

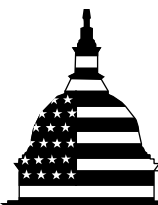
GAO

Report to the Acting Chairman,
Subcommittee on Human Resources,
Committee on Ways and Means, House
of Representatives

September 2012

**INFORMATION
TECHNOLOGY**

**Department of Labor
Could Further
Facilitate
Modernization of
States' Unemployment
Insurance Systems**



G A O

Accountability * Integrity * Reliability

Highlights of [GAO-12-957](#), a report to the Acting Chairman, Subcommittee on Human Resources, Committee on Ways and Means, House of Representatives

Why GAO Did This Study

Labor's UI program is a federal-state partnership that provides partial compensation for lost earnings of eligible individuals who become unemployed through no fault of their own. In fiscal year 2011, about \$117 billion was spent on the UI program. To administer the program, states rely heavily on IT, including benefits and tax systems. However, a July 2010 state survey noted that most of the UI IT systems are outdated and cannot efficiently handle their current workloads.

GAO was asked to (1) determine Labor's role in facilitating UI IT modernization efforts, (2) identify and describe the types of federal funding selected states have spent on modernization, (3) provide the status of modernization for selected states, (4) determine key modernization challenges, and (5) determine what management controls have been established for IT modernization. To do this, GAO analyzed documentation and interviewed officials from a nongeneralizable sample of nine states (selected based on varying location, size, and modernization status); and reviewed Labor policies; and interviewed department officials.

What GAO Recommends

GAO recommends that Labor (1) comprehensively analyze and document challenges and lessons learned and (2) distribute the lessons learned to each state to share and foster ideas for effective modernization of UI systems. Labor generally agreed with the first recommendation; it did not agree or disagree with the second recommendation, but said it is committed to sharing lessons learned.

View [GAO-12-957](#). For more information, contact Valerie Melvin at (202) 512-6304 or melvinv@gao.gov.

INFORMATION TECHNOLOGY

Department of Labor Could Further Facilitate Modernization of States' Unemployment Insurance Systems

What GAO Found

The Department of Labor (Labor) facilitates states' efforts to modernize information technology (IT) systems supporting their unemployment insurance (UI) programs by (1) providing funds for administrating overall UI operations and (2) participating in groups that provide technical support to states. While the federal-state structure of the UI program places primary responsibility for its administration on the states, Labor provides potential strategies for IT modernization activities through supplemental budget funds.

Federal funds for UI modernization efforts come primarily from two sources: (1) supplemental budget funds that are designated by Labor for state IT modernization efforts and (2) general UI administration funding. General administration funding primarily consists of State UI and Employment Service Operations funds (an administrative grant issued by Labor at the beginning of each fiscal year); Job Creation and Worker Assistance Act of 2002 funds, (distributed under the Reed Act, a mechanism by which the federal government transfers surplus UI funds to states); and American Reinvestment and Recovery Act funds (an economic stimulus package enacted in February 2009). However, federal funds can be used for multiple UI purposes, and states are not required to report costs for UI modernization projects.

The status of the nine states' UI IT modernization efforts that GAO reviewed range from planning to deployment. Of the nine states, three are part of a consortium (multiple states that develop a single common system) and are all in the initial planning phase; two individual state efforts are in the development phase; two are in a combination of different phases; and two are in operations and maintenance. For example, Virginia is in the development phase whereas Minnesota has a deployed system and is in operations and maintenance.

States and Labor have challenges specific to (1) individual states and (2) consortiums' modernization efforts. The challenges for individual states that GAO reviewed relate to having sufficient technical expertise and limited funding, among others, and challenges faced by consortiums relate to differences in state laws and business processes among member states. It is widely recognized that analyzing and prioritizing challenges and then documenting lessons learned can help mitigate risk and track successful ideas for more effectively managing IT in the future. A committee was tasked to assess lessons learned from consortium efforts which may serve as a valuable first step toward helping the states mitigate challenges. However, the effort is not complete and does not represent an independent survey of all the states' lessons learned. As such, Labor has not yet comprehensively evaluated and prioritized challenges and lessons learned, disseminated them to each state, or facilitated an appropriate information sharing mechanism. Until it does, Labor may miss opportunities to help support future consortium and state modernization efforts.

All nine states reviewed have established selected management controls for modernizing IT which, if properly implemented, could help reduce the risks of modernization challenges. The controls align with industry-accepted program management practices, such as independent verification and validation; and include state-specific practices, such as oversight through a Chief Information Officer office and consortium-specific practices, such as governance structures.

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Abbreviations

CIO	Chief Information Officer
COBOL	Common Business Oriented Language
ETA	Employment and Training Administration
IT	information technology
ITIM	information technology investment management
ITSC	Information Technology Support Center
IV&V	independent verification and validation
NASWA	National Association of State Workforce Agencies
PMBOK	Program Management Body of Knowledge
PMI	Project Management Institute
SCUBI	Southeastern Consortium for Unemployment Insurance Integration
UI	unemployment insurance
WyCAN	Wyoming, Colorado, Arizona and North Dakota consortium

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Accountability * Integrity * Reliability

United States Government Accountability Office
Washington, DC 20548

September 26, 2012

The Honorable Erik Paulsen
Acting Chairman
Subcommittee on Human Resources
Committee on Ways and Means
House of Representatives

Dear Acting Chairman Paulsen:

The unemployment insurance (UI) program is our nation's largest income maintenance program, with its benefits serving as a critical source of income for millions of unemployed Americans. The program, which is administered by the Department of Labor (Labor) in partnership with the states, has been particularly essential in the wake of the recent recession and slow pace of economic recovery: in fiscal year 2011, \$116.8 billion was spent to provide temporary, partial compensation for lost earnings of individuals who became unemployed through no fault of their own.

As a federal-state partnership, the framework of the program is determined by federal law, and benefits for individuals are dependent on state law and administered by State Workforce Agencies.¹ To administer the program, state agencies must, among other things, collect state unemployment taxes, determine eligibility and benefits amounts, and pay unemployment benefits. In carrying out these key responsibilities, the state agencies rely heavily on information technology (IT), including benefits and tax systems. However, a July 2010 state survey noted that most of the IT systems used for the UI program were old and based on outmoded programming languages, were costly and difficult to support, and could not efficiently handle workload demands.² Given the

¹State Workforce Agencies administer their respective state unemployment insurance laws and provide employment services, training programs, employment statistics, and labor market information.

²National Association of State Workforce Agencies Center for Employment Security Education and Research, Information Technology Support Center, *A National View of UI IT Systems*, July 2010. The Information Technology Support Center (ITSC) is a national collaboration of state workforce agencies and Labor to maximize the sharing of UI IT best practices and to facilitate the appropriate application of IT in state UI programs. The goal of ITSC is to provide accurate, efficient, cost-effective, and timely service to all UI customers.

importance of IT to state agencies' abilities to effectively process and provide timely UI benefits to millions of unemployed Americans, you requested that we examine states' efforts to modernize the systems supporting their UI programs. Our specific objectives were to (1) determine Labor's role in facilitating the states' IT modernization efforts, (2) identify and describe the types of federal funding selected states have spent on IT modernization, (3) provide the status of modernization efforts for the selected states, (4) determine key modernization challenges, and (5) determine what management controls have been established for IT modernization.

To accomplish our objectives, we selected and examined the IT modernization efforts of nine states.³ We selected the states on the basis of varying regional location, size, and modernization status. We also selected states developing individual systems, those developing integrated tax and benefits systems, and states involved in consortium efforts. While the sample was nongeneralizable, the selected states offered insight and perspective on their experiences in modernizing UI systems, including sources of funding, challenges, and established management controls.

To determine Labor's role in facilitating the modernization efforts, we analyzed documentation describing its responsibilities, including regulations, department project plans, and program guidance. We also interviewed Labor officials responsible for overseeing states' UI programs to further clarify the department's role. To identify and describe the types of federal funding selected states have spent on IT modernization, we analyzed states' expenditure data, such as funding allocations and spending reports. Further, to determine the status of modernization efforts for the selected states, we reviewed the states' modernization project plans and status reports, and interviewed officials responsible for UI technology. To determine key modernization challenges, we analyzed public reports and interviewed relevant officials from Labor and the nine states regarding issues encountered while initiating and developing the states' efforts to modernize the UI systems. Based on these challenges reported and observed, we also reviewed state modernization documentation and interviewed state and Labor representatives to

³The nine states selected for our study were California, Colorado, Florida, Indiana, Minnesota, Ohio, Tennessee, Vermont, and Virginia.

identify and assess lessons learned for the nine states selected. Finally, to determine what management controls have been established for IT modernization, we reviewed documentation from Labor and each state describing existing management controls and interviewed cognizant officials about the controls. However, we did not assess the extent to which the selected UI agencies implemented these management controls.

We conducted this performance audit from January 2012 through September 2012 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. Further details on our objectives, scope, and methodology are provided in appendix I.

Background

The federal-state UI program, created in part by the Social Security Act of 1935, is administered under state law based on federal requirements.⁴ The primary objectives of the program are to provide temporary, partial compensation for lost earnings of individuals who become unemployed through no fault of their own, with some exceptions, and meet certain other eligibility criteria, and to stabilize the economy during economic downturns.⁵ The program is generally financed by federal and state payroll taxes levied on employers. Within the guidelines of federal law, states administer the program and can specify who is eligible to receive UI benefits and how much they receive. Generally state and federal taxes on employers fund UI benefits and administrative costs. Within Labor, the Employment and Training Administration's (ETA) Office of Unemployment Insurance—along with the agency's six regional offices—oversee the states' implementation and administration of their UI programs.

⁴UI was initiated on a national basis as Title III and Title IX of the Social Security Act of 1935. Pub. L. No. 74-271, 49 Stat. 620, codified as amended at 42 U.S.C. ch. 7, subch. III and IX.

⁵Some states allow for some workers who quit for certain work-related or personal reasons to be eligible for UI benefits. The American Recovery and Reinvestment Act of 2009 authorized the Secretary of Labor to make unemployment compensation modernization incentive payments to a state if, among other things, the state law included provisions that would not disqualify an individual from UI benefits who quit employment for a specified compelling family reason, such as following their spouse to a new job. Pub. L. No. 111-5, div. B, § 2003, 123 Stat. 115, 439-443 (Feb. 17, 2009).

Applicants must have earned at least a certain amount in wages and/or have worked a certain number of weeks over a period of time to be eligible for benefits. In addition, the individuals must, with limited exceptions, be available for and able to work, and actively search for work. For their part, UI agencies must identify recipients who are likely to exhaust their benefits and refer them to reemployment services, such as those available through state-run employment centers known as “American Job Centers.”⁶ At these centers, states and localities provide services for many federally funded employment and training programs, and they have the option of including additional programs, such as the Temporary Assistance for Needy Families program (one of the nation’s primary income support programs for low-income families).

Typically, eligible unemployed workers can receive UI benefits for up to 26 weeks in most states (though individuals may be eligible for fewer weeks). During periods of high unemployment, the states may provide up to 20 additional weeks of benefits through the Extended Benefits program. In 2008, Congress provided for the temporary extension of benefits through the Emergency Unemployment Compensation program. In 2009, Congress temporarily authorized⁷ the extension of benefits based on unemployment rates in each state and, has since, amended the rate and time frame several times, most recently in 2012.⁸ As of January 2012, eligible unemployed workers could potentially receive the maximum 99 weeks of benefits in 17 states, according to Labor data, though some individuals may be eligible for fewer weeks in these states. In 2012, through the passage of the Middle Class Tax Relief and Job Creation Act, Congress extended the Emergency Unemployment Compensation program until January 2, 2013, and also extended full federal funding of the Extended Benefits program until December 31, 2012.⁹

⁶According to Labor officials, many of these centers are operated by contractors and are governed by regional boards. The states provide oversight and set performance standards and policies.

⁷Pub. L. No. 111-5, § 2005, 123 Stat. 444.

⁸The sequencing of unemployment benefits is determined by three separate programs and starts with the Unemployment Compensation program, providing up to 26 weeks of benefits. After this initial benefit, the temporarily authorized Emergency Unemployment Compensation program may provide up to an additional 53 weeks of benefits, though in 2008 provided a maximum of 33 weeks.

⁹Pub. L. No. 112-96, §§ 2122-2123, 126 Stat. 156, 163-167 (Feb. 22, 2012).

Federal and State Requirements for Unemployment Insurance

Federal law sets forth broad coverage provisions for the categories of workers that are covered by the UI program, as well as some benefit provisions, the federal tax base and rate, and administrative requirements such as what program data will be reported. Within the framework established by federal law, states can determine key elements of their UI programs, such as eligibility/disqualification provisions, the benefit amount, and the amount of taxes that employers must pay.

Within the context of the federal-state partnership, Labor has general responsibility for overseeing the UI program to ensure that the states are operating the program effectively and efficiently.¹⁰ For example, Labor is responsible for monitoring state operations and procedures, providing technical assistance and training, as well as analyzing UI program data to diagnose potential problems. The federal-state structure of the UI program places primary responsibility for its administration on the states, and gives them wide latitude to administer their programs in a manner that best suits their needs within the guidelines established by federal law. In addition, an administrative decision made by Labor in 1986 provided states “bottom line authority” in administering their UI programs, giving them greater control over their expenditures and reducing federal monitoring of administrative expenditures.¹¹ In particular, bottom-line authority permits states to move resources among cost categories—such as from benefit payment control activities to claims processing—and across quarters within a fiscal year. It also permits states to use UI administrative resources based on the state’s assessment of its particular needs.

To oversee the program, the Office of Unemployment Insurance within Labor’s ETA and ETA offices in six geographic regions are responsible for working with the states. The regional offices are the states’ main points of contact with Labor and serve as a link between the department and the states for providing technical assistance and clarifying program policies, objectives, and priorities. Moreover, the regional offices have primary responsibility for overseeing the fiscal and management integrity of the UI program. This oversight includes ensuring that states do not

¹⁰See 42 U.S.C. § 502(a); see also 20 C.F.R. Parts 601 (Administrative Procedure) and 602 (Quality Control in the Federal-State Unemployment Insurance System).

¹¹51 Fed. Reg. 18052 (May 16, 1986).

provide unemployment compensation to ineligible recipients and ensuring that states detect these overpayments when they do occur.

Funding Provided to Administer the UI Program

The UI program was designed to be forward funded and self-financed by states, with each state's trust fund building up reserves from employer taxes during periods of economic expansion in order to pay UI benefits during economic downturns. Because unemployment can vary substantially during a business cycle, it is important that states build sufficient trust funds to remain solvent during recessionary times. Toward this end, the program is financed primarily by taxes levied on employers,¹² with each state setting tax rates and a tax base which must be at least equal to the federal wage base (currently set at \$7,000) to automatically finance regular UI benefits. In addition, in accordance with the Federal Unemployment Tax Act, employers pay a federal tax. This tax is used to fund: (1) federal and state UI administration costs;¹³ (2) the federal share of extended benefits; (3) Title XII loans to state trust funds when they cannot pay benefits;¹⁴ (4) benefits under federal supplemental and emergency programs; (5) labor exchange services,¹⁵ employment, and training for veterans; and (6) some labor market information programs.

The Unemployment Trust Fund in the U.S. Treasury consists of 53 state accounts, including one each for the District of Columbia, the Virgin

¹²Alaska, New Jersey, and Pennsylvania also withhold UI taxes from employee wages.

¹³GAO has conducted past reports on UI funding used to administer the program. See GAO, *Unemployment Insurance Trust Funds: Long-standing State Financing Policies Have Increased Risk of Insolvency*, [GAO-10-440](#) (Washington, D.C.: Apr. 14, 2010); *Human Service Programs: Demonstration Projects Could Identify Ways to Simplify Policies and Facilitate Technology Enhancements to Reduce Administrative Costs*, [GAO-06-942](#) (Washington, D.C.: Sept. 19, 2006); and *Unemployment Insurance: Increased Focus on Program Integrity Could Reduce Billions in Overpayments*, [GAO-02-697](#) (Washington, D.C.: July 12, 2002).

¹⁴Title XII of the Social Security Act, 42 U.S.C. §§ 1321 – 1324, authorizes advances or loans to state unemployment compensation programs.

¹⁵Labor exchange services include job search assistance, job referral, placement assistance for job seekers, reemployment services to UI claimants, and recruitment services to employers with job openings.

Islands, and Puerto Rico;¹⁶ plus six federal accounts that are dedicated for special purposes.¹⁷ Of these six accounts, federal taxes go into the Employment Security Administration Account, the Extended Unemployment Compensation Account, and the Federal Unemployment Account, while state taxes go into individual state accounts.

When the aforementioned three federal tax accounts reach prescribed statutory ceilings at the end of September 30 in any year, any excess funds are transferred to individual state accounts, in accordance with the Reed Act—the mechanism by which the federal government transfers surplus UI funds to states.¹⁸ Labor bases each state’s share of Reed Act funds on the state’s proportional share of Federal Unemployment Tax Act taxable wages. Federal law restricts states’ use of Reed Act distributions to covering only the cost of state benefits and, if certain conditions are met, for the administration of state UI and Employment Services programs. A state must have a specific appropriation from its legislature, specifying the purposes and amounts, pursuant to which the state may use its share of the Reed Act funds for administrative expenses.¹⁹ There have been eight Reed Act distributions since 1956, most recently in 2002;²⁰ Congress has raised the Reed Act’s statutory ceilings that trigger the distribution of the excess funds several times.

States’ Unemployment Insurance IT Environment

State agencies rely extensively on IT to carry out their UI program functions. Specifically, IT systems are used to administer the programs

¹⁶According to Labor, funds deposited in the 53 state accounts may only be used for the payment of claimant benefits and refunds of sums erroneously paid, and may not be used for any other purpose, with limited, statutory exceptions.

¹⁷The six accounts include: the Employment Security Administration Account, the Extended Unemployment Compensation Account, the Federal Unemployment Account, the Federal Employees Compensation Account, and two accounts related to the Railroad Retirement Board.

¹⁸The term “Reed Act” refers to a part of the Employment Security Financing Act of 1954, Pub. L. No. 83-567. The provisions referred to are found in Title IX of the Social Security Act, 42 U.S.C. §§ 1101-1104.

¹⁹42 U.S.C. § 1103(c)(2).

²⁰The 2002 Reed Act distribution was made under the Job Creation and Worker Assistance Act of 2002, and was not the result of a transfer due to the accounts reaching the statutory ceilings.

and to support related administrative needs. For example, benefits systems are used for:

- determining eligibility for benefits;
- recording claimant filing information, such as demographic information, work history, and qualifying wage credits;
- determining updates as needed, such as changes in work-seeking status; and
- calculating state-specific weekly and maximum benefit amounts.

In addition, tax systems are used for:

- online reporting and payment of employers' tax and wage reports;
- calculating tax, wage, and payment adjustments, and any penalties and interest accrued;
- processing quarterly tax and wage amounts;
- determining and processing late payment penalties, interest, civil penalties, or fees; and
- adjusting previously filed tax and wage reports as a result of a tax audit, an amended report submitted by the employer, or an erroneously keyed report.

States use an appeals system to provide appellate and due process rights to claimants and employers. An appeals system allows any party (claimant or employer) who is dissatisfied with an adjudicator's decision to contest that decision.

The majority of the states' existing systems for UI operations were developed in the 1970s and 1980s. Although some agencies have performed upgrades throughout the years, most of the state legacy systems have aged considerably. Accordingly, as the systems have aged, they have presented various challenges to the efficiency of states' existing IT environments. For example, a survey conducted by the National Association of State Workforce Agencies (NASWA)²¹ in 2010 found that states reported:

- over 90 percent of the systems run on outdated hardware and software programming languages, such as Common Business

²¹National Association of State Workforce Agencies Center for Employment Security Education and Research, Information Technology Support Center, *A National View of UI IT Systems*, July 2010.

Oriented Language (COBOL), which is one of the oldest computer programming languages;²²

- the systems are costly and difficult to support: the survey found, for example, that over two-thirds of states face growing costs for mainframe hardware and software support of their legacy systems;
- most states' systems cannot efficiently handle current workload demands, including experiencing difficulties implementing new federal or state laws due to the constraints posed by the outdated inefficient IT systems; and
- states have realized an increasing need to transition to web-based online access for UI data and services.
- States also cited specific issues with legacy systems, including the fact that they cannot be reprogrammed quickly enough to respond to changes due to legislative mandates. In addition, states have developed one or more standalone ancillary systems to fulfill specific needs; however, these systems are not integrated with the states' legacy mainframe systems, thus decreasing efficiency. Finally, according to the states, the existing legacy systems cannot keep up with advances in technology, such as the move to place more UI services online.

Labor's Primary Role in Facilitating IT Modernization Efforts is Providing Funding and Technical Support to State UI Programs

Labor's role in facilitating UI IT modernization efforts primarily consists of providing funding and technical support to the state agencies. In this regard, the department distributes federal funds to each state for the purpose of administering its UI program, including funds that can be used for IT modernization. (Federal sources of funding for UI IT modernization are discussed later in this report.)

In addition to providing funding for the individual state modernization efforts, Labor has also supported the establishment of state consortiums, in which three or four states work together to develop and share a common system. These efforts are intended to allow multiple states to pool their resources and reduce risk in the pursuit of a single common system that they can each use after applying state-specific programming and configuration settings. For example, through supplemental budget

²²COBOL is a business application programming language that was introduced in the 1960s. This language is generally viewed as obsolete and there are a limited number of programmers that know the language, therefore it is difficult to implement new business processes and new service delivery models, such as online, real-time processing.

funds,²³ in 2009 the department provided \$29 million to initiate two state consortium modernization efforts—the Wyoming, Colorado, Arizona, and North Dakota (WyCAN)²⁴ consortium and the Southeastern Consortium for Unemployment Insurance Integration (SCUBI). Later, in 2011, Labor provided state UI agencies, under certain conditions, additional funding totaling about \$192 million to modernize tax and benefit systems and to enhance the program integrity and technology infrastructure systems. This money supported the two initial consortiums (WyCAN and SCUBI) and a third consortium that was formed in 2011—the Vermont, Maryland, and West Virginia technology infrastructure consortium.

However, because states' bottom-line authority permits them to use UI administrative resources as they deem appropriate, and Labor ETA officials stated that the department has limited control over how states actually spend administrative funds, Labor does not track each state's UI IT modernization spending. The officials added that Labor does not track or monitor the progress of states' UI IT modernization initiatives. Further, the department's Administrator of the Office of Unemployment Insurance said that while Labor monitors supplemental funding provided to specific consortium projects,²⁵ Labor does not have sufficient technical resources to monitor all of the states' modernization efforts.

Beyond providing funding for individual states' and consortiums' efforts, Labor also helps to provide technical assistance to the states by supporting and participating in two key groups—NASWA and the Information Technology Support Center (ITSC):

- NASWA provides a forum for states to exchange information and ideas about how to improve program operations; serves as a liaison between state workforce agencies and federal government agencies,

²³Labor and the states refer to these as “supplemental budget requests” when they apply for the funding.

²⁴When the consortium was initiated in 2009, the states involved were Arizona, Wyoming, Idaho, and North Dakota; however, in 2011 Idaho decided to manage its own modernization effort and withdrew from the consortium. At about the same time Colorado decided it would take part as the lead.

²⁵Labor provides sample grant proposals for the states to use to obtain money through supplemental budget funds. Labor establishes specific state requirements and designates what the funding is to be used for, and monitors if the states are using the funding for the intended purposes.

Congress, businesses, and intergovernmental groups; and is the collective voice of state agencies on workforce policies and issues.²⁶

In 1994 the association established the Center for Employment Security Education and Research to serve as its research arm. Under a grant from Labor, the center is conducting a study to measure progress and challenges in implementing the workforce and UI provisions of the American Recovery and Reinvestment Act of 2009, to highlight new and promising practices, and to provide guidance to ETA, the states, and local workforce investment areas. Specifically, in September 2010 NASWA's Center for Employment Security Education and Research developed a national vision for Labor to improve the UI and workforce systems' connection and integration. This vision included, among other things, a client-integrated service systems delivery plan, and it identified the need for real-time automated processing, technical staff developmental needs, and required systems upgrades to support the UI program.

- ITSC²⁷ is funded by Labor and the states to provide technical services, core projects, and a central capacity for exploring the latest technology for all states.²⁸ The core services that ITSC provides to the states include:
 - Application development—develops, distributes, and supports UI components and independent modules or products for high-payoff and cost-efficient multistate use. ITSC develops requests for proposals to procure the required programming and other technical services.
 - Standards development—in conjunction with the states, develops suggested technical standards and guidelines to help states in

²⁶NASWA receives funding from workforce state agencies' membership dues. Also, through the Center for Employment Security Education and Research, grant money is provided by Labor for specific projects or tasks. These specific projects may include those in which money is provided for ITSC to perform UI information technology tasks.

²⁷Recognizing that the UI program was dependent on technology, Labor funded ITSC. It was created in 1994 as a partnership between Labor and the Maryland Department of Labor, Licensing and Regulation to support state UI IT initiatives. Labor supports the ITSC through grants to the Maryland agency. ITSC supports all states' modernization efforts, either directly with states' requests and funding or with funding support from Labor.

²⁸ITSC performs three primary types of projects: (1) core projects defined and agreed on by the 11 voting member ITSC Steering Committee which is comprised of Labor officials, state UI and IT directors, State Workforce Agency Administrators, and ITSC technical representatives and is funded by Labor; (2) projects requested and funded by Labor; and (3) projects requested and funded by the states.

developing systems that are highly configurable and can be used by multiple states and consortiums.

- Independent verification and validation (IV&V)²⁹—provides consultative services to help states safeguard Labor and state funds.
- UI modernization services—provide best practice services for UI modernization initiatives.
- Advisory services—provide advisory assessments of technologies that UI agencies may review and/or adopt.

ITSC also provides other services at the request of individual states, such as responding to a specific request to modernize an interactive voice response system to support the processing of UI benefits. In addition to providing funding to ITSC for state technical support, Labor facilitates states' individual efforts by:

- Meeting quarterly with the ITSC Steering Committee³⁰ comprised of ITSC technical experts and state representatives to discuss and review IT challenges, issues, status, and consortium approaches. Within these meetings, Labor participates in providing informal recommendations of potential solutions to issues raised. For example, in a June 2012 ITSC Steering Committee meeting, Labor officials, including the Administrator of the Office of Unemployment Insurance in ETA, participated in a discussion regarding the need to document lessons learned from UI modernization projects.
- Providing potential strategies and a framework to the states on how the states should use the grant money through supplemental budget funds. For example, for one of the supplemental budget funds provided to support a consortium system's effort, Labor established a framework on how the states should develop and administer a study to determine the feasibility of designing, developing, and implementing a core UI benefits system that could be used by multiple state workforce agencies. As part of this framework, Labor, for

²⁹IV&V is a process conducted by a party independent of the development effort that provides an objective assessment of a project's processes, products, and risks throughout its life cycle and helps ensure that program performance, schedule, and budget targets are met.

³⁰ The ITSC Steering Committee consists of 11 voting members, including State Workforce Agency administrators, State Workforce Agency Unemployment Insurance directors, State Workforce Agency IT directors, and two representatives from the department's Office of Unemployment Insurance.

example, required the consortium states to undertake an analysis of the various state laws, regulations, policies, procedures, and IT standards to determine their ability to make adjustments or changes in their state in order to increase commonality between the states and simplify the consortium's approach to a new, common benefits and tax system.

- Participating in UI conferences primarily established by NASWA, leading discussions and forums that address IT challenges and issues, and helping gain an understanding of the general directions and progress being made by states. For example, during the October NASWA UI conference, the Administrator of the Office of Unemployment Insurance in ETA discussed, among other things, NASWA/ITSC supporting an integrated client registration tool, as well as identifying useful IT best practices.

A Variety of Funding Sources Exist for States' Modernization of UI Programs

The states we reviewed have used various sources of federal and state funding to support their IT modernization efforts. There are two primary federal sources: (1) supplemental budget funding³¹ that is designated by Labor for specific state and consortium IT modernization efforts; and (2) general UI administration funding, which can be used for a variety of purposes, including IT modernization.³²

In particular, ETA has awarded supplemental funds to the states. Among other purposes, these supplemental funds may provide an opportunity for states to implement consortium technology-based solutions to improve the efficiency and performance of their UI operations. Supplemental budget funds are offered to the states with the understanding that ETA cannot assure that future federal supplemental funds will be available to complete the projects. Thus, in applying for supplemental budget funds, the state in essence agrees that the projects will be completed with no additional federal supplemental budget funds and that it will supply any additional funds necessary to complete the project in a timely manner, such as with states' specific monies.

³¹ According to Labor officials, supplemental budget request funding is drawn from the State UI and Employment Service Operations Appropriation.

³² In addition, other federal sources of funding include Reed Act distributions when statutory caps are met and other special distributions as authorized by Congress.

As previously mentioned, three consortiums have been formed with federal funding:

- The WyCAN consortium was formed in 2009 following an initial ETA grant of about \$19 million for a feasibility study to develop a common UI benefits and tax system. In 2011, ETA provided additional funding of about \$72 million to this consortium to develop and implement integrated UI benefit and tax systems.
- SCUBI was formed in 2009 and is comprised of the following states: Tennessee, South Carolina, North Carolina, and Georgia. This consortium received an initial grant from ETA of \$10 million to perform a feasibility study to develop a common UI benefits system. Tennessee took the lead for the consortium, providing the project management and direction for the four-state modernization effort. In 2011 the consortium completed a requirements document and received a second grant from ETA, in the amount of about \$50 million, to develop and implement an integrated UI benefits system for the member states.
- The Vermont, Maryland, and West Virginia technology infrastructure consortium was formed in 2011, when ETA provided a grant of \$6 million to develop common UI tax, benefits, and appeals systems requirements, using products from the WyCAN and SCUBI consortiums as a baseline.

The second federal source of funding, the general UI administration funding, primarily comes from (1) the State UI and Employment Service Operations funds, (2) Reed Act distributions, and (3) American Reinvestment and Recovery Act funds. However, while states report their general UI administrative spending,³³ they are not required to report specific costs for individual projects such as IT modernization initiatives and, as stated earlier, Labor does not track states' UI IT modernization spending. The states have the authority to spend these funds on a number of administrative activities, including IT, and use a range of sources aside from federal funds to support their modernization efforts. Thus, neither Labor nor the nine selected states could provide full and specific information regarding what has been spent on UI IT

³³General administrative UI funding provides funding to the states to administer the UI program. These costs do not include the benefit payments provided to claimants. Administrative funding is given to the states to establish specific policies and operation methods for: (1) determining benefit entitlement, (2) paying benefits, and (3) collecting state UI taxes from employers.

modernization efforts.³⁴ The following describes the categories of UI administrative funding that were provided to the nine states.

State UI and Employment Service Operations Appropriations. This appropriation provides federal funding through Labor to each state to administer its UI programs, including modernization. In this regard, a “base” administrative grant for each state is determined by Labor at the beginning of each fiscal year. In developing these administrative funding allocations, Labor uses a formula that is designed to provide each state with an amount that will equally provide services across states to beneficiaries and employers. This funding, at the discretion of the state, may be used in part for UI modernization efforts.

Reed Act distribution. In March 2002, in response to an increase in unemployment and the September 11, 2001, terrorist attacks, Congress passed the Job Creation and Worker Assistance Act of 2002. This broad stimulus package included a distribution to states of \$8 billion from the unemployment tax revenue held in reserve, referred to as a Reed Act distribution.³⁵ The act provided that these funds may be used to pay UI benefits and/or to enhance UI benefits, such as increasing weekly benefit payments, extending the period of time benefits are paid, or otherwise expanding eligibility to groups that currently do not qualify for benefits.³⁶ Funds may also be used for the administration of UI and employment services programs, including American Job Centers, if appropriated by state law.³⁷ In addition, Reed Act funds may be used to support states’

³⁴Actual amounts spent on specific UI modernization projects, such as tax and benefit systems, are difficult to fully determine. Specifically, individual UI modernization projects are generally not a separate budget line item, and the budget documents may not be detailed on the sources of the funds, such as federal UI IT administration or Reed Act funding. Moreover, all of the UI funds—funds for benefits as well as for administration—are identified under the same budget category and include direct payments with unrestricted use and formula grants, hindering the identification of IT modernization funds. However, selected modernization funding and certain states do have the ability to break down spending amounts—including consortium money from Labor for supplemental budget funds and the state of California, which does track spending on individual UI IT modernization projects.

³⁵Unlike traditional Reed Act distributions, this distribution was required regardless of the ceilings and did not take place at the beginning of a fiscal year.

³⁶Pub. L. No. 107-147, § 209, 116 Stat. 22, 31-33 (Mar. 9, 2002).

³⁷The American Job Centers—a centralized service delivery structure (one-stop career centers) consolidating delivery of most federally funded state and local employment and training assistance—was mandated by the Workforce Investment Act of 1998.

funding needs in undertaking major IT renovation and capital improvement projects (such as automated and centralized claims handling capabilities).

American Reinvestment and Recovery Act funding. This act was an economic stimulus package from which states received two special distributions of funds.³⁸ The first special distribution was intended to provide unemployment compensation modernization incentive payments, and made a total of \$7 billion available for all states. To obtain its share, each state was required to submit an application to Labor demonstrating that its unemployment compensation law contained certain benefit eligibility provisions.³⁹

The second distribution was a special transfer of \$500 million to the states' accounts in the Unemployment Trust Fund to be used for certain administrative purposes. This administrative transfer was made regardless of whether the state qualified for a modernization incentive payment. States did not need to apply to receive these amounts.

The administrative transfer could only be used for several specific purposes:

- implementation and administration of the provisions of state law that qualify the state for the incentive payments;
- improved outreach to individuals who might be eligible by virtue of these provisions;

³⁸Pub. L. No. 111-5, § 2003, 123 Stat. 439-443.

³⁹The American Reinvestment and Recovery Act provided funding to the states for purposes of making unemployment compensation modernization incentive payments. The maximum incentive payment allowable to any state was determined by a formula. A state received one-third of the maximum incentive payment if the state's laws determining eligibility met the requirement of using a base period that includes the most recently completed calendar year or provided for an alternate base period that uses a base period that includes the most recent calendar quarter. States could receive the remaining two-thirds of their incentive payment if the state's laws include provisions to carry out at least two of the following: (1) an individual shall not be denied unemployment compensation for seeking only part-time work, (2) an individual shall not be disqualified from unemployment compensation for separating from employment for compelling family reasons, (3) unemployment compensation to an individual who has exhausted state unemployment compensation but is participating in an approved training or job program, or (4) benefits include an allowance for dependents.

- the improvement of unemployment compensation benefit and tax operations, including responding to increased demand for unemployment compensation; and
- staff-assisted reemployment services for unemployment compensation claimants.

According to Labor, federal law does not require state legislatures to appropriate these special administrative transfers (unlike the incentive payments, which must be appropriated by the state legislature before they can be used for administrative purposes). However, a Labor UI official noted that nothing prohibits a state legislature from appropriating such money or from attaching more specific or limiting conditions to the use of such money.

Labor officials provided funding amounts for the selected states which could be used, in part, at the states' discretion for UI modernization activities, as shown in table 1.⁴⁰ As previously mentioned, neither Labor nor the selected states could fully provide detailed information regarding the specific sources of funding and amounts spent on individual UI IT modernization efforts.

Table 1: Reported Distributions of Federal UI Administration Funds to the Nine Selected States

State	2011 State UI and Employment Services Operations ^a	2002 Reed Act	American Reinvestment and Recovery Act Funding - 2009 Modernization Incentive	American Reinvestment and Recovery Act Funding - 2009 Special Distribution ^b
California	\$458,777,005	\$936,873,766	\$838,680,283	\$59,905,736
Colorado	\$45,664,818	\$142,666,574	\$127,469,762	\$9,104,983
Florida	\$105,826,544	\$449,667,718	\$0	\$31,733,965
Indiana	\$43,079,673	\$174,573,012	\$0	\$10,607,023
Minnesota	\$49,410,044	\$163,061,573	\$130,063,620	\$9,290,259
Ohio	\$102,641,818	\$343,709,635	\$88,169,529	\$18,893,471

⁴⁰These funding amounts are primarily provided to support the general day-to-day state agency operations and are only in part available for UI IT modernization. Also, Unemployment Compensation Modernization Act incentive funds can be used for the costs of expanded benefits eligibility and for general administration purposes.

State	2011 State UI and Employment Services Operations^a	2002 Reed Act	American Reinvestment and Recovery Act Funding - 2009 Modernization Incentive	American Reinvestment and Recovery Act Funding - 2009 Special Distribution^b
Tennessee	\$91,496,224	\$162,633,730	\$141,808,031	\$10,129,145
Vermont	\$14,218,036	\$16,395,967	\$13,917,898	\$994,136
Virginia	\$47,705,615	\$214,949,942	\$62,817,683	\$13,460,932

Source: Labor.

^aThese figures only include fiscal year 2011 base funding, above-base funding (additional funds that are available on a quarterly basis for claims-related workloads actually processed above the base level), and supplemental budget funds.

^bAmerican Reinvestment and Recovery Act funding was used for certain administrative purposes, including the improvement of UI benefit and tax operations and responding to increased demand for benefits.

Federal funding provides only a portion of the funding states can use for UI modernization. Seven out of nine states in our study have also used nonfederal sources of funding for UI modernization. For example, in every state an employer is subject to certain interest or penalty payments for delay or default in payment of contributions, and usually incurs penalties for failure or delinquency in filing required reports. States set up special administrative funds, made up of such interest and penalties, to meet special needs. In some states, the fund is capped: when it exceeds a specified sum, the excess is transferred to the unemployment fund or, in one state, to the general fund, where the state legislature designates how these funds are used. Officials of two states that we interviewed told us that they use the penalty and interest funds collected from employers for selected UI modernization efforts.

The selected states also identified other sources of nonfederal funds that are being used to modernize UI systems. These included (1) California's special acquisition method, (2) Ohio's employers' surcharge, and (3) Tennessee's in-kind staff resources:

- California is developing its UI tax system modernization project through a special agreement with an IT vendor. Specifically, state

officials said a vendor that has a commercial-off-the-shelf system⁴¹ has agreed to modify this system, thus adapting it to the needs of California and providing the state with a new UI tax system. This project is to be benefit funded—that is, funded based on additional revenues that will be obtained from the increased efficiencies and effectiveness of the newly implemented tax system. As part of this agreement, the vendor is to provide the initial funding for hardware, software, and configuring the system, and is to be paid based on the state's additional revenues generated by the newly developed state system. The state-vendor agreement is to contain a maximum vendor payment cap of \$46 million, and the vendor is not to receive full compensation if sufficient revenue levels are not met.

- Ohio implemented an employer surcharge to provide funds for the administration of the UI program, as well as to pay UI benefits. In addition, it used this funding to, in part, develop and deploy a modernized UI benefits system.
- The Tennessee Department of Finance and Administration established a dedicated IT work unit to support efforts in developing and implementing IT. According to Tennessee state technology managers, the creation of this unit was intended to help deliver large IT projects on time and on budget across departments. These managers noted that the cost of providing the unit services will not be charged to the UI systems modernization efforts or to the departments receiving services and will expand the availability of technology expertise to work across state units.
- As such, state funding sources, as well as federally provided UI administrative funds and specific consortium supplemental budget funds, can be used by states to modernize their UI IT systems.

⁴¹A commercial-off-the-shelf system is software that has been defined by a market-driven need, is commercially available, requires limited additional development, and has been demonstrated as fit for use by a broad variety of commercial users.

Selected States Vary in Their Efforts to Modernize UI Systems

The nine states in our study were in varying phases⁴² of modernizing their UI systems. Of the nine states we reviewed, each of the three states that were part of a consortium were in the initial phases of planning that includes defining business needs and requirements; two individual states were in the development phase, that is, building the system based on requirements; two were in a combination of development and operations and maintenance (also called a “mixed” phase, meaning a portion of the system is completed and in the operations and maintenance phase but other portions are still in the development phase); and two were completed and in operations and maintenance. These modernization efforts have, for example, enhanced states’ UI technology to support web-based services with more modern relational databases⁴³ and replaced outdated programming languages, such as COBOL. These efforts also included the development of auxiliary systems, such as document management systems and call center processing systems, that allow claimants who have been denied benefits the ability to file an appeal using a phone-based system.

⁴²The phases of modernizing a system can be sequential or overlapping and performed in an incremental manner, completing components of the overall system in iterations, or stages. The phases include (1) initiation, which identifies a business need that requires a technological solution; (2) concept, when the IT governance organization approves the business needs statement; (3) planning, which begins when the project has been formally approved and funded; (4) requirements analysis, during which the business requirements are validated and further analyzed and decomposed into functional and nonfunctional requirements; (5) design, which develops detailed specifications that emphasize the physical solution to the end user’s IT needs; (6) development, in which the system developer takes the detailed design information and transforms it into machine executable form; (7) test, to determine whether the business product developed or acquired is ready for implementation; (8) implementation, in which the business product is moved from development status to production status; and (9) operations and maintenance, in which the certified and accredited business product operates in a full-scale production environment.

⁴³A relational data base is a system comprised of multiple files which can be linked to each other. Specifically, current data base management systems are based on the relational model, which generally involves data bases full of numerous, relatively short records that are frequently updated. The records often can be sorted in many different ways; they do not have to follow any inherent sequence. Relational data base systems arrange these records in tables that allow great flexibility in sorting and provide quick access to make updates to specific records. See GAO, *Information Technology: Critical Factors Underlying Successful Major Acquisitions*, [GAO-12-7](#) (Washington, D.C.: Oct. 21, 2011) and *Earth Observing System: NASA’s EOSDIS Development Approach Is Risky*, [GAO/IMTEC-92-24](#) (Washington, D.C.: Feb. 25, 1992).

The following table provides an overview of the states' modernization initiatives—specifically, the systems that are being developed and their status.

Table 2: Overview of the Selected States' UI Modernization Efforts

State	Modernization initiatives ^a	Status
California	Separate tax and benefits	Tax and benefits: mixed.
Colorado (WyCAN consortium)	Integrated tax, benefits, and appeals	Tax, benefits, and appeals: defined business needs and requirements; planning to initiate design.
Florida	Integrated tax, benefits, and appeals	Tax: implemented; benefits and appeals: development.
Indiana	Integrated tax, benefits, and appeals	Tax, benefits, and appeals: mixed.
Minnesota	Integrated tax, benefits, and appeals	Tax, benefits, and appeals: operations and maintenance.
Ohio	Separate tax; Integrated benefits and appeals	Tax, benefits, and appeals: operations and maintenance.
Tennessee (SCUBI consortium)	Integrated benefits and appeals	Benefits and appeals: planning and defining business needs and requirements.
Vermont (Vermont-Maryland-West Virginia consortium)	Integrated tax, benefits, and appeals	Tax, benefits, and appeals: planning and defining business needs and requirements.
Virginia	Integrated tax, benefits, and appeals	Tax: testing; benefits and appeals: development.

Source: GAO analysis of state documents.

^aThe states' efforts included enhancing or redesigning existing tax and benefits systems, and may have been designed as an integrated or standalone system.

California

The California UI modernization project was initiated in 2003 to begin modernizing the state's tax and benefits systems. Both systems are currently in a mixed state of development and implementation, with full implementation scheduled for 2014. According to the Deputy Director, Employment Development Department, the total cost budgeted for the modernization is \$192.7 million—approximately \$68.7 million for the tax system and \$124 million for the benefits system. The project included upgrading to a modern programming language and converting from a legacy database to a database that would allow the state to use web-

based programs. In this regard, the state completed a database modernization project in November 2011 that replaced the outdated database management system which supported multiple programs, including UI and disability programs. As a part of its benefits system modernization effort, the state modernized its (1) electronic benefit payment system and (2) continued claim web certification system. The electronic benefit payment project converted the payment of UI benefits from paper check to a debit card or direct deposit in an attempt to eliminate the delays associated with processing and mailing checks. According to a state UI official, the continued claim web certification project enabled UI customers to use a web-based system to certify for benefits, eliminating the need to certify by paper. Specifically, they noted that the system authenticates the customer's identity through an identity management component to help ensure customers are eligible for benefits, and allows customers to enter their claim information on the form in English or Spanish. According to California Employment Development Department officials, these functions have increased the security of benefit payments and eliminated the need for paper certification.

Colorado

According to IT state officials, Colorado's existing systems are over 20 years old, operating inefficiently, and difficult to modify. To modernize its systems, Colorado joined the WyCAN consortium in 2011 and is taking a lead role in managing the consortium modernization efforts. The consortium is in the planning phase of developing a common integrated tax and benefits system to support the UI program. Specifically, according to the program manager, WyCAN has performed a gap analysis to identify differences in requirements among states, which was completed in March 2012, and the consortium's system requirements were completed in April 2012. A request for proposals was released in June 2012 and the program manager said that once these IT services are procured the states will initiate the system design phase. A request for proposals was released in June 2012. The consortium's goal is to develop open source software code⁴⁴ that would provide a tax and

⁴⁴The term "open source software code" means software for which the source code is open and available: open means the source code for the software can be read (seen) and written (modified) and there are no restrictions on how the software is used or by whom; and available means the source code can be acquired either free of charge or for a nominal fee.

benefits system that could be potentially exported to other states. According to the program manager, the Colorado WyCAN Team, the consortium has spent \$347,796 to complete a feasibility study of an integrated tax and benefits system.

Florida

Florida is in the development phase for its integrated tax, benefits, and appeals system. The modernization effort initially began as a separate tax system in 2006, and this individual system was completed in 2008. The effort for the benefits and appeals system and the effort to integrate it with the tax system began in 2010. This modernization effort includes increased automated system interfaces using web-based architecture and new business requirements. Florida engaged a contractor to help the state reengineer the UI benefits process for the modernization effort, and has dedicated subject matter experts to support the system modernization redesign. In 2010, the state issued a request for proposals to modernize the UI benefits system. A vendor was selected and, according to IT officials, as of June 2012 the state was about halfway through the 3- to 4-year project. Specifically, according to the Director, Florida Department of Economic Opportunity, the state plans to validate the requirements and test and implement the system, with deployment scheduled for September 2013 at a cost of approximately \$57.8 million.

Indiana

Indiana's integrated tax and benefits systems modernization effort began in 2002, when it received funds under the Reed Act. In late 2005 Indiana awarded a \$24 million contract to upgrade its system to replace a 1980s legacy system. According to state IT officials, the modernization project is using a phased approach in which system functions are to be implemented in separate releases. Functions and capabilities that have been released include:

- web-based employer self-service and document scanning capabilities, including online payments and debit cards for benefit distribution;
- automated fact finding for employers, spreadsheet submission of layoffs for large-scale employers, and business intelligence reporting tools; and
- automated claims processing and additional features, such as a new user identification, passwords, a job search function, and the capability for online filing of federal emergency unemployment compensation and state benefits.

Despite these new capabilities, Indiana is still operating its legacy UI system, and on a daily basis performs updates to both the legacy and modernized UI systems. According to state UI officials, the next release is scheduled to be implemented in late 2012, at which time the state should be able to shut down most parts of the legacy system. Further, the officials stated that, after the next two releases are deployed in 2013, Indiana will have implemented all of the capabilities needed to retire the legacy system. Indiana has a total budget of approximately \$40 million for its modernization effort.

Minnesota

Minnesota began its modernization project in 2001 and fully deployed an integrated tax, benefits, and appeals system in 2007. The system is currently in operations and maintenance. According to the Director, Unemployment Insurance Division, the state spent approximately \$50 million on its modernization efforts. At the same time that Minnesota modernized its UI IT system, it also modernized its business model to improve program efficiency and quality. As a result, according to state technology officials in charge of IT modernization, 100 percent of UI benefit appeals are filed online or over a voice-activated phone system, which speeds claims processing. The system that Minnesota developed is now being modified for use in Massachusetts, New Mexico, and Florida.

Ohio

Ohio began planning for the modernization of its benefits system in the early 1990s and deployed the new system in 2004. In addition, the state began planning for the modernization of its tax system in early 2000 and deployed it in March 2011. Completion of each of these modernization efforts took approximately 10 years from planning to deployment. Ohio reported that it spent approximately \$85.6 million to modernize the tax system and approximately \$88 million for the benefits system. One important example of modernization included implementing a web-based unemployment compensation benefit system that offers self-service capabilities to employers and claimants. This application supports increased customer online use, with many of the online claims being processed without any staff intervention.

Tennessee

Tennessee, the lead state of the SCUBI consortium, began its modernization effort in 2009. The effort is intended to replace its legacy benefits systems built in the 1970s and 1980s and run on mainframe systems using outdated COBOL language. According to state IT officials, these systems were never intended to function in today's environment with the current claims processing volume. Tennessee is planning to issue a request for proposals in October 2012 and expects full deployment of its modernized system by May 2015. The modernization effort is currently in the requirements development phase and, as part of the SCUBI consortium, has a budget of \$56 million for the modernization effort. The effort is intended to provide a common core system for the benefits and appeals process of the UI program.⁴⁵ Specific state members are to adapt the core system to their unique state functions.

Vermont

Vermont is the lead state of the Vermont–Maryland–West Virginia consortium; it is collectively updating those states' benefits, tax, and appeals systems, which date from the 1980s. The consortium effort was initiated in 2011 and is currently in the planning phase. The consortium released a request for proposals in February 2012 and is negotiating a contract with the selected vendor. According to state IT officials, the vendor is expected to be developing requirements during 2013. These requirements are to ensure design consistency and allow for variations between the three states' laws and their required functionality as a result of their variations.

Virginia

Virginia is operating a legacy system and, during discussions with us, state business and IT managers said that the system is at risk and that the state needs to move forward with modernization to avoid system problems. Specifically, the officials said that there have been many

⁴⁵Consortium officials said SCUBI is intended to develop an integrated benefit and appeals system and does not include modernization of the tax system. While the SCUBI states plan to have their respective tax systems interface with the modernized benefit and appeals system, a Tennessee UI state official said that its state does not have plans to modernize the tax system.

unanticipated changes to the business environment (such as legislative changes) and, as a result, Virginia has had to patch the legacy system. Virginia initiated its UI modernization effort in 2008 with the intent of developing an integrated tax and benefits system and is implementing the project incrementally in four stages,⁴⁶ scheduled to be fully deployed in 2013. The first stage was the development of an imaging and workflow system that was completed in 2011 and replaced an older document management solution, as well as microfilm, with a more modern technology platform; the tax system is in the second stage and is in testing; and the benefits and appeals system is planned for the third stage and is currently in development. Virginia has a total budgeted amount of about \$58.5 million for its modernization effort. The new system is also expected to provide the state with more efficient processing, less dependence on manual processes, and greater flexibility in responding to legislative mandates.

States and Consortiums Have Experienced Challenges with IT Modernization

The selected states and Labor have experienced challenges related to both individual states' and consortiums' efforts towards modernizing the UI systems. The challenges for individual states relate to limited funding and the increasing cost of UI systems, among others. The consortiums pointed to difficulties that derive from the differences in state laws and business processes among member states, as well as a lack of sufficient skills in leading a multistate modernization effort. State officials and ITSC have recognized the importance of understanding challenges to identify lessons learned and approaches to address selected issues and mitigate potential risks.

States Have Been Challenged With UI Modernization

While the nine states included in our study are taking various steps to modernize systems supporting their UI programs, they have also experienced challenges to doing so:

- Funding streams are declining or inconsistent. All nine of the states, as well as Labor and ITSC, said that limited funding and/or the increasing cost of UI systems is a major challenge. In addition, the current economic environment has resulted in smaller state budgets,

⁴⁶The four stages and scheduled deployment dates are: (1) imaging and workflow, October 2011; (2) tax, May 2013; (3) benefits and appeals, August 2013; and (4) final system acceptance, September 2013.

which has further limited state funds for IT modernization. Moreover, once funds are identified or obtained there is often a considerable amount of time between identifying the funds and when the IT project is completed. Specifically, state IT officials said that the development of large state or multistate systems may span many years, and that states' priorities and competing demands on resources can delay project implementation. As such, states often have to fund one phase of a project with the hope that funds will be available in the future when they are ready to move to the next project phase. The states also noted that the lack of a steady stream of funding potentially hinders effective IT project planning. For example, when Labor first provided consortium funding in 2009, department officials said that it was uncertain if there would be additional money available to complete the implementation of these projects. While Labor was able to provide additional grant funds for implementation to the first two consortiums in 2011, state officials said that there is still uncertainty if the modernization funding will be sufficient to implement and operate over the life cycle of a project, including the initial planning, design, development, and operation of their UI systems.

- Ensuring staff have necessary technical and project management expertise to manage modernization efforts is difficult. Further, seven of the nine states cited as a challenge the lack of workers in their UI offices with the necessary expertise to manage IT modernization efforts. For example,
 - Several states said that they had insufficient subject matter experts that are knowledgeable of the extensive rules and requirements of the UI program. However, such experts are essential to helping computer designers and programmers understand the program's business process, supporting an effective transition to the re-engineered process, and identifying systems requirements and needs.
 - States also said that if they had a system developed by vendors they would have been challenged with operating and maintaining the modernized system because the state staff may not have the needed expertise to maintain the new system once the vendor staff leave.
 - The states said they may have staff that implement larger scale systems only once every 10 to 15 years and, as a result, a large amount of time usually passes between modernization efforts. This causes voids in required knowledge and skills, process maturity and discipline, and executive oversight.
 - Because the states' staff typically has expertise in an outdated computer language, such as COBOL, they now must learn new

skills and modern languages in order to support the modernized systems.

- In 2011, a workforce survey found that over 78 percent of state CIOs confirmed that state salary rates and pay grade structures presented a challenge in attracting and retaining skilled IT talent. In this regard, the top five skills and disciplines presenting the greatest challenge were security, project management, architecture, application and mobile application development and support, and analysis and design.⁴⁷
- According to Labor, the limited staff resources facing states requires that subject matter experts⁴⁸ be pulled off projects to address the workload demands of daily operations.
- States have limited staff resources to operate both legacy and modernized systems. Six of the nine states noted that continuing to operate their legacy systems while simultaneously implementing new UI systems required them to balance scarce staff resources between the two major efforts. They explained that legacy systems must be maintained for a period of time while operations are established on the new UI systems. Thus, the states must continue to staff the operations and maintenance of the legacy systems while also providing staff to assume management of the modernized systems. For example,
 - One state's COBOL language programmers were being trained in a modern language for 6 months but had to be pulled out of the training to meet pressing needs on other projects, thus preventing the state from establishing technical expertise required for modernization.
 - An official from another state said that data had to be transferred between and maintained on both the legacy and new systems, which was time-consuming and could potentially introduce processing errors.
 - According to officials of another state, programmers will have to split their time between maintaining the legacy system and

⁴⁷The National Association of State Chief Information Officers, *State IT Workforce: Under Pressure* (January 2011). This survey refers to all state IT modernization and not specifically to UI IT modernization.

⁴⁸Subject matter experts are experts in the processes being automated. For example, a team member representing financial customers must be fully familiar with the needs of those customers.

supporting the development effort, which they said could potentially delay the development efforts.

- Another state noted that modernization planning efforts took longer because the IT staff had to maintain the existing system, code new federally mandated changes to the legacy system, and create the plans for the modernization project, all using the same finite resources. According to this IT official, this type of situation leads to increased risk as legacy resources become less readily available in the marketplace, driving up the costs for hardware and software support services.
- There are a limited number of vendors to develop UI IT systems. Officials in four of the nine states we reviewed, as well as the ITSC, noted that the limited number of state modernization systems that have been developed over the last decade, and the declining amounts of funding, has resulted in there being only a small number of vendors that have the knowledge and experience to build UI IT systems. According to an ITSC official, only a limited number of vendors have successfully implemented UI modernized systems on time and within budget with major functionality delivered. Further, one state UI official noted that, understanding the intricacies of the UI program and the number of legislative changes that impact IT systems programming to accommodate the changes require vendors to invest extensive time and resources. Consequently, the vendors often distribute their knowledgeable staff among several different states' modernization efforts simultaneously, resulting in system development delays. In addition, three of the nine states said there is significant competition for IT staff from the private sector. For example, three states are using the same vendor and, according to the states' IT managers, their individual schedules for modernization have been impacted by the limited vendor resources being divided among the multiple states. One IT project manager told us his state is experiencing project delays because its vendor has diverted resources to address issues with another state's project.
- There are restrictions on certain funding that is available. Four states said the restrictions tied to federal funding created a hindrance to accepting those funds. For example, one state chose to not accept federal funds for its IT modernization efforts because the funds came with the requirement to increase UI benefits, which the state opposed. Other federal restrictions include a prohibition on the commingling of funds, such as using the federal funds for other projects. One official said this impaired his state's ability to leverage funds and projects and potentially could hinder a state's ability to, for example, consolidate its computer operations into one facility because this would involve using

for other projects those resources designated for UI. Another state said the short time frame in which to apply for federal supplemental budget funds is not adequate to sufficiently explore the funding conditions. Labor officials agreed with this challenge, further commenting that the amount of funding available is not known until the end of each fiscal year.

Consortiums Had Unique Challenges with Modernization

States participating in consortiums have unique multistate structures with different organizational oversight mechanisms. As such, the states in our study said they have encountered a separate set of challenges as they develop common requirements and share technology platforms:

- State law and business processes among consortium member states may differ. Representatives for all three consortiums indicated that differences in state laws, business processes, and aversion to risk pose challenges to modernizing their UI systems. Specifically, differences among states can be found in the areas of procurement, communication, and implementation of best practices; in the involvement of each state's IT office; and in how centralized the state's IT is. Designing and developing a common system that will work for all states is impacted because each state's requirements and processes may differ. For example, because of these differences and the need to modify a UI technology framework, state officials told us that they see a consortium as not practical; another state official questioned whether a common platform for a system can be successfully built and made transferable between states in an economically viable manner.
- Software development approaches may differ. There are multiple approaches to developing and modernizing systems, and states within a consortium have often had different opinions on the best approach. State officials said that having different software development approaches is not practical when developing a common system, and that it is difficult to reach consensus on an overall approach that satisfies all the states in the consortium. A state in one consortium effort had a preference for one type of system development approach and withdrew from the consortium to develop its own UI project because it did not agree with the development approach the consortium was taking. Specifically, instead of contracting out for systems development, the state preferred developing the system in house with its own state staff and resources, and further noted that joining the consortium would have required a "waterfall" project development method, such as

defining all requirements initially before designing the system instead of taking an agile approach and incrementally defining and changing system requirements during segmented development, which is the approach that state preferred to use.

- Potential liabilities that exist in providing services to another state cause concerns. IT representatives from one consortium's lead state noted that taking leadership and managerial direction of a multistate consortium effort created concerns because officials from one state were taking responsibility for another state's management duties in modernizing its systems to support the UI program. The official explained that if the lead state makes a decision that affects other states and the outcome is not desirable, blame may be placed on the lead state. In addition, there is a possibility that the lead state's decision making could place other states' funds at risk. In one case, a state withdrew from its leadership position due to concerns about liability, and it allowed another state to take this role and assume the responsibilities.
- Location of system resources causes concern. IT managers in one of the three consortiums pointed to difficulties identifying where the joint data center that would support the multiple states should be located, and that there were challenges with reaching agreement on the resources that should be designated to operate and manage the facility while complying with individual state requirements. For example, according to a UI state official, one state required the data center to be in-state.⁴⁹ In July 2012, according to consortium officials, the state's UI program received an exception and was allowed the flexibility to choose the hosting location outside of its state. Without exceptions such as these, state-specific requirements that data centers be in-state potentially could inhibit the number of states willing to participate within the consortium efforts.
- Independent qualified leadership may be insufficient. All three consortium representatives noted that obtaining an independent and qualified leader for a multistate modernization effort was challenging. The state IT project managers and CIOs elaborated that, while each state desires to successfully reach a shared goal, doing so requires strong leadership and commitment that crosses independent and diverse cultures in multiple states. The leadership of the consortium

⁴⁹According to a consortium official, the state required a data center to be located within its own state to help support businesses within that particular state.

must keep the interests of each state in balance. The leader of a consortium needs to have extensive IT experience, that goes beyond his or her own state's technology environment, to effectively understand and support other states in the joint effort. Moreover, the consortium's leader has to mitigate the appearance of partiality, which may be difficult given the priorities and demands within his or her own state. This was a significant challenge for one consortium, and to address the challenge the lead state decided to recruit a senior program manager from outside the member states to provide independent leadership and the appearance of being unbiased.

Analysis of Challenges and Documenting Lessons Learned May Facilitate Improvements

As mentioned previously, Labor's role, in partnership with the states, is to ensure that the UI program is operating effectively and efficiently. In its role to facilitate states' UI modernization efforts Labor participates in a variety of activities and, in part through ITSC, stays up to date with the states' technological initiatives, strategies, approaches, and challenges. Thus, it is uniquely positioned to help ensure effective and efficient technology modernization by identifying and disseminating lessons learned from the states' efforts. We have recognized the importance of analyzing and prioritizing challenges and then documenting lessons learned from major efforts such as the UI projects, in order to help mitigate risks and track successful ideas for more effectively managing IT and improving cost effectiveness that can be utilized in the future.⁵⁰

Lessons learned is a principal component of an organizational culture committed to continuous improvement. Sharing such information serves to communicate acquired knowledge more effectively and to ensure that beneficial information is factored into planning, work processes, and activities. According to the Office of Management and Budget, lessons learned can be based on positive experiences or on negative experiences that result in undesirable outcomes. Documenting lessons learned can provide a powerful method of sharing successful ideas for improving work processes and increasing cost effectiveness by aligning these practices in future modernization efforts.⁵¹ Such an assessment of states' challenges

⁵⁰GAO, *Federal Chief Information Officers: Opportunities Exist to Improve Role in Information Technology Management*, [GAO-11-634](#) (Washington, D.C.: September 2011); GAO, *NASA: Better Mechanisms Needed for Sharing Lessons Learned*, [GAO-02-195](#) (Washington, D.C.: Jan. 30, 2002).

⁵¹OMB, Circular A-130, *Transmittal Memorandum No. 4*, "Management of Federal Information Resources, 8. b (1)" (Washington, D.C.: Nov. 28, 2000).

and documentation of lessons learned would be consistent with Labor's role.

Both individual state and consortium officials have developed methods to mitigate specific challenges and have identified lessons learned. For example, several states:

- are centralizing and standardizing their IT operations to address technical challenges, which may allow a state to focus and leverage its IT funding, staff, and projects on UI IT modernization;
- have found that a standardized, statewide enterprise architecture may provide a more efficient way to leverage project development; and
- have taken steps to address consortium challenges they have encountered, such as requesting that the consortiums have an IT representative from each state to ensure that each state's IT department is involved in the project from the beginning.

ITSC's Steering Committee tasked the ITSC to prepare a lessons learned assessment, but the effort has not been completed and, while it may provide valuable information and a basis to build on lessons learned, it is limited to ITSC's observations and may not be a comprehensive assessment.⁵² Specifically, in September 2011⁵³ ISTC's Steering Committee tasked ITSC with documenting lessons learned, observations, and successful practices of the consortiums. ITSC officials stated that they plan to prepare a draft document that contains states' status and potential systems development approaches by the end of September 2012.⁵⁴ They stated that this document will incorporate lessons learned based on ITSC observations; however, it is limited to ITSC's scope of observations and has not been formally reviewed by the states or Labor.

⁵²Labor is an active participant and is involved in the committee's decision process, although the assignment of tasks is done in a collaborative manner by all members of the Steering Committee.

⁵³Specifically, the ITSC Steering Committee's task order for "UI IT Modernization Consortium Building and Best Practices" called for ITSC to work closely with states interested in building a UI IT modernization project, with particular emphasis on consortium forming. ITSC is also expected to assist states in understanding the positive and negative aspects of consortiums, lessons learned to date, and how to formalize the consortium for the project in terms of interstate agreements.

⁵⁴Labor noted in its comments on our report, that ITSC is expected to finalize its report on lessons learned by September 28, 2012. ITSC noted in its technical comments that it would release its report by October 30, 2012.

Furthermore, during our review, ITSC officials told us the date when the report will be finalized and provided to the states had not been determined. Subsequently, in commenting on our draft report, ITSC officials said that the report is “evolutionary” and constantly changing over time. They added that the work had been used to brief UI executives and leaders of 26 states.

While this effort may be a good first step toward identifying challenges and lessons learned, it does not represent a complete, independent survey of all the states’ challenges and lessons learned. A comprehensive assessment would include formal input from states and consortiums, the ITSC Steering Committee, and Labor. Until Labor undertakes a more comprehensive approach that clearly identifies critical challenges and lessons learned, it may not be positioned to help states mitigate future challenges and facilitate the effectiveness and efficiency of states’ modernization efforts going forward.

If such actions to address challenges are analyzed, prioritized, and documented into lessons learned and then widely disseminated, they could assist in mitigating future challenges as states proceed with their UI program modernization efforts. Further, steps to develop an information-sharing platform for lessons learned could provide additional benefits. Until Labor comprehensively analyzes and prioritizes challenges, and documents lessons learned on these federally funded state UI modernization efforts, it may miss opportunities to help support future consortium and state modernization efforts, potentially hindering effective administration of the UI program.

The Selected States Have Established Management Controls to Help Guide Their IT Modernization Efforts

As we have previously reported, an organization’s ability to effectively modernize its IT environment greatly depends on the extent to which it has established and implemented IT management controls.⁵⁵ These controls include, among others, recognized program management practices and effective oversight. All of the selected states have established management controls for modernizing the IT systems that support their UI programs. These controls align with industry-accepted program management practices and, if effectively implemented, could help successfully guide modernization efforts.

⁵⁵[GAO-11-762](#).

Project Management Office Provides Leadership and Direction

A project management office is an organizational body assigned various responsibilities related to the centralized and coordinated management of those projects under its domain. The responsibilities of the office can range from providing project management support functions to being responsible for the direct management of a project. This office may be delegated the authority to act as a key decision maker during the beginning of each project, to make recommendations, or to terminate projects or take other actions as required to keep business objectives consistent. In addition, it may be involved in the selection, management, and deployment of project resources. Our work and other best practice research have shown that having a dedicated project leader that applies effective management principles and practices improves the likelihood of delivering expected modernization projects on time and within budget.⁵⁶ In other words, the quality of IT systems is largely governed by the quality of project management processes and can help ensure that management controls are being enforced.

All nine states in our study had established key aspects of project management offices, and three of these states' IT project managers said that this office was a major factor in helping their UI modernization projects. Among these states that have established a project management office:

- Colorado hired a project management office director with IT certifications and a diverse background with, according to state officials, extensive experience as a project management office director. The officials stressed that having an experienced director to lead the management office is key to successfully implementing UI modernization projects.
- Florida uses the project management office as a key part of its UI modernization project. It is responsible for day-to-day project oversight, providing overall guidance and direction to the contractor, coordinating project resources, budgets, and contract management,

⁵⁶GAO, *Homeland Security: Progress Continues, but Challenges Remain on Department's Management of Information Technology*, [GAO-06-598T](#) (Washington, D.C.; March 2006). See also Software Engineering Institute/Carnegie Mellon, *CMMI for Development, Version 1.3*, CMU/SEI-2010-TR-033 (Hanscomb AFB, Massachusetts, November 2010); Institute of Electrical and Electronics Engineers (IEEE), *Systems and Software Engineering – Software Life Cycle Processes*, IEEE Std. 12207-2008, (Piscataway, N.J., January 2008).

and monitoring project management areas including scope, risk, quality, and change control. Officials from this state indicated that having the project management office play such a large role in day-to-day activities may assist Florida in successful completion of its UI modernization project. Officials explained that the office's involvement in a wide range of tasks helps ensure that critical factors that need to be considered will be brought to management's attention in a timely manner and, as such, could help implement the project effectively.

- Minnesota had a statewide project management office that was in effect at the time the UI modernization project was initiated. This office required project registration and status reports, and the UI program included a project management consultant from that office on its steering committee. State officials indicated that this integrated effort added additional oversight to the UI project.

Program Management Body of Knowledge Provides Project Management Standards

Effective project management is a critical element of any modernization effort. One set of standards for managing a project includes the Program Management Body of Knowledge (PMBOK).⁵⁷ For example, the project management standards include processes, tools, and techniques used to manage a project toward a successful outcome. PMBOK has interrelationships to other project management disciplines such as program management and portfolio management. The IT industry has adopted the project management standards as an accepted best practice, and if properly implemented and integrated into an organization's environment, these management controls could help reduce risks associated with modernization projects by providing effective and efficient process improvements.⁵⁸

Based on our discussions with state IT administrators and managers and our assessment of their guidance, states we reviewed have incorporated project management standards into their UI modernization efforts. While all of the states use selected project management standards, seven of the

⁵⁷ PMBOK was developed by the Project Management Institute (PMI), which is an organization that provides guidelines, rules, and characteristics for project management.

⁵⁸ *Strategies for Implementing Capability Maturity Model Integration (CMMI) Project Management Process Category*, Natural SPI, An SEI Transition Partner, 2004. Also see GAO, *Information Technology: Critical Factors Underlying Successful Major Acquisitions*, [GAO-12-7](#) (Washington, D.C.: Oct. 21, 2011).

nine states noted that project management was a key contributor to their states' UI modernization projects. For example:

- California derived its own project management methodology, called the California Project Management Methodology. This methodology provides a framework for the IT project life cycle, from planning and initiation to maintenance and operations. According to state officials, this framework provides consistent project information and, as a result, helps key policy makers with greater visibility concerning the status of IT modernization projects, such as UI modernization, potentially allowing them to provide informed direction and guidance to IT project managers.
- Colorado has also created its own guidance, the Colorado Project Management Commonality Program, in alignment with project management standards. This program provides guidelines indicating when projects' status and information should be elevated for the Executive Governance Committee's review. State IT officials noted that these guidelines assist with the oversight of potentially risky projects, like UI modernization, and could help ensure successful completion.
- Project management standards were also incorporated into Florida's project management documents and, according to the state's IT officials, may have helped ensure the quality of its project management. Specifically, for the state's UI modernization project, PMBOK guidance defined project scope and helped ensure that only work within this scope was performed. In addition, the guidance required having key project management personnel certified, such as IT project leaders, providing training that could help ensure more experienced and skilled leadership. Moreover, Florida used project management standards to manage the modernization's costs, cost reporting, and metrics; and budgeting controls were established for the state's systems modernization efforts.
- Indiana's IT management officials noted that its state's main source of guidance for project management was in part derived from selected standards from PMBOK that, according to the officials, may help mitigate challenges and foster better control of the project. Indiana officials said that it holds weekly meetings with the commissioner of the workforce agency, the commissioner of the office of IT, and the agency director of IT to help manage the UI project.
- According to the Director, Minnesota Department of Employment and Economic Development, Minnesota's UI program applied PMI standards in the management of its modernization project. The statewide project management office required project management disciplines to be applied to state projects. These project management

disciplines continue to be applied and the statewide project office works in partnership with a recently established centralized state IT agency. This centralized IT agency also provides guidance IT security controls and enterprise architecture.

- Ohio has established a program management organization that follows project management standards to help ensure successful implementation of its modernization initiatives, such as UI modernization. Ohio officials noted that the state uses the PMBOK backbone to help drive UI modernization activities for planning and introducing change into the workplace. Change control (for both documents and source code) was key in helping to get interim deliverables from the vendor as milestones were reached.
- Tennessee has a PMBOK-based methodology that is required for IT projects, including UI modernization. For example, its Office of Information Resources requires an annual system project plan from each agency for the 3 upcoming fiscal years, and projects are required to have a detailed funding plan, providing a baseline for a project's status and progress to be tracked and managed. Also, Tennessee officials noted that project management controls are essential in overseeing modernization projects, including a structured change management practice, and this has been adopted by the state to capture legacy UI system changes, related legislative action, and policy changes.

Independent Verification and Validation Provides Effective Project Evaluation

IV&V means that an independent entity evaluates the work generated by the team that is designing a project. Verification is the process of ensuring the accuracy of a project based on written specifications and requirements. Validation is the process of evaluating software during the development process to determine whether it satisfies specified requirements and meets users' needs.⁵⁹ The IV&V contractor will often monitor and evaluate every aspect of the project from inception to completion so that problems can be corrected before they escalate to large-scale issues. We and others have recognized that, if properly performed, IV&V is a best business practice that is invaluable in providing management reasonable assurance that a planned system will meet user

⁵⁹Capability Maturity Model Integration (CMMI V1.1) and CMMI for Development (CMMI V 1.2).

needs.⁶⁰ For three of the states in our review, IT officials said IV&V played a vital role in verifying the quality of their UI modernization project. Among these:

- Florida has an IV&V contractor that provides services for its UI modernization project such as verifying that the system is developed in accordance with validated requirements and design specifications, validating that the system performs its functions satisfactorily, monitoring project management processes, and providing feedback on any deficiencies noted.
- Indiana also has an IV&V contractor that provides guidance to its UI modernization project. State officials noted that the IV&V process helps them measure and assess the project's progress, allowing the state's management to better provide redirection in a timely manner.
- Virginia holds monthly meetings with its internal agency oversight committee to discuss project progress. State officials also periodically meet with the project's IV&V vendor to report on the UI modernization project's scope, schedule, and budget. State officials said that the presence of both the IV&V contractor and the vendor help ensure that system requirements will be met. These officials further elaborated that the IV&V process helps identify potential issues in scheduling and may reduce project problems as the system is developed and implemented.

IT Investment Management Helps Guide Investment Decisions

IT investment management is a process for linking investment decisions to an organization's strategic objectives and business plans that focuses on selecting, controlling, and evaluating investments in a manner that minimizes risks while maximizing the return on investment.⁶¹ Consistent with this, our IT Investment Management (ITIM) framework consists of five progressive stages of maturity for any given agency relative to selecting, controlling, and evaluating its investment management

⁶⁰GAO, *DOD Business Transformation: Lack of an Integrated Strategy Puts the Army's Asset Visibility System Investments at Risk*, [GAO-07-860](#) (Washington, D.C.: July 27, 2007). According to the Institute of Electrical and Electronics Engineers, verification and validation processes for projects can be used to determine whether the software satisfies intended user needs and helps ensure the systems conform to the requirements.

⁶¹[GAO-04-394G](#); [GAO/AIMD-10.1.13](#); GAO, *Executive Guide: Improving Mission Performance Through Strategic Information Management and Technology*, [GAO/AIMD-94-115](#) (Washington, D.C.: May 1994); and OMB, *Evaluating Information Technology Investments, A Practical Guide* (Washington, D.C.: November 1995).

capabilities.⁶² These maturity stages are cumulative; that is, in order to attain a higher stage of maturity, the agency must have institutionalized all of the requirements for the previous stage before moving on to the next one. The framework can be used both to assess the maturity of an agency's investment management processes and as a tool for organizational improvement. For each maturity stage, the ITIM describes a set of critical processes that must be in place for the agency to achieve that stage. We have used the framework in many of our evaluations, and a number of agencies have adopted it.⁶³

One of the nine states within our review—Virginia—has adopted our ITIM standards for implementing selected modernization projects and has incorporated the standards into its UI system development guidance. The state's UI modernization efforts follow certain procedures for selecting, controlling, and evaluating projects. This provides a mechanism for the state to help ensure that critical tasks and elements that were considered as the UI modernization project were selected and developed, and that critical points throughout the process were brought to management's attention when approvals were needed to continue or redirect the project. Other states have also followed selected aspects of the ITIM standards to monitor their UI modernization projects and to help ensure appropriate approvals and reviews at critical points in the systems development process were obtained.

Earned Value Management Is a Process to Measure Project Performance

Earned value management helps project managers to measure project performance. It is a systematic project management process used to find variances in projects based on the comparison of work performed and work planned. Earned value management is used to support cost and schedule control and can be very useful in project forecasting. The project baseline is an essential component of earned value management and

⁶²GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, [GAO-04-394G](#) (Washington, D.C.: March 2004).

⁶³See, for example, GAO, *Information Technology: HUD Needs to Better Define Commitments and Disclose Risks for Modernization Projects in Future Expenditure Plans*, [GAO-11-72](#) (Washington, D.C.: Nov. 23, 2010) .

serves as a reference point for all related activities. Earned value management provides quantitative data for project decision making.⁶⁴

One of the three consortiums—WyCAN—said it intends to use earned value management as one of the tracking measures as it develops the UI system. If adequately implemented, earned value management can assist the program managers in accurately forecasting scope, schedule, and cost and in identifying any potential problems and risks.

Information Technology Infrastructure Library Provides Guidance for Using IT as a Business Tool

The Information Technology Infrastructure Library provides guidance to organizations on how to use IT as a tool to facilitate business change, transformation, and growth. The five core guides of the library map the service life cycle, beginning with the identification of customer needs, through the design and implementation of the service into operation and, finally, to the monitoring and improvement phase. According to the IT Service Management Forum,⁶⁵ adopting the core guides can offer users a range of benefits that include: increased user and customer satisfaction with IT services, improved service availability, financial savings from reduced rework, improved resource management and usage, and improved decision making, among other benefits.

Two of the nine states in our review had considered using the five core guides as a best practice and these states reported using the standards to help identify potential problems in their UI modernization efforts, such as limitations on resources and appropriately defining customer needs. For example, Colorado had adopted the standards to aid with the development of their UI modernization project to help define customer needs and associated systems requirements, and the resources required to implement these requirements.

⁶⁴GAO, *Information Technology: Agencies Need to Improve the Accuracy and Reliability of Investment Information*, [GAO-06-250](#) (Washington, D.C.: Jan. 12, 2006).

⁶⁵The IT Service Management Forum, *An Introductory Overview of ITIL V3, Best Practice Management*, 2007.

Governance Structures Provide Oversight

All the states in our review noted that oversight was important and have some form of governance. For example, states have formed committees to guide modernization efforts, created oversight programs aimed at modernization, and used their CIO offices to lead their efforts:

- California created an IT oversight agency which approves all IT projects over \$1 million and receives monthly and quarterly reports on projects. A feasibility study report is prepared to approve a development project, and a special project report is required when a project is rebaselined. California has used this control for its UI modernization projects.
- Colorado uses a tiered system for IT projects, which is referred to as its executive governance committee. For the UI IT modernization project, Colorado is implementing a project health index that provides a numeric rank to the project status. This is intended to provide information on the status of the project to the executive governance committee so that it is informed of the project's health, and is intended to help ensure the project is aligned with its planned strategic direction. In addition, Colorado's technology office is required to report on an annual basis to a state legislature oversight committee to discuss the status of the UI modernization project.
- Florida has monthly meetings with CIOs from other state agencies to identify any issues related to the IT modernization project and UI program that need to be resolved or discussed. In addition, Florida has implemented an executive steering committee which has the responsibilities of providing direction and support to the management team; assessing the IT modernization project's alignment with the strategic goals of the department; reviewing and approving any changes to the project's scope, schedule, and costs; reviewing, approving, and determining whether to proceed with any major project deliverables; and recommending suspension or termination of the project if the primary objectives cannot be achieved. In addition to the executive steering committee, a technical steering committee exists and includes a small group of subject matter experts. The technical steering committee provides technical guidance and advice to the project team.
- Tennessee uses a Fiscal Review Committee, which reviews contracts over \$250,000 for which the state is required to present contract and funding information. According to state officials, the committee has authority to review state funding and risk management. In addition, Tennessee established a governance committee at the Department of Finance and Administration called the Information Technology

Assessment and Budget Committee, which meets monthly to review the status of projects, including the UI modernization project and new project requests. Further, the state has an Information Systems Council that is made up of state legislators as well as commissioners, the state comptroller, employee representatives, and others who meet quarterly to review major state IT projects' status and costs, as well as any issues that need management direction. Finally, Tennessee's CIO reviews requests for proposals and approves major IT procurements.

- Virginia has an office that provides management controls and an overall model for project management for projects such as UI modernization. It has defined criteria for major projects, such as those that have a budget over \$1 million, are mission critical, or are multiagency projects. In addition, Virginia's project management office provides checks and balances on the project to ensure accuracy and protect the state's financial and operational interests.
- As part of the IT governance process in Vermont, the state CIO office provides direction and oversight to IT projects such as the UI modernization project. According to a state official, the state requires the CIO to review and approve any IT projects estimated to cost over \$500,000. In addition, the CIO office is responsible for overseeing contracts and any significant changes (over \$100,000) to procurements.

In addition, the three consortiums—SCUBI; Maryland, Vermont, and West Virginia; and WyCAN— have established governance structures that are specific to their consortiums, in order to help review and oversee multistate decisions affecting the modernization efforts:

- SCUBI's state officials have established a steering committee to oversee states' efforts to determine the feasibility of designing, developing, and implementing a core UI benefit system. SCUBI's project steering committee is responsible for the overall management of the business of the consortium and project. It also has a project management office which is responsible for the day-to-day management of the project. Each participating state will provide both program and technical staff to work as a project team and to provide project management resources for the office. The UI project is supported by the IT staff of the consortium states, the executive management of the member states, NASWA, and Labor.
- The Vermont, Maryland, and West Virginia Consortium have established three committees that aid in the oversight of the consortium: the Project Steering Committee, the Consortium Project Team, and the Contractor Project Team. The Project Steering Committee is comprised of the UI directors from each consortium

state. This committee has authority to approve the project scope, project schedule, project assumptions, project constraints, project risks, the project communication plan, and the technical plan and approach. The Consortium Project Team, consisting of subject matter experts and technical staff from each state, execute the work of the consortium based on guidance from the Project Steering Committee. The Contractor Project Team aids the consortium by conducting a review of the current benefit and tax operations in each state, developing business and functional requirement documents, and helping the consortium identify an approach to developing new systems.

- The WyCAN consortium, led by Colorado, is planning to develop a common, integrated and combined UI benefits and tax IT system. To do this, the consortium states have established multiple governance structures to help regulate the interaction of the states within the consortium. One of the governance structures includes the executive committee and is comprised of eight members in each consortium state that meet at least once quarterly. The head of the UI program and the state CIOs are included in the executive committee and provide leadership and approval of the consortium efforts.

Conclusions

In recognition of the states' need to modernize their UI systems, Labor has provided funding and technical assistance. Yet, the status of states' efforts varies, ranging from the planning and requirements phase to the implementation and operation of modernized solutions. In undertaking these major efforts, the nine states we reviewed have encountered a variety of challenges in managing their modernization projects, resulting from factors such as the need to provide sufficient staff to operate both legacy and modernized systems, and differences in state law and business processes among consortium member states. Labor has tasked ITSC to assess lessons learned, observations, and successful practices of consortium efforts, which is a valuable first step toward helping the states overcome challenges as they move forward in modernizing UI systems. However, this effort is not complete and does not represent an independent survey of all the states' lessons learned. As such, Labor has not clearly identified challenges and lessons learned, disseminated them to each state, or facilitated an appropriate information sharing mechanism. This can hinder states' ability to draw upon each others' experiences to mitigate future challenges and facilitate success going forward to improve the effectiveness and efficiency of modernization efforts. The states we reviewed have identified numerous management controls to aid their modernization efforts which, if implemented successfully, can also help to mitigate challenges.

Recommendations for Executive Action

To further facilitate state and consortium modernization efforts, we recommend that the Secretary of Labor direct the Administrator of the Office of Unemployment Insurance to take the following two actions:

- Perform a comprehensive analysis of lessons learned and identify specific areas that would help mitigate current state challenges and provide guidance for future consortiums and individual state efforts. This assessment should include an evaluation of ITSC's lessons learned and observations identified, as well as input from individual states, consortium representatives, and the ITSC Steering Committee. Lessons learned and best practices identified could include practices for mitigating issues associated with inconsistent and insufficient funding streams, helping ensure staff have the necessary technical and project management expertise to manage modernization technology resources, and sufficient staff to operate both legacy and modernized systems while developing and implementing new systems; and consortium-specific challenges, including practices for addressing concerns about differences in state requirements and business processes among consortium member states, mitigating potential liabilities and concerns that lead states face in providing services to and oversight of another states' modernization efforts, and identifying independent qualified leadership for consortium efforts.
- Distribute the analysis of lessons learned to each state to share and foster ideas and facilitate the efficient and effective modernization of UI systems through an information-sharing platform or repository, such as a website, so that state agencies can contribute ideas and case studies of best practices and lessons learned on a continuing basis, and so that states' input can be solicited for each major phase of system development.

Agency Comments and Our Evaluation

Labor's Assistant Secretary for Employment and Training Administration provided written comments on a draft of this report, which are reprinted in appendix II. In its comments, the department generally agreed with our recommendation to perform a comprehensive analysis of lessons learned and identify specific areas that would help mitigate current state challenges and provide guidance for future consortiums and individual state efforts. In this regard, the department said it agreed with the need for an ongoing process of continuous learning that would involve collecting and analyzing lessons learned and best practices and offering technical assistance to states. To accomplish this, the department believed it would be more prudent to evaluate the report on state lessons learned that ITSC is expected to finalize by September 28, 2012, to avoid conducting a possibly duplicative analysis. We noted in our report that

ITSC's assessment of lessons learned provides a valuable first step toward helping the states overcome challenges as they move forward in the modernization of UI systems. As such, we recommended that the department's assessment include an evaluation of ITSC's lessons learned and observations identified and use this information as a good first step. Labor's assessment, as we noted, should also include input from all individual states, consortium representatives, and the ITSC Steering Committee.

Labor neither agreed nor disagreed with our second recommendation, which called for it to distribute the analysis of lessons learned to each state to share and foster ideas and facilitate the efficient and effective modernization of UI systems through an information-sharing platform or repository, such as a website. Nonetheless, the department noted that it is committed to working actively to support knowledge sharing among the states related to UI IT modernization best practices and lessons learned through ITSC's website, department guidance, webinar presentations, participation in conferences with states, and the department's recently established UI Community of Practice website. Labor acknowledged its commitment to identify lessons learned and the need to reevaluate them on an ongoing basis. The department also recognized the importance of maintaining a repository of best practices and lessons learned to provide a forum for the states to provide ideas and feedback on a continuing basis for each major phase of systems' development.

Labor also provided clarifying information in its technical comments, which we incorporated as appropriate. In these comments, the department sought to clarify our discussion of funding sources, such as the Reed Act distribution. Specifically, Labor noted that the Reed Act distribution funds are not solely available for UI IT modernization efforts. As we noted in our report, federal funds can be used for multiple UI purposes, and states have the authority to spend these funds on a number of administrative activities, including IT, as well as other activities, such as capital improvement projects and payment of benefits. In response to Labor's technical comments, we revised the wording to make clearer the sources of funding for IT modernization efforts.

Beyond the aforementioned comments, we requested technical comments through email from ITSC and the nine states included in our study. In response, the Director of ITSC and five state officials—California's Deputy Director of the Employment Development Department, Colorado's Program Manager of the Colorado Department of Labor and Employment, Minnesota's Director of the Unemployment

Insurance Division, Tennessee's Information Technology Administrator of the Tennessee Department of Labor and Workforce Development, and Virginia's Project Manager of the Virginia Employment Commission—provided comments on relevant facts discussed in the report message. We have incorporated these comments where appropriate.

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

If you or your staff have questions about this report, please contact me at (202) 512-6304 or melvin@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in appendix III.

Sincerely yours,



Valerie C. Melvin
Director, Information Management
and Technology Resources Issues

Appendix I: Objectives, Scope, and Methodology

Our objectives were to (1) determine the Department of Labor's (Labor) role in facilitating the modernization efforts, (2) identify and describe the types of federal funding selected states have spent on IT modernization, (3) provide the status of modernization efforts for the selected states, (4) determine key modernization challenges, and (5) evaluate what management controls have been established for IT modernization.

To address each objective, we conducted in-depth interviews with management and IT staff in nine state unemployment insurance (UI) offices—California, Colorado, Florida, Indiana, Minnesota, Ohio, Tennessee, Vermont, and Virginia. We selected the states on the basis of varying regional location, size, and modernization status. Specifically, our selection of nine states represents each of the six Labor regions, at least one small, medium, and large state, and each of the major phases of systems modernization, including planning and requirements, development, testing and operations and maintenance. We also selected states developing individual systems, those developing integrated tax and benefits systems, and states involved in consortium efforts.¹ While our sample is nongeneralizable, these states offered insight and perspective on their experiences in modernizing UI systems, including sources of funding, challenges, and established management controls. In addition, we interviewed Labor officials, evaluated state audit entities' reports, and spoke to stakeholders involved in modernization of states' UI systems, such as officials from the National Association of State Workforce Agencies' (NASWA) Information Technology Support Center (ITSC).

To determine Labor's role in facilitating the modernization efforts, we collected and analyzed documentation describing Labor's responsibilities, including regulations, department project plans, and program guidance. We interviewed relevant Labor program officials to identify and discuss Labor's role and efforts in supporting state UI modernization efforts, including facilitating state UI agencies in mitigating their modernization challenges. We also interviewed relevant officials from the selected state UI agencies as well as from the NASWA's ITSC to obtain their views on Labor's role and efforts to assist states in the modernization of their UI systems.

¹We selected the three lead consortium states as part of our review, obtaining representation of all consortium efforts.

To identify and describe the types of federal funding selected states have spent on IT modernization, we obtained and analyzed selected states' IT modernization expenditure data such as funding allocations, project reports, and spending reports. We also reviewed documentation on federal funding sources that can be used for state UI modernization, such as the State Unemployment Insurance and Employment Service Operations appropriation, Reed Act distributions, and the American Reinvestment and Recovery Act, as well as Labor's documentation on funding for UI modernization, including supplemental budget funds for state UI modernization efforts. In addition, we reviewed documentation discussing nonfederal funding sources that are used for state UI modernization. To supplement this information, we interviewed officials from Labor, the selected UI states, and stakeholders such as the NASWA's ITSC, to identify the type of federal and other funds spent on UI modernization efforts. In addition, we summarized the information collected from the state UI agencies on the types of federal funds and obtained clarification and confirmation from the states on the accuracy of this information.

To provide the status of modernization efforts for the selected states, we collected and reviewed the selected states' documentation of their modernization planning and development efforts, such as IT strategic plans, project plans, status reports, and descriptions of current systems development artifacts. We also held discussions with officials from the selected UI agencies, including officials involved in planning and developing the UI systems, regarding the status of and plans for state UI modernization efforts.

To determine key modernization challenges, we analyzed public and internal reports on state UI modernization efforts and lessons learned. We also interviewed relevant Labor, UI state, and NASWA's ITSC officials to identify modernization challenges and to discuss lessons learned and means for addressing the challenges. We also summarized the information collected from the state UI agencies on their modernization challenges and obtained clarification and confirmation from the states on this information.

To evaluate what management controls have been established for IT modernization, we interviewed Labor and selected UI states' officials to identify and discuss the management controls used by the selected state UI agencies. To supplement this information, we also met with representatives from the NASWA's ITSC who were involved in assisting states in their modernization efforts, to discuss management controls

used to support state UI consortiums' modernization efforts. We also reviewed the documentation describing the selected states' UI management controls and compared these controls to best practices and industry standards, such as those identified by the Project Management Institute. We did not, however, assess the extent to which the selected UI agencies implemented the management controls or the effectiveness of these controls in modernizing state UI systems.

We conducted this performance audit from January 2012 through September 2012 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Comments from the Department of Labor

U.S. Department of Labor

Assistant Secretary for
Employment and Training
Washington, D.C. 20210



SEP 19 2012

Ms. Valerie C. Melvin
Director
Information Management, and
Technology Resources Issues
U.S. Government Accountability Office
441 G. Street, N.W.
Washington, D.C. 20548

Dear Ms. Melvin:

On behalf of the U.S. Department of Labor (Department), I want to thank you for the opportunity to review and comment on the Government Accountability Office's (GAO) draft report entitled, *Information Technology: Department of Labor Could Further Facilitate Modernization of States' Unemployment Insurance Systems (GAO-12-957)*. I want to compliment you on conducting a very thorough review of the challenges that State Workforce Agencies (SWAs) are facing in the area of technology supporting mission critical processes in the Unemployment Insurance (UI) system.

The GAO report recommends that to further facilitate state and consortium modernization efforts, the Secretary of Labor direct the Administrator of the Office of Unemployment Insurance to take the following two actions:

- 1) Perform a comprehensive analysis of lessons learned and identify specific areas that would help mitigate current state challenges and provide guidance for future consortiums and individual state efforts.

The Department generally agrees with GAO's recommendation; however, the Department considers it to be more prudent to evaluate the soon-to-be published report on lessons learned relating to information technology and the UI system that is currently being developed by the National Association of State Workforce Agencies (NASWA) Information Technology Support Center (ITSC) and determine if there is any additional effort needed to build on that report, before committing to conducting another, possibly duplicative, analysis. The Department considers ITSC to be the appropriate partner to prepare such an analysis.

As the report notes, at the direction of the ITSC Steering Committee and with support from the Department, ITSC is in the process of developing a comprehensive report on state best practices and lessons learned related to information technology and the UI system. The ITSC report is expected to be finalized and shared with the ITSC Steering Committee at its next meeting on September 27-28, 2012. The Department expects ITSC's report to provide important information to inform future steps to support state UI IT modernization. It will also include best practices and lessons learned that will be shared broadly with states. ITSC has a long history of providing one-on-one technical assistance to states and, as a result, is the repository of

substantial knowledge and information on state use of technology to support UI processes. In the last several years, they have focused specifically on supporting state management of complete overhauls of their benefits and tax systems as part of UI IT modernization efforts. The report will rely on ITSC's firsthand experience with the vast majority of states as well as responses to surveys of SWAs.

Therefore, the Department prefers to use the ITSC report to inform any future steps that the Department should take rather than starting over and preparing a new analysis of lessons learned. Moreover, ITSC intends this report to be a "living" document that will be updated to reflect new lessons learned and experiences on an ongoing basis.

We agree there is a need for an ongoing process of continuous learning and offering of technical assistance to states. These responsibilities – collecting and analyzing lessons learned, best practices, and offering technical assistance to SWAs – are precisely the mission of the ITSC. ITSC has subject matter expertise in the field of state UI IT modernization efforts; is considered a trusted resource by states; and has the ability and capacity to conduct an independent analysis in this area.

- 2) Distribute the analysis of lessons learned to each state to share and foster ideas and facilitate the efficient and effective modernization of UI systems through an information-sharing platform or repository, such as a website, so that state agencies can contribute ideas and case studies of best practices and lessons learned on a continuing basis, and so that states' input can be solicited for each major phase of system development.

The Department is committed to working actively to support knowledge sharing among the states related to UI IT modernization and is committed to continuing to use various communication avenues to ensure that best practices and lessons learned are provided to our state partners. These strategies include the use of the ITSC website, agency guidance, Webinar presentations, participation in conferences with states, and the Department's UI Community of Practice.

As part of ITSC's core missions to collect and disseminate best practices and lessons learned, ITSC already manages a website which serves as a repository for key information about the various SWA's UI IT modernization projects and other information technology information. In addition, both the Department and ITSC promote information sharing among the states on UI IT modernization projects at NASWA conferences and meetings. The Department also recently launched a UI Community of Practice website exclusively for Federal and state UI professionals on the Employment and Training's online technical assistance platform to facilitate the sharing of information among the SWAs. Other avenues for sharing information on UI IT modernization among the states include formal agency guidance and featuring state best practices through Webinars. Also, ITSC staff, frequently in partnership with Department staff, routinely engages in briefings and information sharing on lessons learned and best practices with individual states' administrators and leadership teams and/or with state consortia.

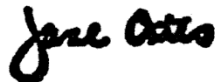
Finally, the Department wishes to comment on a few of the findings set out in the GAO report related to funding UI IT modernization efforts. With regard to the GAO report's observation on

pages 28-31 that “[f]unding streams are declining or inconsistent...the lack of a steady stream of funding potentially hinders effective IT project planning,” we note that not all the funding sources identified are available solely for UI IT modernization efforts. Funding sources such as Reed Act distributions are needed for other strategic purposes – including the payment of benefits, the general administrative day-to-day operations of state programs, providing reemployment services to UI claimants, and meeting increased staffing needs in times of increased workloads. We note that an automatic Reed distribution to states that may provide funds for IT investments in the near term will not be triggered since Federal trust fund accounts have not reached their caps.

The Department’s strategy is to encourage a number of states to join together to build new systems and to leverage resources across states. To date, the Department has provided funding to and worked with ITSC to support three consortia involving 11 member states to collaborate on UI IT modernization projects. The Department is currently reviewing applications for two additional state consortia. We require these projects to use open source technologies to enable their future sharing with other states. The Department also concurs with observations that project management controls are important to successful projects and notes that many states are using these tools as a result of ITSC’s technical assistance.

Enclosed are the Department’s technical comments on the draft report. If you would like additional information, please do not hesitate to call me at (202) 693-2700.

Sincerely,



Jane Oates
Assistant Secretary

Enclosure

Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact

Valerie C. Melvin, (202) 512-6304 or melvinv@gao.gov

Staff Acknowledgments

In addition to the contact named above, Christie Motley (Assistant Director), Michael Alexander, Neil Doherty, Rebecca Eyer, Christopher Nemr, Teresa M. Neven, Monica Perez-Nelson, and Charles Youman made key contributions to this report.

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