



July 2022

U.S. COURTS

Action Needed to Improve IT Management and Establish a Chief Information Officer

GAO Highlights

Highlights of [GAO-22-105068](#), a report to congressional requesters

Why GAO Did This Study

The Administrative Office of the U.S. Courts relies on IT systems to manage information to support its lines of business. These lines of business include case management, court administration, and probation and pretrial services.

GAO was asked to review the Office's IT management. This report evaluates, among other things, the extent to which the Office (1) implemented selected leading IT workforce planning and management practices, (2) implemented selected best practices for planning and managing IT projects, and (3) has a CIO with the authority to exercise enterprise control and oversight of the Office's IT workforce and project portfolio.

To do so, GAO assessed agency documentation against 12 selected leading workforce management practices within four topic areas. It also evaluated 23 best practices for managing the Office's three largest IT acquisition projects. In addition, GAO interviewed officials from the Office about the agency's management of its IT workforce and projects.

What GAO Recommends

GAO is making 18 recommendations, including that the Office improve its IT workforce planning and management, enhance its IT project management practices, and establish a CIO position with enterprise-wide responsibility. The Office said it would evaluate the recommendations in light of its decentralized management model and determine what improvements to make. As discussed in the report, GAO maintains the recommendations are appropriate.

View [GAO-22-105068](#). For more information, contact Carol C. Harris at (202) 512-4456 or HarrisCC@gao.gov.

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Action Needed to Improve IT Management and Establish a Chief Information Officer

What GAO Found

The Administrative Office of the U.S. Courts (the Office) is a judicial branch agency that, among other things, provides IT support services to federal courts. Regarding IT workforce management, the Office's implementation of 12 selected leading practices across four areas varied (see table). The Office substantially implemented practices in the performance management area, but was less successful in recruitment and hiring and training and development. For example, although the Office identified gaps in the cybersecurity skills of its IT workforce, it did not have a recruiting strategy for IT staff and did not establish a training program for its IT staff. Agency officials said that they did not establish such a training program because the agency's departments are to address training on an individual or project basis. Fully addressing practices in these areas would help ensure that it has the knowledge and skills to tackle pressing IT issues.

Administrative Office of the U.S. Courts' Implementation of 12 Selected Leading Practices Associated with Four Workforce Planning and Management Areas for Its IT Workforce

IT workforce area	Overall area rating	Number of practices fully implemented	Number of practices partially implemented	Number of practices not implemented
1. Strategic planning	Partially implemented	0	3	0
2. Recruitment and hiring	Minimally implemented	0	2	1
3. Training and development	Minimally implemented	0	2	1
4. Performance management	Substantially implemented	1	2	0
Total	—	1	9	2

Source: GAO analysis of data provided by Administrative Office of the U.S. Courts officials. | GAO-22-105068

The Office partially implemented most of the 23 selected project management best practices for its three largest IT projects: (1) the Judiciary Electronic Filing System, (2) JSPACE (an enterprise facilities management system), and (3) Probation and Pretrial Services Automated Case Tracking System 360. It fully implemented the majority of the supplier agreement management practices for each project. However, for project planning, while the Office had developed life cycle cost estimates and schedules for each project, none of the cost estimates were comprehensive and none of the schedules were well-constructed. Full implementation of these practices would help ensure that projects meet user needs and are delivered on schedule and within budget. However, insufficient oversight and incomplete IT project management guidance have hampered the projects and may have contributed to cost increases and schedule overruns.

Although a Chief Information Officer (CIO) with enterprise-wide authority could address IT oversight and guidance shortcomings, such a position does not exist at the Office. Instead, the Associate Director for the Department of Technology Services serves as the principal IT advisor to the Director. Agency officials acknowledged that the Associate Director does not have oversight of other Office units that separately manage their own IT workforces and projects. The judicial branch does not have a statutory requirement to establish a CIO. However, according to GAO's prior work at federal agencies, leading organizations adopt and use an enterprise-wide approach to managing IT under the leadership of a CIO.

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Abbreviations

AO	Administrative Office of the U.S. Courts
CIO	Chief Information Officer
CMMI	Capability Maturity Model Integration
EPA	Electronic Public Access
JEFS	Judiciary Electronic Filing System
PACER	Public Access to Court Electronic Records
PACTS 360	Probation and Pretrial Services Automated Case Tracking System 360
PMBOK®	Project Management Body of Knowledge

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July 28, 2022

The Honorable Henry C. “Hank” Johnson Jr.
Chairman
Subcommittee on Courts, Intellectual Property, and the Internet
Committee on the Judiciary
House of Representatives

The Honorable Gerald E. Connolly
Chairman
Subcommittee on Government Operations
Committee on Oversight and Reform
House of Representatives

The Administrative Office of the U.S. Courts (AO)—an agency within the judicial branch—provides a broad range of legislative, legal, financial, technology, management, administrative, and program support services to federal courts.¹ To provide these services, the agency relies on IT systems to manage information to support its different lines of business, such as case management, court administration, probation and pretrial services, human resources, and financial management. AO has also reported that IT is inextricably part of the performance of the judiciary’s business, with judges and judiciary staff relying on IT to do their jobs.² According to the judiciary’s fiscal year 2023 congressional budget justification, the judiciary obligated \$648.3 million for IT in fiscal year 2021.

In addition, AO uses IT to provide the public with important information about court cases and hearing schedules. For example, the agency operates the Electronic Public Access (EPA) program to provide public users with electronic access to information on federal court docketing systems.³

¹For the purposes of this report, we refer to AO as an agency.

²AO, *Long Range Plan for Information Technology in the Federal Judiciary, Fiscal Year 2022 Update* (Washington, D.C.: September 2021).

³Federal court docketing systems provide a repository of cases and documents. Courts also use such systems to manage deadlines, hearing schedules, and trials.

As part of the EPA program, AO provides case file information, among other things, through the Public Access to Court Electronic Records (PACER) service. Certain users of this service are charged fees for usage.⁴ Pursuant to statute, these fees are set by the Judicial Conference of the United States.⁵ Uses of these fees include providing access to electronic court docketing information and providing information to the public via courts' public websites. However, the judiciary has faced legal challenges to the expenditures associated with these fees.⁶

Given the importance of IT to AO's support of the federal courts and the significance of the EPA program to providing the public with electronic access to information on federal court docketing systems, you asked us to review the agency's efforts to manage its IT projects and EPA program funds. Specifically, our objectives were to evaluate the extent to which AO (1) implemented selected leading workforce planning and management practices for its IT workforce; (2) implemented best practices for planning and managing selected IT projects; (3) has a Chief Information Officer (CIO) with authority to exercise enterprise control and oversight of the agency's IT workforce and project portfolio; and (4) addressed selected internal control principles for EPA program obligations.

⁴Fees are not charged in the following instances: (1) a user is a party in a case and receives a Notice of Electronic or Notice of Docket Activity from a court; (2) a user views case information at any federal courthouse; (3) a user is an individual or group who was granted a fee exemption; and (4) court opinions are always free. In addition, users who spend \$30 or less on court records in a quarter will have the fees waived.

⁵The Judicial Conference of the United States is the national policy-making body of the federal courts. Congress authorized the Judicial Conference to prescribe reasonable fees for collection by the courts for access to information available through automatic data processing equipment in § 404 of The Judiciary Appropriations Act, 1991, Pub. L. No. 101-515, title IV, § 404, 104 Stat. 2129, 2132 (1990). The authority was extended indefinitely by § 303 of The Judiciary Appropriations Act, 1992, Pub. L. No. 102-140, title III, 105 Stat. 807, 810 (1991).

⁶In *National Veterans Legal Services Program v. United States*, 291 F.Supp.3d 123 (D.D.C. 2018), aff'd and remanded, 968 F.3d 1340 (Fed. Cir. 2020), the plaintiffs challenged the legality of fees charged for access to the PACER system, arguing that they exceeded the costs of maintaining this system. In March 2018, a federal district court held that most programs AO had funded with these fees were appropriate, but that certain categories were impermissible (e.g., use of EPA funds for courtroom technology not related to digital audio recording). In August 2020, the U.S. Court of Appeals for the Federal Circuit affirmed the district court's ruling and remanded the case back to the district court for further proceedings.

To address the first objective, we first identified seven topic areas associated with human capital management based on our review of IT workforce planning and management guidance issued by AO; related guidance issued by the Office of Personnel Management, the Chief Human Capital Officers Council, and our prior work; and related federal law.⁷ Several of these sources are not legally applicable to the judiciary, including the federal laws that we reviewed (which are legally applicable to the executive branch) and the guidance issued by the Office of Management and Budget, the Office of Personnel Management, and the Chief Human Capital Officers Council. However, these sources identify fundamental and sound workforce management practices that are relevant to the judiciary.

Among these topic areas, we then selected four areas that are of particular importance to successful workforce planning and management: (1) strategic planning, (2) recruitment and hiring, (3) training and development, and (4) performance management.

We also identified numerous leading practices associated with the four topic areas. Among these leading practices, we selected three practices within each of the four areas. These are foundational practices that are of particular importance to successful workforce planning and management. Appendix I identifies the four workforce areas and 12 associated practices.

⁷Office of Personnel Management, *Human Capital Framework*, 5 C.F.R. pt. 250, subpt. B.; Office of Personnel Management and the Chief Human Capital Officers Council Subcommittee for Hiring and Succession Planning, *End-to-End Hiring Initiative* (March 2017); Office of Personnel Management, *Workforce Planning Model*, accessed May 3, 2022, <https://www.opm.gov/policy-data-oversight/human-capital-framework/reference-materials/strategic-alignment/workforceplanning.pdf>; Office of Management and Budget, *Managing Information as a Strategic Resource*, OMB Circular A-130 (July 2016); Clinger-Cohen Act of 1996, Pub. L. No. 104-106, division E, title LI, subtitle C, § 5125(c)(3), 110 Stat. 679, 684 (1996), codified at 40 U.S.C. § 11315(c)(3); Administrative Office of the U.S. Courts, *AO Manual*, vols. 4, 7 (Washington, D.C.: October 2020); GAO, *U.S. Secret Service: Action Needed to Address Gaps in IT Workforce Planning and Management Practices*, [GAO-19-60](#) (Washington, D.C.: Nov. 15, 2018); *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); *Human Capital: A Guide for Assessing Strategic Training and Development Efforts in the Federal Government*, [GAO-04-546G](#) (Washington, D.C.: Mar. 1, 2004); and *Results-Oriented Cultures: Creating a Clear Linkage between Individual Performance and Organizational Success*, [GAO-03-488](#) (Washington, D.C.: Mar. 14, 2003).

To determine the extent to which AO had implemented the selected leading practices for its IT workforce,⁸ we obtained and assessed documentation and compared it against the 12 selected practices. In particular, we analyzed documentation such as AO policies and manuals regarding its mission, organization, financial planning (as it relates to the workforce), training and development, and performance management. We also interviewed AO officials about the agency's workforce-related policies and documentation, and the agency's efforts to implement the selected workforce practices for its IT workforce.

To address the second objective, we reviewed leading IT project management practices from ISACA's Capability Maturity Model Integration (CMMI), GAO's *Cost Estimating and Assessment Guide*, and GAO's *Schedule Assessment Guide*.⁹ To select CMMI practices for review, we first selected the two capability areas that most directly applied to our objective. These capability areas were (1) selecting and managing suppliers and (2) planning and managing work. In CMMI, those capability areas are comprised of five practice areas. We excluded two of these five areas from our review because one area, according to CMMI, does not apply to all domains,¹⁰ and the other area overlapped with practices that we selected from GAO's cost and schedule guides (discussed in more detail later). We included the three remaining practice areas for our review:

⁸AO officials define the agency's IT workforce as government employees in the Office of Personnel Management's 2210 (IT Management) occupational series. This occupational series covers positions that manage, supervise, lead, administer, develop, deliver, and support IT systems and services. According to the Office of Personnel Management, occupational series consist of positions in a similarly specialized line of work and with similar qualification requirements. AO also employs contractor staff to support AO's IT projects and its IT environment. According to AO officials, the agency does not have workforce management guidance for contractor IT staff and relies on the contractor's company to train, develop, and manage its own workforce.

⁹ISACA, *CMMI Model V2.1* (Pittsburgh, PA: Dec. 4, 2018). CMMI Model and ISACA ©[2021] All rights reserved. Used with permission. GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, [GAO-20-195G](#) (Washington, D.C.: Mar. 12, 2020); and *Schedule Assessment Guide: Best Practices for Project Schedules*, [GAO-16-89G](#) (Washington, D.C.: Dec. 22, 2015).

¹⁰CMMI considers six domains: (1) development, (2) services, (3) supplier management, (4) security, (5) safety, and (6) people management.

-
1. supplier agreement management,
 2. planning, and
 3. monitoring and control.

From these three practice areas, we then selected the 23 practices associated with CMMI's first and second levels of maturity (seven practices from supplier agreement management, 10 from planning, and six from monitoring and control).¹¹ However, because the GAO cost and schedule estimation practices that we selected (discussed in more detail later) overlapped with two of the practices in CMMI's planning practice area, we excluded these two overlapping CMMI practices. As a result, we selected 21 CMMI practices for review.

Next, as part of the planning practice area, we selected estimating best practices from GAO's cost and schedule guides. Specifically, in consultation with internal cost and schedule experts, we selected the "comprehensive" characteristic of a reliable cost estimate in GAO's *Cost Estimating and Assessment Guide*. We selected the "comprehensive" characteristic, which includes four associated practices, because this characteristic relates to the foundational practices for a high-quality, reliable cost estimate. We also selected the "well-constructed" characteristic of a reliable schedule estimate in GAO's *Schedule Assessment Guide*. We selected the "well-constructed" characteristic, which includes three associated practices, because this characteristic relates to the foundational practices for a high-quality, reliable schedule.

For reporting purposes, we consolidated the four practices associated with the "comprehensive" characteristic of a reliable cost estimate into one new practice, as follows: *Develop a comprehensive life cycle cost estimate*. We also consolidated the three practices associated with the "well-constructed" characteristic of a reliable schedule estimate into one new practice, as follows: *Develop a well-constructed project schedule*. We discuss these two consolidated practices within the Planning practice area discussion of our report. Appendix I identifies the three practice areas and 23 best practices that we selected.

¹¹CMMI includes clusters of practices within each practice area, which represent various levels of maturity from zero through five. Not all practice areas include a maturity level beyond two or three. Each evolutionary level builds on the previous levels by adding new functionality or sophistication, resulting in increased capability. We did not assess the specific maturity level of each project included in our review.

Next, we selected three IT projects to assess against the selected project management best practices. To do so, AO officials provided us a list of 10 IT projects that they said were currently in the acquisition or development phase as of May 2021. From this list, we excluded one project that started in 2021 and another project that was expected to be fully deployed in 2021. We then selected, from the eight remaining projects, the three projects with the largest planned total costs. These projects were (1) Judiciary Electronic Filing System (JEFS), (2) JSPACE, and (3) Probation and Pretrial Services Automated Case Tracking System 360 (PACTS 360). See appendix II for descriptions of each selected IT project.

To determine the extent to which AO had implemented the 23 selected project management practices, we obtained and analyzed relevant documentation from each of the three selected projects. This documentation included, among other things, project management plans; stakeholder involvement and communications plans; IT project cost and schedule estimating methodologies, assumptions, and results; charters for oversight entities; acquisition plans and strategies; and contracts and task orders.

We compared all of the documentation to the selected practices. We also interviewed AO and project officials regarding the agency's efforts to implement the 23 selected best practices for each selected project.

To address the third objective, we obtained and reviewed judicial policy documents and AO's organizational chart to determine whether a CIO position and associated roles and responsibilities were identified within them. We also interviewed AO officials about oversight roles and responsibilities for the IT workforce and IT projects.

To address the fourth objective, we selected three internal control principles from the *Standards for Internal Control in the Federal Government* that provided a sound basis for evaluating both AO's planning for and use of internal controls over EPA program obligations.¹² The selected principles are (1) identify, analyze, and respond to risk; (2) design control activities; and (3) implement control activities.

¹²GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014). This report identifies key principles for implementing an effective internal control system and provides an overall framework for designing, implementing, and operating such a control system.

To determine the extent to which AO had addressed the three selected internal control principles for EPA program obligations, we reviewed relevant documentation of its internal controls over these obligations. We then compared this documentation to the selected internal control principles. We also interviewed agency officials for additional information about AO's design and implementation of internal controls over EPA program obligations. See appendix I for a more detailed discussion of our objectives, scope, and methodology.

We conducted this performance audit from March 2021 to July 2022 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

The federal judiciary consists of a system of courts that has the critical responsibility of ensuring the fair and swift administration of justice in the United States. These federal courts include 13 appellate courts, 94 district courts, 90 bankruptcy courts, and two special trial courts (the Court of International Trade and the Court of Federal Claims).¹³ These courts handle all federal civil, criminal, and bankruptcy cases and review of administrative agency cases throughout the country.¹⁴

The Judicial Conference of the United States is the national policy-making body of the federal courts. The conference is a body of 26 judges, over which the Chief Justice of the United States presides. It operates through a network of 20 committees created to address and advise the courts on various subjects. For example, the Committee on Resources and the Committee on IT have jurisdiction for reviewing personnel and IT issues, respectively. When necessary, the committees also recommend changes to judicial policies for personnel and IT.

¹³The federal judiciary also includes the Supreme Court, which is not in the scope of this report.

¹⁴An administrative agency is a government body authorized to implement legislative directives by developing more precise and technical rules than possible in a legislative setting. Many administrative agencies also have law enforcement responsibilities. Administrative agencies include, for example, the Department of Justice, the Environmental Protection Agency, and the Securities and Exchange Commission.

Purpose and Structure of AO

To help the Judicial Conference carry out its statutory responsibilities, in 1939, Congress and the President established AO as the central support entity for the courts of the federal judiciary.¹⁵ Operating under the direction and supervision of the Judicial Conference, the agency provides a broad range of legislative, legal, financial, technology, management, administrative, and program support services to federal courts.

Specifically, AO is principally responsible for

- supporting and carrying out the policies of the Judicial Conference and its committees,
- providing staff support to the conference, and
- providing administrative and program support to federal courts and federal defender organizations.

In addition, AO services and responsibilities include, among other things,

- supporting the development of the federal judiciary's budget,
- allocating funds to local court units,
- developing IT systems, and
- performing program and management reviews and analyses.

Under the leadership of the Director and Deputy Director, AO consists of 12 executive offices, including the Office of AO Human Resources, and three departments:

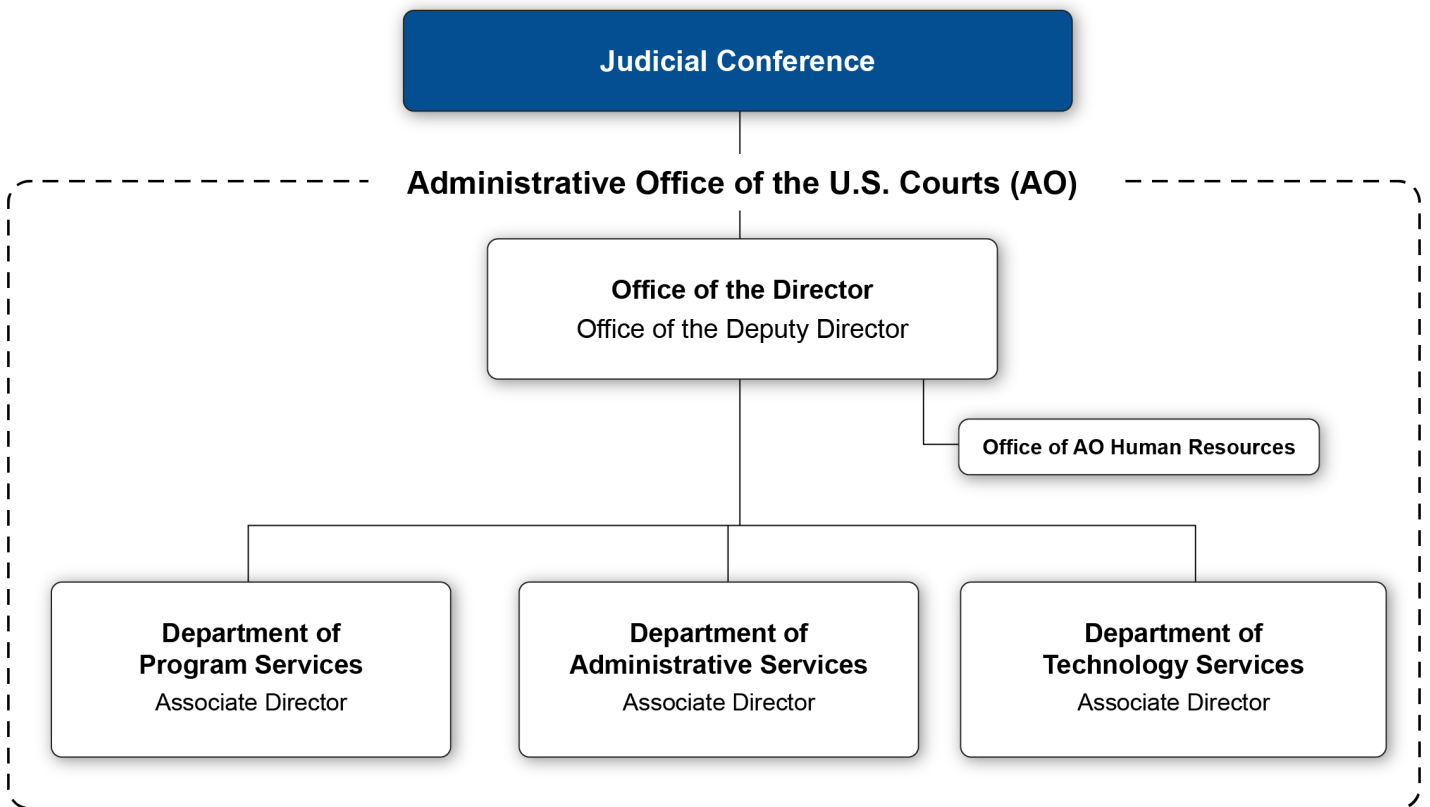
1. Department of Administrative Services: provides support for the judiciary's budget, accounting, human resources, and procurement functions; develops and supports automated administrative systems and services for AO and the judiciary;
2. Department of Program Services: provides programs, services, and support to federal judges, clerks of court, probation and pretrial services officers, federal defenders, and others; manages the judiciary's case management systems; and provides support for judiciary data analysis and reporting; and
3. Department of Technology Services: provides support for the deployment of judiciary IT systems; manages IT infrastructure; plans

¹⁵28 U.S.C. § 601.

and coordinates national IT policy, standards, architecture, training, and security for the judiciary.

Each AO department maintains offices responsible for various programs and services. Figure 1 provides a simplified depiction of the agency's organization.

Figure 1: Simplified Administrative Office of the U.S. Courts Organizational Chart



Source: Data provided by AO. | GAO-22-105068

The judiciary's operations are funded partially through fees collected by the courts, including those from the EPA program. For fiscal year 2021, AO's total enacted appropriations were \$95.7 million of the \$8.5 billion enacted for the judiciary.¹⁶

¹⁶Congressional Research Service, *Judiciary Appropriations, FY2021*, R46747 (Washington, D.C.: Apr. 5, 2021).

Management of AO's IT Environment

The Judicial Conference of the United States provides leadership and vision for AO's IT programs through the conference's Committee on IT. The committee—which is made up of judges—sets IT policy and supports strategic planning for the judiciary. According to AO officials, the committee meets twice yearly and on an ad hoc basis to address specific issues.

AO's Director is the administrative officer of the federal courts. The Director's responsibilities include providing direction for the agency's services to the courts, such as the development and support of automated systems and technologies used throughout the courts and the monitoring and review of the performance of programs.¹⁷ To assist the Director with this role, AO's Associate Director for the Department of Technology Services serves as the principal IT advisor to the Director.

The judiciary depends on technology for communication systems, research, and information management systems to fulfill mission-critical needs. To help meet these needs, the judiciary develops, operates, and maintains IT systems both nationally for judiciary-wide use and locally to meet the needs of different courts. For example, according to agency officials, AO's three largest IT projects in the development or acquisition phase (as of May 2021) included the following:

- JSPACE: intended to implement an enterprise facilities management system to enhance the judiciary's ability to manage its real estate and facilities portfolio. This project is managed by the Department of Administrative Services. The agency's total planned cost for this project is about \$35 million.
- The Judiciary Electronic Filing System (JEFS): intended to establish a modernized system for the secure electronic filing, review, storage, management, tracking, and release of financial disclosure reports. This project is managed by the Department of Administrative Services. The agency's total planned cost for this project is about \$36 million.
- Probation and Pretrial Services Automated Case Tracking System 360 (PACTS 360): intended to implement a cloud-based, software-as-a-service solution to replace the legacy case management system that AO's Probation and Pretrial Services Office uses to manage the

¹⁷28 U.S.C. § 604.

supervision and investigation of defendants and offenders.¹⁸ This project is managed by the Department of Program Services. The agency's total planned cost for this project is up to \$100 million, which is the estimated cost of the blanket purchase agreement that the agency established for this project.¹⁹

To fund IT efforts across the judiciary, in fiscal year 1990, Congress and the President established the Judiciary Information Technology Fund.²⁰ Specifically, this fund provides for the procurement of IT resources and for the management, coordination, operation, and use of IT, including personnel costs for AO and the courts.²¹ According to the judiciary's fiscal year 2023 congressional budget justification, the actual obligations from the Judiciary IT Fund in fiscal year 2021 were \$648.3 million.²²

AO's Department of Technology Services provides the IT infrastructure, security, operations, and support for the judiciary. Each department also manages IT projects to meet judiciary business needs.

To help ensure effective management of IT projects across the agency, AO's Department of Technology Services issued the *Judiciary IT Project Management Framework* in May 2017. This framework is intended to provide the body of knowledge, processes, skills, and tools needed to support effective project management. The framework also identifies project management activities that may be implemented, such as

¹⁸Cloud-based computing relies on internet-based interconnectivity and resources to provide computing services to customers, while intending to free customers from the burden and costs of maintaining the underlying infrastructure. Software-as-a-service is a cloud service model where the service provider delivers one or more applications and all the resources (operating system and programming tools) and underlying infrastructure, which the agency can use on demand.

¹⁹A blanket purchase agreement is a method of filling anticipated repetitive needs for supplies or services by establishing "charge accounts" with qualified sources of supply. These agreements between agencies and vendors have terms in place for future use and agencies issue individual orders to fulfill requirements for goods and services as they arise; funds are obligated when orders are placed.

²⁰28 U.S.C. § 612.

²¹The Judiciary Appropriations Act, 1998, Pub. L. No. 105-119, title III, § 304, 111 Stat. 2488, 2491 (1997) extended the Judiciary IT Fund indefinitely.

²²The Judiciary IT Fund receives funding from a variety of sources, including EPA fees and other amounts made available through appropriations. Information in agencies' congressional budget justifications is generally unaudited. We are not attesting to the accuracy of the obligated amount.

conducting regular project reviews with a governing body responsible for project oversight.

Judiciary policy calls for all IT projects to conform to this project management framework.²³ The policy notes that consistent application of the guidelines within the framework would increase the likelihood that projects will accomplish their intended objectives, help minimize project risks, and improve accountability for how funding is spent.

Management of AO's IT Workforce

As discussed earlier, each AO department manages IT projects to meet judiciary business needs. To develop and implement these IT projects, the departments have their own IT staff who, according to AO officials, collaborate with other offices across the agency as needed to support these projects.

AO employs a federated approach for managing this IT workforce. Specifically, as part of this federated approach, each department and office is responsible for planning and managing its own IT employees. This responsibility includes the day-to-day management of IT employees as well as other workforce planning and management activities, such as recruiting and hiring.

To assist the departments in planning and managing their workforces, AO's Office of Human Resources provides support to the departments. AO has also issued policies and guidance on certain AO-wide workforce management activities, including training and performance management. According to AO officials, the agency does not manage IT staff as a separate work group. Instead, the agency performs workforce planning and management activities that include, but do not specifically focus on, the IT workforce.

As of March 2022, AO officials stated that the agency's IT workforce included about 420 staff, which accounted for approximately one-third of

²³Judicial Conference of the United States, *Guide to Judiciary Policy*, vol. 15, ch. 4 (July 18, 2019).

AO's total staff.²⁴ This IT workforce was distributed throughout the agency's departments and executive offices. Specifically,

- the Department of Technology Services had 272 IT staff,
- the Department of Program Services had 89 IT staff,
- the Department of Administrative Services had 55 IT staff, and
- the agency's executive offices had four IT staff.

Agency officials added that these IT employees worked in AO offices in Washington, D.C.; Charleston, South Carolina; Phoenix, Arizona; and San Antonio, Texas, with additional staff teleworking from various locations.

One recent AO initiative has directly impacted the size of the agency's overall workforce—including its IT workforce. Historically, the agency has relied heavily on contractors to support IT projects and maintain the IT environment of the agency and the environment used by the judiciary's national systems. In 2012, AO launched a contractor insourcing program to adjust the ratio of government employees to contractors. This program was designed to contain costs, improve program management, protect data, and ensure inherently government functions are performed by government employees. According to AO officials, from October 2012 to March 2022, AO insourced work that was previously being completed by contractors. In doing so, AO hired 217 government employees (174 IT and 43 non-IT) through this initiative. The officials stated that they plan to insource work performed by an additional 56 staff (29 IT and 27 non-IT) by the end of September 2024.

Management of Human Capital and IT Acquisitions Are High-Risk Efforts

In 2001, we designated strategic human capital management as a government-wide high-risk area. We identified a need for a consistent strategic approach to marshaling, managing, and maintaining the human capital necessary to maximize government performance and assure its accountability. In our March 2021 update to the High Risk List, we reported this human capital management problem persists with skills

²⁴AO officials define the agency's IT workforce as government employees in the Office of Personnel Management's 2210 (IT Management) occupational series. This occupational series covers positions that manage, supervise, lead, administer, develop, deliver, and support IT systems and services. According to the Office of Personnel Management, occupational series consist of positions in a similarly specialized line of work and with similar qualification requirements.

gaps in the federal workforce despite the continuing efforts of the Office of Personnel Management and federal agencies.²⁵ We also reported that causes of these skills gaps vary but are often due to a shortfall in one or more talent management activities, such as robust workforce planning or training.

We also designated the federal government's management of IT acquisitions and operations as a government-wide high-risk area, adding it to our High Risk List in February 2015.²⁶ In doing so, we noted that, across the federal government, IT investments too frequently failed or incurred cost overruns and schedule slippages while contributing little to mission-related outcomes. These investments often suffered from a lack of disciplined and effective management, such as project planning and program oversight and governance.

AO's Electronic Public Access Program

AO's EPA program is intended to provide electronic public access to information on federal court docketing systems. AO provides administrative support for this program. This support includes planning for and managing the program's budget through the Court Services Office within the Department of Program Services, as well as through a service center and other offices within the Department of Technology Services.

Through the EPA program, the public and other external stakeholders do not need to visit courts in person to obtain a case file and photocopy documents. Instead, users can obtain these documents and other case information online.

Specifically, the EPA program's purpose is to

- provide the public with access to court information at a reasonable cost;
- make judiciary information and services more accessible to the public through improvements that enhance the availability of electronic information;
- support ongoing program requirements and costs associated with the Case Management/Electronic Case Files systems used by federal

²⁵GAO, *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: Mar. 2, 2021).

²⁶GAO, *High-Risk: An Update*, [GAO-15-290](#) (Washington, D.C.: Feb. 11, 2015).

courts throughout the country, which provide the case file information accessible through the PACER service; and

- support programs providing electronic public access to information from the courts.

As required by law, AO funds the EPA program entirely through fees that certain users pay to access the PACER service.²⁷ These fees are set by the Judicial Conference of the United States.²⁸ By law, these fees must be used for electronic access to information that the Director is required to maintain and make available to the public.²⁹

AO offices and the courts are responsible for ensuring that collected fees are obligated for lawful purposes. Each fiscal year, the EPA program office recommends allocations of EPA funds among AO's offices and the courts and provides those recommendations to the AO Director.³⁰ The Director is responsible for apportionment of EPA funds—dividing the funds available and allocating them to each department's Associate Director and the courts.³¹ The Associate Directors then approve allotments of EPA funds to AO offices and to the courts. This approval

²⁷Pursuant to the EPA Fee Schedule (available at <https://www.uscourts.gov/services-forms/fees/electronic-public-access-fee-schedule>, accessed May 5, 2022), there are certain exemptions to these fees. For example, no fees are owed for electronic access to court data or audio files until a user has accrued charges of more than \$30.00 in a quarterly billing cycle. In addition, there are no fees for viewing case information or documents at courthouse public access terminals.

²⁸Congress and the President authorized the Judicial Conference to prescribe reasonable fees for collection by the courts for access to information available through automatic data processing equipment in § 404 of The Judiciary Appropriations Act, 1991, Pub. L. No. 101-515, title IV, § 404, 104 Stat. 2129, 2132 (1990). The authority was extended indefinitely by § 303 of The Judiciary Appropriations Act, 1992, Pub. L. No. 102-140, title III, § 303, 105 Stat. 807, 810 (1991).

²⁹28 U.S.C. § 1913 note.

³⁰Before making these recommendations, the EPA program office reviews budget requests that AO offices submit as part of the annual budget process to document their identified needs for EPA funds. AO also provides courts with allotments of EPA funds every fiscal year that are calculated based on standard formulas applied to certain prior year's expenses (e.g., court printing costs).

³¹Apportionment divides available funds by one or a combination of the following: specific time periods (usually quarters), activities, projects, and objects.

authorizes the offices and courts to obligate or expend EPA funds for specific purposes.³²

The office's or court's obligation of the funds documents a legal liability for the government to pay—either immediately or in the future—for goods and services ordered or received. For example, the agency incurs an obligation when it places an order, signs a contract, purchases a service, or takes other actions that require the government to make payment. The payment may be made immediately or on a predefined future date.

AO's and the courts' obligations of EPA program fees for certain expenditures has been challenged in ongoing litigation. As part of this litigation, a district court ruled in March 2018—and the U.S. Court of Appeals for the Federal Circuit upheld in August 2020—that certain categories of EPA program expenditures were impermissible (e.g., the use of EPA funds for courtroom technology not related to digital audio recording).³³ As a result of the court rulings, AO no longer allocates EPA program funding to certain activities ruled impermissible.

Since 2018, AO officials reported that they have authorized EPA program obligations for the following activities:

- case management system/electronic case file development, operations, and maintenance;
- communications infrastructure, services, and security;
- public access services; and
- electronic bankruptcy noticing.³⁴

In addition, AO allocates a portion of EPA funding to federal courts to support electronic public access at that level.

³²Allotments are the amounts authorized for obligation and expenditure for specific purposes. An allotment cannot exceed the amounts apportioned for a particular purpose.

³³*National Veterans Legal Services Program v. United States*.

³⁴We asked AO to provide detailed information on the purposes for which the agency obligated EPA program funds during fiscal years 2016 through 2021. However, the agency declined to provide this information. According to agency officials, the information pertained to factual and legal issues that were the subject of ongoing litigation as of May 2022.

AO Did Not Fully Implement the Majority of Selected Leading IT Workforce Planning and Management Practices

Workforce planning and management are critical for federal agencies to have the essential balance of skills, knowledge, and experience needed to execute their missions and program goals. We have previously reported that effective workforce planning is key to addressing the federal government's IT challenges. We have stressed that implementing workforce planning activities can facilitate the success of major IT acquisitions.³⁵

To help agencies effectively conduct workforce planning and management, the Office of Personnel Management, the Chief Human Capital Officers Council Subcommittee for Hiring and Succession Planning, the Office of Management and Budget, AO, and GAO have identified leading IT workforce planning and management practices. These practices relate to multiple workforce areas, including strategic planning, recruitment and hiring, training and development, and performance management.³⁶ Table 1 identifies four workforce areas and 12 selected leading practices associated with these areas (three practices in each area).

³⁵GAO, *Information Technology: Agencies Need to Fully Implement Key Workforce Planning Activities*, [GAO-20-129](#) (Washington, D.C.: Oct. 30, 2019) and *Federal Chief Information Officers: Critical Actions Needed to Address Shortcomings and Challenges in Implementing Responsibilities*, [GAO-18-93](#) (Washington, D.C.: Aug. 2, 2018).

³⁶Office of Personnel Management, *Human Capital Framework*, 5 C.F.R. pt. 250, subpt. B.; Office of Personnel Management and the Chief Human Capital Officers Council Subcommittee for Hiring and Succession Planning, *End-to-End Hiring Initiative* (March 2017); Office of Personnel Management, *Workforce Planning Model*, accessed May 3, 2022, <https://www.opm.gov/policy-data-oversight/human-capital-framework/reference-materials/strategic-alignment/workforceplanning.pdf>; Office of Management and Budget, *Managing Information as a Strategic Resource*, Circular A-130 (July 2016); Clinger-Cohen Act of 1996, Pub. L. No. 104-106, division E, title LI, subtitle C, § 5125(c)(3), 110 Stat. 679, 684 (1996), codified at 40 U.S.C. § 11315(c)(3); Administrative Office of the U.S. Courts, *AO Manual*, vols. 4, 7 (Washington, D.C.: October 2020); [GAO-19-60](#); [GAO-17-8](#); [GAO-04-546G](#); [GAO-03-488](#). The Clinger-Cohen Act requirement applies to executive branch agencies directly and is not legally applicable to the judicial branch. However, it identifies fundamental and sound workforce management practices that are relevant to the judiciary.

Table 1: Selected Workforce Planning and Management Areas and Selected Leading Practices Associated with Each Area

Workforce area	Leading practice
1. Strategic planning	Establish and maintain a strategic workforce planning process, including developing all competency and staffing needs.
	Regularly assess competency and staffing needs and analyze the IT workforce to identify gaps in those areas.
	Develop strategies and plans to address gaps in competencies and staffing.
2. Recruitment and hiring	Implement recruiting and hiring activities to address skill and staffing gaps by using the strategies and plans developed during the strategic workforce planning process.
	Establish and track metrics to monitor the effectiveness of the recruitment program and hiring process, including their effectiveness at addressing skill and staffing gaps, and report progress addressing those gaps to agency leadership.
	Adjust recruitment plans and hiring activities based on effectiveness metrics.
3. Training and development	Establish a training and development program to assist the agency in achieving its mission and goals.
	Use tracking and other control mechanisms to ensure that employees receive appropriate training and meet certification requirements, when applicable.
	Collect and assess performance data (including qualitative or quantitative measures, as appropriate) to determine how the training program contributes to improved performance and results.
4. Performance management	Establish a performance management system that differentiates levels of staff performance and defines competencies in order to provide a fuller assessment of performance.
	Explicitly align individual performance expectations with organizational goals to help individuals see the connection between their daily activities and organizational goals.
	Periodically provide individuals with regular performance feedback.

Source: GAO analysis of workforce-related areas and practices identified in federal and agency guidance, and GAO's prior work. | GAO-22-105068

AO did not fully implement the majority of selected leading IT workforce planning and management practices. Specifically, of the four selected workforce planning and management areas, the agency substantially implemented one area, partially implemented one area, and minimally implemented two areas for its IT workforce. In addition, of the 12 selected leading practices associated with these areas, AO fully implemented one practice, partially implemented nine practices, and did not implement any aspects of two practices. Table 2 summarizes the extent to which the agency implemented the four IT workforce planning and management areas and 12 selected leading practices.

Table 2: Administrative Office of the U.S. Courts’ (AO) Implementation of Four Selected Workforce Management Areas and 12 Selected Leading Practices, as of March 2022

Workforce area	Area rating ^a	Practice rating	Leading practice
Strategic planning	Partially implemented	●	Establish and maintain a strategic workforce planning process, including developing competency and staffing needs.
		●	Regularly assess competency and staffing needs and analyze the IT workforce to identify gaps in those areas.
		●	Develop strategies and plans to address gaps in competencies and staffing.
Recruitment and hiring	Minimally implemented	●	Implement recruiting and hiring activities to address skill and staffing gaps by using the strategies and plans developed during the strategic workforce planning process.
		●	Establish and track metrics to monitor the effectiveness of the recruitment program and hiring process, including their effectiveness at addressing skill and staffing gaps, and report progress addressing those gaps to agency leadership.
		○	Adjust recruitment plans and hiring activities based on effectiveness metrics.
Training and development	Minimally implemented	●	Establish a training and development program to assist the agency in achieving its mission and goals.
		●	Use tracking and other control mechanisms to ensure that employees receive appropriate training and meet certification requirements, when applicable.
		○	Collect and assess performance data (including qualitative or quantitative measures, as appropriate) to determine how the training program contributes to improved performance and results.
Performance management	Substantially implemented	●	Establish a performance management system that differentiates levels of staff performance and defines competencies in order to provide a fuller assessment of performance.
		●	Explicitly align individual performance expectations with organizational goals to help individuals see the connection between their daily activities and organizational goals.
		●	Periodically provide individuals with regular performance feedback.

Legend: ● Fully implemented ● Partially implemented ○ Not implemented

Source: GAO analysis of data provided by AO officials. | GAO-22-105068

^aGAO’s methodology includes five levels of workforce area ratings: Fully implemented: AO provided evidence that it had fully implemented all three of the selected practices within the workforce area. Substantially implemented: AO provided evidence that it had either fully implemented one selected practice and partially implemented the remaining two selected practices within the workforce area, or fully implemented two selected practices and partially implemented the remaining one selected practice within the workforce area. Partially implemented: AO provided evidence that it had partially implemented each of the three selected practices within the workforce area. Minimally implemented: AO provided evidence that it had either partially implemented one selected practice and did not implement the remaining two selected practices within the workforce area, or partially implemented two selected practices and did not implement the remaining one selected practice within the workforce area. Not implemented: AO did not provide evidence that it had implemented any of the three selected practices within the workforce area.

AO Partially Implemented Selected Leading IT Strategic Workforce Planning Practices

AO partially implemented each of the three selected leading practices associated with the IT strategic workforce planning area. Table 3 provides our assessment of AO’s implementation of these leading practices.

Table 3: Administrative Office of the U.S. Courts’ (AO) Implementation of the Strategic Workforce Planning Area and Selected Leading Practices, as of March 2022

Workforce area rating	Practice rating	Leading practice
Partially implemented	●	Establish and maintain a strategic workforce planning process, including developing competency and staffing needs.
	○	Regularly assess competency and staffing needs and analyze the IT workforce to identify gaps in those areas.
	○	Develop strategies and plans to address gaps in competencies and staffing.

Legend: ●=Fully implemented ○=Partially implemented ○=Not implemented

Source: GAO analysis of data provided by AO officials. | GAO-22-105068

- Establish and maintain a strategic workforce planning process, including developing competency and staffing needs—partially implemented.** AO established and maintained a workforce planning process that included, but did not specifically focus on, the IT workforce. In particular, AO’s departments developed annual budget requests that identified the number of staff that the agency needs. AO offices also developed personnel plans on a monthly basis that identified staffing actions needed (e.g., adding a new position or filling vacancies from retirements), including for IT positions.

However, the agency did not strategically plan for the number of staff or the specific competencies needed for its IT workforce as a whole. Instead, AO was reactive to individual staffing actions needed. Specifically, AO officials stated that the agency did not identify or manage IT employees separately from the rest of AO’s employees. As a result, the departments’ budget requests did not separately identify the number of IT staff needed.

Moreover, the agency was not initially aware of what its IT staffing needs were—either by department and office or the total number of IT staff across the agency. Specifically, in response to our request for the total number of IT employees that the agency needed, AO officials stated that their IT workforce included employees in the Office of Personnel Management’s 2210 occupational series (IT Management); however, the officials also noted that there were other employees not

in that series who assisted with IT work.³⁷ After further internal consideration about who is included in the IT workforce, AO officials told us that this workforce includes only those employees in the 2210 occupational series.³⁸

Nevertheless, AO did not conduct a strategic analysis to determine the number of IT staff the agency needs. As such, it is unclear whether AO's current number of IT employees reflects the agency's IT staffing needs, or whether the agency may need more or fewer IT staff to effectively support its functions.

Further, AO had not fully identified nor documented its complete set of competency needs (i.e., the knowledge and skills needed) for the IT workforce as a whole, including technical competencies. The agency had identified certain non-technical competencies (e.g., communication and critical thinking) for these staff as part of its performance management system. AO officials also stated that human resources staff discuss technical competency needs for specific positions with hiring managers during the recruitment and hiring process, but the agency did not document these technical competency needs.

According to the Human Resources Officer, AO did not document the technical competencies needed for the IT workforce as a whole because the Office of Personnel Management issued guidance that specifies the competencies needed for positions in the 2210 occupational series. However, while that guidance identifies certain technical competencies needed for positions in that series, the guidance notes that additional technical competencies should be identified based on the specific occupation.³⁹ AO did not demonstrate that it had identified the additional technical competencies needed for each of its IT positions or for the IT workforce as a whole. Moreover, AO officials did not demonstrate how they applied the competencies

³⁷According to the Office of Personnel Management, occupational series consist of positions in a similarly specialized line of work and with similar qualification requirements. The 2210 occupational series (IT Management) covers positions that manage, supervise, lead, administer, develop, deliver, and support IT systems and services.

³⁸According to AO officials, as of March 2022, the agency had about 420 IT employees (i.e., those in the Office of Personnel Management's 2210 occupational series, as defined by AO officials).

³⁹See, for example, the Office of Personnel Management's *Interpretive Guidance for Project Manager Positions* (May 2019) and *Interpretive Guidance for Cybersecurity Positions: Attracting, Hiring and Retaining a Federal Cybersecurity Workforce* (October 2018).

listed in the Office of Personnel Management’s guidance to strategic planning for the IT workforce as a whole.

Until AO conducts a strategic analysis to fully determine its IT staffing needs, the agency may lack assurance that it is appropriately identifying the number of IT staff it needs to meet its mission and programmatic goals. In addition, without fully identifying and documenting all of the required knowledge and skills that IT staff need (including technical competencies), AO will be limited in its ability to identify and address any competency gaps these staff may have.

- **Regularly assess competency and staffing needs and analyze the IT workforce to identify gaps in those areas—partially implemented.** AO offices regularly assessed their individual staffing gaps, including gaps for IT staff, as part of the monthly updates that the offices made to their personnel plans. AO officials stated that the offices continually updated these plans as needs changed. The Associate Director for the Department of Technology Services also stated that, within the agency’s Technology Steering Group, office chiefs discussed potential strategies for responding to specific, urgent staffing needs.⁴⁰

However, the Associate Director elaborated that these steering group discussions were not based on an analysis of total IT staffing needs. In addition, as mentioned earlier, AO had not conducted a strategic analysis to identify its IT staffing needs—either by department and office or for the agency as a whole.

Further, the agency did not regularly assess the competency needs of its entire IT workforce, nor analyze this workforce as a whole to identify competency gaps. Instead, AO officials stated that they regularly completed these activities for individual staff and documented any competency gaps in an individual’s performance plan. AO officials stated that they do not analyze the competency gaps identified in individual performance plans to determine the gaps that exist across the IT workforce as a whole.

⁴⁰According to AO officials, the Technology Steering Group is comprised of the chiefs of various technology offices from each of AO’s departments. Its functions include advising the Executive Management Group on IT standards and prioritizing IT investments. The Executive Management Group is comprised of the Director, Deputy Director, General Counsel, and Associate Directors of AO’s three departments. It handles AO’s strategic planning, information management, financial planning, and human resources strategies.

AO officials also stated that they performed ad-hoc competency assessments of their full workforce (including IT staff) in response to specific initiatives, such as implementing Agile.⁴¹ For example, the Associate Director for the Department of Technology Services stated that his department had analyzed cybersecurity issues in the courts and identified a need for training related to network and application security. AO also identified an agency-wide need for such training and, as of March 2022, was in the process of developing plans for providing such training (discussed in more detail below).

AO officials stated that they did not regularly assess the competency needs of the agency's entire IT workforce, nor analyze this workforce as a whole to identify competency gaps, because the agency uses a federated approach to manage the workforce (both IT and non-IT employees). They further said that each department is therefore responsible for managing its own staff. However, according to agency officials, none of the departments have regularly assessed the overall competency needs of their respective IT workforces.

Until AO regularly analyzes the IT workforce to identify the staffing needs of the overall IT workforce and any gaps the agency may have, the agency will lack assurance that it has the appropriate number of staff. In addition, without identifying competency needs for its IT staff, the agency cannot be assured that these staff have the necessary knowledge and skills to tackle pressing IT issues, such as cybersecurity.

- **Develop strategies and plans to address gaps in competencies and staffing—partially implemented.** AO took action to address identified staffing and competency gaps. For example, the agency recruited for staff to fill vacant positions using the agency's website, USAJobs.gov, and LinkedIn.com (the agency's recruiting efforts are also discussed in more detail later).⁴² The agency also took steps to address needs for new staff positions through the annual budgeting process. In addition, AO officials stated that they moved staff within departments to address competency gaps when necessary.

However, AO did not provide any other documentation of specific strategies or plans it had developed to address staffing and

⁴¹Agile is a type of incremental development, which calls for the rapid delivery of software in small, short increments rather than in the typically long, sequential phases of a traditional waterfall approach.

⁴²USAJobs.gov is the central website for posting federal job openings. LinkedIn.com is a commercial social networking website for people in professional occupations; it is mainly used for professional networking.

competency gaps. In addition, because the agency did not conduct a strategic analysis to determine the number of IT staff needed, AO was unable to demonstrate that the recruiting and hiring actions it took were specifically targeted towards addressing all IT staffing needs. Similarly, because the agency did not analyze the IT workforce as a whole to identify any competency gaps that may exist, AO could not demonstrate that its recruiting and hiring actions were targeted towards addressing any such gaps.

AO officials were unable to explain why they did not document specific strategies or plans to address the IT staffing and competency gaps they identified. According to the Associate Director for the Department of Technology Services, the agency has begun working to develop a new training initiative to address certain identified IT skills gaps (e.g., network security). As of March 2022, AO expected this initiative to be implemented in fall 2022.

Nevertheless, until AO develops specific strategies and plans to address gaps in IT competencies and staffing (once it completes a strategic analysis of all of its IT competency and staffing needs, as discussed earlier), the agency will be limited in its ability to effectively address those gaps.

AO Minimally Implemented Selected Leading Recruitment and Hiring Practices

AO minimally implemented the selected three leading practices associated with the recruitment and hiring workforce area. Specifically, the agency partially implemented two of the three practices and did not implement the other practice. Table 4 lists these selected practices and provides our assessment of AO's implementation of the practices.

Table 4: Administrative Office of the U.S. Courts’ (AO) Implementation of the Recruitment and Hiring Area and Selected Leading Practices, as of March 2022

Workforce area rating	Practice rating	Leading practice
Minimally implemented	●	Implement recruiting and hiring activities to address skill and staffing gaps by using the strategies and plans developed during the strategic workforce planning process.
	◐	Establish and track metrics to monitor the effectiveness of the recruitment program and hiring process, including their effectiveness at addressing skill and staffing gaps, and report progress addressing those gaps to agency leadership.
	○	Adjust recruitment plans and hiring activities based on effectiveness metrics.

Legend: ●=Fully implemented ◐=Partially implemented ○=Not implemented

Source: GAO analysis of data provided by AO officials. | GAO-22-105068

- Implement recruiting and hiring activities to address skill and staffing gaps by using the strategies and plans developed during the strategic workforce planning process—partially implemented.** AO implemented recruiting and hiring activities to address identified staffing gaps, as discussed earlier. For example, the agency posted job announcements on the agency’s internal website, USAJobs.gov, and LinkedIn.com. AO officials also stated that the Office of AO Human Resources sent a weekly email to employees about open positions as well as recruited from a variety of universities and other online career websites.

However, as previously discussed, AO lacked a current analysis of competency gaps in its overall IT workforce, and the agency had not strategically analyzed its staffing needs for the IT workforce as a whole. Therefore, the agency was unable to demonstrate that the recruiting and hiring activities it had implemented were based on a complete set of identified skill and staffing gaps. Without complete knowledge of its current IT competency and staffing gaps for the entire IT workforce, AO could not provide assurance that the recruiting and hiring activities that it had implemented fully addressed these gaps.

- Establish and track metrics to monitor the effectiveness of the recruitment program and hiring process, including their effectiveness at addressing skill and staffing gaps, and report progress addressing those gaps to agency leadership—partially implemented.** AO established certain metrics for its recruitment and hiring processes for IT positions that enabled the agency to monitor certain aspects of the effectiveness of these processes. For example, the agency tracked the average number of days in the recruitment cycle, the average number of applicants, and the total number of IT staff hired per year in each department. AO departments and offices

also reported to agency leadership on progress addressing overall staffing gaps as part of their monthly personnel plan updates.

However, AO did not report to agency leadership on progress addressing skill gaps that were specific to its IT workforce. For example, the judiciary has identified a need to improve its cybersecurity. To address that need, the judiciary requested \$74.4 million for cybersecurity-related salaries and expenses for fiscal year 2022, a 33 percent increase over the previous fiscal year. AO also identified gaps in cybersecurity skills for its IT workforce (as previously discussed). However, AO did not report to management on its progress addressing cybersecurity skill gaps in its IT workforce.

According to AO officials, because IT staff are embedded across the agency and managed with the rest of its workforce as a whole, AO did not develop separate recruiting strategies for IT positions (nor for any other subset of its workforce, such as human resources). For that same reason, AO did not have metrics that monitored how effective its recruiting and hiring efforts were at addressing skill and staffing gaps specifically in the IT workforce. As such, the agency was unable to report to agency leadership on such effectiveness metrics and progress made in addressing skill and staffing gaps specifically in the IT workforce.

Nevertheless, we maintain that such recruitment and hiring metrics specifically for the IT workforce should be established and tracked. We also maintain that AO should report progress addressing skill and staffing gaps in the IT workforce to agency leadership. IT positions, such as cybersecurity positions, require special knowledge and skills; consequently, the agency may need to use different recruitment tactics for such positions compared to non-IT positions.

Without developing and tracking metrics to monitor the effectiveness of the agency's recruitment and hiring efforts specifically for the IT workforce, including their effectiveness at addressing IT skill and staffing gaps, the agency may be unable to ensure that its recruiting and hiring efforts are effectively addressing any such gaps that exist. Moreover, if agency leadership does not receive reports on progress addressing such gaps in the IT workforce, AO's leadership will lack the information necessary to make effective recruitment decisions.

- **Adjust recruitment plans and hiring activities based on effectiveness metrics—not implemented.** As discussed above, AO did not develop metrics for assessing how effective its recruiting and hiring efforts are at addressing skill and staffing gaps in the IT

workforce. Consequently, the agency was not able to adjust its IT recruitment and hiring activities based on such metrics.

Until AO adjusts its recruitment and hiring activities, as necessary (after establishing and tracking metrics to monitor the effectiveness of these activities at addressing skill and staffing gaps in the IT workforce), the agency will be limited in its ability to ensure that its recruiting activities are appropriately targeted to potential candidates. In addition, AO will lack assurance that these plans and activities will effectively address skill and staffing gaps within its IT workforce.

AO Minimally Implemented Selected Leading Training and Development Practices

AO minimally implemented the selected three leading practices associated with the training and development workforce area. Specifically, the agency partially implemented two of the three practices and did not implement one practice. Table 5 lists these selected leading practices and provides our assessment of the agency’s implementation of the practices.

Table 5: Administrative Office of the U.S. Courts’ (AO) Implementation of the Training and Development Area and Selected Leading Practices, as of March 2022

Workforce area rating	Practice rating	Leading practice
Minimally implemented	●	Establish a training and development program to assist the agency in achieving its mission and goals.
	◐	Use tracking and other control mechanisms to ensure that employees receive appropriate training and meet certification requirements, when applicable.
	○	Collect and assess performance data (including qualitative or quantitative measures, as appropriate) to determine how the training program contributes to improved performance and results.

Legend: ●=Fully implemented ◐=Partially implemented ○=Not implemented

Source: GAO analysis of data provided by AO officials. | GAO-22-105068

- **Establish a training and development program to assist the agency in achieving its mission and goals—partially implemented.**⁴³ AO enabled all of its staff, including the IT workforce, to take a variety of training courses, including IT-focused training that the agency’s Department of Technology Services developed.

However, as of March 2022, AO did not have an established training program focused on its IT staff. According to AO officials, the only required training for these staff was annual security training (which all

⁴³We use “training and development program” to refer to a system of procedures or activities with the purpose of enhancing employees’ skills and competencies.

AO employees must take) and training identified for specific initiatives when necessary (e.g., implementing Agile). The officials stated that IT managers may also recommend training in employees' individual performance plans. The two agency performance plans we reviewed included recommendations on general topics (e.g., cybersecurity or continuing education for contracting officer representatives).

AO officials stated that the agency had not previously established an agency-wide training program focused on IT staff because, as part of the agency's federated approach for managing its IT workforce, each department is responsible for managing the training and development of its own staff. However, none of the departments have established training programs for their IT staffs. AO officials attributed this to the departments addressing training on an individual or project basis, rather than for their respective IT workforces as a whole.

According to the Associate Director for the Department of Technology Services, the agency is planning to implement a new policy to require technical training for Department of Technology Services staff and IT staff from other departments and offices across the agency. As of March 2022, the Associate Director expected that this policy would go into effect in fall 2022, once AO implements its new training initiative, as previously mentioned. If implemented, this policy and the new training initiative should help to address technical competency gaps that the agency may have.

Nevertheless, without establishing a training program that identifies required and recommended training for all IT staff, as appropriate, AO cannot ensure that its training and development efforts address all skills gaps that the IT workforce may have.

- **Use tracking and other control mechanisms to ensure that employees receive appropriate training and meet certification requirements, when applicable—partially implemented.** AO used tracking and other control mechanisms to ensure that contracting officer representatives met certification requirements when applicable.

However, while the agency also took steps to track various training that employees completed, AO did not ensure that all employees completed required IT security training in fiscal year 2021. Specifically, about 11 percent of AO staff did not complete required IT security training that fiscal year.

AO officials explained that not all staff had taken the required IT security training because the agency did not have an enforcement mechanism in place to ensure that staff took the training. The officials noted that the agency did have such a mechanism in place to ensure

that new staff who onboarded after August 11, 2021, took the training. According to the officials, all of these new staff completed the training in fiscal year 2021.

Agency officials also stated that, at the end of fiscal year 2021, the AO Technology Office requested and received approval to begin enforcing compliance with annual IT security training for all staff. The officials further stated that, as of May 2022, the agency was piloting this enforcement mechanism and expected it to be in place for all staff by the end of June 2022. Fully implementing such a mechanism to ensure that all staff complete the required IT security training should provide the agency better assurance that staff are aware of the agency's IT security policies.

Nevertheless, until AO ensures that IT employees also complete other appropriate training (after establishing a training program that identifies required training for IT staff), the agency will have limited assurance that the workforce has the necessary knowledge and skills.

- **Collect and assess performance data (including qualitative or quantitative measures, as appropriate⁴⁴) to determine how the training program contributes to improved performance and results—not implemented.** According to AO officials, they did not perform any formal assessments of staff training. The officials stated that department and office managers may evaluate the effectiveness of training during individual performance management discussions. However, AO's performance management process did not require such an evaluation, and the agency did not provide any documentation demonstrating that such evaluations were completed.

Until AO collects and assesses performance data (including qualitative or quantitative measures, as appropriate) to determine how the training program for IT staff (once implemented) contributes to

⁴⁴GAO's *Human Capital Guide for Assessing Strategic Training and Development Efforts* ([GAO-04-546G](#)) identifies the following commonly accepted training program evaluation model that consists of five levels of assessment: (1) The first level measures the training participants' reaction to, and satisfaction with, the training program. (2) The second level measures the extent to which learning has occurred because of the training effort. (3) The third level measures the application of the learning to the work environment. (4) The fourth level measures the impact of the training program on the agency's program or organizational results. (5) The fifth level—often referred to as return on investment—compares the benefits (quantified in dollars) to the costs of the training and development program. GAO's guide notes that, when evaluating specific training and development programs, agencies should select the analytical approach that best measures the effect of a training program while also considering what is realistic and reasonable given the broader context of the issue and fiscal constraints.

improved performance and results, the agency may be limited in its knowledge of whether the training program is contributing to improved performance and results.

AO Substantially Implemented Selected Leading Performance Management Practices

AO substantially implemented the selected three leading practices associated with the performance management workforce area. Specifically, the agency fully implemented one of the three practices and partially implemented the other two practices. Table 6 lists these selected leading practices and provides our assessment of AO’s implementation of the practices.

Table 6: Administrative Office of the U.S. Courts’ (AO) Implementation of the Performance Management Area and Selected Leading Practices, as of March 2022

Workforce area rating	Practice rating	Leading practice
Substantially implemented	●	Establish a performance management system that differentiates levels of staff performance and defines competencies in order to provide a fuller assessment of performance.
	◐	Explicitly align individual performance expectations with organizational goals to help individuals see the connection between their daily activities and organizational goals.
	●	Periodically provide individuals with regular performance feedback.

Legend: ●=Fully implemented ◐=Partially implemented ○=Not implemented

Source: GAO analysis of data provided by AO officials. | GAO-22-105068

- Establish a performance management system that differentiates levels of staff performance and defines competencies in order to provide a fuller assessment of performance—partially implemented.** AO established a performance management system that differentiates levels of employee performance—for both IT and non-IT staff—using a two-tier rating system during the performance review process. Specifically, as part of this process, supervisors are to rate employees on objectives that are unique to each employee. These objectives are to be defined by supervisors and rated as “achieved” or “not achieved.”⁴⁵ Supervisors are also to rate employees on five core competencies (e.g., communication and critical thinking) using ratings of “successful” or “unsuccessful.”

However, AO did not assess IT staff performance against the full set of technical competencies needed for their respective positions. This was because, as discussed earlier, the agency had not defined and documented a complete set of these competencies for the IT

⁴⁵AO policy also allows a performance objective to be rated as “other” to address extenuating circumstances. This rating is only to be used when circumstances outside of an employee’s control prevent completion of the objective.

workforce. When we pointed out the lack of technical competencies in the performance assessments for IT staff, AO officials stated that there is not one set of competencies for every IT position.

Nevertheless, assessing IT staff against the technical competencies needed for their positions would provide the staff with a fuller assessment of their own performance. One possibility for doing so would be to group similar positions into roles and determine the core technical competencies needed for each role, rather than identifying the unique competencies needed for the agency's approximately 420 IT positions. Identifying core technical competencies by role would simplify the administrative process for AO while providing employees with a fuller assessment of their performance than they currently receive in the agency's performance assessments.

Until AO updates its performance management process to include appropriate technical competencies, once identified, against which IT staff performance should be assessed, the agency will be limited in its ability to provide IT staff with a full assessment of their performance.

- **Explicitly align individual performance expectations with organizational goals to help individuals see the connection between their daily activities and organizational goals—partially implemented.** In the two example IT staff performance assessments that we reviewed, AO had documented certain individual performance objectives that appeared to be related to organizational goals.

However, AO was unable to provide documentation that explicitly showed how these individual performance objectives aligned to organizational goals, such as a mapping of the objectives to specific goals. According to the agency's manual, individual employee responsibilities should link to the agency's goals and objectives. Agency officials also stated that they directed managers to base an individual's performance objectives on organizational goals. Nevertheless, they stated that managers were not required to document such linkage.

AO officials stated that the agency does not require an explicit mapping of the connection between individual performance expectations and organizational goals because they believe they have sufficiently integrated the agency's strategic direction with individual performance planning. Specifically, the officials stated that while planning for the strategic direction, AO has focus groups composed of employee representatives. According to the officials, these employee focus groups communicate with staff to make

recommendations for the strategic plan. The officials also stated that, during performance reviews, connections are made between the individual employee's work and the strategic plan.

However, while AO demonstrated that it had provided employees the opportunity to review and comment on the agency's draft strategic plan, it is unclear to what extent employees did so. It is also unclear to what extent all employees participated in the focus groups to which the officials referred. Further, the agency did not provide evidence that performance reviews include a discussion demonstrating the connection between an individual's performance expectations and the agency's organizational goals. This connection was not clear in the two example IT staff performance assessments that we reviewed.

Until AO explicitly aligns individual performance expectations for IT staff with organizational goals, the agency will lack assurance that employees understand the connection between their daily activities and organizational goals.

- **Periodically provide individuals with regular performance feedback—fully implemented.** AO managers regularly provided IT employees with performance feedback and tracked completion dates for each of these activities. Specifically, the agency provided employees with annual performance plans that identified expectations for the year, and provided staff with feedback during mid-year reviews and final assessments.

AO Partially Implemented Planning and Management Best Practices for Selected IT Projects

To help guide organizations to effectively plan and manage their acquisitions of IT systems, ISACA and GAO have identified numerous best practices related to project planning, monitoring and control, and supplier agreement management.⁴⁶ We selected 23 of these best practices, including 10 that focus on project planning, six on project monitoring and control, and seven on supplier agreement management. Table 7 identifies the 23 selected IT project management best practices.

⁴⁶ISACA, *CMMI Model V2.1* (Pittsburgh, PA: Dec. 4, 2018). CMMI Model and ISACA ©[2021] All rights reserved. Used with permission. GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, [GAO-20-195G](#) (Washington, D.C.: Mar. 12, 2020); and *Schedule Assessment Guide: Best Practices for Project Schedules*, [GAO-16-89G](#) (Washington, D.C.: Dec. 22, 2015).

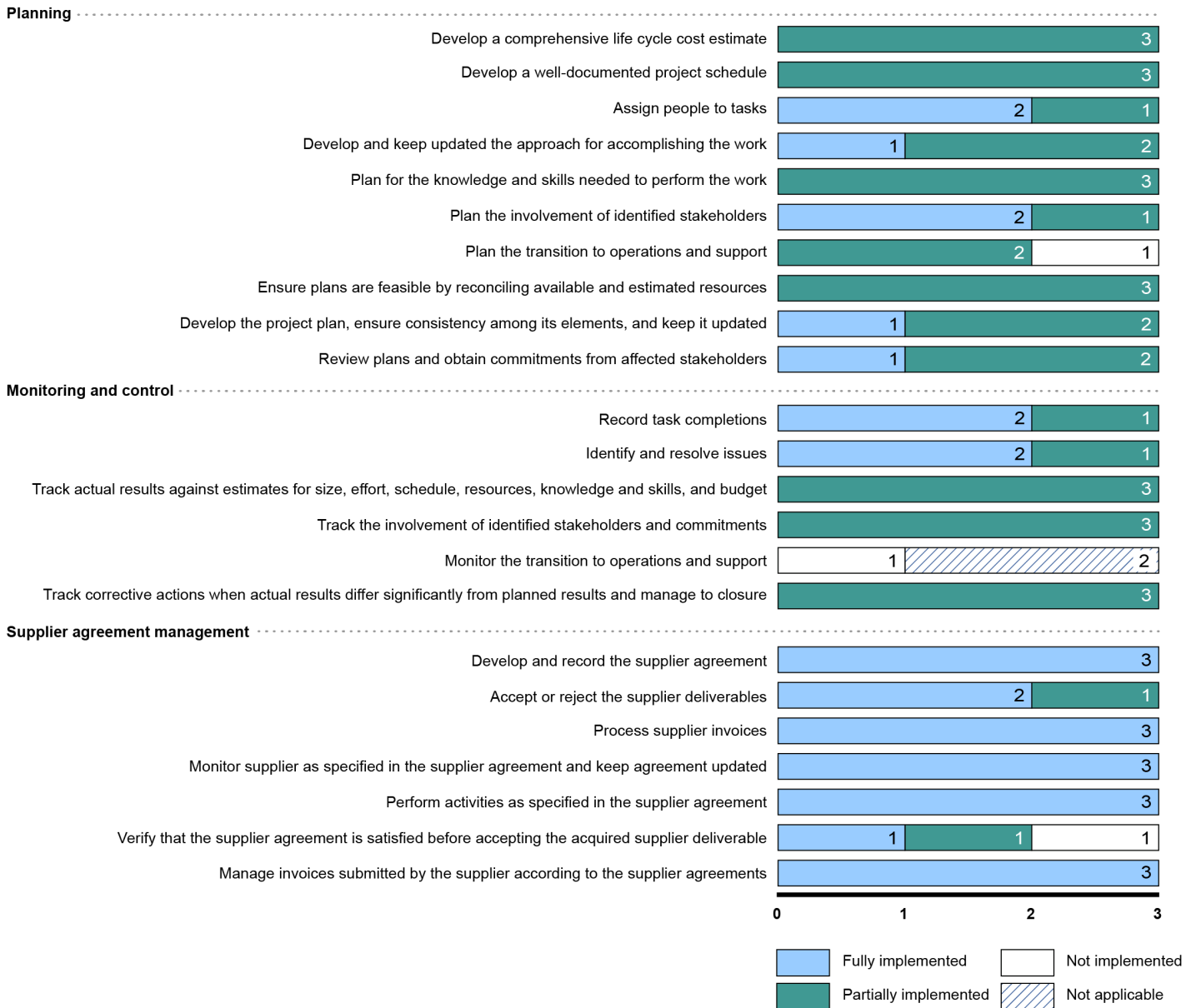
Table 7: Selected IT Project Management Best Practices

Practice area	Practice
Planning	Develop a comprehensive life cycle cost estimate.
	Develop a well-documented project schedule.
	Assign people to tasks.
	Develop and keep updated the approach for accomplishing the work.
	Plan for the knowledge and skills needed to perform the work.
	Plan the involvement of identified stakeholders.
	Plan the transition to operations and support.
	Ensure plans are feasible by reconciling available and estimated resources.
	Develop the project plan, ensure consistency among its elements, and keep it updated.
	Review plans and obtain commitments from affected stakeholders.
Monitoring and control	Record task completions.
	Identify and resolve issues.
	Track actual results against estimates for size, effort, schedule, resources, knowledge and skills, and budget.
	Track the involvement of identified stakeholders and commitments.
	Monitor the transition to operations and support.
	Track corrective actions when actual results differ significantly from planned results and manage to closure.
Supplier agreement management	Develop and record the supplier agreement.
	Accept or reject the supplier deliverables.
	Process supplier invoices.
	Monitor supplier as specified in the supplier agreement and keep agreement updated.
	Perform activities as specified in the supplier agreement.
	Verify that the supplier agreement is satisfied before accepting the acquired supplier deliverable.
Manage invoices submitted by the supplier according to the supplier agreements.	

Sources: ISACA, *CMMI Model v2.1*. CMMI Model and ISACA ©[2021] All rights reserved. Used with permission. GAO, [GAO-20-195G](#) and [GAO-16-89G](#). | GAO-22-105068

AO partially implemented the project management best practices for each of the three selected AO IT projects—JEFS, JSPACE, and PACTS 360. Figure 2 shows the agency’s implementation of each of the 23 best practices for the three selected projects.

Figure 2: Administrative Office of the U.S. Courts' (AO) Implementation of Project Management Best Practices for Three IT Projects^a



Source: GAO analysis of AO and selected IT project documentation. ISACA Capability Maturity Model Integration v2.1. CMMI Model and ISACA © [2021] All rights reserved. Used with permission. GAO, GAO-20-195G and GAO-16-89G. | GAO-22-105068

^aThe three selected projects are the Judiciary Electronic Filing System, JSPACE, and Probation and Pretrial Services Automated Case Tracking System 360.

^bOne practice related to monitoring the transition to operations and support was not applicable for the Judiciary Electronic Filing System and Probation and Pretrial Services Automated Case Tracking System 360 projects because these projects had not deployed any functionality as of April 2022.

Further, AO implemented more practices for one selected project than the other two projects. Specifically, for the PACTS 360 project, the agency fully implemented 14 practices and partially implemented the remaining eight applicable practices.⁴⁷ For the JEFS project, the agency fully implemented eight practices, partially implemented 12, and did not implement two.⁴⁸ For the JSPACE project, the agency fully implemented seven practices, partially implemented 15, and did not implement one. Table 8 identifies the extent to which the agency implemented the 23 IT project management best practices for each of the three selected projects.

Table 8: Administrative Office of the U.S. Courts’ (AO) Implementation of Project Management Best Practices for Selected IT Projects

Project name	Number of practices fully implemented	Number of practices partially implemented	Number of practices not implemented
Judiciary Electronic Filing System ^a	8	12	2
JSPACE	7	15	1
Probation and Pretrial Services Automated Case Tracking System 360 ^a	14	8	0

Source: GAO analysis of AO and selected IT project documentation. | GAO-22-105068

^aOne practice related to monitoring the transition to operations and support was not applicable for the Judiciary Electronic Filing System and Probation and Pretrial Services Automated Case Tracking System 360 projects because these projects had not deployed any functionality as of April 2022.

AO Partially Implemented Planning Best Practices for Selected IT Projects

AO partially implemented the 10 planning best practices for each of the three selected IT projects. In particular, for the JEFS project, the agency fully implemented one of the planning best practices, partially implemented eight of the practices, and did not implement one practice. In addition, for the JSPACE project, AO fully implemented one of the planning best practices and partially implemented the other nine practices. Further, for the PACTS 360 project, AO fully implemented five of the planning best practices and partially implemented the other five

⁴⁷One practice related to monitoring the transition to operations and support was not applicable for PACTS 360 because the project had not deployed any functionality as of April 2022.

⁴⁸One practice related to monitoring the transition to operations and support was not applicable for JEFS because the project had not deployed any functionality as of April 2022.

practices. Table 9 summarizes the extent to which the agency implemented the 10 planning best practices for each of the selected IT projects.

Table 9: Administrative Office of the U.S. Courts’ (AO) Implementation of 10 Planning Best Practices for Selected IT Projects

Best practice	Judiciary Electronic Filing System	JSPACE	Probation and Pretrial Services Automated Case Tracking System 360
1. Develop a comprehensive life cycle cost estimate.	○	○	○
2. Develop a well-constructed project schedule.	○	○	○
3. Assign people to tasks.	○	●	●
4. Develop and keep updated the approach for accomplishing the work.	○	○	●
5. Plan for the knowledge and skills needed to perform the work.	○	○	○
6. Plan the involvement of identified stakeholders.	●	○	●
7. Plan the transition to operations and support.	○	○	○
8. Ensure plans are feasible by reconciling available and estimated resources.	○	○	○
9. Develop the project plan, ensure consistency among its elements, and keep it updated.	○	○	●
10. Review plans and obtain commitments from affected stakeholders.	○	○	●

Legend: ●=Fully implemented ○=Partially implemented ○=Not implemented

Source: GAO analysis of AO and selected IT project documentation. ISACA, *CMMI Model v2.1*. CMMI Model and ISACA ©[2021] All rights reserved. Used with permission. GAO, [GAO-20-195G](#) and [GAO-16-89G](#). | GAO-22-105068

For example:

- **Plan for the knowledge and skills needed to perform the work.** AO partially implemented this practice by identifying project team roles (e.g., project manager, test engineer) and responsibilities for each project. However, the agency did not define the skills needed to perform the assigned responsibilities for any of the projects (e.g., familiarity with specific software or the Agile methodology used in development).
- **Develop a comprehensive life cycle cost estimate.** AO partially implemented this practice by developing cost estimates for each of the three selected projects. Each of the project estimates contained various ground rules and assumptions and reflected certain information contained in technical baseline documents.⁴⁹ However,

⁴⁹A technical baseline description is a document or set of documents that describe the project’s purpose, system, performance characteristics, and system configuration.

none of the cost estimates were comprehensive. For example, none of the estimates included operations and maintenance costs beyond 1 or 2 years after system deployment, which provides little information to support leadership decision-making around the long-term maintenance of the systems. In addition, actual costs incurred to date were not clearly expressed for all aspects of each program. For example, the JSPACE estimate begins in fiscal year 2021 and does not include prior costs in the overall summary totals. It was also not evident that the agency had documented and justified items that had been excluded from each of the project estimates. Furthermore, AO did not use a work breakdown structure to manage any of the cost estimates.⁵⁰

- **Develop a well-constructed project schedule.** AO partially implemented this practice for each of the selected projects by developing schedules for them. However, none of the schedules were well constructed, which is described in more detail below. Moreover, according to project officials, AO no longer uses any of the schedules that they provided to us for review. Instead, the agency was in the process of developing new schedules for each project. For example, the JEFS project schedule provided was for a prior solution that was retired in July 2021.⁵¹ According to project officials, they were in the process of constructing a schedule for the new JEFS solution.⁵² Further, the agency had deficiencies in the construction of each of the outdated project schedules. For example, it was not possible to trace the JSPACE project schedule from beginning to end, in part due to missing linkages between tasks. Such traceability is necessary for management to be able to focus on activities that will adversely affect key project milestones if the activities are delayed.

⁵⁰A work breakdown structure provides a framework to develop a schedule and cost plan that can easily track technical accomplishments, both in terms of resources spent in relation to the plan, as well as completion of activities and tasks.

⁵¹As part of the prior solution, the JEFS project had planned to implement the executive branch's core financial disclosure product, a government-off-the-shelf product. After development began, AO determined that it would have to substantially customize this product in order to meet the judiciary's unique financial disclosure reporting requirements. As a result of the increased complexity, the project incurred cost increases and schedule slippage. In April 2021, the project decided to pursue an alternative approach and decommissioned the partially developed system in July 2021.

⁵²Near the end of our audit, AO officials offered to provide the updated JEFS schedule for us to assess. Due to the timing of the audit, we did not evaluate this updated schedule.

AO Partially Implemented Monitoring and Control Best Practices for Selected IT Projects

AO partially implemented the six project monitoring and control best practices for each selected IT project. In particular, for the JEFS project, AO fully implemented one of the best practices and partially implemented four of the practices. In addition, for the JSPACE project, the agency fully implemented one of the best practices, partially implemented four of the practices, and did not implement one practice. Finally, for the PACTS 360 project, AO fully implemented two of the best practices and partially implemented three of the practices. One practice—monitor the transition to operations and support—was not applicable for the JEFS and PACTS 360 projects because neither of these projects had deployed any functionality as of April 2022. Table 10 summarizes the extent to which AO implemented the six monitoring and control best practices for each of the selected IT projects.

Table 10: Administrative Office of the U.S. Courts’ (AO) Implementation of Six Monitoring and Control Best Practices for Selected IT Projects

Best practice	Judiciary Electronic Filing System	JSPACE	Probation and Pretrial Services Automated Case Tracking System 360
1. Record task completions.	○	●	●
2. Identify and resolve issues.	●	○	●
3. Track actual results against estimates for size, effort, schedule, resources, knowledge and skills, and budget.	○	○	○
4. Track the involvement of identified stakeholders and commitments.	○	○	○
5. Monitor the transition to operations and support.	N/A ^a	○	N/A ^a
6. Track corrective actions when actual results differ significantly from planned results and manage to closure.	○	○	○

Legend: ●=Fully implemented ○=Partially implemented ○=Not implemented. N/A=Not applicable: AO did not implement the practice because the project is still too early in development.

Source: GAO analysis of AO and selected IT project documentation. ISACA, *CMMI Model v2.1*. CMMI Model and ISACA ©[2021] All rights reserved. Used with permission. | GAO-22-105068

^aThe practice related to monitoring the transition to operations and support was not applicable for the Judiciary Electronic Filing System and Probation and Pretrial Services Automated Case Tracking System 360 projects because these projects had not deployed any functionality as of April 2022.

For example:

- **Record task completions.** AO fully implemented this practice for JSPACE and PACTS 360 by recording task completions for each of these projects. The agency partially implemented this practice for the JEFS project. Specifically, while AO had recorded certain task completions, it was still in the process of building out a final schedule for JEFS and did not record the completion dates for all past activities.

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- **Track the involvement of identified stakeholders and commitments.** AO partially implemented this practice for each of the three selected projects by planning for and identifying the stakeholders who should be involved with each project. According to project officials, there is an expectation that the stakeholders will attend routine meetings as planned. The officials added that any stakeholder concerns or commitments identified during these meetings are documented in associated meeting minutes. However, AO did not demonstrate, for any of the projects, consistently tracking stakeholder attendance, concerns, or commitments within the meeting minutes provided.
 - **Track corrective actions when actual results differ significantly from planned results and manage to closure.** AO partially implemented this practice for each of the selected projects by demonstrating that it tracked corrective actions to address risks and issues that arose during the course of the projects. However, AO did not demonstrate for any of the projects how the corrective actions tracked back to a review of project plans against actual results. As such, it was unclear whether any of the corrective actions were intended to address deviations from planned scope, cost, or schedule estimates.

AO Fully Implemented Most Supplier Agreement Management Practices for Selected IT Projects

AO fully implemented the majority of the seven supplier agreement management practices for each of the three selected IT projects. Specifically, the agency fully implemented all seven of these practices for the PACTS 360 project. In addition, for the JEFS project, AO fully implemented six of the practices and did not implement one practice. Further, for the JSPACE project, the agency fully implemented five of the practices and partially implemented the other two practices. Table 11 summarizes the extent to which AO implemented seven supplier agreement management best practices for each of the three selected IT projects.

Table 11: Administrative Office of the U.S. Courts' (AO) Implementation of Seven Supplier Agreement Management Best Practices for Selected IT Projects

Best practice	Judiciary Electronic Filing System	JSPACE	Probation and Pretrial Services Automated Case Tracking System 360
1. Develop and record the supplier agreement.	●	●	●
2. Accept or reject the supplier deliverables.	●	◐	●
3. Process supplier invoices.	●	●	●
4. Monitor supplier as specified in the supplier agreement and keep agreement updated.	●	●	●
5. Perform activities as specified in the supplier agreement.	●	●	●
6. Verify that the supplier agreement is satisfied before accepting the acquired supplier deliverable.	○	◐	●
7. Manage invoices submitted by the supplier according to the supplier agreements.	●	●	●

Legend: ●=Fully implemented ◐=Partially implemented ○=Not implemented

Source: GAO analysis of AO and selected IT project documentation. ISACA, *CMMI Model v2.1*. CMMI Model and ISACA ©[2021] All rights reserved. Used with permission. | GAO-22-105068

For example:

- **Develop and record the supplier agreement.** AO fully implemented this practice for each of the three selected projects. Specifically, the agency developed and recorded the supplier agreement for each project, and documented the agreements in writing.
- **Verify that the supplier agreement is satisfied before accepting the acquired supplier deliverable.** AO fully implemented this practice for the PACTS 360 project and partially implemented the practice for the JEFS and JSPACE projects. Specifically, for PACTS 360, the agency demonstrated that it determined whether supplier deliverables satisfied the expectations set in the service level agreement before accepting or rejecting the deliverables. For the JEFS and JSPACE projects, AO did not demonstrate that it had set quality expectations for certain deliverables for these projects and, in some instances, did not demonstrate that it accepted or rejected deliverables.
- **Manage invoices submitted by the supplier according to the supplier agreements.** AO fully implemented this practice for each of the three selected projects. Specifically, the agency demonstrated how, for each project, it received contractor invoices, disseminated them among the necessary government officials, approved the invoices, and, ultimately, paid them.

AO Did Not Fully Implement Best Practices for Selected IT Projects Due to Insufficient Oversight and Guidance

AO did not fully implement the project planning and management best practices for the selected IT projects due to insufficient oversight and guidance. Specifically:

- **AO did not require or ensure that the selected IT projects fully adhered to the agency’s guidance or a set of standard processes for IT project management.** While the agency had developed guidelines for IT project management that address many of the selected best practices, projects were not required to follow this guidance, and the three selected projects only partially adhered to it. For example, the *Judiciary IT Project Management Framework* guidelines stated that each IT project should define and understand performance metrics and monitor these metrics through, for instance, monthly project dashboards. This is consistent with the monitoring and control best practice to track actual results against estimates. However, the JEFS project did not demonstrate tracking progress against its defined performance metrics.

According to AO officials, the agency’s guidelines for IT project management were not required because the agency did not have the resources to oversee implementation of these standards. The Associate Director for the Department of Technology Services also stated that the agency previously planned to dedicate staff to provide agency-wide IT project oversight. However, due to limited resources, AO decided to focus on higher priorities (e.g., IT operations) instead of establishing agency-wide IT project oversight.

In lieu of such agency-wide oversight, AO officials stated that they relied on the departments to manage their IT projects in a federated manner. However, the departments responsible for the three selected projects—the Departments of Administrative Services and Program Services—did not provide sufficient oversight to these projects. Specifically, these departments did not ensure that the projects fully adhered to the agency’s IT project management guidelines or a set of standard processes for IT project management.

- **AO’s guidance did not fully reflect the selected IT project planning and management best practices.** For example, project officials stated that they were not aware of a specific policy regarding schedule estimating. According to the officials, AO developed a work breakdown structure template to support schedule development; however, using the template was optional. Further, AO’s guidance for completing this template did not reflect schedule estimation best practices. This lack of scheduling guidance contributed to none of the

three selected IT projects developing a current, baselined project schedule.

According to the Associate Director for the Department of Technology Services, AO has not undertaken efforts to establish agency-wide guidance for cost or schedule estimation. He acknowledged that the agency lacked internal practices and expertise needed to effectively estimate cost or schedule for major IT projects and, therefore, generally seeks contractor support to develop such estimates. However, the Associate Director was not aware that AO had established requirements for contractors to follow in developing cost and schedule estimates.

- **The selected IT projects did not always document activities related to certain best practices.** For example, regarding the monitoring and control best practice to track the involvement of identified stakeholders and commitments, project officials stated that staff routinely interacted and coordinated with project stakeholders when making decisions. However, the projects did not always maintain records of stakeholder involvement and decisions made during discussions with stakeholders. According to project officials, AO did not require the projects to document activities associated with certain best practices.

The agency's lack of full implementation of these project planning and management best practices for the selected projects, and its insufficient oversight and guidance of them, may have contributed to cost increases and schedule overruns that the projects previously experienced (see appendix II for details on the changes in each project's cost and schedule estimates). For example, the JSPACE project's cost estimate has increased by about 85 percent—from \$18.9 million (as of August 2017) to its current estimate of \$35 million (as of April 2022).⁵³ In addition, the PACTS 360 project's planned completion date has slipped from fiscal year 2019 (as of 2016) to April 2024 (as of April 2022).

Until AO develops guidance for IT projects (including contractors) to follow related to the best practices that were not fully reflected in AO's existing IT project management guidance, the agency will lack assurance that the projects are being consistently managed based on these best practices. In addition, without requiring the Departments of Administrative Services and Program Services to ensure that the selected IT projects

⁵³According to AO officials, the change in the JSPACE project's cost estimate is due to the project having a better understanding of the complexity of its requirements, as well as the project adding new requirements beyond the system's basic space and lease management functionality.

AO Does Not Have a CIO with Enterprise Control and Oversight of the IT Workforce and Project Portfolio

comply with this guidance, the agency's ability to effectively implement the projects may be limited. Further, until the agency requires, and takes steps to ensure, that the selected projects fully implement these best practices, including documenting and tracking related activities, it will likely be more difficult for AO to ensure that the projects meet user needs and are delivered on time and within budget. Moreover, the agency may be challenged to fully implement the projects within their current cost and schedule estimates without experiencing further overruns.

Effective leadership, such as that of a CIO, can drive change, provide oversight, and ensure accountability for results. For decades, we have reported that it is critical that federal agencies have CIOs that provide effective leadership and focused management control over the government's spending on IT, beyond what a CIO would provide if the position were solely a technical support function.⁵⁴ Specifically, according to our prior work at federal agencies, leading organizations adopt and use an enterprise-wide approach to managing IT under the leadership of a CIO.⁵⁵

Congress has also recognized the need for an agency CIO. The Clinger-Cohen Act of 1996 established in statute the position of agency CIO for 24 executive branch agencies.⁵⁶ This act also gave these CIOs responsibility and accountability for IT investments—including monitoring the performance of IT acquisitions and programs, among other things—and for the IT workforce. Specifically, the act requires agency CIOs to, among other things, annually

- assess the requirements established for agency personnel regarding knowledge and skills in information resource management and the adequacy of such requirements for facilitating the achievement of performance goals,

⁵⁴GAO, *Federal Chief Information Officers: Opportunities Exist to Improve Role in Information Technology Management*, [GAO-11-634](#) (Washington, D.C.: Sept. 15, 2011); *Executive Guide: Maximizing the Success of Chief Information Officers: Learning From Leading Organizations* (Supersedes AIMD-00-83), [GAO-01-376G](#) (Washington, D.C.: Feb. 1, 2001); *Executive Guide: Maximizing the Success of Chief Information Officers: Learning From Leading Organizations, Exposure Draft*, [GAO/AIMD-00-83](#) (Washington, D.C.: Mar. 2000); and *Chief Information Officers: Implementing Effective CIO Organizations*, [GAO/T-AIMD-00-128](#) (Washington, D.C.: Mar. 24, 2000).

⁵⁵[GAO-11-634](#).

⁵⁶40 U.S.C. § 11315.

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- assess the extent to which the positions and personnel at executive and management levels meet those requirements, and
 - develop strategies and specific plans for hiring and training to address any deficiencies.

More recently, in December 2014, Congress and the President enacted federal IT acquisition reforms that strengthened the role and authority of CIOs at 23 major executive branch agencies.⁵⁷ These reforms required these agencies to ensure that CIOs had a significant role in the management and oversight processes related to IT, including reviewing the IT portfolio.⁵⁸ Although these laws are not applicable to AO, they demonstrate that Congress recognizes the importance of CIOs in federal agencies.

AO does not have a CIO with authority to exercise enterprise control and oversight of the agency's IT workforce and project portfolio. Instead, as discussed earlier, AO's Director is responsible for providing direction for the agency to develop and support automated systems and technologies used throughout the courts. The Director is also responsible for monitoring and reviewing the performance of programs. To assist the Director with these responsibilities, AO's Associate Director for the Department of Technology Services serves as the principal IT advisor.

However, AO officials stated that the Associate Director's position and role as the principal IT advisor is different from an executive branch CIO. Specifically, as provided by the Clinger-Cohen Act of 1996, an executive branch CIO has responsibility and accountability for an agency's IT investments and the IT workforce. However, the Associate Director for the Department of Technology Services only has oversight for his own department's programs and workforce. The Associate Director does not have responsibility for the IT programs and workforce in the agency's other departments and offices.

As a result, the Associate Director is not responsible for the agency's three largest IT projects that were in the development or acquisition phase as of May 2021—JEFS, JSPACE, and PACTS 360 (these projects are managed by the Departments of Administrative Services and

⁵⁷The provisions apply to the executive branch agencies covered by the Chief Financial Officers Act of 1990, 31 U.S.C. § 901(b), but have limited application to the Department of Defense.

⁵⁸40 U.S.C. § 11319.

Program Services, as discussed earlier). In addition, the Associate Director is not responsible for 148 IT staff (just over one-third of the agency's 420 total IT staff) that are located within the agency's other departments and offices. The Associate Director noted that he offers advice and counsel to the other departments, but is not involved in oversight of their IT projects or in strategic planning for their IT workforces.

In lieu of a CIO who is responsible and accountable for all of the agency's IT investments and workforce, AO employs a federated approach for managing its IT projects and IT employees. Specifically, agency officials explained that the Director delegates the authority for execution of the agency's financial plan to the Associate Directors of the departments. The Associate Directors are then expected to make decisions pertaining to IT projects and IT workforce planning and management.

As part of this federated approach, the Associate Directors of each department have been taking action to address specific responsibilities that were outlined for CIOs in the Clinger-Cohen Act of 1996. For example:

- **IT project planning and management.** AO policy provides the Associate Directors of each department with responsibility for the strategic planning, coordination, and program assessment for their departments. Although the policy does not explicitly reference IT projects, agency officials told us that the Associate Directors are responsible for monitoring the performance of their respective departments' IT projects.⁵⁹

To the credit of the Department of Technology Services, it issued IT project management guidelines in 2017 that were intended to be used agency-wide. However, the Associate Director for the Department of Technology Services told us that the agency had not fully implemented or enforced the guidelines due to resource limitations. He noted that the Associate Directors of the other departments are expected to follow the guidelines.

Nevertheless, as previously discussed, neither the Department of Administrative Services nor the Department of Program Services had ensured that the three projects in our review (JEFS, JSPACE, and

⁵⁹AO policy also provides the Associate Director for the Department of Technology Services with responsibility for the overall management of the judiciary's national IT program, which includes the network, data centers, and hosted systems.

PACTS 360) had fully adhered to these IT project management guidelines. Without complying with this guidance, the Departments of Administrative Services and Program Services may be challenged in effectively managing the projects and implementing them on time and within budget (as discussed previously, each of these projects has already experienced cost and schedule overruns).

- **IT workforce planning and management.** AO policy provides the Associate Directors broad responsibility for managing their departments' human resources, as well as responsibility for strategic planning for their departments. Although the policy does not explicitly reference the management of IT staff, AO officials told us that the Associate Directors are responsible for managing their respective departments' IT staff, including
 - assessing the knowledge and skills needed for these staff,
 - assessing the extent to which IT staff have the needed knowledge and skills, and
 - hiring and training staff to address any deficiencies in their knowledge and skills.

Specifically, as part of the agency's federated management approach, each Associate Director is responsible for managing the IT employees within their respective departments. However, as previously discussed, AO—including each of the departments—implemented IT workforce planning and management best practices to varying degrees. For example, the agency did not strategically plan and manage its IT workforce as a whole and instead each department was reactive to individual staffing actions needed. As a result, the agency lacks assurance that it is appropriately identifying the number of IT staff it needs and that these staff have the necessary knowledge and skills to meet AO's mission and programmatic goals.

This federated approach for separately managing the IT projects and IT staff in each department is likely less efficient and effective than managing the IT project portfolio and the IT workforce as a whole. For example, because each department individually manages their respective IT projects, agency officials told us that each of the three IT projects in our review followed slightly different project management processes. In addition, as noted earlier, the Departments of Administrative Services and Program Services did not ensure that the three projects fully adhered to the agency's IT project management guidelines.

Another example of the federated management approach likely being less efficient is that each AO department is responsible for managing the

training and development of its own IT staff. As a result, these departments are to develop or provide their own separate training to their respective staffs. Establishing a unified approach to training would appear to offer efficiency opportunities and help ensure consistency in the delivery of training.

AO officials attributed the differences in the role of the Associate Director for the Department of Technology Services and that of executive branch CIOs to the decentralized nature of AO and the judiciary. The officials noted that the AO Director has broad authority over the agency's IT, and that the statutory requirement for an agency CIO does not apply to the judicial branch.

We acknowledge that the judicial branch is not legally required to establish an agency CIO. However, our prior work at federal agencies has affirmed that establishing a CIO with agency-wide oversight and authority for the IT workforce and IT projects is a critical element to effectively managing the workforce and projects.⁶⁰ Specifically, having a CIO who is knowledgeable and supportive of the specialized IT skills and expertise that the IT workforce needs may better enable the agency to strategically plan for and manage the staffing and competency needs of this workforce.

Moreover, having a CIO that is responsible for monitoring the performance of IT investments and enforcing the agency's IT project management guidelines—which the Departments of Administrative Services and Program Services did not do for the JEFS, JSPACE, and PACTS 360 projects—can help to improve the efficiency and effectiveness of the agency's IT programs and operations. Our prior work at federal agencies has also affirmed that decentralized organizations—such as the judicial branch—can effectively adopt an enterprise-wide approach to managing IT under the leadership of a strong CIO.⁶¹ Further, our prior work has affirmed that, in these decentralized organizations, it is important for the CIO to be accountable for results of the decentralized departments and offices.

Without establishing such a CIO with enterprise control and oversight of the agency's IT workforce and project portfolio, AO will continue to face inefficiencies from separately managing its IT workforce and projects.

⁶⁰See, for example, [GAO-21-119SP](#); [GAO-18-93](#); [GAO-15-315](#); and [GAO-11-634](#).

⁶¹See, for example, [GAO-18-93](#); [GAO-15-315](#); and [GAO-11-634](#).

Instead, using an enterprise-wide approach to managing IT under the leadership of a CIO can enable the efficient and effective delivery of IT services to internal and external customers.

AO Did Not Fully Address Selected Internal Control Principles for EPA Program Obligations

Internal control is a process that helps an entity achieve its objectives. Specifically internal control comprises the plans, methods, policies, and procedures that an entity uses to fulfill its mission. An internal control system is a continuous built-in component of operations, effected by people, rather than a separate IT system within an entity. Implementing an effective internal control system increases the likelihood that an entity will achieve its objectives. It is the first line of defense in safeguarding public resources. For example, an effective internal control system over AO's EPA program obligations helps to ensure that such obligations support the program's objective to provide electronic public access to information on federal court docketing systems.

To assist agencies in establishing effective internal control systems, GAO identified numerous key internal control principles that, when effectively implemented, should help provide agencies with reasonable assurance that they will achieve their objectives.⁶² These key internal control principles encourage agencies to, among other things, (1) identify, analyze, and respond to risk; (2) design control activities (the policies, procedures, techniques, and mechanisms that enforce management's directives to achieve the entity's objectives and address related risks); and (3) implement control activities.

AO did not fully address the selected three internal control principles for EPA program obligations. Specifically, the agency partially addressed each of the selected control principles for these obligations.

AO Did Not Fully Identify and Analyze EPA Program Risks

One of the key internal control principles that GAO identified encourages agencies to identify, analyze, and respond to risks to program objectives when establishing internal controls.⁶³ As part of this, management should analyze identified risks by estimating their significance, including considering the magnitude of impact, likelihood of occurrence, and nature of each identified risk. Analyzing risks provides agencies with a basis for

⁶²GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014). This guidance includes 17 principles that provide an overall framework for designing, implementing, and operating an effective internal control system.

⁶³[GAO-14-704G](#).

responding to the risks. For example, assessing internal and external risks to AO's EPA program can position the agency to plan for and take action to avoid, minimize, or respond to such risks.

- Internal risks include the risk that the program's established internal controls are not sufficient for ensuring that the program's obligations support electronic public access to information on federal court docketing systems.
- External risks include the risk that litigation about program obligations may occur.

When agencies design risk responses, they should base those responses on the significance of the analyzed risk and the agencies' defined risk tolerance. To keep risks within defined risk tolerances, agencies may consider different types of risk responses, including acceptance, avoidance, reduction, or sharing risks.⁶⁴

The agency partially addressed the selected internal control principle to identify, analyze, and respond to risks to its EPA program obligations. For example, AO took action to respond to a risk that the agency may obligate EPA program funds for purposes that do not directly support providing the public with electronic access to information on federal court docketing systems.⁶⁵ In response to this risk, AO discontinued EPA funding for specific activities (e.g., supporting the electronic system that notifies potential jurors when they are to serve on a jury). The agency also distributed memorandums to courts that provided additional internal control guidance about whether to obligate EPA program funds for certain IT equipment and services.

However, according to AO officials, they did not perform a comprehensive risk assessment to identify all risks to the EPA program and its objectives. The officials also stated that they did not perform an analysis of the

⁶⁴Risk tolerance is the acceptable level of variation in performance relative to the achievement of objectives. Accepting a risk involves taking no action to respond to the risk based on the insignificance of the risk. Avoidance is an action taken to stop the operational process or the part of the operational process causing the risk. Reducing a risk involves taking action to reduce the likelihood or magnitude of the risk. Agencies opting to share risks take action to transfer or share risks across the entity or with external parties. Insuring against losses is one way agencies share risks.

⁶⁵Federal court docketing systems are a repository of cases and documents. The docketing system also manages deadlines, hearing schedules, and trials. It processes transactions at every step along the way in the progression of a case, from collecting filing fees, to determining deadlines for motions, to sharing vital information among litigants, judges, and court staff.

significance of risks to EPA program obligations to determine the program's most critical risks and prioritize actions to address them. Further, the officials stated that the agency had not defined risk tolerances to guide its responses to risks.

AO officials stated that they did not conduct a risk assessment to identify and analyze risks to EPA program obligations because the agency did not require them to do so. According to the officials, the Office of Compliance and Risk—which was recently established in June 2020—is in the process of creating an enterprise risk management program to address agency-wide risks, such as strategic, operational, and financial risks. However, as of April 2022, it was unclear to what extent this office would complete an assessment of risks to EPA program obligations.

By taking a reactive approach to addressing individual risks to EPA program obligations as they are identified, rather than proactively identifying and assessing all risks to these obligations, AO increases the likelihood that existing risks may remain unaddressed. In addition, the agency may be implementing internal controls that unnecessarily address low priority risks, rather than implementing controls to address higher priority risks that the agency may not have identified yet.

Until AO performs and documents a comprehensive assessment of risks to EPA program obligations—including identifying, analyzing, and responding to these risks—it will lack critical information needed to respond effectively to these risks. Moreover, management will lack assurance that the established internal controls over these obligations are addressing all high-priority risks.

AO's Design of Its Internal Controls Did Not Fully Document Review Procedures or Establish Performance Measures

One of the key internal control principles that GAO identified encourages agencies to design control activities to achieve objectives and respond to risks.⁶⁶ By designing appropriate internal controls at various levels of the agency, management should be better positioned to fulfill defined responsibilities to achieve objectives and address risk. To design effective internal control systems, management should, among other things, design different types of control activities, such as preventive and

⁶⁶GAO-14-704G. As previously mentioned, control activities are the policies, procedures, techniques, and mechanisms that enforce management's directives to achieve the entity's objectives and address related risks.

detective controls, to respond to objectives and risks.⁶⁷ For example, designing control activities for AO's EPA program would help to enforce management's directives in order to achieve the program's objective of supporting electronic public access to information on court docketing systems. Common categories of control activities include reviews of actual performance and accurate and timely recording of transactions.

AO partially addressed the selected key internal control principle to design control activities to support program objectives and minimize risks to EPA program obligations. To its credit, the agency designed control activities over EPA program obligations at various levels of the agency. For example, in 2016, AO established a fund to enable it to identify and track EPA program funds separate from other IT funds. The agency also designed standard procedures for allotting EPA program funds to courts and AO offices.

In addition, AO designed different types of control activities over EPA program obligations. For example, the agency designed preventive controls, including the creation of EPA program spending categories and subcategories. These categories and subcategories are intended to prevent courts and AO offices from obligating EPA program funds for purposes not related to providing the public with electronic access to information on federal court docketing systems. The agency also designed detective controls, including reviews to be conducted by the EPA program office to verify the justification for and amount of court and AO offices' EPA program obligations.

Further, AO designed both manual and automated control activities over EPA program obligations.⁶⁸ For example, the agency designed manual reviews that are to be conducted on EPA program allotment requests from courts and AO offices to ensure a request's purpose supports EPA program objectives. In addition, AO designed automated role-based

⁶⁷GAO-14-704G. Preventive controls are control activities that prevent an entity from failing to achieve an objective or address a risk. Detective controls are control activities that help agencies discover—before operations are complete—when they are not achieving an objective or addressing a risk. By detecting issues before the operations are complete, agencies are able to correct the actions and improve the likelihood that they will achieve the objective or address the risk.

⁶⁸Manual control activities are performed by individuals with little or no use of the entity's IT. Automated control activities are either wholly or partially automated through the entity's IT.

access controls that are intended to prevent unauthorized access to and changes within the financial transaction and recording systems that are used for EPA program fund obligations.⁶⁹

However, AO did not fully document procedures for the manual, detective reviews that are to be conducted on EPA program obligations. The agency also did not establish performance measures for evaluating the effectiveness of established controls. For example, while AO's Executive Management Group and the EPA program office were to conduct reviews of EPA program obligations, the agency did not document procedures for these reviews or guidance for what the reviews are to examine.⁷⁰ In addition, according to AO officials, the agency did not establish performance metrics or benchmarks for its internal controls that would enable the agency to measure how effectively the controls support EPA program objectives and minimize risks.

AO officials attributed the lack of (1) documented procedures for reviews of EPA program obligations and (2) performance metrics for internal controls over these obligations to AO not having a requirement to develop either of these items. The officials stated that, in the absence of documented procedures for the reviews, the EPA program has relied on institutional knowledge and providing training on the judiciary budget system to the EPA program analysts who conduct the reviews of program obligations.

Until AO fully designs and documents procedures for reviews of EPA program obligations, the agency may be unable to ensure that the reviews are performed consistently and that all obligations support program objectives. In addition, without performance metrics for evaluating the effectiveness of its internal control system over EPA program obligations, the agency may be unable to ensure control activities are sufficient to support program objectives and minimize risks over EPA program obligations.

⁶⁹Role-based access control allows organizations to assign and manage access privileges in a manner that aligns with the organization's structure.

⁷⁰The Executive Management Group is AO's top leadership team, comprised of the AO Director, Deputy Director, General Counsel, and the Associate Directors of each department. The group's duties include strategic planning, priority setting, and approving financial plans and the agency budget.

AO Implemented Internal Control Activities through Policies and Procedures, but Did Not Establish Periodic Reviews or Document Responsibility for Addressing Deficiencies

One of the key internal control principles that GAO identified encourages agencies to implement control activities through policies.⁷¹ As part of this, management should document policies outlining each unit's responsibilities for internal controls and may further define these policies through day-to-day procedures. For AO's EPA program, documenting control activities in policies and procedures can help the agency clearly communicate to agency and federal court employees their responsibilities for operational processes, including the obligation of EPA program funds. Such policies and procedures can also help the agency to reduce the risk that employees may incur obligations for purposes unrelated to the program's objective of supporting electronic public access to information on federal court docketing systems. Management should also conduct periodic reviews to monitor control activities for continued relevance and effectiveness in achieving the entity's objectives or addressing related risks. Taking these actions should ensure that staff understand who is responsible for implementing or changing internal controls.

AO partially addressed the selected key internal control principle to implement control activities over EPA program obligations using policies and by defining procedures. For example, AO established a policy that requires courts to implement internal controls for obligating EPA program funds. The policy also outlines roles and responsibilities for the court officers who approve and certify EPA obligations. In addition, the agency established internal controls in its procedures for requesting and approving EPA program fund allotments to courts and AO offices.

Further, AO updated its EPA program internal controls through recent policies and procedures. For example, in 2018, the agency documented its program procedures and internal controls for allotting EPA program funds to courts and AO offices. According to AO officials, the agency had previously used these procedures, but they had not been documented. In addition, in 2020 and 2021, AO updated its EPA program procedures and internal controls by issuing additional guidance intended to prohibit EPA program obligations outside of approved EPA expense categories.

However, according to AO officials, the agency did not require or implement periodic reviews of EPA program-specific procedures and internal controls at the AO level, nor document roles and responsibilities for conducting such reviews. Instead, the agency relied on a reactive approach that, according to officials, included reviewing EPA program

⁷¹[GAO-14-704G](#).

procedures and internal controls when an area needing change was brought to the attention of the EPA program office. The officials also stated that AO had not documented responsibility for addressing any deficiencies identified within the internal control system over EPA program obligations.

In May 2022, agency officials stated that they were in the process of hiring a new employee who would be responsible for developing tools and training for AO offices to use to conduct self-assessments of internal controls. AO officials subsequently stated in July 2022 that the new employee was hired in June 2022.

The officials also explained that, as part of the internal control change review process, the program office recommends options to Court Services Office management and stakeholders.⁷² The officials also stated that they vet any proposed changes to internal controls through AO management and relevant Judicial Conference committees prior to implementation.

However, AO officials acknowledged that the agency did not follow a documented procedure to develop, approve, and implement internal control changes to address deficiencies in the control system. The officials explained that, as of May 2022, AO did not require these processes to be documented.

Developing tools and training for AO offices on how to conduct internal control assessments would help to ensure that the offices perform consistent, appropriate assessments of their control activities over EPA program obligations. However, without requiring AO offices to conduct and document such periodic reviews of control activities over EPA program obligations to ensure their continued effectiveness in achieving the EPA program's objectives, the agency will lack assurance that the offices will conduct such reviews and that the controls continue to be effective. In addition, until AO documents responsibilities for conducting those reviews of control activities and addressing any deficiencies in the established internal controls, the agency's ability to improve the effectiveness of these controls may be limited.

⁷²As discussed earlier, the EPA program is located in the Court Services Office within AO's Department of Program Services.

Conclusions

AO took steps to implement the majority of the 12 selected practices related to strategic planning, recruitment and hiring, training and development, and performance management. However, the agency's reactive, rather than strategic, approach to addressing IT staffing and competency needs limits AO's assurance that it has the appropriate number of IT staff with the necessary skills to effectively accomplish its mission. Moreover, until the agency addresses gaps in its IT workforce management practices, AO's ability to effectively acquire, operate, and maintain the judiciary's IT systems and network may be limited.

AO also partially implemented the best practices for project planning, monitoring and control, and supplier agreement management for the three selected IT projects. AO implemented more supplier agreement management practices than project planning or monitoring and control practices. AO also fully implemented 14 of the 23 IT project management best practices for the PACTS 360 project—about twice as many as the agency implemented for the JEFS and JSPACE projects. However, AO's insufficient IT project oversight and incomplete IT project management guidance—including limitations in cost and schedule estimating practices—hindered efforts to fully implement the best practices and limited the agency's ability to effectively execute the projects. Without establishing such oversight and guidance, AO will be challenged in ensuring that the projects are delivered on time and within budget.

Although a CIO with enterprise-wide authority could address IT oversight and guidance shortcomings, such a position does not exist at AO. The absence of such a leader contributed to AO's incomplete implementation of the project management best practices and may have contributed to the cost and schedule overruns previously experienced by the projects. Compounding these concerns about the lack of a CIO is that AO does not distinguish or separately manage its IT workforce from the rest of its workforce. Effectively managing these staff and projects requires a strong leader—such as a CIO—who is knowledgeable of and supportive of these staff's specialized IT skills and expertise. Moreover, having IT staff dispersed throughout the agency and managed by separate departments requires the departments to conduct multiple efforts to manage these staff. Having a CIO with enterprise-wide authority to strategically plan for and manage the IT workforce as a whole would enable AO to be more efficient in managing this workforce.

AO recognized the importance of implementing internal controls over its EPA program obligations and partially addressed the three selected internal control principles. However, by not conducting a risk assessment

to fully identify, analyze, and respond to risks, the agency does not have critical information about all risks to EPA program obligations. As a result, AO lacks assurance that the internal controls it implemented over these obligations are effective in addressing all risks. In addition, until the agency addresses gaps in its design and implementation of internal controls over these obligations, AO is unable to ensure that the controls are designed and operating effectively.

Recommendations

We are making the following 18 recommendations to AO:

The Director of the Administrative Office of the U.S. Courts should conduct a strategic analysis to fully determine the agency's IT staffing needs. (Recommendation 1)

The Director of the Administrative Office of the U.S. Courts should fully identify and document all of the required knowledge and skills, including technical competencies, needed for the IT workforce. (Recommendation 2)

The Director of the Administrative Office of the U.S. Courts should regularly analyze the IT workforce to identify the staffing and competency needs of the overall IT workforce and any gaps the agency may have in those areas. (Recommendation 3)

The Director of the Administrative Office of the U.S. Courts should develop specific strategies and plans to address gaps in IT competencies and staffing, after completing a strategic analysis of all of its IT competency and staffing needs. (Recommendation 4)

The Director of the Administrative Office of the U.S. Courts should develop and track metrics to monitor the effectiveness of the agency's recruitment and hiring efforts specifically for the IT workforce, including their effectiveness at addressing IT skill and staffing gaps, and require reporting to agency leadership on progress made in addressing skill and staffing gaps in the IT workforce. (Recommendation 5)

The Director of the Administrative Office of the U.S. Courts should adjust recruitment and hiring activities, as necessary, after establishing and tracking metrics to monitor the effectiveness of these activities at addressing skill and staffing gaps in the IT workforce. (Recommendation 6)

The Director of the Administrative Office of the U.S. Courts should establish a training program that identifies required and recommended training for all IT staff, as appropriate. (Recommendation 7)

The Director of the Administrative Office of the U.S. Courts should ensure that IT employees complete appropriate training (after establishing a training program that identifies required training for IT staff). (Recommendation 8)

The Director of the Administrative Office of the U.S. Courts should collect and assess performance data (including qualitative or quantitative measures, as appropriate) to determine how the training program for IT staff (once implemented) contributes to improved performance and results. (Recommendation 9)

The Director of the Administrative Office of the U.S. Courts should update the AO performance management process to include appropriate technical competencies, once identified, against which IT staff performance should be assessed. (Recommendation 10)

The Director of the Administrative Office of the U.S. Courts should explicitly align individual performance expectations for IT staff with organizational goals. (Recommendation 11)

The Director of the Administrative Office of the U.S. Courts should require the Departments of Administrative Services and Program Services to ensure that the selected IT projects comply with the agency's guidance or a set of standard processes for IT project management. (Recommendation 12)

The Director of the Administrative Office of the U.S. Courts should develop guidance for IT projects (including contractors) to follow related to the best practices that were not fully reflected in AO's existing IT project management guidance. The guidance should address, among other things, cost and schedule estimating best practices. (Recommendation 13)

The Director of the Administrative Office of the U.S. Courts should require, and take steps to ensure, that the JEFS, JSPACE, and PACTS 360 projects document and track activities related to the best practices that they did not fully implement. (Recommendation 14)

The Director of the Administrative Office of the U.S. Courts should establish a CIO with enterprise control and oversight of the agency's IT workforce and project portfolio. (Recommendation 15)

The Director of the Administrative Office of the U.S. Courts should direct the Court Services Office to perform and document a comprehensive assessment of risks to EPA program obligations, including identifying, analyzing, and responding to risks associated with obligating EPA program funds. (Recommendation 16)

The Director of the Administrative Office of the U.S. Courts should direct the Court Services Office to (1) fully design and document the procedures for reviews of EPA program obligations; and (2) establish performance metrics for evaluating the effectiveness of the agency's internal control system over EPA program obligations in supporting program objectives and minimizing risks. (Recommendation 17)

The Director of the Administrative Office of the U.S. Courts should direct the Court Services Office to (1) require AO offices to conduct and document periodic reviews of control activities over EPA program obligations to ensure their continued effectiveness in achieving the EPA program's objectives; and (2) document responsibilities for conducting reviews of control activities and addressing any deficiencies in the established internal controls over EPA program obligations. (Recommendation 18)

Agency Comments and Our Evaluation

We provided a draft of this report to AO for its review and comment. In response, AO provided written comments, which are reprinted in appendix III. In its response, the agency did not explicitly agree or disagree with the 18 recommendations. The Director of AO stated that the agency intended to examine and evaluate the recommendations in light of the agency's decentralized model to determine what improvements to incorporate. The Director also described an assessment that the agency plans to conduct regarding the effectiveness of the agency's IT governance, management, and organizational structure. AO expects this assessment, when completed, to inform its actions to address the recommendations. However, AO did not provide specific plans outlining the scope or timeframes for that assessment.

The Director also described actions that the agency plans to take that should help to address certain recommendations. For example,

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- Related to recommendation 16, the Director described plans for AO's Office of Compliance and Risk to undertake a comprehensive risk analysis of the EPA program consistent with other AO risk management studies. If implemented effectively, this assessment should address our recommendation and provide the agency with critical information needed to respond appropriately to EPA program risks.
 - With regard to recommendations 17 and 18, the Director stated that AO hired an individual who will be responsible for training AO staff and court units, among others, in the documentation and self-assessment of internal controls. The Director stated that this training will implement our recommendations to have better documentation of EPA program review and performance procedures and establish periodic reviews of internal controls over EPA program obligations.

This internal controls training, if implemented, could be a useful first step toward addressing our recommendations. However, it is not clear whether or how such training will fully address the recommendations. Specifically, while the training may cover procedures for completing reviews of EPA program obligations, it is important that the agency not just provide training to staff on the agency's current procedures that GAO reviewed. Instead, the agency needs to fully design and document such procedures, as we recommended. It is also important for the agency to establish performance metrics for evaluating the effectiveness of its internal control system over EPA program obligations.

Further, it is unclear how the internal controls training will address the parts of recommendation 18 to (1) require periodic reviews of control activities over EPA program obligations and (2) document responsibilities for conducting reviews of control activities and addressing any deficiencies. In its comments, AO noted that the training would implement the establishment of periodic reviews of internal controls over EPA program obligations. However, such a requirement would be better documented in agency policy or guidance, and not just identified during training.

The agency also provided comments about GAO's findings associated with each objective of the report. Specifically,

- **Establishing a CIO with enterprise control over AO's IT workforce and project portfolio.** AO's Director stated that the agency has been considering organizational changes, including the adoption of a CIO model. As described earlier, the Director stated that the agency is planning to assess the effectiveness of its IT

governance, management, and organizational structure. The Director further stated that this assessment will consider the impact of adopting such significant changes to the AO organization and management (e.g., moving from a decentralized IT management model to one in which a CIO has enterprise control over the agency's IT workforce and portfolio). However, the Director noted that AO requires the flexibility to determine an organizational structure that addresses its concerns and functions best within the judiciary's systems of governance and decision-making.

AO stated that it is considering organizational changes to its management of IT, including the possible adoption of a CIO model. As part of implementing such changes, it is reasonable and appropriate for the agency to adopt changes that fit its organization. However, it is also critical that AO take meaningful action to improve its oversight of IT programs and personnel and address the weaknesses we identified in this report. We maintain that establishing a CIO with enterprise control of the agency's IT workforce and project portfolio is necessary and would position AO for effective IT oversight. Without doing so, the agency will continue to face inefficiencies from having each department separately managing its IT workforce and projects.

- **IT project planning and management.** The AO Director noted that GAO's IT project planning and management criteria were based on best practices from CMMI and GAO's cost and schedule guides whereas AO's IT project management framework was developed based on the Project Management Institute's *Project Management Body of Knowledge* (PMBOK® Guide).⁷³ Further, the AO Director stated that the offices responsible for the development of the projects GAO reviewed report adherence to most elements of the agency's framework.

We acknowledge that the PMBOK® Guide is a useful reference that identifies leading project management practices. However, we maintain that AO should develop guidance for its IT projects (including contractors) to follow related to the best practices that we assessed that were not fully reflected in AO's existing IT project management guidance. As the AO Director noted in her comments, these best practices include, among others, cost and schedule estimating best practices from GAO's cost and schedule guides. However, as we note

⁷³Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge* (2017). The Project Management Institute is a not-for-profit association that, among other things, provides standards for managing various aspects of projects, programs, and portfolios. PMBOK is a registered trademark of the Project Management Institute.

in the report, AO did not fully implement the selected cost and schedule estimating best practices. These practices are critical for establishing comprehensive cost estimates, well-constructed schedule estimates, and effective IT project management.

The Director also stated that AO plans to update its IT project management guidance in 2022. The Director did not provide details on what this update would include. However, updating this guidance to reflect IT project management best practices not included in AO's current guidance (e.g., best practices for cost and schedule estimating), as we recommended, will better position the agency to effectively plan and manage its IT projects.

Further, the Director stated that AO's Associate Directors that are responsible for IT projects will be reminded of the requirement to follow the agency's project management guidance. The Director added that these Associate Directors will be required to report to the Director on their adherence to this guidance.

Moreover, the Director stated that the officials responsible for IT management at AO are consistently applying improvements and are in the process of reviewing our report for further improvements to implement. The Director described examples of such improvements, including stating that monthly meetings are held with project sponsors and key stakeholders, and AO leadership is briefed regularly on the progress of the projects. Providing AO leadership and project stakeholders with accurate and complete information on project performance is essential to ensuring that management has the information necessary for informed decision-making. As we note in the report, it is also important that the projects maintain records of decisions made during these discussions. Without doing so, it will likely be more difficult for AO to ensure that the projects meet leadership and stakeholder expectations and address user needs.

- **IT workforce planning and management.** The AO Director noted that we did not identify deficiencies in the competencies or effectiveness of AO's existing IT workforce. Similarly, the Director stated that we did not find that the IT workforce for the three IT projects we reviewed lacked the capability to perform. While these statements are correct, the scope of our review did not include assessing the effectiveness of AO's IT workforce or whether IT staff had the necessary competencies to perform their jobs.⁷⁴ As such, we

⁷⁴Our audit focused on AO's practices for planning and managing its IT workforce and projects.

are unable to make such determinations about the effectiveness or capabilities of AO's IT workforce.

Moreover, as we state in the report, AO had not fully identified nor documented its complete set of competency needs for the IT workforce as a whole, including technical competencies. In order to understand whether there are any deficiencies in the competencies or effectiveness of AO's existing IT workforce, it is essential to first fully identify the agency's IT competency needs. Without such knowledge, it is not possible to understand whether the existing IT workforce has all of the knowledge and skills needed to accomplish the agency's mission.

The AO Director also expressed concern about the leading workforce planning and management practices that we used during our audit. Specifically, the Director stated that, during the course of the audit, AO stressed that the decentralized structure of the agency and the judiciary often limit the value of a comparison to best practices for other federal agencies. The Director added that our recommendations are based on best practices taken from organizations that are much larger than AO, with many more staff in their IT workforces. The Director further stated that workforce management practices appropriate for larger organizations may not be practical or cost effective for AO's small staff.

We disagree with the Director's assertion that the decentralized structure of AO and the judiciary limit the value of a comparison to leading practices implemented by other federal agencies. Our previous work has shown that other agencies have implemented such practices within decentralized structures.⁷⁵

We also disagree that the workforce management practices we assessed AO against may not be practical or cost effective for the agency to implement given its small size. We maintain that these practices—such as explicitly aligning performance expectations for IT staff with organizational goals and reporting to senior leadership on the progress made to address IT staffing gaps—are appropriate for agencies of all sizes. As we discussed with AO officials on multiple occasions during the course of our audit, we have reviewed these

⁷⁵See, for example, GAO, *Cybersecurity and Information Technology: Federal Agencies Need to Strengthen Efforts to Address High-Risk Areas*, [GAO-21-105325](#) (Washington, D.C.: July 28, 2021); [GAO-20-129](#); [GAO-18-93](#); and [GAO-17-8](#). These reports emphasize the importance of agencies—including decentralized agencies such as the Department of Health and Human Services—implementing workforce management practices.

leading practices at other small agencies, including at one agency component that had 190 IT staff—less than half the number of IT staff that AO has.⁷⁶

It is appropriate for agencies to tailor practices for cost-effectiveness based on the size and other characteristics of their organizations. However, the workforce management practices we reviewed are well established and do not require actions that would be beyond the scope of small agencies. We maintain that these practices, and our associated recommendations, are appropriate for AO to implement in order to effectively plan for and manage its IT workforce.

Lastly, the AO Director expressed concern about the cost of implementing our recommendations and the potential return on investment. The Director stated that the judiciary operates under limited budgetary resources and AO will consider the cost effectiveness of implementing our recommendations. We acknowledge that AO, like all agencies, has limited budgetary resources. As we noted above, it is reasonable and appropriate for AO to tailor its practices for cost-effectiveness. The same is true for addressing our recommendations. There are numerous ways that the recommendations can be addressed in a cost-effective manner.

Moreover, by implementing our recommendations, we assert that AO should realize benefits—and potentially financial savings—from planning and managing its IT workforce in a more comprehensive, enterprise-wide manner. For instance, establishing an agency-wide training program for IT staff, rather than each AO department managing the training and development of its own staff, could reduce the time and costs associated with identifying and obtaining access to various training courses. In addition, given that the agency has more than 400 IT staff, it may be able to economize by obtaining or providing training for this IT workforce as a whole. This could also reduce duplicative efforts within and across departments and IT projects.

In addition to the aforementioned comments, AO also provided technical comments, which we incorporated as appropriate.

⁷⁶See, for example, GAO, *U.S. Secret Service: Action Needed to Address Gaps in IT Workforce Planning and Management Practices*, [GAO-19-60](#) (Washington, D.C.: Nov. 15, 2018).

We are sending copies of this report to the appropriate congressional committees, the Director of the Administrative Office of the U.S. Courts, and other interested parties. In addition, this report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact Carol Harris at (202) 512-4456 or HarrisCC@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 IV.

A handwritten signature in black ink, appearing to read "C. Harris", with a long horizontal flourish extending to the right.

Carol C. Harris
Director, Information Technology Acquisition Management Issues

Appendix I: Objectives, Scope, and Methodology

Our objectives were to evaluate the extent to which the Administrative Office of the U.S. Courts (AO): (1) implemented selected leading workforce planning and management practices for its IT workforce; (2) implemented selected best practices for planning and managing its IT projects; (3) has a Chief Information Officer (CIO) with authority to exercise enterprise control and oversight of the agency's IT workforce and project portfolio; and (4) addressed selected internal control principles for Electronic Public Access (EPA) program obligations.

To address the first objective, we first identified seven topic areas associated with human capital management based on the following sources:

- Office of Personnel Management, *Human Capital Framework*.¹
- Office of Personnel Management and the Chief Human Capital Officers Council Subcommittee for Hiring and Succession Planning, *End-to-End Hiring Initiative*.²
- Office of Personnel Management, *Workforce Planning Model*.³
- Office of Management and Budget, *Managing Information as a Strategic Resource*, Circular A-130.⁴
- Clinger-Cohen Act of 1996.⁵
- GAO, *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*.⁶

¹5 C.F.R. pt. 250, subpt. B.

²Office of Personnel Management and the Chief Human Capital Officers Council Subcommittee for Hiring and Succession Planning, *End-to-End Hiring Initiative* (March 2017).

³Office of Personnel Management, *Workforce Planning Model*, <https://www.opm.gov/policy-data-oversight/human-capital-framework/reference-materials/strategic-alignment/workforceplanning.pdf> (accessed May 3, 2022).

⁴Office of Management and Budget, *Managing Information as a Strategic Resource*, Circular A-130 (July 2016).

⁵40 U.S.C. § 11315(c)(3).

⁶GAO, *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: Mar. 2, 2021).

- GAO, *IT Workforce: Key Practices Help Ensure Strong Integrated Program Teams; Selected Departments Need to Assess Skill Gaps*.⁷
- GAO, *Human Capital: A Guide for Assessing Strategic Training and Development Efforts in the Federal Government*.⁸
- GAO, *Results-Oriented Cultures: Creating a Clear Linkage between Individual Performance and Organizational Success*.⁹
- AO, *AO Manual*, Volumes 4 and 7¹⁰

Several of the above sources are not legally applicable to the judiciary, including the guidance issued by the Office of Management and Budget, the Office of Personnel Management, and the Chief Human Capital Officers Council; the Clinger-Cohen Act; and the workforce planning framework in [GAO-17-8](#), which was developed based on, in part, federal laws and guidance for executive branch agencies. However, these sources identify fundamental and sound workforce management practices that are relevant to the judiciary.

Among these topic areas, we then selected four areas that are of particular importance to successful workforce planning and management. They were also previously identified as part of our high-risk and key issues work on human capital management. These areas include: (1) strategic planning, (2) recruitment and hiring, (3) training and development, and (4) performance management.

We also identified numerous leading practices associated with the four topic areas. Among these leading practices, we then selected three leading practices within each of the four areas. These are foundational practices that are of particular importance to successful workforce planning and management.

⁷GAO, *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).

⁸GAO, *Human Capital: A Guide for Assessing Strategic Training and Development Efforts in the Federal Government*, [GAO-04-546G](#) (Washington, D.C.: Mar. 1, 2004).

⁹GAO, *Results-Oriented Cultures: Creating a Clear Linkage between Individual Performance and Organizational Success*, [GAO-03-488](#) (Washington, D.C.: Mar. 14, 2003).

¹⁰Administrative Office of the U.S. Courts, *AO Manual*, vols. 4 and 7 (Washington, D.C.: October 2020).

Table 12 identifies the four selected workforce areas and 12 selected associated practices.

Table 12: Selected Workforce Planning and Management Areas and Selected Leading Practices Associated with Each Area

Workforce area	Selected practice
1. Strategic planning	1. Establish and maintain a strategic workforce planning process, including developing all competency and staffing needs.
	2. Regularly assess competency and staffing needs and analyze the IT workforce to identify gaps in those areas.
	3. Develop strategies and plans to address gaps in competencies and staffing.
2. Recruitment and hiring	4. Implement recruiting and hiring activities to address skill and staffing gaps by using the strategies and plans developed during the strategic workforce planning process.
	5. Establish and track metrics to monitor the effectiveness of the recruitment program and hiring process, including their effectiveness at addressing skill and staffing gaps, and report to agency leadership on progress addressing those gaps.
	6. Adjust recruitment plans and hiring activities based on recruitment and hiring effectiveness metrics.
3. Training and development	7. Establish a training and development program to assist the agency in achieving its mission and goals.
	8. Use tracking and other control mechanisms to ensure that employees receive appropriate training and meet certification requirements, when applicable.
	9. Collect and assess performance data (including qualitative or quantitative measures, as appropriate) to determine how the training program contributes to improved performance and results.
4. Performance management	10. Establish a performance management system that differentiates levels of staff performance and defines competencies in order to provide a fuller assessment of performance.
	11. Explicitly align individual performance expectations with organizational goals to help individuals see the connection between their daily activities and organizational goals.
	12. Periodically provide individuals with regular performance feedback.

Source: GAO analysis of workforce-related areas and practices identified in federal and agency guidance, and GAO's prior work. | GAO-22-105068

To determine the extent to which AO had implemented the selected leading workforce planning and management practices for its IT workforce, we obtained and assessed documentation and compared it against the 12 selected practices.¹¹ In particular, we analyzed AO's IT strategic plan; documentation of AO's strategic direction for the agency,

¹¹AO officials define the agency's IT workforce as government employees in the Office of Personnel Management's 2210 (IT Management) occupational series. This occupational series covers positions that manage, supervise, lead, administer, develop, deliver, and support IT systems and services. According to the Office of Personnel Management, occupational series consist of positions in a similarly specialized line of work and with similar qualification requirements. AO also employs contractor staff to support AO's IT projects and its IT environment. According to AO officials, the agency does not have workforce management guidance for contractor IT staff and relies on the contractor's company to train, develop, and manage its own workforce.

including its goals for its workforce; and AO policies and manuals regarding its mission, organization, financial planning (as it relates to the workforce), training and development, and performance management. We also analyzed exports from AO's workforce management tools regarding IT staffing planning; financial and budget planning documents pertaining to workforce changes and planned initiatives; and training and certification documentation. Further, we analyzed documentation describing the agency's performance management system and performance competencies for the IT workforce, as well as employee performance assessments.

To assess the reliability of data about AO employees' completion of required IT security training, we interviewed cognizant agency officials about the training system in which the data are tracked and AO's controls for ensuring the reliability of the data. We also performed simple calculations and validity checks to determine the completeness and accuracy of the data. We determined the data were sufficiently reliable for our purpose of determining whether the agency had used tracking and other control mechanisms to ensure that employees received appropriate training.

For this objective, we also interviewed AO officials—including officials from the Office of the Deputy Director, the Office of AO Human Resources, and the Departments of Administrative Services, Program Services, and Technology Services—about AO's workforce-related policies and documentation. Further, we discussed with the officials AO's efforts to implement the selected workforce practices for its IT workforce.

Regarding our assessments of AO's implementation of the 12 leading workforce planning and management practices, we assessed a practice as being fully implemented if AO officials provided supporting documentation that demonstrated all aspects of the practice. We assessed a practice as not implemented if the officials did not provide any supporting documentation for that practice, or if the documentation provided did not demonstrate any aspect of the practice. We assessed a practice as being partially implemented if the officials provided supporting documentation that demonstrated some, but not all, aspects of the leading practice.

In addition, related to our assessments of AO's implementation of the four selected overall workforce areas, we assessed each area as follows, based on the implementation of the three selected practices within each area:

- *Fully implemented:* AO provided evidence that it had fully implemented all three of the selected practices within the workforce area.
- *Substantially implemented:* AO provided evidence that it had either
 - fully implemented two selected practices and partially implemented the remaining one selected practice within the workforce area, or
 - fully implemented one selected practice and partially implemented the remaining two selected practices within the workforce area.
- *Partially implemented:* AO provided evidence that it had partially implemented each of the three selected practices within the workforce area.
- *Minimally implemented:* AO provided evidence that it had either
 - partially implemented two selected practices and not implemented the remaining one selected practice within the workforce area, or
 - partially implemented one selected practice and not implemented the remaining two selected practices within the workforce area.
- *Not implemented:* AO did not provide evidence that it had implemented any of the three selected practices within the workforce area.

To address the second objective, we reviewed leading IT project management practices from the following sources:

- ISACA's Capability Maturity Model Integration (CMMI),¹²
- GAO's *Cost Estimating and Assessment Guide*,¹³ and
- GAO's *Schedule Assessment Guide*.¹⁴

The CMMI model groups related project management practices into 25 practice areas. The model also groups related practice areas into 10 capability areas.

¹²ISACA, *CMMI Model V2.1* (Pittsburgh, PA: Dec. 4, 2018). CMMI Model and ISACA ©[2021] All rights reserved. Used with permission.

¹³GAO, *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, [GAO-20-195G](#) (Washington, D.C.: Mar. 12, 2020).

¹⁴GAO, *Schedule Assessment Guide: Best Practices for Project Schedules*, [GAO-16-89G](#) (Washington, D.C.: Dec. 22, 2015).

To select CMMI practices for review, we first selected the two capability areas that most directly addressed our planned objective. These capability areas were (1) selecting and managing suppliers and (2) planning and managing work.

In CMMI, these two capability areas are comprised of the following five practice areas: (1) source selection, (2) supplier agreement management, (3) estimating, (4) planning, and (5) monitoring and control. From these five practice areas, we excluded the Source Selection area because, according to CMMI, it does not apply to all domains.¹⁵ We also excluded the Estimating area because we would be selecting estimating practices from GAO's cost and schedule guides (discussed in more detail later).

After excluding these two practice areas, we selected the remaining three CMMI practice areas for our review:

1. supplier agreement management,
2. planning, and
3. monitoring and control.

From these three practice areas, we specifically selected 23 practices (seven from supplier agreement management, 10 from planning, and six from monitoring and control) associated with CMMI's first and second levels of maturity.¹⁶ We selected practices associated with these maturity levels because they ensure comprehensive management of the practice areas without requiring project compliance with AO standards. This approach allowed us to focus on project-specific practices while separately considering AO management and oversight of projects as part of a causal analysis for any practices not fully addressed.

Next, as part of the planning practice area, we selected estimating best practices from GAO's *Cost Estimating and Assessment Guide* and GAO's *Schedule Assessment Guide* for review. To do so, we consulted with

¹⁵CMMI considers six domains: (1) development, (2) services, (3) supplier management, (4) security, (5) safety, and (6) people management.

¹⁶Within CMMI 2.1, there are clusters of practices within each practice area, which represent various levels of maturity from zero through five. Not all practice areas include a maturity level beyond two or three. Each evolutionary level builds on the previous levels by adding new functionality or sophistication, resulting in increased capability. We did not assess the specific maturity level of each project and assessed only the individual practices. We ultimately excluded two of the 10 planning area practices from our review, as discussed later in this section.

internal cost and schedule experts and first selected the “comprehensive” characteristic from GAO’s cost guide and the “well-constructed” characteristic from GAO’s schedule guide for review. These characteristics are comprised of the following best practices:

- Comprehensive cost estimate practices: the “comprehensive” characteristic of a reliable cost estimate in GAO’s cost guide includes four practices:
 - the cost estimate includes all life-cycle costs;
 - the technical baseline description completely defines the program, reflects the current schedule, and is technically reasonable;
 - the cost estimate work breakdown structure is product-oriented, traceable to the statement of work, and at an appropriate level of detail to ensure that cost elements are neither omitted nor double-counted; and
 - the estimate documents all cost-influencing ground rules and assumptions.
- Well-constructed schedule estimate practices: the “well-constructed” characteristic of a reliable schedule estimate in GAO’s schedule guide includes three practices:
 - sequencing all activities,
 - confirming that the critical path is valid, and
 - ensuring reasonable total float.

We selected the “comprehensive” characteristic of a reliable cost estimate and its four associated practices because this characteristic relates to the foundational practices for a high-quality, reliable cost estimate. In addition, we selected the “well-constructed” characteristic of a reliable schedule estimate and its three associated practices because this characteristic relates to the foundational practices for a high-quality, reliable schedule.

For reporting purposes, we then consolidated the four selected cost estimating best practices into one new practice, as follows: *Develop a comprehensive life cycle cost estimate*. We also consolidated the three selected schedule best practices into one new practice, as follows: *Develop a well-constructed project schedule*.

In addition, because these two consolidated practices overlapped with two of the practices in CMMI’s planning practice area, we excluded the

Appendix I: Objectives, Scope, and Methodology

overlapping CMMI practices.¹⁷ For reporting purposes, we discuss the two consolidated cost and schedule practices within the planning practice area discussion of our report.

Table 13 identifies the three selected project management practice areas and 23 selected best practices included in those areas.

Table 13: Selected IT Project Management Practice Areas and Best Practices

Practice area	Practice
Planning	Develop a comprehensive life cycle cost estimate.
	Develop a well-documented project schedule.
	Assign people to tasks.
	Develop and keep updated the approach for accomplishing the work.
	Plan for the knowledge and skills needed to perform the work.
	Plan the involvement of identified stakeholders.
	Plan the transition to operations and support.
	Ensure plans are feasible by reconciling available and estimated resources.
	Develop the project plan, ensure consistency among its elements, and keep it updated.
	Review plans and obtain commitments from affected stakeholders.
Monitoring and control	Record task completions.
	Identify and resolve issues.
	Track actual results against estimates for size, effort, schedule, resources, knowledge and skills, and budget.
	Track the involvement of identified stakeholders and commitments.
	Monitor the transition to operations and support.
	Track corrective actions when actual results differ significantly from planned results and manage to closure.
Supplier agreement management	Develop and record the supplier agreement.
	Accept or reject the supplier deliverables.
	Process supplier invoices.
	Monitor supplier as specified in the supplier agreement and keep agreement updated.
	Perform activities as specified in the supplier agreement.
	Verify that the supplier agreement is satisfied before accepting the acquired supplier deliverable.
	Manage invoices submitted by the supplier according to the supplier agreements.

Sources: ISACA, *CMMI Model v2.1*. CMMI Model and ISACA ©[2021] All rights reserved. Used with permission. GAO, [GAO-20-195G](#) and [GAO-16-89G](#). | GAO-22-105068

¹⁷Specifically, we excluded the CMMI practices to (1) develop a list of tasks and (2) based on recorded estimates, develop and keep the budget and schedule updated.

Next we selected three AO IT projects to assess against the selected project management best practices. To select these projects, we first asked AO officials to provide us with a list of AO's ongoing IT projects that were currently in the acquisition or development phase as of May 2021. We asked AO to exclude from this list any IT projects that are part of the judiciary's national IT infrastructure.¹⁸ In response to our request, AO officials provided a list of 10 IT projects that they said met our criteria. The agency also identified, at our request, each project's high-level purpose, start date, planned acquisition/development costs, planned total lifecycle costs, planned full deployment date, and the development/acquisition methodology.

To assess the reliability of the project data that AO provided, we analyzed the data against a list of AO IT initiatives and related data points that the agency had provided to the House Committee on Oversight and Reform in September 2019. We determined that the data were sufficiently reliable for our purpose, which was to select three projects for review.

Specifically, to select the three projects for review from AO's list of 10 IT projects, we established the following criteria:

- The project must not have started in 2021, as it would be very early in the planning phase and would not be far enough along for us to assess its project management activities. (We excluded one project based on this criterion).
- The project must not be expected to be fully deployed in 2021, as it would be complete before the end of our audit. (We excluded one project based on this criterion.)

After excluding two projects based on the criteria above, we then selected, from the eight remaining projects, the three projects with the largest planned total costs. These projects were: (1) Judiciary Electronic Filing System (JEFS), (2) JSPACE, and (3) Probation and Pretrial Services Automated Case Tracking System 360 (PACTS 360).

To determine the extent to which AO had implemented the 23 selected project management practices, we obtained and analyzed relevant documentation from each of the three selected projects, including:

¹⁸According to AO officials, the judiciary's national IT infrastructure includes the network, data centers, and hosted systems.

- Related to the planning practices, including the two consolidated cost and schedule practices: rosters of project staff; descriptions of staff roles and responsibilities; project management plans; stakeholder involvement and communications plans; risk, action, and issue logs; business cases; IT project cost estimating methodologies, assumptions, and results; project management briefings; budget documentation; a description of the project's technical specifications; the life cycle cost estimate and underlying estimating model; the work breakdown structure; IT project schedule estimating methodologies, assumptions, and results; the baseline integrated master schedule and master plan; schedule basis and narrative documentation; identification of the project's main deliverables; and schedule risk analysis documentation, among other things.
- Related to the monitoring and control practices: charters for oversight entities, briefing slides, meeting minutes, and additional metrics used to monitor the project, among other things.
- Related to the supplier agreement management practices: acquisition plans and strategies; contracts and task orders, including any modifications; presentations and associated meeting minutes between the government and contractor; quality assurance surveillance plans; a list of invoices and deliverables for each task order; emails regarding internal review and acceptance of a randomly selected sample of invoices and deliverables, among other things.

Moreover, we obtained and analyzed AO's IT project management framework and policy documentation related to supporting IT projects in developing cost and schedule estimates. We compared all of the documentation described earlier to the selected practices.

We also interviewed AO and project officials regarding the agency's efforts, for each selected project, to plan for project implementation and keep those plans up to date; develop and maintain the cost and schedule estimates; monitor project performance and progress; and manage contracts, including invoices. In addition, we interviewed these officials regarding their efforts to support cost and schedule estimation for IT projects across the agency.

Regarding our assessments of AO's implementation of the selected CMMI project management best practices, we assessed each practice as follows:

- *Fully implemented:* AO provided supporting documentation that demonstrated all aspects of the practice.
- *Partially implemented:* AO provided supporting documentation that demonstrated some, but not all, aspects of the practice.
- *Not implemented:* AO did not provide supporting documentation that demonstrated any aspect of the practice.
- *Not applicable:* None of the aspects of the practice applied to the project.

Related to our assessments of AO's implementation of the two consolidated practices for cost and schedule estimation, we first assessed AO's implementation of the individual cost and schedule best practices that comprised those consolidated practices.¹⁹ Specifically, we assessed the individual best practices as follows: *not met* = 1; *minimally met* = 2; *partially met* = 3; *substantially met* = 4; and *met* = 5.

We then determined an overall rating for each characteristic ('comprehensive' for cost or 'well-constructed' for schedule) by taking the average of the individual practice assessment ratings, as follows: *not met* = 1.0 to 1.4; *minimally met* = 1.5 to 2.4; *partially met* = 2.5 to 3.4; *substantially met* = 3.5 to 4.4; and *met* = 4.5 to 5.0.

Following this assessment, we aligned the overall characteristic ratings with our assessment ratings for the CMMI best practices, in order to assess the consolidated cost and schedule estimation practices using the same rating scale as the CMMI practices. Specifically, if we had assigned an overall characteristic a rating of

- 'fully met' or 'substantially met,' we assigned the consolidated estimation practice a rating of 'fully implemented;'
- 'partially met' or 'minimally met,' we assigned the consolidated estimation practice a rating of 'partially implemented'; and
- 'Not met,' we assigned the consolidated estimation practice a rating of 'not implemented.'

¹⁹As discussed earlier, we consolidated four selected cost estimating best practices into one new practice. We also consolidated three selected schedule best practices into one new practice.

Finally, we shared our draft analyses of the three selected projects' cost estimates and schedules with AO officials to review, comment, and provide additional information. We adjusted our analyses where appropriate.

To assess the reliability of the data associated with the three selected projects' cost estimates and schedules, we compared these data with relevant project documentation and interviews with agency officials. We determined that these data were not sufficiently reliable. We discuss limitations of these data in the report.

To address the third objective, we obtained and reviewed judicial policy documents and AO's organizational chart to determine whether a CIO position and associated roles and responsibilities were identified within them. We did not identify such a position in these documents. We then interviewed AO officials about whether such a position existed. The officials stated that the agency does not have a CIO. We therefore also interviewed them about why such a position does not exist and the positions that are responsible for oversight of the IT workforce and IT projects.

To address the fourth objective, we first reviewed GAO's *Standards for Internal Control in the Federal Government*, which identifies 17 key principles associated with designing effective internal control systems.²⁰ We then selected three of these principles for review. The selected principles provide a sound basis for evaluating both AO's planning for and use of internal controls over EPA program obligations.

Specifically, the three selected internal control principles are

1. identify, analyze, and respond to risk;
2. design control activities; and
3. implement control activities.

As described in GAO's *Standards for Internal Control in the Federal Government*, each of these principles has important characteristics called attributes that explain the principles in greater detail. These attributes,

²⁰GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: Sept. 10, 2014). This report identifies key principles for implementing an effective internal control system and provides an overall framework for designing, implementing, and operating such a control system.

which vary in number depending on the principle, contribute to the design, implementation, and operating effectiveness of the principles.

To determine the extent to which AO's internal controls over EPA program obligations addressed the three selected internal control principles, we first obtained and analyzed relevant documentation of AO's internal controls over these obligations. These controls were outlined in various volumes and chapters of the *Guide to Judiciary Policy* and *AO Manual*, as well as in documentation of EPA program-specific procedures and memorandums that provided guidance to courts. We then compared this documentation to the selected internal control principles.

We also interviewed agency officials—including the Deputy Chief of the Court Services Office, the Chief of the EPA program office, and EPA program analysts and attorneys—for additional information about AO's design and implementation of internal controls over EPA program obligations.

As part of our overall review of AO's internal controls over EPA program obligations, we assessed the relevance of standards for internal control.²¹ We determined that the control environment, risk assessment, and control activities components of internal control were significant to this objective. Of specific relevance were internal control principles that emphasize that (1) the oversight body should oversee the entity's internal control system; and that management should (2) identify, analyze, and respond to risks related to achieving the defined objectives; (3) design control activities to achieve objectives and respond to risks; and (4) implement control activities through policies.

Regarding our assessments of the extent to which AO's internal controls over EPA obligations addressed each selected internal control principle, we assessed each principle as follows:

- *Fully addressed:* AO provided supporting documentation that demonstrated that its policies and procedures exhibited all attributes for the principle.
- *Partially addressed:* AO provided supporting documentation that demonstrated that its policies and procedures exhibited some, but not all, attributes for the principle.

²¹[GAO-14-704G](#).

- *Not addressed:* AO did not provide any supporting documentation related to the principle or the documentation of AO's policies and procedures did not exhibit any attributes for the principle.

We conducted this performance audit from March 2021 to July 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Descriptions of Selected IT Projects from the Administrative Office of the U.S. Courts

Table 14 describes selected Administrative Office of the U.S. Courts IT projects as of April 2022. The table also provides each project’s start date, original and current planned completion date, and original and current total planned cost.

Table 14: Description of Selected Administrative Office of the U.S. Courts (AO) IT Projects, as of April 2022

Project name	Department (office)	Purpose	Start date	Original planned completion date	Current planned completion date	Original total planned cost	Current total planned cost
JSPACE	Department of Administrative Services (Administrative Systems Office)	Implement an enterprise facilities management system to enhance the judiciary’s ability to manage its real estate and facilities portfolio.	4/24/2017	9/30/2025 (as of August 2017)	9/30/2025	\$18.9 million (as of August 2017)	\$35 million ^a
Judiciary Electronic Filing System (JEFS)	Department of Administrative Services (Administrative Systems Office)	Implement a modernized system for the secure electronic filing, review, storage, management, tracking, and release of financial disclosure reports.	4/1/2017	1/1/2024 (as of March 2021)	1/1/2024 ^b	\$27.1 million ^c (as of March 2021)	\$36 million ^{b,d}
Probation and Pretrial Services Automated Case Tracking System 360 (PACTS 360)	Department of Program Services (Probation and Pretrial Services Office)	Implement a cloud-based, software-as-a-service solution to replace the legacy case management system that the Probation and Pretrial Services Office uses to manage the supervision and investigation of defendants and offenders. ^e	5/11/2020	Fiscal year 2019 (as of 2016)	4/30/2024	\$24.5 million ^f (as of 2016)	Up to \$100 million ^g

Source: Data provided by the Administrative Office of the U.S. Courts. | GAO-22-105068

^aAccording to AO officials, the change in the JSPACE project’s cost estimate is due to the project having a better understanding of the complexity of its requirements, as well as the project adding new requirements beyond the system’s basic space and lease management functionality.

^bIn June 2022, agency officials stated that the JEFS project’s cost estimate and schedule have been affected by the requirements in the Courthouse Ethics and Transparency Act, which became law in May 2022. (This law requires, among other things, AO to enable public online access to financial disclosure reports of federal judges.) As of June 2022, agency officials stated that they were in the process of analyzing and updating the JEFS schedule to address the implications of the act. The current cost and schedule estimates listed in the table above are from before the passage of the act. As such, they do not reflect any changes that may be made to address the requirements in the act.

^cThe original cost estimate listed for the JEFS project is the initial estimate for the agency’s current approach to implementing the system. However, the project previously planned to implement a different solution—a government-off-the-shelf product. After development of that previous solution began, AO determined that it would have to substantially customize this product in order to meet the judiciary’s unique financial disclosure reporting requirements. As a result of the increased complexity, the project incurred cost increases and schedule slippage. The earliest estimate that AO officials

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provided for that previous solution was from March 2021—nearly 4 years into the project. At that time, according to agency documentation, the cost to implement the government-off-the-shelf product was expected to be approximately \$54 million. The documentation notes that this was an increase in cost. We asked AO officials to provide the original planned cost for implementing that prior solution, but the officials did not provide it. In April 2021, the project decided to pursue an alternative approach and decommissioned the partially developed system in July 2021.

^dAO officials stated that the change in the JEFS project's cost estimate is because the original estimate—which is for the project's current solution, not its previously planned solution, as described earlier—did not include the total planned operations and maintenance costs, government personnel costs, and three years of development labor costs.

^eCloud-based computing relies on internet-based interconnectivity and resources to provide computing services to customers, while intending to free customers from the burden and costs of maintaining the underlying infrastructure. Software-as-a-service is a cloud service model where the service provider delivers one or more applications and all the resources (operating system and programming tools) and underlying infrastructure, which the agency can use on demand.

^fAccording to AO officials, the original cost estimate in 2016 was to replace a small portion of the legacy PACTS application (Pretrial Services). Officials stated that the agency subsequently released a Request for Information and, after evaluating responses to that request, the agency conducted a portfolio evaluation of all Probation and Pretrial Services applications used for critical core case management. Officials further stated that, with the help of MITRE, the agency developed an independent government cost estimate in 2018 that more accurately reflected the scope of work that needed to be completed. The agency released a request for proposal for the PACTS 360 project in July 2019 and awarded the project's blanket purchase agreement in April 2020.

^gThis is the estimated cost of the blanket purchase agreement that AO established for the PACTS 360 project. A blanket purchase agreement is a method of filling anticipated repetitive needs for supplies or services by establishing "charge accounts" with qualified sources of supply. These agreements between agencies and vendors have terms in place for future use and agencies issue individual orders to fulfill requirements for goods and services as they arise; funds are obligated when orders are placed.

Appendix III: Comments from the Administrative Office of the U.S. Courts



ADMINISTRATIVE OFFICE OF THE UNITED STATES COURTS

HONORABLE ROSLYNN R. MAUSKOPF
Director

WASHINGTON, D.C. 20544

July 14, 2022

Ms. Emily Kuhn
Assistant Director, IT Acquisition
Management Issues
U.S. Government Accountability Office
441 G. Street, N.W.
Washington, DC 20548

Dear Assistant Director Kuhn:

The Administrative Office of the United States Courts (AO) acknowledges receipt of the Government Accountability Office's (GAO) draft report *US Courts: Action Needed to Improve IT Management and Establish a Chief Information Officer* (GAO-22-105068). Technical corrections have been provided to GAO in a separate communication.

The draft report covers the AO's IT management and makes 18 recommendations for improvement including establishing a Chief Information Officer (CIO). The report also recognizes the decentralized model of IT management at the AO for the delivery of projects and services. The AO will examine and evaluate the recommendations in light of our decentralized model and determine what improvements to incorporate. As noted by AO officials, the Associate Directors have significant authority and responsibility to manage their workforce in a way that best meets the AO's needs and provides the best delivery of services to the Judiciary community.

Electronic Public Access Program

I am pleased that the draft report documents the internal controls that the Electronic Public Access (EPA) program has in place to ensure that EPA funds are obligated in a manner consistent with policy and statute. Because effective controls are an AO priority, the AO recruited for and hired an individual who will be responsible for training AO staff, court units, and federal public defender organizations in the documentation and self-assessment of internal controls. The EPA program will be one of the first programs to benefit from this initiative. This training will implement the report's recommendation to have better

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documentation of review and performance procedures and the establishment of periodic reviews.

GAO recommends that the AO conduct a comprehensive risk analysis of the EPA program to further inform the controls that are in place. The AO's Office of Compliance and Risk plans to undertake a comprehensive risk analysis of the EPA program consistent with other AO risk management studies.

Chief Information Officer

The draft report recommends establishing a CIO with enterprise control and oversight over the AO's IT workforce and project portfolio. The AO has been considering organizational changes, including the adoption of a CIO model. To assist in moving toward that goal, an assessment of the effectiveness of AO IT governance, management, and organizational structure is already planned. The assessment will consider the impact of adopting such significant changes to the AO organization and management and address effective ways to ensure proper oversight of IT programs and personnel.

As the administrative arm of the Judiciary, which is a separate branch of government, the AO requires the flexibility to determine an organizational structure that addresses our concerns and functions best within the Judiciary's systems of governance and decision-making.

Planning and Management of IT Projects

The draft report includes recommendations to implement a set of best practices for the planning and management of IT projects. The recommendations are based on a comparison of the AO's project management approaches with those suggested by the Information Systems Audit and Control Association's (ISACA) Capability Maturity Model Integration (CMMI), as well as cost estimating and scheduling guidance from GAO.

As the draft report indicates, the AO's IT project management guidance can be found in the *Information Technology Project Management Framework* (ITPM), which was issued in 2017 and is based on the Project Management Institute's *Project Management Body of Knowledge*. A 2022 edition will soon be released that reflects updates in project management methods.

As indicated in the report, some but not all the best practices in the CMMI and GAO guidance were followed in the projects reviewed. The offices responsible for the development of the projects reviewed by the GAO team report adherence to most elements of our ITPM framework. The AO will assess whether this decentralized approach is operating

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effectively in the assessment noted above. In the interim, the Associate Directors responsible for IT projects will be reminded of the requirement to follow the ITPM and report to me on their adherence to the framework.

It should be noted that those responsible for IT management at the AO are consistently applying improvements and are in the process of reviewing the report for further improvements. Some examples include additional training on the use of project management tools and support services to ensure consistency for projects. In addition, monthly meetings are held with project sponsors and key stakeholders and AO leadership is briefed regularly on the progress of the projects.

IT Workforce Planning and Performance Management

GAO did not identify deficiencies in the competencies or effectiveness of the AO's existing IT workforce. GAO made 11 recommendations regarding the AO's workforce planning and performance management, including: the need for an analysis and development of strategies to address staffing needs and competencies; the development and tracking of metrics to monitor the effectiveness of AO recruitment and hiring; the development of a training program specific to the AO's IT workforce; and updates to the performance management process, including the identification of IT-workforce-specific competencies.

GAO noted that its recommendations are based on selected leading best practices. During the course of this study, the AO stressed that the decentralized structure of the AO and Judiciary often limit the value of a comparison to best practices for other federal agencies. In addition, these recommendations are based on best practices taken from organizations that are much larger than the AO, with many more staff in their IT workforce. Workforce management practices appropriate for larger organizations may not be practical or cost effective for our small staff.

As noted above, organizational changes are under consideration, and the AO will assess each of these recommendations as it assesses the AO's IT management and organizational structure, including workforce planning.

The cost of implementing these recommendations, and the potential return on investment, raises some concerns. Workforce needs and training regularly have been managed on a project-by-project basis, and GAO did not find that our staff lacked the capability to perform. Given the limited budgetary resources under which the Judiciary operates, the AO will consider the cost effectiveness to implement.

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Conclusion


In 2013, the AO implemented a significant reorganization to simplify its structure and streamline procedures, while at the same time providing exceptional support to the courts and the Judicial Conference of the United States. The plan had three goals: to reduce operating costs and duplication of effort, to simplify the administrative structure, and to enhance services to the courts and the Judicial Conference.

As a result of the reorganization, three departments were created: Technology Services, Administrative Services, and Program Services, with software development being consolidated in each department as well as in several other offices throughout the AO. This allowed close ties between developers of applications and associated business owners. The concept was to allow limited resources to be shared and to foster the coordination of application development.

Since the reorganization, the Judiciary has faced critical challenges including cybersecurity threats, resource constraints, and the need to modernize IT infrastructure and mission critical systems. To meet these challenges, the AO must ensure that its IT management and organizational structure provides appropriate authorities to AO officials and fosters a leadership and coordination across the AO. GAO's report, and the organizational assessment we are conducting, will help inform necessary and appropriate changes.

I look forward to reporting on organizational changes that will follow a close review of GAO's recommendations and the completion of the AO's assessment

Sincerely,



Roslynn R. Mauskopf
Director

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact named above, the following staff made key contributions to this report: Emily Kuhn (Assistant Director), Amanda Gill (Analyst-in-Charge), Jordan Adrian, Lauri Barnes, Mathew Bader, Emile Ettedgui, Becca Eyler, Shane Homick, Kimberly LaMore, Jason Lee, Niti Tandon, and Mary Weiland.

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