



US Army Materiel Command

Benefits at a glance

- ▶ *Inventory cut by \$4.5 billion in 12 months*
- ▶ *Savings worth billions of dollars per annum for the next 10 years*
- ▶ *Annual storage costs reduced by \$60 million*
- ▶ *Inventory staff reduced by 50 percent*
- ▶ *Increased visibility of future inventory requirements*
- ▶ *Emerging new talent discovered within the organization*
- ▶ *Improved cash flow and increased supplier capacity*
- ▶ *Rapid progress to world class performance*

Customer profile

Military Efficiency

The US military demands excellence in logistics. At the end of the supply chain are the soldiers, sailors, marines and airmen whose lives depend on in-full delivery; on-time, every time. For customers like this, failure is not an option. However as 12 years of war in the Middle East draws to a close and budget cuts hit, life is changing for all branches of the military and new levels of efficiency are the order of the day. The US Army is the first of the services to conduct an Integrated Business Planning program.

Inspiring
Business
Excellence

Oliver Wight
OLIVER WIGHT

“We will cut inventory by \$4.5 billion by the end of this year, without any degradation in readiness.”

*Jim Dwyer
Army Materiel Command*



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Implemented in record time, this advanced sales and operations planning (S&OP) process is providing previously unknown levels of visibility and efficiency and is set to shave billions of dollars from the Defense Department’s inventory bill.

It goes without saying the US military is a vast, diverse and complex organization. Its logistics are on a scale unfathomable to most other businesses but like many of those businesses, the military is experiencing a financial squeeze. With planned cuts and sequestration set to strip the Pentagon budget of \$1 trillion over the next decade, all services are under pressure to improve efficiency and reduce costs. As operations wind down in Afghanistan, inventory requirements are changing dramatically and with billions of dollars at stake, accurate forward planning has become a critical success factor. In one significant corner of this sprawling organization, at Army Materiel Command (AMC), a fresh approach to managing operations is revolutionizing forward planning and providing dramatic cost reductions.

AMC is a 65,000-employee operation, responsible for planning ‘all things logistics’ for the Army - transportation, sustainment, clothing, armament and battlefield movements.

“If a soldier eats it, drives it, shoots it or flies it, AMC supplies it,” says AMC’s Principal Deputy Chief of Staff for Logistics and Operations Planning, Jim Dwyer. “Our role is to keep the army’s combat systems running; everything from the M1 Abrams tank to the Black Hawk helicopter.”

As the senior civilian logistician at AMC HQ, Dwyer has synchronization responsibility for all AMC logistics functions and overall responsibility for budget allocation to AMC’s three subordinate ‘Commands’: AMCOM (Aviation and Missile



Command), also in Huntsville; TACOM (Tank-Automotive and Armaments Command), in Warren, Michigan and CECOM (Communications-Electronics Command), in Aberdeen, Maryland.

Seven years in his current role, Dwyer was previously 27 years in uniform, where he reached the rank of Colonel. He understands first hand the importance of meeting the needs of his customers: “I truly believe that if a weapon system isn’t operating at peak performance, then we’re putting soldiers at risk.” Yet, despite the war coming to an end, and budget cuts looming, spend on inventory wasn’t reducing accordingly. “Our workload is dropping and we have to be more frugal with our dollars. The problem was, all our inventory models were based on the demands of being in theater and we needed a more forward-looking system.”

As part of what it calls its Logistic Modernization Program, AMC had made a substantial investment in a SAP enterprise resource planning (ERP) system. However, things didn’t

improve as expected, explains AMC’s Chief of Secondary Item Requirement Branch, David Frey, responsible for secondary or ‘aftermarket’ items and support for fielded weapon systems: “Even after the ERP deployment, we didn’t let go of how we’d always done business. When lives are at stake it’s hard to be risk averse and people tend to err on the side of buying too much because they don’t want to be in the position of not having parts when they’re needed.”

From planning chaos to best practice

Frey was charged with improving efficiency across the Command and set up teams to tackle six key areas. One of these, sales and operations planning (S&OP), has seen AMC’s transformation from planning chaos to best practice in just six months.

A year ago, Frey describes an organization in supporting two wars in very geographically challenged areas: “Our focus was not on optimizing inventory; we were finding out about problems as they occurred, so we didn’t have time to

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correct or mitigate without incurring cost; we just had to fix it regardless.”

“These situations had become the rule rather than the exception. We had lots of people who were doing heroic things but now with the war coming to an end, we needed to be smarter; we needed to be better at understanding the customer and managing our resources more effectively.”

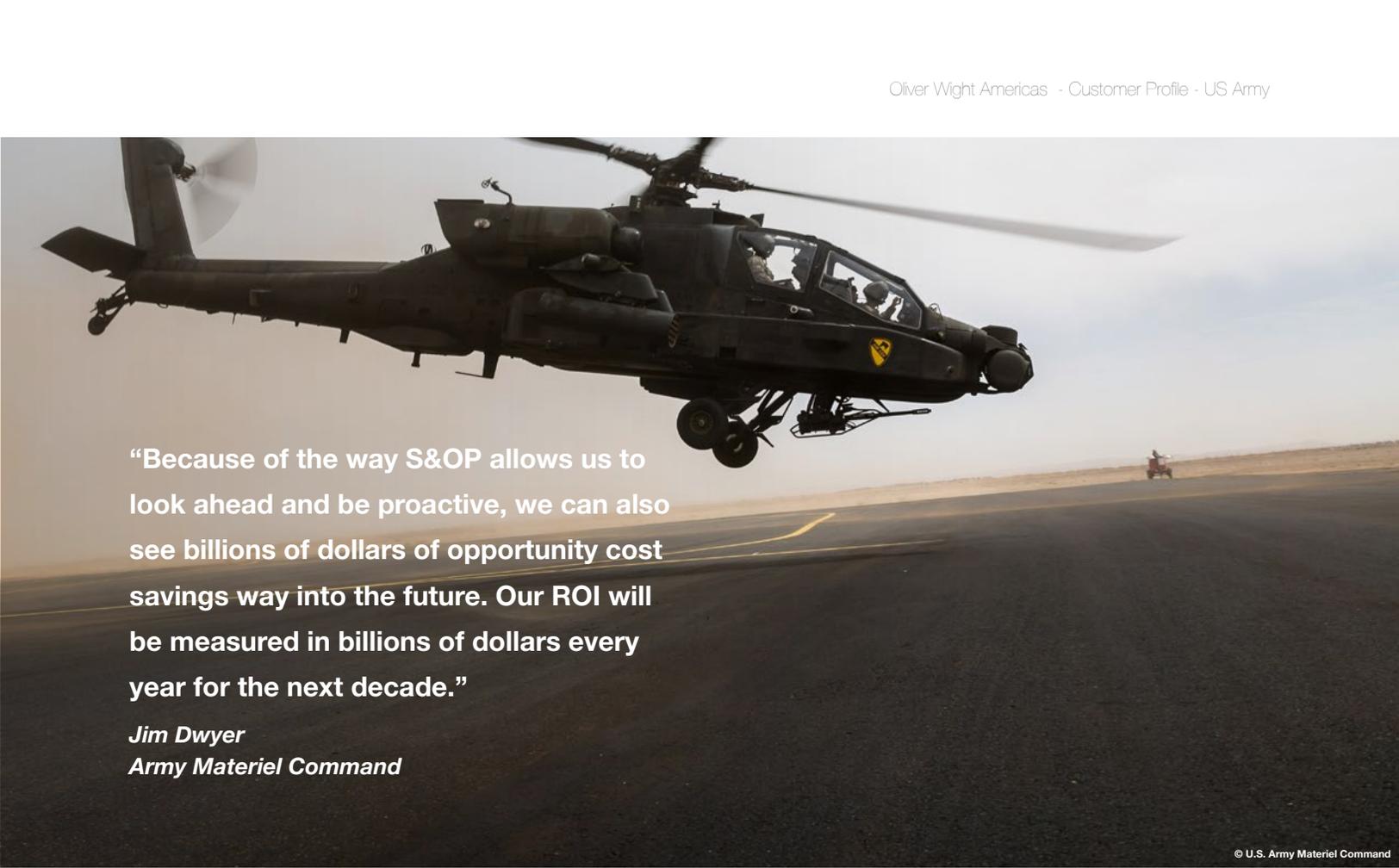
Frey’s S&OP team reached out to the rest of the military and Department of Defense (DoD), to make sure it was in sync. And it struck lucky. By coincidence, the DoD’s central procurement agency, the Defense Logistics Agency (DLA), was working on its own S&OP project and looking for one of the services to help it with ‘proof of concept’. Frey seized the opportunity, securing funding in the process.

By now, Congress had given notice of its squeeze on the defense budget and with withdrawal from Afghanistan imminent, rapid results were expected.

“We developed a very aggressive schedule, which was briefed all the way up to the Secretary of the Army, who was really pressing us to get it done sooner,” says Frey.

Frey opted for a full Integrated Business Planning (IBP) program; most simply described as next-generation, or advanced S&OP, Integrated Business Planning integrates diverse processes and plans from the individual business functions to form one holistic organizational plan. It’s a common-sense process, but one which requires time and rigor to implement, especially in large, complex organizations like the US military. Even using a fast-track program, design and implementation typically takes six to nine months. Astonishingly however, AMC’s process was designed in just five days and fully functioning inside eight weeks; “It was the speed of light,” says Frey.

Fundamental to the speed and success of the AMC program was backing from the leadership team. With the top brass behind him, Frey was able to assemble all the key members of the Commands for an initial week-long education program.



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The size of the prize in sharp focus

However, things ground to a halt within hours, as the group struggled to get a grip of the process, paralyzed by cynicism and old habits dying hard. That was until a moment of epiphany on day two, when CECOM’s demand data was loaded into a dedicated S&OP software program with scenario modeling capability, which creates a financial view of the business derived from operational plans. The group suddenly had a clear picture of CECOM’s future demand and inventory levels. It came as a shock.

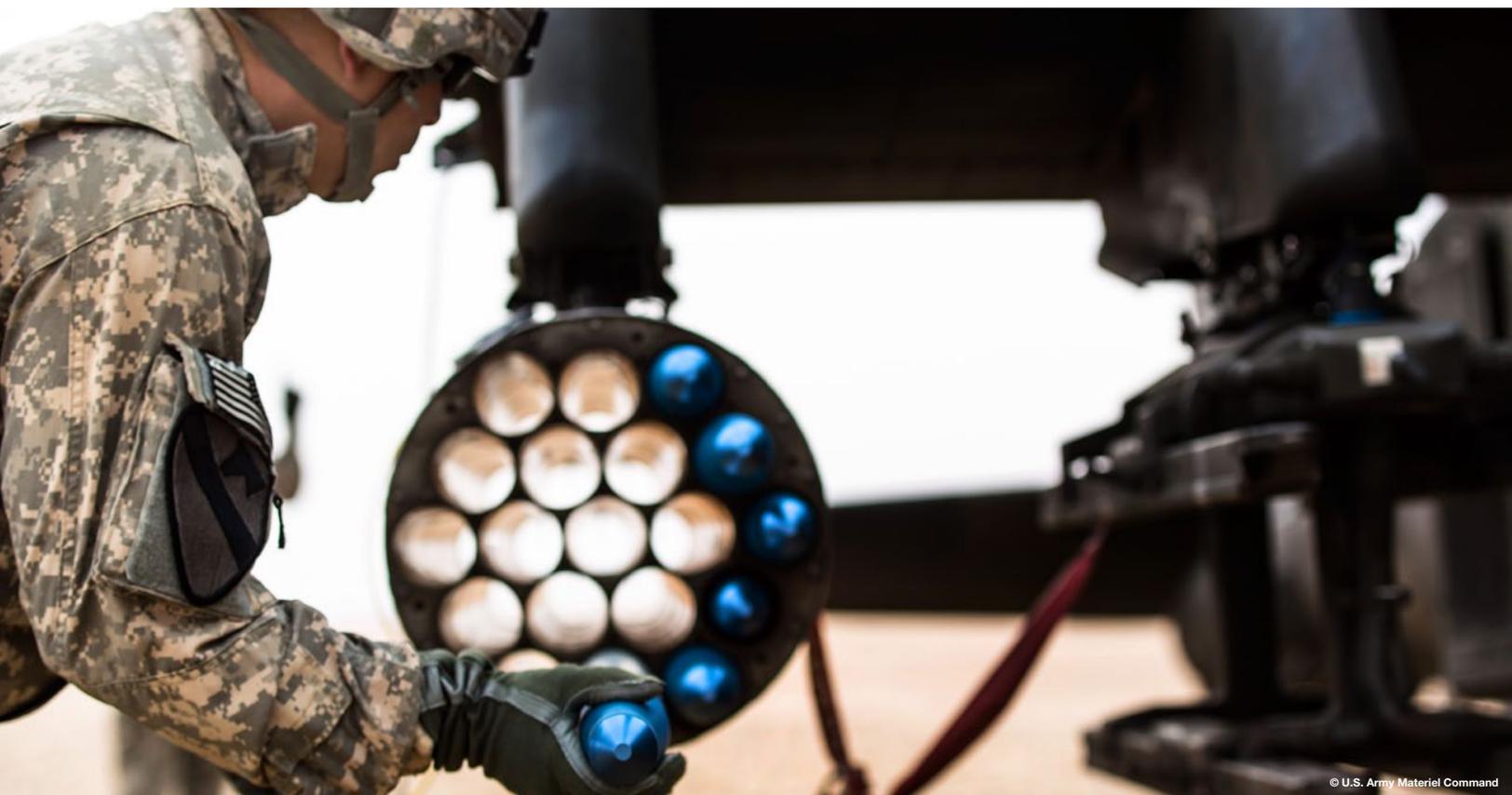
Despite the withdrawals from Iraq and Afghanistan, the figures showed there was no planned reduction in inventory, because the ERP system was still averaging data from the previous two years to predict future requirements. What’s more, the data revealed there was already a 10-year inventory backlog. “It was a huge wake up call,” says Frey. “We were facing an overspend of billions of dollars on inventory that absolutely dwarfed our requirement. We had this colossal pipeline gaping wide open and we needed to slow it down fast.”

With the size of the prize in sharp focus, the team didn’t look back. AMC set itself the strategic goals of reducing inventory by 22 percent and backorders by 30 percent within 18 months.

Just six months into the program, things are on track, despite some very significant dynamic challenges: inventory is still coming in from existing contracts and unknown quantities of equipment are yet to return from the field in Afghanistan.

Now, with a clear 24-month future view of demand, AMC has been able to eliminate the firefighting and brute force logistics of the past, and address future gaps without incurring any cost.

“We will cut inventory by \$4.5 billion by the end of this year,” says Dwyer, “without any degradation in readiness. Not only that, because of the way S&OP allows us to look ahead and be proactive, we can also see billions of dollars of opportunity cost savings way into the future. Our ROI will be measured in



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billions of dollars every year for the next decade. We're only just seeing the tip of the iceberg in terms of its potential.

"Plus," he says, "there are lots of second or third order effects we will get out of this. For example, with a lower inventory of parts, our storage costs will also go down by \$60 million a year. We'll also need half the number of item managers in the future."

The future is no longer a thing of the past

IBP has led to what Dwyer considers to be the most significant change; the improved collaboration between AMC HQ and its subordinate commands. "We're using the process and the software together, to make decisions that affect what we are going to do in two or three years time," he enthuses.

The process is based on a monthly cycle comprising five reviews - outputs from reviews of the core processes of product, demand and supply, pass through an integrated reconciliation review to a management business review (MBR)

at the most senior level. For AMC, there is a two-step MBR process: the Commands conduct their own (MBR1) each month and this rolls up to the MBR2, chaired at AMC HQ by Dwyer.

By operating to a single set of numbers with full integration, different scenarios can be modeled based on a 24-month forward view, and these are presented to the senior team with recommendations and assumptions.

"At every MBR2, we assess the Commands' current performance levels against the plan; inventory and backlog," says Dwyer. "But equally important, we can look out to the future and ask, 'Is this right; is this OK?'"

And he confesses, there can be some frank discussions at a senior level to fix things if they're not working: "The neat thing is that nobody can hide; we can all see the data and it can't be manipulated. Unless I see a downward slope on the demand curve, I won't release budget to the Commands."

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Keith Roberson
Aviation and Missile Command



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Frey says the big breakthrough came with a move to plan inventory at weapons system level rather than by item, dramatically reducing the risk of under- or over-forecasting. “Previously, we’d plan for say, a landing wheel or a rotor blade, without understanding the total requirement for the helicopter. If I only had \$100 and spent it all on landing gear rather than splitting it across all the requirements of the helicopter, I could end up with every helicopter having working landing gear, but none operational because I couldn’t afford any of the other critical components.

Samantha Smith has first-hand appreciation of the benefits from the IBP process. Smith is the IBP coordinator for AMC but is also responsible for budget stratification - analyzing and allocating the AMC budget. “Before, analysts like me could see everything but had no decision-making authority. If we found any issues, we’d write it up for the Command leadership, who’d feed it back down the chain again and you’d have to accept any response because challenging your superiors in the military is not a great career move.

With IBP, process review teams are always cross-functional to ensure an effective forum for decision making at the lowest possible level; leaving only those decisions which require executive-level resolution for the MBR.

“Now all budgetary issues are aired at MBR2 and resolved at that level. There’s no back and forth with emails and phone calls; decisions are made there and then,” says Smith.

Cultural shift

Frey says the organization needed a huge cultural change: “Eighty to ninety percent of the challenge is people. One of the key issues, is a tendency for people not to want to dispose of anything. They think ‘We’ve paid for it, so we might as well keep it; it might come in useful one day’. But if you do that for ten years you get a mountain of inventory that will almost certainly never be used,” he says.

“We have to make better decisions and we’re very confident IBP will help us with that, as well as improve our planning.”



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Keith Roberson is Executive Director of Aviation and Missile Command Logistics Center (AMCOM ALC), which had initiated its own S&OP process a few months earlier to manage the expected changes from the drawdown. “The problem with our own process was that we were continually looking in the rear-view mirror and only analyzing five to ten percent of our inventory,” says Roberson. “The new IBP program put rigor into the process and gave us some standard tools to visualize our forecasts; it really spurred us on.

AMCOM has now progressed to modeling demand and inventory projections for individual line items, or NIINs (National Item Identification Number), the equivalent of SKUs.

“Demand for each NIIN is driven by different factors, from combat tempo to ground-air-ground fatigue, and we now have a much better understanding of these. Without IBP we wouldn’t have a standard future picture of our markets or the key drivers influencing the forward demand plan,” explains Roberson.

The change in focus from inventory to demand represents a huge cultural shift for the organization and Roberson believes the challenge now, is for the demand plan to drive the budget rather than vice versa. However, there is a residual credibility issue with AMCOM’s forecast - with safety and support of soldiers on the ground paramount during the war years, there had been a culture of ensuring stock availability at all costs. This led to ‘covering off’ on inventory and augmenting demand figures in the ERP system to avoid reporting excess stock.

“Because we used to manipulate the demand figures, we now have some work to do to convince the budget office to trust our demand forecast, otherwise we are at risk of premature or erroneous decision making for our business at HQ level,” says Roberson. “IBP works, and now we have to trust the data to drive our financials. Targets and goals have to be developed bottom up from the demand plan, not arbitrarily from the top down.”

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There is plenty of evidence to support Roberson’s case; AMCOM has already reduced inventory by \$2 billion and back-orders by 50 percent, and IBP is now also bringing substantial improvements in efficiency and cash flow. “IBP gives us the visibility to ensure we have the right parts in the right place at the right velocity. We are becoming more efficient by sharing demand plans with our contractor partners, which means we can reconstruct our contracts, so we pay on delivery rather than up front and tie up a lot of cash.”

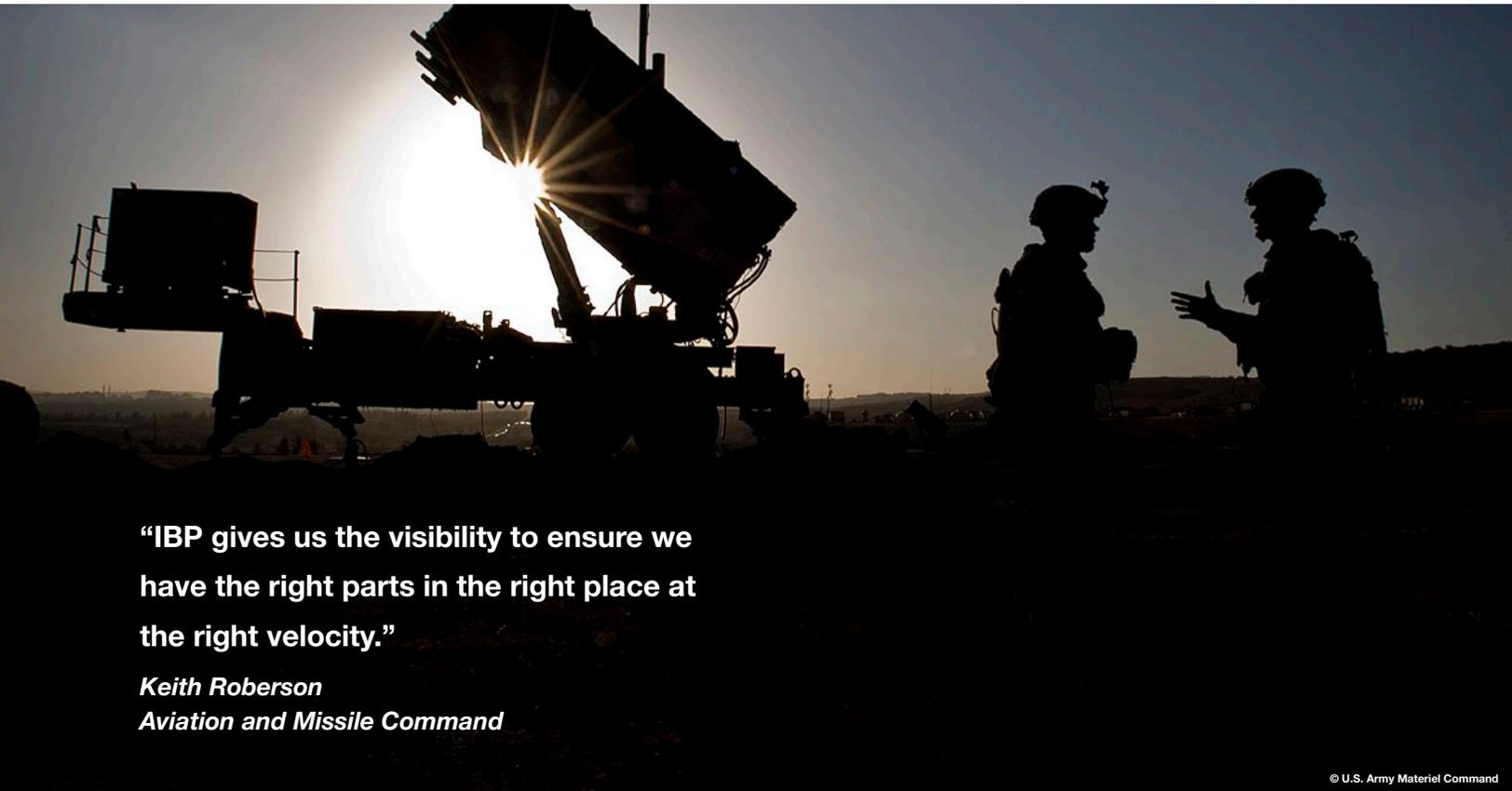
He also notes there is improved data sharing and communication between Commands, especially CECOM whose own inventory is driven by AMCOM’s demand plan: “Now we can give them crisp information as we make adjustments to the demand plan and the assumptions that drive it,” says Roberson.

Leadership development

Like AMCOM, CECOM already had an embryonic S&OP program in place, which shaved \$1.2 billion from its inventory.

But for Director of Logistics, Lane Collie, the benefit of IBP goes way beyond the financials: “It’s all about people wanting to do everything they can to support our soldiers. At CECOM, folks jumped in straightaway when they saw what IBP could bring to their tool kit. It gives them unbelievable analytical capabilities to help our soldiers, and to do it more efficiently in light of the downward financial pressure. Organizations typically spend 80 percent of their time collecting data and 20 percent analyzing it. They need to do the exact opposite and IBP facilitates that.”

There have been significant benefits in staff development at CECOM too, allowing Collie to identify the key performers and future leaders of his organization. He deliberately selected one of his biggest skeptics to lead the implementation of the process and saw him transformed into the most enthusiastic and successful practitioner. Others have similarly attracted his attention. “I have 2,000 personnel and obviously, I can’t know all of them but IBP has brought to my notice, individuals with unbelievable talent.”



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From a financial perspective, Collie says IBP is allowing him to better apply his dollars. In one instance, there has been mutual benefit between the Command and one of its key suppliers: “Looking 12 months out, we could see a significant excess, so we agreed with our supplier to move to a seasonal production schedule, which improved our cash flow and freed up some capacity for them at the same time.”

Collie shares Roberson’s view that the challenge is now to use the data to drive the financials at HQ level, and in the longer term, he sees wider benefits: “I always have pretty high expectations and this process has come pretty close to meeting exactly what I was hoping for. It’s a lofty goal to see it go further in the military than just AMC but it’s a worthy goal too.”

The journey to excellence

For Frey, the priority now is to better ingrain the process with plant floor staff: “The DoD is taking this very seriously and

from the outset, we’ve had support from AMC’s Commanding General on down, without which our success would have been extremely limited. We got things up and running real fast but inevitably, the further down the organization you go, there isn’t necessarily the same level of understanding, simply because there are more people to deal with. Plus, IBP is a very high-level planning process, so now we’re working on integrating it better with planning and control at the execution level. We have the structure in place, it’s just about maturing the process.”

Dwyer is quick to praise his team: “Change management is not easy. Change management when you’re fighting a war is harder yet. It was a very significant moment when we cut the order telling 65,000 people we were going to change the way we do business. We are changing paradigms, and I’m very proud of what the team has achieved and the speed at which we’ve become almost world class.”

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Lane Collie
Communications-Electronics Command



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Although the military’s goal is combat readiness rather than revenue, profit, and shareholder value, Dwyer believes IBP has shown that the military can learn from industry and tailor commercial best practice to its own business. “We’re not Walmart or P&G, and I didn’t fully understand IBP until I went on a course with folks from civilian industry. I thought we were unique but it became clear very quickly, the paradigms that work in the commercial world could work for us too. My impression then, was that we really truly needed to do this.”

“We’ve still got a way to go,” says Frey. “As we get down the road, our forecast accuracy will improve still further and our inventory to demand ratio will get better, so our backlog will reduce. But for now, the most important thing is, we all see the same thing at the same time from plant level to HQ.”

And Frey’s vision for the future? “Class A,” (the globally recognized standard of business excellence) he says, without missing a beat. “The recognition of what people have achieved

is important but it’s more than that - if you’re Class A, you know you’re doing things right; you’ve got a process in place that allows your organization to plan better, respond better and be more efficient.”

For Dwyer, the challenge is to ensure IBP remains ingrained in this organization for the future: “We need it to ensure we stay ahead of the government budget cuts and right-sizing of the army.”

There’s a bigger picture too, concludes Frey. “DoD policy now requires all services to implement IBP. Other parts of the military have been watching us, and even some of the greatest skeptics are becoming more receptive. We’re really proud of what we’ve done and we want to get the good news out there.”



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