

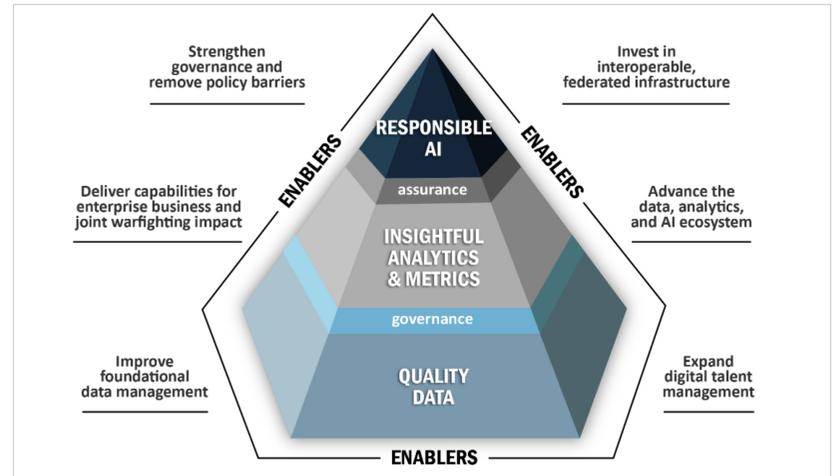
THE DOD'S APPLICATION OF DATA ANALYTICS IN FINANCIAL MANAGEMENT: HOW TO ACHIEVE COMPETITIVE ADVANTAGE THROUGH DATA INTEGRATION



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Abstract

For the DoD, facing complex security challenges, data analytics is crucial for informed decision-making, resource optimization, and staying ahead of emerging threats. The purpose of this study is to examine the current use of data analytics within the DoD financial management and identify opportunities for enhancement. This research analyzes the policies and strategic documents implemented by the DoD to govern the application of data analytics in financial management. Additionally, it analyzes Advana, the principal platform for advanced analytics, to ascertain how its capabilities can enhance financial management practices within the DoD. The research reveals that the DoD has made significant strides in leveraging data analytics for financial management. However, there is ample room for improvement to enhance the effectiveness of data analytics for DoD's objectives. While strategic documents outline objectives, they lack clear guidance on implementation mechanisms and oversight frameworks. The enhancement of financial reporting compilation stands as a notable opportunity through Advana; however, the pace of integrating authoritative data systems into the platform remains slow. Moreover, there is a notable need for additional highly skilled employees proficient in using Advana for financial management purposes. Based on these findings, I provide recommendations for optimizing Advana implementation and utilization, enhancing data integrity and monitoring, and improving workforce development and talent management.



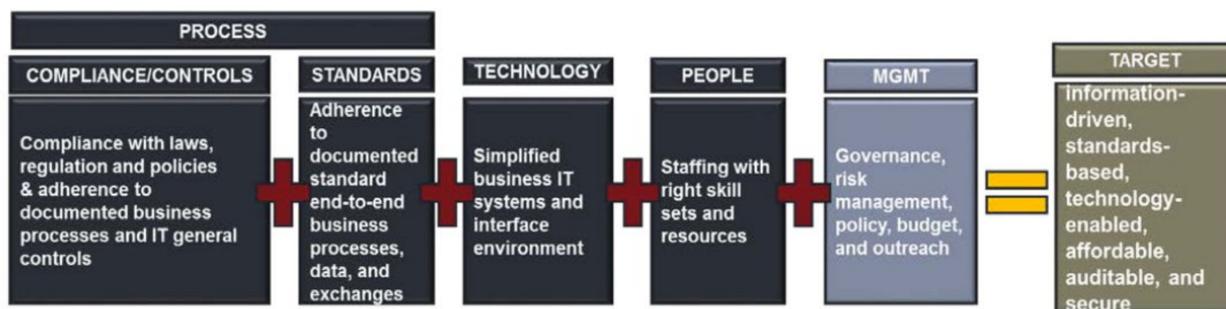
DoD's Strategic Goals and the Hierarchy of Needs

Methods

For this research, I reviewed a combination of secondary sources, including policies, strategic documents, previous publicly available interviews with DoD officials, academic articles, GAO reports, and research papers. These sources were instrumental in investigating variables such as data analytics, financial management, and Advana, which formed the primary focus of the study. I adopted a qualitative approach to address the existing gap in empirical research and explore the research questions.

Results & Their Impact

The research highlights gaps and challenges across various areas. The findings underscore the need for targeted improvements to enhance the accuracy, efficiency, and transparency of financial management practices within the DoD. Specifically, addressing incomplete Advana implementation can significantly improve Fund Balance with Treasury reconciliation processes, ensuring timely and accurate transaction reconciliations. Moreover, implementing reliable controls and standardized procedures for financial reporting compilation can enhance the completeness and accuracy of financial statements. Streamlining intragovernmental transaction handling and ensuring compliance with policy requirements, such as with the Government Invoicing System, can mitigate compliance issues and improve the efficiency of intradepartmental transactions. Additionally, improving financial system assessments and ensuring FISCAM compliance can strengthen internal controls and enhance the auditability of financial systems, contributing to overall financial management effectiveness. Furthermore, adopting continuous planning and analysis approaches can provide decision-makers with timely and comprehensive information for strategic decision-making, ultimately improving resource allocation and operational performance. Finally, leveraging digital collaborative environments like Advana for streamlined data sharing with Congress can enhance transparency and partnership, facilitating more efficient oversight processes. Overall, addressing the identified deficiencies through targeted corrective actions outlined in the research can enhance the DoD financial management community's capabilities.



DoD's Financial Management Target Equation

Recommendations

Advana Implementation and Utilization

- Clear implementation mechanisms and oversight frameworks should be developed for data analytics strategies within the DoD, ensuring specific protocols for monitoring progress, evaluating initiatives, and ensuring accountability.
- Priority should be given to completing Advana implementation, particularly in Fund Balance with Treasury reconciliation, to address material weaknesses and enhance the accuracy of transaction reconciliation.
- Measures should be implemented to strengthen data analytics practices in financial reporting compilation, including enhancing controls, ensuring completeness and accuracy, and utilizing Advana for comprehensive analysis.
- Challenges in handling intragovernmental transactions should be addressed by leveraging Advana's capabilities for transaction verification and obligation validation, ensuring compliance and accuracy.
- Integration of authoritative data systems into Advana requires an accelerated pace to ensure the timely incorporation of essential data systems.
- Decision-making processes in budgeting and PPBE should be improved by leveraging Advana for continuous planning, analysis, and timely information dissemination.

- The DoD should leverage Advana to address vulnerabilities in core enterprise systems and improve FISCAM compliance. By implementing Advana alongside an enterprise Identity, Credential, and Access Management solution, the DoD can enhance security management access, segregation of duties, and configuration management, while effectively tracking remediation status and ensuring alignment with FISCAM requirements.

Enhancing Data Integrity and Monitoring

- Attention should be given to maintaining standardized data formats and preventing duplication within Advana to streamline analytics processes and enhance data integrity.
- Monitoring of corrective actions should be strengthened, and Business Health Metrics should be utilized for enhanced performance monitoring and decision-making in financial management practices.

Workforce Development and Talent Management

- Upskilling and reskilling employees in data analytics should be prioritized to ensure a sustainable source of certified data scientists and analysts, leveraging existing talent to drive progress in the Department's digital transformation.

