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State of Idaho

Luma System Optimization: Business Process Assessment and Ongoing Issue Root Cause Analysis Report

June 2024

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Luma System Optimization: Business Process Assessment and Ongoing Issue Root Cause Analysis Report

Executive Summary

ERP Implementation Background

The State Controller's Office ("SCO") selected Infor to replace the State of Idaho's aging mainframe solution for accounting and payroll activities with a Cloud ERP solution calling it Luma. Infor is considered one of the 10 most powerful ERP vendors in the U.S. focusing on customizable industry specific solutions and serving more than 60,000 organizations across 175 countries.

The SCO implemented Luma on July 1, 2023, after an initial planned implementation date of July 1, 2021, was delayed twice. This implementation required the State to transition from a familiar mainframe system with in-house designed add-ons, to a cloud-based, software-as-a-service solution to manage financial and human capital activities.

The SCO also opted for a "big bang" approach to the implementation, resulting in the simultaneous transition of both Finance and Supply Chain Management and Human Capital Management functions at the same time. Initially, these two segments were scheduled to be implemented separately.



Infor Cloud ERP Post-Implementation

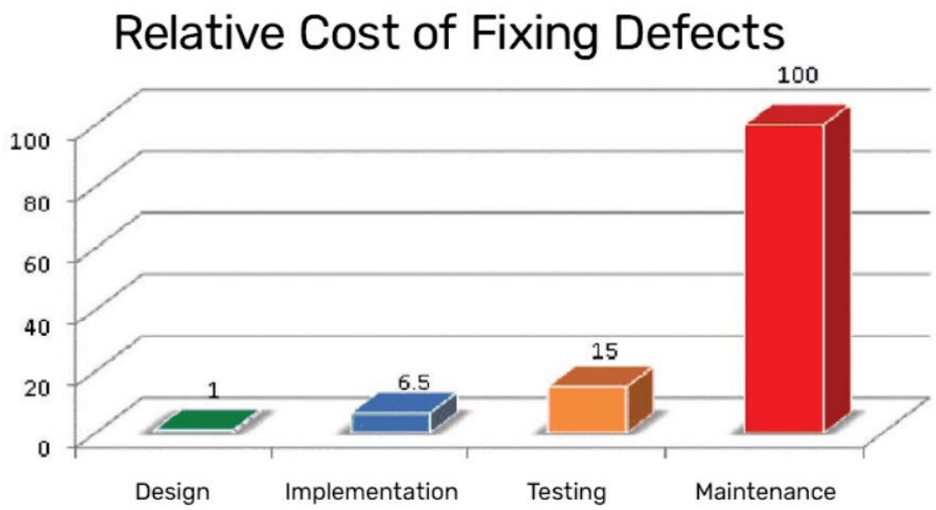


Following the go-live implementation on July 1, 2023, representative agencies encountered a myriad of challenges with the Infor Cloud ERP system.

These issues ranged from operational inefficiencies to data inaccuracies, leading to disruptions in day-to-day processes and impacting overall productivity. Despite initial expectations, the transition period proved to be more complex than anticipated.

While the Infor Cloud ERP system offers robust features and customization options, its successful integration into the organization will require concerted efforts to address and resolve post-implementation issues promptly.

Impact of Timely Defect Resolution on Project Costs



As per the Systems Sciences Institute at IBM, addressing a bug discovered during implementation incurs approximately six times higher costs compared to one detected during the design phase.

Furthermore, rectifying an error post-product release is four to five times more expensive than during design and up to 100 times pricier when found during the maintenance phase.

In essence, the expense of resolving bugs escalates exponentially as the software advances through the software development life cycle (“SDLC”).

Legislative Service's Office Engagement with Baker Tilly

The Audit Division of the Idaho Legislative Services Office ("LSO") requested feedback from agencies regarding their experiences with the new system, including functionality and efficiency concerns.

Consulting services from Baker Tilly were enlisted by LSO to conduct a comprehensive assessment of key areas identified from this feedback.



Baker Tilly Approach

1. Commenced a kickoff meeting to align on the scope, objectives, and timeline of the assessment. This meeting provided an opportunity to gain a deeper understanding of the organization's specific requirements and expectations.
2. Conducted onsite walkthroughs of key areas within payroll, accounts payable, and financial reporting functions. This hands-on approach allowed Baker Tilly to observe processes in action, identify root causes, and engage directly with key personnel to gather valuable insights.
3. Maintained open lines of communication with key stakeholders, fostering collaboration and addressing any emerging questions or concerns promptly.



Summary Observations - Issues After System Implementation

After conducting interviews with participating agencies, the areas described below by functional area provide a summary of issues identified. This overview serves as a resource for understanding the key challenges and areas requiring attention.

Payroll

- Payment delays
- Inappropriate transaction processing affecting payroll
- Susceptibility of timesheet management processes to manipulation, with insufficient notifications for changes
- Inaccurate and incomplete representation of leave balances and deductions on paystubs
- Unintentional duplication of after-tax deduction
- Incorrect expense reports
- Payroll data issues due to the inability to reconcile activity

A/P A/R Transactions

- Incorrect spend plans and appropriations
- Errors in daily interface files
- Corrupt data in interfaces
- Unauthorized access to financial data
- Duplicate Medicaid payments
- Missing information in Medicaid payments
- Missing invoices from cash requirements list
- Extended processing times and missed deadlines
- Complicated Purchasing Card (P-Card) processes including:
  - Disappearing P-Card transactions and payables
  - Reviving completed P-Card transactions
  - P-Card transactions held in approval
- Duplicate warrant numbers
- Vendor payment delays
- Payments defaulting to incorrect funds
- Revenue interface issues
- Interagency billing issues

Financial Reporting

- Financial status reports from Luma are difficult to access and use
- Discrepancies between Enterprise Reporting (Cognos) and Luma (In-System) reports
- Inadequate reporting including:
  - Concerns about data validity
  - Lack of confidence in LUMA data
  - Limited data access for federal reports
- Inability to perform critical reconciliations
- Unreconciled cash balances
- Interest allocation issues
- Grant funds misallocation
- Inadequate projects and grants tracking

Summary Observations

Agency personnel demonstrate proficiency in troubleshooting issues and devising workarounds to meet transactional and reporting needs.

Agency personnel promptly escalate issues to the State Controller's Office for resolution.

Despite challenges, agency staff maintain a positive attitude and productivity during stressful times.

Agency staff actively break down silo mentality by engaging with other agencies to share ideas and collaborate on solutions.

SCO has established weekly meetings with the vendor to troubleshoot issues and collaborate on solutions.

Strengths



Summary Observations

Following the implementation of the new Infor Cloud ERP system, several root causes for the origination and/or persistence of issues were identified, along with their effects:

1. **Limited Requirements Analysis, Suboptimal Communication, Incomplete Testing, and Ambitious Timelines** has led to misunderstandings and incorrect implementations, a system misaligned with operational needs, late-stage defect identification, and a rushed, incomplete implementation. Consequently, the operational efficiency of the state agencies processes was significantly impacted, resulting in delays, increased costs, and user dissatisfaction.
2. **Inadequate user acceptance testing ("UAT")** has resulted in a multitude of post-system challenges, including functionality and data reliability issues, inadequate preconfigured reports for financial reporting, integration challenges, complex workflow processes, and system performance issues such as extended loading times and unstable data extraction. These issues have led to operational disruptions, delays, confusion, increased troubleshooting efforts, reliance on manual Excel work, errors, and significant time investment in data preparation. Ultimately, these challenges have negatively impacted user experience, productivity, and perceptions about the system's viability. Moreover, they hinder effective decision-making, erode stakeholder trust, and directly impede program delivery by State agencies, potentially causing delays, errors, and inefficiencies in service provision to constituents. This cascade of issues ultimately undermines overall organizational performance and diminishes the quality and effectiveness of government services.
3. **Challenges in effectively managing the volume of IT tickets** submitted by representative agencies of varying complexity levels have led to unresolved issues and prolonged downtime.
4. **Agencies resorting to informal communication channels** rather than utilizing the official ticketing system, despite the simplified process for submitting IT tickets, have caused inefficiencies and tracking issues.
5. **Outdated, incomplete, or inaccurate Quick Reference Guides** have led to user confusion and inefficiencies, resulting in increased training needs and operational delays.

Root Causes



Summary Observations

In response to the challenges faced post-system implementation, included below is a breakdown of the proposed solutions to effectively address these issues:

1. Implement a holistic approach comprising rigorous requirements gathering with active end-user involvement, clear communication protocols among stakeholders, strengthened testing processes with comprehensive test coverage, and realistic project timelines to address post-system implementation issues effectively.

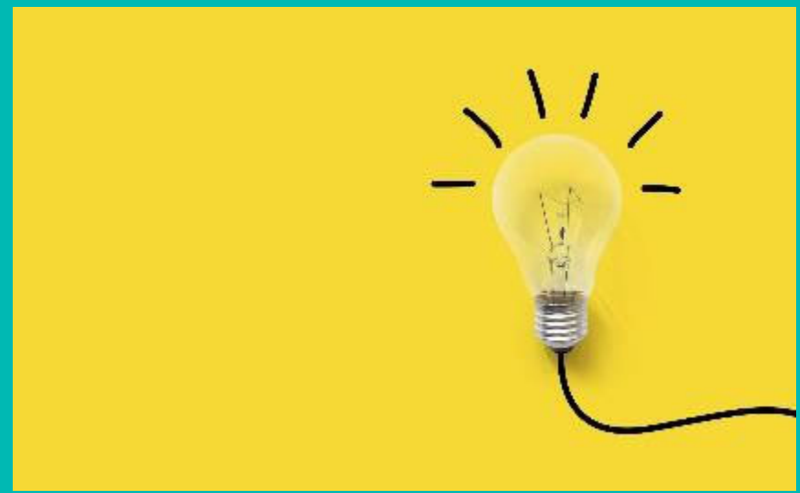
2. Enhance SCO response time through increased resource allocation, continuous training, automation implementation, routine reviews, clear communication channels, and improved business requirements and testing procedures to better serve representative agencies with greater efficiency and support.

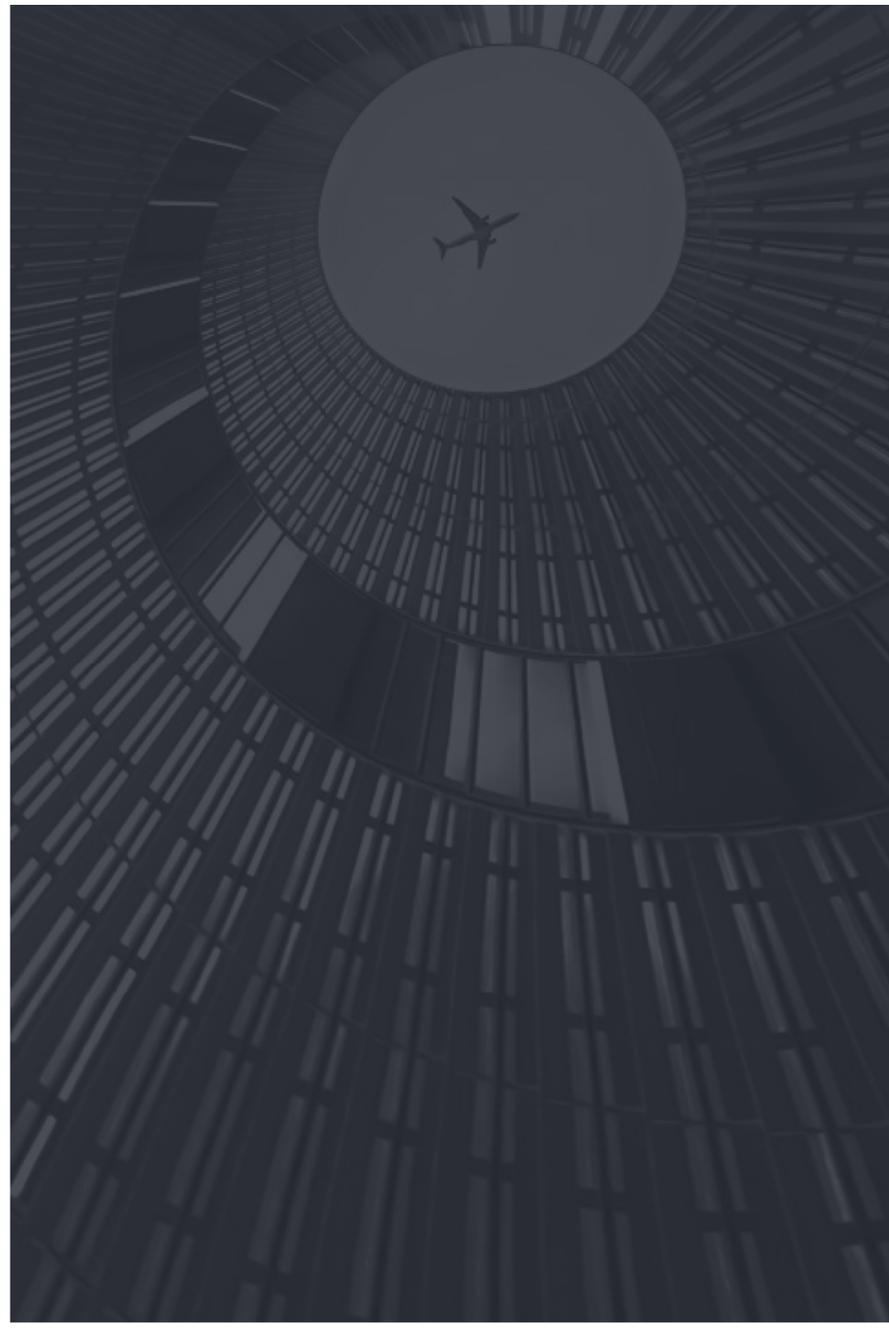
3. Enhance communication by implementing clear protocols and utilizing IT service management tools to ensure stakeholders receive transparent updates regarding ticket status and future actions.

4. Promote the adoption of the official ticketing system through training sessions that highlight its benefits and ongoing reinforcement efforts.

5. Review and update Quick Reference Guides to reflect system changes and provide accessible training materials to mitigate user confusion.

Solutions





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Management's View and Corrective Action Plan

STATE OF IDAHO

OFFICE OF THE STATE CONTROLLER BRANDON D WOOLF

SCO Response to Baker Tilly, *State of Idaho, Luma System Optimization: Business Process Assessment and Ongoing Issue Root Cause Analysis Report*

October 15, 2024

Management Response

Baker Tilly was commissioned by the Legislative Services Office (LSO) to conduct a comprehensive IT assessment of Luma. This assessment included a business process assessment, using data from a survey LSO conducted earlier in the year. Baker Tilly reviewed the compiled survey results and summarized the feedback.

While the Controller's office was the sponsor of the Luma project, the reality is that this effort was truly a state-wide endeavor with direct project participation by hundreds of state employees as well as executive leadership from state policy owners. Projects of this magnitude are incredibly challenging and require significant investment in change management activities. Implementation was just the foundation that made opportunities possible where our legacy systems were no longer supportable. In the end, the Controller's office takes ownership of the required business transformation and commitment to continuous improvement in order to achieve upon the new opportunities.

The survey inputs highlight two specific project implementation areas negatively impacting state employees as a result of executive project leadership decisions. Specifically, the plan and schedule developed for preparedness, training and support to employees prior to, as well as the immediate period after, implementation was insufficient given the complexity of this project.

Additionally, decisions regarding the readiness and stability of reporting were faulty. These decisions generated frustration and ultimately created a negative experience with users of the system. We recognize the difficult environment created for users of the system as a direct result of those decisions. We sincerely appreciate and respect the tremendous dedication and commitment exhibited by agency staff and project team members. We have heard the concerns raised and are working diligently toward solutions.

Data stability is crucial and confidence in reporting has been our number 1 priority. We have added and realigned resources, as well as sought industry expertise. Previously, our legacy systems were not integrated and several functions (such as billing and project data) was managed utilizing customized locally developed programs or using Microsoft Excel. Today, we are utilizing a fully integrated system, consisting of budget, accounting, payroll, human resources, and time management. We have access to far more data within a singular system than ever before.

This has added tremendous complexity and taken longer than anticipated. We have worked and will continue to work diligently to find solutions. We believe data stability issues have been resolved and, over time, we look to restore confidence in Luma reporting.

We understand the difficulties surrounding the training and support to users of the system. Luma was not just a system modernization, but also a revolutionary change in business practices driven by a conversion to a financial accrual-based methodology, fusion of procurement, budget, and HR data, incorporation of accounts receivable processes, and a complete redesign of the chart of accounts. Our project team members have held countless open office hours and training events. They deserve tremendous credit and have our utmost respect. From a leadership perspective, we needed to provide more support in order to provide timely responses. Going forward, we need to provide them additional resources and support in order to fulfill our responsibility to state employees. We have added temporary contractor support and instituted an Agency Success Manager (ASM) model. We are also seeking legislative support for additional resources to add to the Luma sustainment team. We are creating user groups to facilitate greater information sharing as well as forums on our websites for reference regarding the future roadmap. The Luma team will continue to devote more time and energy providing timely support to users focusing on the critical areas identified by agencies.

While we acknowledge the above concerns, the report asserts limited requirements analysis as a root cause (#1). The auditors did not seek documentation related to the extensive requirements development or consult project subject matter experts to understand the comprehensive testing conducted before Go-Live. The separate IT audit with a limited scope of interface testing does not substantiate the survey results and we present the volumes of requirements documents available created by hundreds of state subject matter experts as validation of our extensive analysis accomplished.

Additionally, we have copious documentation regarding the comprehensive testing scenarios and user acceptance protocols accomplished. We conducted a thorough analysis regarding integration testing and user acceptance testing with considerable assessment of the risks given the remaining project timeline. A strategic decision was made to accomplish these testing activities under the umbrella of a singular event. In order to meet the established Go-Live date, we did narrow the testing window based on the risk known at that time. This decision may result in perceptions of incomplete testing with an ambitious timeline. However, given the facts known at the time, we feel the decision fulfilled the intent and met the standards necessary for preceding forward. This was a difficult decision, which we take responsibility for the increased risk.
However, the heightened risks of delaying the go-live for another fiscal year, and the ramifications upon resources and funds in choosing an alternative path should also be taken into account and weighed against the decision that was made.

Since this survey was accomplished, we believe significant progress has occurred. Through our outreach efforts to agencies, the feedback received has generated similar expressions of frustration.

However, we are also receiving comments acknowledging the positive potential with the roadmap forward. We need to continue the outreach efforts and communicate more effectively regarding the existing challenges and share the efforts ongoing to resolve known issues. We must capitalize on the opportunity in front of us and communicate more effectively.

Even with the challenges associated with Luma, we see the potential benefits based on the foundation created at Go-Live as well as the year of sustainment efforts. Agency personnel and project team members should be applauded for their ingenuity, perseverance, and remarkable dedication. Implementation of Luma was exceptionally difficult upon our team members. There are many examples of implementation failures and very few success stories to reference at this point in time. Implementation of an ERP the size and scope of Luma, and for an organization the size and scope of the State of Idaho, takes time for organizational change and adoption. As demonstrated in the analysis, the organization change management and adoption has been challenging and the necessary resources and work to meet that challenge was underestimated. Learning from this, we are confident that the continuing efforts of the Luma team and the efforts of agency staff, it will be a success moving forward.

Additional Management Responses to Each Root Cause

Response to Root Cause #1: Limited Requirements Analysis, Suboptimal Communication, Incomplete Testing, and Ambitious Timelines

Management Response: Acknowledge with context

We believe that Finding Root Cause #1 could be refined in order to accurately convey intent. At first reading, the survey's observation about limited requirements analysis, suboptimal communication, incomplete testing, and ambitious timelines appears largely anecdotal. It overlooks the comprehensive requirements gathering that took place. During the software RFP development, eight functional teams comprising 57 state employees from 23 agencies held a total of 24 team meetings, amounting to 80 hours, to generate 1,170 requirements and 60 process maps. This effort continued into the implementation phase, encompassing over 900 user stories or business process requirements developed across finance, budget, and procurement workstreams. This extensive analysis spanned several years, including a dedicated eight-month period involving agency personnel, policy owners (Division of Human Resources, Division of Financial Management, Office of Group Insurance, Division of Purchasing, etc.), Luma project team members, and contract integrator personnel.

Together, they authored numerous requirements documents, created process maps, and established a roadmap for future business processes. Certainly, requirements change over time as a result of new laws and policies. This requires consideration of risk and timelines in order to make the best decision given the constraints at that time. In comparison, our legacy systems were still being refined after 30 years.

SCO conducted hundreds, potentially thousands, of individual meetings with agencies and numerous statewide meetings. On a regular and structured basis, we issued project updates and held monthly project update meetings. Moreover, unique to Idaho's implementation, we established an Agency Advocate program. Each agency appointed a contact who worked closely with dedicated Agency Advocates from our project team. This direct connection between agencies and the project team was crucial to our project's success. The Agency Advocate served as a single point of contact for agency personnel to resolve issues and also enabled project team members to inform agencies about requirements, deadlines, and project progress.

Additional context regarding testing protocols and ambitious timelines are included in Root Cause #2.

Response to Root Cause #2: Inadequate User Acceptance Testing Management Response: Acknowledge with context

For Finding Root Cause #2, we believe additional clarification would be helpful. It is important to clarify that the State did not conduct a unique separate event labeled as User Acceptance Testing (UAT). An executive decision was made to include the same UAT activities within a modified Joint System Integration Test (JSIT) event as a suitable substitute. This extensive event was organized based on identifying business processes through a documented Business Process Index (BPI). Clear testing criteria were defined, and business scenarios were clearly identified.
The Luma project team designed a holistic testing approach that focused not only on individual tasks but on interrelated business processes. JSIT was divided into two phases: 1) Project team testing, which involved 4-6 weeks of testing using actual roles and test data; and 2) Agency team testing, which involved 4-6 weeks of testing using actual roles and

agency-specific data (such as purchase orders, invoices, and billing). Over 40 agencies were invited to participate in JSIT to demonstrate system functionality. Interfaces were processed and validated internally for inbound files. Additionally, the project hosted an event labeled Luma Labs. This provided users with a "sandbox" environment to practice, train, and gain familiarity with the system at their own convenience.

Since Go-Live, we have implemented and improved upon the foundation built. As mentioned in the report, we would like to provide additional information. While not an exhaustive list, this is a few sample items for consideration:

Payroll: Payroll has consistently run on-time and met every pay date since Go-Live. Even under the legacy system, payroll occasionally had errors involving incorrect or missing entries. However, this critical task has been fulfilled through the amazing work of the project team members.

Payroll: The system now offers accurate, real-time leave balances, whereas pay stubs reflect a specific point in time. This real-time capability is an improvement over legacy systems, which only showed past pay period activities.

Accounts Receivables/Accounts Payable (AR/AP)**:** We acknowledge that the interface process needed refinement post-Go-Live, and testing with legacy systems from various agencies presented challenges. Significant progress has been made, resolving many initial issues, with notable advancements achieved with agencies such as State Treasurer's Office, State Tax Commission, Department of Health and Welfare, Department of Labor, Department of Lands, and Department of Administration.

AR/AP**:** Vendor payment delays, revenue interface issues, and interagency billing problems were largely due to knowledge and training gaps. Accounts receivable processing required further optimization of billing statements post-Go-Live, but these issues now appear resolved. This represents a significant advancement in statewide accounts receivable functionality, offering capabilities that were previously unavailable and maintained in separate, unique systems.

Reporting**:** More development time and effort should have been invested in this area before Go-Live. Luma provides agencies with a broader range of data than ever before.

However, changes to the chart of accounts and the transition to accrual-based accounting have added challenges in creating financial reports. We are actively working to support agencies in building knowledge, confidence, and capabilities in this area.

Benefits: Alongside the Office of Group Insurance and Division of Human Resources, the Luma team was able to successfully roll out a new benefits enrollment process while changing the contracted benefits provider within a 3-month window. In legacy system, this was projected to require at least 18 months of development work.

While there are additional improvements required, Luma also presents advancements that are worth noting. We recommend constructively evaluating the strengths of the new business processes and improvements. For example:

- Project codes in FSM are integrated with HCM and WFM for employee selection.
- Expenses are automatically split and posted to projects within the system.
- Budgets are developed in planning and imported into Luma.
- Approved purchase orders in Luma carry over into the new fiscal year.
- Purchase orders and a punchout system are linked to funding and expenditures.
- Employees transferring between agencies retain their benefits without needing to reapply.
- Billing is managed within the system, posting directly to accounts.
- Billing statements are generated within the system, reducing duplication across agencies.

Luma team members have devoted considerable effort to creating, maintaining, and updating training material. Updating guides is an ongoing and continuous effort that we actively pursue daily. Since completing JSIT, we have published over 1,300 reference guides and updated an additional 200+ guides since Go-Live. Several dedicated teams focus on updating quick reference guides (QRGs), revising hundreds of documents, and posting training videos and additional "How To" documents. Numerous open office hours have been conducted to assist agencies in accessing QRGs, and this training continues to be provided. We are enhancing the search process to make QRGs more easily locatable through word association searches, incorporating advancements in AI.

Although not necessarily a major issue, the terminology used does not adequately explain why the project was delayed or why the "big bang" approach was chosen. These details are crucial because they directly relate to several findings, particularly Observations 1 and 2. The go-live date for the Finance and Supply Chain Management (FSM) phase (“Phase I”) was postponed by the Governance Board for various reasons and rescheduled to align with the start of a fiscal year. Its new go-live date coincided with the scheduled go-live for Human Capital Management (HCM) on July 1, 2023. This resulted in only a six-month delay to the overall Luma implementation, which is minimal considering it occurred during a global pandemic.

Extending the go-live date beyond this point by an additional year—just to have FSM and HCM go-live separately—would have incurred significant costs, especially since the State had already budgeted and planned for post-implementation sustainment services. Any ERP implementation will involve extensive post-implementation problem resolution. The costs and risks of a one-year delay far outweighed the risks associated with a “big bang” approach to the go-live.

While the study on the relative costs of fixing defects provides useful information, there is no evidence that this was the case in Idaho, as confirmed by the auditors. It is also important to consider the cost of individual fixes compared to the total cost of deferring a go-live date by a year or more, which would include significant additional implementation consulting fees, licensing expenses, and the use of state resources. There should be verification that these costs were actually incurred by the State. After one year of operations, the State of Idaho has maintained its current operating model to address configuration needs without facing an exponential cost burden during the maintenance phase. The State Controller’s Office has not issued any contracts that indicate the supporting efforts have reached anywhere near the costs suggested in the study (i.e., “100 times pricier when found during the maintenance phase”). A balanced assessment should take this fact into account.

The first year of implementation for any Enterprise Reporting Planning (ERP) software system is always incredibly challenging. We understand the requirement for completing the IT audit in support of the Annual Comprehensive Financial Reporting (ACFR) but also assert that these types of survey’s are generally accomplished after more time has passed since implementation.
The timing of this audit should be considered when evaluating the responses. We would expect that the process findings would be significantly improved in the near future and the survey results meaningfully improved with any future reviews.

Root Cause #3: Challenges in Effectively Managing the Volume of IT Tickets. Management Response: Agree

The Controller’s Office does acknowledge that immediately after go-live the office was overwhelmed by the volume of support tickets submitted and this significantly hampered its ability to efficiently triage and manage support tickets to representative agencies. In addition to sheer volume, the complexity and diversity of issues submitted sometimes required a different subject matter expert to help resolve the issue. This had the direct effect causing delays, disruption to agency business operations, and contributed to frustration regarding Luma adoption and decreased confidence in the IT ticket support system.

We are happy to report that we have seen an approximate 40% reduction in tickets being submitted. With IT tickets reaching over 1,600 active requests, the Luma sustainment team has dedicated countless hours to reduce this number under 1,000. There are likely multiple reasons for this. It’s important to note that this volume of tickets range from normal operating items (password reset, updating vendor accounts, changing agency workflows, etc) to more complicated activities (future process improvement changes, correcting data entry errors, etc). Some of the reduction is likely the

result of better triaging and resolution by SCO, but some is also agencies becoming more familiar with the Luma modules they use, and some may be the result of other work that has been done with improved reporting.

Additionally, SCO has begun a reorganization of the Luma Division. We are anticipating this to have a positive effect on triaging and resolving IT tickets. The division will establish a bureau dedicated to agency ticket triaging and aggressively reducing response times. We believe this will provide the structure and support for one of the recommendations mentioned in this Root Cause related to ongoing training and support for staff involved in triaging to ensure they have the necessary skills and knowledge to prioritize and address tickets.

We also embrace other recommendations in the analysis for this Root Cause. Particularly, allocating additional resources dedicated to IT ticket triaging more effectively. The SCO has requested a total of 20 FTE's (funding for 13 existing FTE's, 5 trainer positions and 2 Financial Specialists) in its recent budget submission. This is aimed at bolstering Luma training, but also utilizing these subject matter expert staff to assist in triaging tickets more efficiently.

Finally, the SCO has plans to establish clear outward facing communication on our website to inform agencies and stakeholders with regular updates of what updates have occurred in Luma, and what functionality is in the process of being worked on for the improvement of business functions. This will bring some transparency to problem areas that may have already been reported, or suggestions for improvement, that are being worked on to avoid the same service ticket or request from being submitted.

The Controller's Office does see the value in having an established structure of ticket prioritization and process. Being able to track problem areas and collect information of the nature and types of issues being resolved can be great information. Being initially overwhelmed by IT service tickets really prevented SCO from being able to fully utilize and optimize the benefits of a structured process. We have made significant progress in triaging IT tickets, with plans for continuous improvement, and plan to fully utilize the ticketing system for its benefits. Regular reviews and updates based on information learned will hopefully ensure our organizational priorities are aligned and we can optimize work flow and improve overall efficiency, for the entire State.

Root Cause #4: Agencies Resorting to Informal Communication Channels. Management Response: Agree

We recognize the tremendous challenge for users of the system compounded by an insufficient training program and the overwhelming submission of IT tickets. More communication and training on the ticketing system is part of our efforts, specifically a priority item to be addressed by the reorganization of the Luma division. Our Luma sustainment team members

are incredibly dedicated and embrace a sincere work ethic to assist agencies to the best of their abilities. As a result, this may be a key contributor to the utilization of informal methods. We will use this survey feedback to reinforce the importance of using the IT ticketing system and ensure the prioritization is communicated effectively. Additionally, as mentioned in Root Cause #3, we are working to improve communication by establishing clear outward facing communication on our website to inform agencies and stakeholders with regular updates.

Root Cause #5: Outdated, Incomplete, or Inaccurate Quick Reference Guides Management Response: Agree

Building from Root Cause #2 comments on the sheer volume of guides available and the efforts to maintain the accuracy of those documents, we recognize our efforts were not meeting standards and process improvements are required to present useful guides. We heard concerns that the guides were limited to specific steps and did not easily link to predecessor or dependent tasks. We are currently engaged in a review of guides to ensure the process is represented from an end-to-end visualization. With the renewed visualization, the user guides will provide a more comprehensive view and support users through the complete process. One challenge that exists is primarily due to the uniqueness of each agency. We built guides based on the basic, common processes that each agency will utilize. However, each agency has specific requirements that dictate a refinement of the guide to fit their unique business need.

Additionally, during the time leading up to and during the Go-Live event, system updates were delivered monthly creating an environment where training team members were unable to update guides in a timely fashion. We have identified two root causes for this: additional resources required and a change to the system update schedule. SCO has requested funding for 13 resources and the authorization for 7 new resources in order to bolster the training team capacity. Additionally, we are reorganizing the Luma Division to create a bureau specifically dedicated to direct customer engagement. This will enable agencies to communicate directly to the document managers and rapidly resolve any inaccuracies effectively. We have also instituted improvements to the system update release schedule. Unless the change is a critical item, system changes are scheduled in planned events quarterly, instead of monthly. The extra time is utilized to provide the opportunity for training materials and guides to be updated prior to the change. Furthermore, the Luma Division will provide communication to system users regarding the changes with the goal of enabling agencies to prepare for change and make any necessary adjustments. We understand that the lack of accurate guides created frustration. With the above changes and additional resources, we believe this will improve rapidly and we will continue to explore opportunities to reduce frustrations.

Conclusion:

The Root Cause Analysis Report conducted by Baker Tilly on behalf of the Legislative Services Office (LSO) is based upon survey data that was provided to Baker Tilly for review from a survey that was conducted by LSO earlier in the year. Baker Tilly states they met with selected agencies from the survey to better view and understand the inputs provided from the survey.
However, the Controller's Office was not consulted in order to provide information in response to the survey results. Having reviewed the conclusions stated in the report, the Controller's Office recognizes and appreciates the incredible dedication and perseverance exhibited by agency staff and project team members. The implementation of Luma would have greatly benefitted from additional resources and time committed to preparing users for use of the system and changes to internal business processes. ERP projects are incredibly challenging and Idaho's journey was considerably complex given the decision to implement all modules at once. At critical junctions, project executive leadership was presented with difficult decisions on the appropriate path forward

given constraints of personnel, time, and funding. Several of those decisions increased the difficulty for system users and increased the negative experiences. The alternatives not chosen were viewed to be even more dangerous and could have resulted in far greater negative outcomes, such as more workload for employees, greater security risks, and significant financial challenges.

The Controller's Office emphasizes there is a need for additional assessment of available documentation and resources from the Controller's Office and Luma team. Particularly, so a complete understanding can be achieved regarding the extensive requirements gathering and collaboration with agencies on those requirements that took place, the real consequences of additional delays of going live with Luma as suggested in the report, and the extensive testing script and critical scenarios that the Joint System Integration Testing and other testing events covered.

In our view, the report offers several valid recommendations that would benefit from additional inputs regarding the implementation and performance of the Luma project. None of our comments should be interpreted as questioning the agencies team member's professionalism and dedication. We acknowledge their concerns, and the Luma team remains committed to supporting them and making improvements whenever possible.

The Controller's Office has acknowledged many of the report's observations and recommendations; particularly regarding the initial reporting capabilities of Luma, improving the support portal and QRG's, and the need for more resources and enhanced effectiveness of the ticketing support system. The Controller's Office has worked to provide solutions to those or is working to fix them. It's important to understand the significant additional functionality and the switch to accrual-based accounting that Luma has brought to the state. It has changed many business processes regarding how the legacy system did things, and we underestimated the amount of time and training to learn how to use this system effectively. It's also important to note that implementation and adoption of a large-scale ERP, combined with a complete re- engineering of financial business processes, generally takes more time. The Controller's Office takes accountability for providing the necessary training and support for the state to fully adopt Luma.

With particular emphasis, there are hundreds of state employees and contractor staff who devoted themselves to the Luma project over the last 5+ years. We sincerely appreciate and acknowledge their outstanding dedication and commitment to the vision of Luma and the possibilities available in the future.

Contact Scott Smith
Chief Deputy Controller State Controller's Office 208-334-3100

Auditor's Responses

Terri Kondeff
Director

Legislative Services Office
Idaho State Legislature
Serving Idaho's Citizen Legislature

Luma System Optimization: Business Process Assessment and Ongoing Issue Root Cause Analysis Report

Auditor's response to Management's View and Corrective Action Plan

The Luma System Optimization: Business Process Assessment and Ongoing Issue Root Cause Analysis Report was completed by Baker Tilly, through a contract with the Legislative Services Office, Legislative Audits Division. As part of the reporting process, we requested that the Office of the State Controller (SCO) provide us with responses to the five summary observations of root causes and recommendations. The following information includes a reference to the section of the SCO response and an auditor's response. The SCO provided a general management view of the report and a more detailed response for each recommendation. Those comments are included directly after the report, and prior to this document. These final responses were received from the SCO on October 15, 2024. We are providing auditor responses to clarify comments made by the SCO in its response that we feel could be misleading to the reader and concerns we have with corrective action plans provided, where they exist.

General Management Response to the Report Provided on pages 1-3 of the SCO's Response

Auditor's Response: We thank the Office of the State Controller for its cooperation and assistance throughout the completion of this report. However, we are concerned that the tone of the response is defensive and deflective in nature without providing concrete, measurable solutions that are necessary to provide the best possible outcomes to challenges identified by agencies.

Additionally, we feel that some statements made in the responses could be misleading and require clarification so that the deficiencies identified, and corresponding recommendations, are clearly understood. We would like to clarify that Baker Tilly was not engaged to compile the survey results and summarize the feedback. The challenges agencies experienced after implementation were of significant concern on many levels, including the ability to make critical decisions, prepare financial statements, and ensure compliance with state and federal requirements. Auditors, both in-house and from Baker Tilly, reviewed documents maintained by the agencies to support the specific error or issue, IT ticket submissions to the SCO, email correspondence, and end results to assess the process and identify the root cause of the problem and provide recommendations. This report was also completed in conjunction with the IT Audit that identified specific deficiencies with interface solutions including documentation to support clear alignment from business process needs to solutions, reporting, and data validation.

We continue to assert that while the SCO may have done extensive front-end requirements analysis, documentation is lacking to support that they consistently linked business process needs to the final implemented solutions or that those solutions were properly tested for end user acceptance prior to implementation to ensure they met user needs. It is understandable that limited requirements analysis, suboptimal communication, incomplete testing, and ambitious timelines are hard criticisms to hear; however, it is criticism that is necessary for improvement and supported by user experiences, interface integration documents reviewed, and weaknesses in interface reconciliations identified by Baker Tilly. There is also evidence within the governance board meeting minutes that members consistently raised concerns about the testing approach that were not addressed. Specifically, the lack of a separate user acceptance testing plan after functionality had been confirmed through system integration testing. Those meeting minutes also provide documentation showing testing and training plans changed significantly as the third and final go-live date came into view.

While we cannot go back to the initial implementation and make changes, it is critical that the recommendations from this report, along with the IT Audit report, be implemented in a timely manner to ensure any changes or new modules are properly managed. The implementation of these recommendations will also support successful solutions to financial reporting needs and ease the burden on agencies.

Recommendation #1 Limited Requirements Analysis, Suboptimal Communication, Incomplete Testing, and Ambitious Timelines

Auditor's Response: The SCO provided several details about the RFP (request for proposal) development to support the idea that requirements analysis was adequate, however, they did not provide a clear line from the analysis used to prepare the RFP to ensuring that those business needs were adequately included and tested in the final solution. Additionally, the communication tools listed in this section of the response were top down focused and provided high level information that also did not address the overarching concern of meeting the business needs of the agencies. The IT Audit completed in conjunction with this report also identified deficiencies in the validation of the implementation of interfacing data, expected functionality of interfacing solutions, and in the SCO's ownership of proactive data validation and reconciliation controls related to interface solutions. These deficiencies speak to the issues agencies encountered post implementation and the observations and recommendations included by Baker Tilly in this report.

We agree that the SCO created a governance board composed of knowledgeable and experienced State agency officials as part of the project charter to provide project oversight, leadership and guidance to the project team. However, this Governance Board is chaired by the Chief Deputy Controller, and as the Chair, meeting content was set at his discretion. It is also worth noting that governance board meeting minutes document several instances where members voiced concerns about the ambitious timeline including resolution of critical fixes to the system, proper end-user acceptance testing, adequate training windows, and reporting.

Recommendation #2 Inadequate User Acceptance Testing

Auditor's Response: It is important to note that initially the SCO included System Integration Testing (SIT), End User Acceptance Testing (EUAT), and training windows in the project plan. This was still the plan as of August 2022, per governance board documents. It is not clear when or why the project switched to a Joint SIT that would include some form of EUAT. And, when this was communicated to the governance board members, they raised concerns about the adequacy of this approach and ensuring the system met the end user needs and business requirements. Combining the SIT and EUAT prevented thorough testing because when functionality failed and required fixes from Infor or SCO workarounds, agencies could not fully complete test scripts, and that is also documented in the meeting minutes from governance board meetings. The SITs should have been completed to appropriate IT standards, then the EUA testing, then appropriate end user training. "Joint" system integration testing merged with end user acceptance testing is not an accepted standard IT process.

The assertion made by the SCO that the project delays resulted "in only a six-month delay to the overall Luma implementation" is a misrepresentation of the facts. It re-scripts the timeline and the fact that the original plan intended 18 months to implement the Finance and Supply Management (FSM) modules with an original go-live date of July 1, 2021, and then another 18 months to implement Human Capital Management (HCM) with a planned go-live date of January 1, 2023. The SCO's statement ignores the level of ongoing effort placed on agencies to continue to submit revised workbooks, manage changing configuration issues, and continue to process transactions in STARS, many with fewer staff members as a result of being loaned to the implementation team, over the original planned and delayed go-live dates of July 1, 2021 and July 1, 2022 for the FSM modules.

Additionally, the list of improvements since go-live that the SCO provided in its response have not been evaluated or verified as accurate. Reporting, interface process validation, and data validation continue to be a significant concern.

The comment that the SCO has maintained its current operating model to address configuration needs without facing an exponential cost burden during the maintenance phase highlights why these problems have not been adequately addressed. Further, that the SCO indicates several staffing requests will be needed to address the problems identified indicates that there will be more costs to come, and those costs could have potentially been lessened or avoided had the problems been addressed in the implementation phase.

Recommendation #3 Challenges in Effectively Managing the Volume of IT Tickets

Auditor's Response: We appreciate the SCO's willingness to address this concern with plans for more staff and improved communication; however, it is important to remember that without addressing the recommendations provided in Recommendations #1 and #2, it is unlikely that corrective action plans offered for this recommendation will provide the long-term detailed fixes necessary for accurate and reliable financial reporting

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Recommendation #4 Agencies Resorting to Informal Communication Channels

Auditor's Response: We appreciate the SCO's acceptance of this issue, but again want to stress that without improving the approach to resolving issues through a well-documented assessment of business needs that are clearly mapped to a solution, including both SIT and EUAT, we anticipate that agencies will continue to utilize informal solutions to complete tasks for areas where they are still experiencing problems.

Recommendation #5 Outdated, Incomplete, or Inaccurate Quick Reference Guides

Auditor's Response: We appreciate the SCO's acceptance of this issue; however, we are concerned with the consistent theme of requesting FTE's or "resources" of over 20 positions related to this recommendation and it appears another 20 positions related to Recommendation #3. It is unclear if these are intended to be the same positions for both or a total of 40, but timelines for true improvement in the QRG resource is also not included in this response. Finally, the addition of that many positions is a significant cost, and one that might have been mitigated through improved design, configuration, and testing prior to go-live.