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# Digitizing the Planning, Programming, Budgeting and Execution (PPBE) Process

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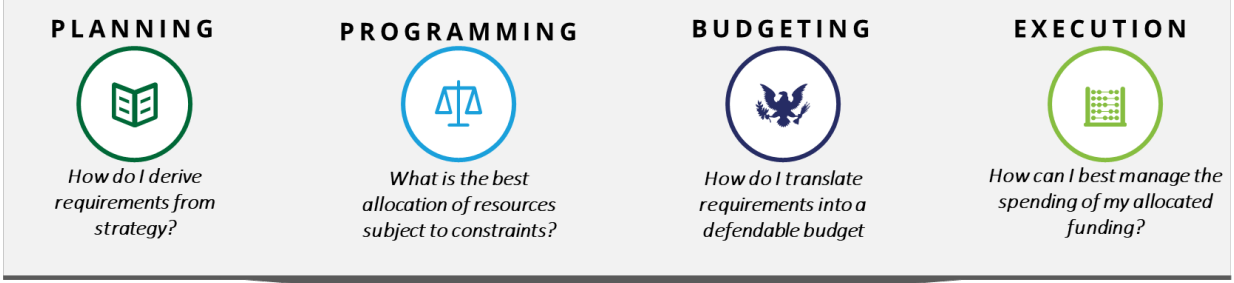
## Background

The Department of Defense's (DoD) resource management process called Planning, Programming, Budgeting & Execution (PPBE) is now over 60 years old. This deeply ingrained process provides the Department with the organization and structure required to manage its complexity but is based upon an industrial-era model. It is no longer feasible to conduct PPBE in a twentieth century fashion: time lagged, dependent on unreliable data, prone to human error, siloed and disconnected…and more importantly, built to support a large-scale battle playbook. Today's increasingly uncertain strategic landscape is defined by a return to great power competition, rapid technology evolution, and the marked pressure to balance budgets, cut costs, and reduce the Federal deficit. Relying on manual, time- and labor-intensive processes for PPBE will not be sufficient to meet the demands and challenges for such a relentlessly competitive and dynamic environment.

**History of PPBE**

The process currently known as PPBE dates to 1961, when Secretary of Defense Robert McNamara and Assistant Secretary of Defense (Comptroller) Charles Hitch implemented the Planning, Programming, and Budgeting System (PPBS), in part to centralize the budget. [1]

Short of reforming the entire PPBE process in whole, DoD organizations may benefit from adopting digital decision-making processes and automation tools to more carefully capture business insights, track requirements, and fill capability gaps. The current PPBE process relies heavily on historical or expert knowledge and basic predictive analytical techniques, which may miss insights that are more consistently revealed through digital solutions and technical advances in artificial intelligence and automation. Recent developments in artificial intelligence (AI) and machine learning (ML) have demonstrated a clear imperative: the DoD should consider evolving the PPBE process and leveraging these capabilities to outpace competitors with accelerated decision velocity and precise resource allocation against critical mission requirements.




**The Challenge**

*An increasingly complex operational and resource constrained environment challenges decision-makers to make timely and informed decisions on how resources are planned, prioritized, allocated, executed, and whether they are fully traceable from strategy through to budget execution.*

[1] William F. West, Program Budgeting and the Performance Movement: The Elusive Quest for Efficiency in Government (Washington, DC: Georgetown University Press, 2011), p. 9

## Keeping up with a rapidly evolving operational environment

The DoD may want to consider developing more modern and agile capabilities that keep pace with adversarial development and adaptation of these same technologies. Because resources are a primary driver of the ability of DoD to ensure national security, there is an inherently complex relationship between stakeholders both within DoD and also outside of DoD to include Congress, industry, and allies and partners. Constrained resources can lead to competition across services, combatant commanders, and DoD agencies. Leaders should consider how resources are allocated to support national security strategies or address the many critical capabilities to meet global challenges that are increasingly complex. The environment calls for tools that equip commanders and planners throughout DoD with the ability to understand long-term impacts and implications of resource decisions. Similarly, resource managers should efficiently develop funding options that consider and support the strategies that planners are developing based on commanders' guidance. Integration and a common data picture—a PPBE "digital thread" between these stakeholders—does not exist as resource management processes and data systems remain siloed at many levels in the DoD and in service components.

## Limited digital solutions increase PPBE challenges

DoD organizations typically create point solutions to address discrete PPBE pain points, but due to the interconnected nature of the PPBE process, integrated solutions are beneficial. DoD requires systems and processes that move resource decisions at the speed of mission while maintaining accuracy and accountability. Some challenges faced by DoD using existing approaches include:

- **Manual processes hindering effective workflow and decision speed.** Organizations are managing PPBE through manual processes, many relying on standalone spreadsheets for analysis, and email or online file sharing sites to manage workflows. The lack of a robust digital workflow and enhanced analytic suite of tools—such as visualization capability—exacerbates the burden of delivering products for review and adapting to the dynamic timelines.

- **Inability to link resources to strategy.** Decision makers face significant challenges to trace strategy through to budget execution, resulting in limited transparency and accuracy of decision making. Commanders face challenges making operational decisions when budget execution data is not readily available. Planners and resource managers face challenges in performing assessments that cross PPBE phases, limiting the available information to provide to decision makers. These process silos not only impact the ability to assess the effectiveness of DoD strategies, but also limit the assessments to provide quality feedback on the effectiveness of individual PPBE swim lanes.

- **Lack of data integration across PPBE phases.** PPBE stakeholders are dependent on data from multiple, siloed sources. Lack of integration layers and a common PPBE digital thread across PPBE phases increase analytic processing and waste valuable time as data is transformed into usable formats within PPBE phases.

Increased concern about security of data transport across classification levels is also crucial for the modernization of the PPBE process. With the sensitive nature of the information involved in the PPBE process, organizations should consider implementing broad security measures to protect against

unauthorized access and breaches. This includes the use of encryption, multi-factor authentication, and other security technologies to safeguard data and prevent unauthorized access.

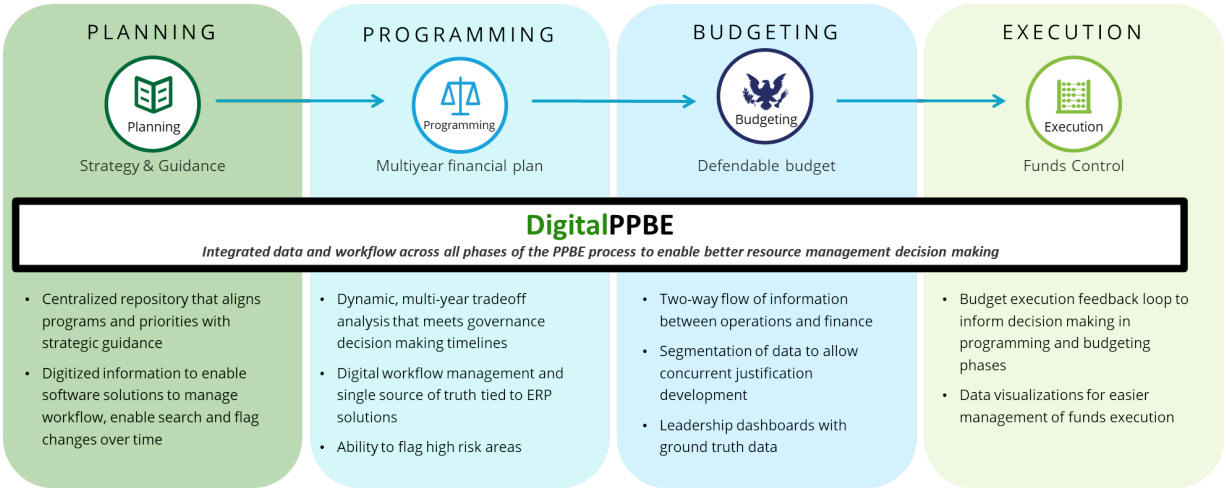
## Getting to an ideal state for PPBE

Meeting the challenges of managing the complex and cumbersome PPBE process requires insights that integrate data across PPBE phases and organizational silos while managing processes in a repeatable manner. DoD leaders and financial/resource managers also require what can be described as a "single pane of glass" over their data and processes. This view can help provide decision makers and resource managers the ability to unify planning, analysis, and forecasting in a single environment, supporting a stricter connection between operational and financial reporting and insight and action. This can enable transparency without disrupting the day-to-day business activities of users. Some of the specific attributes to address these challenges include the ability to:

- Integrate and interconnect digital processes that are repeatable across multiple timeframes and managed over multiple organizational levels.
- Digitize information to enable software solutions to manage workflow, enable search, and flag changes over time.
- Create constructs and data required to align programs and priorities with strategic guidance.
- Create two-way flow of information between operations and finance.
- Segment data to allow concurrent justification development.
- Provide leadership dashboards with ground truth and real-time data to facilitate effective decision making.

## Digitizing the process to improve outcomes

Deloitte's approach for helping agencies address these issues rests on a multi-component solution that bundles demonstrated technological approaches with domain professionals that have years of experience with the PPBE process. We leverage new and existing AI/ML assets, alliances, curated data, and functional skilled to provide a modular and tailorable technology solution that scales to meet client's needs.




One of the primary technology approaches we leverage is the use of Financial Planning and Analysis (FP&A) software to serve as a decision-making platform to unify planning intelligence that provides a 360° view of the organization with the capability to drill down to the transactional level where the data

is generated. It provides the ability to analyze data, look at past business decisions and results, and then create models for the user to understand the full impact of specific decisions on organizational results. Many organizations have individual point solutions; but an integrated enterprise solution can produce a single source of data to the organization, thus providing a flexible development platform that is scalable across multiple PPBE phases and multiple organizational echelons.

Additionally, our modular approach leverages software that is purpose-built for assisting with decision analysis, course of action development, and assessing different funding strategies:

- **Portfolio Integration and Digital Workflows.** With spreadsheet-driven processes, it is challenging to maintain and enforce controls. Our FP&A approach enables the use of workflows that align to business processes, connects and integrates stakeholders at multiple echelons, and—most importantly—delivers transparency throughout the PPBE process. Organizations gain an authoritative source of data upon which to base investment decisions and deliver guidance.
- **Dynamic Scenario Planning and Costing.** To provide decision options for leaders, our approach enables flexible scenario planning, which can include collecting performance and schedule data such as conservative, worst-case, etc. Our solution supports integration with various products, which means flexibility to tailor solutions to reporting needs.
- **Prioritization and Trade Space Analysis.** Our solution provides a structured framework for organizing, comparing, and analyzing inputs to assess risk and score initiatives to assign quantitative value for requirements. Users can develop "what-if" scenarios to change variables within portfolios (e.g., timing, status, and budget) without changing the underlying data.
- **AI/ML for Document Analysis.** Our Natural Language Processing approaches can rapidly sift through guidance documents and regulations to provide insights for development of strategies and guidance for resource informed decision making.
- **AI/ML for Effective Funds Management.** Federal organizations return a significant amount of funding back to the US Treasury that could have been better allocated toward other mission needs. Our solution leverages AI/ML to identify funds that may be expiring and enables comptrollers to take action ahead of losing these funds.

Deloitte's Government & Public Service (GPS) Practice, Defense Sub-Account has over 4,500 professionals providing services to DoD agencies with over 250 of these professionals providing DoD Financial Management and PPBE services. Included are professionals with experience working with clients' existing data systems of record, analytical approaches that are provided by the government and commonly used analytical tools that many government organizations have access to. This allows Deloitte to provide a range of solutions to meet clients where they are on their technology journey to help them improve their resource management decision making processes.

## Conclusion

The increasingly complex operational and resource constrained environment challenges the DoD's ability to make timely and informed resourcing decisions. The DoD would benefit from better insights into how their organization's resources are planned, allocated, and executed. Deloitte's approach provides the ability to organize strategic priorities and imperatives assigned to large DoD organizations; align that strategic direction to capabilities, requirements, and fiscal guidance; and ultimately connect the narrative to fiscal reality, thereby improving senior leaders' ability to justify their budgetary requirements in a coherent data-informed fashion.

# For more information, please contact

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