

USAWC STRATEGY RESEARCH PROJECT

**FUTURE COMBAT SYSTEMS: OVERCOMING RESISTANCE TO THE ARMY'S
MODERNIZATION STRATEGY**

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ABSTRACT

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The current Army modernization strategy is at risk due to increasing pressures to cut investments in Future Combat Systems (FCS). The Army faces an age-old dilemma: arriving at the right investment balance between current demands and relevant future forces. Although the Army firmly intends to avoid sacrificing future capabilities in order to fund near-term operations, the strategy to accomplish this balance is failing. Widely criticized as an unsustainable strategy, the FCS program is at the center of the current debate.

This SRP explains why FCS, the centerpiece of Army modernization, is placing this strategy at risk. The Army's failure to effectively communicate its strategic goal is a big part of the story. How, then, should the Army improve its communications plan in order to assure full support for FCS? The SRP attempts to answer this question by projecting FCS beyond its performance as an acquisition program and accounting for current sources of resistance to the program. An effective strategic communications plan must counter this resistance in order to effectively support the current plan for Army modernization.

FUTURE COMBAT SYSTEMS: OVERCOMING RESISTANCE TO THE ARMY'S MODERNIZATION STRATEGY

The Army's Future Combat Systems (FCS) program faces significant risk despite considerable efforts by senior leaders to ensure adequate force capabilities meet future requirements. Two circumstances account largely for this risk: an Army modernization strategy that is not well understood and influential resistance from powerful "rice-bowl" interests. These two circumstances currently threaten program funding and therefore jeopardize the Army's ability to modernize. Because the Army has failed to effectively communicate the FCS vision, the FCS program remains at risk.

This problem is exacerbated by an ill-defined end to the current war effort as well as the uncertainty of the future security environment, which by itself would be a daunting challenge for Army planners. But the Army also faces an age-old resource dilemma — achieving the right investment balance between current demands and relevant future forces. The Army leadership firmly intends to avoid sacrificing future technological capabilities in favor of funding near-term operational requirements. Army Chief of Staff GEN Peter J. Schoomaker warned Congress that "If we don't do future combat system and don't spiral these technologies on top of all the brigades in the Army, we will not have a modernization program in the Army for almost four decades..."¹ General Richard A. Cody, the Army Vice Chief of Staff, continued to emphasize this position when he told the Congressional Army Caucus recently that the Army "could soon find itself fighting adversaries using outdated technologies and equipment."²

Despite these leaders' intent and the messages communicated during straightforward and consistent public testimony, the program has been reduced in each of the last three years.³ Indeed there is widespread confusion, both internal and external to the Army, on the current modernization plan and the role of FCS in the strategy. This confusion renders the program vulnerable not only to the more traditional sources of resistance to major acquisition programs but also to current critics who claim the FCS program fails to effectively reduce risks in our strategic plan. Some key questions help to define this problem: What are the real obstacles that stand in the Army's way of its primary modernization effort? How can strategic leaders create the organizational change required to enable a promising transformation initiative as significant as FCS?

In an attempt to answer these questions, we will first review lessons learned from previous periods of change in order to facilitate genuine transformational or revolutionary change. From past experience, we have identified five necessary conditions for genuine institutional change:⁴

1. A crisis must have occurred or one is pending.

2. The crisis must be recognized by the decision makers.
3. Leadership within the organization must set the conditions for change by developing and communicating a vision that will lead to change, by providing the resources to effect the change and placing people in key leadership roles who share the vision.
4. The organization as a whole must understand the need for change.
5. The leader must go outside entrenched bureaucracy to effect the change.

The leadership requirements to effect this change are numerous; however, this SRP focuses primarily on one aspect: recognizing the sources of resistance and improving the strategic communications plan to overcome them. Strategic communications and the analysis that supports a communications campaign plan are the most critical agents of change. They serve to enable the creation of the other conditions necessary to assure success of the FCS plan which, accompanied by conversion to the Modular Force organizational design, forms the core of the Army's transformation strategy.

The SRP projects FCS beyond its performance as an acquisition program and identifies the sources of resistance that a strategic communications plan must address in order to effectively support the current Army modernization strategy. First, a brief background on FCS describes how it got to where it is today and reviews its current status. The sources of resistance to impending FCS changes are then identified, along with the reasons why the criticism continues. This SRP then concludes with recommendations for ways that leaders can improve the FCS strategic communications plan to overcome resistance to internalizing and operationalizing its vision. Given lessons learned from the Army's ongoing transformation to the Modular Force, these recommendations are based on relevant principles from organizational change theory and are organized into six areas: transformational change, vision, improving the message, cultural change, a coalition of acceptance, and gaps in the current communications strategy.

The FCS Program

To understand the troubled waters that Army modernization is navigating it is necessary to first summarize the FCS program and its initial strategic guidance, the program's background, and where it is today in the defense acquisition cycle. FCS is characterized by the Army's senior leadership as:

...the Army's main modernization program for the 21st century. It will ensure that the Army retains the combat advantage in critical capabilities—net-centricity, mobility, and a more efficient use of materiel and personnel.⁵

FCS is intended to modernize the force which is currently equipped with 40-year-old systems designed to defeat Cold War enemies. FCS features a network that “allows the FCS Family-of-Systems (FoS) to operate as an integrated system-of-systems where the whole of its capabilities is greater than the sum of its parts.”⁶ It will integrate “reconnaissance and surveillance capabilities to enable situational understanding and operations at a level of synchronization not achievable in current network-centric operations.”⁷

In contrast to the development of the Stryker Brigade Combat Team, which represented the next evolution of unit design bridging current to future, and the Stryker vehicle itself, which was merely a lighter chassis to carry existing technology, FCS system-of-systems development is more revolutionary.⁸ MG Charles Cartwright, Program Manager, FCS Brigade Combat Team, describes it as:

...one of the most complex systems integration and development programs ever executed by the Department of Defense. The scope of the program -- the development of 18 manned and unmanned systems and their integrating network, the integration of 150+ complementary and associated programs, and development of the underlying doctrine, organization, training, facilitization, and other functions needed to develop and field a fully-functioning UA [Unit of Action] -- require a new, innovative approach to complex systems integration.⁹

This concept for Army modernization conforms with current DoD transformation guidance.

Strategic Guidance

The Army has sufficient strategic direction for development of a modernization program. This guidance specifies the Army's need for both the Modular Force and FCS. This guidance, in which the Army's transformation strategy is nested, is articulated for execution as the Army Campaign Plan (ACP). It clearly supports the current National Military Strategy, which specifies desired joint force attributes: fully integrated, expeditionary, networked, decentralized, adaptable, decision superior, and lethal.¹⁰

The Army views transformation as a process through which the current force eventually confirms the vision of the future force. This transformational process is described as “a journey of continuously improving capabilities of the Soldier through comprehensive change...rather than a destination achieved by a materiel solution.”¹¹ Both the FCS program elements and the comprehensive FCS strategy for Army modernization appear fully synchronized with specific DoD force transformation intent.¹² The goal of FCS is to enable the Army, as a key component of Defense transformation, to “accelerate the ongoing shift from an industrial age to an information age military. This is a matter of developing competency for the new age.”¹³

FCS Background

In 1999, then Chief of Staff of the Army GEN Erik K. Shinseki articulated a vision for transformation that included a network-centric FCS-equipped force that integrated “a range of technologies likely to be centered on a family of vehicles.”¹⁴ The plan called for eventually fielding FCS to all units, including the Stryker Brigades. This 30-year transformation strategy, approved in March 2003, effectively halted modernization of current equipment. It assumed that critical technologies and resources would be available to begin fielding FCS capability in 2008 and planned for Full Operational Capability (FOC) in 2010. The assumptions proved overly optimistic and the plan was criticized for its lengthy development cycle. Added to these impediments was the challenge of operations in Afghanistan and Iraq. So the strategy soon became untenable. “Constrained resources, technology challenges, and the desire to provide the Operational Army with the most modern systems possible made transformation using the Shinseki concept obsolete.”¹⁵ The next Army Chief of Staff, General Schoomaker, revamped the previous investment strategy in favor of emphasizing modernization of the current force in support of the current fight.

FCS is currently in the System Development and Demonstration (SDD) phase of the DoD acquisition cycle. It received its milestone approval as a program of record in May 2003. Two significant program restructures have occurred. In 2004, the traditional scope of SDD was expanded to accelerate the fielding of early FCS capability to the current force as technologies mature (known as “Spin Outs” and depicted in Figure 1 below¹⁶); and in 2005, the Army restructured the business aspects of the program to improve its contract oversight.¹⁷

Current Status

According to current plans, an evaluation unit is scheduled to demonstrate Initial Operational Capability (IOC) with the full complement of FCS core systems in 2015. The Army then intends to field fifteen FCS BCTs over the next two decades.¹⁸ The total cost of the program is approximately \$161 billion. The DoD Appropriations Act of 2007 sustained support for FCS acquisition (\$3.4 billion in 2007) but reduced the FCS program funding by \$326 million in favor of current force needs. It also established a ceiling of \$2.85 billion per year for FCS after FY07 unless two other near-term requirements—reset and modularity—are fully funded by the Army first. Finally, the 2007 Act requires a review of the FCS program by the Defense Acquisition Board.¹⁹

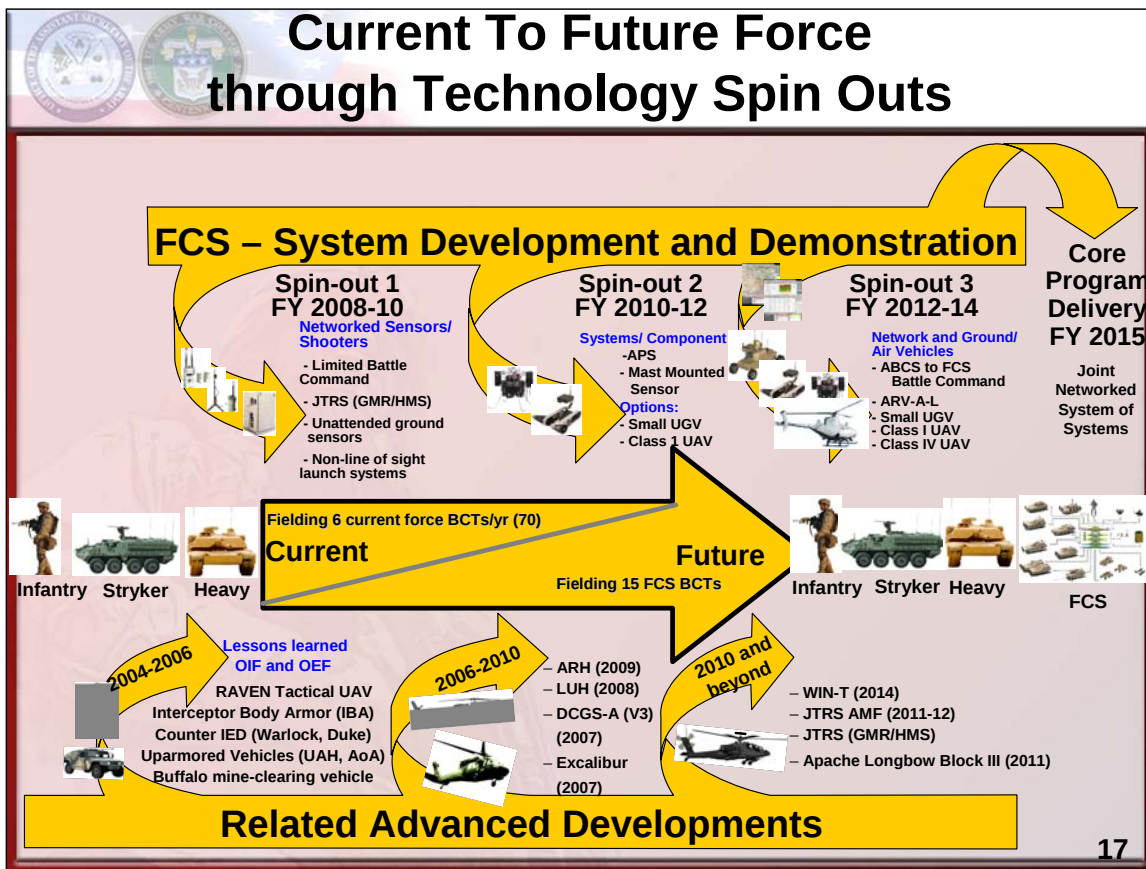


Figure 1.

FCS Brigade Combat Team...

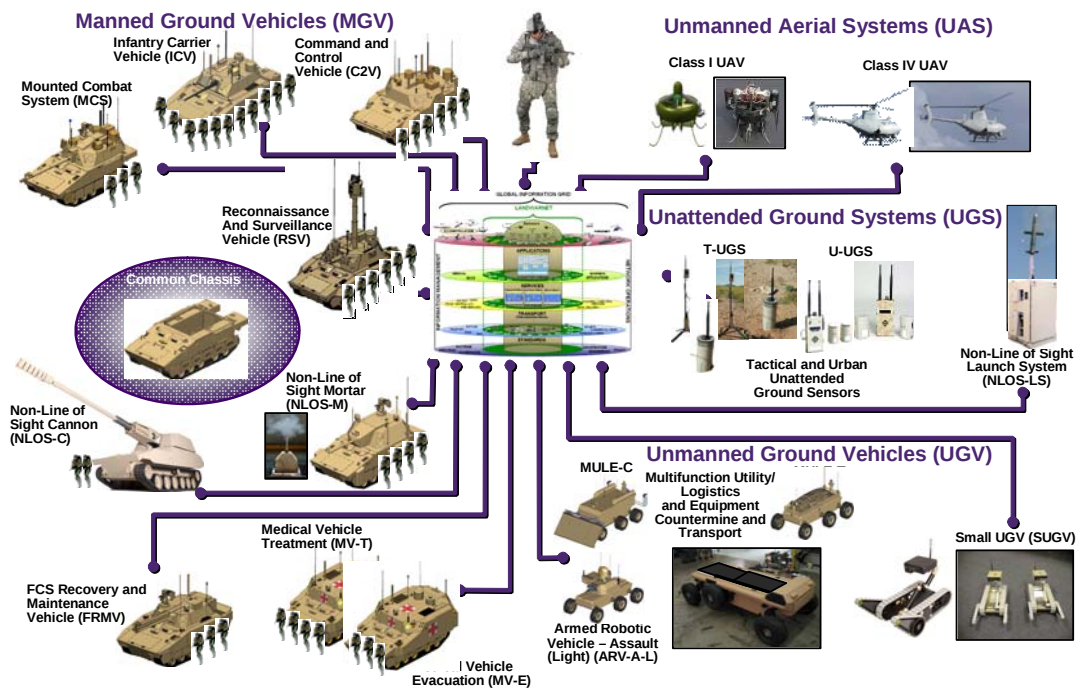


Figure 2.

The most recent program adjustments are proposed within the President's Budget for Fiscal Year 2008 and reflected in Figure 2 above.²⁰ In order to proceed within current financial constraints, the Army adjusted the program construct from 18+1+1 to 14+1+1 by deferring four of the systems (two classes of UAVs, the largest robotic vehicle, and the intelligent munitions system). This modification reduced the cost of an FCS BCT, provides the same procurement quantities within the Program Objective Memorandum (POM) years and enables the fielding of the network two years earlier. By stretching the fielding of the 15 FCS BCTs from a previous 10-year period to a proposed 15 years, the total program cost has been reduced \$700 million.²¹ The Army Acquisition Executive describes the program changes as purely budget-driven.²²

Sources of Resistance

Why does criticism of FCS persist so intensely despite Congressional acknowledgement of the Army strategy and \$11.4 billion in previous funding allocated to the program through Fiscal Year 2007?²³ The most obvious sources are pressures on current budgets reflecting wartime requirements and program risk, which are not unique to the FCS program. The concerns about program risk are a more traditional obstacle that most major acquisition programs have encountered. Further, there is always resistance to significant deviations from accepted warfighting concepts. The following section focuses on other sources of resistance to FCS. They exist within the Army itself, the DoD and military culture in general, the Congress, the defense industry, independent think tanks and the media.²⁴

Understanding within the Army

The Army's comprehensive modernization strategy is simply not well understood. There is still great confusion surrounding the Army's strategic message on the FCS plan, both internally and externally. Questions that are commonly asked probably indicate that the program vision is unclear. How does FCS relate to the Army's Modular Force Initiative and the Army Force Generation Model? If FCS culminate the long-term modernization strategy, how do we define the return on investment if only 15 of the 77 BCTs will be equipped with FCS? What becomes of the remainder of the current force in the future operating environment? Answers to these questions are available but FCS advocates have done a terrible job of explaining it in understandable terms. This is mostly because those who are doing the explaining don't understand it themselves and therefore fail to communicate effectively. There is a dire need to get the message across. But due to widespread unfamiliarity with the approved FCS requirements documents, many in decision-making or influential positions have not even read or attempted to understand the documents that established FCS as a program.²⁵

In addition to developing a common basis of understanding, the Army also needs to reconsider its ability to persuade and articulate its message. LTG (Ret.) Trefrey, the Army's preeminent force manager, believes that the skill of persuasion and articulation are tenets of senior leadership and that the institutional Army does a poor job of both with respect to the Army vision.²⁶

Another factor contributes to this institutional failing: senior leaders have not effectively conveyed the message that FCS is the central component of the strategic modernization initiative. Two reasons can be cited: First, the Army has separated FCS initiatives into many individual parts, thereby providing inadequate central direction.²⁷ Second, communications plans have not fully transitioned the messages in support of the future modernization plan, formerly known as the Objective Force, to the current vision of the Future Force. Many of the strategic communications themes are vestiges of the Army's Objective Force Task Force that need to be updated for relevancy in today's planning environment.²⁸ This situation has left the Army's position vulnerable to critics who do not understand the FCS concept of modernization. Perhaps the most vulnerable part of the message is that FCS is not only about the future but is critical to the current force as well —Non-Line of Sight Cannon (NLOS-C) and select spin-outs are going into production this year. The use of the word "future" presents a strategic communication challenge that will require continuous effort to overcome.

Because the vision is not clear, critics are able to advance their own interests to effectively argue against Army investment initiatives using what the Army claims is faulty logic or mischaracterization of individual components without an appreciation for the entire program. The ability to communicate the strategic message is certainly essential to overcoming resistance; but as other services with comparable acquisition initiatives have successfully demonstrated, the Army should not expect to either sustain or lose support for FCS simply on the basis of its ability to convey a message.²⁹

Army leadership cannot even begin to address the strategic communication dilemma if FCS continues to be described in a manner indicating our priorities are not supportive of our vision of the future force. A recent Army press release announcing Fiscal Years 2008 and 2009 budget priorities fails to describe FCS's role in the Army's modernization strategy.³⁰ The document provides two key themes related to FCS — "Build Readiness" and "Accelerate the Future-Force Modernization Strategy" — but adds further confusion to the Army position on the FCS program. Three of the four statements used to describe the "Build Readiness" theme are directly related to FCS, but they fail to exploit an opportunity to emphasize the program's

integral role in improving capabilities of the current force as we ensure a successful modernization:

- Fully fund a modernization and recapitalization program to ensure full-spectrum ground combat operations.
- Apply lessons learned in Operation Iraqi Freedom and Operation Enduring Freedom to Army equipment purchases.
- Continue development of Future Combat Systems.³¹

Curiously, the imperative citing FCS is listed last, as if an after thought. It seems not included in the same breath as the modernization imperatives of the previous two statements. The use of "Continue development of..." seems to imply that FCS is considered separately, not as integral to a full-spectrum future ground force and not necessarily a product of incorporating lessons learned during current operations. Words are important! This kind of presentation might be mistakenly construed as an indication that FCS is destined to be something less than the Army Game Plan's description of FCS as "our main modernization program."³² Certainly development will continue, but 'continue development' is a less compelling assertion of the effort to build readiness than 'initiate procurement,' which should have been the focus of this press release since FY08 is the budget year during which procurement begins. Elsewhere in the same President's Budget Request, however, this message is clearer: FCS is specifically described as providing not only "full-spectrum warfighting capabilities," but also as "adaptable to other types of operations such as civil support and disaster relief." In all descriptions, FCS needs to be consistently and indisputably linked to the priority of ensuring "full-spectrum ground combat operations."³³

The budget theme titled "Accelerate the Future-Force Modernization Strategy" also misses an opportunity to identify FCS as the centerpiece of modernization and the Army's best way to spiral enhanced capabilities into the current fight. It cites four imperatives:

- Remain aligned with Department of Defense strategy.
- Balance future capability with OIF/OEF lessons learned.
- Continue support for Future Combat Systems and adjustments made to the program.
- Sustain a strong focus on the future.³⁴

This seems a less-than-enthusiastic means to advocate funding for a system-of-systems that is intended to prevent the Army from "fighting adversaries using outdated technologies and equipment."³⁵ To have the desired effect, these statements must include stronger descriptors,

such as 'decisive' and 'essential.' Again, words are important in developing key messages but so is consistency. Other budget items submitted with the same document even continue to use the now-defunct term "Objective Force" instead of "Future Force" in its program description – talk about sending confusing messages to stakeholders!

Another challenge in overcoming resistance is the difficult but essential task of maintaining a current and effective organizational vision, supported by a set of strategic messages. But the current Army vision with respect to modernization is misunderstood. The rhetorical goal, as described in John Kotter's *Leading Change*, should be to clearly establish and communicate a critical need for transformational change, yet to retain the focus on the driving vision that enables the cultural change. The plans and programs of change themselves cannot overshadow or obscure the reason that the change is necessary in the first place. The 'driving vision' in the case of FCS is, in addition to the leap-ahead technology that it represents, the message that FCS is much more than a major multi-year defense acquisition program. It represents a new way to think holistically about Army modernization by improving strategy for providing joint force capability and serving as the key element for modernizing land forces to meet both today's fights and future security challenges. The fateful consequence of allowing a poorly communicated vision to derail Army modernization would be the failure to provide Soldiers with the best capability possible and a failure to provide relevant military forces in support of the national military strategy. Additional principles of Kotter can be used to make the current vision more effective. Specifically, leaders of transformation should enable affected stakeholders to understand how they share in the outcome; further, they should explain how the vision can 'extend' to various future threat scenarios and defense transformation initiatives; finally, they should convey how it comprehensively 'expands' beyond current platform-centric, stove-piped concepts of warfighting and materiel acquisition.³⁶

A lack of understanding also naturally breeds fear within the Army. Its internal communities and personnel are certainly susceptible to fear of change where FCS is concerned. People instinctively fear failure, unfamiliarity, and uncertainty that accompany genuine change. The FCS-enabled unit will generate many new skill sets and concepts for employment, along with promises to operate in a non-stovepiped manner, with much greater potential for fluid operations carried out in asymmetric and full-spectrum environments. These new ideas are currently difficult to envision and even more difficult for branch proponents to associate with capability gaps and other emerging operating concepts. Fear of uncertainty permeates the entire force when the key future capability enhancement, a network, is something that cannot even be seen! Until the Army vision allays this uncertainty, this resistance will continue.³⁷

Fear also takes an institutional form. Mitigating the risk in any potential survivability gap (including network survivability) is a key concern for the majority of combat arms branches. The natural tendency for those that generate equipment requirements is to attempt to counter all threats in any platform design, which, of course, is impossible. Given that everything we have in Iraq today has been penetrated, and that it is simply not technically feasible to sufficiently armor-plate all vehicles or aircraft against current or potential weapons, modernization plans must integrate an enhanced ability to see and sense in addition to protect. This effort will lead to the adoption of an alternative approach: protect only against the most likely threats and then ensure that sensing and prevention negate others. This integrated survivability approach represents a paradigm shift that creates both a fear associated with a perceived greater survivability risk and further misunderstanding of the program's objectives.³⁸

Competition within the Army

The power of the status quo that is present in Army branch proponents is a classic example of the conflict that exists between the institutional versus the operational Army. Ironically, FCS development and its evolutionary acquisition process, for the first time in many years, actually has a chance to change the 'we-they' mentality of Army culture. The increased participation of the user, the combat developer, and the acquisition community in the continuous design and production of a capability that is spiraled forward to the current force represents a paradigm shift. A failure to recognize this and account for it as we communicate the strategy will allow this disconnect to continue as a part of the problem; this failure represents a missed opportunity to address a deficiency in organizational culture. Four primary areas of concern define the gulf between these two internal domains of the Army.

First, the institutional Army fears that along with an increased role for operators in the FCS evolutionary acquisition process, there is a potential loss of control over requirements, resources, and the output of combat development processes. Secondly, there are institutional biases and concerns in the entrenched bureaucracy of the branches that would stand to lose if the Army force generation (ARFORGEN) model — specifically, the cyclical generation of units with enhanced FCS capability, spiraled to meet employment requirements — becomes doctrine for the operating force. Thirdly, the doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) aspects of the Army are the business of the institutional Army, which is rightfully concerned about capabilities that are fielded and deployed in current operations and that may extend to the early spirals of FCS capability. This could potentially increase the internal Army friction over the program: "It's a little bit difficult for the

Army or any service to accept things that are developed by labs or other organizations that are not in the normal train of institutional Army development.” The natural tendency is for the operational Army to be less concerned than the institutional Army about the creation of “orphan” programs, or those without funding, force structure, or training to sustain them over the long term.³⁹ Finally, a continuous effort is required to bridge the gaps, both in communications and strategic focus, between the Army Service Component Commands on the operational side and their institutional counterparts. Their respective focuses create a predictable divide: the efforts of the operational commands concentrate on near-term priorities, whereas the statutory responsibilities of the institutional Army require it to take a longer view. This last point may be mitigated to some degree as it pertains to FCS by the fact that the responsibility for sourcing an evaluation unit has shifted from the operational to the institutional Army. The US Army Training and Doctrine Command will now provide the Army Evaluation Task Force (AETF); formerly known as the Evaluation Brigade Combat Team (EBCT) at Ft. Bliss, Texas.⁴⁰

Army units, as in all large organizations, compete internally for resources. The service succeeded in demonstrating a strategy-to-resource mismatch in the most recent DoD budget cycle (FY08-13), which garnered an increase to the total obligating authority in the base budget. But unless appropriations continue to increase after base budget and supplemental appropriations for both Modularity and wartime emergency funding cease, the Army will face difficult decisions in balancing its plans to increase force structure with its major modernization programs. The resulting budget pressures will likely continue as a major obstacle to programs like FCS that represent a large part of the resource pie. Several factors contribute to this pressure that will cause the Army to scrutinize its largest programs: potentially declining budgets caused when this ‘earmarked’ funding comes to an end, along with the federal fiscal outlook, the increasing cost of the Army, and competing demands between programs structured into the PPBE process.⁴¹

Until FCS becomes more visible as the program moves toward fielding, it will not garner full support throughout the Army as an essential component of its shared vision and thus be accepted as the most cost-effective way to modernize. The FCS investment will continue to be considered a potential bill-payer during each budget cycle unless a fuller understanding and explanation of the vision is realized, unless competition within the Army is mitigated, and unless the fear factors are addressed.

Department of Defense

It is difficult for those outside the Army to recognize FCS as anything more than another major acquisition program. This inability to see the program as it is, a major shift in the Army's acquisition and operational methods, resides in four main areas: perceptions rooted in outdated realities of the program's objectives rather than today's vision of Army modernization as a whole; its contribution to current operations; its lack of acceptance in the joint community; and DoD's emphasis on capabilities-based planning.

Ensuing criticism is based on disagreement with the strategic goals of the previously envisioned Objective Force, rather than the current vision of a comprehensive Army modernization program that continuously enhances capabilities of the Current Force, to include those now deployed. A related argument is that in current operations, and what some predict as future operations, not only does the Army not need FCS, but it cannot afford such an expensive program. Traditionally, the Army is not supposed to be expensive; 'low-tech' Army programs are supposed to be less costly than the more technically complex systems of the Air Force or Navy.

The joint community will also find it difficult to immediately join the coalition of acceptance of FCS for good reason. Given the Army-centric system-of-systems lens through which we view the current program, an improved process for building joint force capability holistically is difficult to envision at this point. As a result, the joint community also lacks a full appreciation of the potential joint and multi-national applications and benefits of accelerated capability inherent in FCS. An obvious example is that although FCS is designated as a Joint program, there is currently little if any Joint Program Office participation in program development.⁴² It is not clear if a joint vision of FCS supported by the Marine Corps and the Special Operations Command even exists at this point. It would appear that these stakeholders are both taking a 'wait and see' approach, since neither has yet committed resources to the program.⁴³

The capabilities-based approach does not lend itself to envisioning a modernization end state.⁴⁴ This issue is the most troubling one to overcome since it is difficult to understand what is meant by capabilities-based planning. Replacing the threat-based planning that focused on who, where, and what type of threats we may face with planning based upon how any potential adversary might threaten U.S. interests is not an easy concept. It certainly poses a significant challenge for identifying specific capability gaps to use in planning system modernization paths.⁴⁵ What's missing is the traditional, tangible threat that the defense establishment has always relied on as a basis for determining required counter-capabilities.

Congress

Why does the level of criticism persist so intensely despite Congressional acknowledgement of the Army strategy and six previous years of program funding?⁴⁶ The main concerns related to FCS in the Congress and its analytic arms — the Government Accountability Office (GAO) and the Congressional Budget Office (CBO) — are about oversight and management control. Three key areas define the focus of their criticism: program risk (acquisition feasibility), affordability, and a sound business case.

The risk issues are specified in a 2006 Congressional Research Service report that raises concerns over “Army’s ability to take on a larger role in overseeing and executing this highly complex and technologically risky program.”⁴⁷ The complexity of the program and the belief that FCS technologies were not sufficiently matured and that requirements were not adequately defined to enter SDD are reasons some in Congress believe the program poses too much risk.⁴⁸ Army leaders successfully adjusted the modernization strategy to bring FCS capabilities into the current force earlier—in both the 2004 program restructure creating spin-outs and the 2008 President’s budget adjustments that accelerate the network. However, they must continue to refine and expand this approach, seeking further joint force applications of accelerated capability that will help build a coalition of acceptance in the Defense committees to ensure continued support for funding.

The Congressional resistance that is linked to a question of affordability comes from the belief that Army modernization investments are ill-timed, given costs of the Global War on Terrorism (GWOT), especially the current deployments in Iraq and Afghanistan. Those who see affordability as a significant concern question the Army’s ability to fund both future and near-term requirements. The recent decision to increase the size of the Army end strength by 74,000 will only add additional fuel to the debate over the prioritization of investments in the current force and future modernization.⁴⁹ In the most recent defense budget passed by Congress, the House Armed Services Committee charges that while

FCS is the Army’s long term transformation strategy, modularity and equipment reset constitutes the near-term strategy. Given fiscal realities, the Army’s challenge of simultaneously funding reset and modularity, and the high technical risks associated with the development of FCS, the committee is concerned the Army may sacrifice the warfighting capability of the current force in order to resource FCS.⁵⁰

This Congressional skepticism served to justify the \$326 million cut in FCS in the FY07 budget. The Army obviously disagrees with this analysis of the strategy and contends that FCS is not in competition with reset or modularity for funding. The Army claims that with continued

supplemental funding until the wartime reset requirement is complete the Army can afford FCS.⁵¹ LTG Thompson, Military Deputy, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), even goes further to explain that FCS and Modularity together make up only ten percent of the Army budget—quite a bargain for meeting both current and future capability gaps. He also believes the Army is unfairly disadvantaged in cuts to its modernization accounts and deserves a larger percentage (currently sixteen percent) of DoD “investment” dollars for modernization.⁵²

Both the CBO and GAO have their own interests prompting them to resist the FCS plan. CBO is concerned primarily with budget limits and therefore questions the initial high cost, cost growth, and ability to sustain the program, given the level of risk in maturing technologies. The Army’s response to the CBO’s August 2006 study points out that both a misunderstanding of the purpose of the FCS program and a flawed analysis of cost-effectiveness based on faulty data and logic were major failings in the report.⁵³ GAO’s criticism focuses on the FCS acquisition business case and the Army’s ability to sustain the program’s viability. GAO observes that FCS “is worrisome because it is now three years past the beginning of development, and most of the technologies remain immature by best practice standards.”⁵⁴ Further, the GAO argument is based on its review of the five elements of a sound business case.⁵⁵ It is predictably bureaucratic in its approach and reflects an incomplete understanding of the FCS program’s development strategy. The Army’s problems with both CBO and GAO reveal the need to reform the acquisition process in the current strategic environment. We must now plan capabilities-based acquisitions to counter anticipated threats to our vulnerabilities, so we must accept risks that the plan is on the right path, instead of waiting until the five elements of a sound business case are in place before starting the research and development effort. Our military culture supports the lengthier acquisition cycle required to produce a new tank, but this cycle cannot support appropriate responses to current threats. Also, GAO uses an outdated framework to assess technology readiness levels (TRLs).⁵⁶ This concept does not neatly apply to FCS development in today’s environment because it creates a circular argument: We are required to test new technologies in an environment that does not exist in order to reach the required TRL. Part of the FCS acquisition strategy should include additional authority that would provide flexibility to test with models and simulations and to conduct component-level testing. In short, testing and development must become more integrated.⁵⁷

In sum, the Army must change the Congressional perception that FCS represents an expensive, high-risk, futuristic system, that competes with needs of the current force and other major DoD transformation initiatives (such as expanded cultural awareness training, business

transformation, and increases in special operations forces and both Army and Marine Corps end strengths).

Defense Industry

Unlike other sources of resistance, the defense industry fully understands the intent of Army modernization via FCS. And they don't like it. Resistance from this sector is grounded in the power of the status quo: Current programs and industrial production lines meet military requirements, so why change them. There is an enormous amount of inertia, strengthened by industry's fear of losing these profitable programs and their proprietary interest in efforts to recapitalize current force platforms. Industry also opposes FCS for other reasons. Separate, non-integrated production provides greater profit margins, and Lead System Integrator (LSI) partnerships require intense coordination and cooperation—which runs counter to their culture. But Army modernization strategy must always adhere to the principle that government drives industry—FCS is a public, not a private, interest.⁵⁸

Independent Think Tanks and the Media

In a briefing prepared for the Secretary of the Army, MG (Ret) Robert Scales observed that “FCS will continue to be the object of external criticism from Congress, the press, and think tanks.” He recommends that the Army’s strategic vision and supporting messages “get beyond programs and technology” and “lead with intellectual pedigree.”⁵⁹ Such an effort in this direction is critical to overcoming this resistance that is primarily based on a flawed understanding of the Army’s strategy to modernize. Writers and think tank representatives tend to overlook the Army responses to GAO and CBO findings and generally focus on affordability, survivability, and technology readiness issues that are no longer applicable, but do not allow the debate to proceed to more current, relevant issues. Congress and the public should be informed by organizations that think critically about current contexts, convince others to do the same, and constructively join the debate to support Army modernization, and not simply continue to reiterate previous agenda.⁶⁰ Representatives of these organizations freely talk to the media about FCS as an acquisition program without understanding the contextual strategy. Andrew Krepinevich of the Center for Strategic and Budgetary Assessments correctly frames the resource debate as current versus future priorities in the matter of reset of equipment returning from Iraq versus FCS. But he fails to understand that these programs do not compete against one another because they are supported by separate funding sources. He definitely does not grasp current modernization plans when he questions the Army’s need for FCS, claiming it is only “oriented towards fighting another Republican Guard somewhere, another tank force.”⁶¹

Zealous criticism has at times replaced critical thinking. These critics have not adequately accounted for the components of the program that are already operating in Iraq, the capability enhancements in the pieces of FCS being developed that will benefit forces beyond FCS BCTs, and the incremental progress of the spirals.⁶² Additionally, they tend to rely on outdated information. The most common example is these critics' citations of original program goals to begin production in 2008 (under General Shinseki), while ignoring the restructure of the program that occurred in 2004.

In summary, resistance to FCS comes not only from the more obvious, traditional sources that accompany most significant transformational changes, but also from other individual and institutional sources. The key to overcoming them is first to acknowledge their existence and their origin. Then, after understanding how they influence FCS, plot a marketing strategy to effectively account for positions they represent, mitigate them through engagement, and measure the trends toward change in order to make necessary course corrections in the strategy and supporting communications.

Recommendations to Improve Strategic Communications

The need to act is clear: FCS program funding, and therefore the Army's ability to modernize, is threatened. Overcoming the sources of resistance to FCS and thereby reducing a source of program risk is, in large measure, about strategic communications.

The analysis that underpins the strategic communications planning, however, is at the heart of the matter. This analysis must support actions to mitigate the two primary risk areas in the FCS communications strategy: a deficient understanding of the Army's modernization strategy and stakeholder visions focused on 'rice-bowl' interests, rather than recognition of how their interests are served by the objectives of the FCS program. The following recommendations attempt to enable decision-makers to improve the communications campaign supporting the modernization strategy.

Apply Lessons from Previous Transformational Change

As previously mentioned, certain conditions must exist for genuine transformational or revolutionary change to occur.⁶³ "History tells us that disaster is often the surest catalyst to reform, particularly among armies, which tend by their conservative nature to resist change."⁶⁴ The FCS communications strategy must establish this urgency by describing the risks of not modernizing now and emphasizing the number of years the defense acquisition process requires in order to react to a new threat. This looming crisis must be recognized by decision-

makers, both internal and external to the Army, in order to support decisions and corresponding actions.

Normally, but not necessarily, the leader within an organization must set the conditions for change by developing and communicating a vision that will lead to change, and provide the resources (such as time, personnel, and funding) to effect the change. The budgetary implications for FCS are obvious: The program has currently demonstrated through its FY08 program modifications that its continued development costs are considered affordable and achievable. The time devoted to development and execution of FCS strategic communications and the personnel assigned will also send a clear message of intent. Army leadership must continue to assign leaders, committed in both word and deed, to positions critical to modernization processes. Recent examples of this indicate a positive trend: MG Sorenson's nomination as the next Army G6 puts a "FCS visionary" in a position to influence decisions on the development of the network, the center of gravity for the SoS concept; LTG Thompson's assignment to lead the Army's Acquisition Corps will improve the Army's oversight of FCS program management by drawing on his background as the Army's subject matter expert for Lean and Six Sigma initiatives, Director of Army Program Analysis and Evaluation, and his experience in managing government-industry partnerships as Commander, U.S. Army Tank and Automotive Command. This trend must be sustained in order for strategic communications from credible sources to be effective.

The organization as a whole must understand the need for change. In addition to recognizing a long-term vision and the fact that "real transformation takes time", all appropriate organizations and programs must recognize the value of tangible short-term goals and achievements. "Complex efforts to change strategies...risk losing momentum if there are no short-term goals to meet." Recent FCS achievements should be exploited for their value in maintaining the momentum of Army modernization's intermediate objectives (such as capabilities spun-out to deployed forces, acceptance of NLOS cannon, delivery of the Integrated Computer System, and Soldier Experiment 1.1).⁶⁵

Finally, leaders must act outside the entrenched bureaucracy to effect change. The Army has effectively used its "gray beard" mentors in the past as strategic communicators in support of complex periods of change; this period is no different.

Update and Implement the Vision

A development and acquisition process as dynamic as FCS requires constant updating and dissemination of strategic direction adjustments. The current FCS vision can be improved

by addressing other stakeholder interests. We must enable other entities (joint staff, industrial base, Congress) to buy in to their own futures through a shared vision of FCS. Army leaders must persuade these stakeholders to update their own visions to reflect a newly conceived future and to acknowledge the value to be gained in making FCS operational in the joint environment and supported by the national industrial base that, by the way, currently engages 802 different FCS contractors.⁶⁶

Once updated, the vision must then be implemented in order to “move the organization toward a more effective future state.” Implementation requires a deliberate, conscious process on the part of leaders “to convince key players within the organization [and outside the organization] that the vision is correct and viable.” Implementation of the FCS vision has already begun: technology demonstrations have produced positive results, initial capabilities have been accelerated to operating forces in Iraq and Afghanistan, and program funding supports both the production of the first spiral in FY08 and its trial by the AETF. Current resistance, however, suggests only limited acceptance of the vision. The resulting criticism is obscuring a full understanding of how affected stakeholders will share in the outcome, of how the vision ‘extends’ to various future threat scenarios and defense transformation initiatives, and of how it comprehensively ‘expands’ beyond current platform-centric, stove-piped concepts of warfighting and materiel acquisition. A fuller understanding of these components of the vision is essential to complete institutional buy-in and to ensuring progress toward enhancing future capabilities.⁶⁷

Improve the Message

The key actions to be taken by strategic leaders to overcome the major sources of resistance to the change in organizational culture center on strategic communications. Strategic communication and outreach, not simply information campaigns, must continue to emphasize that FCS is more than merely an acquisition program. Rather, FCS offers a revolutionary way to think about Army modernization. It represents an improved strategy for providing joint force capability holistically. Arguably, it leads DoD efforts in evolutionary acquisition processes to this end.⁶⁸ Although a recently revised communications campaign plan makes significant improvements in defining communication lines of operation (operational necessity, affordability, and acquisition feasibility) and addressing separate stakeholder interests, it falls short of its purpose. It does not yet adequately explain the Army’s shift in emphasis for the scope of FCS away from its characterization as simply as a program of record in the early days of development to the all-encompassing future of Army modernization.⁶⁹ In

fact, FCS is still described in the 2007 Army Posture Statement as an individual program, “one of six major acquisition systems” the Army is executing.⁷⁰ Strategic communications must become more adept at consistently educating audiences on this point: FCS-related technologies will provide enhanced capability throughout the force, not just within the 15 FCS BCTs. Although the full message is being sent by some, it is not yet resonating with the most influential stakeholders. Making this story part of the continuing dialogue that helps to establish the linkage in people’s minds is one of the most important contributions Army leaders can make.

Unfortunately, this strategic concept and its supporting institutional messages represent only what Edgar Schein describes as “reinforcing” or “secondary mechanisms” that leaders use to convey the strategy. They will be effective in implementing the Army vision only if they consistently apply Schein’s concept of more powerful “embedded” or “primary mechanisms.” The strongest of these signals are sent by leaders who are clearly committed in both word and deed to the program and to its role in Army modernization. While most categories of Schein’s concept of embedding mechanisms are applicable to efforts to change the Army culture to include FCS, the leaders’ actual allocation of scarce resources and their personnel decisions, rewards, and organizational status will have greater impact.⁷¹

It is not too early to capitalize on a strategic communications success story during the conversion to the Modular Force: a process is needed to push information and respond to questions from units.⁷² While TF Modularity effectively employed this concept with units that were engaged in conversion to the new design, the FCS program must engage the entire Army (and beyond) in order to allay the resistance to cultural change.

Describe Desired Organizational Culture Changes

Cultural change must be approached deliberately: it starts with the organizational vision. “There is a significant interdependence between the current culture and the ‘desired’ culture that might be necessary for future unit effectiveness. The engine for this cultural change is the vision of the strategic leader.”⁷³ The current Army vision seeks to provide “relevant and ready land forces” and capabilities to the Combatant Commanders during transformation. The 2006 Army Game Plan expands this vision and includes detail specifically embedding FCS in the vision:

A transformed modular force – expected to perform across the range of military operations in a complex security environment – requires modern equipment for the Army to remain the preeminent landpower on earth. Future Combat Systems (FCS) will pioneer the next generation of warfighting capabilities, including the construction of a new class of manned and unmanned air and land vehicles. FCS

will optimize total combat effectiveness by connecting these new capabilities to the Soldier through a tightly integrated battle-management network.⁷⁴

Since some resistance to FCS is based merely on perceptions of futuristic warfighting environments that would require a military culture that is currently difficult to imagine, the successful reform of Army culture necessary to fully embrace FCS will depend on our ability to further explain the desired culture accompanying emerging warfighting capabilities. Leaders must explain how unit effectiveness will be defined, and how we get there as individuals and as an institution. The next generation of leaders depends on our ability to adequately describe the FCS-enabled vision for the future. Current leadership development should include an orientation to a planned, emerging organizational future.

Build Coalition of Acceptance

Enabling a coalition of acceptance will assist in overcoming resistance. The first step of John Kotter's concept of a "guiding coalition" calls for activating the "agents of change."⁷⁵ Since broad-based support is essential to transformational change, principles such as these are useful in analyzing how we might improve our approach. The most significant agents at our disposal are our Soldiers—our best salesmen! But change agents are also found outside the Army. MG Scales believes the Army can overcome the FCS challenge by "using outside as well as inside voices" to develop "the groundswell of support from all relevant domains" and to "intellectually advance operational concepts and tactical advantages."⁷⁶

A number of important lessons can be drawn from Task Force Modularity in its development of the plans that are currently transforming Army force structure. These lessons can be applied to consensus-building in support of the FCS plan for Army modernization. First, the efforts must be resourced with the right personnel. The Task Force included a cell of experts representing a cross-section of Army institutions, joint partners, and a cross-section of skills from every corner of the Army. This cell performed effectively in the Pentagon, as well as in Congress, by providing a spokesman for day-to-day engagement in the National Capital Region to support Headquarters, Department of the Army in the implementation of the Modular Force.⁷⁷

Success in coalition-building should also be measured. Every Army program can describe its role and relationship to the FCS-enabled future force in its strategic communications: program descriptions in the annual Army Modernization Plan, program and budget documents, posture hearings, and legislative objectives, to name a few. Strategic

documents must synchronize their current and future strategies in the new environment, while closing the gap in the middle with effective transition strategies and management of resources.

Fill in the Gaps in the Communications Strategy

The current modernization strategy and the supporting communications plans have gaps in the areas of requiring more definition, of countering affordability arguments, and of clarifying the improved process for building joint force capability in a holistic manner.

The roadmap for FCS, beyond its technological and programmatic aspects, needs further explanation. Specifically, tactical advantages and capability enhancements in FCS requirements documents need to be placed in the context of a Combatant Commanders' stated requirements and related to specific capability gaps. The strategy also needs to highlight the contrast between FCS and the recent Army acquisition failures of Crusader and Comanche. Unlike these programs, FCS requirements have remained stable during development. If FCS ultimately becomes unaffordable, the situation is more likely to be attributed to program funding cuts instead of growth in requirements.⁷⁸

The Army must aggressively counter affordability arguments and further demonstrate the reasons why it cannot afford *not* to modernize via FCS, the most critical component of its modernization strategy. First, the budget is available and all 14 planned systems and their associated spin-outs can be resourced. Second, the Army is saving \$12 billion over the program's life in reduced SDD costs due to integrated development. The strategy also provides cost effectiveness: the FCS BCT requires 500 less soldiers than today's heavy BCT, including half as many mechanics; at the same time, it doubles the number of infantrymen in infantry squads. Third, the future Army would become unaffordable due to the higher cost of alternative modernization strategies. Fourth, no other technology is out-pacing the work being accomplished today through FCS.⁷⁹ Fifth, the Army is demonstrating the ability to fund the program through to end state and reduce any perceived competition among the other major DoD transformation initiatives mentioned previously. And the final strategy to counter the affordability critics is an issue of perspective. Martin Feldstein questions why the nation was able to allocate far more dollars in a shorter time period to provide equipment to fight World War II than are required to procure FCS. He describes the cost of FCS as "less than 2 percent of today's defense budget." He further concludes that "since the defense budget is only 4 percent of GDP, the FCS plan for modernizing the [A]rmy involves an annual cost of less than one-tenth of 1 percent of GDP."⁸⁰

The FCS plan improves processes for building joint force capability holistically, but this advantage is not currently resonating like it should with stakeholder audiences due to the gaps in the communication strategy. The two primary means to this end that must be emphasized in the strategy are the removal of branch propensity in the current system of combat development and elimination of the current platform-centric, stove-piped concepts of warfighting and materiel acquisition.

Conclusion

The risk to FCS does not appear to originate with a lack of linkage with Department of Defense guidance. Although a demand-strategy-resource mismatch may still exist, the justification for significant investment in the Army's modernization effort is clear.⁸¹ Despite this, the Army will continue to be challenged to overcome current sources of resistance to FCS. These resistors obscure the fact that FCS is an essential component of DoD's plan for developing a relevant future ground force. Army modernization strategy must address the conditions necessary to sustain transformational change of this magnitude. Due to the complexity of both the future environment and the current choices to address it, strategic leaders must aggressively support this change and ensure effective strategic communications that provide both the motivation and focus of a continuous educational effort. Without it, the support for programmed resources will likely erode due to increasing budgetary pressures facing DoD as a result of current operations in Iraq and Afghanistan, concurrent transformation objectives defined in national military guidance, and fiscal realities of the federal budget.

Clearly, for the Army to maintain the level of funding required to achieve FCS capabilities, it must stay the course on the message and continue to convince its critics that "without FCS, the Army does not modernize."⁸² To maintain the decisive advantage that the U.S. military currently has, this modernization is vital. Consistency of this message by itself, however, will not be enough to overcome powerful resistance. Only by doubling its efforts to identify, acknowledge, and address the organizational and cultural forces resistant to change, will the Army be able to reduce the risk to its current modernization strategy through more effective strategic communications.

Endnotes

¹ U.S. Congress, House of Representatives, Committee on Armed Services, *Department of the Army's Fiscal Year 2007 Budget Request*, 109th Cong., 1st sess., 15 February 2006.

² GEN Richard A. Cody, Vice Chief of Staff, Army at the Army Caucus Breakfast on Capitol Hill, 14 September 2006.

³ Megan Scully, "Army Trims and Stretches Future Combat Program," *CongressDaily*, 8 February 2007; available from http://www.govexec.com/story_page.cfm?articleid=36084&ref=rellink; Internet; accessed 12 April 2007. Program cuts in three consecutive years (FY05-07) totaled more than \$825 million and caused the program to slip production by more than five months.

⁴ COL Henry M. St-Pierre, Project Advisor, discussion with author 19 December 2006, Carlisle, PA.

⁵ Francis J. Harvey and Peter J. Schoomaker, *A Campaign Quality Army with Joint and Expeditionary Capabilities: A Statement on the Posture of the United States Army, Fiscal Year 2007*, Posture Statement presented to the 110th Cong., 1st sess. (Washington, D.C.: U.S. Department of the Army, 2007); Addendum G.

⁶ "FCS Overview," available from <http://www.army.mil/fcs/factfiles/overview.html>; Internet; accessed 12 October, 2006. Hereafter cited as "FCS Overview."

⁷ Ibid.

⁸ MG Jeffrey A. Sorenson, U.S. Army, Deputy for Acquisition and Systems Management, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), interview by author, 27 February 2007, Carlisle, PA.; and LTG (Ret) Joseph L. Yakovac, interview by author, 28 February 2007, Carlisle, PA. The following aspects of the program's acquisition strategy can also be considered revolutionary in nature: The system-of-systems approach; incorporation of a Lead Systems Integrator (LSI) to pull together the efforts of the 802 contractors working on the program; forward capability spiraling; and holistic, integrated development methods.

⁹ FCS Overview. The term "Brigade Combat Team" replaced "Unit of Action" per *Army Doctrine Update #1*, Combined Arms Doctrine Directorate, U.S. Army Combined Arms Center, Fort Leavenworth, KS, 24 Feb 2007, 1.

¹⁰ U.S. Joint Chiefs of Staff, *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow, 2004* (Washington, D.C.: U.S. Joint Chiefs of Staff, 2004), viii; available from <http://www.defenselink.mil/news/Mar2005/d20050318nms.pdf>; Internet; accessed 12 March 2007.

¹¹ "Army Modernization (FCS) Update to Army Synchronization Meeting," briefing slides with scripted commentary, Pentagon, 6 March 2007, 2.

¹² U.S. Office of the Secretary of Defense, Office of Force Transformation, *Elements of Defense Transformation* (Washington, D.C.: U.S. Office of the Secretary of Defense, Office of Force Transformation, October 2004), 17; available from http://www.oft.osd.mil/library/library_files/document_383_ElementsOfTransformation_LR.pdf; Internet; accessed 22 February 2007. FCS directly supports four of the top five Office of Force Transformation goals:

- Change the force and its culture from the bottom up through the use of experimentation, transformational articles (operational prototyping), and the creation and sharing of new knowledge and experiences.
- Implement Network Centric Warfare (NCW) as an emerging theory of war for the information age and the organizing principle for national military planning and joint concepts, capabilities and systems.
- Get the decision rules and metrics right and cause them to be applied enterprise-wide.
- Discover, create, or cause to be created new military capabilities to broaden the capabilities base and to mitigate risk.

¹³ Ibid., 6.

¹⁴ John Matsumura et al., *Exploring Advanced Technologies for the Future Combat Systems Program* (Santa Monica, CA: RAND Arroyo Center, 2002), 2.

¹⁵ COL Henry M. St-Pierre, et al. *Transforming to the Modular Force: A Review on the Design Development and Division Execution to the Modular Design* (Carlisle, PA: U.S. Army War College, 20 March 2005), 1-14. Hereafter cited as "USAWC 2005 Modular Force study." This study, more an In-Progress Review than an After Action Review, was commissioned by the Director of the Army Staff and the Army Vice Chief of Staff. The study's purpose was twofold. The first was to examine what processes were used by the Institutional Army to quickly transform the Army from a design more suited for the Cold War into one more suited for current and anticipated adversaries. The second was to provide an aid to units preparing for their own transformation by examining units currently undergoing transformation, learning from their experiences, and making those lessons available to units about how to undergo changes to the Modular Force design.

¹⁶ MG Jeffrey A. Sorenson, "Army War College Presentation," briefing slides with scripted commentary, Carlisle Barracks, U.S. Army War College, 27 February 2007, 17. Cited with permission of the briefer.

¹⁷ Levator Norsworthy, Jr., "Transitioning from Other Transactions Authority to a FAR Contract: FCS Lessons Learned," briefing slides from presentation to the 2005 Acquisition Senior Leaders and AMC Commanders Conference, 22-26 August 2005.

¹⁸ "FCS Overview."

¹⁹ "Department of Defense Appropriations Act, 2007," available from <http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.5631.enr>; Internet; accessed 12 October 2006.

²⁰ COL Charles Bush, Chief, Future Force Division, Force Development Directorate, Army G8, discussion with author 8 February 2007, Washington, D.C. Hereafter cited as Bush, "discussion."

²¹ Fred W. Baker III, "Future Combat Systems Restructuring a 'Balancing Act'," *Army News Service*, 9 February 2007; available from <http://www.defenselink.mil/news/newsarticle.aspx?id=2982>; Internet; accessed 11 April 2007.

²² “Army Announces Fiscal Years 2008 and 2009 Budgets,” 5 February 2007; available from <http://www.army.mil/-newsreleases/2007/02/05/1727-army-announces-fiscal-years-2008-and-2009-budgets/>; Internet; accessed 7 February 2007.

²³ U.S. Office of Management and Budget, “Budget of the United States Government, Fiscal Year 2008,” *Program Acquisition Costs By Weapon System* (Washington, D.C.: U.S. Government Printing Office, 2007), 57.

²⁴ These sources of resistance were discussed during lessons in Strategic Leadership Course, United States Army War College, 27 September-17 October, 2006.

²⁵ Yakovac.

²⁶ Lieutenant General (Ret) Richard G. Trefrey, Program Manager for the Army Force Management School, interview by author, 21 February 2007, Carlisle, PA.

²⁷ St-Pierre.

²⁸ Bush, “discussion.”

²⁹ St-Pierre.

³⁰ “Army Announces Fiscal Years 2008 and 2009 Budgets.”

³¹ Ibid.

³² U.S. Department of the Army, *2006 Army Game Plan* (Washington, D.C.: U.S. Department of the Army, 2006). Hereafter cited as “*2006 Army Game Plan*.”

³³ U.S. Office of Management and Budget, “Budget of the United States Government, Fiscal Year 2008,” *Budgeting for Procurement and Research, Development, Test and Evaluation* (Washington, D.C.: U.S. Government Printing Office, 2007), 8.

³⁴ “Army Announces Fiscal Years 2008 and 2009 Budgets.”

³⁵ Cody.

³⁶ John P. Kotter, *Leading Change* (Boston: Harvard Business School Press, 1996), 8.

³⁷ Undated working papers provided to the author in July 2006 by COL Charles Bush argue that the core of FCS criticism is less about the complexity of the program or the perception of increased requirements or cost, but rather fear, as a fundamental element of human nature. The text explains FCS as a revolutionary way to develop materiel that will replace the traditional methods of combat development, an environment characterized by Army branches protecting their own requirements, programs, branch-specific training and associated funding lines with little incentive to work together; field commanders who have to figure out on their own the integration of a wide array of systems intended to enhance combat capabilities; pundits who say “net-centric operations” will never work; and the defense industrial base that continues to get rich on maintaining the status quo of building and recapitalizing proprietary current force platforms.

³⁸ Yakovac.

³⁹ Larry Burger, Director, Future Warfare Center, Space and Missile Defense Command; quoted in Sandra I. Erwin, "Technologies Rushed to War Face an Uncertain Future," *National Defense*, August 2006, available from <http://www.nationaldefensemagazine.org/issues/2006/August/TechnologiesRushed.htm>; Internet; accessed 12 April 2007.

⁴⁰ Bush, "discussion."

⁴¹ Federal fiscal outlook from: David M. Walker, Comptroller General of the United States: January 11, 2007 Testimony before the Committee on the Budget, U.S. Senate. *Long-Term Budget Outlook, Saving Our Future Requires Tough Choices Today*. Cost of the Army from: LTG David F. Melcher, LTG Jack S. Stultz, LTG Clyde A. Vaughn, "Resourcing the Total Army: The Need for Timely, Predictable, and Sustained Funding," *Reserve Officer's Association National Security Report* (February 2007); 41. PPBES from: LTG David F. Melcher, "Planning, Programming, Budgeting and Execution (PPBE) For an Army at War and Transforming—Programming to Produce Preeminent Landpower," *Army AT&L* (July-September 2006): 35-37. Funding for Modularity is expected to expire in FY07. Wartime supplemental appropriations to fund operations, battle losses and equipment reset requirements are anticipated to be supported by the Congress for two years following the withdrawal of our forces from Iraq.

⁴² "FCS Overview."

⁴³ Bush, "discussion."

⁴⁴ Sorenson interview, and Bush "discussion", and LTG David F. Melcher, LTG Jack S. Stultz, LTG Clyde A. Vaughn, "Resourcing the Total Army: The Need for Timely, Predictable, and Sustained Funding," *Reserve Officer's Association National Security Report* (February 2007): 40.

⁴⁵ U.S. Office of the Secretary of Defense, Director, Office of Force Transformation, *Military Transformation: A Strategic Approach* (Washington, D.C.: U.S. Department of Defense, Fall 2003); available from www.oft.osd.mil; Internet; accessed 22 February 2007.

⁴⁶ "National Defense Authorization Act For Fiscal Year 2007, H.R. 5122," available from http://www.house.gov/pence/rsc/doc/LB_051006_defenseauthfy07.doc; Internet; accessed 12 October 2006.

⁴⁷ Andrew Feickert, *The Army's Future Combat System (FCS): Background and Issues for Congress* (Washington, D.C.: The Library of Congress, Congressional Research Service, May 2006), 2.

⁴⁸ David M. Walker, Comptroller General of the United States: September 7, 2006 testimony to the Subcommittee on Defense, Committee on Appropriations, House of Representatives. Subject: Defense Contracting. GAO Responses to Questions for the Record: This is the accessible text file for GAO report number GAO-07-217R entitled *Defense Contracting--Questions for the Record* which was released on December 22, 2006.

⁴⁹ GEN Peter J. Schoomaker, *Farewell Message, Army Chief of Staff* (Washington, D.C.: U.S. Department of the Army, 2007), 2.

⁵⁰ “National Defense Authorization Act For Fiscal Year 2007, H.R. 5122.”

⁵¹ U.S. Department of the Army, “Strategic Communication Priorities,” 6 March 2007, available from <https://www.us.army.mil/suite/authenticate.do?c=bWljaGFibC5nbGVubjI6Uk9zZWxsYSQOTMwNA==>; Internet; accessed 14 March 2007.

⁵² LTG N. Ross Thompson, III, quoted in Sandra I. Erwin, “Defense Forecast: Army Cash-Flow Troubles Continue Despite Hefty Emergency Allowance,” *National Defense* (January 2007): 26-27.

⁵³ U.S. Department of the Army, *Army Assessment of Congressional Budget Office Study: “The Army’s Future Combat Systems Program and Alternatives,” August 2006*; available from www.army.mil/fcs/fcscbo_reg.pdf; Internet; accessed 11 October 2006.

⁵⁴ The FCS business case argument was presented by U.S. Government Accountability Office, Defense Acquisitions: *Improved Business Case Key for Future Combat System’s Success*, Statement of Paul L. Francis, Director, Acquisition and Sourcing Management in Testimony Before the Subcommittee on Tactical Air and Land Forces, Committee on Armed Services, House of Representatives (Washington, D.C.: U.S. Government Accountability Office, 4 April 2006). GAO concerns with technology readiness were presented by David M. Walker, Comptroller General of the United States: September 7, 2006 testimony to the Subcommittee on Defense, Committee on Appropriations, House of Representatives. Subject: Defense Contracting. GAO Responses to Questions for the Record: This is the accessible text file for GAO report number GAO-07-217R entitled 'Defense Contracting--Questions for the Record' which was released on December 22, 2006.

⁵⁵ U.S. Government Accountability Office, Testimony before the Subcommittee on Airland, Committee on the Armed Services, U.S. Senate, *Defense Acquisitions: Business Case and Business Arrangements Key for Future Combat System’s Success* (Washington, D.C.: U.S. Government Accountability Office, 1 March 2006). GAO describes the five elements of a sound business case as firm requirements, mature technologies, knowledge-based acquisition strategy, realistic cost estimate, and sufficient funding.

⁵⁶ John C. Mankins, “Technology Readiness Levels - A White Paper,” 6 April 1995; available from <http://www.hq.nasa.gov/office/codeq/trl/trl.pdf>; Internet; accessed 12 April 2007.

⁵⁷ Yakovac.

⁵⁸ Sorenson and Yakovac interviews.

⁵⁹ MG Robert H. Scales, USA (Ret), “Future Combat Systems: A New Age of Mounted Maneuver,” briefing slides, 29 August 2006.

⁶⁰ Yakovac.

⁶¹ Andrew Krepinevich, Executive Director, Center for Strategic and Budgetary Assessment, “Military Equipment Repair Costs Mount,” *Morning Edition, National Public Radio*, 6 December 2006.

⁶² Yakovac.

⁶³ St-Pierre.

⁶⁴ Robert H. Scales, *Certain Victory: The US Army in the Gulf War* (Washington, D.C.: Brassey's, 1997), 6.

⁶⁵ Kotter, 11.

⁶⁶ Sorenson.

⁶⁷ Shambach, 27-28.

⁶⁸ LTG N. Ross Thompson, III, Military Deputy, Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), telephone interview by author, 16 March 2007. He cites the following examples: FCS is leading DoD in its LSI management approach and the transition from OTA to FAR-based contracting. He also uses an analogy to describe the SoS approach: unlike development of an aircraft carrier or jet fighter, FCS BCT development would be more like the entire carrier battle group or USAF air wing developed in an integrated manner.

⁶⁹ U.S. Department of the Army, *Communication Campaign Plan, Modernization (Future Combat Systems—FCS)* (Washington, D.C.: U.S. Department of the Army, 2006). Document was updated on 26 October 2006. It is for official use only and maintained by the DA Executive Office of the Headquarters, Staff Group.

⁷⁰ Harvey and Schoomaker.

⁷¹ Edgar H. Schein, *Organizational Culture and Leadership* (San Francisco: Jossey-Bass, 1992), 231.

⁷² "USAWC 2005 Modular Force study."

⁷³ COL Stephen A. Shambach, ed., *Strategic Leadership Primer*, 2d ed. (Carlisle, PA: U.S. Army War College, Department of Command, Leadership, and Management, 2004), 35-37.

⁷⁴ *2006 Army Game Plan*.

⁷⁵ Kotter, 6.

⁷⁶ Scales briefing.

⁷⁷ Audience was those agencies considered the stakeholders in the plan, such as the Department of the Army, Army National Guard, United States Army Reserve, OSD, GAO, and Congress. The Army had an expert in concept and structure design who could be available to the Army leadership to deliver its strategic message. This decision enabled TF Modularity to focus on the work at hand, while still meeting the growing appetite for Modular Force information (USAWC 2005 Modular Force study).

⁷⁸ Sorenson.

⁷⁹ Yakovac.

⁸⁰ Martin Feldstein, "The Underfunded Pentagon," *Foreign Affairs* 86 (March/April 2007) 136-137.

⁸¹ The Army realized this mismatch early during formulation of its FY08-13 POM: the sum of the requirements was greater than the QDR strategy, which in turn, was greater than the DoD budget guidance.

⁸² Cody.