Analysis of Section 321: Consumption-Based Solutions of the Forged Act

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Key Points

Section 321 of the Forged Act introduces a new acquisition authority for the Department of Defense (DoD) to procure technology-supported capabilities through "consumption-based solutions." This provision aims to modernize defense acquisition practices by enabling the DoD to pay for services based on actual usage, similar to commercial models. The initiative originated from recommendations by the Section 809 Panel, which identified the limitations of traditional acquisition methods in procuring modern information technology. This new authority is expected to increase flexibility, align costs with usage, provide budget predictability through fixed unit pricing, enhance contract management with usage notifications, streamline modifications for innovation, and offer flexible funding options. However, potential challenges include budgeting and forecasting difficulties, the risk of vendor lock-in, complexity in performance monitoring, the potential for over-consumption, and the need for adjustments within the existing acquisition workforce and processes. To mitigate these risks, the DoD will need to develop robust forecasting methods, establish clear exit strategies, define comprehensive performance metrics, implement strong governance, and invest in training and workforce development. The implementation of Section 321 will most directly affect contracting officers, program managers, budget analysts, IT personnel, and end users within the DoD. Opposition may arise from traditional defense contractors, some budget and finance offices, oversight bodies, incumbent vendors, and some members of the acquisition workforce. Successful implementation will require additional resources, including funding for training and tools, specialized personnel, and updated policies and procedures. The success of this provision will be measured through cost efficiency, time to capability, flexibility, vendor agility, user satisfaction, contract management efficiency, budget predictability, and adoption rate. While alternative acquisition approaches exist, they may not fully capture the benefits of the consumption-based model. Section 321 provides a clear definition of consumption-based solutions and outlines specific contracting and funding considerations.

History of the recommendation

The concept of consumption-based solutions within the Department of Defense acquisition framework has its roots in a broader movement towards acquisition reform aimed at improving efficiency and responsiveness.[1] The inclusion of Section 321 in the

Forged Act is a direct result of the multi-year effort by the Section 809 Panel to modernize defense acquisition.[3] This panel was commissioned in 2016 to provide recommendations for streamlining and codifying acquisition regulations to meet the evolving threats and demands of the 21st century.[4] Recommendation #43 of the Section 809 Panel explicitly focused on revising acquisition regulations to enable more flexible and effective procurement of consumption-based solutions.[6] The panel's research highlighted the increasing prevalence of "as-a-service" models in the commercial sector and the DoD's need to efficiently acquire these capabilities.[3] The traditional acquisition system, designed for hardware-centric procurement, struggles with the dynamic nature of these offerings.[7]

Several factors drove the push for this change. Outdated acquisition categories, such as classifying information technology (IT) as either supplies or services, proved inadequate for modern IT solutions like cloud services.[9] Current contract structures often constrained scalability and did not align with how commercial IT is increasingly sold on a consumption basis.[9] The need to revise contract types to permit the procurement of commercial goods on a consumption basis became evident.[9] Congress recognized these challenges and urged the Pentagon to pilot consumption-based buying and cloud in the 2021 National Defense Authorization Act (NDAA), based on the Section 809 panel's recommendations.[3] The FY2024 NDAA also included a pilot program to further explore the use of consumption-based solutions.[12] Section 321 represents a formalization and expansion of these earlier pilot efforts, indicating a growing acceptance and push for this acquisition model within the DoD. Furthermore, the authority granted by Section 321 can be seen as a complementary effort to the DoD's broader initiatives to reform software acquisition, emphasizing agility, iterative delivery, and leveraging commercial solutions.[13] Modern software development often relies on cloud infrastructure, and consumption-based models fit well with this paradigm by allowing the DoD to pay for what they use and scale resources as needed, supporting faster deployment and adaptation of software capabilities.[13]

Desired Effect of the recommendation

The primary desired effect of Section 321 is to provide the DoD with **increased flexibility in acquiring technology-supported capabilities**. This new acquisition avenue moves beyond traditional procurement methods, allowing the DoD to access capabilities in a more agile and adaptable manner, which is crucial in a rapidly evolving technological landscape.[1] Traditional acquisition can be rigid and time-consuming; this new authority aims to provide more flexibility to acquire modern technological

capabilities that may not fit neatly into existing procurement categories.

Another key desired effect is the **alignment with usage-based models** prevalent in the commercial sector. By specifying that consumption-based solutions must have the ability to be metered and billed based on actual usage, the DoD can pay only for the resources they consume.[9] This has the potential for significant cost savings and more efficient allocation of resources, as costs are directly tied to utilization. Paying for actual usage aligns the cost with the benefit derived, potentially reducing waste associated with underutilized resources acquired through traditional fixed-price contracts.

Section 321 also aims to provide **predetermined pricing and financial control**. The requirement for predetermined pricing at fixed price units offers predictability in budgeting and cost management, even with variable usage. While usage may fluctuate, the fixed price per unit allows for better forecasting and control of expenditures.

Enhanced contract management and oversight are another anticipated outcome due to the mandate for notifications when consumption reaches 75% and 90% of the funded amount. These notifications enable proactive monitoring of contract usage and allow for timely decisions regarding additional funding or adjustments, preventing potential disruptions in service. These notification requirements provide early warnings of potential funding shortfalls, allowing contracting officers to take necessary actions to avoid service interruptions.

Furthermore, Section 321 intends to foster **streamlined modifications for innovation** by treating modifications up to 25% of the contract value for new features or capabilities as competitive procurements. This aims to facilitate quicker adoption of new technologies and capabilities without lengthy recompetition processes for smaller enhancements, allowing the DoD to adapt more rapidly to evolving needs. The ability to add new features through streamlined modifications can encourage innovation and allow the DoD to adapt to evolving needs more rapidly.

Finally, the provision offers **flexible funding options** by allowing for the use of various funding types (Research, Development, Test and Evaluation; Procurement; Production; Modification; and Operation and Maintenance) and incrementally funded contracts. This provides greater flexibility in how these solutions are funded, potentially overcoming some of the limitations associated with traditional appropriation categories and aligning the funding stream with the consumption-based nature of the

acquisition.

Potential Negative impacts of the recommendations

Despite the intended benefits, the implementation of Section 321 could lead to several potential negative impacts. One significant concern is **budgeting and forecasting challenges**. While the provision requires fixed unit pricing, the overall expenditure will depend on actual consumption, which might be difficult to predict accurately.[20] This inherent variability could lead to budget overruns or shortfalls if usage deviates significantly from projections, making long-term budget planning more complex compared to fixed-price contracts. Accurately forecasting consumption for new technologies or evolving mission needs can be challenging, potentially leading to financial instability if not managed carefully.

Another potential negative outcome is the **risk of vendor lock-in**. Once the DoD becomes heavily reliant on a particular consumption-based solution, switching vendors might be costly and disruptive.[7] The seamless integration promised by these solutions could make it harder to transition to alternative providers in the future, potentially leading to vendor lock-in and reduced negotiating power. The convenience and integrated nature of consumption-based solutions might create dependencies that limit the DoD's future flexibility and ability to leverage competitive pricing.

Performance monitoring complexity also presents a challenge. While metering usage is a core requirement, defining meaningful performance metrics and ensuring the vendor is meeting the required service levels based on consumption data might be complex.[20] Traditional performance monitoring based on deliverables might need to be adapted to focus on the outcomes and effectiveness of the consumed capability. Measuring the value and effectiveness of a capability based purely on consumption metrics might not capture the full picture of mission impact or potential inefficiencies.

The **potential for over-consumption** is another concern. The ease of access and usage inherent in consumption-based models could lead to unintended over-consumption if proper governance and cost controls are not in place.[20] Without clear policies and oversight, users might consume resources without fully considering the cost implications. The "pay-as-you-go" nature could incentivize greater usage, which, while potentially beneficial, could also lead to unnecessary expenses if not managed effectively.

Finally, the **impact on the existing acquisition workforce and processes** must be

considered. Implementing this new acquisition authority will require changes to existing processes and might necessitate new skills and training for the acquisition workforce.[21] This could potentially cause initial disruption and resistance as the workforce adapts to new procedures and requirements. The shift towards consumption-based models might challenge established acquisition practices and require a significant cultural and procedural adjustment within the DoD.

Mitigations the organization will take to diminish the negative impacts

To mitigate the potential negative impacts of Section 321, the DoD will need to implement several key strategies. To address budgeting and forecasting challenges, the organization should focus on **developing robust forecasting and budgeting methodologies**. This includes implementing sophisticated tools and processes for forecasting consumption based on historical data, mission requirements, and predictive analytics. Regular reviews and adjustments of budgets based on actual usage and evolving needs will be crucial. Proactive forecasting and flexible budgeting can help mitigate the financial risks associated with variable consumption.

To diminish the risk of vendor lock-in, the DoD should focus on **establishing clear exit strategies and interoperability standards**. This involves incorporating clauses in contracts that ensure data portability and facilitate transitions to alternative vendors if necessary. Promoting the adoption of open standards will also enhance interoperability between different consumption-based solutions. Avoiding vendor lock-in requires careful planning and contractual safeguards.

To address the complexity of performance monitoring, the DoD needs to focus on **defining comprehensive performance metrics beyond consumption**. This involves developing a holistic set of performance indicators that go beyond just usage metrics to evaluate the actual mission impact and effectiveness of the acquired capabilities. This might include measures of efficiency, responsiveness, and user satisfaction. A balanced approach to performance monitoring will ensure that consumption translates to real value.

To mitigate the potential for over-consumption, the DoD must focus on **implementing strong governance and cost control mechanisms**. This includes establishing clear policies and approval processes for the consumption of resources, implementing real-time monitoring tools and alerts to track usage and identify potential over-consumption, and providing training to users on responsible consumption practices. Effective governance is crucial to prevent unnecessary expenditures in a

consumption-based model.

Finally, to address the impact on the workforce and processes, the DoD should prioritize **investing in training and workforce development**. This involves developing and delivering targeted training programs for the acquisition workforce to equip them with the knowledge and skills needed to effectively contract for, fund, and manage consumption-based solutions. This includes understanding the unique aspects of fixed-price resource units and performance monitoring in this context. A well-trained workforce is essential for the successful implementation of any new acquisition authority.

DoD Personnel Most Affected

The implementation of Section 321 will most directly affect several key roles within the Department of Defense. **Contracting Officers** will be significantly impacted as they will need to learn and apply the new subcategory of services ("Consumption-based solutions") and the new contract type ("Fixed-price resource units"). This will involve understanding the unique requirements for metering, billing, and notifications, as well as the streamlined modification process. This will likely lead to increased complexity in contract negotiation and management, requiring new expertise and potentially updated templates and procedures.

Program Managers will also be heavily involved, as they will be responsible for defining requirements in a way that aligns with consumption-based models, monitoring usage, and managing budgets based on variable consumption. They will also need to work closely with contracting officers to ensure contracts are structured effectively. This represents a shift in focus from managing deliverables to managing resource consumption and ensuring mission outcomes are achieved efficiently.

Budget Analysts and Financial Management Personnel will need to adapt their budgeting and forecasting processes to accommodate the variable nature of expenditures under consumption-based solutions. They will also be involved in tracking and approving payments based on actual usage. This will likely lead to increased complexity in budget planning and execution, requiring new tools and techniques for financial management.

IT and Technical Personnel will be crucial in defining the technical requirements for consumption-based solutions, monitoring their performance, and ensuring they meet the DoD's needs. They will also play a role in tracking and reporting usage data. This will necessitate closer collaboration with vendors and a greater focus on managing

service levels and consumption metrics.

While not directly involved in acquisition, **End Users** will also be affected, as their behavior and usage patterns will directly impact the cost and effectiveness of consumption-based solutions. They might require training on how to use these services efficiently and responsibly, leading to potential changes in how they access and utilize technology-supported capabilities.

Stakeholders opposed and rationale for Opposition

Several stakeholders may oppose the implementation of Section 321 for various reasons. **Traditional Defense Contractors**, whose business model often relies on large, long-term contracts for hardware development and fixed-price service agreements, might oppose this shift towards consumption-based models.[7] Their rationale would likely be a potential decrease in revenue and profit margins associated with usage-based billing compared to traditional contract structures, as well as uncertainty about future demand and revenue streams.

Internal DoD Budget and Finance Offices might also express initial opposition, despite the intended flexibility.[20] Their concerns could stem from the perceived unpredictability of consumption-based spending compared to more traditional, fixed appropriations, leading to worries about the difficulty of long-term budget planning and the potential for uncontrolled spending if consumption is not managed effectively.

Oversight Bodies, such as the Government Accountability Office (GAO) and congressional committees, might raise concerns about the potential for waste, fraud, and abuse in consumption-based models if proper monitoring and controls are not in place.[2] They might also scrutinize the metrics used to measure the effectiveness of these solutions to ensure accountability and responsible use of taxpayer funds in a new and potentially less familiar acquisition model.

Incumbent Vendors who have secured large, multi-year contracts under traditional acquisition methods might oppose the adoption of consumption-based alternatives that could potentially compete with or replace their existing agreements. Their rationale would be the desire to protect their existing market share and revenue streams from disruption by new acquisition models.

Finally, some **Acquisition Workforce Personnel** who are comfortable with traditional processes and lack experience with consumption-based models might resist the change due to a fear of the unknown or the need to learn new skills and procedures. This resistance could be rooted in inertia and a general aversion to change, as well as

potential concerns about increased workload or complexity.

Additional Resources

The successful implementation of Section 321 will likely require the DoD to allocate additional resources in several key areas. **Funding** will be needed for dedicated training programs for the acquisition workforce on consumption-based contracting, funding mechanisms, and performance monitoring. Initial investment in tools and systems for tracking and analyzing consumption data will also be necessary, as well as potentially a dedicated fund or process to handle fluctuations in spending due to variable consumption.

Training will be critical, requiring the development of specialized programs for contracting officers, program managers, budget analysts, and technical personnel on the principles and practices of consumption-based acquisition. This includes training on the new subcategory of services and the "Fixed-price resource units" contract type, as well as performance monitoring and evaluation in a consumption-based environment.

The DoD might also need to augment its **Personnel** with individuals possessing expertise in areas such as cloud computing, data analytics, and other fields relevant to consumption-based solutions. Contracting officers with experience in negotiating and managing usage-based contracts, as well as data analysts to help track and interpret consumption data, may be required.

Investments in **Tools and Systems** will be necessary, including IT systems for tracking and reporting consumption data from vendors, analytics tools to help forecast consumption and identify trends, and updates to existing acquisition and financial management systems to accommodate the unique aspects of consumption-based solutions.

Finally, **Updated Policies and Procedures** will be essential. This includes the development of clear policies and guidance on when and how to utilize consumption-based solutions, updates to the Defense Federal Acquisition Regulation Supplement (DFARS) to fully implement the authority granted by Section 321, and the creation of standardized contract templates for "Fixed-price resource units."

Measures of Success

The success and effectiveness of the "consumption-based solutions" acquisition authority, once implemented, can be measured through several key criteria. **Cost**

Efficiency can be tracked by comparing the cost per unit of capability delivered through this method versus traditional acquisition approaches. Measuring potential cost savings achieved through optimized resource consumption will also be crucial. **Time to Capability** can be assessed by evaluating the speed at which new technology-supported capabilities can be acquired and deployed using consumption-based solutions compared to traditional processes.

Flexibility and Scalability will be important indicators of success, measured by the ability of the DoD to quickly scale up or down its usage of capabilities based on changing mission needs. **Vendor Agility and Responsiveness** can be gauged by how effectively consumption-based contracts incentivize vendors to provide timely updates, new features, and responsive support. **User Satisfaction** should be assessed through feedback from end users on their experience with the capabilities acquired through these solutions, including ease of use and mission effectiveness.

Contract Management Efficiency can be measured by tracking the administrative burden and complexity associated with managing consumption-based contracts compared to traditional contracts. While consumption will inherently vary, **Budget Predictability** (within acceptable limits) should be monitored to assess the DoD's ability to forecast and manage the financial aspects of these contracts within reasonable tolerances. Finally, the **Adoption Rate**, or the extent to which DoD components are leveraging the authority granted by Section 321 to acquire suitable capabilities, will also be a key measure of success.

Alternative approaches

While Section 321 establishes a direct authority for consumption-based solutions, several alternative acquisition approaches could potentially achieve similar outcomes, albeit with different mechanisms and potential trade-offs. **Increased Use of Short-Term Contracts and Options** could provide some flexibility by employing more frequent, shorter-term contracts with options for renewal based on performance and evolving needs, without fully adopting a consumption-based model. **Blanket Purchase Agreements (BPAs) with Flexible Ordering** could be established with pre-negotiated pricing for various services, allowing for flexible ordering based on demand, although not necessarily metered by consumption.

Enhanced Leasing Models could offer more flexibility than outright purchase for certain types of equipment and software, but might not align perfectly with the "pay-as-you-go" nature of consumption-based solutions. **Hybrid Contract Types** could be developed, combining elements of traditional fixed-price or

cost-reimbursement contracts with usage-based pricing for specific components or services, offering a middle ground. Investing in **Modular and Open Architectures** could allow for easier integration of different technologies and vendors, reducing reliance on single, integrated consumption-based solutions.

However, these alternatives might not fully capture the benefits of aligning costs directly with actual usage and the streamlined acquisition of innovative features as intended by Section 321. The unique aspects of metering and fixed-price units for actual consumption are key differentiators that Section 321 aims to leverage for greater efficiency and responsiveness.

Section Specific Question 1: How does Section 321 define or provide authority for acquiring "Consumption-Based Solutions" (e.g., cloud services, data analytics as a service)? What unique contracting, funding (color of money), and performance monitoring considerations apply?

Section 321(a) explicitly grants the authority to the Secretary of Defense and the Secretaries of the military departments to acquire technology-supported capabilities through consumption-based solutions. Section 321(d) provides a clear definition, stating that a "consumption-based solution" is a model under which a technology-supported capability is provided to the Department of Defense and may utilize any combination of software, hardware or equipment, data, and labor or services that provides a capability that is metered and billed based on actual usage at fixed price units. Examples such as cloud services and data analytics as a service directly align with this definition, as they are typically offered on a usage-based pricing model.

Section 321(b)(1) outlines unique contracting considerations by mandating the amendment of the Defense Federal Acquisition Regulation Supplement (DFARS) to include a new subcategory of services entitled "Consumption-based solutions" and the creation of a new contract type under part 16 of the Federal Acquisition Regulation (FAR) called "Fixed-price resource units." This new subcategory is defined by several key characteristics, including being a combination of hardware, equipment, software, labor, or services providing a seamless capability; having the ability to be metered and billed based on actual usage; featuring predetermined pricing at fixed price units; requiring notifications upon reaching 75% and 90% of the funded amount; and treating modifications for new features or capabilities (up to 25% of the total contract value) as competitive procurements.

In terms of funding, Section 321(c) specifies that amounts authorized for these

acquisitions can be used for expenses across various appropriation categories: research, development, test and evaluation; procurement; production; modification; and operation and maintenance. Furthermore, it explicitly allows for the use of incrementally funded contracts or other agreements, offering flexibility in aligning funding with the consumption-based nature of the acquisition, which differs from traditional procurement cycles tied to specific fiscal years and appropriation types.

Performance monitoring considerations under Section 321 are inherently linked to the metering of actual usage. The success of these solutions will be evaluated based on the accurate tracking of consumption against the agreed-upon fixed price units. This necessitates robust metering systems and clear definitions of what constitutes a billable unit. While traditional performance metrics related to deliverables will still be relevant, the primary focus will likely shift towards monitoring the consumption of the capability and ensuring that the vendor is providing the agreed-upon service levels for the resources consumed.

Section Specific Question 2:

Not Applicable as no Section Specific Question 2 was provided in the user's query.

Summary

Section 321 of the Forged Act represents a significant shift in the Department of Defense's acquisition strategy, introducing the authority to procure technology-supported capabilities through consumption-based solutions. This provision, inspired by recommendations from the Section 809 Panel, aims to address the limitations of traditional acquisition methods when dealing with modern, service-oriented technologies like cloud computing and data analytics. By allowing the DoD to pay for capabilities based on actual usage at fixed prices, Section 321 offers the potential for increased flexibility, cost efficiency, and a more agile approach to adopting new technologies. However, the successful implementation of this new authority will require careful consideration of potential challenges, including budgeting complexities, the risk of vendor lock-in, and the need for robust performance monitoring and governance mechanisms. The DoD will need to invest in training its workforce, updating its policies and procedures, and potentially acquiring new tools and expertise to effectively leverage the benefits of consumption-based solutions. While alternative acquisition approaches exist, Section 321 provides a unique framework for aligning costs with actual use and streamlining the acquisition of innovative capabilities, marking a crucial step in the modernization of defense

acquisition practices.

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