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Insights into better integrated eligibility systems

Implementing integrated eligibility systems can be fraught with challenges, making it difficult for states to claim success. However, there are five observations they can use to ensure triumphant future execution.

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Insights into better integrated eligibility systems

Integrated eligibility systems (IESs) are the enabling technology behind state-level Medicaid and human services programs in the United States. The core of an IES is automated rules and a case management and workflow system that encodes logic to enable timely and accurate eligibility determinations for Medicaid and other human services programs. Because many low-income individuals and families qualify for multiple public benefit programs, most states use the same technology and staff to process eligibility for programs such as Medicaid, the Supplemental Nutrition Assistance Program (SNAP), and the Temporary Assistance for Needy Families program (TANF) in order to avoid duplication of effort for case workers as well as individuals and families applying for such programs, reduce duplicative administrative costs, and ensure program integrity.

Starting in 2011, the Centers for Medicare & Medicaid Services, driven by requirements and deadlines associated with the Patient Protection and Affordable Care Act, announced it would increase its funding match to 90 percent for Medicaid programs to build new or enhance existing, up from 50 percent, and increase maintenance and operations matching to 75 percent, also up from 50 percent. This was accompanied by an OMB A-87 waiver for eight years (through 2018), allowing states to use the enhanced Medicaid matching funds to build IESs benefiting SNAP (funded by USDA) and TANF (funded by ACF) programs as well.[1] To the best of our knowledge, all 50 states took advantage of the matching funds to upgrade or replace outdated systems, and the majority of states focused on using IESs to improve access to food, childcare, and other basic necessities for more than one-third of the US population. Based on McKinsey analysis, the annual expense to maintain, operate, improve, and modernize IESs is estimated to be approximately $6.5 billion.[2]

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[1] For more, see Cindy Mann et al., "Tri-agency letter on details of cost allocation waiver," Office of Child Support Enforcement, January 23, 2012, acf.hhs.gov; Kevin Concannon et al., "Letter to the Medicaid, Children's Health Insurance Program, and U.S. Department of Health & Human Services directors, and state marketplace CEOs," Medicaid.gov, July 20, 2015, medicaid.gov.
[2] Based on data from the Kaiser Family Foundation (KFF) and the 2016 Medicaid Budget and Expenditure System (MBES).

However, the record of success for IES implementations is mixed. These systems face many challenges, from managing increased spending to designing new systems in a multi-stakeholder environment. Sharing sensitive data, such as medical information, across systems also presents serious security and privacy concerns. Furthermore, there is no single template for executing these projects successfully, making the process difficult to navigate.

The good news is that states can use five observations to inform their IES implementations and improve their systems, streamline processes, and ultimately serve their constituents better. These observations are based on our analysis of thousands of public sector IT transformations, including those of IESs (see sidebar "About the research").

States can apply these strategies to maximize value and minimize risk, improve existing IESs, and facilitate future implementations of IESs. These observations also apply to other large IT systems (see sidebar "Applying insights to other complex systems").

An IES implementation done well provides symbiotic benefits for both the people who qualify for public benefit programs and the public sector workers who regularly work with the systems. A well-functioning IES can make receiving program benefits easier and improve the overall experience for customers.

Sidebars

About the research

Our observations about, and lessons learned from, various IES implementations draw on three specific sources:

— Independent research and analysis of IES approaches taken by various states

— Extensive experience with other multimillion-dollar public-sector IT transformations that are similar to IESs

— Assessment and analyses of more than 5,400 IT projects since 2011 across the public and private sector[1]

[1] The following analysis was conducted in partnership with the BT Centre for major Programme Management at the University of Oxford: Michael Bloch, Sven Blumberg, and Jürgen Laartz, "Delivering large-scale IT projects on time, on budget, and on value," October 2012, McKinsey.com.

Applying insights to other complex system

Although insights in this paper have been drawn from various IES implementations, they can also apply to similar legacy systems upgrades or replacements, such as enterprise resource planning, core banking systems, payroll, and customer relationship management platforms.

These systems have characteristics similar to most IESs—monolithic architecture, high dependence on system vendors, and many stakeholders—making them good candidates to benefit from other IES integrations.

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Getting started with integrated eligibility systems

There is no single template for delivering IES implementations and other similar projects successfully. Nevertheless, several clear obstacles can be managed to minimize risk. Unfortunately, these factors are often overlooked due to tight timelines, lack of funding, and competing priorities, leading to suboptimal outcomes.

A few core areas of focus support the success of any implementation: alignment of stakeholders, streamlined governance, and a continuous laserlike focus on value and project objectives.

Because of the type of risks at stake (breach of personal data, for instance), states may want to begin by conducting an assessment to ensure that IT requirements, business impact, and organizational change are all adequately planned and managed. Such an assessment can help states shape projects that successfully deliver the anticipated benefits on time and on budget.

The assessment's focus depends on where the state is in its IES journey:

— For states that have not initiated an IES project or are unsure whether a health and human services systems integration is right for them, they could conduct an options analysis that looks at the degrees of integration and weigh the benefits versus risks along the project spectrum.

States may want to begin by conducting an assessment to ensure that IT requirements, business impact, and organizational change are all adequately planned and managed.

— For states in early planning stages, the assessment might focus on an independent cost-benefit analysis focused on the project's scope. This initial stage could also include securing stakeholder alignment, setting up the program management office, and establishing clear governance structures to support data–driven decision making.

— For states that have started an implementation, the assessment might focus on identifying potential strategies to accelerate timelines, taking a customer-journey lens to redesign business processes that would be affected once the new IES is operational, or conducting an organizational health assessment to support a "last-mile adoption." The state can ensure that staff and eligibility workers have the capacity, readiness, and capabilities to use the new system.

— For states that have completed an implementation, the assessment might focus on researching innovations that could significantly improve caseworker or constituent experience and upgrading capabilities that improve the integrity of data and system performance while optimizing the cost of system maintenance.

Five observations for integrated eligibility system implementations

Five observations can inform individual state's actions both at the beginning of an IES implementation as well as during any necessary course corrections if an implementation derails (see observation five).

Observation one: Manage execution risk by focusing on business value
While unforeseen risks may be unavoidable, there are two things states can do to significantly improve the way they approach projects and management to achieve the desired business value: increase transparency by focusing on leading performance indicators and incorporate the appropriate project management tools and processes.

States can move beyond the traditional project management office (PMO) mind-set and independent verification and validation focus by taking four distinct steps.[3]

Own the program
A major issue with IES and other large technology-enabled programs is states' reliance on system integration or implementation vendors to manage the program. Vendors often do this in addition to their typical system development responsibilities, including implementation and roll out. This reliance may create several challenges for both parties.

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[3] This approach asks states to assess whether they're building the right system and if the system they're building is right for the services and programs needed.

First, one of the key program management tasks (and factors of success) is managing and limiting project scope and workload. Assigning this responsibility to vendors could lead to perceived or actual conflict of interest. Second, states need objective and independent oversight and management of the system integrator's tasks—often the largest portion of program spending. Third, states might focus on acquiring the system or technology rather than the business benefits. Furthermore, acquiring the necessary stakeholder and change management support may also fall to the wayside.

States should own and manage these programs, ensuring that the PMOs are dedicated to the cause and have the proper resources and cross-functional skills needed for success. One northwestern state created an internal PMO with dedicated resources, resulting in on-time and on-budget delivery consistent with business needs.

Install early warning systems
Early warning systems identify important factors that can help predict the likelihood of implementation success and determine concerns. McKinsey research established 13 key factors (for instance, level of executive support and degree of major stakeholder alignment) that determine the health of a large IT implementation.[4] These factors can be assessed in a variety of ways: surveys, interviews, and pulse checks. The early warning system can provide an objective risk score as well as a "risk radar" that highlights the critical issues needing attention.

Employ project management centers of excellence
These centers can instill best practices for establishing and managing large, complex projects, and they can use communication and training tactics to disseminate knowledge and improve organizational capabilities. For instance, states might set up a war room or control tower to monitor progress, continuously track known issues, identify new issues, and ensure that solutions are being developed in both cases. One eastern state was able to quickly adjust staffing when their call center experienced volume at more than 50 percent of initial projections using war-room data feeds, which provided real-time updates.

Focus on changing hearts, not just skills
Change management and changing frontline behavior is as much a hearts-and-minds exercise as it is a training question. Success requires that project leaders be hands-on changemakers. The first step in change management is to assess the organizational readiness of the people and systems that will transition from siloed IT and work processes to the IES. One southwestern state was able to apply the results of such an assessment to help inform itself of the types of programs and communication channels required to promote adoption and transform mind-sets and behaviors. The assessment also provided the state with insights on skill gaps that need to be addressed to ensure successful implementation and adoption of the IES. As such, the state integrated staff and eligibility workers into the transformation effort from the beginning, ensuring that their inputs were incorporated alongside system modernization. Doing so put the state on the path to success.

Observation two: Consider best-fit integration approach based on business case
There's no universal approach for an IES strategy. And the concept of integration has taken many forms since 2018—given the OMB A-87 waiver expiration—increasing states' share of system development funding for SNAP and TANF. For example, the level of integration can span from a consolidated user portal and multibenefit application, to shared services on the back end (such as document management or verifications), to the development of a single system that houses a portfolio of health and human services programs. Choosing the approach should be based on the most appropriate fit given the business case for the IES and the state's desired level of effort.

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[4] For a complete list of the 13 key factors, see Exhibit 3 in "Delivering large-scale IT projects on time, on budget, and on value."

To develop a business case for an IES project, states should identify the specific benefits an IES project will provide to the users.

To develop a business case for an IES project, states should identify the specific benefits an IES project will provide to the users. This can inform a set of alternative approaches for states to consider, such as improving work sequence and project prioritization.

Based on 2018 McKinsey research, the spectrum of options that states have used or considered (Exhibit 1) include:

— *No integration:* Twelve percent of states have not initiated system integration efforts for health and human services. In these instances, states might have a lower degree of overlap between the populations that use different programs, particularly in states that did not expand Medicaid, or there might be limits to the level of information that can be shared across programs.

Instead, states are focused solely on modernizing their Medicaid eligibility systems, including requiring eligibility determinations for those who qualified for Medicaid because of their modified adjusted gross income and those who may be eligible for other reasons (aged, blind, or disabled eligibility status) together on one platform. States that have not pursued integration might consider whether it is worth exploring a light integration model (for instance, shared services such as document imaging, a consolidated portal, shared verification data, or a single call center) focused on shared functionality.
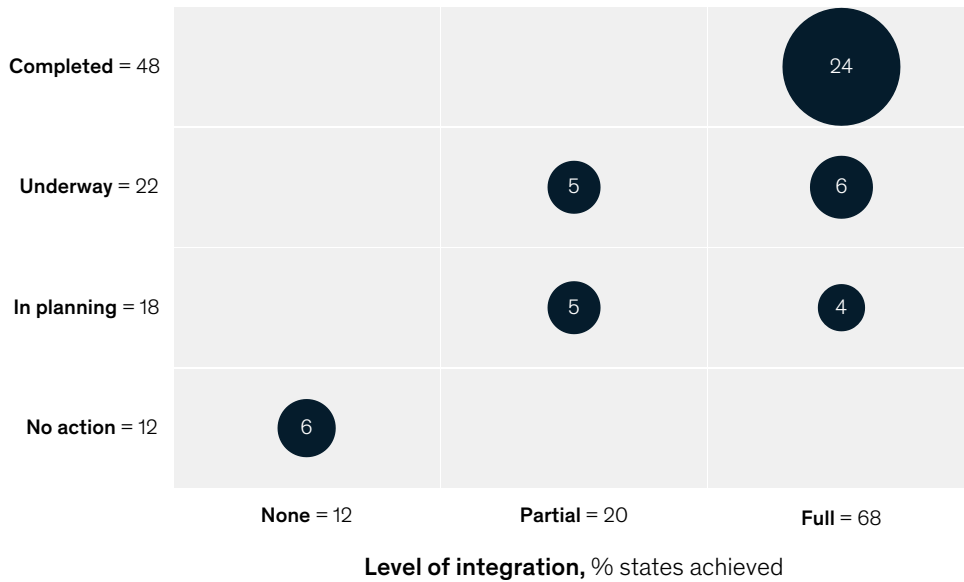
— *Partial integration:* Twenty percent of states have decided on a partial or light integration model. Such a choice is typically justified when a light integration operating model would deliver the fastest impact or available funding and time for integration is limited.

— *Full integration:* Sixty-eight percent of states have opted for full integration. Twenty-four of the 34 states that opted for full integration have completed their efforts, with ten more states in various stages of planning or implementation. In these cases, there is often a high degree of overlap between the constituents served by programs such as Medicaid, SNAP, and TANF, making a single access point viable. This indicates that program administration can be consolidated at the local level to support scale efficiencies. Looking forward, these states could further support their eligibility workforce through increased integration of supplementary technology capabilities using ancillary systems: document imaging, notices, and identity management. A technical variation of this model designs and creates a modular, multivendor system that supports all programs; one northeastern state is currently pursuing this approach.

Exhibit 1

A majority of states have opted for full integration.

Bubble size is based on number of states

Status of integration efforts, % states

	None = 12	Partial = 20	Full = 68
Completed = 48			24
Underway = 22		5	6
In planning = 18		5	4
No action = 12	6		

Level of integration, % states achieved

- Choice of level of integration is specific to each state—there is no "one right answer."
- Irrespective of the status or level of integration, majority of the states could be (and, in fact, have been) planning refreshes and continuous improvements to their IES.

Observation three: Control cost through strategic choices
IES projects, as with any large-scale transformation, are complex and costly. In some states, the average annual maintenance and operations cost can be up to $100 million, not accounting for additional spending on county- or state-specific enhancements. Implementation and recurring system integration costs can be controlled—and often reduced—through a variety of assessment techniques.

Don't reinvent the wheel—reuse
Scrutinizing each element in a build (applications, hardware, and software) and examining sources of reuse can drastically reduce implementation costs.[5] For example, one state wanted to build a new statewide beneficiary portal for its IES. However, an analysis of functionality and features indicated that the state could use an existing portal and apply user experience and design principles from its health insurance marketplace. The state created a new portal for less than 75 percent of its estimated cost by conducting an independent assessment that mapped pain points and documented current and aspirational client journeys (Exhibit 2).

Minimize scope
Too often in large IT projects, scope and system requirements eventually outstrip the underlying economic rationale, resulting in costs exceeding benefits. This issue is often amplified during execution when unanticipated developments undermine the project's original assumptions.
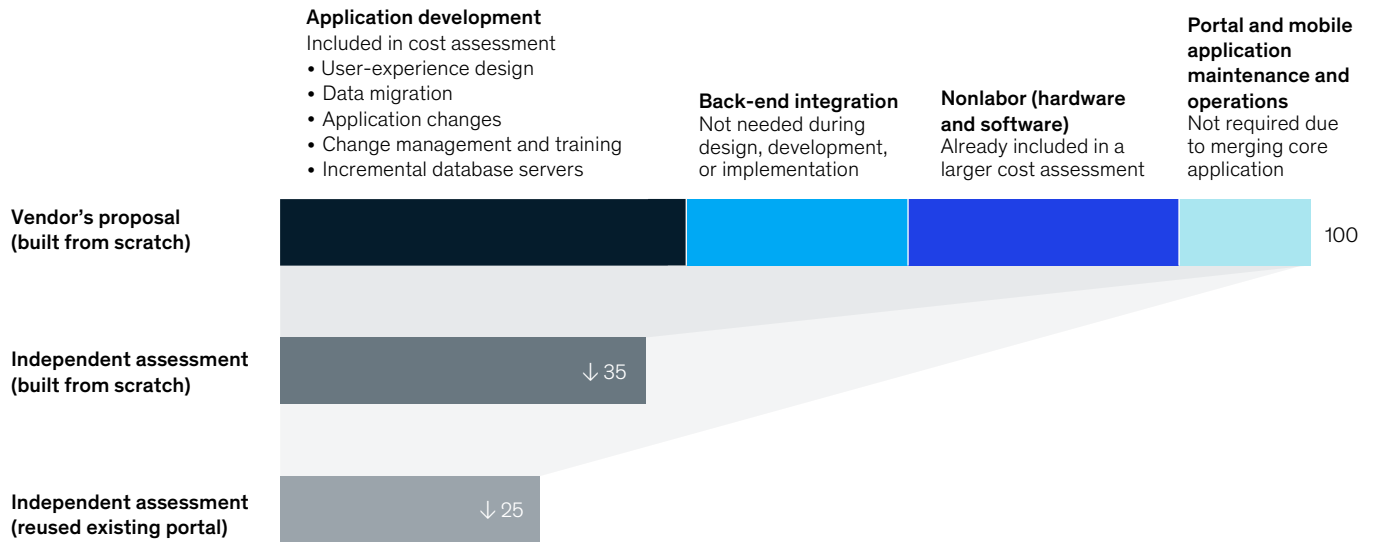
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[5] Reuse is a required condition for accessing the 90 percent federal match. See Timothy Hill, "Centers for Medicare & Medicaid Services letter to State Medicaid Director," April 18, 2018, medicaid.gov.

Exhibit 2

One state found reusing an existing portal costs 75 percent less than a vendor proposal built from scratch.

Disguised state example

Cost comparison: vendor proposal vs independent assessment, % of total cost[1]

Application development
Included in cost assessment
• User-experience design
• Data migration
• Application changes
• Change management and training
• Incremental database servers

Back-end integration
Not needed during design, development, or implementation

Nonlabor (hardware and software)
Already included in a larger cost assessment

Portal and mobile application maintenance and operations
Not required due to merging core application

Vendor's proposal (built from scratch) — 100

Independent assessment (built from scratch) — ↓ 35

Independent assessment (reused existing portal) — ↓ 25
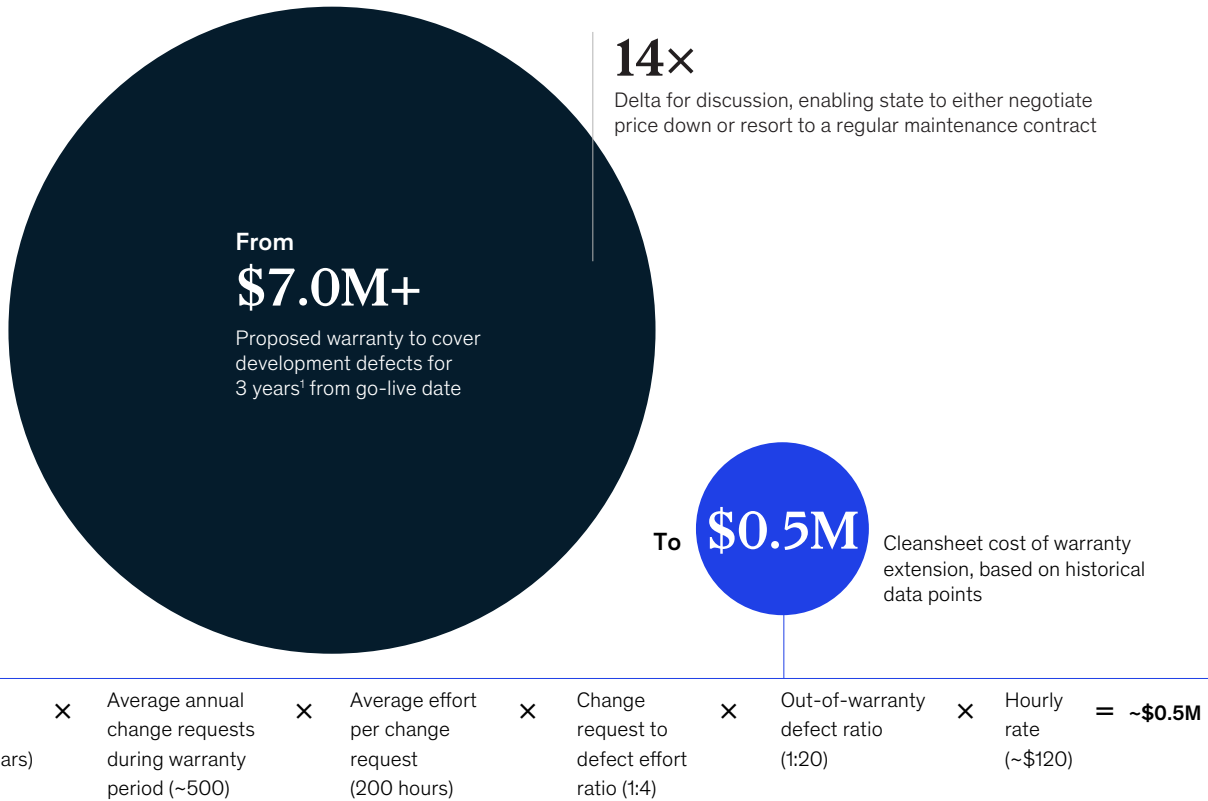
[1] 100% = >$10 million.

Organizations should start by building a granular scope that includes unmet business needs (such as shifting the majority of applicants from in-person to online) and desired technical functionality (such as real-time eligibility determinations). Then, the economic benefits of the IES project should be incorporated into each must-have business need and prioritized based on the estimated business value. Doing so can help limit system requirements that are not critical for go-live and reduce overall costs. For example, one state was able to reduce the level of priority for more than 60 percent of requirements through a rigorous assessment of must-haves that stripped away nonessential reports, batch jobs, and user-interface changes.

Unpack and examine overhead costs
Many people believe that most of the up-front costs needed to build an IES stem from the need to make technology changes. In our experience, however, this is not always the case. Technology changes such as application design, development, and testing tend to account for about 30 to 40 percent of overall one-time investment costs. Identifying and examining the reasons for the remaining 60 to 70 percent of costs can reveal opportunities for optimization.

In one case, a state analyzed a proposed warranty extension and realized that the additional system warranty would have cost 14 times more than using the existing vendor contract. This transparency allowed the state to decide whether to negotiate the price of the warranty or opt for solving defects discovered under a regular maintenance contract (Exhibit 3). The state chose the latter option in this case, but different states may take different directions.

Exhibit 3

An additional system warranty for fixing bugs was 14 times more expensive than the existing vendor contract.

14×

Delta for discussion, enabling state to either negotiate price down or resort to a regular maintenance contract

From

$7.0M+

Proposed warranty to cover development defects for 3 years[1] from go-live date

To **$0.5M** Cleansheet cost of warranty extension, based on historical data points

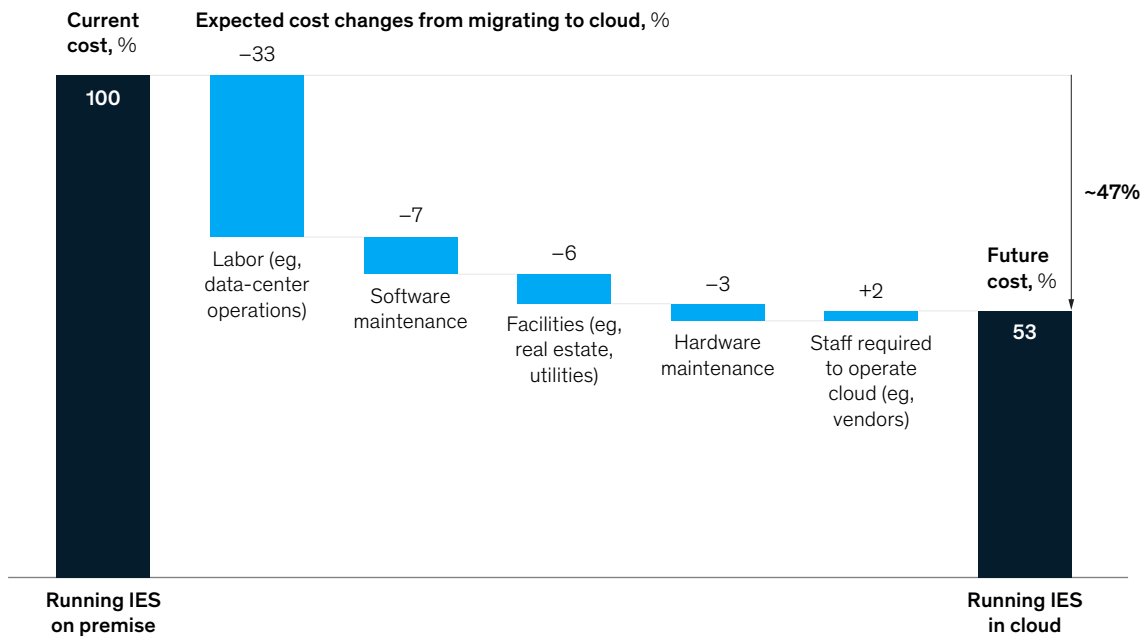| Warranty coverage term (3 years) | × | Average annual change requests during warranty period (~500) | × | Average effort per change request (200 hours) | × | Change request to defect effort ratio (1:4) | × | Out-of-warranty defect ratio (1:20) | × | Hourly rate (~$120) | = | ~$0.5M |

[1]Compared with the standard 3 to 6 months after go-live.

Use emerging technology solutions
Many organizations lack the industry and technology knowledge to understand the full range of potential solutions and identify best-in-class vendors for system development. This is especially true with the emergence of next-generation technologies, such as cloud computing, robotic process automation, and artificial intelligence (AI). Conducting due diligence and identifying feasible solutions before the project begins can result in significant efficiency improvements; it also meets the federal match requirement for an alternatives analysis.

Our research shows that employing cloud-based infrastructure can reduce data center–related costs by about 50 percent and provide additional benefits of scalability and options for future innovation (Exhibit 4). For instance, an organization might discover it could use a cloud provider's suite of add-on functionalities, such as machine learning, to improve fraud detection.

Exhibit 4

Expected reduction in data-center costs due to cloud use is approximately 47 percent.

Current cost, %

Expected cost changes from migrating to cloud, %

−33

100

−7

−6

−3

+2

~47%

Future cost, %

53

Labor (eg, data-center operations)

Software maintenance

Facilities (eg, real estate, utilities)

Hardware maintenance

Staff required to operate cloud (eg, vendors)

Running IES on premise

Running IES in cloud

Unbundle design and development requirements

Separating IES procurement into components (maintenance and operations, discrete system integration efforts, change management and training, and hosting services) increases optionality and flexibility, providing greater control over vendor partnerships. One state was able to discretely obtain tasks from separate vendors such as the development of their portal, the modernization of their contact center, the refresh of their reporting and analytics engine, and the enhancement of their business rules.

This approach ensures that system integrators compete given the quality and experience of their teams. It forces accountability while providing transparency into total costs. Furthermore, because of the evolving nature of policies and regulations for large IT systems, numerous change requests are likely to arise during system upkeep. By unbundling design and development requirements from maintenance needs, states can avoid unnecessary cost and time overruns. Indeed, states commonly do not have enough technical staff to manage multiple vendors and implement thoughtful work sequencing. Establishing proper governance such as a dedicated change control board and incorporating independent vendor oversight can help states with the unbundling process.

Observation four: Deploy innovations outside of core systems

States may find improving the public's experience using IES cost-prohibitive due to the tightly coupled architecture of legacy IESs in which changing one component sets off a chain reaction of other changes needed. However, there are several examples of how customer experience can be improved by innovating outside of the core.[6] States employing any of these innovations should ensure they comply with the requisite security and privacy measures as well as data regulations. Access rights to sensitive health and medical

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[6] The "core" refers to the primary eligibility system platform, rules engine, and data warehouse of a technology system.

information should be protected under HIPAA, for instance, and states may want to consider using a data governance software program that enables access rules.

Videoconferencing and electronic or telephonic signature technology
People with limited mobility or transportation options can apply for benefits using online eligibility interviews or by completing online applications with telephonic signature functionality. These options remove the need to visit an office in person or mail in paper forms.

User-centric lobby management systems with self-check-in kiosks
These kiosks allow people to swipe a benefits card to check in instead of entering their social security numbers and self-scanning documents, cutting down on wait times. Once people are finished, they receive a confirmation receipt. This process is like making deposits through an ATM.

Statewide or county-wide view of beneficiaries via a centralized data hub
A centralized data hub, similar to an IES, provides a comprehensive view and serves as a repository of data for programs.

One large urban county used this functionality to enable secure and legally compliant cross–program and cross–department data sharing. Services ranging from Medicaid, SNAP, and TANF to mental health, public
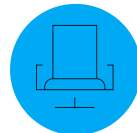
Exhibit 5

One western state observed several innovations outside the core integrated eligibility system.
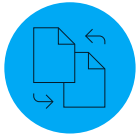
Task management
Tool integrated with lobby and workforce management systems to automate task assignment and monitor performance
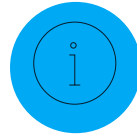
Remote administration
Remote signatures and form completion during video interviews for cash aid programs

Shared imaging
Consistent county-wide customer experience through shared imaging system across agencies

Customer kiosks
Customer-centric lobby management system with advanced functionalities (eg, customer self-scans documents)

Integrated workflow tools with dashboards
Task management, imaging, and workflow (eg, live view of lobby, phone, online customers) to promote business processes, thus powering decision making

Employment services
Advanced job search capabilities (eg, integrations with multiple local job search sites) for employment-service cases

Workforce management
Real-time workforce tracking manage case coverage and task distribution

Image recognition
Automated indexing and sorting of imaging through comprehensive optical character recognition, reducing customer processing times from an otherwise manual process

Cash assistance tools
Tracking and job search for employment services and cash assistance customers via home-grown, customized case management (eg, for community-based organizations)

Data sharing
Cross-departmental share of data for comprehensive view on customer profiles via data hub

health, and family services were integrated and accessible to approved eligibility workers. This integration also provided wraparound services and functionality.

The county's integration included:

— *A "break the glass" button.* In a medical emergency or in the case of a 211 call, an eligibility worker or supervisor can quickly find an individual's personal and health history from multiple data sources. The information can be shared with first responders so they can act quickly, using the information to potentially save the patient's life. Of course, first responders are designated with specific access rights, ensuring compliance with audit and personal data regulations.

— *Cross-department notes.* A worker from another department, such as mental health, can enter a flag (for example, a beneficiary is verbally abusive) that can be viewed by eligibility workers, first responders, and justice clerks.

One western state implemented a range of innovations outside the core to benefit eligibility workers and customers alike (Exhibit 5).

Customized, detailed employment–services case management systems
These systems can help caseworkers intervene in targeted ways, such as suggesting an appropriate job club or résumé and interview class based on an individual's specific needs, rather than simply checking the box on program requirements. In addition, the system can pull from a recommended list of community partners to pick the best program for beneficiaries.

Automate processes
By automating initial data processing and prioritizing Medicaid referrals from external sources, states can reduce application processing times and improve the quality of service for the public.

Observation five: Roll out new technical functionality early and often
Focusing on providing value early on when selecting an IES implementation approach helps organizations prioritize modules that best support that value.

An organization can begin obtaining implementation program benefits early and often, providing insights on where to improve and what modules might help, thereby refining the project's return on investment. Second, these projects typically run for many years; ongoing benefits analysis helps stakeholders see continued value and remain interested throughout the entire project. Finally, value delivery analysis ensures that should the project be terminated before the end date, the investment will not be a total loss, and the improvements that were made will provide sustained benefits.

Once modules are identified and prioritized, they can be built using rapid iteration, focusing first on creating a minimum viable product that provides fundamental value, such as faster processing, to program beneficiaries and eligibility workers.[7] Customizations, supplemental capabilities, and other enhancements can be included later.

The implementation rollout should then focus on providing high-value functionality to eligibility workers as early and often as possible. One way to do this is by testing the new system functionality in select pilot areas

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[7] Agile development methods, such as rapid prototyping and minimum viable products, are established best practices for rolling out products early and often. However, most states have historically chosen more monolithic, waterfall approaches.

Exhibit 6

Different states' approaches to integrated eligibility system (IES) development and rollout can vary greatly.

Eastern state
- Built new IES to integrate with HIX[1]
- Used state IT staff and agile approach rather than an SI[2]
- Managed by human services agency but operated in-house by state IT office

Northeastern state
- Built IES hybrid on top of existing mainframe
- Separated SI requirements and vendors
- Overseen by human services agency but operated by SI

Western state
- Consolidated 3 separate IES, though minimal HIX integration
- Separate SI and requirements vendors
- Conducted full independent analysis of alternatives
- Managed by 3 pre-existing county consortia; consolidated system operated by SI

Eastern state
- Built new IES then added in modified adjusted gross income Medicaid
- Based on a commercial off-the-shelf product with SI
- Overseen by IES program office but operated by SI

[1] Health insurance exchange.
[2] System integrator.

and iterating continually. In addition, the rollout should create mitigation strategies in case of unforeseen disruptions and execution challenges.

One large northeastern state considered different IES options based on approaches other states used, including a single monolithic IES built by a system integrator, an IES built by dozens of development teams from multiple vendors, and a hybrid of both approaches (Exhibit 6).[8] Once the state decided to take an iterative, modular approach, it needed to decide whether to roll out the new functionalities by module, such as beneficiary portal, data management, and client index, or program by program. The decision-making process required technical and program stakeholders to balance different priorities and preferences. In the end, the state went with a hybrid of underlying functionality first, striking a balance between supporting underlying technology and prioritizing early results for at least one program.

States have an exciting opportunity to implement IESs that dramatically simplify operations, reduce costs, and improve beneficiary and worker experience. While the challenges are significant, success is possible through strong stakeholder alignment, streamlined governance, and a continuous laserlike focus on value that incorporates observations and lessons learned from an array of similar large-scale IT implementations.

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[8] All of these IES options would work in a modular fashion against clearly defined business, technical, and interoperability requirements to ensure integration.

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