*Ebook*

# Six Guiding Principles of a Next-Generation Defense Budget System

DECISION LENS

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# Background

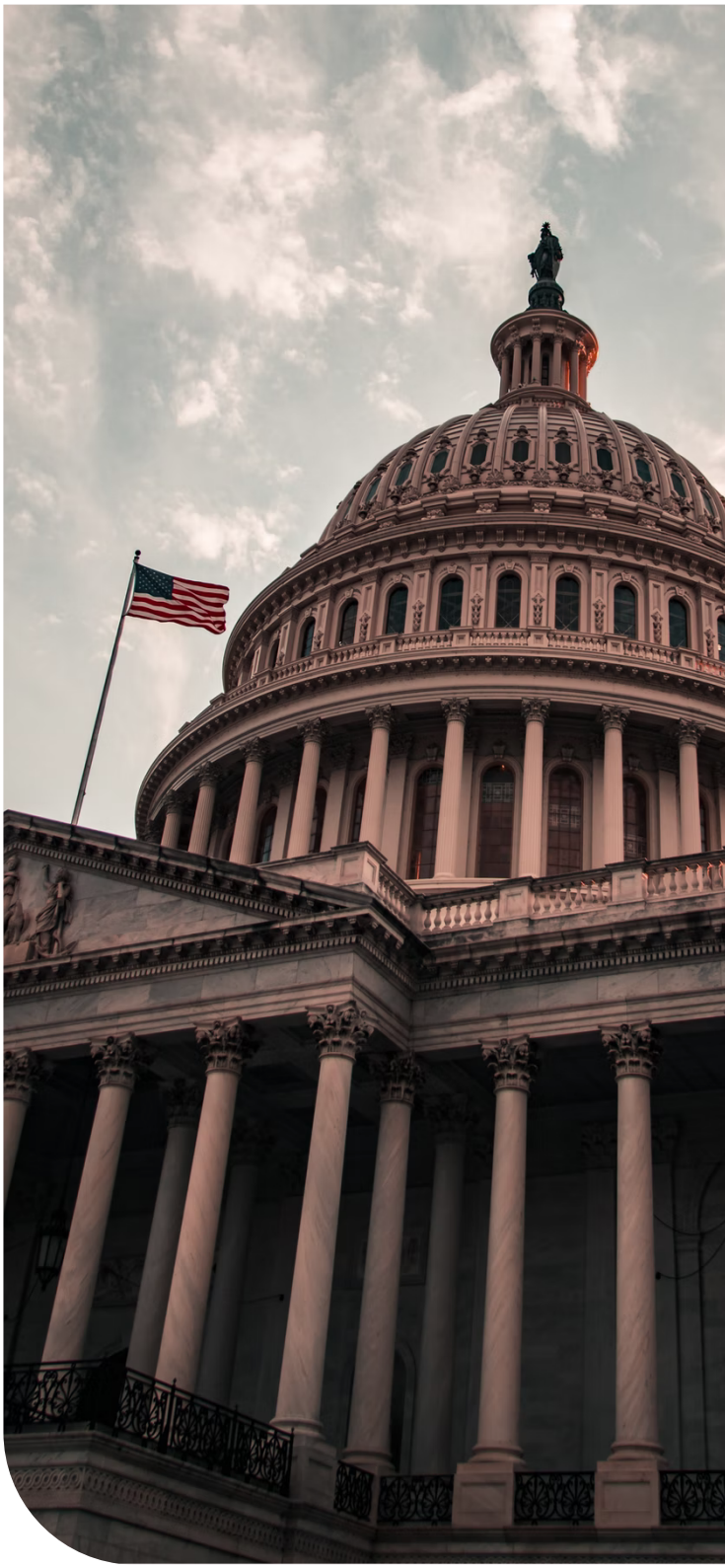
The consolidation of the world's industrial, technological, and demographic power in Eurasia under a hegemonic power poses a real threat to our economy, sovereignty, and to the physical security of the United States itself.[1] Recognizing this dynamic, The U.S. National Defense Strategy explicitly names the People's Republic of China as America's primary strategic competitor.

China and other adversaries are investing in rapidly modernizing their militaries as the US is plagued with the overly bureaucratic and increasingly inflexible Planning, Programming, Budgeting and Execution (PPBE) process.

Originally implemented to maintain American dominance by unifying strategy and budget, reliance on PPBE increased after Vietnam as the DoD and Congress doubled down on Soviet-style central planning. Since that time, PPBE has morphed into an overly rigid, bureaucratic quagmire which slows innovation, threatens military readiness, and delays execution. Each of the Planning, Programming, Budgeting, and Execution phases contains obstacles for aligning resources to strategy making changes to strategic priorities hard to implement.

Unlike the Soviet Union throughout the Cold War or America in the current environment, the scale of China's economy means that military production – even at its recent unrelenting pace – does not impose an insurmountable economic burden.

Ultimately, America's processes for budget, acquisition, and procurement – all of which are essential to developing and maintaining our superiority – are broken. Having become divorced from time and urgency, the process is left to fester in inefficiency. The result, unsurprisingly, is the practical elimination of world-class productivity and disruptive innovation due to the over-regulated, risk averse, defense market.[2] The most direct example of this decline in productivity can be seen in the time it takes to deliver new capabilities and innovation to US forces,[3] often measured in decades.



These challenges are why the commercial sector equivalent of PPBE was replaced decades ago. The processes failed to keep private companies technologically competitive over the long run. Without making a similar pivot, the DoD will play the role of the Soviet Union in the next era of global domination.

In summary, China poses a major threat to our well-being, especially as they and other adversaries are seemingly better equipped to modernize their militaries more rapidly. Meanwhile, the PPBE process in the US, while intended to unify strategy and budget, has become overly rigid, bureaucratic, and unproductive. As a result, the US military is unable to build capabilities and maintain military readiness at the adequate accelerated pace required to deter our adversaries.

# Antiquated budgeting has led to a decline in US defense productivity

Our current budget process is the primary culprit behind the decline in US defense productivity and innovation.[4] It is cumbersome and slow, resulting in inferior decision making — the very opposite of the agility epitomized by Silicon Valley – a way the Pentagon once aspired to emulate.

As our potential adversaries are poised to achieve greater productivity and faster innovation per equivalent dollar spent on their defense, the global balance of power is changing. The United States is falling behind in critical short-term readiness areas while simultaneously the US government return on investment in each dollar spent on national security has been rapidly diminishing.[5]

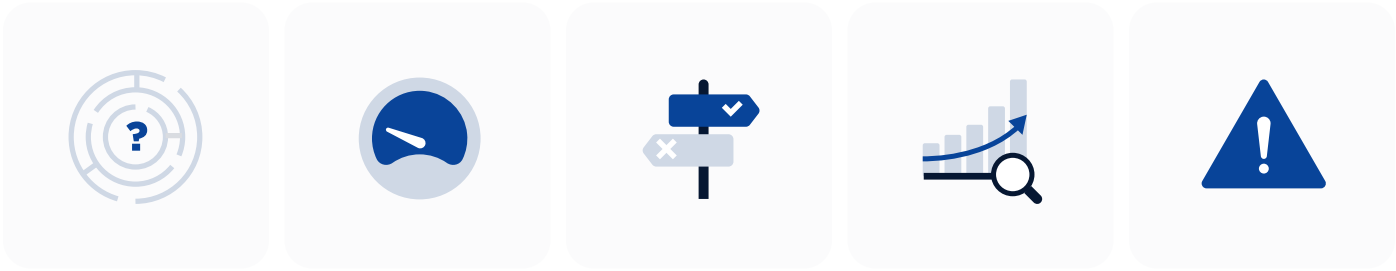
China is innovating faster than our traditional systems can respond by leveraging the commercial market to deploy new capabilities at the speed of Moore's Law. There is fear that China will meet or surpass the United States in terms of capabilities because they are accelerating, prioritizing, and funding innovation at a faster pace than we are.

In fact, China may already have an edge in its resource allocation process. Evidence includes their ability to develop and field 25 new unmanned aircraft systems from 2010 to 2020, including stealthy carrier-based unmanned systems.[6] We must build a budget system that delivers the efficiency, agility, and insight needed to achieve decision superiority which minimizes waste and maximizes return.

If we don't upgrade our planning and budgeting systems now, China and other potential adversaries will surpass us.

> **The surest way to prevent war is to be prepared to win one. Doing so requires a competitive approach to force development and a consistent, multiyear investment to restore warfighting readiness and field a lethal force.**
>
> James Mattis, Former SECDEF

# The 5 Fatal Flaws of Today's Defense Budgeting



**It's rigid** | **It slows innovation** | **It prevents strategic alignment** | **It's not transparent** | **It's mostly manual**

The budget system is broken because it was developed for predictability. If the last several decades have taught us one infallible lesson it is this - predictability is a vestige of a bygone era. The systems and solutions supporting PPBE are therefore equally anachronistic.

Fixing the issue will require more than just legislative action. Progress requires lean-forward leaders who understand how technology, process re-engineering, and up-leveling personnel skills are equally important variables of the solution equation.

## It's Rigid

Every inefficiency not aligned with expanding capacity or delivering timely innovation is a tax on our military and foreign policy capabilities making us less ready today and tomorrow. In today's dynamic threat environment, the military cannot efficiently resource emergent needs during the year of execution or effectively integrate in-year changes to the Future Year Defense Program (FYDP).

Re-programming is one example of how bureaucratic oversights, manual processes, and a lack of transparency favor predictability and impede readiness. Why does re-programming present such a challenge?

1. **It can be cumbersome:** Reprogramming of funds could require several layers of approval and review and today's manual approach requires significant resources to accommodate additional data requests.

2. **It can be time-consuming:** While DoD and Congress have acted quickly for many major events, response times are inconsistent – studies suggest some approvals may take months - resulting in potential delays in action.

3. **It can be difficult to describe impact analytically:** Problems describing the requirements with source justification delay the approval process.

According to Philip Candreva, 85% percent of the time, Congress did not alter a reprogramming request but let it proceed as requested. The lack of pushback suggests delays are primarily due to overly rigid rules and a lack of transparency resulting from reliance on inferior technology and outdated process.

## It Slows Innovation

Today's defense budget system slows the acquisition and adoption of innovative new technologies because it is not designed to effectively tap into the commercial technology ecosystem[7]. As a result, long-term planning is impeded, as it takes far too long for innovations to reach the warfighter. According to The Hudson Institute[8], the regular acquisition process can take between 9 and 26 years for a needed capability to progress from an identified capability gap into an actual capability at the hands of the warfighter. Considering the advancing innovation of our near-peer adversaries, this delay poses an unacceptable risk to our long-term security. The result is:

- The DoD cannot efficiently take advantage of new and unanticipated commercial innovation that would improve joint force capabilities.

- The commencement of new capability development is delayed for the continuance of legacy programs that DoD should halt in favor of a more affordable or more capable program.

The need to rely on various colors of money, ongoing support for legacy programs, and challenges in how the research, development, test, and evaluation process works under the PPBE construct inhibit innovation. While there has been forward progress with colorless appropriations these are bridge solutions spanning from an old approach into tomorrow.

## It Prevents Strategic Alignment

While aligning strategy and execution was the initial objective of instituting the PPBE process, it now severs these two elements, inextricably divorcing one from the other. As a result, our ability to strategically execute has been challenged. The current system does not do enough to require foregoing investment in less aligned legacy programs in favor of more aligned, innovative investments.

As a result, some people claim that today's approach to budgeting requires great people to deliver mediocre results. This is due to disempowered personnel who understand the lack of alignment but do not have the ability to voice concerns or place their own strategic bets. Change requires more than new systems; it demands process re-engineering driven by empowered innovative leaders across the DoD. Today, services must sacrifice investment in modernization in favor of near-term readiness, improved capacity, and long-term innovation which may or may not manifest into impactful technology for the warfighter.

Better technology – which can align short-term investment decisions to strategy while also providing data into the system for mid-term POM, FYDP, and long-term 10+ year planning – is essential to understanding and auditing investments in a dynamic environment.

## It's Not Transparent

An opaque system requires extensive oversight resulting in waste, bloat, and delayed decisions. Between fiscal years 2013 and 2018, the Department of Defense had more than $81 billion canceled, most in appropriations[9]. If the right systems had been in place, the canceled funds could have been combined, channeled, and invested in furthering the mission. However, the current approach makes it difficult to understand the real-time status of funds during the year of execution. The issue is compounded by an inability to easily roll-up funding across a major

command and assess how funds can be re-deployed before a fiscal year ends.

Systems play a supporting role in this play, but fear is the featured star. Inaction is driven by worries that a decision may be proven incorrect, and responsibility is cast upon an individual who finds it difficult to audit and justify a decision. The result is an unwillingness to share pre-decisional information openly and honestly. However, studies show that thoughtful deliberation and appreciation for differing perspectives lead to better outcomes. But this first requires the ability to justify requests with the depth of information necessary to defend a position.

Fear results in less collaboration by driving some planning and programming details onto classified systems even though the budget becomes public record upon release to Congress. Reliance on classified systems makes it difficult to deploy cutting-edge commercial cloud software. However, these systems would provide better access to individuals, insight into status of funds, allow for scenario planning to spend un-allocated dollars, and roll-up spending across a command.

Ultimately, we need a process that encourages risk taking, free discussion, and ongoing collaboration without fear of reprisals. Better technology, more transparency, and less finger-pointing are critical to ushering in this necessary change.

## It's Mostly Manual

Manual reporting places data validation over data analytics, leading to sub-optimal decision making. It's why the private sector has been integrating automation into its processes for decades. Meanwhile, the DoD continues to rely heavily on email, spreadsheets, and PowerPoint, turning intelligent data analysts into expensive data aggregators. Why is manual reporting so detrimental to a next-generation defense budget system?

- **Manual reporting is surprisingly error prone.** While error messages are readily apparent, a faulty formula or errant macro could return numbers that look legitimate but lead to the wrong situational assessment.

- **Manual reporting detracts from data analysis.** Financial managers are required to spend much of their time validating data and making sure that it is correct instead of providing insights based on their front-line experience.

- **Manual reporting takes up too much time and resources.** Rising personnel costs dedicated to time consuming, low-value data collection is an undue tax on the system which wastes precious resources.

Alternatively, automation can save an organization thousands of hours. As the war for talent continues, the DoD would be best served to put the exceptional people it hires to the task of making better informed, fiscally sounds, data-driven decisions which further the mission.

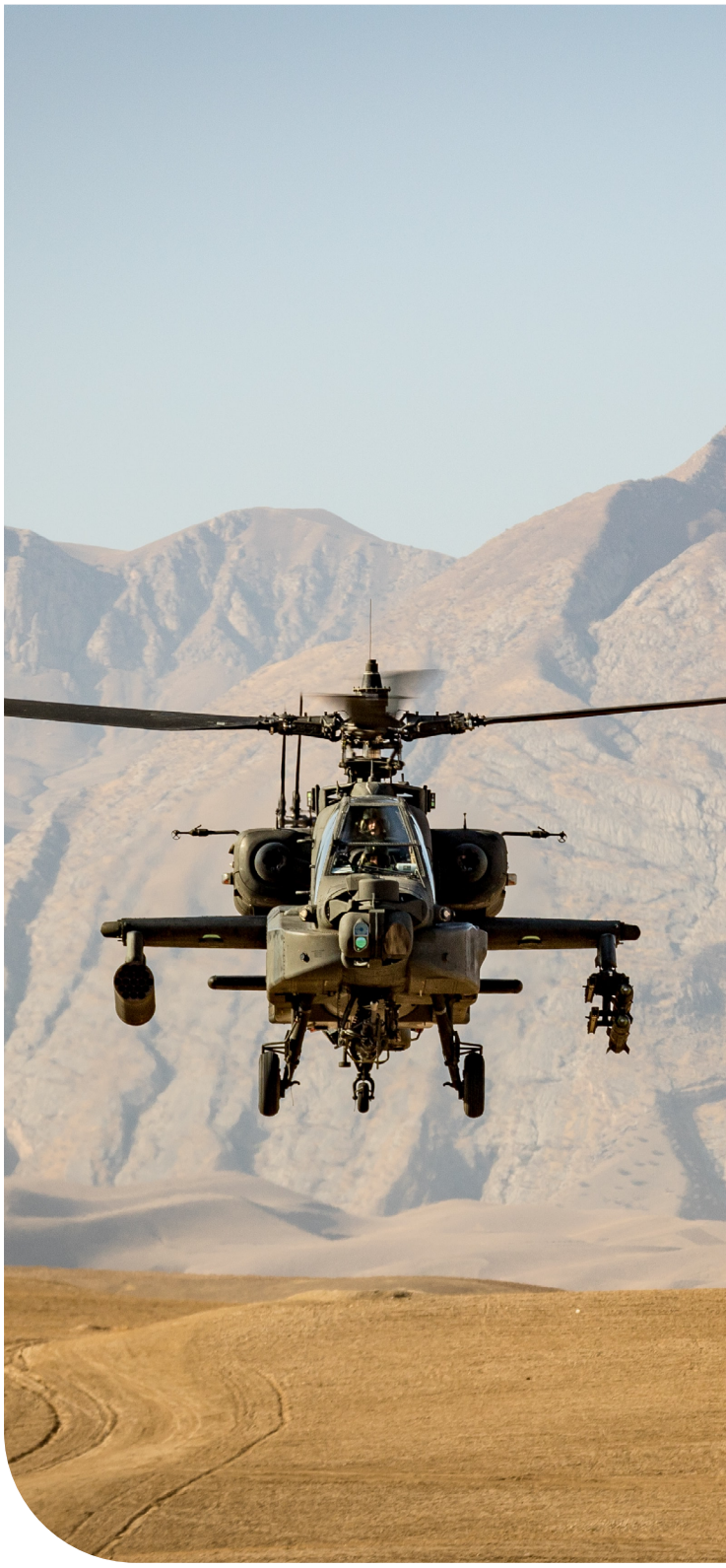
# The Guiding Principles of Next-Generation Defense Budgeting

An agile approach to budgeting will result in a sustained operational advantage providing decision makers with data-informed options which allow them to act definitively in the short-term and confidently in the long-term.

The next-generation defense budget must achieve the following:

- Effectively balance the tradeoffs between readiness and future force capabilities
- Allow for rapid, impact-aware response to world events
- Ensure American overmatch over our near-peer adversaries
- Deliver innovations to the warfighter at a faster pace
- Create long-term accountability for programs of record

To meet these objectives a next-generation budget must adhere to the following guiding principles.



## Powered by Leading-Edge Technology

Unleashing the power of the United States' private sector and of Silicon Valley – with its unmatched innovation and extraordinary capital investment potential – can reverse the U.S. slide in capabilities relative to China and maintain our edge across a range of critical technologies[10]. Commercial innovations such as automation, cloud-native, artificial intelligence, quantum computing and yet unrealized future capabilities must be easy to identify, resource, and procure. Efficiently integrating these technologies will result in a sustained operational advantage which delivers maximum value from every tax dollar. New innovations will allow for:

- **Agility**. Artificial intelligence can deliver insights into the impact of changing conditions and present a variety of potential outcomes nearly instantaneously allowing for more situationally aware decisions.
- **Speed.** Automation delivers data and insight to leaders faster by putting in longer hours than possible when relying solely on a human workforce.
- **Improved accuracy.** When repetitive processes have exacting standards, machines almost universally do a better job.

Optimizing spending away from expensive data collection into data analysis and strategic alignment will harness individual ingenuity and deliver better outcomes. The result is more investment in the mission, readiness, and innovation.

To achieve these ends, there must be above all a shift in mindset across the DoD. The goal of defense budgeting cannot be predictability. This approach results in safe decisions by choosing vendors and solutions which are well known and less risky. The data bears out this scenario. At the 2021 GAIN conference, it was noted that over an 18-month period ending in late 2021, the number of contractors seeking to work with the government increased 75%. However, the number of first-time award nominees has declined.

While programs have been set-up across the DoD such as AFWERX, the DoD needs an enterprise-wide approach to integrating commercial innovation. To make this a reality, the DoD must find, promote, and highlight lean-forward leaders who are looking for innovation to squeeze every efficiency out of the system.

## Deliver Mission Alignment

There are three primary time horizons which must be considered when evaluating any financial or resourcing decision. The short-, medium-, and long-range plans must each maximally invest in the mission while dynamically informing each other.

- **Short-term readiness.** We must restore readiness, not maintain it. This requires tying year of execution funding to readiness objectives and understanding how and when changes happen along with the impact. Every decision must have a well understood consequence, and plan to replace diverted readiness funds in the current or future years.
- **Medium-term modernization.** The DoD must determine not only how and when to modernize, but also how to mitigate the cost of modernization. Achieving modernization requires fiscal discipline, a sound strategy, and the tools necessary to assess how raiding modernization accounts will impact the mission.
- **Long-range force strength.** Viable policy decisions require more input and engagement from financial executives across hierarchy and units. These individuals must understand the long-term mission, how investment aligns to these missions, and have a feedback loop on which to base decisions.

Delivering mission alignment requires better decision making which demands harmonized data in as few systems of record as possible. The Army recognizes that it has a strategy-to-resource mismatch and that solving it means doing things differently from now on.

The next generation defense budget must not overload management with data validation tasks which take away their ability to perform data analysis. It must be more collaborative and inclusive of financial executives operating in each time horizon and it must be built on a framework which ties investment decisions to the mission.

## Planning Must Be Continuous

Our current budget approach is episodic and disconnected. It provides little insight into historical performance and trends which making it harder to shape present and future strategic planning.

Continuous planning on the other hand allows stakeholders to monitor goals, metrics, and milestones for existing priorities while simultaneously seeking new strategic priorities. Financial leaders connect dynamic, external factors – from macro trends such as inflation to individual events such as a natural disaster – with responses that provide the transparency and clarity leadership needs for decision dominance.

It is faster than episodic planning as well, encompassing high-impact activities that give organizations a material advantage. The ability to model what-if scenarios and courses of action without limits allows decision-makers to anticipate what might happen and how to change, recalibrate, or modify plans with minimal impact on the mission.

## Transparency and Accountability are Embedded

Congress must maintain oversight of defense budgeting while providing greater flexibility to respond to changing events. Instead of unduly burdening the reprogramming process due to a lack of transparency, the DoD could invest in tools which build accountability into the system.

Recognizing this, the FY21 NDAA called for a modernization of budget justification documents that would promote “the flow between the Department and the congressional defense committees of other information required by Congress for its oversight of budgeting for the Department.”

However, identifying a need and manifesting a solution are vastly different. To deliver on this stated requirement, the DoD must institute a mechanism for promoting continuous dialogue that recognizes transparency is an act of mutual trust.
Our next-generation defense system must promote this notion by guaranteeing that decisions are understandable, auditable, and well-considered.

It is important to delegate acquisition authority of resources to highly responsible lower-ranked front-line workers. These contributors have the most ground truth, in-the-moment expertise to make quick, data-driven decisions. This is only possible if these individuals can defend decisions with data and be called into account for failures.

Beyond individual accountability, advances in big data and analytics will provide government with capabilities to identify and reduce waste while simultaneously systematically improving investments in a way that would have been difficult to fathom even five years ago.

## Collaboration is Required

The most productive approach to strategic planning is to engage in open dialogue with key stakeholders, provide context, request feedback and suggestions, and develop compromise positions that still achieve desired effects. Today's system veers towards closed collaboration due to fear of openly and honestly sharing pre-decisional information.
However, empirically grounded, interdisciplinary thinking can make our assumptions more realistic and the resulting strategies more meaningful. In short, we need more open collaboration to make better decisions. The Navy is considering such an approach with a revised POM process consisting of overlapping phases including strategy development, requirements and program integration, and resource integration.

Collaboration also serves to bolster other tenants of the next-generation defense system. Collaboration in a system of records makes all records auditable, holding individuals in the decision-making process accountable. Changing personnel doesn't lead to knowledge gaps during turnover as the history of decisions made is all contained within a single system.

Fostering collaboration will require a willingness to share unpopular opinions without reprisal. Opposing viewpoints based on sound, legitimate, argued reasoning are necessary to creating defensible strategies. No one will contribute to the discussion if they are passed over for a promotion or otherwise penalized for a contrary viewpoint.

Secure technology is paramount to providing comfort for using collaboration tools and any system should provide varying levels of roles and rights for accessing content and be available in a secure cloud environment.

## It Must be Enterprise-Wide

Continuous, integrated planning requires a holistic look across the entire enterprise to identify and influence the key factors and linkages that can best meet the mission. These linkages maintain strategic alignment, deliver enterprise agility, and result in more effective decision making.

Delivering an integrated enterprise solution requires more than just software. This includes:

- A common data framework for risk analysis that is applicable from the strategic to the tactical levels.
- Cloud-native offerings which promote secure access to everyone from everywhere.
- Process re-engineering to leverage technology and replace existing inefficient processes.
- Strong leadership prepared to defend investing time and dollars into modernization.

Enterprise adoption doesn't simply mean a single unit or one Major Command relying on a solution. The broader goal – which will deliver on the promise of short and long-term strategic alignment – requires the DoD to begin adopting tools at the Pentagon level down and through the individual branches of the military. This system could then be relied upon by Congress to deliver the true state of military priorities, investments, and outcomes.

While such sweeping adoption will take time, starting small is a good first step. It's critical that the end state of enterprise DoD adoption be the end-game mindset. Approaching the system from this perspective will allow for establishment of information and system architecture, contracting, and procurement protocols which an enterprise approach.

# An Unparalleled Opportunity for Innovation

China's relentless digital modernization is eroding overmatch, resulting in increasing aggression. Our current budget system will not allow us to keep up with their continued investment in transformation.

To offset these shifting global dynamics, the DoD must accelerate its adoption of a next generation defense budget system. We cannot continue to accept the rapidly diminishing return on each dollar invested in national security and the resulting delayed delivery of new capabilities and innovations to US forces.

The only way to achieve these objectives is with a foundational overhaul. By investing in a solution which adheres to next-generation principles, the US can achieve the software supremacy needed to compete.

The US cannot forego readiness nor over-invest in it. Alternatively, we cannot under-invest in modernization. The only way to achieve both end is by ensuring every dollar is spent wisely. We must be able to plan for the future without sacrificing today.

With the right partners, the best technology, and forward-leading thinkers, the situation can improve. Implementing a next generation budget system will allow the DoD to achieve the software supremacy necessary to win future wars. By rethinking how it plans, programs, budgets, and executes, the DoD will regain lost momentum, restore readiness, and win the future.

## About Decision Lens

Decision Lens is integrated planning software which modernizes how government prioritizes, plans, and funds. Leveraging our unique expertise in decision science, customers across the Department of Defense, intelligence community, and federal civilian agencies achieve a sustained operational advantage though superior long-range planning, continuous medium-range prioritization, and short-range funding execution.

Decision Lens addresses the shortcomings of the current defense budget system by developing cutting edge technology, relying on process re-engineering best practices, and hiring experts who get organizations to realize value quickly. With Decision Lens, the DoD will realize the agile, accountable, and collaborative approach required to retain US global dominance.

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