The Future Installation Management Enterprise

Is the Army Equipped with the Right Capabilities?

by Major Roye Locklear, Jr., U.S. Army National Guard



LAND WARFARE PAPER 144 / APRIL 2022 PUBLISHED BY THE ASSOCIATION OF THE UNITED STATES ARMY



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Land Warfare Paper No. 144, April 2022

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Major Roye Locklear, Jr., currently serves as an Active Guard Reserve Soldier with the Florida Army National Guard. He has over 30 years of military service; he served as an enlisted Soldier for the first 18 years, attaining the rank of Sergeant First Class. He currently serves as the Battalion Executive Officer/Administrative Officer for the 927th Combat Sustainment Support Battalion. His previous full-time assignments include Resource Manager for the Florida National Guard Recruiting and Retention Battalion and Operations Officer for the Florida Counterdrug Program. He has commanded twice at the company level and served as a Battalion Operations Officer (S-3) in a Brigade Support Battalion. His deployments include two tours to Afghanistan in support of *Operation Enduring Freedom* in 2005 and 2010. Additionally, he served as the Head Coach for the U.S. Army Men's Soccer Team from 2010–2018.

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Inquiries regarding this and future Land Warfare Papers should be directed to: Nzinga A. Curry, Director, Education & Programs, 2425 Wilson Boulevard, Arlington, VA 22201, email ncurry@ausa.org or telephone 703-907-2636.

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In Brief

- Future Soldiers will expect installations to modernize at pace with civilian sector smart cities initiatives.
- Army installations must provide critical capabilities to strategic readiness and to the Army's ability to "*deploy, fight and win our nation's wars*."
- Current installation management challenges include: decisions made to deliberately underfund infrastructure; the need to enhance understanding of guiding principles; and constraints to streamlining installation services.
- Installations should serve to enhance recruitment and retention efforts, while supporting the Army's most important asset: its people.

The Future Installation Management Enterprise: Is the Army Equipped with the Right Capabilities?

Introduction

The Army of 2028 and beyond, as a critical component to the joint force, faces an uncertain future environment.¹ Trends in the diplomatic, information, military and economic (DIME) realm are creating an operational environment (OE) that is rapidly transforming the nature of all aspects of society and human life. The future OE will be characterized by persistent competition, challenges posed by adversaries, rapid technological change and increasing regional instability.² As part of the overall U.S. response to all of this, the Army will be called upon to respond to challenges on the land.³ The Army's success will depend on flexible and adaptive leaders and on efficient and capable formations. The requirements of successful Army installations are no different. Installations support all Army missions, both within the United States and overseas, from enabling training and deployment to supporting mobilization and civil authorities.

In the more than 25 years since the establishment of the Army's installation management enterprise, Army installations have developed a highly complex system of services and infrastructure in support of the Army.⁴ Army installation managers are the integrators and synchronizers of the infrastructure and services on Army installations. Installations, and the organizations that manage them, will require the same adaptability and innovation to be successful in the future environment. How will Army installation management transition from current formations and capabilities to the flexible and adaptive installations that will be necessary to integrate and respond effectively to unexpected threats and transitioning missions?⁵

Although installations are recognized as integral to the success of the current and future joint force, and there are a few installation strategies and tasks in current joint and Army functional concepts, installation management still lacks sufficient approved future operating concepts and doctrine. This paper will apply an abbreviated capabilities-based assessment (CBA) process to identify areas that require better alignment between the Army's current capabilities and future installation management needs. The Army's CBA is a four-phased process: defining the future operating environment; conducting a functional area analysis (FAA); completing a

functional needs analysis (FNA); and performing a functional solutions analysis (FSA). Applying this to installation management works as follows.

Describing the future operating environment for Army installations is essential to providing the framework for follow-on analysis. The FAA translates joint and Army future operating and logistics functional concepts to identify potential problems faced by Army installation management and to establish future approaches to a range of problems. Next, the FNA documents the Army's current installation management capabilities, then analyzes their performance against future tasks. The FNA results in a prioritized list of capability gaps and associated risks. Finally, the FSA provides an assessment of the prioritized list of installation management gaps and develops potential solutions across doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy (DOTMLPF-P).⁶ Applying the CBA framework to the Army Installation Management Enterprise identifies gaps between current and future requirements and allows for better alignment of current resources to achieve success in future Army missions.

Future Environment for Army Installation Management

The first step in the CBA process is to define the future operating environment for Army installation management. First, it will be increasingly VUCA—volatile, uncertain, complex and ambiguous—that is, rapidly changing, difficult to understand and predict, highly interconnected and defying analysis.⁷ This will present several challenges to Army installations; indeed, joint and Army studies define several persistent and anticipated trends in this scenario. Understanding the impact of these future characteristics is critical to establishing the conditions and metrics that will define successful future installation management operations.

The Capstone Concept for Joint Operations defines these persistent trends to include a proliferation of weapons of mass destruction (WMD), a rise of competitors, regional instability, transnational criminal and violent extremist organizations (VEOs) and competition for resources. These persistent threats shape the way that the Army operates and builds programs for its installations. The proliferation of WMD and a competition for resources drives regional instability as neighbors seek to ensure their own economic and territorial security, thereby increasing the volatility of the world. The interaction between transnational criminal and VEOs and the nation-states such as Russia and Iran, which are willing to use them as proxies, are an example of the uncertainty and complexity that the United States is facing. Additionally, competition for natural resources will be a key driver of instability for the foreseeable future. Finally, anticipated future trends include adversaries seeking to attack the Army asymmetrically, increasing urbanization, competition for natural resources, an increasing pace of technological change and constrained funding for the DoD.⁸

While these future trends will cause rapid changes to some Army organizations and missions that are part of the operating force, most will have less impact on Army installations which are part of the generating force. The three future trends of increasing urbanization, asymmetric competition and declining DoD resources have the greatest potential to significantly influence Army installation management.

First, installations will face increased competition for natural resources, especially access to land and water, both domestically and overseas. Increasing urbanization and the growth of civilian communities outside our installations presents challenges to the Army's ability to utilize training land.⁹ For example, the expansion of Army ballistic missile defense missions in

South Korea and increased training at Pinion Canyon Maneuver Site in Colorado resulted in opposition from the respective communities.¹⁰ At the same time, community growth outside installations also presents opportunities to increase partnerships, enabling efficiencies through municipal services with the surrounding local governments.¹¹

Second, adversaries will increase asymmetric attacks on the Army. Future threats to our installations are infrequently addressed in joint and Army doctrine. Most asymmetric threats to the Army are in the context of its forces deployed to contingency locations. While the threat of kinetic attacks on Army installations is relatively low, especially for those installations within the United States, installations remain increasingly vulnerable to cyberattacks and disruptions.

Finally, uncertainty over future DoD funding will hamper the Army's installation managers' ability to adapt to changing missions and future requirements. The uncertainty over future DoD budgets results in aging infrastructure and outsourcing installation management functions to reduce costs to maintain and operate Army installations. Technology presents some opportunities for installation managers to streamline operations and reduce costs, but it will not offset reductions in Army installation management budgets. Addressing the challenges of the future environment is likely to require installations to perform their expanded missions at an increased pace, confronted by diverse challenges and reduced resources.

Functional Area Analysis

Given the characteristics of the future environment, how can the Army develop the required capabilities for installations and the organizations that operate them to support the Army and joint force? The Army does not have a current approved concept for installation management, but the Joint Concept for Logistics (JC-L), Army Functional Concept for Sustainment (AFC-S) and other concepts offer a proposed concept. Together, the JC-L and AFC-S frame proposed future military problems, required capabilities, performance standards and risks for future installation management. Addressing these problems, the CBA needs to answer the following question: How does the Army enable future operations through flexible and adaptive installations while integrating and synchronizing support for joint, intergovernmental and multinational objectives? With that in mind, the JC-L and AFC-S can be used to identify three primary future required capabilities of installation management: first, flexible and adaptive leaders and workforce; second, cost-effective and scalable infrastructure and services; and third, protected and robust data systems that enable decisionmaking.

Adaptable Workforce

First, future installation management professionals must be able to think critically, communicate effectively, make data-informed decisions, understand their functional roles and enhance the missions of the supported units on or serviced by the installation. They will have to prioritize installation support functions to maximize support to critical Army missions such as mobilization, deployment, protection and personnel support.¹² Understanding statutory responsibilities and authorities to modify and adapt installation support functions will enable the success of the installation and the missions of its tenants. Future installation management professionals will continue to function as critical liaisons with surrounding communities. Given that the future environment remains resource constrained, and that the communities around our installations continue to urbanize, integration with surrounding communities will be critical. Understanding the capabilities, capacities and needs of the communities around our installations will allow future installation management professionals to mitigate challenges while recognizing and making the most of opportunities for collaboration and cooperation. Additionally, the ability to communicate effectively will enhance all aspects of installation management. Inevitably, modifying or adjusting functions creates gaps between expectations and delivery. Future installation management professionals must create a climate where a trained and ready workforce is able to ensure mission success through flexible and adaptable application of limited resources to achieve desired results.

Efficient Infrastructure

Second, Army installation management must provide cost-effective and scalable infrastructure and services. In the rapidly changing and volatile future environment, installations will need to provide a range of options to support units, Soldiers and their families on both contingency and enduring bases. Future installation infrastructure needs to be tailorable to the missions of the units assigned, but also scalable to ensure efficient use and to reduce operating costs. Future installations may also consist of many geographically disbursed sites—either Army-owned, contracted or with limited access—all under the management of a single organization. Assuming that less money will be budgeted to sustain repairs or to replace infrastructure with new construction, it is prudent to seek innovative ways to expand installation capacity and capabilities. The Army must consider contracted facilities and dual-use facilities for administration, research and development, troop housing and dining facility operations.¹³ Likewise, future installation managers must be able to deliver services in the most cost-effective manner, blending organic capabilities with inter-service and community partnerships, all while ensuring that units, Soldiers, civilians and families receive the required support.

Robust Data Management

Finally, Army installation management of the future must have integrated and robust information systems to inform decisionmaking.¹⁴ The Army needs visibility over the status of all infrastructure assets and performance of all critical enabling services. It needs to invest in technology and data systems that monitor performance in real or near real time, enabling more efficient management and utilization. Similar to civilian smart cities, the Army must expand the integration of sensors in its infrastructure to monitor energy and water consumption as well as the performance of critical building components like electrical, plumbing, waste-water, climate-control and ventilation systems.¹⁵ This autonomous reporting capability is necessary to achieve improved infrastructure readiness by enabling preventive maintenance and so preventing cascading failures of building components that increase repair costs.¹⁶ Likewise, the Army needs to develop information systems to monitor performance of the services it provides. Flexible and responsive services driven by data on manpower, inventory and other cost factors will establish more accurate baselines for installation support services. Data analytics will also allow installation managers to accurately forecast requirements and adjust resources to optimize support based on mission requirements and fiscal constraints.

Functional Needs Analysis

In an effort to thoroughly understand the capability requirements that installations must provide, an FNA should be conducted to identify gaps. An FNA assesses current and future capabilities to meet military objectives based on outputs produced by way of an FAA. The FNA assesses whether or not an inability to achieve a desired effect exists to determine if there is a capability gap.

Lack of Installation Management Doctrine

Currently, neither the joint force nor the Army have a comprehensive doctrine for installation management, meaning that there is no common language for this management. For example, multiple joint and Army doctrine and concepts use the words *installation*, *base*, *camps*, *base camps*, *sites*, *stations* and *post* interchangeably.¹⁷ Likewise, most of the current doctrine is intended to cover installation management functions conducted in contingency environments.¹⁸

The organization responsible for developing installation management doctrine for the Army is the Assistant Chief of Staff for Installation Management (ACSIM). Department of the Army General Order Number 2017-01 states that the ACSIM, "[serves] as the ARSTAF proponent for installation management doctrine and the professional development of installation and garrison commanders and other installation management professionals."¹⁹ As of Fiscal Year 2017 (FY17), installation management doctrine appeared on the ACSIM's list as the eleventh priority, indicating that the Army recognizes the need for this doctrine, but that it is not as important as current support to Army readiness, internal reorganization or building the annual *Program Objective Memorandum*.²⁰

The biggest risk from this deficiency is inefficiency. The U.S. Army Installation Management Command (IMCOM), the largest installation management organization, admits, "Human capital management structural components/processes (e.g., Table of Distribution and Allowances management; Management Decision Evaluation Package actions, Standard Garrison Organization, Common Levels of Service) are not well integrated or aligned."²¹ The lack of common terminology, along with different organizations and under-resourced career development, means that the Army's installation management enterprises' adaptation to the future environment risks inefficient application of limited resources to achieve current mission success and to develop required capabilities in preparation for the future operating environment.

The Need for a Holistic Career Development Program

The current installation management workforce is comprised primarily of a mix of civilian functional experts, senior enlisted and field grade officers. The civilian workforce is comprised of a wide variety of functional experts who represent several Army Civilian career programs (CP), including engineers (CP 18), comptrollers (CP 11), scientists (CP 16), housing managers (CP 27) and installation management (CP 29).²² Career development training for the majority of the installation management workforce falls under the purview of non-installation management organizations, with the exception of the installation management career program, CP 29. This career path begins for mid-career civilians (GS-9) and prescribes standard Army Civilian leader development training, such as the Army Civilian Education System (CES), Supervisor Development Course and Lean Six Sigma programs.²³ CP 29 also offers a Developmental Assignment Program (DAP) to allow short-term career development opportunities for motivated employees. The CP 29 DAP does not centrally manage employees identified for development, and it relies on the organizations that comprise the installation management enterprise to identify developmental assignments.²⁴ This arrangement results in potential gaps to getting the right developmental experience to the proper employees at the appropriate points in their careers to prepare them for future leadership positions.

Like their civilian counterparts, there is no career progression for officers selected for installation management leadership positions. Garrison command is a centrally selected command billet that is considered a generalist assignment available to lieutenant colonels (O-5) and colonels (O-6). Similarly, sergeants major (E-9) also typically have no prior background in installation management. *The IMCOM estimates that 98 percent of military personnel entering their installation leadership positions have no prior installation management experience.*²⁵ Military members assigned to installation management positions, much like their civilian counterparts, are experts in one of the Army's branches or functional areas, but they receive little preparation for integrating and synchronizing the full range of installation support for senior commanders.

The Army is attempting to address this gap in capability by establishing installation management training programs. The most mature of these is the College of Installation Management (CIM), under IMCOM. Its goal is to provide the single source of career development training for the installation management community.²⁶ The CIM's foundation is the Training and Doctrine Command (TRADOC) accredited Family, Morale, Welfare and Recreation (MWR) Academy, which has a long and established track record for educating non-appropriated fund employees to run Army MWR and Family support programs. Also, in 2010, CIM took over several installation-focused training programs from the Army Management Staff College after it consolidated and realigned to Fort Leavenworth.²⁷ Unfortunately, CIM's mission growth did not come with required resources, and the plan to expand CIM appears to have stalled. Its goal to be fully TRADOC-certified and to expand the CIM staff by the second quarter of FY17 (March 2017) has not happened yet.²⁸ The CIM still offers courses that span the breadth of installation management functional expertise, but there is very little formal instruction on how to coordinate, synchronize and direct an entire installation.²⁹ Most training for senior installation management professionals remains informal "on the job" training. These doctrine and resource shortfalls contribute to the Army's institutional risk to operating successfully in an increasingly complex environment.

Inadequate Funding and Streamlining of Installation Operations

For several years, the Army has prioritized force structure, training and material readiness over sustaining and modernizing its infrastructure.³⁰ The current challenges of reduced resources, excess infrastructure and degraded infrastructure puts support to Army readiness at risk. The Army currently has approximately 21 percent excess infrastructure capacity and is petitioning Congress for authorities to study another round of potential Base Realignment and Closure (BRAC).³¹ Congress has been unwilling to grant new BRAC authority, but it understands the Army's costly excess infrastructure and has granted the Army expanded authorities to mitigate this challenge. The ACSIM recently testified before Congress:

Although a new authority in *National Defense Authorization Act for Fiscal Year 2017* (Public Law 114-328) allows conversion of existing buildings to new functions, the Army still requires authorization for another round of Base Realignment and Closure (BRAC), which will enable the Army to re-station forces and missions for future requirements.³²

The cost of maintaining this excess infrastructure is approximately five hundred million dollars annually, sapping resources away from both current readiness and future requirements.³³

Additionally, the Army's military construction investment remains historically low, and it focuses on replacing failing and obsolete training, operations and maintenance facilities, and footprint consolidation. The Army funds sustainment, restoration and modernization (SRM) for existing facilities at only 75 percent of the required rate. Underfunding SRM means that Army installation infrastructure deteriorates at an accelerated rate, jeopardizing support to current

missions and adaptability for changing conditions. As the Chief of Staff of the Army (CSA) recently testified before Congress, "Deterioration of our installations adversely impacts Soldier and family quality of life, maintenance of equipment, deployment of forces, and the ability to mobilize our reserve component."³⁴ The risk to ensuring flexible, adaptable and effective infrastructure support to the future Army is that the infrastructure will be in the wrong location, in poor condition, or be unsuitable to support the missions of the Army.

Both Congress and the Army recognize the need to deliver cost-effective and flexible services. Beginning in 1983, the Office of Management and Budget issued *Circular A-76*, which directed all federal agencies to examine all organizational functions and, where applicable, to conduct competition between government service providers and the commercial sector to ensure that tax payers were getting maximum value for resources expended.³⁵ This began a process of examination of installation services for potential efficiencies, resulting in increasing contract support, including public works, personnel services and housing services.

Competitive Sourcing Directives such as A-76 began DoD initiatives to privatize even more services and the infrastructure used to deliver them, resulting in programs to privatize family housing, temporary lodging and utilities. These privatized services do not really save the Army resources for operating costs, but they do free the Army from investing in recapitalization of the infrastructure.³⁶ Unfortunately, in 2007, Congress issued a moratorium on A-76 in the wake of the scandal over conditions at Walter Reed Army Medical Center.³⁷ The moratorium on A-76 competitions remains in place today, preventing installations from exploring changes in service delivery.

In 2013, Congress passed legislation allowing the Army to enter into inter-governmental support agreements (IGSAs) for services already being provided by local governments. These created a way for installations and their partner communities to build economies of scale for public services that benefit both organizations. Unfortunately, there is some ambiguity between the authorities suspended by the moratorium on A-76 competitions and the authorities to enter IGSAs with local governments.³⁸ Ultimately, Army installations will lose flexibility to adapt installation service delivery in the future if the moratorium on A-76 competitions is not lifted and if the various interpretations of authorities between A-76 and IGSAs are not clarified.

Timely Integration of Data

The final area of analysis is the ability of the current installation management enterprise to provide integrated and robust data systems that enable decisionmaking. The current Army systems that provide installation managers with data for decisionmaking are designed for planning and programming installation resources. Those data systems are unconnected, and data is entered into them manually. The primary system for monitoring the status of Army installations is the Installation Status Report (ISR). The ISR has four components that measure the quality and capacity of infrastructure, services, natural infrastructure and mission capacity. These measurements cover the breadth of an installation's ability to support the Army, but they are only measured once per year. The lack of frequency of reporting this data makes ISRs only good for macro-level assessments of programs rather than on-the-spot corrections that would enable efficient and flexible service delivery.³⁹ Additionally, the ISR is not linked to other Army systems, meaning that assessments of total Army installation programs are done manually. Manual analysis has the consequence that program adjustments may not occur in a timely fashion to ensure the most effective and efficient delivery of services.

The Army is making slow progress toward automating its installation management data systems to enable decisionmaking with programs such as the Army metering program and the General Fund Enterprise Business System (GFEBS). The GFEBS is the DoD's accounting system of record that tracks all expenditures and real property. It gives installation management professionals at all levels a comprehensive view of financial status and projected expenditures. The Army Utilities metering program suffers from the same lack of resources as other parts of the installation management enterprise; it is a decade late on its goal to meter all Army facilities by 2012.⁴⁰ Even if all installations had the required meters in place, the data they collect is distributed among several unconnected data management systems. If the Army does not improve the automation of installation data gathering and have the ability to understand the relationships among that data in a timely fashion, then it will have missed opportunities, as well as inefficient and ineffective delivery of installation services.

Functional Solutions Analysis: Recommendations

Identifying the gaps and prioritizing their risks to achieving future capabilities of the installation management community allows examination of potential solutions across the DOTMLPF-P to help manage those risks. The biggest risk to the future capabilities of Army installations is the availability of funding for Army installations to sustain support for the Army's missions today while transforming for success in the future. Congress delayed implementation of the 2011 Budget Control Act (BCA) that required sequestration of federal discretionary spending through bi-partisan budget agreements in 2013, 2015 and 2018. The 2011 BCA has not been repealed, meaning sequestration will continue to impact budgeting and resource planning efforts. If BCA spending cuts return, the reduction of resources will likely affect the installation management enterprise disproportionally, meaning that the Army will ensure force structure and readiness of its combat formations at the expense of capital investments. The Secretary of the Army and the CSA, as strategic leaders, must continue to articulate to the President, the Secretary of Defense and Congress the risks to the Army posed by inadequate resources through direct leader engagements, congressional testimony and the annual budget process. A mitigation strategy for this risk is outside the scope of this paper, but the remaining proposed solutions account for this overarching institutional risk.

The second proposed solution addresses the problem of a lack of guiding principles to establish comprehensive installation management doctrine to ensure unity of effort for current Army installation management missions and to inform the development of future Army installation management capabilities. Installation doctrine establishes the foundation for standardizing current installation management operations across the regular Army, Army Reserve, Army National Guard and contingency base operations. The existing doctrine for installation management in contingency environments is a good start.⁴¹ The Army installation management doctrine for current installation management doctrine, such as Field Manual 100-22, *Installation Management*, first published in 1994, and rescinded back in 2009.⁴² Standardizing installation operations would allow the Army to focus current resources against Army priorities and to streamline current installation operations.⁴³

Installation management doctrine would help focus limited resources on developing a holistic leader development program for both military and civilian installation managers. The Army needs a cadre of installation management professionals who have experience integrating and synchronizing the range of infrastructure and services required for Army installations—not just experts in their respective functional areas. The Army must continue consolidating training for the installation management professionals (CP 29) under a TRADOC accredited school, while leveraging other established Army schools to train the remaining workforce. In the meantime, the Army should explore expanded partnerships with organizations such as the International City Managers Association; it can leverage industry to supplement career development for installation management professionals while establishing a holistic program. Also, the Army should consider "re-greening" installation management to create a larger pool of military cadre with installation management exposure. Introducing officers (O-3/O-4) and enlisted Soldiers (E-6–E-8) at the mid-career point would allow exposure to the installation management enterprise. Although it would increase stress on an already stretched force, it would also reduce the amount of time it would take for them to be effective in later assignments. "Re-greening" would also allow the Army to retain additional mid-grade cadre for future expansibility.

Third, the Army needs to better manage current and future infrastructure to ensure proper allocation of limited resources. The Army needs to continue seeking authorization for a new round of BRAC to reduce the costs of operating excess infrastructure, and the next BRAC round needs to focus more on realignment rather than on outright closure. Preserving available training land should remain a top Army priority. Given the current political climate in Congress, it may be a while before those efforts bear fruit. In the meantime, the Army should seek to lift the moratorium on A-76 competitions and should clarify IGSA authorities. The Army also needs to build upon past success in privatizing non-governmental functions and their associated infrastructure. Candidates for potential future privatization are childcare, retail, barracks, physical fitness facilities and services. These significantly impact the Army's ability to perform its missions, but they are not inherently governmental in nature. Additionally, given the stakeholders in these activities, it is likely that changes to the delivery of these services would be met with some resistance. The Army must include a robust and concentrated information campaign to accompany any future adjustments.

Finally, the Army needs to increase investment in "smart infrastructure" and linked data systems for real-time decision support. Not only would this allow the Army better management of the day-to-day infrastructure operations and service deliveries, but it would also facilitate greater integration with partner communities. Where critical data cannot be collected by sensors, the Army must change the frequency of reporting to allow for more responsive corrections to critical programs and services. The Army must also invest in methodologies to link the separate installation management data systems into a single system that can aggregate data into information that enables decisions. The Army has multiple options for accomplishing this requirement: already-developed commercial software or the Army's Enterprise Management Decision Support system.⁴⁴

Conclusion

The solutions proposed above are not all encompassing, but they are a start to ensure Army installation management is better positioned for success in the anticipated future operating environment. For the Army, that environment is ever more volatile and uncertain, characterized by increasing threats, competition between great powers, rapid technological advances and limited resources. Army installations will continue to be a key enabler of Army missions

and readiness. Future Army installations will be challenged by increasing urbanization and by expanded missions at an increased pace and with reduced resources. The Army's current installation management capabilities suffer from deliberate choices to underfund infrastructure, lack of common understanding and guiding principles, ad hoc career development and uncertain authorities to streamline installation services. Army installation management must, at a minimum, develop comprehensive installation doctrine to provide that common language to guide current operations and leader development. Establishing doctrine sets the stage for the remaining solutions to position future installations to develop a trained cadre, to deliver flexible and responsive infrastructure and services and to enable robust data systems that inform decisions for effective and efficient operations. The Army must act now to ensure that the installation management enterprise has the correct capabilities to be effective in a complex, unknown, unknowable and constantly changing strategic environment.

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