



# OFFICE OF THE INSPECTOR GENERAL MONTGOMERY COUNTY MARYLAND

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INSPECTOR GENERAL

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## Enterprise System Procurement

Department of Permitting Services

OIG Publication # OIG-24-02

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AUGUST 21, 2023

# EXECUTIVE SUMMARY

The Montgomery County Office of the Inspector General (OIG) initiated this review to evaluate the Department of Permitting Services' (DPS) efforts to procure and implement an enterprise system to manage a number of its core services.

In May 2021, DPS used a contract bridged from another public entity to procure a single enterprise software system with a projected cost of \$4.5 million. This enterprise system was intended to replace four disparate systems DPS was using to manage and administer permits, licensing, inspections, and code enforcement activities.

From the outset, implementation of the new system presented numerous challenges. As the contract was bridged from another public entity, DPS had limited ability to customize processes or functionality. Some DPS staff lacked the expertise needed to migrate existing data into the new system and it became apparent that the new system provided less functionality than the legacy systems it was replacing. After spending approximately \$2.1 million, the contract was terminated prior to implementation of the new system.

## OBJECTIVES

Through this review, we sought to evaluate DPS's efforts to procure and implement an enterprise software system to manage permits, licensing, inspections, and code enforcement activities.

## SCOPE & STANDARDS

Our review was conducted between February and July 2023, in accordance with the Association of Inspectors General, *Principles and Standards for Offices of Inspectors General, Quality Standards for Inspections, Evaluations, and Reviews* (May

## RESULTS

Our review found no instances of non-compliance with county law, regulation, or policy. However, we identified recommended enhancements to further reduce risk and safeguard public funds when procuring enterprise systems.

## RECOMMENDED ENHANCEMENTS

- Develop comprehensive written guidance that outlines the key factors to consider when procuring or evaluating enterprise systems.
- Restrict the use of bridge contracts for enterprise systems to rare circumstances as determined by the Department of Technology and Enterprise Business Solutions.
- Require thorough contingency plans for all existing critical systems throughout the process of upgrading or implementing new systems.

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## BACKGROUND AND RECOMMENDED ENHANCEMENTS

The Department of Permitting Services (DPS) is responsible for the review and processing of building plans and permits; inspections of structures and rights-of-way; enforcement of electrical, mechanical, energy, fire and life safety, accessibility, and building zoning codes; and issuing related licenses and permits. DPS's approved operating budget for fiscal year (FY) 2023 was \$4.1 million. Approximately 75% of the budget was attributed to personnel costs (e.g., salaries and employee benefits) and the remaining 25% to operating expenses.

DPS utilizes four separate platforms to review plans, process permits and licenses, store documents, and interact with the public. In April 2020, the county hired a new DPS Director who was tasked with improving customer service and streamlining the permitting process. Following a series of meetings with various stakeholders, the DPS Director decided to replace the four separate platforms with a single, cloud-based enterprise system.

In anticipation of implementing the new system, the DPS Director terminated an on-going upgrade of the DPS electronic plan review application, ePlans. DPS had spent approximately \$150,000 on the project prior to it being cancelled. Without the upgrade, ePlans was no longer supported by the vendor. In late 2020, in an effort to expedite the procurement of the new enterprise system, DPS chose to bridge a contract used by another public entity rather than undertaking its own formal contracting process.

In a bridged contract, the county relies on another public entity's competitive procurement process to satisfy competition requirements. While this typically shortens the procurement timeline, it limits the county to "materially the same goods and services" included in the bridged contract. This means most customizations, expansion of services, and upgrades outside of the contract originally bridged are not permissible.

The DPS Director involved staff from the county's Office of Procurement, Department of Technology and Enterprise Solutions, and Office of the County Attorney in project planning and vendor selection. Over the course of approximately six months, DPS staff viewed product demonstrations from multiple vendors offering enterprise permitting solutions. Only one vendor provided both an acceptable enterprise system and a competed contract comparable to the scope of the DPS project.

### SYSTEM UPGRADE TIMELINE

- **February 2019:** \$189,000 purchase order issued to upgrade ePlans system using IT Commodities vendor
- **January 2021:** ePlans upgrade terminated
- **May 2021:** \$4.5 million contract signed for new enterprise software solution to manage permits, licensing, inspections, and code enforcement
- **March 2023:** Enterprise solution contract terminated; and DPS enters into a \$496,310 contract (year one) to upgrade ePlans system
- **July 2023:** DPS preparing RFP to change permitting system

In May 2021, the county signed a \$4.5 million contract that was bridged from another government entity to procure an enterprise software system to manage permits, licensing, inspections, and code enforcement for DPS. From the beginning, DPS staff struggled with the implementation of the new system. The bridged contract placed responsibility for much of the required data migration on DPS. However, DPS staff lacked the expertise to complete the work independently so outside contractors, with limited knowledge of DPS’s processes, were hired to assist. Additionally, although best practices suggest an interval between configuration and data conversion, DPS’s compressed project timeline meant these tasks had to be done in parallel. This meant that processes for the new solution were not fully developed when DPS staff were attempting to map the data into the new system.

PROJECT COSTS EXCEEDED \$2.1 MILLION	
\$150,473	(ePlans system upgrade)
\$1,528,105	(Enterprise solutions project)
<b>+ \$496,310</b>	(Current ePlans system upgrade - contract value)
<b>\$2,174,888</b>	(Total project costs excluding staff time)

As the project progressed, DPS staff determined the new enterprise system had less functionality than the legacy systems it was replacing. DPS staff expressed concern that the new system did not align with DPS’s current business processes and practices so they compiled a list of 28 specific concerns regarding the functionality of the new system. The vendor indicated a willingness to customize some of the functionality requested by DPS, however, due to the restrictions inherent in bridge contracts, optimal customization was not possible.

DPS found that the limitations of the new system, coupled with the aggressive project timeline, overwhelmed staff. The DPS Director retired in

December 2022 and shortly thereafter the county terminated the contract. In March 2023, the county signed a new \$496,310 contract to again upgrade ePlans to minimize operational impact and ensure current system stability while efforts to address DPS’s needs are reassessed. As of July 2023, DPS had begun the process of drafting a request for proposal (RFP) for another enterprise permitting solution. All told, the failed attempt to implement a new system cost the county approximately \$1.5 million, including payments to the vendor and expenses for contractors assigned to the project. This does not include the extensive amount of staff time spent preparing for the implementation of the new system.

**Conclusion**

Our review did not identify any instances of noncompliance with applicable policy, regulation, or law. However, we determined the county spent approximately \$2.1 million directly related to the failed implementation of the new system and the subsequent need to upgrade the existing ePlans system. Consistent with our obligation to propose ways of increasing accountability, efficiency, and effectiveness in the use of county funds, we identified several potential

enhancements to processes that are designed to reduce risk and better safeguard public funds when procuring and implementing enterprise systems in the county.

#### Create a Structured Framework for Enterprise Solution Procurements

We learned that the county does not have a written framework that guides using departments through the unique considerations involved in evaluating enterprise systems. The procurement and implementation of enterprise systems often presents substantial risks and a comparatively high failure rate. It is imperative that departments ensure appropriate needs analysis, vendor selection, change management, and implementation strategies are put into place to mitigate risk and increase the likelihood of success.

Many enterprise systems fail due to lack of preparation as opposed to software limitations. The lack of a structured framework may have contributed to DPS's failure to appropriately evaluate the number and extent of changes required to existing DPS workflows. DPS also failed to fully consider the level of expertise needed to configure and migrate its data to the new system.

The county should develop comprehensive written guidance that outlines the key factors to consider when procuring or evaluating enterprise systems. At a minimum, the guidance should provide specific direction on how to: 1) properly document existing systems discovery; 2) develop functional requirements; 3) evaluate alternatives; 4) identify risks; 5) develop objective vendor selection criteria; and 6) properly assess the time and resources needed to redesign processes and configure and migrate data from existing systems to new cloud solutions.

#### Restrict the Use of Bridge Contracts for Enterprise Solutions

DPS's decision to utilize a bridge contract contributed to the failure of its enterprise solution project. During the project DPS determined that it would need customization to achieve comparable functionality of the systems being replaced. However, because bridge contracts are limited to the scope of work contained in the original contract, DPS was unable to negotiate a resolution with the vendor.

DPS likely would have been better served to utilize a more traditional, competitive procurement process such as an RFP. This would have allowed prospective vendors to provide a customized proposal in response to DPS's specific articulated needs. Unlike the bridged contract, the RFP process would have allowed the county to negotiate and modify contract terms and scope as needed. Contracts for enterprise systems require a careful and detailed evaluation of whether the solution can appropriately integrate with existing business processes. This critical step is difficult to do when evaluating a solution through the lens of a contract awarded, and designed, by another entity.

Since this contract was awarded, the Office of Procurement issued an updated *Procurement Guide* which acknowledges that bridge contracts "for services, including software/solutions, may

be problematic as it is generally more difficult to meet the materiality the same services or at the same prices.” However, the updated guidance does not place any concrete limitations or criteria on the use of bridge contracts for the implementation of enterprise systems. The county should implement restrictive criteria designed to limit the use of bridge contracts for enterprise systems to rare circumstances as determined by the Department of Technology and Enterprise Business Solutions.

#### Ensure Functionality of Current Systems

Contingency planning is key to the successful integration of disparate legacy systems into a single enterprise system. Most enterprise system projects require more time than originally estimated and often exceed the initial budget. Our research revealed that enterprise systems also experience a high rate of failure. Therefore, it is essential that using departments ensure that they will be able to maintain current services using existing systems until after the new solution is fully tested and implemented. This mitigates pressures that may mislead staff into making premature or ill-informed decisions while ensuring customers are well served in the interim.

When the Director decided to replace all of DPS’s systems, DPS was in the process of upgrading its ePlans application because the workflow technology was retired and unsupported by the vendor.. The upgrade project was then terminated in anticipation of the ePlans application being replaced with a single enterprise system. This created a heightened risk of failure and undue pressure because the existing maintenance contract with the ePlans vendor did not include support for the retired technology. The county should require thorough contingency plans for all existing critical systems throughout the process of upgrading or implementing new systems to reduce pressures, increase the success rate, and limit excessive waste.

## OIG COMMENTS TO THE CAO'S RESPONSE

The County Chief Administrative Officer's response to our report is included in its entirety in Appendix A. The response notes general concurrence with the OIG's recommended enhancements.

We ask the administration to provide us with copies of updated policies and procedures once they are finalized.



## APPENDIX A: Objectives, Scope and Methodology

Through this review we sought to evaluate DPS's efforts to procure and implement an enterprise software system to manage permits, licensing, inspections, and code enforcement activities. During this engagement, we reviewed relevant laws, regulations, policies, and procedures. We also interviewed relevant staff and inspected and analyzed relevant documentation, including system information, vendor proposals, contract documents, and relevant emails and correspondence.

This review was conducted between January and June 2023, in accordance with the Association of Inspectors General, Principles and Standards for Offices of Inspector General, Quality Standards for Inspections, Evaluations, and Reviews (May 2014).

# APPENDIX B: The CAO's Response

The Chief Administrative Officer provided the following response to our report:



OFFICE OF THE COUNTY EXECUTIVE


Marc Elrich  
County Executive

Richard S. Madaleno  
Chief Administrative Officer

## MEMORANDUM

September 1, 2023

TO: Megan Davey Limarzi, Inspector General

FROM: Richard S. Madaleno, Chief Administrative Officer 

SUBJECT: Inspector General Confidential Draft Report: Enterprise System Procurement – Department of Permitting Services (OIG Publication #OIG-24-02)

Thank you for the opportunity to respond to the issues identified in the report. Consistent with the direction from the County Executive and my November 23, 2022, memorandum (“*Updating our Information Technology Governance Model*”) the County, through the efforts of the Department of Technology and Enterprise Business Solutions (TEBS) and the Office of Procurement, is implementing a number of enhancements to the processes highlighted in the draft report. These enhancements, implemented subsequent to the system procurement that was the focus of the OIG review, are designed to improve the County’s planning, decision-making, and management of major systems projects.

As directed in the November 23 memorandum, the Chief Information Officer (Director of TEBS) is conducting a project review of all large-scale technology projects to ensure the County is administering best process governance, funding needs, security protocols, and network architecture standards across all major systems projects. TEBS has also begun coordinating activities to include efficiency models, cost-benefit analysis, and the appropriate policies to rapidly improve technology advancement in County Government. In addition, the Office of Procurement, as noted in your report, has taken steps to improve the oversight on use of bridge contracts, not just for systems projects but across all County operations.

Such enhancements and changes take time to plan and implement, and your report’s findings and recommendations will be useful as we continue to define and refine these processes in the future.

The report noted the following recommendations.

**Recommendation 1:** The County should develop comprehensive written guidance that outlines the key factors to consider when procuring or evaluating enterprise systems. At a minimum, the

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guidance should provide specific direction on how to: 1) properly document existing systems discovery; 2) develop functional requirements; 3) evaluate alternatives; 4) identify risks; 5) develop objective vendor selection criteria; and 6) properly assess the time and resources needed to redesign processes and configure and migrate data from existing systems to new cloud solutions.

**CAO Response:** We concur with the recommendation, and TEBS is moving towards implementing these recommendations through more formalized enterprise project management practices as mentioned in the November 2022 CAO memo. TEBS is in the process of developing project management standards and templates for enterprise IT projects to ensure that major systems projects are successfully planned and managed. Enterprise-level projects will also undergo periodic phase-gate reviews by a project review board. TEBS Project Management support has been added to the Internal IT Service Catalog and can be requested by departments at any time.

TEBS has hired a new Chief Enterprise Project Officer and is in the process of staffing the new Project Management Office to assist in raising the maturity of the County's project management practices. We are committed to ensuring successful project management for the delivery of services to residents, staff, and stakeholders while also acknowledging the challenges associated with this process and the move to a more centralized IT governance model.

**Recommendation 2:** The County should implement restrictive criteria designed to limit the use of bridge contracts for enterprise systems to rare circumstances as determined by the Department of Technology and Enterprise Business Solutions.

**CAO Response:** We concur with the intent of the recommendation and will continue to assess whether additional criteria are necessary to further limit the use of bridge contracts for major systems projects. The Office of Procurement will continue to coordinate with TEBS in this effort.

**Recommendation 3:** The County should require thorough contingency plans for all existing critical systems throughout the process of upgrading or implementing new systems to reduce pressures, increase the success rate, and limit excessive waste.

**CAO Response:** We concur that it is important to ensure that, as a new system or existing system upgrade is planned and implemented, appropriate contingency and resource plans are developed to ensure that ongoing operations are maintained subject to funding availability. The enterprise project management standards being implemented by TEBS will include this focus. Important work has already been conducted to identify and prioritize critical County systems through a Business Impact Analysis study.

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Thank you for bringing these matters to our attention.

cc: Fariba Kassiri, Deputy Chief Administrative Officer, Office of the County Executive  
Gail Roper, Director, Department of Technology and Enterprise Business Solutions  
Ash Shetty, Director, Office of Procurement  
Rabbiah Sabbakhan, Director, Department of Permitting Services  
Bill Broglie, Internal Audit Manager, Office of the County Executive