

What to Expect When You Don't Know What to Expect

Overcoming Four Major Obstacles When You're the Unassuming New Hire

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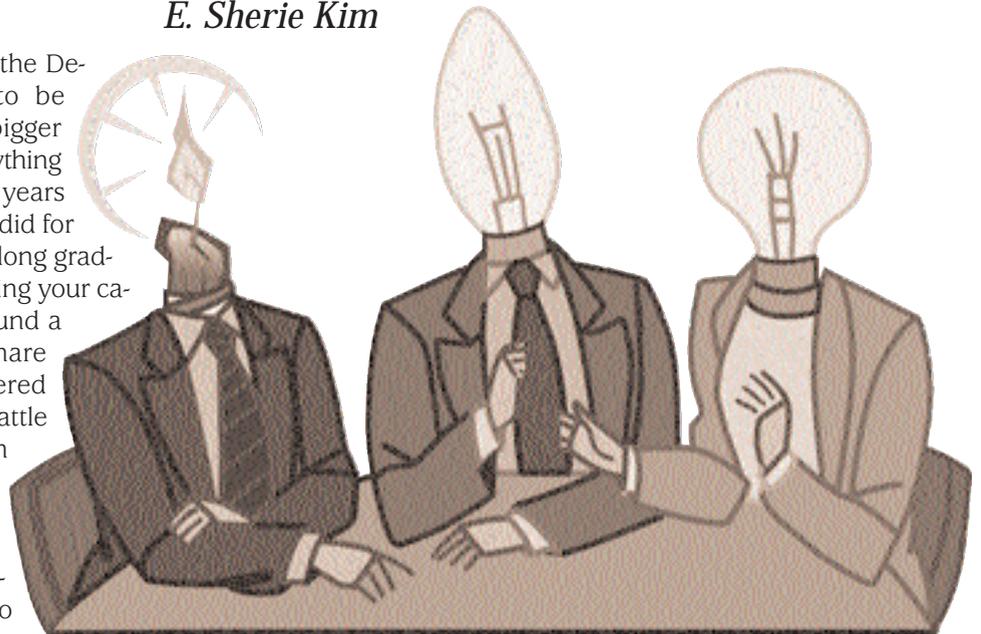
It's hard enough being new to the Department of Defense, but to be thrown into a project that is bigger and more complicated than anything that was attempted even five years ago can keep you up at night (as it did for me for two months). If you've not long graduated from college and are beginning your career (and even if you've been around a while), I have four obstacles to share with you that I recently encountered during a test event for the Army Battle Command System (ABCS), a system of systems. In case you're new to the acquisition workforce, a system of systems consists of individual systems that provide a similar function and are brought together into one overarching system to meet a particular need—and they're all the rage right now.

My experiences are in the test and evaluation field, but they are just as applicable to other projects that you'll be involved with in the world of defense acquisition. I hope they'll help prepare you for some of the challenges you may face.

Obstacle 1: But We've Always Done it This Way!

The way that test and evaluation is supposed to be conducted is so heavily imprinted in some heads that getting people to shift their thinking can lead to some serious arguments. When you're dealing with a system of systems, the number of people in this mindset multiplies drastically and can be overwhelming if nothing is done to get everyone thinking about the current situation and not just how things used to be done.

Of course, it's crucial to have experienced testers and evaluators. Without them, we'd never make it to a test event, much less an acquisition decision. We appreciated having past experience and expertise on the ABCS evalua-



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tion team, people who knew how T&E was typically done. However, nothing about this test was typical, and it required everyone to shift from thinking about how things had been done in the past to how things needed to be done now to help the warfighter.

We spent many days beating our heads against a closed door in a room where a few of us were hiding to escape the barrage of "But we always had access to this type of data!" and "These data were never classified before, so why are they now?" and similar cries. We needed people to apply what they'd learned in the past to our current situation. If people previously had access to a certain type

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of data and now found themselves at a test where only certain individuals could view the data, it did no good for them to point out repeatedly the way it was once upon a time. We needed a solution that would give people what they needed without compromising whatever rules were in place for the data access.

It turned out that the issue wasn't that some people were banned from viewing the data, but that only a certain number of people could be given access because of constraints with issuing user names and passwords. We found that a good solution was to allow the individuals without access to the data to sit with someone who did have access so that they could review them as well. It was a limitation of the test, but it was something that had to be accepted and worked around.

There will always be those who are resistant to change or to new methodologies. Step up to the plate, even if you're new, and help these individuals define what the problem is, then talk to people who can effect change. There will always be someone who will help you fix the problem or else tell you why the change can't be implemented and help you come to a compromise that you can relay to your team. It seems obvious, but many people don't take this step—and it's a step that can begin transforming you from "employee" to "leader," which isn't a bad thing to start doing at any stage in your career.

Obstacle 2: Didn't Anybody Write Anything Down?

ABCS had no formal documentation as a system of systems when we began planning for our T&E. There was no system of systems operational requirements document or capabilities production document, no system of systems test and evaluation master plan, no system of systems system evaluation plan. In other words, there was limited guidance as to what ABCS was required to do other than fulfill a capability to help commanders envision the battlespace. We knew that commanders needed friendly and enemy pictures, but we did not have a requirement for how long it should take to see friendly and enemy unit icons or to have an overlay updated.

It's a challenge to evaluate a system if you don't know what the requirements are and therefore have no evaluation plan. But don't get discouraged. Even if you find yourself in this situation, there are things you can do to get data for your analysis, even if you're not completely familiar with acquisitions. The ABCS team created a matrix that listed the data that we believed should be collected and the events we planned to use for the data collection. Given the changing T&E environment, we knew we were limited in how much data we could collect from an operational event when a unit is preparing for deployment. Therefore, we relied largely on answers from questionnaires provided to the soldiers at the end of the

Army Battle Command System: A System of Systems

ABCS helps commanders visualize the battlespace and consists of 11 systems that provide this capability:

- Advanced Field Artillery Tactical Data System
- Air and Missile Defense Planning and Control System
- All-Source Analysis System-Light
- Battle Command Sustainment Support System
- Digital Topographic Support System
- Force XXI Battle Command Brigade and Below
- Global Command and Control System-Army
- Integrated Meteorological System
- Integrated System Control
- Maneuver Control System
- Tactical Airspace Integration System

Although ABCS consists of 11 systems either seeking or having already received acquisition decisions, the system of systems itself has no acquisition decision. It is intended for use in theater by a division-sized Army unit.

test. Some questions required soldiers to write out their own answers (for example: "What ABCS capabilities did you find to be most useful?") while others were Likert-scale questions requiring answers such as "Strongly Agree" or "Disagree" to be circled.

Yes, it was difficult not having the typical documentation that usually accompanies a system. However, many of us felt that this limitation gave us the freedom to steer our evaluation the way we felt it should go, and coupled with some instrumented data that we had gathered, reading the soldiers' responses was an excellent way to determine whether or not the warfighters' needs were being met. Don't be afraid of not having enough information to conduct what would be defined as typical T&E. You already know enough to structure useful interviews or questionnaires, so start with what you know and work with your team to make it fit with the team's objectives.

Obstacle 3: What Does This Thing Do Anyway?

Chances are, you didn't sit down one day, open up a calculus textbook, read through it once, and then walk away with a profound understanding of mathematics. You probably attended a class for a semester or two in college, worked and re-worked problems, asked a lot of questions, and took a final examination that told you whether or not you truly had a grasp of calculus. It's no different for the end users of a system of systems and the system evaluators. Imagine how hard a system can be to learn if you have no prior knowledge of it. It can take months. But if

you're busy preparing for multiple missions, you may not have months to train. You may not even have weeks. Add to that the difficulty of having to understand how your system fits into this system of systems concept, and you have the potential for one confused individual.

The ABCS evaluation team discovered just how critical training can be. Some soldiers failed to understand what the system of systems did and how it did it. Others expressed concern for the training they received: it was too short and could therefore only teach them what buttons to push, not why they were pushing them, which was what they were interested in learning. Still other soldiers received no training at all. The culprits? Time constraints as they prepared for deployment and a high soldier turnover rate in the unit, so soldiers who had been trained were replaced by soldiers with no knowledge of the systems. And the biggest problem? There's more riding on the soldiers' final exam than on a college calculus final. They have to take the system with them into war, and that's not an examination anyone wants to fail.

Beyond that, we as the T&E community must understand these systems, and trying to evaluate a system you're just seeing for the first time is a daunting task. The interfaces may be new to you, or there may be too many screens to look at to understand what the soldier is doing. Be prepared for training and evaluation constraints in your systems. The systems are being built to do more than can be imagined, and with that comes a level of complexity that can make both training and understanding systems for evaluation more difficult. It can be discouraging to have a system whose potential is not tapped because of training constraints, but develop a plan that helps your team work through this obstacle, not fight it. If you're new to the T&E community, this is your chance to develop a plan based on what we all learned in college: there's not enough time to learn everything there is to learn, so learn what you need to stay ahead of the competition.

Obstacle 4: Where is Everyone?

Do you sometimes find that you can't locate a particular person you need to speak with? Maybe it's a co-worker down the hall who seems to have disappeared when you need to have a question answered immediately for your boss. Or maybe you're in a group meeting and two of the six people who needed to be present didn't show up to work that day. This is typical when you work anywhere.

Now imagine this same scenario but at the system of systems level. You have everyone from testers, evaluators, program managers, developers, and representatives from other commands, agencies, and military units who need to talk to one another. Their schedules are varied and are usually already filled with other meetings and tasks. You can try to get everyone together for a teleconference, but for those who are of higher rank or in a higher position,

face-to-face meetings are often needed, which can get tricky with schedules and funding.

It's difficult to attack this logistical nightmare, as we found with the ABCS planning sessions. Systems of systems, by default, involve a lot of players, and we found that it was good to have one or two points of contact in our team to act as liaisons with the points of contact in the other groups. This kept the information consistent amongst all parties involved instead of having multiple people being told different things from different agencies who might not have yet received the most recent official word on the issue at hand. Of course, this didn't always work—nothing's perfect—but it was a good strategy to try to follow, and it minimized confusion in the masses. That exact strategy might not work for you because every situation is unique, so vary it as necessary to make it work for you.

Don't be afraid to take the lead and implement a strategy like this—or any other idea that you think could be beneficial if what's being done isn't working. If you're new to the field, find co-workers who you think are efficient leaders and model yourself after them. Talk to them about what you plan to do to help coordinate these large meetings and get their ideas. I started doing this for many different challenges that we had with ABCS and found that everyone enjoyed sharing their knowledge (not to mention a break from whatever they happened to be working on) and everyone was willing to teach me how to become a leader in the workforce. I took mental notes on the behavior, attitude, and language of technical directors, division chiefs, senior analysts, and even junior analysts so that I could better coordinate with everyone all of the many actions that we had to take. Remember, it's to us that the acquisition community is looking to shape its future over the next 20 years, so we need to jump at any chance to show how we can coordinate in the community, even if it's as seemingly minor as sending out an e-mail to everyone officially announcing an upcoming meeting.

It's That Simple?

Perhaps you're thinking that this all sounds simple and obvious. However, not only do some people overlook these simple steps when they begin their careers, but they neglect them throughout the rest of their working lives too. So don't be afraid to take the lead in even the smallest areas if that's all you're comfortable starting with. It may be more than other people have done, and it will get you noticed by those who have it in their power to help you move up in your new career.

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