer service survey, including survey sampling methodology for the external survey and, in the case of the internal IT survey, response rates. We determined that the methodological information from the internal survey was not sufficiently reliable for our purposes; however, we were able to use the narrative data provided.

For both objectives, we interviewed USDA and FPAC mission area officials, including those based at their headquarters in Washington, D.C., to obtain their views and verify the information provided. Specifically, we interviewed officials from USDA's Office of the Chief Information Officer, including the Director of Capital Planning and the Deputy Assistant Chief Information Officer; and in the FPAC mission area Business Center, we interviewed the Assistant Chief Information Officer for FPAC, the Acting Director for Customer Experience, the program manager for Farmers.gov and officials responsible for IT workforce planning and personnel issues, among others.

We conducted this performance audit from March 2020 through September 2021 in accordance with generally accepted government

⁷GAO-15-84 relied on a variety of requirements including the *GPR Modernization Act of 2010*; which significantly enhanced the *Government Performance and Results Act of 1993*, Pub. L. No. 103-62, 107 Stat. 285 (Aug. 3, 1993); Executive Order No. 13571 (Apr. 27, 2011), *Streamlining Service Delivery and Improving Customer Service*, 76 Fed. Reg. 24,339 (May 2, 2011); and Executive Order No. 12862, *Setting Customer Service Standards* (Sept. 11, 1993), 58 Fed. Reg. 48,257 (Sept. 14, 1993).

⁸OMB, *Preparation, Submission, and Execution of the Budget, Sec. 280: Managing Customer Experience and Improving Service Delivery*, Circular No. A-11 (Washington, D.C.: June 2018) (Revised August 2021).

**Appendix I: Objectives, Scope, and
Methodology**

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 Department of Agriculture



United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

September 15, 2021

Mr. Vijay A. D'Souza
Director
Information Technology and Cybersecurity
U.S. Government Accountability Office
441 G. Street, NW
Washington, D.C. 20548

Dear Mr. D'Souza:

The U.S. Department of Agriculture (USDA) is providing you with its response to the Government Accountability Office (GAO) draft report, GAO-21-512, "USDA Needs to Improve Oversight of Farm Production and Conservation Mission Area." In a separate transmittal, USDA provided your office with proposed technical corrections to the draft report, on August 31, 2021.

USDA's Farm Production and Conservation (FPAC) Mission Area supports America's farmers, ranchers, and foresters on a wide array of needs, such as voluntary conservation practices, farm loans, disaster assistance, and farm bill mandated programs. Essential to our work is effective, modern technology that is reliable, efficient, usable, cost effective, and secure. Those same technologies must also be planned, governed, designed, implemented, and maintained correctly in accordance with business priorities, strategic plans and goals, and USDA and Federal policies, processes, and standards.

USDA generally agrees with GAO's recommendations. USDA also acknowledges that during the previous Administration the goal of re-organizing and combining Information Technology (IT) took improper precedence over the proper planning, processes, and focus on the needs of our customers and front-line employees and many corners were cut. USDA takes IT Modernization seriously and has already taken or begun to take actions that align with the recommendations in the report and more broadly refocus on the needs of, and improvements for, customers and employees.

USDA also is committed to understanding what went wrong with the contracted support under the previous Administration. There were significant resources and time invested in Program Management Offices which reduced funding from other more critical areas, such as alternatives analyses or independent reviews that could have helped direct the USDA to conduct the planning and review at industry-accepted minimal levels. USDA intends to discover whether there was also a failure in contractor support and contract management. Further, USDA will confirm if the deliverables and outcomes were sufficient and appropriately dispositioned to support the business requests and expectations.

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**Appendix II: Comments from the Department
of Agriculture**

Mr. Vijay A. D'Souza
Page 2

On June 4, 2021, the USDA Deputy Secretary approved an updated Executive Information Technology Investment Review Board (E-Board) charter. Since then, the E-Board has met and is holding recurring meetings. The E-Board will provide concurrence on regularly scheduled Integrated Advisory Board (IAB) reviews, approvals, and recommendations on Major IT Investments. Further, the E-Board will review and approve passed decision points associated with Farmers.gov and the appropriate required documents in accordance with the requirements of USDA's Integrated IT Governance Framework. FPAC will consider better ways to approach decisions amongst the agencies to better collaborate with customer-facing agencies (Recommendations 1 and 2).

USDA has benefited from the adoption of Agile development practices to deliver critical mission-enabling software more quickly, with higher quality results. We agree that clear, documented FPAC policies and guidance for Agile development is necessary to further mature our practices, and to ensure consistent application. This will also include the expansion of training for multi-functional groups of business and IT professionals to acquire knowledge and better manage complex programs (Recommendation 3).

Regarding IT workforce planning, the department established an IT Workforce Standing Committee to address several workforce planning initiatives for the 2210 occupational series from a department-wide perspective. FPAC is an active participant on this committee. Of note, the IT Workforce Standing Committee has made progress this fiscal year on standardized position descriptions and IT competency models. USDA expects to make additional progress in FY22 on the full range of actions described in the draft report. FPAC will also analyze the Information Solutions Division (ISD) within the FPAC Business Center to ensure it is providing the service needed for the customer-facing agencies it serves. This FPAC effort is part of overall workforce planning, to ensure that ISD's work plans address the needs of the agencies ISD serves. (Recommendations 4 through 11).

With respect to IT strategic planning, FPAC is now updating a business-led, draft five-year IT plan to help reduce overlap and provide for an actionable roadmap for IT modernization that incorporates the priorities of the customer-facing agencies. The roadmap will include methods to measure and track progress and measure efficiencies. FPAC will also be engaged in the revision of the department's IT Strategic Plan. These actions will enable USDA and FPAC to monitor progress towards reducing IT overlap and duplication (Recommendations 12 and 13).

The FPAC Customer Experience Division, working in partnership with the Farm Service Agency (FSA), Natural Resources Conservation Service, and Risk Management Agency, plans to use the Producer Satisfaction Survey results to establish performance indicators and baselines for measuring customer satisfaction. USDA has found serious deficiencies in how previous surveys were designed and conducted. For instance, they were only directed at current customers, and made no effort to reach the significant number of unserved or underserved groups of producers. Improvements in survey design and outreach will need to be made before the producer surveys can be used as an accurate baseline. The performance indicators will be proposed for inclusion in the USDA Strategic Plan for 2022-2026 and used within FPAC. The ongoing actions will be reviewed with the Under Secretary for further consideration or approval (Recommendations 14 and 15).

FPAC will ensure that the Farmers.gov program is responsive to the feedback from our staff and customers about functionality and useability, coupled with disciplined and documented oversight and direction from FPAC and agency leadership. FSA's Farm Programs staff at the very early

**Appendix II: Comments from the Department
of Agriculture**

Mr. Vijay A. D'Souza
Page 3

stages of implementation had concerns with the capabilities, such as WHIP and WHIP+ , which are very complex programs that required an immense amount of rich data transfer across agencies and extensive code customization. Those capabilities encountered system limitations when added to Farmers.gov. The FSA Farm Programs staff suggested that we should perform a strategic review of the current investments and capabilities before implementing WHIP and WHIP+ using the underlying software platform. For example, FPAC continues to support and maintain multiple customer records management (CRM) systems with a shifting and sometimes inconsistent strategy for using the systems effectively in tandem or creating a plan to consolidate the functions over time. This lack of planning or follow-through on previous recommendations has resulted in excessive costs of operating and maintaining multiple systems, as well as paying necessary license fees, while never maximizing the utility of what USDA is purchasing under any one investment. FPAC has begun applying some of these lessons and adjusted its approach to focus on adding features and capabilities that most directly benefit farmers and producers and enhancing how they do business with us instead of a software platform-centric and IT driven decision-making under the previous Administration. One example of FPAC's lessons-learned approach was the addition of conservation-related features, enabling our customers to: securely view, upload, download and e-sign documents; request conservation assistance; request financial assistance, including submitting a program application; view and request application details; and access information on current and past conservation practices. Finally, recent enhancements also resolved employee concerns with how we support a wider range of customers beyond individual producers.

But fundamentally, beyond the WHIP and WHIP+ deployment mentioned earlier, the Farmers.gov investment has spent most of the past three years of development simply shifting previous functionality from a different system (Farm+) which resulted in very little progress toward the stated goals of providing better customer-facing access and functions. The number of users of Farmers.gov remains relatively low and is made up primarily of USDA employees who may also have a farming operation. The more significant process improvements and widespread increased functionality were driven by the needs of the customers and front-line employees as the work in the USDA Service Centers was forced to shift to a virtual environment during the COVID-19 pandemic. Having this urgency to show immediate tangible and practical results drove decision-making points back into the agencies instead of the often-times far-removed decision-points within IT governance. USDA is cognizant that simply following the better decision-making process, documentation and review steps that were found lacking in the GAO's review, is not enough. USDA needs to empower the agencies and needs of the customers and front-line employees to be the primary drivers of the decisions such that they are empowered to over-rule and stop decisions from reverting to being largely driven by the preferences and inclinations of the IT and procurement staff.

In alignment with the above actions and with the results of the audit, USDA is committed to reevaluating our internal processes and making the necessary changes to correct past mistakes and to ensure that our IT investments produce expected results and are managed properly. The following actions will support this commitment:

- Re-assess the current FPAC IT organizational structure, known deficiencies and shortcomings, and in consultation with FPAC mission area agency leadership, identify changes to improve and enhance how the IT organization can best support the agencies and enable the delivery of the FPAC mission.

**Appendix II: Comments from the Department
of Agriculture**

Mr. Vijay A. D'Souza
Page 4

- Revisit the FPAC IT governance structure, processes, and practices to re-enforce business-based decisions; and, that USDA will ensure that informal, undocumented, and inadequate USDA governance practices described in your report are eliminated.
- Ensure that the annual FPAC customer (producer) survey represents the views of both current and potential customers to ensure that we are able to collect meaningful feedback and ideas, and create proper baselines and goals using data from a diverse population. This corrects deficiencies in the design of the original producer survey in 2020, which will lead to more robust results. These corrections will serve as a baseline in improving our customers' experience and the overall delivery of programs.
- In conjunction with the broader IT workforce planning efforts described in the draft report, FPAC will re-evaluate the ratio of federal staff to contract staff and examine the need for more federal staff with technical skills. This evaluation will consider necessary actions, to include re-training/up-skilling and targeted hiring, as staff attrition occurs over time. FPAC will also evaluate monitoring and management of the contract work we have and how it best supports our IT roadmap.

These corrections will assist us in increasing efficiency and effectiveness and identifying potential waste and duplication. What FPAC is committed to doing aligns with audit results – and, in fact, challenges us to go above and beyond to meet the fullest intent of our mission.

If you have questions, please contact Gary Weishaar, Branch Chief, External Audits and Investigations, at (202) 401-0584 or gary.weishaar@usda.gov.

Sincerely,



Gloria Montaño Greene
Deputy Under Secretary
Farm Production and Conservation

Appendix III: GAO Contacts and Staff Acknowledgments

GAO Contact

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In addition to the contact named above, Neela Lakhmani (Assistant Director), Kathleen S. Epperson (Analyst in Charge), Leland Buggie, Christopher Businsky, Stephen Duraiswamy, Cassandra Pham, Dana Pon, Priscilla Smith, and Matthew Ziccarelli made key contributions to this report.

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