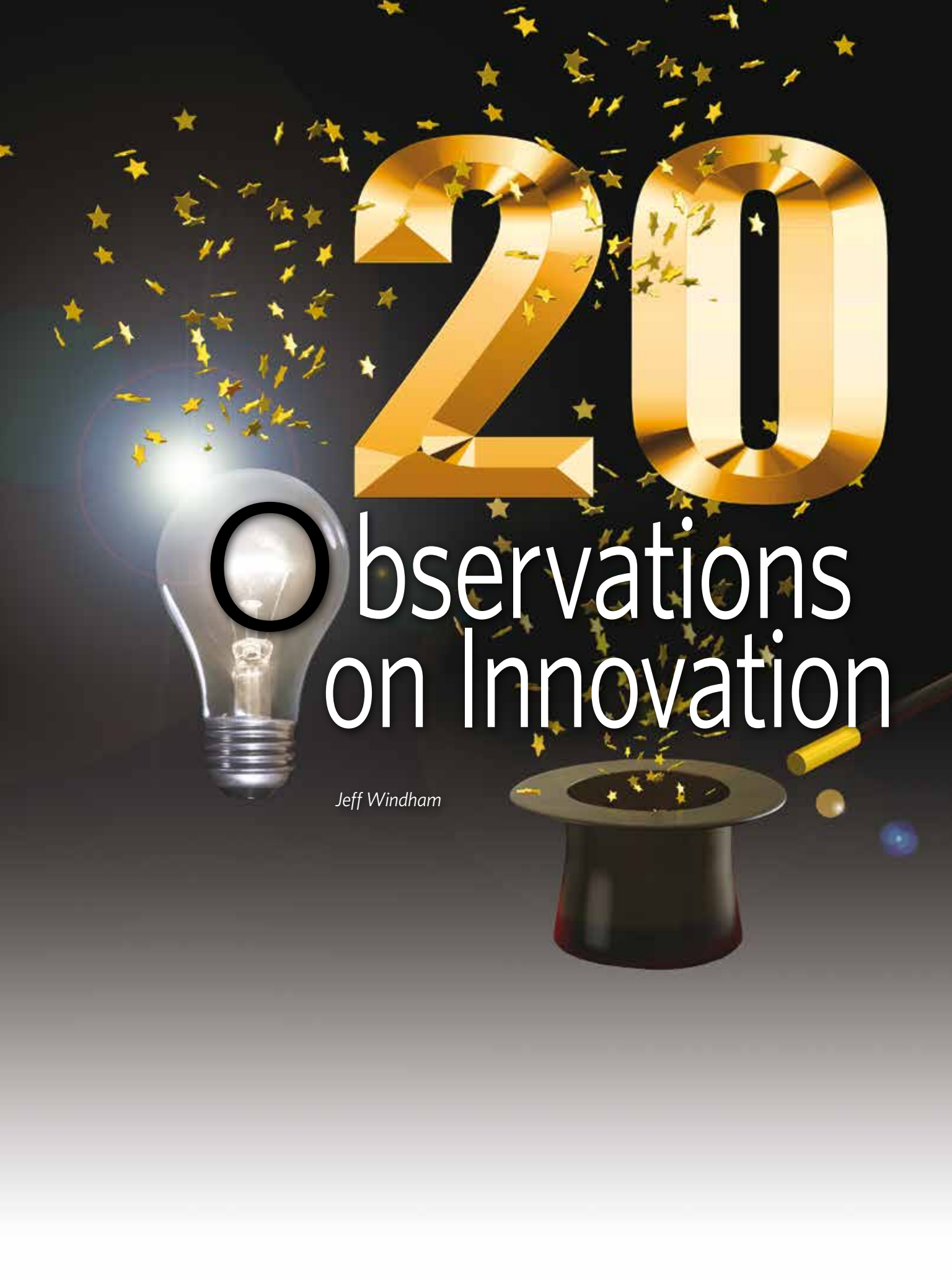

20 Observations on Innovation

Jeff Windham

Defense Secretary Ashton Carter issued a challenge to the defense establishment to think "outside the five-sided box" and apply innovative solutions to today's national security challenges. Innovation in the Department of Defense (DoD) isn't easy. It's harder to innovate in the government than in the private sector; that's just the way it is. It's not easy, but it can be done. For those leaders and innovators who work inside the DoD acquisition system, here are some observations:

1 **Innovation is not a product; it's a byproduct.** You can't create innovative ideas by trying to innovate. Innovation isn't a product created at will, it's a byproduct of something else. Innovation occurs when organizations solve difficult problems in an environment that encourages experimentation, risk taking and allows for short-term failure. The Bell X-1 flown by Chuck Yeager had a single design requirement: Break the sound barrier. It wasn't intended to do 100 things, or 10 things or be multi-role or modular. It addressed just one simple, single, hard problem. Solving that one problem led to many downstream innovations. If you want innovation, identify a few hard problems and challenge your organization to fix them.

2 **Lack of funding is no excuse**. If you think the first step to innovation is for someone to give you a big bag of money, you've already failed. Col. John Boyd's Energy-Maneuverability theory (E-M) revolutionized fighter aircraft design in the 1960s. Boyd had no money to develop his idea and no official backing. He developed his E-M equations by sneaking into the computer room at night at Eglin Air Force Base in Florida. To Col. Boyd, lack of funding

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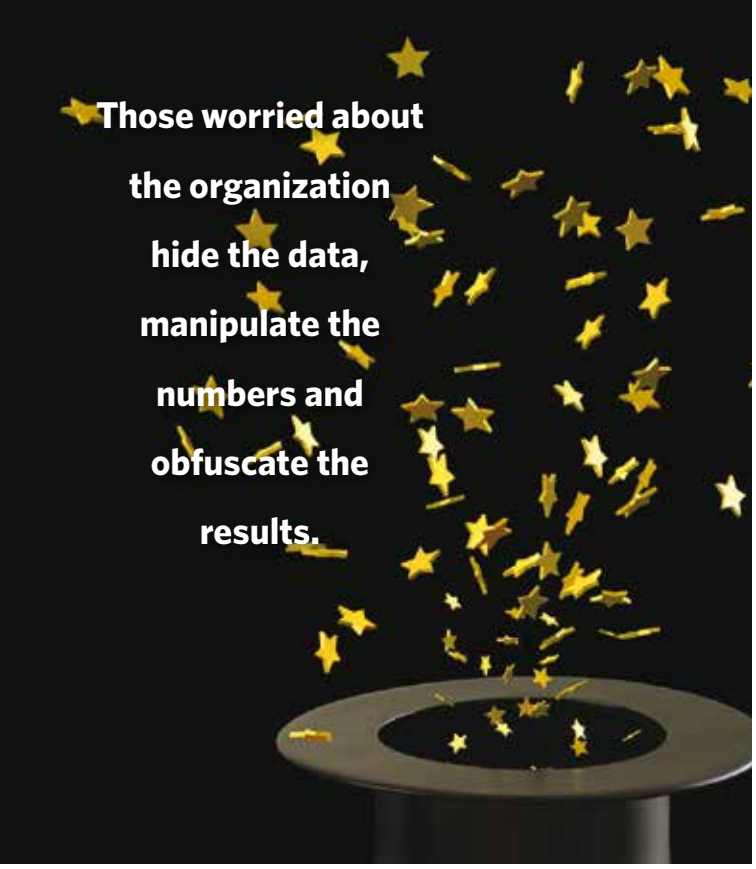


was not an excuse. This leads to the most important assumption you must accept if you want an innovative organization:

3 **In the DoD, we don't lack resources, we lack resourcefulness**. What John Boyd lacked in resources, he made up with ingenuity. Wherever you are in your innovation quest, I guarantee there is something you can do that doesn't require a big bag of money. Start with the assumption that you don't lack resources to innovate, you lack resourcefulness. Start with that assumption, and I guarantee you will get better results.

4 **Worry about advancing your goals, not your organization**. There are two types of people in an organization: Those who protect and advance the *organization,* and those who protect and advance the *goals* of the organization. For example, a teacher who worries about educating kids, looks for better ways to educate kids and stays up nights worrying about educating kids, is advancing the goals of the organization. A school administrator who worries about increasing budgets, reducing classroom sizes and protecting teacher tenure is protecting and advancing the organization. In most situations, these two people will be in agreement. Reducing classroom size helps both advance the organization and the goals of the organization. But occasionally these two philosophies will diverge. For example, what to do with a poor performing teacher? If you support the goals of the organization, you will say that teacher needs to be fired. If you are protecting the organization, you will say that teacher needs to stay.

Another example is the wait-list scandal in the Veterans Administration (VA). The VA realized the long wait times made the organization look bad, so little by little they shaved the numbers and made many small adjustments to hide a problem and protect the organization. It wasn't one big decision; it was many little decisions. They were so worried about the protecting the VA that they lost sight of the goals of the VA.

One way to tell if someone supports the organization or the goals of the organization is how they react to bad data: a bad fitness report, bad customer survey or a bad metric of any type. Those who support the goals of the organization will publicize the bad data so problems can be corrected. Those worried about the organization hide the data, manipulate the numbers and obfuscate the results.

Why does this matter? If you want to have an innovative organization, worry about your goals more than you worry your organization. And when you find bad news about your organization, embrace it, publicize it and then work to make the bad news better.

5 **Be a problem solver, not a problem hider**. The VA wait list scandal is a great illustration of what can happen when there is an aversion to problems becoming known to the outside world. This is the "don't air our dirty laundry" mantra. But this approach leads to many negative outcomes. For problems to be fixed they must be discussed openly. If you want to be an innovator, make sure problems are not hidden. Be a problem solver, not a problem hider.

6 **Solution versus workarounds**: There's a difference between a solution and a workaround. A workaround alleviates a symptom of a problem, a solution cures the problem.

For example, in the DoD, we have a supply system that provides spare parts to keep equipment operational. The DoD supply system is not very good. As a rough metric, it has about an 80 percent chance of delivering a part within 60 days. That means 1 part in 5 takes more than 2 months to arrive where needed. I use an online retailer and, if I order before 10 a.m. today, there is a 95 percent chance the box will be on my doorstep tomorrow. A 95 percent chance of next-day delivery—now that is a supply system. OK, but in the DoD it is 80 percent within 60 days. That lack of responsiveness is a root cause of many downstream problems. Field units create all kinds of workarounds: they cannibalize parts, keep an unauthorized inventory of spares, order nonstandard parts using a credit card, or use parts long after they should be replaced. Every workaround creates its own new set of problems. I'm not saying don't do workarounds—sometimes they are necessary. An individual field unit isn't going to fix the DoD supply system, so it does what is necessary to achieve the mission. But, as you address problems in your organization, if you understand whether you are doing a workaround or fixing the root cause, you will create a better solution regardless.

7 **Have you found the root cause**? Root causes are simple to express: "The DoD supply system is too slow." That's an easy problem to express. Not an easy problem to fix but easy to articulate the problem once you've drilled to the true root cause. If someone gives a long complex explanation of their problem, they are describing a symptom, not the root cause.

8 **Don't overestimate senior leaders' power**. Some think the way to implement an innovative idea is go to the head of the organization, convince that person of the merits of your idea, and—bam!—it will happen. It doesn't work that way. Every senior leader has 100 problems on his or her plate and only enough time and resources to deal with three of them. The chances of an innovative idea making it to the top of the list are remote. Keep senior leaders informed, but don't think selling the head of an organization on an idea will make it happen. Leaders can't order innovation to *occur.* They can be champions and help clear roadblocks, but, in general, senior leaders are not the driving force in innovation.

9 **Passion drives innovation—not rank, power or position.** The person who drives innovation is rarely the highest-ranking, smartest or best-educated person in the room. Those who drive innovation are the people who are the most passionate about the idea.

10 **Don't underestimate the power of passion in a junior leader**. An enlisted person, noncommissioned or junior officer, civilian or contractor who is passionate about an idea can accomplish far more than that person's rank would otherwise indicate.

11 **Innovation is not a committee function**. Committees can be useful venues for reviewing ideas and providing feedback but cannot develop innovative solutions to problems. Don't even try to innovate by committee.

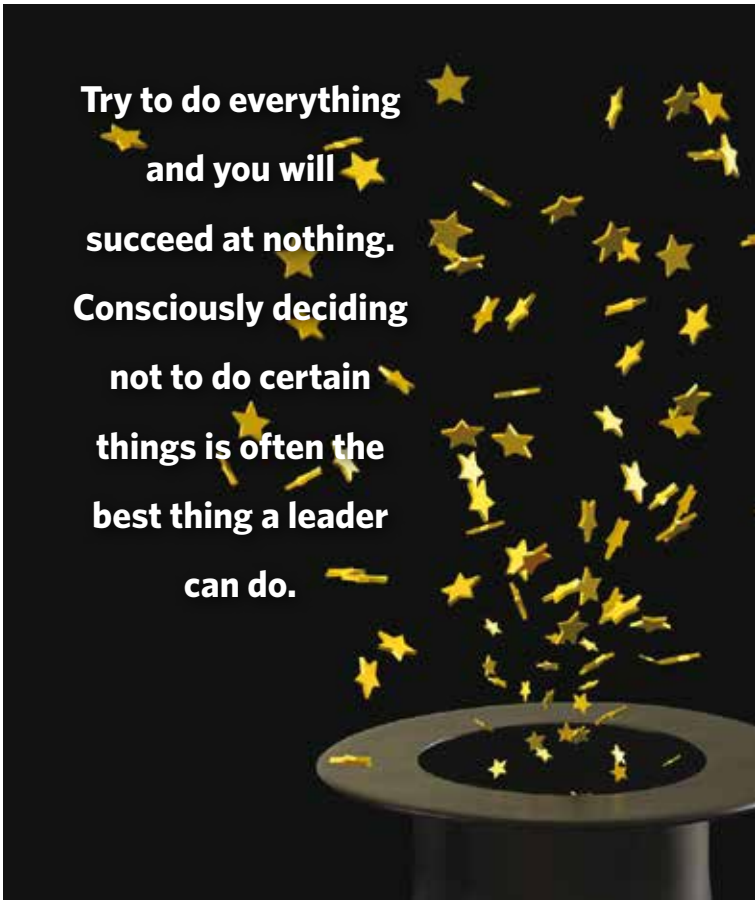
12 **Innovators are a small minority**. Less than 1 percent of the people within DoD are innovators. You may not like this statistic and you may wish it weren't so, but you must accept it. Identify the 1 percent in your organization and empower them in any way you can.

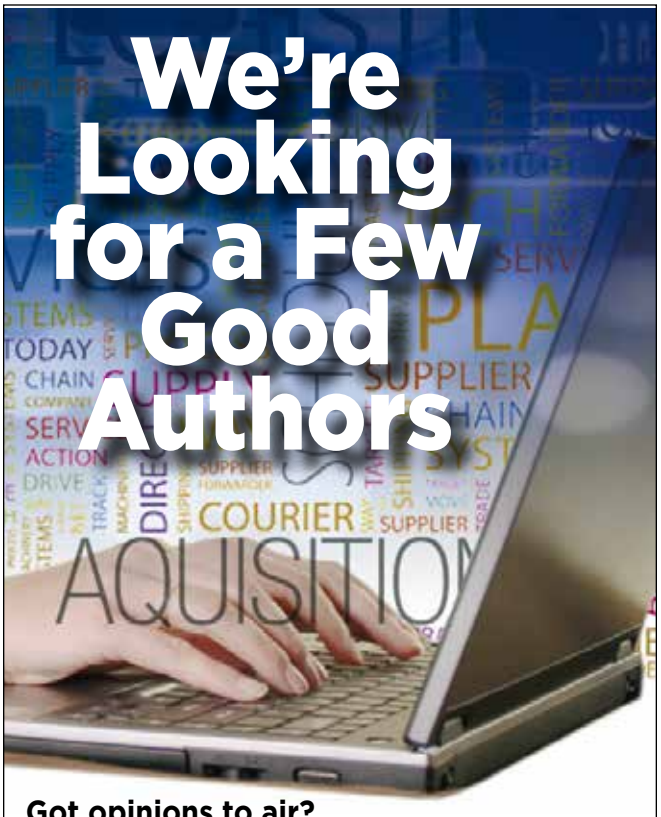
13 **You can't do everything**. Try to do everything and you will succeed at nothing. Consciously deciding not to do certain things is often the best thing a leader can do. When Steve Jobs returned to Apple Computer in 1997, the company was on the verge of bankruptcy. Its employees were disillusioned, unfocused and unmotivated. Apple had many projects in development and Jobs canceled 70 percent of them. Many of those canceled projects could have been successful, but Jobs understood that management and innovative bandwidth are limited commodities; spread them too thin and they are ineffective. When a leader consciously decides not to do certain things, he sends a powerful message to focus only on a few things and accomplish those few things well.

14 **Large organizations and the pitfalls of complexity**. Task a bureaucracy with solving a problem, and the solution it develops usually will add complexity—complexity to the process, to the organization, to reporting requirements or to the product. This is almost always wrong. Complexity is the enemy of innovation. Develop a disdain for complexity and constantly and forever simplify your processes, simplify your organization and simplify the products you provide.

15 **A bad solution written down is better than no solution**. If you have a problem and you don't know what to do, don't just commiserate about the problem and do nothing. Nothing gets fixed without a plan, and a plan has to start somewhere. Come up with a solution, no matter how bad, write it down and start a conversation.

16 **Ignore the naysayers**. The path to every successful idea is lined with people who say "you can't do it," "you shouldn't do it," "it's not necessary" and "you're doing it wrong anyway." The naysayers will wear you down. Ignore them. Perseverance is your most valuable commodity.





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17 **The soft sell works better**. When selling an innovative idea, the soft sell works better than the hard sell, especially when you introduce the idea. Sit back in a room and watch when any new idea gets proposed. People's thoughts immediately jump to "how can this new idea harm me?" It's easy for members of a group to talk themselves out of a good idea before they fully digest it. Soft sell the idea to get the group exposed to it. If you encounter resistance, back off and bring it up later. If you hard sell and people dig in their heels, nothing you say after that will matter. No new information will persuade them, because it's no longer about the idea; it's about the argument. Try to not let it get to that point. Patience and persistence are key.

18 **Prototype, prototype, prototype**. The first prototype is a sketch on a bar napkin. From that moment on, continually prototype as many iterations as possible, making them increasingly more developed. Use whatever means possible—cut and paste, flow charts, computer-aided design, 3D printing, whatever. This will help develop the idea and transition the vision from your head into the minds of others. Constantly prototype your idea in any way you can.

19 **Forget about unanimous consent**. In the DoD, we like consensus. This is the belief that we must achieve unanimous consent, and only then will we have the best idea. When it comes to innovation, this is a false belief. To quote Silicon Valley guru Guy Kawasaki, "innovative ideas polarize people." Innovative ideas are by nature new, untried, provocative, controversial and, therefore, divisive. Try to achieve consensus and you will do two things:

- Waste time (months and years in some cases).
- Turn innovative ideas into pabulum.

Wide-area review is a good thing, but complete consensus is neither healthy nor desired.

20 **Don't check your common sense at the door**. Anyone who works for the government can attest, we swim in a sea of rules, regulations and contradictory guidance. These rules probably made sense when they were established. But over time, piled one on top of the other, they can make doing the right, logical thing impossible. Regardless of this, blindly following the rules can't be an excuse for not doing the right thing. You can't check your common sense at the door. Understand the rule and why it was put in place, but at the end of the day do what is best for the warfighter and taxpayer. A word of caution: Understand the difference in bending a rule and breaking the law. Never break the law. But if you want to be an innovator, sometimes you have to follow the spirit of the rule more than the letter of the rule. Never check your common sense at the door.

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