## Predictive Logistics

## Reimagining Sustainment on the 2040 Battlefield



By LTG Heidi J. Hoyle

s we stand on the cusp of a new era in military logistics, the Army is poised to revolutionize the way we sustain our forces on the battlefield. The year 2040 is not a distant future but an imminent reality, and with it comes the need for innovative, forward-thinking strategies to ensure our Soldiers are equipped, supplied, and supported in the most efficient and effective manner possible.

Predictive logistics represents a paradigm shift in how we approach sustainment. Traditional logistics models have been reactive, focusing on responding to needs as they arise. While this approach has served us well, the complexities and uncertainties of the modern battlefield demand a more proactive stance. Predictive logistics leverages advanced technologies such as artificial intelligence, machine learning, and data analytics to anticipate requirements before they become critical, thereby enhancing our readiness and responsiveness.

Imagine a future where our supply chains are not just efficient but intelligent. Where sensors embedded in equipment can predict maintenance needs before failures occur, where algorithms can forecast demand for supplies based on real-time data, and where autonomous systems can deliver these supplies precisely when and where they are needed. This is the promise of predictive logistics a future where our sustainment capabilities are not just meeting the needs of today but are already addressing the challenges of tomorrow.

The journey to this future begins with a commitment to innovation and a willingness to embrace change. It requires investing in the technologies that will drive these advancements and fostering a culture that values data-driven decision making. It also necessitates collaboration across the Army with industry partners and our allies to ensure that our logistics systems are interoperable, resilient, and adaptable to the ever-evolving threats we face.

As the Headquarters, Department of the Army, Deputy Chief of Staff, G-4, I am excited about the potential of predictive logistics transform our sustainment to capabilities. We are already seeing the benefits of these technologies in various sectors, from healthcare to manufacturing, and it is time for the Army to harness this potential enhance our operational to effectiveness.

In the pages that follow, you will read about the pioneering work being done across the Army to bring predictive logistics to life. From the development of advanced analytics tools to the integration of autonomous systems, our Soldiers and civilian workforce are at the forefront of this revolution. Their efforts are not just about improving logistics; they are about ensuring that the U.S. Army remains the most capable and ready force in the world.

As we look ahead to the 2040 battlefield, predictive logistics is

not just a vision for the future it is a necessity. It is the key to ensuring that our Soldiers have the resources they need to accomplish their missions and return home safely. Together, we can reimagine sustainment and build a future where our logistics capabilities are as agile, adaptive, and forwardthinking as the Soldiers they support.

Join us on this journey as we explore the transformative power of predictive logistics and the role it will play in shaping the Army of the future.

Be all you can be. This we'll defend.

LTG Heidi J. Hoyle currently serves as Headquarters, Department of the Army, Deputy Chief of Staff, G-4, and oversees policies and procedures used by Army logisticians. A graduate of the U.S. Military Academy, she has a Master of Science degree in systems engineering from the University of Virginia and a Master of Science degree in national resource strategy from the National Defense University. She is a graduate of the Chemical Officer Basic Course, Combined Logistics Officer Advanced Course, United States Army Command and General Staff College, and the Eisenhower School of National Security and Resource Strategy.

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