

## Making the most of your budget authority

### AI-powered funds management

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A publication from the Deloitte AI Institute for Government

Federal agencies often struggle with managing budget authority and open obligations, leaving money on the table that could be repositioned for unfunded requirements or other critical mission needs.

Additionally, the review and oversight of unliquidated obligations (ULO) and unmatched disbursements (UMD) can complicate a financial statement audit and contribute to material weaknesses for many federal agencies.

Challenges including disparate systems, data integrity, and nonstandard processes can reduce visibility and accountability. The resulting ineffective funds management

leads to reduced obligation authority and the return of unused funds to the US Department of the Treasury. The stakes are high: on average, federal agencies collectively return approximately \$24 billion worth of budgeted funds to the Treasury each year.<sup>1</sup> Returning undisbursed funds can negatively impact an agency's future because Congress is more willing to maintain or increase funding to agencies that spend their entire funding allotment.

To help agencies tackle their ULOs and UMDs, Deloitte built a configurable platform called ObligationOverwatch™. Through a custom configured implementation, an agency can continuously monitor its UMD and ULO landscape. The system provides intelligent flagging of high-risk ULOs using machine learning and automated remediation via robotic process automation (RPA). This can enhance processes for de-obligation and contract close-out. AI-powered monitoring and resolution of high-risk UMDs and ULOs allows for more timely and proactive de-obligation of ULOs, which then can be repurposed for other mission-critical activities. Overall, the internal control environment over ULOs and UMDs improves.

**Unmatched Disbursement (UMD):**  
A disbursement transaction that has been received and accepted by an accounting office but has not been matched to the correct detail obligation.

**Unliquidated Obligation (ULO):**  
An open obligation that has not been liquidated by payments (disbursements).

## Pain points lead to lost funds

A failure to adopt state-of-the-art approaches to funds management creates pain points that inhibit effective and efficient budget authority management. Many agencies use manually intensive processes to review and certify open obligations, including mass email data calls, spreadsheets, and extracting and transforming enterprise resource planning (ERP) data. Antiquated checklist processes for budget management may also be used, with inadequate internal controls and ineffective monitoring mechanisms that negatively impact auditability. Agencies often see such processes as compliance exercises rather than valuable opportunities to manage resources by repurposing high-risk obligations. Commonly, disparate data sources, including ERP, procurement systems, and other sub-ledger systems, add to the time required for consolidating and reviewing obligations. Moreover, ERP systems typically do not provide adequate tools to review, research, and certify open obligations or links between budgets, contract, and financial activity systems.

Pain points emerge from the processes and tools most federal agencies use to manage ULOs. One team extracts data from multiple systems (an ERP or financial systems and procurement systems), blends the data, and creates pivot tables. The team then emails the data to each division. Each division further distributes the records to its stakeholders for review. The division gathers all results of the review via email and sends them to headquarters for final aggregation. Follow-ups and reconciliations are rarely performed, or involve significant effort to ensure accuracy and completeness. Because agencies can have thousands or millions of ULOs and UMDs at a time, this approach can tremendously drain resources and divert staff from value-adding tasks.

Five years after their expiration, ULOs that were inadequately reviewed and deobligated and therefore non-disbursed are eventually canceled and returned to the Treasury. Identifying and implementing approaches to improve or correct these losses enables buying power back into the year of execution and informs budget decisions.



# How AI can be applied to manage budget authority

We are now in the Age of With,<sup>™</sup> where humans and machines work together. Government agencies recognize new opportunities, as seen in their exponentially increased use of AI to manage budget authority and obligations. AI provides an opportunity to better manage the overall budget process and better understand issues of cost estimation, budget formulation, and program management—all of which contribute to avoiding funds' return to the Treasury.

AI's most prominent uses will likely be in identifying and reducing risk. Examples include transactions and balances with high risk of incorrect calculation or use, or high fraud indication potential. Additionally, AI can be used to create and recommend budget authority scenarios, improving formulation and allotments.

The ideal potential applications for AI are where significant data volume complicates understanding or the drawing of conclusions. In such cases, organizations can add value by using AI to more rapidly analyze,

classify, or interpret data compared to traditional manual approaches. In the context of budget authority, this could mean analyzing transactions' risk of going unused before the funds expire. Then, management can focus on reviewing higher risk obligations, determine whether the funds are still needed, and deobligate if necessary.

By analyzing problematic data, AI can predict which current transactions entail high risk. Benefits include:

- **Strengthening internal controls** to promote better financial stewardship and audit readiness
- **Reducing the budget authority** sent back to Treasury, thereby potentially making budget authority available for other mission priorities
- **Improving budget planning and formulation** to gain a more accurate picture of annual funding needs

# ObligationOverwatch tackles the challenges

ObligationOverwatch is a configurable platform, specifically designed for the federal procure-to-pay process, that makes management of ULOs more transparent and effective. A single centralized location for analyzing ULOs enables greater oversight and implementation of proper internal controls. It also enables standardized processes to perform causative research, flag ULOs for de-obligation, and reconcile balances. The solution is designed to help agencies address challenges across ULO risk assessment, certification, and matching (see Figure 1).

Two examples illustrate our platform's application:

**US Department of Agriculture (USDA):** Internal and external reports (for example, the Agency Financial Report and Government Accountability Office report for fiscal year 2018) identified ULO management as a risk area for the USDA.<sup>2</sup> The department's Office of the Chief Financial Officer (OCFO) sought to improve the management, liquidation, reporting, and remediation of identified ULOs by taking a proactive and data-driven approach to monitoring.

Together with USDA, Deloitte piloted a methodology to support the USDA OCFO with this exploratory effort—including the timely identification of problematic ULOs. To enable implementation of the methodology, dashboards and RPA bots were developed. In combination, these tools gave the USDA a bird's-eye view of its operations, and allowed the bots to notify analysts when individual ULOs were flagged as being at high risk of resulting funds loss.

The dashboards provide a broad picture of the ULO landscape, each catering to a different audience with specific needs. The executive dashboard provides a strategic overview; the division leadership dashboard enables tactical oversight; and the staff dashboard supports causative research. The RPA bots automate notification of high-risk ULOs, providing greater transparency and reducing the time analysts spend extracting, analyzing, and certifying ULO data.

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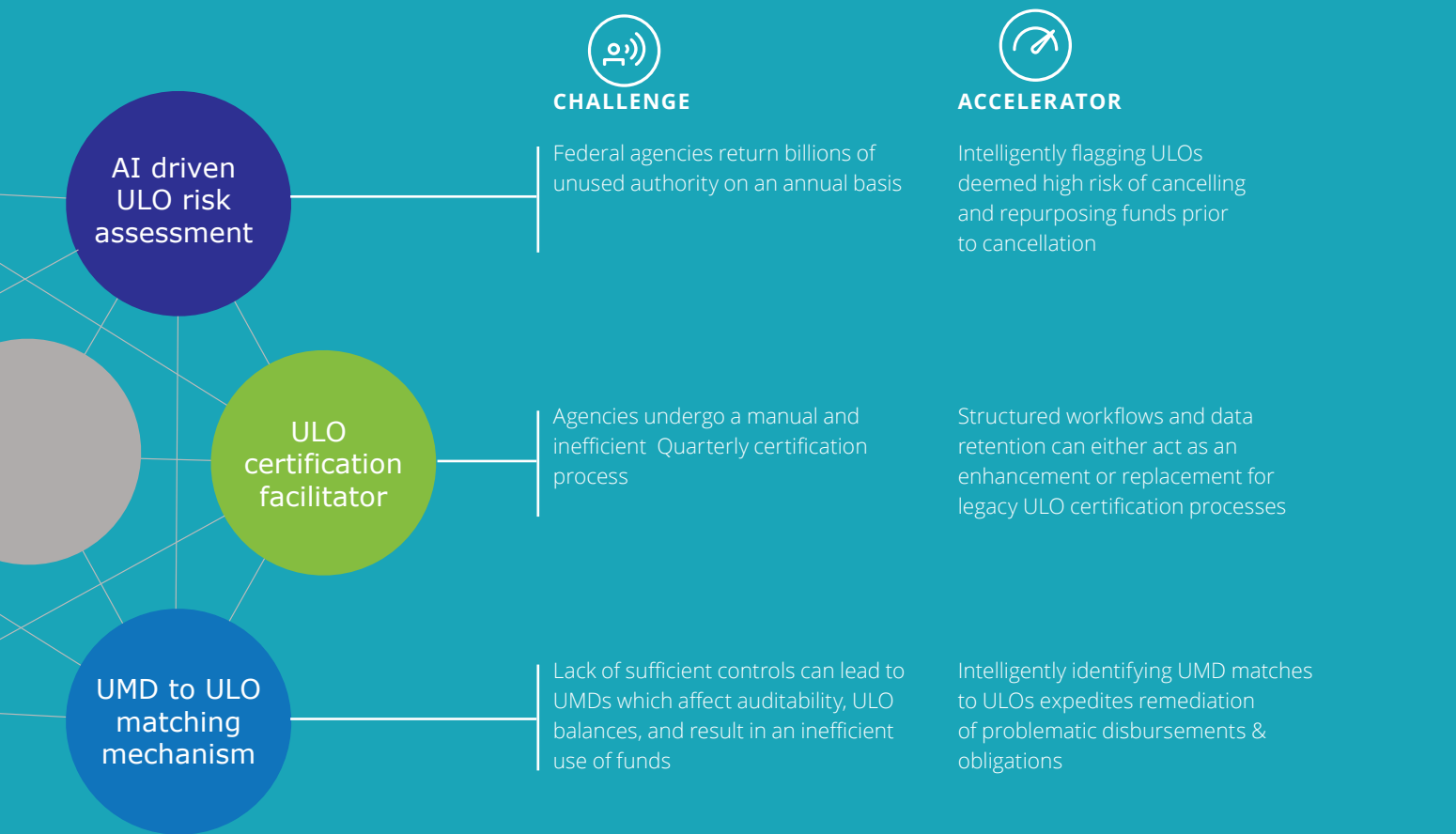
**A large federal agency** sought to reduce their total number of UMDs and improve their funds balance with the Treasury. We assisted the effort by launching a pilot program that covered one of their largest budget submission offices to test the use of AI. Our pilot matched more than \$70 million worth of UMDs to ULOs, resulting in roughly a 5 percent reduction in UMDs. This produced a more accurate ULO balance by reducing ULOs associated with the matched UMDs, and creating a more auditable procure to pay environment. The pilot also identified numerous vulnerabilities within the financial system that resulted in a failure to match many disbursements. The agency is now expanding its use of the matching tool across all divisions to reduce the number of UMDs by matching them to open obligations where applicable.



FIGURE 1 | AI POWERED FUNDS MANAGEMENT

## ObligationOverwatch™

Deloitte has built proven solutions that tackle an organization’s Unliquidated Obligations (ULO) and Unmatched Disbursements (UMD) pain-points. Through a custom configured implementation, an organization can now implement continuous monitoring of their entire UMD/ULO landscape.



### Problem federal agencies experience

Agencies often struggle with managing budget authority and open obligations, often leaving money on the table that could have been repositioned for unfunded requirements. Additionally, the review and oversight of ULOs and UMDs are cited by auditors as being a material weakness for many Federal Agencies. Challenges such as disparate systems, data integrity issues, and nonstandard processes can cause a lack of visibility, accountability, and ultimately ineffective management of funds that results in reduced obligation authority and funds returning to Treasury unused.

### What's ObligationOverwatch

A configurable platform specifically designed for the federal P2P process which adds more transparency and effectiveness to the management of ULOs. A single centralized location for analyzing ULOs enables greater oversight, implementation of proper internal controls and standardized processes for performing causative research, flagging ULOs for deobligation, and reconciling balances

### The value ObligationOverwatch brings to federal agencies

AI powered monitoring and resolution of high risk UMDS and ULOs allows for a timelier and more proactive deobligation of ULOs to be repurposed for other mission critical activities. ObligationOverwatch provides a clear picture of an Agency's status of funds to enable an easier method for maximizing the use of funding authority.



# Uniting humans and machines to drive value in budget execution

Agencies spend significant amounts of time and effort wrangling data and emailing spreadsheets, leaving little time to address unneeded obligations.

Advances in AI offer solutions in the form of new tools and methods for identifying outliers and unusual transactions. AI-powered technology alone cannot address the challenges of obligations management and budget control. However, it gives humans a jump start on correcting recurring errors and improving overall fund management. UMD matching, automated high-risk ULO notifications, and dashboards to synthesize obligations and disbursements can be handled by AI.

Then, staff can focus on finding and correcting chronic problems at the source. This can prevent future UMDs and reduce the total number of ULOs cancelled each year. Without the focus brought by AI, this outcome may be too difficult to realize for human experts. Agencies that balance the application of technology and human expertise may be rewarded with the optimal use of funding authority and greater visibility and control over funds.

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## Endnotes

1 US Government Accountability Office, "Federal Budget: A Few Agencies and Program-Specific Factors Explain Most Unused Funds," May 2021, <https://www.gao.gov/products/gao-21-432>

2 USDA, "2018 Agency Financial Report" (U.S. Department of Agriculture, 2018), <https://www.usda.gov/sites/default/files/documents/usda-fy18-agency-financial-report.pdf>. GAO, "Federal Budget: A Few Agencies and Program-Specific Factors Explain Most Unused Funds" (U. S. Government Accountability Office, May 25, 2021), <https://www.gao.gov/products/gao-21-432>.



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