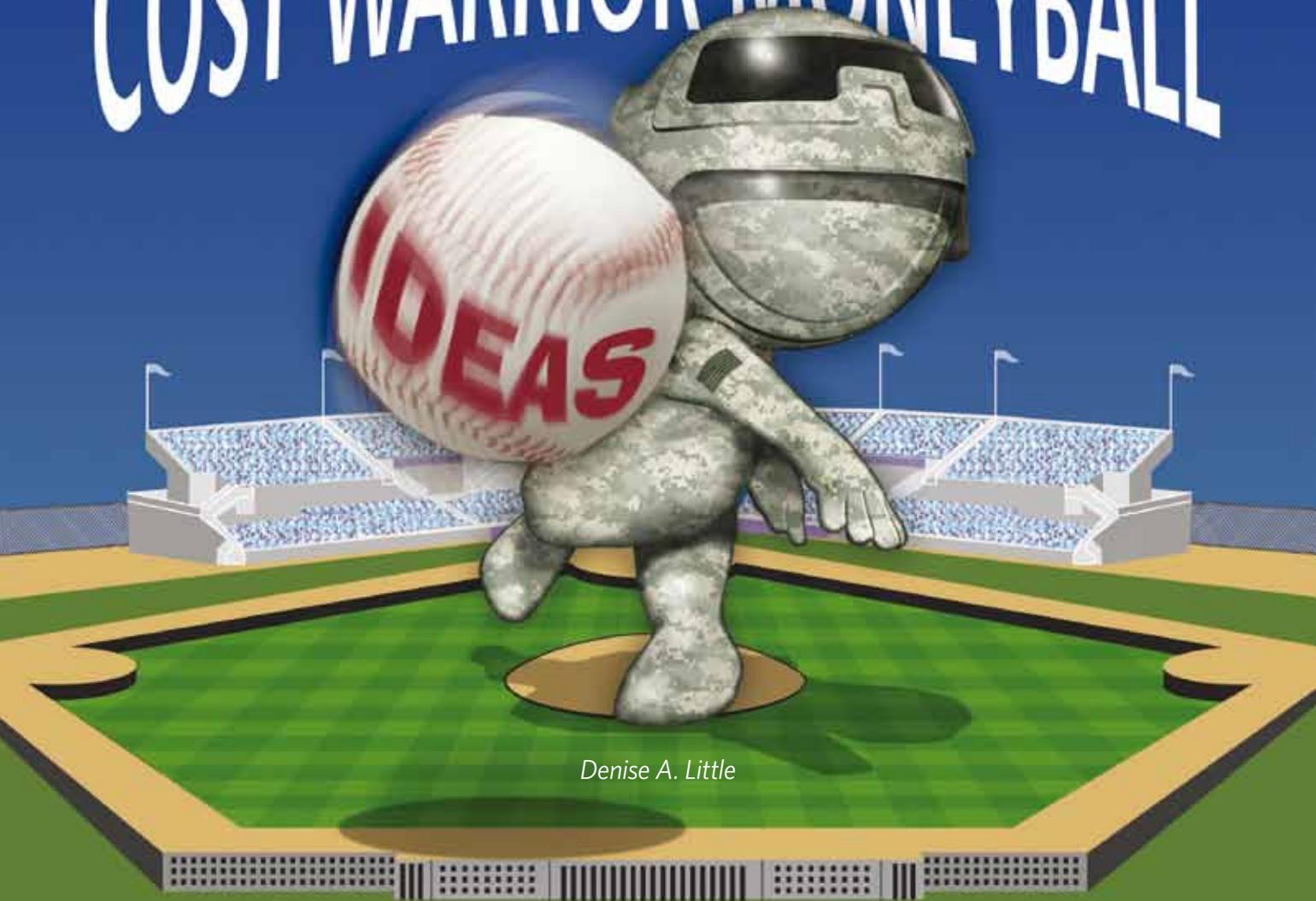


COST WARRIOR MONEYBALL



Denise A. Little

We've outlined my program's command [cost] requirements consistently and in detail over the past 3 years. I don't want to waste time on a semantics debate over what I call my requirements.

—Program manager during a weapon system review

We could all learn a thing or two from the Oakland A's general manager, Billy Beane, who took his team with a shoestring budget to the play-offs in 2002. The A's spent \$41 million on player salaries, compared with the New York Yankees, who spent more than \$125 million. According to Michael Lewis' *Moneyball: The Art of Winning an Unfair Game*, Billy's plan used performance metrics to select players, recruit an entire team, and compete against teams like the Yankees, who can afford practically any player they want.

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Billy successfully played hardball when it came to recruiting and trading yet took care of the players, the organization, and the fans with a poetic integrity. He committed to his strategic vision and tactical plan. He performed analysis, coached financial stakeholders and peers alike, and he even taught those who doubted the process. He went the distance—and years—to convince them of the hard right over the easy wrong. He realized that deliberate planning and analytics take time and patience. He is a change agent in Major League Baseball's own brand of cost culture. So how do Cost Warriors apply Billy's winning approach to strategic communications?

Overwhelming Underdogs

Take a look at the role that the Army G-4 plays in cost management, and compare it to Billy's strategic plan. The Army G-4 logistician analyzes sustainment costs to provide decision support for the secretary of the Army and the assistant secretary of the Army for acquisition, logistics and technology (ASA[ALT]) concerning system life cycle cost or total ownership cost. (The ASA[ALT] is also the army acquisition executive.) Acquisition executives must consider both cost and affordability when approving milestone decisions. Sustainment costs include depot-level maintenance, software maintenance, logistics assistance representatives, and more.

To give you perspective on the size of the budget that the Army G-4 manages, it averages 4 percent of Army resources. Out of six Army Program Evaluation Groups (PEGs), Army G-4's Sustaining PEG comes in next to last place, just ahead of the Organizing PEG. According to recent G-8 Program Analysis & Evaluation (PAE) office's figures, manpower annually leads the pennant race with a whopping 40–45 percent of the budget. Consider that procurement comes in a distant second between 14 percent and 18 percent. However, the manpower portion of the budget doesn't include personnel labor for those who perform depot and other sustainment. They include Field Software Engineers who perform software support, logistics assistance representatives who provide technical guidance, and engineers who provide modification work order support.

I was reminded by Cecile Batchelor, the Army cost culture initiative program manager and special assistant to the deputy assistant secretary of the Army for cost and economics, that we should compare historical data to our long-term budget expectations. "We should ask ourselves how our original expectations compare to our current budget requests, and ask what we are doing to improve." Marc Gutleber, of the U.S. Army Communications-Electronics Command (CECOM), led Army G-4 cost analysts with building the software maintenance/sustainment cost element structure and each element's definitions. He added to Batchelor's questions on budget expectations. "We should also ask what changed since the original expectation. Did the projected 'cost savings' ever materialize? Did the sustainment costs dramatically increase, and why?" He noted that the Army had planned to field a system at division headquarters level, then changed the plan to field it down to the brigade level; this increased the necessary number of

systems by the hundreds. The result was an apples-to-oranges comparison of the original estimate produced at milestone A to the estimate produced years later for the full rate production milestone review.

So why go to all this trouble to apply cost management to the sustainment programming and budget process? There's a DoD-wide problem of low-balling sustainment costs, and in our constrained budget environment we need to have realistic estimates to understand what we're committing ourselves to over the 20- to 30-year system life. Here's a notional example of software maintenance. At milestone A, a program manager estimates software maintenance at \$1 billion per year in the original life cycle cost. Then by milestone C, the estimate ballooned to \$6 billion. Less than a year later during the next program objective memorandum (POM) build, it increased again to \$7 billion. How did this happen? To make a long story short: each agency and each forum had a different way of defining software maintenance. Each had its own set of cost elements with different definitions for each cost element.

The low sustainment estimates are further complicated by the annual competition for a piece of the operations and maintenance (O&M) appropriations budget pie. The life cycle management commands (LCMC) that fall under the Army Materiel Command (AMC) present sustainment command requirements that are consolidated into functions that support multiple systems. Sustainment command requirements are funded through functional channels, such as sustainment systems technical support (SSTS) programming that includes logistics assistance representatives, second destination transportation, and post production software support (PPSS). They are not always specific to the individual program. The program manager as the total life cycle manager partners with his/her LCMC(s), the Army G-4, G-3, and G-1, in the projection, management and synchronization of the O&M appropriations.

Say it ain't so, Joe!

The Army G-4 came up with its strategic game plan for cost management implementation in Fiscal Year (FY) 2010. Chaired by Joint Staff's director of logistics (J-4) and facilitated by the deputy assistant secretary of Defense for program support, the Defense Materiel Readiness Board (DMRB) tasked each Service's Deputy Chief/Commandant for Logistics to outline an approach to total ownership cost optimization.

It was Oakland's (Army G-4's) turn on the pitching mound to brief the DMRB. Their integrity was on the line. Did the coach send its Cy Young contender to the mound with instructions to intentionally walk the batter? Gloss over existing Army regulations and say that the World Series POM FY 2013–2017 championship was all cinched up?

No, the team managers took the hard right. The pitcher aimed for the board's strike zone to deliver a meaningful discussion on their current status, even though it meant extra innings and an extended season.

It ain't over till it's over.

What was the Army's status? There are regulations and directives—lots of 'em! But how well were they implemented? How clearly do we understand them? Some were ambiguous or at times in conflict with others. And saying so would mean sending some starting pitchers to the dugout during the fourth inning. But despite challenges, they had a plan and were already making steady progress.

They reviewed existing standards and identified a few that were unrealistic. They socialized the plan to gain momentum using existing forums, such as the Cost Review Board working group and the Weapon System Reviews. They weren't reinventing the wheel, just making it better. They set out to make sustainment cost estimates reliable, repeatable, and accurate.

ing, fielding, and equipping actions) pays for post deployment software support (PDSS), through the Equipping PEG.

PDSS is like hundreds of pop-up balls flying into the bleachers during batting practice. In other words, they are a multitude of software issues that require patches and troubleshooting, in addition to the operational maintenance costs such as paying for licenses, implementing information assurance vulnerability assessments, certification, providing field level software maintenance, etc. If software maintenance occurs *during or after* the first full year after the hardware production line ends, software maintenance typically is in its steady state. This is post *production* software support (PPSS). If it's PPSS and organically supported, then the Army G-4 pays for it.



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You can observe a lot by watching.

The Army G-4 talked with product support, business and cost managers, and explained to them that the Army was in new territory. The three managers make up the vital team who would translate their logistics/sustainment support jargon into the appropriate sustainment cost elements.

Then we throw into the semantics batting cage the various ways to use the word "sustainment." When we hear the word sustainment and find out that there's a Sustaining PEG, we might assume that all sustainment-related costs are paid by the Army G-4 Logistician. But the Army G-3 Operations and Training team pays for spare and repair part replenishment, for field-level maintenance and other expenses, through the Training PEG.

Programming for software maintenance can also be confusing. It contains the word "maintenance," so naturally the Army G-4 pays for maintenance, right? It depends on when the maintenance occurs. The transition occurs during the first full year after the hardware production line ends. If the software maintenance occurs *before* the first full year after hardware production line ends, then the Army G-8 (responsible for fund-

There's one more software maintenance twist! Does the software maintenance support a business or software-intensive system that's not tied to a weapon system or its hardware? If so, the primary stakeholder is the post production software maintenance bill payer. The Integrated Personnel and Pay System—Army (IPPS-A) business system illustrates this point. It's a *personnel* business system, so the Army G-1 is the primary stakeholder and is responsible for programming and managing those post production software maintenance funds. The same is true of the Army G-4 who pays for the Logistics Management Program business system's post production software maintenance.

Sweet Caroline, good times never seemed so good.

While we need to know how much the program costs, whose office decides if it's affordable? Who decides who will program the money? That's Army staff business in the franchise head shed, right? The truth is that we need to know its cost, affordability, and stakeholders to ensure that we programmed and budgeted for it properly. So let's go to the Cost Warrior basics for the plan.

First, if we know how much it costs, then we can figure out if we can afford it. We must initially determine the true cost by defining each cost category, that is, the cost element structure. The program office estimate (POE) cost categories and their definitions must match those used by the budget, cost, and logistics managers throughout the Army.

Second, is it affordable? Do we have enough money budgeted over the next five years to cover our costs? More importantly do we have enough to cover costs over the system's entire life (total ownership cost or life cycle cost)? Did we consider just the one system? Or did we consider all the systems that make up one portfolio consisting of similar systems that have a related or parallel mission? In an address to an Armor Warfighting Conference, Gen. Peter Chiarelli said, "If you look at any one of these systems as an individual system, you can sell just about anything. But, when you look at the entire

(O&M) appropriation's [Sustaining PEG] Total Obligation Authority (TOA) decreased in FY12, and will continue to decrease over the next five years as the Army implements the SECDEF's [Secretary of Defense] efficiencies initiatives."
—Army Campaign Plan 2012

Let's root, root, root for the home team.

The Army Materiel Enterprise team will have confidence in their estimates, because everyone will be using the same cost category definitions. The O&M sustainment estimate becomes reliable, repeatable, and accurate. Let's use analytical gauges of cost estimates to enable ourselves to compete successfully during the POM validation process.

Applying cost analysis to a program develops your cost-management and cost-analysis skills and makes you competent in this emerging skill set. You can use cost analysis to determine



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portfolio you can start to see where we have duplication in different systems or maybe we're overinvesting in one and underinvesting in another." Perhaps we could incorporate a 20-30 year strategic planning budget that includes all sustainment costs.

The future ain't what it used to be.

Third, change takes time and patience. Over the past 10 years, big money has been flowing. It was as if the San Francisco Giants starting pitcher, Tim Lincecum, brought on the heat with incessant fast balls and change-ups in the form of never-ending deployments and high operational tempo. If we needed more than the anticipated base dollars, we would go to his all-star teammate and closing pitcher, Brian Wilson—also known as Overseas Contingency Operations (OCO) budget requests. But the future is now, and we find ourselves with more fiscal constraints than ever. Something has to give as base dollars decrease and continual OCO dollars become a distant memory.

player performance and come up with a winning strategy for the entire portfolio. How are we doing compared to the original expectation (our estimate)? If not great, what are we doing to improve? Managing sustainment life cycle costs means answering those questions to snag a spot on the Cost Warrior team.

Each agency could set a goal to win the cost management Triple Crown. What if you prepared action officers to become your agency's Los Angeles Dodger Clayton Kershaw, who won the Triple Crown in 2011? First, encourage them to sharpen cost management and analysis skills by taking Defense Acquisition University online and resident courses. Second, ask them to attend the four-hour cost-benefit analysis course. Third, set their sights on the four-week resident cost-management certificate course at the Naval Postgraduate School in Monterey, Calif. The Triple Crown? Hey, it could happen! 

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"The Army's ability to balance its fiscal, materiel, and personnel requirements is critical since the Operations & Maintenance