Audit of Land Management Software Implementation -Interim Report

August 30, 2024

Mark S. Swann, City Auditor

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City of Dallas

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Executive Summary

Objective and Scope

The objectives of this audit were to determine whether:

- A system development life cycle methodology has been adopted and executed.

- Project planning activities have been completed.

- Business requirements, security risks, and data flows were identified and incorporated.

- Continuous project evaluation performed.

The audit covered conditions as of May 31, 2024.

Recommendations

Certain project activities and steps if addressed immediately will improve the success rate of the land management software.

- Review and complete the Information and Technology Services mandatory project management steps and obtain approvals for the phases completed to date.

- Review project areas and gaps that need attention and minimize the gaps with an appropriate corrective plan.

- Review upcoming challenges and work with vendors and internal project managers to mitigate identified project risks as applicable.

Background

The Planning and Development Department and Information and Technology Services are in the process of implementing land management software (DallasNow) for building and permit services. The software implementation was initiated in May 2023 and is scheduled for completion July 28, 2025.

The city contracted with Accela for software implementation and Gartner Consulting for program assurance services totaling $8.25 million. The paid to date total for implementation services is $4.25 million. Refer to Background for additional details.

The Planning and Development Department and Information & Technology Services are approximately halfway into software implementation.

Observed Conditions

As the software implementation moves into the next phases of user acceptance testing, migration, deployment, and closure, certain challenges need careful attention. Refer to Observation A.

Objectives and Conclusions

1. Has a system development life cycle methodology been adopted and executed?

    Generally, yes. The City requires software implementation projects to follow the *Just Enough Project Management* concept. This process is in practice but has not been formally identified and communicated to the Planning and Development Department, to Accela for collaboration, or within Information & Technology Services. (See Observation A.)

2. Have the project planning process and activities been completed?

    Generally, yes. Mandatory documents required by the City's project management methodology to support the project implementation, regardless of which approach is applied are incomplete. Various versions are available. (See Observation A and Exhibit 2.)

3. Are business requirements, security risks, and data flows identified and managed?

    Generally, yes. Business requirements, data flows, security elements, and technical architecture were not leveraged before implementation. Vendor tailoring sessions, however, do incorporate basic process requirements. (See Observation A and Exhibit 1.)

4. Are continuous project evaluations performed to ensure project progress meets the established timeline and budget?

    Generally, yes. Management places reliance on vendors to communicate and track weekly meetings and changes. However, there are certain internal activities to support collaborative efforts that are not being performed, such as compliance reviews.

Audit Results

As the city continues with this critical implementation, an audit on the pre-planning, planning, requirement analysis, configuration, project management, and related artifacts of the software implementation identified the following.

Accomplishments

The Planning and Development Department and Information & Technology Services software implementation of land management software (DallasNow) key accomplishments include:

- **Project Initiation:** The Planning and Development Department and Information & Technology Services completed initial planning steps toward procuring the product, deciding on tailoring instead of customization, identifying project managers, and establishing regular communication with vendors. This groundwork has laid a foundation for the subsequent stages of the implementation process.

- **Tailoring of Software:** The Planning and Development Department and Accela completed tailoring Civic Platform for ten of the twelve solution groups (May 15, 2024).

- **Subject Matter Expertise:** The city has contracted with Accela and Gartner Consulting, subject matter expertise for software implementation. This has provided a degree of assurance over the project's success and identification of project risks for timely mitigation.

Both *City Council Resolution 88-3428* and Administrative Directive 4-09*, Internal Control* prescribe policy for the City to establish and maintain an internal control system. The audit observation listed is offered to assist management in fulfilling their internal control responsibilities.

Observation A: Project Implementation – Interim Status

The Planning and Development Department and Information & Technology Services with assistance from Accela (software vendor) and Gartner Consulting (program assurance services) are approximately halfway into the land management software implementation (Dallas Now). The software implementation was initiated in May 2023 and is scheduled for completion on July 28, 2025.

Upcoming Challenges

As the software implementation moves into the next phases of user acceptance testing, migration, deployment, and closure, certain challenges need careful attention.

- **Integration Complexity:** The integration process has presented some unforeseen challenges resulting in potential project delays.

- **Skilled Resources:** Insufficient knowledge and guidance from internal project management for user acceptance phase testing may result in developing inadequate user testing scripts. Gartner Consulting risk profile for the project cites city resource capacity and skill set constraints.

- **User Training and Adoption:** The training plans may need to be tailored to meet the City's needs.

- **Timeline & Cost Adjustments:** Due to the challenges noted above, the timeline for project completion and estimated project cost may need to be updated.

Needs Attention

While progress has been steady and continuous, certain steps and activities need immediate attention to ensure continuing success. Refer to Exhibit 1 for further details.

- **Governance Structure:** Several leadership changes in the City have left a void in the DallasNow Governance Committee. The void impacts decision-making, direction, clarity, and expectations of and from the vendor for the remaining phases of the implementation.

- **Requirement Analysis:** The vendor-developed statement of work may not completely address the city's business requirements, security risks, technical architecture, and desired improvements to the POSSE replacement system. A thorough requirement analysis to re-evaluate and incorporate various needs identified from different sources is necessary**.** Refer to Exhibit 1, Number 7, for additional details**.**

- **Project Management:** The *Just Enough Project Management* concept has not been formally defined for this project's implementation. Subsequently, mandatory project artifacts are incomplete. Refer to Exhibit 2 for additional details.

- **Continuous Evaluations:** The City is not actively performing due diligence on project changes and resource monitoring. Compliance reviews are not performed to provide project barrier information to the Information and Technology Services director. Phase acceptance approvals and evaluation are not completed.

Criteria

- ❖ *Information and Technology Project Management Methodology*

- ❖ Standards for Internal Control in the Federal Government:

    - ○ *Principle 10 – Control Activities*

    - ○ *Principle 16 – Perform Monitoring Activities*

Assessed Risk Rating:

Moderate

We recommend the **Directors of Information and Technology Services and Planning and Development Department:**

A.1: Review project artifacts and complete the Information and Technology Services mandatory project management steps and obtain approvals for the phases completed to date. Refer to Exhibit 2.

A.2: Review project areas and gaps that need attention and minimize the gaps with an appropriate corrective plan. Refer to Exhibit 1.

A.3: Review upcoming challenges and work with vendors and internal project managers to mitigate identified project risks as applicable.

Exhibit 1:

Project Areas and Identified Gaps Needing Attention and Associated Recommendations

No.	Area	Identified Project Risk/Gap	Recommendation
1	Governance Structure	Key decision-makers on the governance committee are no longer with the city.	Reestablish the governance committee with current personnel with the authority to make key decisions.
2	Governance Structure	Insufficient clarity between the Information & Technology Project Management Office and their role relative to Gartner Consulting to perform similar project management activities.	Determine how the project management office should utilize Gartner Consulting to continue progress, avoid duplication, and lead the next steps in user acceptance testing.
3	Governance Structure	Gartner has identified several ongoing medium risks that are trending toward high risk which are not being addressed by the City (integration, user acceptance test plans, technical infrastructure, guidance from the internal project management office).	Consider possible changes to the project management team between Gartner Consulting and the project management office and give appropriate authority to make decisions.
4	Governance Structure	An internal memorandum of understanding that established department-specific roles to avoid misunderstandings is not in place.	Develop a memorandum of understanding for the remaining aspects of the project to avoid misunderstandings and set clear expectations on activities, deliverables, and results.
5	Project Management	The *Just Enough Project Management* concept has not been defined for this project's implementation.	Define the *Just Enough Project Management* for the project implementation and communicate the variances and adopted process steps and activities for upcoming phases.
6	Project Management	The information & Technology Project Management Methodology states, *"All projects require a common set of process steps and documentation regardless of the type of project or unique characteristics of the project."* Of the 9 process steps required for interim project phases, several project activities were not available. Refer to Exhibit 2 for details.	Adhere to the project methodology and complete the required mandatory documents. Refer to Exhibit 2.

No.	Area	Identified Project Risk/Gap	Recommendation
7	Business Requirements	Previously identified process improvements may be overlooked because a gap analysis of the City's prior evaluation of business process areas, data flows, and desired POSSE improvements to the Accela Civic Platform solution has not been completed.	Perform a detailed gap analysis (not compliance) using the information from the completed tailoring sessions to the previously accumulated potential identified improvement areas. The minimum documents for review are: – POSSE System Overview – February 1, 2018. – Current POSSE Interface – November 13, 2018. – POSSE Centric High-Level Architecture Diagram – September 20, 2018. – 2020 Information & Technology Services developed business process descriptions and data flows. – 2022 Matrix Consulting Report that identifies areas for business process improvement, and technology improvement. – 2022 Gartner developed business process flows before onboarding of vendor.
8	Continuous Project Assessment	Compliance reviews are not performed to provide adequate project barrier information to Information & Technology Services director.	Perform compliance reviews and communicate project barriers timely to Information & Technology Services executive.
9	Continuous Project Assessment	Phase acceptance approvals and evaluation are not completed.	A purposeful implementation phase analysis that focuses on the current project status (time, scope, cost, resource validation) without the intervention of vendors should be performed between the business department and Information & Technology Services.

Exhibit 2:

Information and Technology Services Project Management Methodology
Project Artifacts and Required Approvals from Project Initiation Through Project Planning

Project Phase	Phase Description	Mandatory and Conditional Documents and Required Approvals
Phase I – Project Initiation	Receive formal project authorization.	**Mandatory** – Business Technology Request – Project Charter – Project Resources Planning Estimate* – Project Management Methodology Checklist – Phase Acceptance – Phase – Project Status Report* **Conditional** – Project Scope and Definition Document **Required Customer and CIS Approvals** – Business Technology Request – Project Charter – Phase Acceptance – Phase 1
Phase 2 – Scope & Requirements	Define and document the project's scope, Customer's business requirements, and technical infrastructure.	**Mandatory** – Project Communication Plan – Meeting Agenda / Meeting minutes* – Infrastructure Requirements and Technical Specifications – Project Status Report* **Conditional** – Business Requirements Document – Project Scope and Definition Document – Requirements Traceability Matrix – Phase Acceptance- Phase 2 **Required Customer and CIS Approvals** – Business Requirements Document

Project Phase	Phase Description	Mandatory and Conditional Documents and Required Approvals
		– Project Scope and Definition Document – Infrastructure Requirements and Technical Specifications – Phase Acceptance – Phase 2
Phase 3 – Solution Selection / Definition	Select and acquire project solutions.	**Mandatory** – Infrastructure Requirements and Technical Specifications – Project Budget and Expense* – Project Resource Planning Estimate* – Project Schedule* **Conditional** – Requestion for Competitive Sealed Proposal* – Functional Specifications in Business Requirements Document – Project Scope and Definition – Business Requirements Document – Vendor Statement of Work* – Requirements Traceability Matrix – Phase Acceptance – Phase 3 **Required Customer and CIS Approvals** – Project Scope and Definition – Business Requirements Document – Project Budget – Phase Acceptance - Phase 3
Phase 4 – Planning	Define and develop a set of comprehensive plans.	**Mandatory** – Infrastructure Requirements and Technical Specification – Projects Test Requirements and Plan – Project Resource Planning Estimate*

Project Phase	Phase Description	Mandatory and Conditional Documents and Required Approvals
		– Project Schedule*
		– Phase Acceptance – Phase 4
		– Project Status Report*
		Conditional Documents
		– Configuration and Set-up Specifications (provided by vendor)*
		– Programming Technical Specifications
		– Data Migration / Conversion Requirements and Plan
		– Training Requirements and Plan
		– Security Administration Requirements and Plan
		– Quality Assurance Requirements and Plan
		– Projects Risks and Risk Mitigation Plan.
		– Change Request
		Required Customer and CIS Approvals
		– Change Request
		– Project Resource Planning Estimate
		– Phase Acceptance – Phase 4

Source: *Information and Technology Services Project Management Methodology.*

Note: "*" indicates project artifacts that were available as of June 10, 2024

Appendix A: Background and Methodology

Background

The Planning and Development Department uses POSSE, iNovah, and Project Dox to provide its services. The Planning and Development Department is now implementing a comprehensive land management software application to support building permitting issuance and payment collection. POSSE has been in place for 12 years, is not supported by the vendor, and cannot be updated. The new application will also assist in integrating several other applications that are used in the permit process.

The new application is Accela Civic Platform, and the vendor's name is Accela. The DallasNow project is led by the Planning and Development Department and Information & Technology Services. The Planning and Development Department is relying on vendor Accela to guide the implementation and Information & Technology Services has employed the services of Gartner Consulting Inc. for project management advisory services. The Planning and Development Department has identified an internal team of nine personnel and established that the application will be tailored to meet the business needs.

Contracts

There are two contracts involved in the implementation, Council Resolution (CR) 23-0317 approved on February 22, 2023, with Accela to implement the software for $5,700,508. The implementation's goals are to develop:

- An automated workflow engine for enforcing data and business rules to respond to future ordinance changes and business process changes.

- Enhanced reporting capabilities for management decision-making.

- A broader range of public access and improved offerings for mobile devices.

Information & Technology Services entered into an agreement with Gartner Consulting to obtain assurance and support services in the implementation of land management software for $2,548,000 for 26 months.

Exhibit 3:

Land Management Software Implementation Project Cost
As of June 19, 2024

Vendor	Type of Service	Procurement Type	Budget	Paid as of audit date (May 31, 2024)
Gartner Consulting Inc.	Program Assurance and Readiness Assessments	DIR COOP	$2,548,000	$348,600
Accela	Software Implementation	CR 23-0317	$5,700,508	$3,909,161
Velosimo	Gateway Integration	In Process	$17,200*	N/A
Hyland Software	OnBase Integration	In Process	$87,580*	N/A
			$8,248,508	**$4,257,761**

Source: Information & Technology Services

"*" indicates estimates of project cost

Methodology

The audit methodology included: (1) interviewing personnel from the Planning and Development Department, Communication and Information Technology Services, Gartner Consulting, and Accela; (2) reviewing internal policies and procedures, and (3) verifying execution of and obtaining evidence of management activities and their execution. In addition, all five components of *Standards for Internal Control in the Federal Government* were considered.

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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Major Contributors to the Report

Mamatha Sparks – Audit Manager, CIA, CISA, CISSP, CRISC

Appendix B: Management's Response

See following pages for *Audit Acknowledgement Letter* and *Management Responses.*

Memorandum

CITY OF DALLAS

DATE: August 27, 2024

TO: Mark S. Swann – City Auditor

SUBJECT: Response to Audit of Land Management Software Implementation - Interim Report

This letter acknowledges the City Manager's Office received the *Audit of Land Management Software Implementation - Interim Report* and submitted responses to the recommendations in consultation with Information & Technology Services and the Planning and Development Department.

Management is committed to the successful implementation of the DallasNow software and eagerly awaits the added convenience and efficiency the software will provide to residents and stakeholders in the building permitting process.

To help ensure the successful implementation of the DallasNow software, the City contracted with leading consultants Accela and Gartner Consulting to provide subject matter expertise. In addition, Information & Technology Services and the Planning and Development Department appreciate the feedback provided by the auditors in this interim report.

The diligence of the departments and supporting vendors helped to ensure audit objectives were generally met. However, Information & Technology Services and the Planning and Development Department recognize opportunities exist to improve processes going forward.

Notably, City staffing changes and the reorganization of the Planning and Development department impacted the project's governance structure. On July 17, 2024, the Executive Governance Committee agreed on the updated governance structure and will ensure frequent meetings and effective oversight as the software implementation process proceeds.

In addition, Information & Technology Services and the Planning and Development Department will implement the auditor's recommendations and incorporate the lessons learned in this process going forward. Specifically, the departments will:

- Review the project artifacts and complete the mandatory steps and obtain approvals for the phases already completed;

- Review the project areas and minimize gaps with a corrective action plan; and

- Review the upcoming challenges to mitigate identified project risks.

"Service First, Now!"
Connect – Collaborate – Communicate

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August 27, 2024
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Sincerely,

Kimberly Bizor Tobert
City Manager (I)

    C: Jack Ireland, Chief Financial Officer
       Donzell Gipson (I), Assistant City Manager
       Robin Bentley (I), Assistant City Manager
       Dr. Brian Gardner, Director (I), Information & Technology Services
       Emily Liu, Director, Planning and Development Department

Assessed Risk Rating	Recommendations	Concurrence and Action Plans		Implementation Date	Follow-Up/ Maturity Date
	We recommend the **Directors of Information and Technology Services** and **Planning and Development Department:**				
	A.1: Review the project artifacts and complete the Information and Technology Services mandatory project management steps and obtain approvals for the phases completed to date. Refer to Exhibit 2.	**Agree**	Information and Technology Services (ITS) and the Planning and Development Department (PDD) will review the project artifacts and construct a matrix to identify the necessary documentation for the project. ITS and PDD will use the matrix as a guide to assess if current documentation satisfies the Mandatory and Conditional Documents and Required Approvals documented in Exhibit 2. As needed, the departments will revise draft or under-development deliverables and documentation.	9/30/2024	12/31/2024
	A.2: Review the project areas and gaps that need attention and minimize the gaps with an appropriate corrective plan. Refer to Exhibit 1.	**Agree**	ITS and PDD will change the Governance Committee's meeting cadence to meet every other month, rather than quarterly, for the remainder of the project schedule. This change will provide more frequent communication with the executive stakeholders and provide more timely decision making for any projected risks. In addition, ITS and PDD will review and obtain approval for the project role and responsibility matrix and ongoing project schedule and activities for outstanding project activities.	9/30/2024	12/31/2024

Assessed Risk Rating	Recommendations	Concurrence and Action Plans		Implementation Date	Follow-Up/ Maturity Date
	A.3: Review the upcoming challenges and work with vendors and internal project managers to mitigate identified project risks as applicable.	**Agree**	ITS and PDD have identified User Acceptance Testing (UAT) preparation and delayed integration activities as risks in project status reports. Remediation activities are in progress for the outstanding integration specifications and development. ITS and PDD will increase the frequency of project controls meetings to identify potential risks to the successful completion of the project.	9/30/2024	12/31/2024