

"Adapt or Die"

The Imperative for a Culture of Innovation in the United States Army

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With an introduction by General Peter J. Schoomaker, Chief of Staff, Army

The following article is about cultivating innovation in our Army. We are an Army at war, serving a Nation at war. To win this war and to be prepared for any other task our Nation may assign us; we must have a campaign quality Army with a joint and expeditionary mindset. A fundamental underpinning of this mindset is a culture of innovation. "Adapt or Die" contains important ideas that clearly describe some significant challenges to innovation in our institutional culture, as well as the behaviors we seek to overcome them. Equally important, the authors question the status quo. We must be prepared to question everything. As this article states, "*Development of a culture of innovation will not be advanced by panels, studies, or this paper. Cultural change begins with behavior and the leaders who shape it.*" We have the talent to establish the mindset and culture that will sustain the Army as ready and relevant, now and into the future. Are you wearing your dog tags?

GENERAL Peter J. Schoomaker, Chief of Staff, Army

"Our military culture must reward new thinking, innovation, and experimentation."

President George W. Bush
Citadel Speech
11 December 2001

Change and Innovation

Change is constant, encompassing every aspect of our lives. Significant forces—globalization, restructuring of the international order, and the rise of Internetted communications—have dramatically transformed our personal landscape and the world in which we live. Within the short span of a decade, the

information age has exacerbated the continuous challenge of change. Few remain untouched.

Most large organizations, particularly commercial enterprises, have found that innovation is key to institutional survival, embracing continuous adaptation to remain ahead of their competitors. For the military, this notion of relentless competition has a special significance. Our “competitors” are living, thinking, and adaptive adversaries who mean to destroy us and the society we defend. Our choice is quite clear: “*Adapt or Die.*” Failure does not mean Chapter 11 and an updated resume. Failure means death and destruction for ourselves, our comrades, and all that we cherish.

Failure, though unthinkable, is not impossible. Our position as the world’s leading military power only reinforces the imperative for adaptation, innovation, and learning. Emerging powers are studying our successes, efficiently copying our strengths and tailoring their own capabilities to attack our perceived vulnerabilities. Others are developing asymmetric strategies, developing threats that avoid or circumvent our current capabilities altogether. In the volatile, uncertain, complex and ambiguous environment we face for the foreseeable future, if we were to choose merely one advantage over our adversaries it would certainly be this: *to be superior in the art of learning and adaptation.* This is the imperative for a culture of innovation in the United States Army.

The underpinnings of such a culture exist throughout the United States Army today. In the ongoing operations in Iraq and Afghanistan, we have proven that we have Soldiers and leaders of courage and imagination – innovative warriors who adapt on an hourly basis to overcome a determined adversary.

And in spite of societal stereotypes, the United States Army has an extraordinary record of anticipating and leading change. The development of the airmobile concept in the 60s, the doctrine development and training revolution of the 70s and 80s, and the application of digital technologies of the 90s – were all remarkable innovations.

“The soldiers steer their Humvees slowly down the streets – driving the same direction on both sides – because stationary traffic stops are too predictable, and therefore vulnerable to evasion and attack. They invented the tactic on their own initiative.”

Army Times, 21 Jul 03
“Missions on the Fly”

“Most agree that to win the global war on terror, our armed forces need to be flexible, light and agile – so they can respond quickly to sudden changes. Well, the same is true of the men and women who support them in the Department of Defense.”

Secretary of Defense
Donald Rumsfeld

Changing our culture now is not about introducing innovation – we know what innovation is. It is about changing *how* and *when* we innovate in order to abbreviate the cycles of

change. It is about taking our legacy of tactical innovation and extending it to the strategic and institutional dimensions of our Army.

Ultimately, our ability to rapidly adapt our doctrine, organizations, training, materiel, leadership and education, personnel and facilities (DOTMLPF) will be the measure of our institutionally agility—and clear proof of a culture of innovation.

A Culture of Innovation

Culture is our set of subconscious assumptions, an organization's collective "state of mind." As such, it is frustratingly difficult to describe and articulate. The Department of the Army has tentatively defined a culture of innovation as one in which people at all levels proactively develop and implement new ways of achieving individual, unit, and institutional excellence and effectiveness. A culture of innovation is typified by an

"Culture is a longer lasting, more complex set of shared expectations than climate. While climate is how people feel about their organization right now, culture consists of the shared attitudes, values, goals, and practices that characterize the larger institution. It's deeply rooted in long-held beliefs, customs, and practices."

FM 22-100, *Leadership*

environment within which every single person in the organization is invested in the organization's success and feels a responsibility to implement new and better ways to achieve organizational objectives. People are encouraged to try alternative paths, test ideas to the point of failure, and learn from the experience. Experimentation and prudent risk taking are admired and encouraged. Experimentation is not a destination to be reached, but an unending process of trial, feedback, learning, renewal and experimentation again. The organization as a whole is agile, ready to learn, continually changing, and improving. It is fast, flexible and never prepared to say "we have finished getting better." Innovative organizations depend less on forecasting, planning and control and more on scanning, agility and feedback. Innovative organizations embrace uncertainty, recognizing that an uncertain future potentially holds as many opportunities as it does threats.

If we do not develop an institutional ability to innovate at the pace required of the rapidly evolving future, then we will fail our soldiers who walk point and the officers and NCOs who lead them. The most significant change we must accommodate is the rate of change itself. Our institutional Army—including all

the military, civilians and contractors that comprise the broad institution – and the field Army must relate seamlessly to ensure continued success. A critical element of this relationship is creating an institutional culture of innovation that supports our Current Force, while designing and building tomorrow's Future Force. How do we do that? What has prevented us from doing this in the past? How can we begin to make changes immediately that will eventually change the institutional culture?

Impediments to a Culture of Innovation

We have noted that as a set of unconscious assumptions, the Army's culture is difficult to articulate. The impediments to a culture of innovation may be equally subtle, but we must recognize them if organizational behaviors, and ultimately the culture itself, are to change.

- **Responsibility.** Leadership of the Army is an awesome responsibility. Senior leaders are stewards of the Nation's ultimate arm of decision—the foundation of our national security. The Army has real world obligations that must be met on a daily basis, and even more daunting strategic response obligations to Regional Combatant Commanders around the globe. Leaders understand the need to anticipate and lead change for the future, but they are also compelled by the obligations of the present. Every responsible Army senior leader must ask: "*What if we fight tonight?*" Such responsibilities do not preclude the desire for change—they may in fact reinforce them. But they have the potential to significantly narrow the range and scope of feasible innovative pursuits.
- **Complexity.** Modern land warfare is one of the most complex undertakings imaginable. Our basic way of war is to apply every available means of national power in synergetic combinations that overwhelm our opponents. This application requires a dizzying array of skills, techniques, forces, and munitions. Each application must account for land terrain environments which are diverse, unique, and dynamic. The complexity of land warfare makes it extremely difficult to estimate the second and third order effects of any one action. A central tenet of Army thinking—later adopted by the Joint community, is the criticality of viewing any change comprehensively—across the DOTLMPF imperatives. Army leaders understand this implicitly and view significant change with care. They are, quite properly, concerned that any innovation is properly integrated so that it can reinforce the synergy of our combined arms operations.

- **Process.** The prescription for complexity is *process*, and over time the Army has applied this antidote to the point of addiction. Process is important, but excessive focus on *process* versus *product* significantly impedes innovation. Process is better suited for optimization rather than innovation. A process-dependent organization like the Army can quickly lose the product forest in the process trees. This wound is not entirely self-inflicted. External stakeholders, such as Congress, the White House and the Office of the Secretary of Defense, operate within their own processes that are not optimized for innovation; many processes, in fact, are optimized for control rather than change. Balancing their vital oversight role with the freedom of action which best leads to innovation is a prime challenge for the civilian leadership of the military. Internally, the Army's resource allocation process, Planning,

Programming, Budgeting, Execution System (PPBES), is itself a complex monster that demands constant feeding. PPBES exerts a powerful gravitational force on any efforts to change and can cause timely ideas to languish because the process is too long, too complicated to be understood, and not responsive to the pace of ideas and technology. Below the institutional Army level, internal

"Where an organizational hierarchy manages knowledge by subordinating it to process, the potency of the knowledge the institution does possess is inevitably dissipated. With all operations reduced to routine, knowledge counts for less and less until its acuity – its capacity for affecting change – simply disappears... A comparison of the United States' two Space Shuttle disasters reveals virtually identical institutional shortcomings. In both cases, NASA's 'institutional culture' was assigned a greater weight of responsibility by accident investigators than the immediate technical reasons for the crashes. The management of expert knowledge, which existed in abundance at all organizational levels, nevertheless worked against its critical influence over the larger, policy-level decisions made within the agency.¹ "

Roger Spiller, "The Small Change of Soldiering"

processes and structures that lend required order and routine to our lives can also hinder innovation. Examples include human resource policies that manage people as inputs rather than outputs, labyrinthine organizational structures that frustrate interdisciplinary networking, and reporting procedures that focus more on things than on ideas. The notion of process is central to our pursuit of a *culture of innovation* because there is another culture, the *culture of process*, that it must supplant.

- **Army Campaign Mindset.** Every organization is both beneficiary and prisoner to its past successes, and the Army has an extraordinary record of success in its

charter for *prompt and sustained combat on land* (Title 10). Up to this point, geography and the international environment have allowed us to focus on the post-deployment, *sustained* dimension of our mission. In our thinking, wargaming, training, and combat developments we are more apt to examine the Army *engaged* rather than the Army *deploying*. We deployed before we fought, to be sure, but in the past these deployments have afforded us the time to adjust, react, and adapt our organizations, equipment and plans to the targeted threat. But in this globalized world our geography is no longer protection, and we must deploy rapidly – and fight immediately – to deter and defeat our adversaries. There is a renewed premium on adaptation and innovation, not only on the part of our tactical formations, but on the part of the institutional Army that deploys them. Our visualization was not only one of sustained combat -- it was primarily an Army image. Joint coordination was the task of a higher echelon headquarters, and such coordination focused on deconfliction rather than interdependence. In a joint environment that was only deconflicted, we really did not need to know much about the joint context. We developed Army concepts-based requirements and doctrine long before the emergence of joint concepts and doctrine. That reality has changed. Rather than an Army specific campaign mindset, we seek a *joint and expeditionary mindset*. Such a mindset is necessary but will bring its own challenges, because joint planning and development brings its own set of responsibilities, complexities, and yes – processes – thereby reinforcing the imperative for a culture of innovation.

- ***The Innovator's Dilemma.*** In a recent book, "The Innovator's Dilemma," Clayton M. Christensen examined the reasons why "leaders lose"; why companies, many of them very good companies, fail to stay atop their field when confronted with disruptive market and technological change. Most successful businesses became number one in their field within a cultural and organizational framework in which both its leaders and its customers were heavily invested. Fundamentally changing that framework at the height of success was completely counterintuitive. The Army faces a similar challenge. When the Army vetted the idea of transformation with the Combatant Commanders four years ago, most acknowledged the need for change. However, many also stated that their near-term requirement was for "another heavy division." Our "customers" are more focused on the optimization of their current capabilities as a hedge against today's potential crises, rather than on how the force will look and operate in 20 years.

There are other impediments to innovation, but those described provide a sufficient glimpse of the challenges that the Army must address.

Changing the Mindset

Paradoxically, to alter our culture we must address everything – other than culture. As John Kotter describes in *Leading Change*, culture is not amenable to direct attack. No amount of blue ribbon panels, chain teaching, or “Innovative Activity Reports” will change culture. Behavior drives culture. To change the culture, we must change behavior.

"Culture is not something that you manipulate easily. Attempts to grab it and twist it into a new shape never work because you can't grab it. Culture changes only after you have successfully altered people's actions, after the new behavior produces some group benefit for a period of time."

John Kotter
Harvard Business School

- **Product Behavior.** The Army can not abandon process. But in the contest between *process* and *product*, the emphasis can shift, and shift dramatically. Rather than wait for our processes to optimize or evolve our current solutions, professional military judgment and task-oriented teams can expeditiously devise significant alternatives outside the normal process. Instead of process constraining products, products drive process – the process is inherently adaptive. The Army is beginning such an undertaking with our provisional brigade and divisional redesigns to a more joint, modular configuration.
- **Experimentation Behavior.** A process is designed to prevent mistakes, and muting its focus can increase the frequency and extent of error in our work. Therefore, along with a shift in focus from process to product, we must embrace true *experimentation behavior*. Expeditiously devised products can be viewed as prototypes (which must be tested to failure). True experimentation behavior would drive a significant shift in several aspects of the Army program. Our concepts development and experimentation plan, rather than seeking to confirm or deny a singular hypothesis, would seek to determine the relative merits of several alternative solutions. The Army, moreover, would argue an experimentation rationale for a significant component of Army structure. It would not be unreasonable for at least two of our 33 Active Component (AC) brigades and one of our 18 division headquarters (both AC and Reserve Component) to be allocated to the task of routine reconfiguration and experimentation. This is painful to contemplate in light of the current demands on the Army, but it is both a necessary resource for experimentation and a reasonable strategic hedge.
- **Joint Behavior.** Our organizational behavior, moreover, must be inherently joint rather than retroactively so. We have traditionally thought in terms of Army solutions to land warfare problems and then applied them to joint

warfare. Now we must develop a mindset to identify joint problems and their land power solutions and apply them to the Army. Joint behavior will demand a much higher initial investment of energy, time, processes, and for that we do not unilaterally control. The payoff will come later in concepts and solutions that are “born joint” and are therefore much more interoperable and adaptable. Unified Quest 03, the first Joint Forces Command (JFCOM) and Service co-sponsored wargame, is an example of shifting a ground-centric perspective to a joint and expeditionary mindset.

- **Teaming Behavior.** As the nation moved into the Industrial Age, bureaucracies were developed to manage increasingly large organizations and complex processes. The Army’s parallel response was the line and staff system as described by Elihu Root. Now, in the Information Age, we increasingly see networked organizations that feature task-focused, adaptive teams, matrix organizations, etc. The Army uses these – in fact, they are the foundation of our tactical task organizations. And at the institutional level, our standard response when something really important must be done is to build a “tiger team” of cross-functional experts that defeats the barriers of our stove-piped staff organization and is relatively detached from routine processes.

At TRADOC, the short timelines required to develop and field the Stryker Brigade Combat Team (SBCT) in late 1999-early 2000 led to the making, breaking and remaking of developmental and conceptual teams at a relatively rapid pace throughout the command. The disruption and discomfort these “matrix organizations” caused was palpable, yet they worked and were essential to success. Our challenge is that this technique is still viewed as the exception and not the standard. But our future, if it is to include routine innovation and adaptation, must include staff designs that facilitate this teaming technique, rather than relying solely on ad hoc tiger teams.

- **Efficiency Behavior.** The instinct of any organization is to seek stability and resources, and the Army has a long record of such behavior. Bureaucracy and process are like kudzu – they start out as a way to feed the system and end up overwhelming it. Eternal vigilance is required to assess and ruthlessly eliminate programs and processes that have outlived their usefulness. This is extremely difficult in static organizations in which people derive their value from programs or processes to which they are assigned; their instinct might be to frustrate innovation. Successful industries find that routinely seeking reductions in overhead is often merited, not only to save resources, but also to drive innovation.
- **Parallel Thinking Behavior.** Albert Einstein argued that “problems cannot be solved at the same level of awareness that created them.” Parallel Thinking

Behavior is the allocation of special planning or review tasks to special panels, boards, or ad hoc groups. The observations generated by the non-institutional group of experts expand the insight available to the Army and are a useful balance to internal preconceptions. Parallel thinking provides unconstrained thought, unbound by routine processes. It is a method to introduce different cultural perspectives, ensure objective analysis, and enhance the credibility of results. The insights generated by the Welch Panels, which were asked to review the Comanche and Future Combat System, are examples of *parallel thinking behavior*.

- **Critical Thinking Behavior.** Most Army schools open with the standard bromide: *"We are not going to teach you what to think ... we are going to teach you how to think."* They rarely do. Critical thinking is both art and science. There are techniques to critical thinking, such as the careful application of logic, or the alternative application of deduction and induction. These techniques can be taught and learned.

Critical thinking is also an aspect of environment. To foster critical thinking, Army teams must at times leave rank at the door. "Groupthink" is the antithesis of critical thinking and exists in organizations in which subordinates simply mimic the thinking of their superiors. The Army has a great team of uniformed, civilian and contract personnel, all of whom contribute unique and vital capabilities. Army leaders must create an environment where critical thinking is the norm and reasoned debate replaces unspoken dissent.

Critical thinking is a learned behavior that is underpinned by education. The Army' education system, moreover, can be our most effective lever of cultural change. Many of our most important cultural shifts can trace their origins to school house. A thorough review of the institutional educational system is required to assess its effectiveness at engendering critical thinking.

- **Learning Organization Behavior.** Critical thinking behavior extended beyond the individual level is *learning organization behavior*. Learning organizations routinely overcome the impediment of centralized responsibility by instilling within the organization a thirst for creativity and a hunger for challenge. Learning organization behaviors include:

"Learning organizations are... organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together."

Peter Senge

- *Search for Best Practice.* All tasks begin with a determined search for best practice along the lines of similar endeavors – regardless of source. For the Army, this can mean frequent reference to our joint partners when we face problems they have already engaged.

- *Historical Research.* Paradoxically, a look to the past can reinforce, rather than retard, innovation. The geologist’s idiom – the past is the key to the present – holds true. We can mine history for useful insights and perspective from the past in order to overcome the challenge of the present.

- *Communities of Practice.* Learning organizations develop and nurture communities of practice that share information and reinforce mutual learning across traditional organizational boundaries. One of the most vibrant examples of a community of practice in today’s Army is “companycommand.com”, a Web-based community of practice that links soldiers across the Army.

A community of practice at work

21 Aug 03: CALL identifies information on XO-S3.net “How to Communicate Effectively through Interpreters: A Guide for Leaders”

28 Aug 03: CALL assessment posted to CALL website

29 Aug 03: NCO in Iraq e-mails CALL: “This is great! Will take this and get to officers and NCOs immediately.”

- *After Action Reviews (AARs).* It is difficult to overstate the impact of the AAR on the Army. It is such an important part of the warfighting culture today that we forget it is relatively new. Its strength is derived from the inclusion of the entire team in the process, its “no-holds-barred” honest self-criticism and its ubiquity. Although widely embedded in our tactical training, Army institutional processes have not incorporated AARs to the same extent. To create a culture of innovation in the institutional Army requires that horizontal and vertical AAR processes be integrated into normal office battle rhythms, just as they exist as a normal part of all training.

- *Information Push.* Learning networks aren’t passive. In a learning organization information is pushed, not pulled. Team members are constantly asking themselves, “Who else needs to know”? Pushing information must be tempered with judgment. Email has made the dissemination of information so easy that it can rapidly overload even the most conscientious team member. Pushing information requires thought...it is not about pushing the send button.

- *Engagement of Critics.* - Learning organizations directly seek out and enter into dialogue with their critics, knowing that such activity is the surest way to correct its logic, if faulty, or reinforce its arguments, if correct. It engages its critics and listens actively to them for what it might do differently. Great teams are not characterized by an absence of conflict. On the contrary one of the most reliable indicators of a team that is continually learning is the visible conflict of ideas. In great teams conflict leads to increased productivity. Viewing "adversaries" as "Colleagues with different views" establishes the right attitude and ensures further development of ideas.

- *Open Environment.* Learning organizations operate in the sunshine, sharing their work with a broad network and rapidly processing feedback as it is received. They actively seek views and suggestions from industry and intelligentsia, private citizens and politicians, thereby creating a constructive two-way communication process. They appreciate questions as much as answers, prizing a non-retribution, open environment. They learn from mistakes not punish people for them. The Army's culture has an enduring, legitimate pull between essential centralized control and necessary, decentralized innovation. Commanders and staff section leaders must be proactive in blending the right mix between control and community, creating a command climate receptive to ideas. All members of an organization need to feel that their contributions toward improved organizational capability are welcome and taken seriously. Reward systems, which are designed and overseen by senior leaders (such as efficiency reports and unit readiness reports), drive behavior. Collective behavior, over time, drives culture.

- ***Doctrinal Behavior.*** Why does innovation in our tactical Army outpace that of our strategic/institutional one? There are many reasons, not least of which is the tactical immediacy we have already noted: "*adapt or die.*" A less obvious reason is the relative dearth of doctrine and institutional education in our institutional Army. We enter a tactical setting with a common vocabulary: principles of war, a framework of the battlefield, and broadly understood doctrinal imperatives. But get a group of randomly selected senior officers around a table and you will not be able to generate an intelligent conversation about the TAP, the TAA or the JWCAs. Doctrine for the institutional Army may not be necessary, but the lack of a unifying institutional doctrine, or at least broad education in the mechanics of the institutional Army, hinders innovation by failing to provide a common framework of understanding.

We have developed an officer management process that has increased field grade time in operational units from 14 to 22 months in the last five years. A similar program to identify and stabilize officers in the institutional system

may be worthwhile, though this must be balanced with the requirement to have experienced warfighters represented in the institutional base.

- **Career Behavior.** Demands for technical proficiency and joint capability have exacted a price on today's officers in the form of complex and extended career and professional military education demands. An Army career today is simply too short to include all the necessary assignments and enough experience – particularly in the institutional Army – so that senior officers are confident of the intricacies of the institutional mechanism enough to attempt innovation. It is telling that some of our best insights for major projects come from “greybeards,” retired officers who have finally had the time, and the independence from the restrictions of Army process, to pursue institutional issues to intellectual depth. Warfighting is still “a young man's business.” But leading the institutional Army requires wisdom born of experience that is best obtained over a long career. The average senior position tenure in the Army is two years; private sector CEOs stay in position for about eight years. Consideration should be given to extending the current 20-year career path and reshaping it to include additional time at many levels, including extended periods of time as instructors within the Army educational system, in order to build and maintain a viable “bench” of trained and educated leaders.

Conclusion

The same soldiers and leaders who adapt, learn, and innovate on our battlefields serve in our institutional Army. We can extend our success on battlefields to our struggles to deal with relentless and pervasive change in our institutions. Innovation does not require genius, nor does it often occur in a flash of brilliance or the insight of one person. Development of a culture of innovation will not be advanced by panels, studies, or this paper. Cultural change begins with behavior and the leaders who shape it. We must be prepared to question everything.

Our leadership challenge is to address the impediments to institutional innovation through a wide range of behaviors that, over time, will become second-nature, automatic, and implicit – our culture. Changing the culture will take time, and it will only happen if we start changing our behaviors now. Our soldiers, and the Nation, deserve nothing less.

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