PERFORMANCE AUDIT REPORT

Information Technology Consolidation: Evaluating Whether Consolidating Executive Branch IT Services is Feasible and How Much It Might Save

R-19-006

Legislative Division of Post Audit

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HOW DO I REQUEST AN AUDIT?

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To: Members of the Kansas Legislature

The Legislative Post Audit Committee authorized this audit at its April 25th, 2018 meeting. Representative Jeff Pittman requested this audit, which answers two questions:

1. To what extent can executive branch information technology services be consolidated, and what types of challenges would have to be addressed?
2. What resources would be required to consolidate executive branch information technology services, how would they be paid for, and how much would consolidation save the state?

We evaluated the benefits, challenges, and potential fiscal impacts of these efforts as well as other states' experiences with information technology consolidation. The audit team was Chris Clarke, manager; Andy Brienzo, supervisor; and Amanda Schlumpberger, Josh Luthi, and Will Pope, auditors.

We conducted this performance audit 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. Overall, we believe the evidence obtained provides a reasonable basis for our findings and conclusions based on those audit objectives.

Generally accepted government auditing standards require auditors to avoid situations that could lead reasonable and informed third parties to conclude the auditors are not independent. As a state agency, the Legislative Division of Post Audit is a consumer of services from OITS. In fiscal year 2018, the division paid OITS approximately $9,000 for various services (out of about $2.3 million in total expenditures for the division). However, we do not think this affected the impartiality of our findings, conclusions, judgments, and recommendations.

Also, audit standards require that we report on any work we did related to internal controls. We reviewed controls related to compliance with federal data confidentiality requirements and the efficiency and effectiveness of executive branch information technology services.

If you are interested in learning more, our office has more information than we could fit into this report. If you would like an individual briefing or a committee presentation, please call Andy Brienzo or me at 785.296.3792.
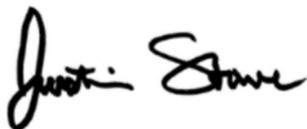
Justin Stowe
Legislative Post Auditor

Information Technology Consolidation: Evaluating Whether Consolidating Executive Branch IT Services is Feasible and How Much It Might Save

The Office of Information Technology Services (OITS) has already started to consolidate IT services for cabinet-level executive branch agencies. OITS' consolidation plan will likely increase state costs instead of achieving savings because it will include updating the state's very old IT infrastructure. The estimated size of the cost increase varies from about $2.6 million to about $38.4 million annually depending on how many IT staff are reduced as a result of consolidation.

<u>Kansas' Current IT Consolidation Plan</u>

The Office of Information Technology Services (OITS) has been consolidating IT services for cabinet-level executive branch agencies since 2011.

- Historically, executive branch agencies have had significant control over their IT staff and services. Agencies could get IT services from OITS, agency IT staff, or third-party vendors.

- The state's most recent IT consolidation efforts began in 2011, when Executive Order 11-46 directed executive branch IT staff to report to the executive branch chief information technology officer. OITS began drafting consolidated IT service contracts in 2013.

- OITS' current consolidation plan will have OITS manage or directly provide enterprise-level (i.e. statewide) IT services, such as data center and IT security services. Individual agencies will retain responsibility for agency-specific IT functions, such as application development and support. As **Figure 1-1** shows, OITS' plan will provide services through both OITS staff and third-party vendors.

- OITS' plan will implement four of the five recommendations for executive branch IT consolidation included in the 2016 Alvarez and Marsal statewide efficiency study. OITS may consider addressing the fifth recommendation, related to application development and support consolidation, in the future.

	Figure 1-1 OITS' partially implemented consolidation plan provides IT services to cabinet agencies with OITS staff and third-party vendors.		
IT Service	**Agencies Required to Use New Service Model** (a)	**Status of Transition to New Service Model**	**How Service Will Be Provided**
Application Development and Support	This service is not being consolidated.	N/A	Agencies will continue to develop and support their own applications.
Data Center Services (b)	Cabinet-level executive branch agencies	Ongoing	Third-party vendor
Desktop Computer Procurement		Completed	Third-party vendor
Email Services		Completed	Third-party vendor
Mainframe Services		Completed	Third-party vendor
Network Services (c)		In Planning	Third-party vendor
Security Services		Ongoing	OITS staff
Service Desk		Ongoing	OITS staff

(a) Other agencies, such as non-cabinet executive branch agencies or elected officials' agencies, may choose to opt in to these service models at their discretion.
(b) Under K.S.A. 75-4705, OITS must perform central data processing for all non-Kansas-Board-of-Regents entities (with exceptions approved by the executive branch chief information technology officer). State agencies must therefore generally use OITS' data processing services, but not because of IT consolidation.
(c) Under K.S.A. 75-4709, state agencies must use telecommunication services OITS coordinates. Changes to network services will therefore likely affect non-cabinet agencies, but IT consolidation is not specifically compelling them to use new services.
Source: LPA summary based on review of OITS' documentation and interviews with OITS officials.

OITS' plan does not include non-cabinet state agencies and institutions such as the Kansas Corporation Commission, the Secretary of State's Office, or the University of Kansas.

- Non-cabinet agencies, including smaller executive branch agencies and elected offices, are not included in OITS' current plan. These agencies obtain IT services primarily from internal agency IT staff and third-party vendors, but statute still requires them to use OITS' network and IT project monitoring services. These agencies may also choose to use other consolidated services. For example, many non-cabinet agencies use OITS' consolidated email service.

  o Smaller executive branch agencies generally fall under the authority of the Governor, who could require them to utilize OITS' consolidated services.

  o Elected officials such as the Secretary of State or the Attorney General have the authority to independently choose IT services for their offices.

- Kansas Board of Regents (KBOR) institutions, including state universities and community colleges, are excluded from OITS' plan. Statute requires these institutions to use OITS' IT project monitoring services, but they otherwise obtain IT services almost exclusively from internal IT staff or third-party vendors.

Stakeholders we surveyed told us there are challenges with including non-cabinet agencies in IT consolidation plans.

- We surveyed officials from 10 state entities (four cabinet agencies, four non-cabinet agencies, and two KBOR institutions) to get their opinions on OITS' consolidation efforts. We selected agencies and institutions that varied with respect to size, IT spending, and IT service needs except the elected officials we surveyed, who we chose randomly. The opinions surveyed officials expressed are not projectable to all state entities. Non-cabinet agency and KBOR institution officials described challenges with including these types of entities in IT consolidation efforts.

- All surveyed officials from non-cabinet agencies and KBOR institutions had concerns about using OITS' consolidated services. They told us that using OITS might impact their ability to accomplish their missions within their current budgets. For example, officials from two non-cabinet agencies questioned whether they could afford OITS' outsourced data center services.

- Non-cabinet agencies and KBOR institutions often have specific needs and functions requiring specialized services OITS is not equipped to deliver. For example, the two KBOR institutions we surveyed include thousands of IT users and dozens of research departments with unique IT needs that OITS does not have experience with, such as supercomputers required for research.

- KBOR institution and OITS officials told us KBOR institutions are eligible for academic IT software and hardware discounts that OITS cannot get. These officials said this often allows these institutions to obtain IT services less expensively on their own than through OITS.

Cost of OITS' Current IT Consolidation Plan

OITS' plan will likely increase agencies' costs mostly because the state needs to replace outdated IT infrastructure.

- According to OITS officials and their consultants, much of the state's IT infrastructure is outdated, creating a "technology debt" for the state.

  o Excipio, OITS' former IT consultants, reported in December 2015 that more than 70% of the state's IT infrastructure was beyond the end of its useful life. They also reported the state deferred millions of dollars in IT costs. For example, Excipio estimated the state deferred about $3.5 million in data center disaster recovery costs annually. OITS officials reported these costs have been deferred each year since at least fiscal year 2015.

o OITS officials agreed the state's IT infrastructure is outdated. For example, officials told us 54% of the state's network infrastructure is in "end of life" status, meaning it no longer receives manufacturer support. Further, they said an additional 36% of the state's network infrastructure will enter this status within five years.

o Any state IT infrastructure changes will likely increase agencies' IT costs because those changes will require infrastructure modernization. This modernization is necessary regardless of how agencies obtain IT services going forward. Increased IT costs are likely inevitable whether OITS consolidates cabinet agencies' IT services or not.

We estimate OITS' consolidation plan may increase cabinet agencies' IT costs by between about $2.6 and $38.4 million annually, depending on how many IT staff positions are eliminated.

- As described more fully beginning on page 6, we could not definitively determine how much the state spends on IT services and therefore how much OITS' plan might cost or save the state. Using the best available data, we estimate cabinet agencies spent about $150.4 million total on IT services and labor in fiscal year 2018 and may spend between about $153 and $188.8 million annually on such services in the future—an annual increase of between about $2.6 and $38.4 million. The low end of the cost increase ($2.6 million) would require the state eliminating up to 232 full-time-equivalent IT positions and outsourcing to third-party vendors. The high end cost estimate eliminates significantly fewer state staff. **Figure 1-2** shows the estimated annual costs for each IT service included in OITS' consolidation plan.

Figure 1-2 We estimate OITS' consolidation plan may increase cabinet agencies' IT costs by at least $2.6 million annually.		
IT Service	**Minimum Estimated Annual Costs/Savings (Millions)**	**Maximum Estimated Annual Costs/Savings (Millions)**
Service Desk	$2.0	$2.0
Data Center Services	$1.9	$11.2
Network Services (a)	$1.5	$17.6
Enterprise-Level Security	$0.4	$0.4
Email Services	$0.0	$0.0
Desktop Computer Procurement	($1.4)	$4.5
Mainframe Services	($1.8)	$2.7
Total Estimated Annual Cost	**$2.6**	**$38.4**

(a) Our outsourced network cost estimate would be shared by all agencies using network and telecommunication services through OITS, not just cabinet agencies. OITS was still planning the outsourced network RFP when we conducted our audit work. This made it difficult to determine how future costs may be shared across agencies.
Source: LPA estimations based on Department of Administration data and agency-reported staffing expenditures.

- For the service desk, we estimate an increase of about $2 million because agencies will be paying for an enterprise-level service that did not exist before. Previously, agencies' internal IT staff fulfilled this function. OITS' consolidated service desk requires agencies to pay a new monthly fee per employee.

- For data center services, we estimate an increase of between about $1.9 and $11.2 million because agencies will be paying for upgraded hardware in vendor-managed facilities that are more modern than the state's outdated data centers. The actual cost for this service will depend heavily on the extent to which agencies utilize it.

- For network services, we estimate an increase of between about $1.5 and $17.6 million. As with the data center, this is primarily because OITS needs to replace outdated infrastructure. This is a preliminary estimate, however. As of February 2019, OITS planned to update this service through outsourcing to a third-party vendor.

- We estimate an increase of about $0.4 million for enterprise-level IT security services because OITS officials told us they plan to charge agencies on a per-employee basis. Agencies already pay for enterprise-level security services, but OITS currently charges agencies based on how they consume network services. By instead charging agencies per employee, OITS will require more entities to pay for this service.

- For email services, we estimate no future cost changes since cabinet agencies already pay for this consolidated service.

- For desktop computer procurement, we estimate a change between a decrease of about $1.4 and an increase of about $4.5 million. The actual cost for this service will depend on whether agencies can eliminate desktop support staff and the specific computer models agencies choose to lease.

- Finally, for mainframe services, we estimate a change between a decrease of about $1.8 and an increase of about $2.7 million. The actual cost for this service will depend on whether agencies can eliminate mainframe support staff. OITS officials told us the state transitioned to outsourced mainframe services prior to our audit, so agencies may have already experienced some of the savings associated with this transition.

- To limit the cost increase associated with OITS' plan, the state would need to partially offset higher service costs through IT staff reductions. Because third-party vendors will provide many of the services consolidated under OITS' plan, the state may need fewer IT staff.

  - OITS and the cabinet agencies would likely need to eliminate up to 232 full-time-equivalent IT positions (relative to the fiscal year 2016 staffing data Excipio compiled) involved in mainframe, network, desktop computer, and data center support to limit the cost increase to about $2.6 million. The state may no longer need these positions if OITS outsources these services. OITS officials told us agencies have already eliminated some IT staff, so the state

may have already experienced some of the staffing-related savings included in our estimates.

- o However, it is unlikely the state will be able to fully achieve these staffing reductions. Both OITS and agency officials told us they currently do not have enough IT staff. In some cases, agency IT staff have multiple responsibilities, so eliminating them because OITS has outsourced their primary responsibility may inadvertently affect other agency operations. Further, no data exists that could comprehensively identify all agency IT staff.

- o If OITS and the cabinet agencies retain all their current IT staff despite OITS outsourcing several consolidated IT services, the annual increased cost to the state may be as high as about $38.4 million. This would increase total annual IT service and labor expenditures from about $150.4 million to about $188.8 million.

We could not definitively determine how much OITS' plan will cost or save the state because no one comprehensively tracks the state's IT expenditures.

- When attempting to calculate the state's annual IT expenditures, we found no entity is responsible for tracking statewide IT spending. Excipio encountered a similar problem in 2015 when evaluating the cabinet agencies' and OITS' IT spending.

   - o The state's accounting system does not clearly capture all IT expenditures. Although this system has IT account codes, agencies do not always use these codes appropriately. Further, some account codes, such as the "professional services" codes, may include both IT and non-IT expenditures.

   - o The state's account codes also do not capture labor costs, and not all IT positions are readily identifiable. For example, not all IT positions have IT-specific titles. Further, non-IT staff may perform limited IT-related tasks.

- We used account codes, information submitted by agency officials and OITS, OITS' contracts with third-party vendors, and Excipio's prior work to estimate how much agencies spent on IT in recent years and how OITS' consolidation plan might affect agencies' IT spending.

   - o To estimate agencies' IT service expenditures, we used a modified version of Excipio's account code methodology. While the account codes are imperfect, they are the only way to examine the state's IT spending without working with each agency individually. We believe we were able to identify and include only the account codes most relevant to IT services.

   - o To estimate agencies' IT labor expenditures, we used a linear model based on self-reported data from the agencies we surveyed.

   - o To estimate how OITS' plan might affect agencies' IT expenditures, we reviewed OITS' contracts with its third-party vendors to understand how those vendors will charge the state. We also reviewed Excipio's prior analysis of what consolidation may cost or save the state, including the fiscal year 2016 staffing data Excipio compiled. Based on this information and

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information provided by OITS and agency officials, we estimated how much each consolidated service may cost agencies in the future and compared that to current estimated expenditures.

- It is likely no one centrally tracks the state's IT expenditures because agencies have historically been responsible for managing their own IT services and staff. Agencies do not budget for or otherwise break out IT expenses, including for reporting purposes, so this information is not readily available. Further, the state has not added account codes for new IT services, so the codes themselves may not always be informative.

- Although we believe our IT spending estimates are reasonably accurate, a lack of clear expenditure data means no one can definitively determine the fiscal effects of OITS' consolidation plan.

Benefits and Challenges of OITS' Current IT Consolidation Plan

OITS' plan will modernize Kansas' outdated IT infrastructure and may also help the state monitor its IT spending and reduce the state's need to recruit and retain the same number of qualified IT staff.

- OITS' plan will improve the state's access to modern IT infrastructure by taking advantage of third-party vendors' updated facilities and hardware. As these vendors continually update their IT assets, the state will maintain access to modernized infrastructure. This will help reduce the state's IT risks, such as data center or network failures, and may make its IT spending more consistent.

- OITS' plan may help the state better understand and monitor its IT spending, staff, and assets, which no one currently tracks in a centralized, comprehensive way. Expenditures for outsourced services, for example, should be especially easy to track because vendors will bill OITS specific amounts for specified services. Additionally, OITS' plan may reduce the amount and variety of state-owned IT assets, making these items easier to inventory.

- OITS' plan replaces state staff with vendor staff, which will help the state address challenges with maintaining qualified IT staff. Both OITS and agency officials told us the state cannot recruit and retain enough IT staff, and OITS' plan will reduce the state's need for its own staff by offering access to vendor staff.

Officials we surveyed had concerns about the responsiveness, cost, and quality of some of OITS' consolidated services.

- We surveyed officials from 10 state entities (four cabinet agencies, four non-cabinet agencies, and two KBOR institutions) to get their opinions on OITS' consolidation efforts. To protect our survey respondents' anonymity, this report does not include specific information about our respondents, such as how many people we spoke to from each surveyed entity or how many people expressed the opinions outlined in the report. We also interviewed OITS officials.

- Agency officials who use OITS' consolidated <u>service desk</u> told us this service provides slow responses and poor performance, and that agency requests are often routed back to agency staff.

  - Every agency official we surveyed voiced a desire to maintain or regain control of their service desk.

  - At least one agency told us a slow service desk response jeopardized agency information security.

  - OITS officials we interviewed acknowledged the consolidated service desk had insufficient staff to promptly address agency requests. However, they told us OITS now has the data needed to better allocate state IT staff and hold third-party vendors accountable. OITS officials also said they intend to move agencies' IT service staff to OITS, although doing so may reduce their agency-specific knowledge.

- Some agency officials told us OITS' outsourced <u>data center</u> services might be cost prohibitive.

  - Many surveyed officials acknowledged at least some of their data storage hardware is outdated and that state data centers, such as the Landon State Office Building data center, fail to meet industry standards.

  - Some agency officials preferred to either accept the risks associated with operating outdated data centers or update their data center hardware on their own schedule, as opposed to paying more for quality data center services.

  - OITS officials we interviewed said outsourced data center services will provide modernized equipment and security at a cost comparable to what the state would spend to build an updated data center.

- Although surveyed officials expressed fewer concerns about OITS' consolidated email, mainframe, and desktop computer services, some noted these services have not provided savings or could be obtained less expensively from third-party vendors these agencies could contract with on their own.

- Some officials also told us OITS' network service is outdated, unreliable, and not competitive with market rates.

- Some surveyed officials expressed concerns that certain consolidated services do not meet federal requirements for the storage and transmission of confidential data, such as criminal justice or tax data. However, OITS officials said consolidated services are or could be made compatible with these requirements, and that some agencies' views are unnecessarily restrictive.

Surveyed officials also had more general concerns about OITS' ability to successfully oversee consolidation.
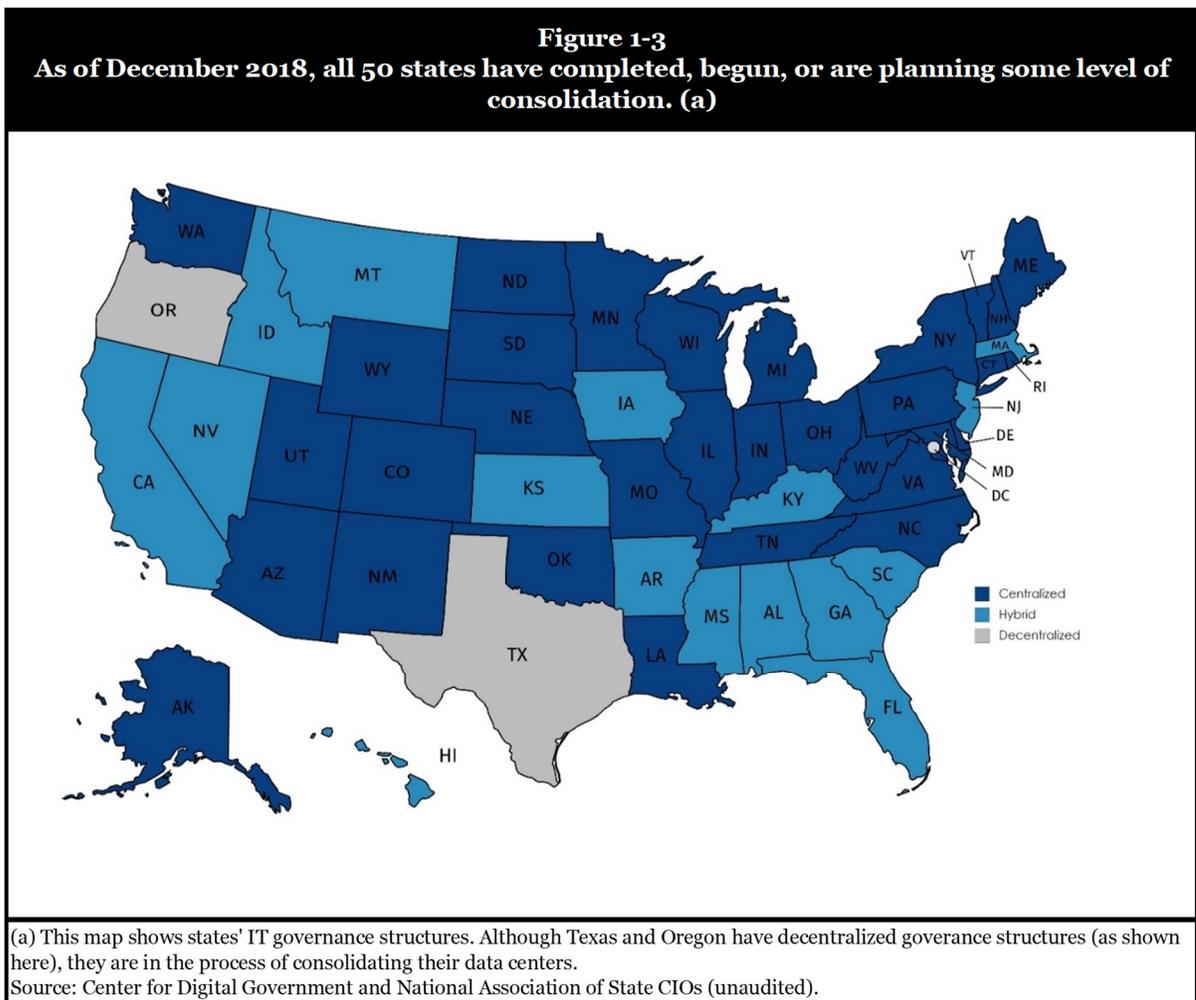
- Although agency officials voiced general satisfaction with the current executive branch chief information technology officer, they reported wariness about consolidation because they perceive OITS to have a poor track record with consolidation.

- Some officials told us OITS has made rapid changes without fully assessing their impacts or agencies' needs. They also said OITS has launched new projects before completing ongoing ones, making it more difficult to implement these projects. Some OITS officials acknowledged OITS has not always implemented projects successfully, reducing agencies' confidence in OITS' ability to do so.

- Agency officials reported dissatisfaction with OITS' communication practices both generally and about specific consolidation projects. Some officials said OITS does not share information well or does not communicate at all. They also told us OITS officials sometimes contradict themselves or suppress dissenting agency opinions about OITS projects. Although one OITS official we interviewed agreed communication with agencies should be improved, most said OITS communicates well.

- Agency officials told us they are concerned consolidation might reduce their control of specialized, agency-specific IT functions, affecting their ability to accomplish their agencies' missions. Further, cabinet agency officials told us requiring their chief information officers to report directly to the executive branch chief information technology officer effectively prevents them from advocating on their agencies' behalf.

- Agency officials believe OITS forces agencies to participate in consolidation regardless of the agency impact. Some told us they thought OITS' plan would produce "winners and losers," meaning larger agencies with better developed internal IT services would subsidize OITS' improvement of agencies that may not have previously managed IT as well. All surveyed agency officials said OITS should collaborate more with agencies rather than mandate change. By contrast, OITS officials we interviewed noted mandatory consolidation creates statewide standards and helps manage risk.

IT Consolidation in Other States

OITS' plan aligns with a nationwide trend toward greater IT centralization.

- According to national IT organization publications, all 50 states have completed, begun, or are planning some level of consolidation or shared services. States' IT governance structures fall into three categories: decentralized, hybrid consolidation, and centralized consolidation.

- A decentralized structure is characterized by agency IT departments providing or procuring most services for their own agencies.

- Hybrid consolidation is characterized by a combination of agency IT departments and a central IT organization providing or procuring services for agencies.

- Centralized consolidation is characterized by a central IT organization providing or procuring most services for agencies.

- Since 2016, the nationwide trend has been toward increasing centralization of state IT services. By the end of 2018, 64% of states had implemented centralized consolidation and 32% had implemented hybrid consolidation, as shown in **Figure 1-3**. OITS' hybrid consolidation plan for Kansas therefore follows the national trend.

Figure 1-3
As of December 2018, all 50 states have completed, begun, or are planning some level of consolidation. (a)

(a) This map shows states' IT governance structures. Although Texas and Oregon have decentralized goverance structures (as shown here), they are in the process of consolidating their data centers.
Source: Center for Digital Government and National Association of State CIOs (unaudited).

- To learn more about other states' consolidation plans, we interviewed officials and reviewed documentation from Indiana, Nebraska, North Dakota, and Utah. We chose these four states because of their similarities to Kansas in terms of location, demographics, and overall state expenditure and staff levels, while also capturing

variation in their IT consolidation plans. These states' consolidation plans are also closer to completion than OITS' plan. Although they all implemented centralized consolidation, the details of their plans vary in terms of agency participation, governance structure, and which services are included.

- o Indiana and Nebraska included all executive branch agencies in consolidation, whereas North Dakota and Utah only consolidated services for cabinet-level agencies.

- o Indiana created a central IT organization, but agency IT staff still report to their agency heads rather than Indiana's central IT leadership. The other states we reviewed had centralized or are in the process of centralizing their IT reporting structures.

- o The states we reviewed consolidated many enterprise-level IT services, such as data center, networking, security, and email services. These states differed regarding agency-specific application development and support. Indiana and Nebraska left these responsibilities with the agencies, whereas North Dakota and Utah consolidated them to varying degrees.

Officials from our sampled states reported overall cost savings from consolidation, although individual agencies may have experienced cost increases.

- Some sampled state IT officials told us they had limited startup costs associated with consolidation, including upgrading outdated infrastructure and creating a central IT organization. These officials told us they recouped or offset those costs over time through shifting them to the central IT organization, agency-paid IT service rates, or savings from consolidation.

- Other-state officials reported annual savings ranging from between $1.3 and $14 million in Utah to $30 million in Nebraska. These savings vary based on our sampled states' individual circumstances, including the extent to which they consolidated their infrastructure and services, how many staff they eliminated, and how long consolidation has been in effect.

- As may be the case in Kansas, many sampled state officials told us their consolidation savings came at least partially from staffing reductions, regardless of whether they rely primarily on state-owned infrastructure or third-party vendors. For example, staffing reductions provided most of Indiana and Utah's savings. On the other hand, Nebraska officials told us their savings came primarily from eliminating redundant IT infrastructure.

- Although IT officials from our sampled states reported overall savings from consolidation, individual agency officials expressed concerns about consolidation's effects on IT service rates.

  - o Most agency officials said consolidated service rates increased but acknowledged they now include the central IT organization's administrative

and security fees. One official also said the more expensive consolidated services are higher quality.

- o One agency official told us consolidation caused larger agencies to subsidize smaller agencies' improvement. Smaller agencies must meet higher standards under consolidation but lacked the preexisting IT resources of the larger agencies. Consolidation had a leveling effect in raising or lowering all agencies to the same standards.

Sampled state officials reported experiencing consolidation-related challenges like those Kansas officials described and managing these challenges using methods similar to those OITS officials told us about.

- Sampled state officials said agency resistance and managing the culture change were major challenges. Further, some agency officials told us agencies sometimes use confidential data requirements (for example, federally protected criminal justice or health data) to resist or slow down consolidation. IT officials told us confidential data posed challenges because various federal requirements must be followed, but they are not insurmountable.

    - o Consistent with best practices from the National Association of State Chief Information Officers, other-state IT officials reported managing these issues by openly communicating, creating clear and well-thought out plans, and getting agency stakeholders on board.

    - o OITS officials told us they communicate and build relationships with agencies, including meeting regularly with key agency staff, using agency chief information officers as agency liaisons, and developing agency-specific IT plans. Agency officials we surveyed expressed dissatisfaction with OITS' communication practices, however. Some also told us OITS officials do not listen to dissenting agency opinions about OITS projects.

- Other-state agency officials reported issues with IT service rate transparency after consolidation. They said they do not always know what they are paying for or how much they are paying for it due to their central IT organizations' rate structures.

    - o Sampled state IT officials reported increasing rate transparency and conducting periodic rate studies to assure agencies that consolidated service rates are competitive with other states and third-party vendors.

    - o OITS officials reported itemizing agencies' bills and separating OITS fees from service rates. For example, security fees will be separated from network service rates. OITS officials said they cannot afford to conduct rate studies. Prior LPA audits have found OITS has not made its rates clear to agencies, however.

- Other-state agency officials said consolidated IT services are not always delivered in a timely manner and that agency staff are sometimes confused about how these services work.

    o Sampled state IT officials said they conduct customer satisfaction surveys to understand where they need to improve service delivery. One official also mentioned using agency liaisons to ensure agency staff understand how consolidated services work.

    o OITS officials described conducting annual customer satisfaction surveys and providing agency user training, which likely help address service timeliness issues and agency staff confusion about consolidated services. Agency officials we surveyed reported dissatisfaction with the timeliness of some OITS services, though, especially the consolidated service desk.

- Sampled state officials told us it can be difficult to sufficiently staff agencies after staff centralization. Agency IT staff may have multiple job duties that are not IT related, so moving these staff to the central IT organization might leave agencies understaffed in other areas.

    o Other-state IT officials said they conduct surveys and assessments to ensure they understand agency needs and staff duties, including any non-IT duties. Further, some states left agency-specific application development and related staff with the agencies.

    o OITS officials acknowledged Kansas experiences high IT staff turnover and has difficulty recruiting and retaining enough staff. They said they work to identify agencies' IT staffing needs and left agency-specific application development and related staff with the agencies. Further, outsourcing increases the state's access to third-party vendor staff, reducing its reliance on state IT staff.

CONCLUSION

OITS' IT consolidation efforts for cabinet agencies generally align with those other states have undertaken in recent years. Although we estimate OITS' consolidation plan will increase cabinet agencies' costs instead of saving the state money, those increased costs are likely unavoidable regardless of OITS' plan given the poor condition of Kansas' current IT infrastructure. Although agency officials affected by this plan reported some doubts and concerns about consolidation, the experiences of other states suggest these issues can be reasonably addressed. Ultimately, successful consolidation will largely depend on OITS' ability to clearly communicate its plan to affected agencies and to sufficiently address the concerns agency officials have expressed.

RECOMMENDATIONS

None

APPENDIX A

On April 24th, 2019 we provided a copy of the draft audit report to the Office of Information Technology Services. Its response is included as this appendix.

In their formal response, OITS officials generally agreed with our findings and conclusions. However, they noted we did not explicitly reference their agency desktop support plans and questioned the methodology we used to estimate the cost of OITS' consolidation plan. We carefully reviewed the information OITS provided but did not change our findings or conclusions.

- **OITS officials noted we did not explicitly reference OITS' planned consolidation of agency desktop support.** OITS has already consolidated lower-level IT support services required by agency staff, such as resetting user passwords, to a centralized service desk. More technically complex support requests, such as those requiring IT staff to remotely access users' desktop computers, are routed from OITS' service desk back to the agency's IT staff for resolution. OITS officials told us they intend to consolidate these higher-level support services and relocate agency IT support staff who currently handle more complex requests to OITS.

  However, OITS officials indicated during interviews and in their feedback on the draft audit report that they are in the earliest stages of planning these further aspects of support service consolidation. As such, they could not provide firm plans or cost figures for additional consolidation, including how it might affect the current service desk rate agencies pay to OITS. Further, surveyed agency officials told us they oppose the agency IT support staff relocation OITS envisions for this service. We therefore included only OITS' existing consolidated service desk function in our calculations and figures.

- **OITS officials questioned our use of fiscal year 2016 IT staffing data compiled by Excipio for our cost estimates.** We noted in the report that no one comprehensively tracks the state's IT staff, making the data Excipio compiled for its report the best available to us. During the draft review process, OITS provided some agencies' self-reported January 2019 IT staffing information and suggested this information would be more accurate than Excipio's. However, OITS' data does not include the same agencies Excipio's data includes. Further, Excipio's data was overstated with vacant positions, but we did not include those vacant positions in our calculations. As a result, the actual difference in these two datasets is significantly less than OITS officials state in their response.

  Further, OITS' data does not include staff who perform IT functions but whose positions are located within agencies' business operations rather than their IT operations. OITS' data also does not identify IT staff according to their IT responsibilities. We therefore could not use it to estimate service-specific cost changes or determine if any staff decreases since fiscal year 2016 were related to OITS' consolidation plan.

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Office of the Governor
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Lee E. Allen, Chief Information Technology Officer

Laura Kelly, Governor

May 8, 2019

Justin Stowe
Legislative Post Auditor
800 SW Jackson Street, Suite 200
Topeka, KS 66612

Dear Mr. Stowe,

Thank you for the opportunity to respond to Legislative Post Audit's study – Information Technology Consolidation: Evaluating Whether Consolidating Executive Branch IT Services is Feasible and How Much it Might Save.

In general, the Office of Information Technology Services (OITS) agrees with the conclusion of this study. There are, however, a few topics the Office would like to address.

The current condition of core IT infrastructure serving the executive branch is in a condition that requires significant financial investment, whether the state consolidates IT services and staff or not.

The hybrid consolidation plan in place was developed following multiple studies that pointed toward outsourcing major technology hardware, facilities and services as the most fiscally responsible solution compared to the state owning and operating the hardware and facilities as had been done in the past. Outsourcing these services would eliminate significant capital outlay requirements, modernize state technology, and drastically improve the security of state systems and citizen data. The study points to a cost increase for consolidation, when in reality, the cost increase is to address accumulated technology obsolescence. The staff consolidation element does not independently drive a cost increase, and in fact is usually the driver of cost reduction.

The data used by LPA to develop an estimated cost increase of consolidation is significantly outdated. The suggestion of reducing up to 232 state employees to maintain the smallest increase in cost is irresponsible and inaccurate. This data was derived from a report written using FTE counts from fiscal year 2016. That report suggested to maintain appropriate levels of service; 232 employees could be reduced from the 791 total if all suggested technologies were fully consolidated. At that time, executive branch information technology had 791 employees spread throughout the agencies. As of January 2019, there are only 569 employees; a reduction of 222 employees from FY16. This reduction in staff prior to fully consolidating technology services has led to a decline in service levels, lower confidence in executive branch IT, and insufficient resources to address agency business needs.

This is clearly illustrated in the feedback provided by state agencies to LPA in the section titled "Benefits and Challenges of OITS' Current IT Consolidation Plan." To successfully transition to any consolidated service, there needs to be an investment made to address new technology, processes, and people skills. Previous consolidated service implementations were not funded appropriately and have not met agency expectations.

Figures 1-1 and 1-2 are not inclusive of all consolidated services under the hybrid consolidation plan, omitting the planned consolidated service for agency desktop support needs. This planned service is not listed anywhere in the report. Figure 1-2 does not appear to take into consideration any cost variability for currently consolidated services, nor does it recognize the cost avoidance of remediating technology obsolescence. Finally, it should be noted that the RFP for network consolidation has not yet been released and the economic benefit is undetermined.

The hybrid consolidation plan was developed to achieve a few key goals:

- Mitigate risk to business operations caused by outdated and failing technology via a comprehensive refresh of equipment capitalized by our service partner
- Increase EBIT responsiveness, agility and ability to integrate new technologies via use of common and modernized service delivery platforms
- Improve service levels and information security for agencies and citizens via common delivery processes, technology and infrastructure

If the entire executive branch works together to achieve these goals, the state will be in a much more secure and fiscally responsible IT environment. These changes can not be made overnight and will require an investment for our state's future.

On behalf of OITS, I would like to thank the members of the LPA team that conducted this study for their professional and courteous interactions. We look forward to additional constructive dialogue as we move forward.

Sincerely,

Lee Allen
Executive Branch CITO

APPENDIX B

This appendix summarizes the consolidation plans for Kansas and the four states we reviewed: Indiana, Nebraska, North Dakota, and Utah.

	IN	NE	ND	UT	KS
Appendix B **Summary of the Consolidation Plans in Kansas and Sampled States (a)**					
	Office of Technology	**Office of the CIO, Department of Administration**	**Information Technology Department**	**Department of Technology Services**	**OITS**
Structure					
Centralized Consolidation	✓	✓	✓	✓	
Hybrid Consolidation					✓
Agencies Included in Consolidation					
All Executive Branch	✓	✓			
Cabinet Agencies Only			✓	✓	✓
Other State Entities Can Use Consolidated Services	✓	✓	✓	✓	✓
Impetus					
Legislative or Executive Mandate	✓		✓	✓	✓
Policy- or CIO-Driven		✓			✓
Funding Structure					
Rate Funded	✓	✓	✓	✓	✓
Governance					
Centralized in State IT Organization		✓	✓ (b)	✓	✓
Centralized in State IT Organization with Independent Agency IT Governance	✓				
Services and Infrastructure Consolidated					
Agency-Specific Application Development and Support			✓ (c)	✓ (d)	
Enterprise-Level Application Development and Support	✓	✓	✓	✓	
Contract Management	✓	✓		✓	✓
Data Center Services	✓	✓	✓	✓	✓
Email Services	✓	✓	✓	✓	✓
Network Services	✓	✓	✓	✓	✓
Procurement	✓	✓	✓ (e)	✓	✓
Project Management or Oversight	✓	✓	✓ (f)	✓	✓ (g)
Security Services	✓	✓	✓	✓	✓
Service Desk/Enterprise Desktop Support	✓	✓	✓	✓	✓

(a) States were chosen due to some level of similarity in size of government, population, and expenditures, except North Dakota, which was included due to its consolidated structure.
(b) As of February 2019, North Dakota is in the process of centralizing its IT governance structure.
(c) With the exception of three agencies, agency-specific applications are centralized.
(d) Most agency-specific applications are centralized, and Utah officials are looking into opportunities to consolidate application development further.
(e) IT procurement over $25,000 is reviewed by IT specialists.
(f) Centralized for IT projects over $500,000.
(g) Centralized for IT projects costing at least $250,000, per K.S.A. 75-7201(c).
Source: LPA summary based on documentation from and interviews with OITS and sampled state officials.

APPENDIX C

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