



FEDERAL NEWS NETWORK

# EXPERT EDITION

Reenvisioning  
how DoD plans  
and budgets

## INSIGHTS FROM

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## Rapidly changing demands create DoD planning and budgeting challenges

For leaders across the Defense Department, managing change can be tough. It's as simple, and as hard, as that.

Given the size of many Defense organizations, the scope of their budgets and the breadth of their missions, the department has long-established processes that stringently manage how leaders plan and budget – in five-year cycles.

But change happens all the time. Emerging crises and demands around the globe require a continual shuffling of priorities. What's more, by the time funds are appropriated for ongoing programs, the needs often no longer align to the dollars.

Douglas Bush, assistant secretary of the Army for acquisition, logistics and technology, notes that while the service has figured out how to re-program money in short bursts during conflicts, it doesn't apply that same tactic to day-to-day changes that also affect spending. "We need to try to move that behavior from kind of wartime behavior to just more the stuff we do routinely," he said.

For this ebook, **The Federal Drive's** Tom Temin spoke to leaders in the Air Force and Navy too. They voiced concerns similar to Bush and talked about the need for more flexibility in DoD planning and budgeting processes to alleviate the imbalances that occur between what's allocated and the capabilities that are ultimately needed.

Air Force Gen. Glen D. VanHerck, commander of the U.S. Northern Command and the North American Aerospace Defense Command, put it succinctly: "We ought to look at the world that we live in and ensure that the policies and laws allow us to operate within that world. We have to make sure that we can adjust and adapt quickly."

How can agencies smartly access the right data? Are there ways to get better visibility across programs despite controlled category spending rules? Is there a way to take advantage of artificial intelligence and machine learning to improve planning decisions even as the services and the Fourth Estate work to evolve the department's Planning, Programming, Budgeting and Execution process?

The articles in this ebook take a look at all of these topics and then some, while also gathering insights from military leaders on where DoD processes need retooling. We hope it will help your agency think about how it can tackle its own comparable planning and budgeting challenges, even if your agency has a civilian mission.

**Vanessa Roberts**  
*Editor, Custom Content*  
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# How the Army intends to balance contingency and long-term needs

BY TOM TEMIN

Douglas Bush, the recently confirmed assistant secretary of the Army for acquisition, logistics and technology – known as the ASA (ALT) – has a short list of priorities.



happen when they happen, he noted. But Army budget planning tends to be a long-term, formal exercise.

He has three in fact:

- Ensure the Army has a quick and standard process for going live with projects once R&D is complete
- Revamp how the service buys software
- Speed the Army's ability to expand prototypes at scale



## Priority No. 1: Repeatable go-live process

Establishing a rapid and repeatable process “for moving things out of research and development and into production” is priority one, Bush said in an interview with [Federal News Network](#). It may not be a new idea, but it’s becoming a more urgent one as the world threat situation changes and military leadership works to maintain a strategic advantage for the U.S. military services.

“I will keep moving the ball down the field on that and bringing in some additional talent to try to develop the right policies so people can do that more effectively,” Bush said.

Moving R&D projects that military program leaders want operational comes with a big budget and financial planning element. The challenge is that breakthroughs

As Bush pointed out, the Army – like nearly every federal agency – received its 2022 appropriations midway through the fiscal year. Now, officials are in discussions with appropriators and Armed Services Committee members on 2023 funding and the Biden administration’s budget proposals. At the same time, Army planners – in accordance with the Defense Department’s Planning, Programming, Budgeting and Execution (PPBE) process – are looking at requirements for the 2024 through 2026 fiscal years.

“It will require us to come up with plans and then engage with Congress because ultimately they have to give us flexibility in research and development accounts, for example, to do things during the year, so to speak, that weren’t planned in advance,” he said.

Bush is well equipped to have these conversations, having spent 19 years as a congressional staff member, including a stint as staff director of the House Armed Services Committee. He’s also a West Point-trained former Army officer.



**“We’re frequently working on three budgets at the same time. For example, right now, we’re executing FY22. We’re talking about ’23 with the Hill. And we are in the middle of planning ’24 to ’28.”**

– Douglas Bush, Assistant Secretary of the Army for Acquisition, Logistics and Technology

Re-programming money for field contingencies is a regular and fairly frequent occurrence during war, as it was during the Iraq and Afghanistan wars. “We need to try to move that behavior from kind of wartime behavior to just more the stuff we do routinely,” Bush said.

Doing so will require the trust of lawmakers, he acknowledged. The Army can earn that trust by making solid, evidence-based cases for the kind of budget flexibilities that all the services need today, Bush said.

## Priority No. 2: Improving how the Army buys software

Traditional PPBE often conflicts with another top priority for the ASA (ALT) operation: improving how the Army buys software.

“Software is becoming a dominant part of what we acquire,” Bush said. “Even in hardware systems we buy, a lot of the work is actually the software work. We have to improve inside the Army our processes for doing that.”

One of the issues is the legally prescribed uses of money connected to different types of acquisitions. For example, R&D, operations and maintenance, and procurement all use different types of funds. “Software is often doing all three at the same time,” Bush said, especially software generated under the continuous development, security and operations (DevSecOps) model.

The general approach has been to use R&D funding for iterative software. “At some point, you traditionally move into a procurement-type situation, but again software is never done,” he said.

## Priority No. 3: Scalability at speed

Bush’s third main priority is how to push prototypes into production at scale.

“That’s more difficult than it sounds,” he said. “But I think it’s a good challenge to have because we’ve gotten good at prototypes in a lot of cases. Now, we’ve got to do the difficult work of producing them at scale.”

Perhaps because of his Capitol Hill experience, Bush returned to the theme of the importance of Congress being a partner in any update, new application or reform of PPBE. It’s needed because the output of those

**“I’m always cautious of ‘data theater.’ I’m focused with our team on making sure we are identifying a limited number of the right data items that are meaningful and that need to be more widely known across the enterprise.”**

– ASA (ALT) Douglas Bush

processes are what members use for oversight and appropriations planning, he said.

Bush plans to experiment with the idea of grouping the current separate procurement lines into categories. That would be a return to practices common in the 1960s and ’70s, Bush said.

## The data factor

No meaningful budget or program discussion can take place without the right data, Bush added. “There is a lot of churn right now about how to use data better across the department and in the Army,” he said. “That’s trending with the private sector’s approach to a large degree.”

Bush is wary of what he called the “data as theater” approach – backing proposals with heaps of data and making artificial arguments.

“I’m focused with our team on making sure that we are identifying a limited number of the right data items that are meaningful and that need to be more widely known across the enterprise,” he said.

The ASA (ALT) operation has an effective database to track financial information closely and as it changes, Bush said. Occasionally, “we do still run into the situations where it’s a massive PowerPoint or Excel drill to try to put together information in a format that senior leaders want,” he said.

But even so, it has the data to act quickly if need be. Bush offered an example that took place during the fast-moving Afghanistan withdrawal last year. His organization worked with a contractor to develop a dashboard, in a matter of days, that senior leaders then used to track critical information. 🚀

# Automation and analytics can help agencies modernize planning and budgeting processes



**Dan Saaty,**  
Chief Scientist  
and Co-Founder,  
Decision Lens

Federal decision-makers at nearly every agency face a common challenge: how to ensure they have the budget for future programs in the correct allocations and at the right time.

This challenge comes from the long planning and budgeting process itself. It begins at least two years

before a planned spend. Through its Planning, Programming, Budgeting and Execution (PPBE) process, the Defense Department takes a five-year view of its requirements.

Despite decades of tinkering with PPBE via DoD Directive 7044.14, the process remains complex, resource-intensive and prone to eventual mismatches between goals and dollars.

## Dependency on manual spreadsheets

One reason so many DoD components have problems with PPBE is because of the manual processes they employ, said Dan Saaty, chief scientist and co-founder of Decision Lens. It remains common, he said, for an agency to use multiple, unwieldy spreadsheets – each derived from different data systems.

The spreadsheets and the hunting for data and merging manually “creates breakage in planning and a misallocation of resources,” Saaty said. He noted that a single organization, such as an Army command, might need to merge as many as 30 spreadsheets, each with thousands of rows and

columns. Each change in plans results in myriad error-prone, manual tasks just to keep everything synchronized and up to date, he said.

“It puts planners in a permanently reactive state to be using these antiquated processes.”

## One budget, many influencers

A second challenge comes from different elements of budget planning belonging to different bureaus and offices.

“When you look at most organizations, the people looking at the long range often are slightly different than people who are looking at the midrange,” Saaty said. “And those are different than the financial managers, who are trying to figure out what to spend money on next month.”

Beyond making it difficult to create budget and spending projections, dated processes impede

**“People who are looking at the long range often are slightly different than people who are looking at the midrange. And those people are different than the financial managers, who are trying to figure out what to spend money on next month.”**

– Dan Saaty, Chief Scientist and Co-Founder, Decision Lens

**“We’re trying to help [Defense agencies] automate the collection of their requirements for the midrange planning process, the Program Objectives Memorandum, and then be able to more effectively connect that to how they spend dollars.”**

– Dan Saaty of Decision Lens

change and innovation. Accounting for any new initiative can founder because when leaders “try and roll that out to the organization, the people who actually operate the day-to-day business are barely able to sustain what they do today,” Saaty said.

Getting around this requires automation and a data analytics-oriented approach, he said. It starts with sorting out the important metrics for different types of programs. Planning for base or camp operations and maintenance differs from planning for a new weapons platform, for instance.

“Within each of these planning processes, as planners define requirements, they need to define what their performance measures are,” Saaty said. “They must ask themselves, ‘How am I going to drive effectiveness in the organization?’ ”

By pulling data and spreadsheet calculations into an automated framework, organizations can move to a continuous planning and execution model. That then allows a fast way of running what-if scenarios with the assurance of determining accurate answers, Saaty said.

## Moving to a more real-time data approach to budgeting

Within what Saaty called a living planning framework offered by the Decision Lens platform, stakeholders can collaborate, test assumptions,

track history and ultimately become more effective at budget allocation.

The Decision Lens application helps civilian agencies, said Saaty, and cited the Federal Aviation Administration, which, like DoD, balances the need for large, long-term capital investment with the operational demands of its air traffic control system. Even agencies with smaller capital and equipment levels – like the Animal and Plant Health Inspection Service – need flexibility to respond to unplanned events, such as disease outbreaks, that can create budget and planning issues.

An effective framework should bring in data that exists outside of the financial and acquisition systems of record but that nevertheless affects planning and resource allocation, Saaty advised. Information in doctrine statements and pre-decisional documents often exists in Word or PowerPoint formats, for instance.

An effective planning framework also lets organizations more carefully prioritize spending in ways that might not be obvious. “Sometimes by spending a dime today, you’re going to save a dollar in the future,” Saaty said. “You really need a multidimensional view of these investments that lets you look at their value, the ultimate cost of the investment and the risk associated with it.”

So what would an effective process, from the Defense Program Objective Memorandum to budget execution, look like? It would be automated and incorporate all of the critical data needed to make smart trade-off decisions, which would let planners identify gaps in their ability to deliver on their missions, Saaty said.

“I believe if we don’t do this, it erodes our competitive position against our adversaries. The way we stay ahead of them is by smartly allocating resources.”

# Navy executive identifies need for more dynamic approach to planning and budgeting

BY TOM TEMIN

Juliet Beyler describes herself as the “money, people and things” person for her region of the Navy. She is one of three people with the title of executive director, each working for one of the Navy’s four-star commands. Those are U.S. Fleet Forces at Norfolk, Virginia; Pacific Fleet in Hawaii; and Naval Forces Europe and Africa, where Beyler works in Naples, Italy.



national defense strategy. Therefore, the executive directors also focus on what joint commanders in each respective theater “are looking for us to do as the naval component of those theaters,” while also supporting the force commander’s “cardinal priorities,” Beyler said.

## Aligning the Navy budgeting process to changing needs

Planning for the future – ensuring sufficient money, people and things are there to support the strategy – is neither simple nor linear. Threats change and require that the Navy move resources and deploy fleets in different ways. Congressional priorities change, and appropriations are almost never available on the first day of a fiscal year.

Beyler said her challenge is balancing all this against the multiyear spending system known as the Planning, Programming, Budgeting and Execution process. PPBE starts with a document known as the Program Objective Memorandum (POM). The core of the PPBE was established under Robert S. McNamara in the 1960s and has undergone alterations from time to time. Congress recently established a commission to study PPBE reform, but it won’t have even an interim report until early 2023.

For now, the PPBE is what it is, and military leaders must deal with it.

“It’s a very dynamic theater, and things are changing,” Beyler said. “But of course, the POM

**“The PPBE is trying to be everything to everybody, from the acquisition community, all the way down to ... the very operational day-to-day Echelon 2 level. And so how do you make a system that works for everyone?”**

– Navy’s Juliet Beyler

cycle is, you identify something, and it’s two to three years later that you might see the initiation of that resourcing. That’s a challenge that we’re facing right now.”

Beyler cited a need for systems and operations to blend with NATO forces, and the developing plans for laying down more strength in the Arctic region as the types of dynamics that somehow have to translate into the right resources at the right time through the multiyear PPBE process.

Priorities have sometimes changed by the time money comes through, she pointed out. “In military construction, for instance, we have projects that were planned five, six, seven years ago, and now we’re getting ready to break ground,” she said. “They finally made it all the way through the budget process.”

The result, Beyler said, is that people within the Defense Department sometimes ask: “Is that really where we need the construction dollars right now?”

## Spreadsheets still rule

For its part, the Navy is working on a project to move to a digital POM to help improve planning and budgeting.

“But at least in Naval Forces Europe and Africa, unfortunately, we are still very much working with spreadsheets,” Beyler said. It’s often difficult, she added, to gather the data needed to evaluate programs and make the case for budget requests.

The various operating groups have a good handle on their immediate budgetary needs, Beyler said. But what’s difficult under the PPBE is how to match up long-term plans and budgets, she said.

In the Arctic example, “we say we need more access. But have we actually put in everything that we need to make that happen? Do we have the logistics? Do we have the international agreements? Do we have the military construction? Have we looked at the IT infrastructure? Do we have the theater logistic lines? For us, it’s looking at what we have in the POM and making sure that we’re covering everything that we need to cover.”

Often, the Navy can reallocate current dollars for an operational need, but that’s a time-consuming process. For example, the need may arise to deploy a certain number of P8 submarine-detecting aircraft. Should that develop into a longer-term requirement, Beyler said, it can turn into a budgeting challenge.

“What we haven’t done very well is work that back through the process to say, ‘OK, how do we ensure that we build the budget to ensure that we fund that requirement moving forward?’ We’ve solved an emergent problem, but we’ve created a longer-term problem for ourselves because we haven’t actually tied it into the PPBE process.”

Beyler doesn’t find the PPBE process totally inflexible but says it can present difficulties in dynamic situations. “It’s trying to be everything to everybody, from the acquisition community all the way to ... the very operational day-to-day Echelon 2 level. And so, how do you make a system that works for everyone?” 🚧



**“It’s a very dynamic theater, and things are changing. But of course, the POM cycle is, you identify something, and it’s two to three years later that you might see the initiation of that resourcing.”**

– Juliet Beyler, Executive Director for Naval Forces Europe and Africa, Navy

# Data visibility, granularity and accuracy are keys to better PPBE process



That famous military aphorism, “No battle plan survives first contact with the enemy,” could also apply to Defense Department budget planning.

The process, formally known as Planning, Programming, Budgeting and Executing, or PPBE, takes place over a five-year

horizon. And anything can happen to affect plans.

Especially in times of great technological change and the transformation of the military across a number of domains, long-term planning and budgeting become particularly problematic.

“The modern world, as it is, has really brought us into a phase where that long-term plan is an ever-evolving series of short, iterative plans,” said Kevin Connor, chief product officer at Decision Lens. “What we’ve tried to do is build a solution that helps people understand that there’s a reconciliation of the longer-term view and vision with the shorter-term decisions required to stay on track and adapt to changing conditions.”

## Changing needs create planning hiccups

The long term and short term can clash when two conditions occur simultaneously, as they often do, Connor noted. For instance, one might be the need to sustain a legacy program or platform that is central to a mission. The other might be the emergence of an innovation that’s desired by an

operating unit. Budgeting for production of that new capability often will not be available for years.

“It’s a Rubik’s Cube times 10,” Connor said. “You have this challenge of having to reconcile existing assets that you have to maintain and have to be deployable in the interim, while you’re developing new technologies and new assets to deploy. So how do you transition and train and do all the things that are necessary to move that in concert? It’s really a difficult puzzle.”

One key to understanding all of the moving parts is to gain a more accessible and transparent view into the relevant data. That’s often a challenge for DoD components because data is scattered across systems and in a variety of formats, and multiple sources might not always match for the same program, Connor said. The result can be a sort of fire drill data call to try and understand a question.

“There’s a lot of disparate pieces. Some of the data is not standardized. Some of the sources are not consistent, and trying to piece that together is really a challenge,” Connor said. The challenge is

**“You really have to go from this highest-level visibility of ‘What does this all look like on a big-picture basis?’ to how you execute that down within the year.”**

— Kevin Connor, Chief Product Officer, Decision Lens

compounded by restrictions on how funds can be allotted and spent. For example, money designated for R&D is not available for operations and maintenance, or for volume procurements.

## The connection between data visibility and budgeting

But having clear, unrestricted views into money available across all categories can help planners better understand what they have and how to deploy it more efficiently – and provide clues to future allocations, Connor said. He likened such data visibility to drilling down in an online map in which more and more detail becomes apparent.

Moreover, planners can, in a high-visibility environment, obtain a clear view of whether projects start on time and meet objectives.

“Ultimately, you have to lay out that plan for spending that money by year,” Connor said. “In each year you’re doing that, be able to have visibility into whether these projects are getting started on time. Are they achieving their objectives and milestones? Are they using the money as desired, or do they have large spend overruns?”

## Reprogramming made easier

That visibility can save dollars for more effective projects and help justify the inevitable reprogramming requests to Congress, Connor said.

“So you really have to go from this highest level of visibility, of ‘what does this all look like on a big picture basis?’ to how you execute that down within the year,” he said. He added that the more granular the views into data, the more accurately planners can map money to desired spending allocations.

All of this requires doing some work on the data itself. DoD financial information, he noted, tends to pool in large spreadsheets. But it also exists in

**“We’re really trying to change the game and crack the code on how to have better real-time information.”**

— Kevin Connor of Decision Lens

widely differing formats, much of it unstructured and not machine-readable for PPBE purposes – such as presentations, reports and PDFs, for example.

“How do we normalize all of this, make sense of it, to be able to see what it says and use it to inform decisions?” Connor said. “That can be incredibly challenging.” He said the Decision Lens solution is built to collect data elements from all sources, normalize and reconcile them, and map the data according to the funding category.

“As long as we can map that seemingly unstructured data to that structure, then we can give you a very common way of looking at it with purpose-built analytics,” Connor said. The goal is greater value from data and greater ability to control costs and manage risks across the asset classes, he said, adding that the tool has the capability of keep the rolled-up picture accurate day to day as new data comes in.

With accurate, comprehensive and up-to-date data, coupled with analytic tools, Connor said, planning becomes less of a once-a-year exercise and more of a continuous process.

“Planning has always been thought of as sort of this annual event,” he said. “We’re really trying to move organizations, despite those structural and procedural elements, to be thinking about the plan itself – and a bit more dynamically and with more adaptability.” 🚀



# Air Force aims to use data, analytics to present risk-based planning options

BY TOM TEMIN



USNORTHCOM doesn't itself have weapons or infrastructure acquisition authority. It must instead make the case for the resources it needs from the armed services to carry out its mission. Each of the command's advocacy memos details the risk levels associated with each option it submits, VanHerck explained.

## Lag in funding creates challenges

Like nearly every federal agency and component, VanHerck said, USNORTHCOM labors under the uncertainties of the congressional appropriations process.

"I would tell you the real challenge has been the period between the submission and the appropriation," he said. "Ideally, we'd like to have an approved budget for execution on the first of October every year." The reality has been a default to continuing resolutions going back many years.

"That has been incredibly detrimental to our buying power, our erosion of readiness, those kinds of things," he said.

In a given year, wild card events, unforeseen early in the Planning, Programming, Budgeting and Executing (PPBE) process, can upset budget execution. As an example, VanHerck cited Operation Allies Welcome, a Homeland Security Department operation to resettle Afghan refugees in the U.S. after the Afghan government collapsed following U.S. troop withdrawal. The initiative required USNORTHCOM to provide temporary housing to thousands of people.

The project "took significant funding that we had to adjust in the year of execution," he said. "We have to adapt to those kinds of things – not specifically NORAD and USNORTHCOM. The department has to acquire and get funds in the year of execution."

**"We need better data analytics, in many cases, to analyze some of the options, the capabilities. Typically, what we're doing is looking at specific options and the capabilities available today to execute those options."**

– Air Force Gen. David G. VanHerck

While there is the ability to sometimes seek new funds from Congress, often "we have to adjust within the year of execution," VanHerck said. "That will obviously have impacts, primarily on our operations and maintenance funds."

## The "color of money" still matters at DoD

Because of the legally bound categorization of funds, often referred to as "colors of money" in the Defense Department, executives can't simply take, say, acquisition dollars and use them for operations.

Until any legislative update to the way DoD must manage its funding, VanHerck said that a level of inflexibility will remain.

"We ought to look at the world that we live in and ensure that the policies and laws allow us to operate within that world," he said. "We have to make sure that we can adjust and adapt quickly, and that policies and laws are not hindering us at operating at the speed of relevance in the future."

For USNORTHCOM and NORAD programs and operations, the key is a good sense of the priorities, VanHerck said. The POM process, with its annual updates, does provide a chance to ensure priorities get updated from year to year.

"The beauty of the POM is it's designed to update the five-year Future Years Defense Program and then it adjusts every year," he said.

## Priorities and risk drive recommendations

Prioritization starts at the Joint Chiefs of Staff level and their Joint Strategic Planning System, VanHerck said. The results factor into the mission tasks issued to commands such as USNORTHCOM. In NORAD's case, the Canadian system for military planning also contributes.

"When you take [the missions] and you dissect them ... you will find that you either have the resources to do it, or in some places, you don't have the capabilities you need," he said.

The resulting resource gaps are used to craft a priority list that, backed by justifications and metrics, goes to DoD's Joint Requirements Oversight Council.

"My job is to produce options and convey the risk of those options," VanHerck said. "As I create options, I'm given a task to achieve a policy and state, given by our civilian leaders, whether that be Canada or the U.S."

Each option is accompanied by a level of risk. "If you want the lowest risk possible, then this is the plan. This is how many people it would take to execute. On the other side, I may give them a high-risk option that says we can get by with less capability and less people to do that," he said. "Ultimately, I'm not going to factor in the budget. I'll let the policymakers figure that decision out."

Regardless of the activity for which he's developing options, VanHerck said he and his team have an ongoing need for good data and analytics. In many cases, he noted, planners have a handle on the analytic inputs, such as the cost per hour to operate an F-22 Raptor, for instance.

"I think we need better data analytics, in many cases, to analyze some of the options, the capabilities," he said.

The spreadsheets and other manual tools so common across DoD aren't up to the task, VanHerck added. "When you do this with pencils and erasers and those kinds of things, it becomes challenging to really present options and present risk and make arguments for one option over the other."

For certain military commands, program planning and budget execution are offset from their direct authority. Two cases in point? The U.S. Northern Command and the North American Aerospace Defense Command.

Air Force Gen. Glen D. VanHerck, commander of the jointly located USNORTHCOM and NORAD, talked with [Federal News Network](#) about how he deals with the Program Objective Memorandum (POM) and subsequent budget processes for a joint Defense Department operation.

"What I would say is, first, from a combatant commander perspective, we don't have any direct control over the budget and the process," VanHerck said. "We have input into the process early on."

That input takes the form of advocacy memos. "What we're seeking from the services is the opportunity to influence the department's guidance for budgeting," he said. That is the Defense Planning Guidance (DPG), which is DoD's allocations for what the armed services ultimately have the funds to acquire.



**"As we see potential threats and actors, who adapt and rather quickly adjust, we have to make sure that we can also adjust and adapt quickly."**

– Air Force Gen. David G. VanHerck, Commander, U.S. Northern Command and NORAD

# For the Air Force and Army, unified, integrated data leads to better budget planning and execution



**Jonathan Allen,**  
Executive Vice  
President of  
Strategic Markets,  
Decision Lens

The Defense Department's venerable Planning, Programming, Budgeting and Execution process is designed to create stability and predictability. But the real world imposes unpredictability and disruption. That's the essential challenge for PPBE, which has a five-year cycle starting with the Program Objective Memorandum (POM) required of each program.

The PPBE process "has a lot of benefits to it. But one of the challenges is it makes it difficult to be agile and adaptive enough when you have emergent requirements," said Jonathan Allen, executive vice president of strategic markets at Decision Lens.

The second major challenge of PPBE relates to the data required for planning and budget execution, Allen said. DoD components lack the necessary data. In fact, data is generated continuously.

"But there are several things that happen with the data," he said. One is that the data used to develop a POM is often different than that used during budget execution years later.

**"One of the challenges that the Defense Department is dealing with is the acceleration of change. We see this with Ukraine and Russia, and other types of what we call 'emergent requirements.' "**

**— Jonathan Allen, Executive Vice President of Strategic Markets, Decision Lens**

Another data problem is delay. People may gather data, and by the time they present it to decision-makers, it may be out of date.

The third concern is what Allen calls disparate data. By that he means data takes differing forms for different planning functions, which "creates disconnects across those different areas. And that's where I think we see a lot of challenges," he said.

## **Tapping all the right data at the right time**

The disparate data can occur as a result of varying sources and formats of data used throughout the PPBE process. Disparate data can also creep in over the long PPBE timelines.

"Organizations often struggle in this day and age to be able to tie the POM activities to the budgeting and the execution activities, when their actual appropriations are coming in," Allen said.

The Decision Lens application, he said, lets users "bring together data in a meaningful way onto a centralized, systemized platform that allows for multiple people to come together and see that transparently." That in turn lets people make decisions faster, "as opposed to over a delayed period of time."

Allen said that's the case for an Air Force major command, which has streamlined its POM planning by combining and normalizing data from spreadsheets, presentation slides and other disparate sources into a unified set. The Decision Lens product automates the process.

## **Leaning on data to justify budget requests**

Ultimately, the automated, unified data approach makes for more accurate and justifiable budget plans and requests. "It gives you the ability not only to have a defensible, justifiable strategy, but [also] a living, breathing process that can adapt to emergent requirements as those are coming in," Allen said. "That's the key – a more and more agile approach."

Decision Lens also brings artificial intelligence and machine learning into the planning and budget process.

"There's a lot of power in being able to not only plan and forecast and project on certain targets, like readiness or lethality of the force," he said. But also applying AI-driven algorithms and machine learning models to planning data sets can improve and speed recommendations about

which projects will drive readiness, lethality and other performance targets.

It's possible to "create a continuous planning cycle so that it can inform future projects based on the historical data," Allen explained. In short, the portfolio of projects under the POM and PPBE cycle can become ever smarter "based on the historical data that we're collecting and gathering over time," he said.

Allen pointed to the Army Training and Doctrine Command as an example. TRADOC was using 17 spreadsheets for its lines of business and trying to tie them together. Decision Lens was able to organize and integrate the command's disparate data sources, which let its planners get a better handle on how to prioritize money and projects.

"And something really powerful started to happen," Allen said. The planning and resource requirement elements of TRADOC were able to see a comprehensive picture. They "started to see more visibly and clearly what was on those requirements, what the priorities were, how those were changing over time," he said. "It gave them a single sheet of music." 🎵

**"From a machine learning and AI perspective, ... the portfolio of projects can become smarter and smarter based on the historical data that we're collecting and gathering over time."**

**— Jonathan Allen of Decision Lens**