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AMC's LONG-RANGE PLANNING VISION

A PATH TO THE FUTURE



U. S. ARMY MATERIEL COMMAND

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A Path to the Future

As AMC enters the twenty-first century, we face special challenges brought about by international politics and economics, the industrial climate, depletion of natural resources and world demographics. Our ability to cope with change and capitalize on opportunities will define our success. As always, AMC must support and sustain the soldier. We must look now at how AMC will operate in the year 2010 if we are to master our destiny. Quality must be the foundation on which we build. With a focus on quality, now and as we move ahead, we can meet the challenges of the future.

A Scenario: The Army in the Year 2010

A sense of uncertainty is the chief characteristic of a world created by changing economic interdependencies, shifting alliances, and growth of new regional powers. The proliferation of nuclear, chemical and sophisticated conventional weapons, some to nations with tenuous political conditions, adds instability. The key to deterrence and victory in combat is our ability to respond decisively. There is very little time for mobilization of the industrial base. Never again can America be a sleeping giant.

Land combat is multi-dimensional, characterized by agile, widely dispersed units. Cooperative development, joint operations and coalition warfare are the norm. The lines between front and rear areas blur. Weapons have unprecedented lethality, and capitalize on space and near-space operations. Long-range engagements with pinpoint, over the horizon accuracy are commonplace.

The Army has learned that battlefield success and survival depend on the ability of the field commander to focus quickly on opportunities. Units are small, but their superior equipment acts as a combat multiplier. This dictates real-time management of information, instant dissemination, and rapid marshalling of resources. It demands equipment that works. There are no excess or "nice to have" assets available. Only the lean is left, and all its parts must mesh and work every time.

The Nation continues to depend on the Army to do its part to defend national security and deter war. Although technology has drastically changed the conduct of war, soldiers still need the best equipment and support. It is imperative that the Army, through AMC, foresee technological requirements and advances, adapting research to military operations. The bottom line is AMC is here, changed, but still here supporting soldiers.

AMC's Role

AMC will continue to be responsible for acquisition and sustainment of materiel for the Army. Our mission will remain vital, although the way we look will change. We will mirror the rest of the Army - lean, efficient and effective. We will modernize our industrial operations to mirror new and proven business practices. A streamlined, simplified and consolidated AMC organization featuring a qualified professional acquisition workforce is our goal. Changes will occur over time, but AMC will anticipate the future and plan for it. Timelines set today will protect our priorities, allow us to take advantage of future opportunities, and guarantee our evolution stays on course.

AMC plays a key role in pursuing the objectives of the Army Long-Range Planning Guidance. Our commitment to the six guiding principles is reflected in what we do and the way we do business.

1. Provide quality soldiers... *AMC helps the Army attract quality soldiers by providing the latest equipment to challenge them. To keep these soldiers and improve their performance, AMC provides training devices, equipment with embedded training systems, and training packages to support efficient and effective soldier training. AMC provides extensive training to foster quality in its civilian and military personnel alike.*

2. Fight and sustain... *AMC helps design and conduct sustainment operations, ensures interoperability of equipment, and procures ammunition for all U.S. forces. AMC provides resupply efforts for the Army and expedites shipment of demand items.*

3. Field flexible, sustainable modernized forces... *AMC ensures logistics requirements are considered in weapon systems design, that supporting equipment is fielded with systems, and system designs accommodate technological improvements.*

4. Exploit operational and tactical dimensions of AirLand Battle doctrine... *AMC with the Training and Doctrine Command prepares logistics doctrine, and advises combat developers and the Commanders-in-Chief of possible new technology applications, focusing on the vulnerabilities of potential adversaries.*

5. Develop and exploit high technology and productivity enhancements... *AMC ensures that the best available affordable technology is incorporated into new and existing weapon systems and promotes automation in all its facilities.*

6. Improve tactical and strategic deployability... *AMC acquires and modifies equipment to enhance deployability.*

TRENDS

As AMC plans for the future it is possible to detect numerous trend lines. Their outcomes are difficult to predict, but we must anticipate and plan, or these trends may lead to reactive behavior, misguided effort and wasted resources. Therefore, we must focus our strategies on those efforts offering the greatest return. Changing trends in technology, space, the environment, demographics and economics are of such magnitude as to require close attention. By concentrating our efforts, we chart a pragmatic path that will bring AMC to 2010, ready to do the job.

Technology. If current trends continue, the U.S. will find its leadership role diminished. The pace of technology will continue to increase dramatically - further outpacing the acquisition process. The pace will also challenge the skill level of our workforce. Quantum leaps in computational and data transmission capabilities, robotics, artificial intelligence and expert systems will occur. Industry, both here and abroad, will develop more defense-related technology than the Army can afford to buy. These projections require substantial planning and investment in technology and training.

Space. The proliferation of technological advances stemming from space-based research and development will significantly contribute to improvements on the battlefield. More rapid, detailed, and reliable information available to field commanders will alter the pace of combat. The challenge for logisticians will be to plan for, keep up with, and resupply the maneuver elements on a very dynamic battlefield. Satellite technol-

ogy will be used for surveillance and imagery, data distribution (logistics, movement control, troop disposition), and command and control. Prototypes of space-based weapon systems will be a reality by 2010. Space-related research and development will continue to generate new materials, avionics, food substitutes, and metallurgical advances for military applications.

Demographics. The labor pool will shrink and its composition change, becoming more representative of the total population. Women, minorities and older workers will constitute a greater share of the workforce. The private sector will continue to be a direct competitor. Employees will be more geographically and organizationally mobile. We must motivate them to remain with the Federal service. Unless current patterns change, the cost of higher education coupled with the quality of public education may mean many will enter the workforce lacking sufficient knowledge and skills. Although the Army may shrink in size, the importance of the acquisition and sustainment mission will dictate that the AMC military/civilian mix remains constant. At the same time, public pressure to restrict growth of the Federal workforce will increase the number and types of activities performed by contractors.

Economics. Funding levels will continue to ebb and flow. Periods of constraint will lead to slowdowns in modernization efforts. Much of the same equipment that is in the inventory today will be on hand in the year 2010, and it will need to be supported. Reduced budgets will yield more joint and combined programs. Redundancy of research in industry, academia and the government will be avoided. Co-production will expand as an alternative to independent efforts. Winning requires a strategy based on leveraging. We must capture the best efforts of both foreign and domestic industry and academia.

The Environment. Clean air, clean water - a "cleaner world" - will continue to be public issues. The ever increasing public laws regulating what can and cannot be done in the environment will effect all our operations. A tremendous amount of money will continue to be spent on cleaning up past problems. The public at large will become increasingly strident and demand and receive world governments' attention.

PATHS TO THE FUTURE

To serve the twenty-first century soldier AMC must develop strategies that harness technology and acquire and sustain equipment to meet soldiers' future needs. We must make sure there is continuous improvement in every process involved in the acquisition and sustainment of the supplies and equipment we provide. Quality products and quality processes must be the goals of the AMC organization staffed by a trained professional acquisition workforce.

Requirements. Required battlefield capabilities need to be matched with technology and resources. We must work closely with those people who communicate directly with the soldier. Process improvements include better war games to project technological effects on the battlefield. We must integrate logistics into those simulations, and develop models that trade off competing technologies and systems with end-strength and cost. We must include the other Services and our allies in these analyses.

Research. The prioritization of what research will be applied for Army use becomes essential. Research conducted in Army facilities will target Army-unique requirements not being pursued in the private sector. AMC's technology experts will maintain communication with U.S. and international industry, academia, other Services and na-

tions about all research programs. Technologies that save operational costs will receive high priority. The Army will focus on research in areas that hold promise for significant gains in warfighting capabilities. Those areas include: multi-spectral sensors, swift signal processing, biotechnology, ultrastructured materials, directed energy and advanced propulsion mechanisms.

Development. The Army and AMC will see value in certain weapon systems which the Army cannot afford to produce in quantity. Nevertheless, AMC will build prototypes, allowing the Army to move quickly to full-scale production should the need arise. To optimize technological discoveries, co-production and the purchase of commercial items for modification will conserve resources. Modularity will maximize combat power while reducing development time and cost. Manufacturing process controls, embedded training, test and diagnostics, and backup systems will be features of all equipment designs. The payoff will be improved operational capability and repair and maintenance cost savings.

Testing and Evaluation. Some new weapon systems will exceed the geographical boundaries of existing test areas, including air space. Thus, the opportunity for comprehensive testing will be limited. Coupled with environmental concerns, these limitations will dictate more reliance on simulation and modeling for all but proof-of-principle testing. Proof-of-principle and operational testing must be done in a realistic environment. Public reluctance to invest in equipment that has not been adequately tested in a realistic threat environment will tax the resourcefulness of AMC.

Production. Increased productivity and reduced costs will be key determinants, with quality always the foundation. Adversarial

relationships with industry will diminish as economics drive to create partnerships, cost saving competition, and contract awards tied to quality. Quality as well as price will influence contractor selection. New public laws and policies will enable AMC to give developers and producers incentives to build in quality. AMC will promote commonality among items, use of common items already in the inventory, and strictly enforce compliance with international standards. Technical data packages will prescribe statistical process controls. Policies will encourage industry to invest in flexible manufacturing equipment.

Fielding. Because of its positive impact on readiness, total package fielding will continue. As a logical outgrowth, further enhancing readiness, AMC will develop and implement unit fielding packages to improve equipment integration and further reduce fielding time.

Supply. AMC's objective is to get supplies to the user more quickly. Materiel movement will be monitored as it flows from the producer to the user, minimizing handling, transportation and storage time. Increased use of common items will reduce the number of items tracked. Probably the greatest change in how AMC does business will occur in this functional area. Improved information systems and automation will allow simplified operations and organizational consolidations. These changes will likely encompass our sister Services as well as other government agencies. Our supply problem will be heightened by the existence of a high/low mix of equipment. The high side will continue to accelerate as technology explodes; conversely, equipment fielded in earlier years will be more difficult to support as production ceases and time passes.

Maintenance and Repair. This will continue to be AMC's most labor-intensive area. Battlefield mobility, lethality, dispersion of forces and equipment complexity will mandate transferring all but the quickest and simplest tasks to the rear. Army civilians and contractor personnel, operating as mobile teams, will bring repair and overhaul services forward and perform maintenance tasks in-theater. This approach will reduce the time equipment is unavailable to field commanders, improving combat posture.

Transportation. AMC will ensure weapon systems are designed for ease of transport. The next century will yield significant advances in this field. Battlefield requirements for improved mobility, combined with air and sea transportability requirements, will challenge the ingenuity of developers. Deployability of equipment will take on increasing significance in the development process as lighter materials and modular assembly combine to reduce the time required to project forces into areas of operation.

PLANNING FOR QUALITY

The most important strategy for the future is to institutionalize the planning process for the long term. Planning includes setting priorities. We must address the hard issues of integrated and balanced programs, Army priorities and resource allocation. The status quo is unacceptable. We must be willing to make choices and revise priorities. We can learn from past planning, but above all, we can predict the need to refine those plans. Change them and improve them, again and again, as trends dictate and opportunities are identified over time. Planning permits us to buy the flexibility to deal with the future. It produces options that would otherwise be unavailable and serves as a catalyst that fosters evolutionary change.

While planning itself is difficult, time-consuming and arduous by its very nature, its real value stems from the exacting demands it places on all of us. Some of the strategies that will prove most profitable may not yield immediate results. We must develop patience, tenacity, and accept change.

As the nature of our technology changes so will the new soldier-oriented products we provide. Consequently, AMC's organizational structure will change. Today's wholesale supply system and industrial production base will be modified to better serve our needs to support the future battlefield. We must streamline our research and development base and change our contracting procedures. We must seek more responsive and efficient management of our programs and invest our limited resources to provide an optimum return. AMC must orient on the Army in the field's need to move, shoot, and communicate.

Concurrently, quality is the overarching principle of all AMC does - today and tomorrow. While planning provides the roadmap for the future, quality provides the point of reference from which we start. It must be integrated at every level of our planing and become an integral part in all that we do. In every functional area, our planning process must take into account the need for quality as we continue to provide the soldier the best equipment in the world. Since people are the key to success, we must develop training programs that build a high-quality acquisition workforce dedicated to that mission.

With planning strategies fully developed and quality as the centerpiece of that process, we will focus more quickly on the challenges of 2010. We must begin now if we are to take advantage of the opportunities which await each of us.