



Special Report

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Installation of the Future

The All-Volunteer Army will remain the most highly trained and professional land force in the world. It is uniquely organized with the capability and capacity to provide expeditionary, decisive landpower to the joint force and to be ready to perform across the range of military operations to prevent, shape and win in support of combatant commanders to defend the nation and its interests at home and abroad, both today and against emerging threats.

General Raymond T. Odierno
Chief of Staff, Army¹

The Future Operating Environment

The United States Army Training and Doctrine Command (TRADOC) recently published the new *U.S. Army Operating Concept* (TRADOC Pamphlet 525-3-1, 31 October 2014), which focuses on all three levels of war: tactical, operational and strategic. It describes as “unknown” the future environment in which the Army will operate. The enemy the Army will face is unknown, the location is unknown and the coalitions involved are unknown. The Army must focus on the challenge of winning in a complex world. Within this issue is an imperative for installation professionals to harness a continuum of learning, adapting and innovation in shaping the installation of the future and tackling the challenges that lie ahead.

As the Army’s operating force enters the future fight, the demand and the ability to rapidly project landpower will be critical. The Army must ensure that its installations, community partners, joint force enablers and technology all support these vital imperatives. As stated in TRADOC Pamphlet 525-3-1,

Army forces ensure combatant commanders possess the ability to scale-up land forces rapidly through forward positioning, strategic and operational airlift and sealift, and use of prepositioned equipment and supplies. The Army is the only element of the joint force with the capacity to conduct sustained campaign-quality land operations that compel adversaries through the physical occupation of vital terrain and infrastructure and consolidate gains to achieve sustainable outcomes.²

Installation professionals must also ensure that training ranges and areas remain viable and flexible enough to build cohesive, highly trained units and adaptive, innovative leaders. Ultimately, this provides for an operating force that is highly trained and ready to meet any contingency. As new technology and capabilities emerge—for long-range precision strike systems (missiles), high-quality air defenses, cyber capabilities and long-range artillery and rocket systems—a greater demand will be placed on maneuver operations space. This will require adaptive leaders, critical long-range planning, leveraged partnerships and timely execution to ensure that the Army meets the requirements of Force 2025 and beyond.

The strategic environment facing the Army is one of many significant challenges such as fiscal uncertainty, military transition and emerging global threats. A period of fiscal austerity and constrained resources is expected to affect the Army over the next several years. As it concludes combat operations in Afghanistan, the Army is faced with the necessity of rapidly drawing down and reshaping its total force to meet potential threats that undermine U.S. security interests. Adversaries, recognizing that they cannot succeed in a force-on-force confrontation with the United States, seek new ways to challenge us by using asymmetric techniques such as cyber, information operations and irregular warfare and by developing anti-access capabilities. In addition, many of the nation’s traditional partners and key allies in providing regional security and global stability are facing the same economic downturn

and reduced defense budgets as the United States. The Army must maintain strong alliances and look for new opportunities to further engage U.S. partners to maintain both national security and global stability. Installation professionals must prepare to provide expeditionary base operations support to Army forces in austere environments, including regions that lack adequate energy and water resources.

Installation professionals must ensure that they provide the support structure the Army needs on its installations to meet the challenges posed by future threats in the decades ahead. The Department of Defense (DoD) defines its Mission Assurance Strategy as a process to protect or ensure the continued function and resilience of capabilities and assets—including personnel, equipment, facilities, networks, information and information systems, infrastructure and supply chains—critical to the performance of DoD mission-essential functions in any operating environment or condition.



Installation commanders are responsible for protecting and ensuring the continued availability of personnel, equipment, facilities, networks, information and infrastructure. They must continue to execute these critical imperatives in shaping the installation of the future, bolstering mission assurance for U.S. forces to win in a complex environment. Installation commanders must develop strategies that support emerging and future technology; further develop and foster private and public partnerships that will enhance installation mission assurance; and secure the right capabilities, technology and infrastructure to guide the Army to the installation of the future (2025 and beyond).

In a tectonic shift, today's roughly 50 percent urban population (3.5 billion urban of the world's 7.1 billion people) will almost certainly climb to near 60 percent (4.9 billion of the world's projected 8.3 billion), a sharp contrast to the largely rural world of 1950, when roughly 30 percent (750 million) of the world's 2.5 billion were estimated to be urban residents. Between now and 2030, demographers expect urban population to grow most rapidly where rates of population growth are highest and where the urban proportion of the population remains relatively low.³

The increasing nexus among food, water and energy—in combination with climate change—will have far-reaching effects on global development over the next 15–20 years. . . . [D]emand for these resources will grow substantially owing to an increase in the global population. . . . [A]n expanding middle class and swelling urban populations will increase pressures on critical resources—particularly food and water. . . . Food and water security is being aggravated by changing weather conditions outside the expected norms.⁴

For decades, Army installations tended to be isolated, which meant that they could train and carry out a whole range of activities largely unimpeded. Today, however, Army installations find themselves having to deal with an increasing number of external pressures.⁵

Expanding development is causing more houses and businesses to be constructed closer to installations, leading to concerns about noise and safety, which in turn threaten to curtail training. The same encroachment is increasingly making installations a preferred habitat for endangered plant and animal species, which puts pressure on the installation to preserve species and habitat. And all of this occurs at a time when resources, such as water, are likely to be less plentiful than in the past. As a result, installations will come under increasing pressure either to share resources or to reduce consumption. Installations will be asked to use less electricity, build more energy-efficient structures, adopt new information and other technologies, cope with trends affecting society at large (such as the rising use of online social networks as part of America's sense of community) and find ways to reduce traffic congestion.

Determining the Capabilities Needed to Operate in the Future Environment

With the projection of what the threat will most likely be in the future, it is essential that installations capitalize on new and existing technologies and energy efficiency programs. Leaders must execute policy revisions and will ensure that Soldier and family services provide resilient Soldiers and self-reliant families. Garrison installation professionals are the centerpiece for ensuring that installations rapidly respond to an ever-changing environment. Ultimately, this will provide the operating force with the best installation platforms for training, sustainment and power projection in support of a globally engaged, responsive and regionally engaged Army.

Critical Partnerships for the Future. As the Army's installation of the future (2025 and beyond) evolves, it is essential for the installation management community to leverage all available resources. This effort will place greater emphasis and a call for greater action within installation communities. Engagement through public-to-public and public-to-private partnerships is critical as installation professionals seek policy, program and technological advances that can be leveraged by installations.

Communities and installations are interdependent and must continue to foster a common supportive bond. The Army has a history of public-to-public and public-to-private partnerships and has garnered vast experience from previous municipal service partnerships and intergovernmental support agreements (IGSAs). One such example is the successful partnership with the Presidio of Monterey and the City of Monterey, California. This partnership allowed DoD to purchase firefighting, security guard, police, public works, utility and other municipal services from government agencies located within the City of Monterey. One of the first demonstration sites for public-to-public and public-to-private partnerships, this effort is saving the Army \$1.5 million per year for the provision of a broad swath of municipal services.

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The benefits of the municipal service partnerships proved to be so successful in efficiency and cost effectiveness that the Department of the Army directed its Installation Management Command to select additional pilot sites: the City of Augusta, Georgia, and the City of Sierra Vista, Arizona. Both of these selected city/installation pairs exacted tremendous cost savings through the partnerships established. The Fort Gordon, Georgia, Water and Wastewater treatment capital upgrade resulted in \$47,500 in annual commodity cost savings while improving system redundancy and increasing the reliability of service when compared to the previous system. Furthermore, the Army reduced its exposure to the risks of environmental liability. At Fort Huachuca, Arizona, under the terms of the library services agreement, the Fort Huachuca library closed and all general library services are now provided by the City of Sierra Vista. This resulted in a savings to the Army of over \$300,000 annually. Ultimately, families were provided comparable library services just 15 minutes from the installation.

In addition, as of March 2014, the number of IGSA concepts identified had grown to 68 and two concepts had progressed into proposals (Fort Bragg, North Carolina, and the aforementioned Presidio of Monterey). As of 29 April 2014, Fort Bragg had the first approved and awarded IGSA within DoD. The Army is working with the other services and the Office of the Secretary of Defense to ensure a synchronized approach for use of the IGSA authority so that broader multisite or regional partnerships may be possible.

The fostering of the public-to-public and public-to-private relationships will become increasingly vital as the Army moves into the installation of the future. Numerous pilot sites have proven that the Army's partners have the resident expertise to execute installation operation maintenance services. The cost savings generated from these partnerships allow more defense dollars to be invested in mission capabilities. Army policy must focus on minimizing barriers that exist now and in the future to ensure that these partnerships can grow and are mutually supportive to both the surrounding community and the installation community.



Technology. New technology will provide installation commanders with solid, actionable metrics that allow them to continue to drive down energy costs, identify areas of energy loss within base infrastructure and employ greater energy efficiency solutions at the appropriate time.

The Asset Management Program, a technology that is being piloted on DoD installations, has proven effective for commercial industry. This technology has drastically reduced energy waste for many major commercial corporations and returned greater cost savings over time. The program supports the sustainable building operations concept, ultimately enabling a central repository

for space management and data center infrastructure to optimize space utilization. It assists in developing processes that can optimize energy consumption. In addition, it allows for asset-intensive divisions of the government to develop smarter processes that support all types of assets such as emergency rooms, fire doors, buildings and other facilities.

Ultimately the Asset Management Program provides a unified platform to track and manage the full spectrum of installation assets and service providers; addresses compliance, accounting and asset-related challenges across multiple departments; and integrates smoothly with key systems such as geographic information, enterprise asset management and customer information.

Future implementation of critical technologies similar to the Asset Management Program will provide an actionable common operating picture for installation commanders that will enable time-sensitive decisions that influence resource stewardship and garner greater cost savings.

A large part of this effort will be leveraging technology to ensure energy stability and security by helping to provide alternative energy sources as well as greater energy and water efficiency. To that end, the Army must also continue to construct facilities and infrastructure that are energy efficient, environmentally neutral and fully compliant with applicable laws and regulations. Beyond technology, the Army must implement cultural change to reverse excessive energy and water use as well as waste accumulation by Soldiers, civilians and family members on installations. This will ultimately ensure future energy and water stability while driving down costs and enabling mission assurance for U.S. forces. The Army has had tremendous success with Net Zero, a holistic strategy targeted to improve management of existing energy, water and solid-waste programs with the goal of increasing independence and neutrality where fiscally responsible. Net Zero must remain a driving force well into the future.

Soldier and Family Services. In an effort to ensure that its operating force is regionally aligned, versatile, responsive and consistently available, the Army must remain committed to providing standardized, essential services and infrastructure necessary to achieve and maintain individual readiness for Soldiers, families, veterans and survivors. Army installations contribute to supporting senior commanders in achieving two key outcomes: (1) trained and ready units delivered on time to combatant commands and (2) an all-volunteer force of high-quality Soldiers, civilians and leaders. Army installations must develop and sustain programs, services and capabilities that meet the needs of senior commanders to enable them to develop trained and ready forces; informed and resilient families; and a dedicated, competent and capable workforce.

Infrastructure. The Army has developed a Facility Investment Strategy (FIS)—an enterprise approach for the Army (active and reserve components) that guides decisions for sustaining and improving the quality of its infrastructure. FIS includes key tenets and metrics for analysis by which progress and outcomes are measured: sustain

required facilities, dispose of excess facilities, improve existing facilities quality and build out critical facility shortfalls. FIS focus areas for analysis include energy/utilities, organic industrial base, organizational vehicle maintenance, training support systems, reserve component readiness facilities and trainee barracks.

The FIS will leverage funding for Sustainment, Restoration and Modernization; Minor Military Construction; Army Family Housing; and the Facility Reduction Program. Military construction will be used only for the highest priorities identified through careful analysis. It is a major step toward fulfilling the Army Chief of Staff's expectations for the right facilities at the lowest cost for the installation of the future.

Meeting Future Requirements for the Installation of the Future (2025 and Beyond)

The Army faces both an uncertain fiscal environment and multiple potential threats in a global environment. Army installation professionals are the centerpiece in orchestrating the necessary change that will shape the installation of the future. They must address both the short-term and long-term budgetary challenges facing installations and the Army while still providing the most essential services and infrastructure sustainment requirements to achieve the proper balance between current and future demands and addressing long-term threats. This effort will require a collective and synchronized engagement with Army echelons and community partners.

Installation professionals must continue to develop and sustain programs, services and capabilities that enable a highly trained and ready force with resilient and self-sustaining families in support. This may require policy changes to ensure greater collaborative efforts and new technology. The Army's ability to quickly adapt, innovate and lead installations and communities through future challenges and demands is essential. Installations are the foundation that provides Soldiers, families and civilians with a sustainable quality of life and ultimately enables the Army's operating force to be the nation's force of decisive action across a full range of missions, capable of meeting today's challenges and tomorrow's uncertain conflicts.

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As installation professionals envision and plan for the installation of the future, the challenges that lie ahead must continually be assessed and addressed. A subset of the challenges facing the Army lies within the balance between installation access and security. It is vital in striking the right balance between access for public-to-public and public-to-private partners and providing force protection on installations as enemies and adversaries extend their threats to the U.S. homeland to achieve political objectives. Security access policies and regulatory guidance must evolve

to support the Army's collaboration efforts with community partners. It is imperative that installation professionals remain adaptive, flexible and innovative.

Endnotes

- ¹ “The Chief of Staff of the Army’s Vision, Waypoint 2,” *CSA Strategic Priorities*, 21 February 2014, <http://usarmy.vo.llnwd.net/e2/c/downloads/332325.pdf>.
- ² U.S. Army Training and Doctrine Command Pamphlet 525-3-1, *U.S. Army Operating Concept*, 31 October 2014, <http://www.tradoc.army.mil/tpubs/pams/tp525-3-1.pdf>.
- ³ National Intelligence Council, *Global Trends 2030: Alternative Worlds* (Washington, DC: Office of the Director of National Intelligence, December 2012), p. 26, http://www.dni.gov/files/documents/GlobalTrends_2030.pdf.
- ⁴ *Ibid.*, p. 30.
- ⁵ Beth E. Lachman, Agnes Gereben Schaefer, Nidhi Karla, Scott Hassell, Kimberly Curry Hall, Aimee E. Curtright, David E. Mosher, *Key Trends That Will Shape Army Installations of Tomorrow* (Summary) (Arlington, VA: RAND, 2013), p. xiii, http://www.rand.org/content/dam/rand/pubs/monographs/MG1200/MG1255/RAND_MG1255.sum.pdf.



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