

1ST INFANTRY DIVISION

BIANNUAL NEWS FROM 1ID SUSTAINERS

Danger Reach



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1st Edition

MAY 2024

Danger Reach

Danger Reach is a biannual publication showcasing the 1st Infantry Division Sustainment Brigade.
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Contributors

COL Charles L. Montgomery
Editor-in-Chief, Writer
LTC Christian Gatbonton
Writer
LTC Jefferson Grimes
Support
LTC Rich Jones
Writer
MAJ Renee Kane
Writer
CPT(P) Nicholas Pruitt
Writer
1LT Lawford Domineck
Writer
1LT Ty Wilcox
Writer
2LT Derick Sizemore
Editor
CW2 Carlos L. Martinez
Writer
SFC David Edge
Editor, Photographer
SGT Daniela Lechuga
Photographer
SGT Charles Leitner
Photographer
SGT Steven Johnson
Photographer
SPC Kenneth Barnet
Photographer
SPC Joshua Holladay
Photographer
SPC Koltyn O'Marah
Photographer
SPC Dawson Smith
Photographer
Tate Bruggeman
Editor, Layout, Graphic Design
Don Sae Kang
Photographer
Sara Kirby
Graphic Design

On the Cover

Infantry soldiers from the 1st Infantry Division learned new skills from their Armor Crew comrades during Tank Academy, Photo by US Army Photographer Spc. Kenneth Barnet.

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Deputy Commanding General's Note

1ID Brigadier General Niave F. Knell

Greetings from the First Infantry Division at Fort Riley, Kansas! As the Deputy Commanding General of the 1ID, it is my pleasure to welcome you to the inaugural issue of our sustainment publication, "Danger Reach." This magazine is dedicated to showcasing the pioneering strategies we implement within 1ID and celebrating the outstanding contributions of our sustainment Soldiers. I am deeply committed to advancing the innovation and efficacy of our logistics and support operations, which are vital to our Division's readiness and combat effectiveness.

This first edition of "Danger Reach" outlines the goals of the 1ID Sustainment Enterprise, aligning them with the broader Army sustainment community to address both current and emerging challenges. The complex global security environment demands a robust and proactive logistics approach, requiring our leaders to respond with agility today while anticipating and shaping future sustainment capabilities.

I trust that "Danger Reach" will prove to be a valuable resource in your professional development, sparking innovative ideas and discussions that lead to substantive improvements in our operations. Together, let us advance with resolve and determination, embodying the spirit of "No Mission Too Difficult, No Sacrifice Too Great."

From Hell to Victory – We Are the Fighting First.

Duty First!



1ID Sustainment Brigade Commander's Note

Colonel Charles L. Montgomery

Duty First!

Greetings from the First Infantry Division located at Fort Riley, Kansas. We are America's oldest and longest continuously serving Division in the Army, which originated on May 17, 1917! I hope all are well and endeavoring to improve our Army organization positively daily. I am excited to introduce our first edition of the First Infantry Division Sustainment Magazine – "Danger Reach." This magazine covers a vast array of tactical sustainment operations from Brigade Support Battalions (BSB), Division Sustainment Support Battalion (DSSB), and the Division Material Readiness Center (DMRC). The goal is to generate diversity of intellectual thought, which will broaden our aperture in the development of the feasible courses of action when organizational change is required.

The execution of Large-Scale Combat Operations (LSCO) continues to dominate the development of our operational approach as we prepare for future conflict. Divisions must wholeheartedly invest in vertical integration efforts with their parent/supporting Corps and strategic enablers to succeed in mature theaters or austere environments. As the 1ID Senior Sustainment Coordinator, I expect all sustainment professionals to fully understand every tactical operation across the Division and the specific task, purpose, and desired outcome

described by the Commanding General (CG). There is a difference between offense, defense, and stability operations. We cannot overlay generic concepts of support over the top of every operation without an in-depth understanding of the operation and associated requirements. As sustainers, we owe maneuver commanders three outcomes: (1) Prolonged Endurance, (2) Extended Operational Reach, (3) and Freedom of Action. We must accomplish prolonged endurance and operational reach before we can afford the CG freedom of action to execute any desired operational plan designed to close with and destroy the enemy. Therefore, sustainment operations must be nested with the scheme of maneuver to ensure success. The goal is to overlay the validated sustainment synchronization matrix and Division operations synchronization schedule and visually depict how sustainment efforts enable maneuver operations. Sustainment operations will serve as the engine to success or the anchor that hinders the progression of division operations.

The First Infantry Division Sustainment Enterprise has five primary goals: (1) Create multiple sustainment dilemmas for the enemy by implementing multiple modes (air, ground, rail), routes, and nodes. (2) Eliminate single points of failure. (3) Unencumber each sustainment echelon to facilitate displacement. (4) Incorporate the Protection Warfighting Function into

every operation. (5) Execute continuous vertical integration with the supporting expeditionary sustainment command to ensure the ESC Commander fully understands 1ID's support requirements. I hope this magazine generates additional intellectual thought within your organization, leading to continuous improvement. Keep Pressing Forward – No Mission Too Difficult – No Sacrifice Too Great – Duty First!

"From Hell to Victory – We Are the Fighting First"



1ID Sustainment Brigade Command Sergeant Major's Note

Command Sergeant Major Adam R. Bezanson



Hello from the Durable Brigade. As I begin my second quarter in this storied Division, I am truly proud of and impressed with our Soldiers and leaders who execute training and sustainment operations daily for the Big Red One. As I write this, the Durable Brigade has over three hundred Soldiers deployed across the SOUTHCOM, CENTCOM, and EUCOM theaters, accomplishing a myriad of tasks in support of our Division and our Army. I am proud to be a member of this team and look forward to the information sharing this publication provides.

The world is as turbulent as any of us can remember, making it crucial that we lean on each other to refine our approach to the sustainment of Large-Scale Combat Operations (LSCO). Having just completed the Army's premier Warfighter exercise, we know that our team is trained to execute the processes associated with the sustainment warfighting function at the speed of LSCO. However, we have yet to test our team after a nearly fifty percent turnover of senior leaders and the physical fatigue of executing sustainment operations across time and space at the National Training Center. These factors, coupled with a resource constraint regarding personnel, underscore the necessity to invest even more heavily in our junior leaders, our NCO Corps, and each other.

The Army is developing an institutional approach to developing multifunctional NCOs through the Logistics NCO Academy, but we must also leverage the operational pillar of development to further refine and employ these NCOs. I believe that progressive leader development, focusing on doctrine and NCO integration into the planning process prior to and during challenging training events, is the only way to combat the resource shortfall across the formation. By sharing our successes, lessons learned, and insights into how we approach sustainment dilemmas, we can accelerate our learning curve and maximize the operational domain of development.

The Criticality of Sustainment Synchronization in Large-Scale Combat Operations

by COL Charles Montgomery

One distinct difference between counter-insurgency and Large-Scale Combat Operations (LSCO) is battlefield geometry. Fighting over vast geographic distances requires much greater attention to detail. This diligence translates to the continuous ability to sustain combat operations over extended periods. The combination of operating over extended distances, a robust Division-centric led Task Force and limited resources mandates that Sustainment Brigade Commanders emphasize synchronization to achieve a specific sustainment effect in time and space. Joint Publication (JP) 2-0 defines Synchronization as "the arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time." There are two critical levels of synchronization, which include operational and commander-guided synchronization. The identified levels of synchronization represent the lynchpin to achieving maximum relative combat power at a predetermined geographic space of our choos-

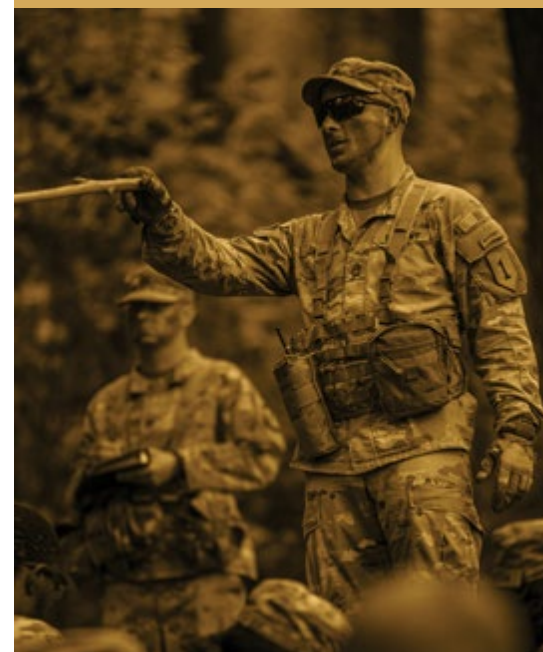
ing. As a second lieutenant deployed to Iraq in 2003 with the 2nd Armored Cavalry Regiment, senior sustainment leaders used supplies backhauled to the Regimental Support Area (RSA) as a critical metric that our planning lacked precision, which placed our Soldiers' lives in the balance. This way of thinking remains relevant today. Limited resources demand greater attention to precise, detailed planning to ensure the correct supplies arrive at the designated unit in time and space. General Charles R. Hamilton, Army Materiel Command - Commanding General, stated, "The Army Sustainment Enterprise's pivot to data-enabled sustainment and predictive logistics will ensure we deliver precisely what's necessary before it's needed under limited time constraints and across vast distances." Deliberate synchronization is the bridge to executing precision sustainment operations in LSCO. Brigade Combat Teams (BCT) Support Operations Officers (SPO), Division SPO, G4, and the Army Field Support Battalion (AFSBn)

"Sustainment synchronization at echelon is the catalyst for generating effective, shared understanding within the Division."



U.S. Army Gen. Andrew P. Poppas, commanding general of U.S. Army Forces Command, and Maj. Gen. John V. Meyer III, commanding general of the 1st Infantry Division and Fort Riley, return from their aerial tour on Fort Riley, Kansas, March 29, 2023. Poppas visited Fort Riley to discuss new leadership development strategies. (U.S. Army photo by Spc. Dawson Smith)

U.S. Army Sgt. 1st Class Corey Jacobs, an infantryman with the 1st Battalion, 16th Infantry Regiment, conducts an after-action review with cadets post-training at Fort Knox, Kentucky, on July 19, 2023. NCOs from the 1st Infantry Division supported Cadet Summer Training to mentor future Army leaders. (U.S. Army photo by Sgt. Charles Leitner)



Commander must ruthlessly merge data during routine coordination sessions to ensure the precise sustainment resources are aligned with the maneuver force to maintain prolonged endurance. The key players within the sustainment synchronization decision cycle include the Division Materiel Readiness Center (DMRC), AFSBn, the Division Sustainment Leadership (Deputy Commanding General – Support (DCG-S), Division Sustainment Brigade Commander, Division G4, and the Division SPO). The DMRC's focus on synchronization will enable timely decisions affecting the sustainment process, generating a more considerable shared understanding before and during execution to ensure victory in war.

Division Materiel Readiness Center

The primary driver of division sustainment synchronization is the Division SPO. The Division SPO operates the DMRC, which consists of three sections: the Materiel Readiness Branch (MRB), the Division Integration Branch (DIB), and the Transportation Branch. The DMRC's primary mission is to direct, integrate, syn-

chronize, prioritize, and optimize the supply function, including maintenance and transportation. The DMRC is responsible for analyzing the division's sustainment information flow to determine support requirements to provide uninterrupted sustainment to maneuver commanders. This type of synchronization falls within the operational level. The Division SPO attends the following sustainment-focused meetings: Logistics Synchronization Working Group (WG), Distribution Management Board, Movement Board, Medical WG, Personnel WG, and Decision Board, which helps validate sustainment running estimates which enables the Sustainment Brigade Commander to direct sustainment resources to restore maneuver units to desired levels based on tactical operations. Specific outputs are generated from each battle rhythm event, which generates priority information requirements for the DCG-S and Sustainment Brigade Commander, that enables decision-making. The Division SPO constantly gains visibility of maneuver operations on the ground, with direct and indirect input from sustainment professionals within the BCT. Operational

synchronization connects division capabilities with maneuver requirements, generating a deliberate process for properly employing people and material. This process eliminates historical actions of throwing abundant resources at a problem and backhauling what is not utilized. Establishing a deliberate synchronization process gets the right supplies to the right place in time and space. This type of deliberate behavior generates greater operational endurance by utilizing data to drive the system, allowing sustainment leaders to apply absolute prudence to the synchronization process.

Key Leader Decision Cycle

From a process-oriented coordination aspect, information synchronization inter-

sects within the Division SPO, generating critical decisions for sustainment leaders. The DCG-S and the Sustainment Brigade Commander are responsible for the Division's sustainment enterprise. Both senior leaders have established requisite decision-making authority; however, communicating all decisions at echelon allows everyone to visualize Division operations holistically. The two key sustainment synchronization engagements are the Logistics Synchronization Meeting and the Movement Board. The Division SPO validates BCT consumption rates and develops future requirements based on operations, the unit's current on-hand quantities, and maximum storage capacity. Like maneuver commanders drive the tactical planning process, sustainment commanders drive the sustainment plan-

ning process to ensure their supported units receive the right supplies at the right time. These two planning processes occur simultaneously, not in isolation. The Division SPO must understand what is available within the Division, Corps Rear Area, and Theater to ensure all divisional sustainment requirements are appropriately addressed, especially when the Division is the Corps Main Effort (ME). This level of synchronization centers around the commander to ensure the sustainment architecture achieves the commanding general's sustainment objectives to enable operations. To manage transitions effectively, sustainment commanders must operate three to five Air Tasking Order (ATO) cycles ahead of the Division's current fight. Managing transitions is primarily driven through con-

sistent commander's dialogue with the commanding general, which enables the ability to anticipate sustainment requirements through a distinct visualization process. One of the most challenging sustainment responsibilities is appropriately managing operational transitions. Therefore, the Sustainment Brigade Commander must stay connected to DMRC operations to ensure precision throughout the operation, especially at decisive points in the battle. This complete understanding of where the Division is operating in time and space allows the Sustainment Brigade Commander the intellectual capacity to visualize where to preposition sustainment resources throughout the area of operations, which allows the maneuver force to maintain pace and tempo. The Sustainment De-

cision Support Matrix represents an essential decision support tool, which is generated collaboratively between the Division G4, Division SPO, Division G1, Division Surgeon, AFSBn Commander, and the Contracting Battalion Commander. The aforementioned leaders have a distinct role within the sustainment enterprise, and their inputs and observations populate the logistics, personnel, and medical common operational pictures, which enable timely decisions. The inability to gather critical information promptly will severely derail the synchronization process based on delayed decision-making. The current strategic environment is complex; information is a weapon system that could produce positive or negative gains based on where the organization resides within the information continuum.

Leaders must understand what information to gather and share within the organization to produce positive operational gains.

Generating Shared Understanding

Sustainment synchronization at echelon is the catalyst for generating effective, shared understanding within the Division. The critical document enabling shared understanding is the sustainment synchronization matrix, a byproduct of all the boards, cells, and working groups addressing rear, close, and deep Division tactical operations. Army Doctrine Publication (ADP) 6-0 Mission Command states, "Creating shared understanding of the issues, concerns, and abilities of commanders, subordinates, and unified

U.S. Army Soldiers assigned to the 1st Infantry Division breakdown tents at a Fort Riley, Kansas training site, on Oct. 24, 2023. Elements belonging to the 1st Inf. Div.'s Headquarters and Headquarters Battalion, Sustainment Brigade, Signal Company, and Division Artillery broke down the site to relocate during the initial stages of Danger Ready II, a series of ongoing exercises designed to prepare Soldiers for an upcoming multinational Warfighter exercise, on Fort Riley, Kansas. (U.S. Army photo by Sgt. Charles Leitner)



action partners takes an investment of time and effort." Investing adequate time to synchronize the Division Sustainment Enterprise unequivocally represents a worthwhile investment for senior leaders. The more sustainment leaders invest in this process, the probability of tactical success increases substantially. The Division, in the purest sense, encompasses approximately 11,500 Soldiers. Including Corps elements operating forward in the Division Area of Operations (AOR) easily increases the Division's total force to

over 15,000 Soldiers. However, the Forward Support Company (FSC) still represents the farthest Divisional Sustainment operational reach element. Thus, deliberate synchronization starts with the FSC Commander and progresses to the Sustainment Brigade Commander and DCG-S to ensure the Division's sustainment shared understanding enables the total fight. Sustainment leaders must clearly comprehend holistic battlefield geometry from the Forward Line of Troops (FLOT), Brigade Support Area

(BSA), and Division Support Area (DSA) to include total distances (0-150 KMs). This knowledge allows sustainment leaders to effectively calculate time/distance to ensure sustainment serves as the engine to maneuver operational success and not the anchor.

Sustainment synchronization in LSCO is vital to Division Warfighting success. The global force distribution represents a more complex problem set combined with reduced resources. However, the

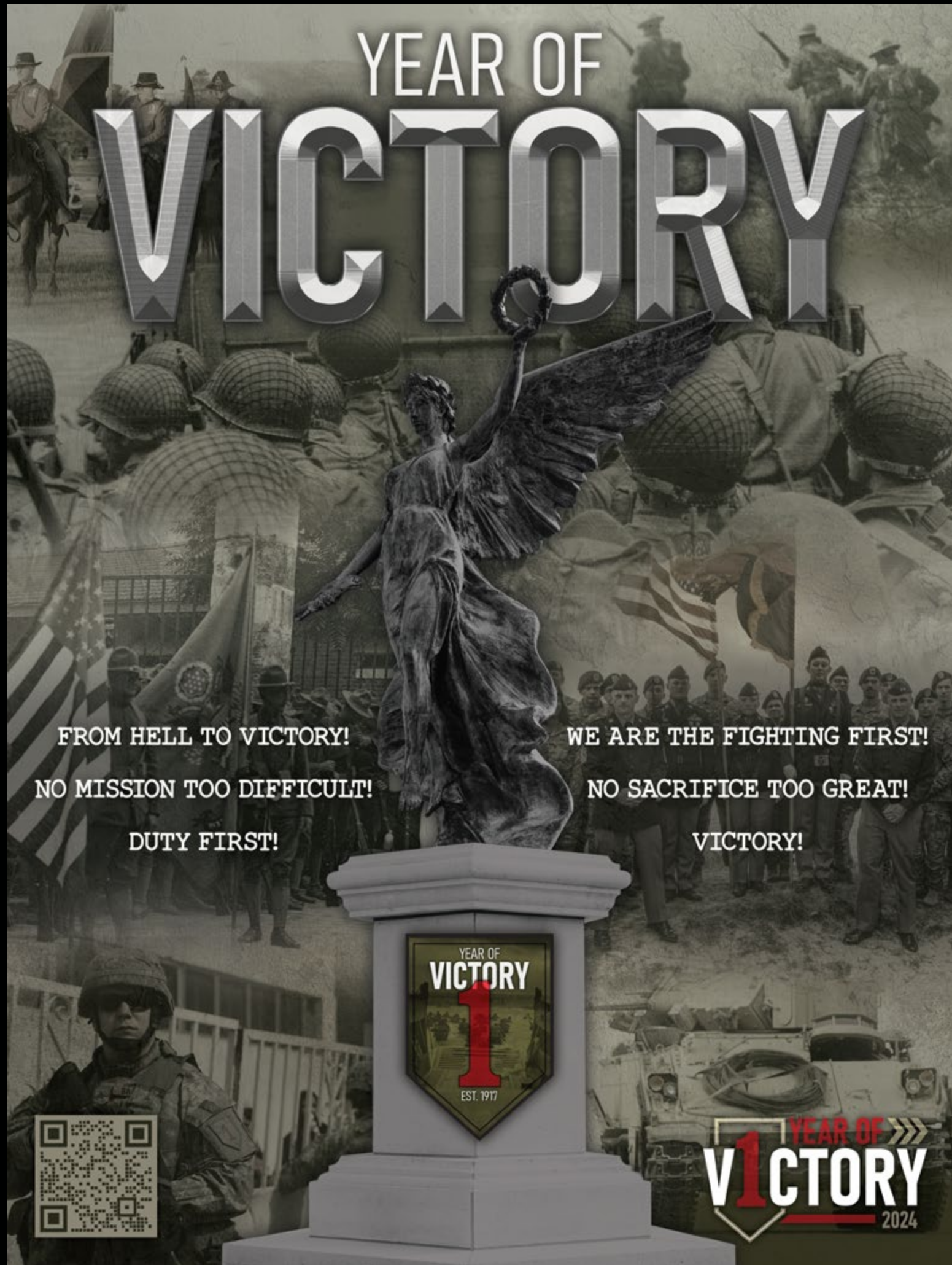
expectations to fight and win our Nation's wars remain the same. Leaders must maximize all training opportunities to exercise and build increased capacity to communicate over vast distances to effectively synchronize operations to achieve victory in war. Rapidly creating a shared understanding from the FLOT to the Division Rear AOR will enable the commanding general to visualize operations faster with an in-depth understanding of how sustainment will afford maneuver forces to close with and destroy the enemy with continuous operational

endurance. Sustainment Professionals must deliberately plan to combat contested logistics to enable operations. Maneuver Enhancement Brigade's (MEB) and Military Police units execute distinct roles in the Protection Warfighting Function, which enable the protection of vital sustainment assets executing operations. The sustainment center of gravity is the DMRC. The DMRC's ability to consistently direct, integrate, and prioritize material management across the Division enables uninterrupted support, which is paramount to tactical success. Intellectual

agility is a skill that sustainment leaders must master at echelon to maintain pace with LSCO operational demands. LSCO will require leaders to think through sustainment operational dilemmas based on the lack of resources. The criticality of sustainment synchronization in Large-Scale Combat Operations represents the key to success or failure, which will affect our ability to fight and win our Nation's wars.



1ST INFANTRY DIVISION



YEAR OF VICTORY

FROM HELL TO VICTORY!
NO MISSION TOO DIFFICULT!
DUTY FIRST!

WE ARE THE FIGHTING FIRST!
NO SACRIFICE TOO GREAT!
VICTORY!



CSM DEREK NOYES
COMMAND SERGEANT MAJOR
1ST INFANTRY DIVISION



MG JOHN V. MEYER III
COMMANDING GENERAL
1ST INFANTRY DIVISION



U.S. Army Chief Warrant Officer 2 Jason Tabor, an Automotive Maintenance Warrant Officer assigned to A Company, 541st Division Sustainment Support Battalion, 1st Infantry Division Sustainment Brigade, 1st Infantry Division, selects tools needed to perform maintenance on a Light Medium Tactical Vehicle at the Rotational Unit Field Maintenance Area on Fort Irwin, California, August 14, 2022. 1DSB attended the 22-09 rotation at the National Training Center to support the 2nd Armored Brigade Combat Team, 1st Infantry Division, by supplying food and water services, fuel, and heavy vehicle recovery. (U.S. Army photo by Spc. Joshua Holladay)



"Investing the time and training required to develop an RX/DX program has the potential to save units millions of dollars in operational funds."

Increasing ABCT Readiness through LRU Repair and Replacement

Reparable Exchange/ Direct Exchange (RX/DX)

by LTC Rich Jones

Abrams and Bradley readiness is critical to an Armored Brigade Combat Team's (ABCT) operational readiness. A central component of Abrams and Bradley readiness is the management of line replaceable units (LRUs) or shop replaceable units (SRUs). Within the Sustainment Warfighting function, more specifically the logistics element, LRU/SRU management deals with two aspects: maintenance and supply. To properly manage LRU/SRUs and maintain combat power we need to understand how we should manage these items, what challenges we will face, and how to overcome these challenges. If done correctly units will save millions of dollars in operational funds, increase Abrams and Bradley readiness, and have a system in place to maintain combat power.

LRUs and SRUs

LRUs and SRUs are electrical units in the Abrams and Bradley platforms that work in concert to control several functions including: vehicle power distribution, forward looking infrared cameras, data management, optics and sighting, ballistic solutions, and location identification. Whether you have LRUs or SRUs depends on the version of the combat platform, for simplicities sake I'll refer to both LRUs and SRUs simply as LRUs. These electrical units are designed to be replaceable on the platform if the Abram or Bradley indicates a faulty LRU. Replacing

faulty LRUs allows maintainers to keep the platform operational while repairs to the LRUs are conducted in the Brigade Support Battalion (BSB). Managing this process is a matter of understanding the maintenance and supply actions required and where these actions take place within the ABCT.

LRU Management in Doctrine: ATP 4.33 Maintenance Operations (2-24)

When an Abrams or Bradley indicates a faulty LRU, a supply action must occur to keep that platform in the fight. This supply action is from the Forward Support Company (FSC) using their shop stock of serviceable LRUs. The FSC then conducts a maintenance action, opening a work order with the BSB to repair the faulty LRU. The faulty LRU is repaired in the BSB's Field Maintenance Company's (B Co) Communication and Electronics (C&E) shop. The C&E shop conducts these repairs by diagnosing faulty LRU components (e.g. circuit cards and wiring harnesses) using the Next Generation Automatic Test System (NGATS). LRUs that cannot be repaired are returned to the FSC so a replacement can be ordered. This replacement comes from stocks within the ABCTs supply support activity. The replacement LRU goes back into the FSCs shop stock.

Cost Savings: Repair versus Replace

Repairing LRUs by replacing components saves time and money compared to ordering replacement LRUs. Components are generally a fraction of the total LRU costs. Using data from Army Vantage we can see the scope of how much units spend on replacement LRUs and the potential cost savings that can be gained by having a process to manage repairs and replacement. This data reflects purchase orders for replacement LRUs. The basic assumption is that if we are repairing LRUs we are not replacing them. From Jan 2013 to May 2023, FORSCOM units have spent a total of \$980 Million on replacement Abrams and Bradley LRUs. Displaying this data in a timeseries helps us visualize the impacts of recent changes in LRU repairs and how those may be challenges to our maintenance programs. In the graph below, the total value of LRU orders for FORSCOM units are displayed in the green bars (\$980M) over the last ten years. The total quantity of LRUs ordered is summarized in the blue line on the secondary axis. The largest disparity, seen by the sharp rise in value and quantity from 2013 to 2015, could be due to the transition to GCSS-A. Vantage may not adequately reflect data during this time as units were transitioning. If we overlay some additional context of how LRU repairs have changed we can draw a few conclusions on how to better manage this process.



Addressing LRU management in SOPs Identify First-hand Experience Opportunities

Each echelon must understand their maintenance and supply requirements for an RX/DX program to succeed. ATP 4.33 (Maintenance Operations) offers a brief overview of the actions required at each echelon. Units must take that overview and describe how that looks at the FSC and BSB, detailing the actions and responsibilities required in an SOP. The Brigade must identify and validate that shop stock and authorized stockage lists reflect an optimal (and varied) amount of command directed LRUs. This gives the repair section time and space to conduct repairs versus order replacement LRUs.

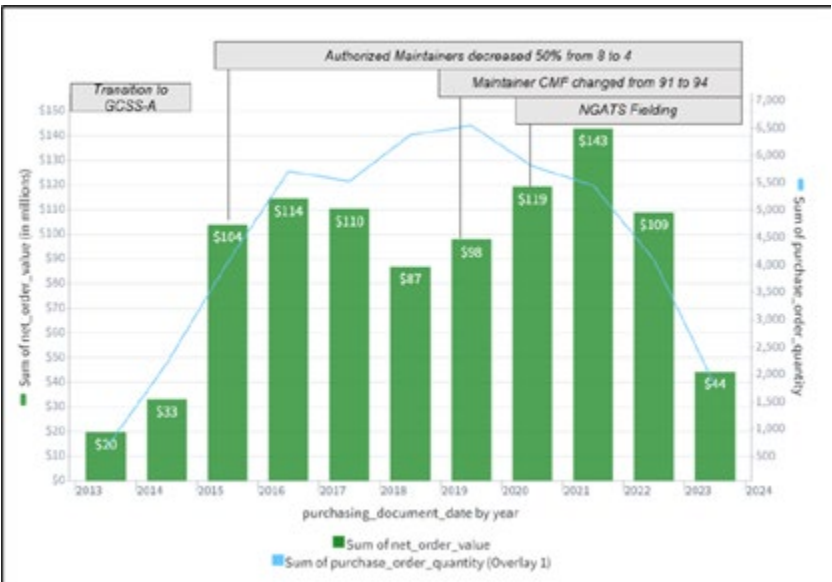
Leaders must seek out opportunities to build experience and gain knowledge beyond cross-training. Diagnosing faults and repairing LRUs is time consuming. Gaining experience and learning common faults and indicators helps to speed up the repair process and get LRUs back in stocks or in platforms, translating to higher operational readiness. Leaders must invest in training opportunities for both the 948B and 948D to build this experience. An iterative, long-term development plan will cost some initial TDY funding, but will pay dividends in the long-run.

Cross-train other 94-Series Soldiers

The 50% decrease in total 94Ys authorized creates a significant challenge for managing LRU repair workload. This can be mitigated by cross-training the four 94As (Land Combat Electronic Missile System Repairer). Training these Soldiers in LRU diagnostics and repairs builds depth in the repair section and provides flexibility.

Investing the time and training required to develop an RX/DX program has the potential to save units millions of dollars in operational funds. Your RX/DX must be in line with how LRU management is outlined in ATP 4.33. It must be written in a unit SOP, and unit responsibilities must be understood at each echelon. For your program to succeed, it is essential to invest time and training to mitigate the recent changes to the LRU repair section. The outcome will be an increase in Abrams and Bradley operational readiness, and a decrease in ordering replacement LRUs.

Graph 1: Total LRU Orders 1 Jan 2013-May2023.



Generation Automatic Test System (NGATS). Additionally, in FY2019 the 91Gs transitioned to 94Ys (Automatic Test Systems Operator and Maintainer) and the Warrant Officer leading the section went from a 913A (Armament Systems Maintenance Warrant Officer) to a 948B (Electronic Systems Maintenance Warrant Officer). That amount of change to the repair section may indicate why we had spikes and upward trends in both FY2015 and FY2019. Conversely the recent downward trend from FY2021-2022, may indicate we are gaining experience and knowledge in the way we manage LRUs.

Changes in the LRU Repair Section

The term Reparable Exchange/Direct Exchange or RX/DX is not as widely used today as it was when I first entered the Army in 2004. As a Shop Officer in 3BCT, 3ID it was a familiar term that was used often to describe the supply and maintenance actions we used to keep Abrams and Bradley platforms operational. At that time, LRUs were repaired by 45G- Fire Control Repairer, which later became a 91G. From FY2012- FY2015, the BSB was authorized eight 91Gs operating two Direct Support Electrical Systems Test Sets (DSESTS). From FY2015 to FY2016, the authorization of 91Gs dropped 50% down to four 91Gs. The two DSESTS remained, but in a few years were replaced with the Next

Improving LRU Repair Capability

The same challenges that impacted total LRU replacement expenditures can be viewed as opportunities to increase LRU repair capability. These opportunities require leaders to invest in their repair capability and set conditions for the repair section to succeed. Establishing an SOP for LRU management, cross-training additional 94-series Soldiers, and investing in first-hand experience opportunities all set conditions that build knowledge and skill required to repair versus replace.

An M1A2 Abrams tank operated by Soldiers with the 3rd Battalion, 66th Armored Regiment, 1st Infantry Division, is inspected before being sent out to fire on Fort Riley, Kansas, June, 22, 2023. The Soldiers manning the tank were at the range to conduct gunnery qualification tables. (U.S. Army photo by Spc. Koltyn O'Marah)

U.S. Army Spc. Hector Perez, an allied trade specialist assigned to the 101st Brigade Support Battalion, 1st Armored Brigade Combat Team, 1st Infantry Division, melts a damaged bolt using an exothermic cutter on Fort Riley, Kansas, on Feb. 15, 2023. Perez demonstrated the tool's capabilities during a visit by Sgt. Maj. Paul Gomez, the Army Ordnance Corps chief enlisted career manager. (U.S. Army photo by Sgt. Charles Leitner)





In Honor of Larry Taylor



U.S. Army Brig. Gen. Niave F. Knell, the deputy commanding general support of the 1st Infantry Division, renders final honors to Capt. Larry L. Taylor's burial flag, during a memorial service at the Chattanooga National Cemetery in Chattanooga, Tennessee, on Feb. 7, 2024. Due to his exemplary service and courage in a near-death rescue mission, Taylor received the Medal of Honor on Sept. 5, 2023. (U.S. Army photo by Spc. Dawson Smith)

Leave No Man Behind



Larry Taylor

Captain (R)
Vietnam Veteran
of the Big Red One

Medal of Honor

Recipient as an AH-1G Cobra helicopter gunship pilot



Maximizing the Effectiveness of the Next Generation Automatic Test System (NGATS)

by CW2 Carlos L. Martinez

The Next Generation Automatic Test System (NGATS) is a single diagnostics and testing system for Field, Sustainment, and Depot Maintenance supporting current and future Army systems. NGATS was first introduced in November 2020 and replaces Direct Support Electrical Systems Test Set (DSESTS) for Abrams and Bradley platforms, Base Shop Test Facility (BSTF) for Ground Missile Systems and Kiowa Electronics, and the Electro-Optics Test Facility (EOTF) for Kiowa and Apache Electro-Optics. NGATS combines all previous legacy capabilities into one system for a more modern approach to the battlefield. NGATS is comprised of two standard, international 20ft containers per system (one Automatic Test Equipment and Test Program Set).

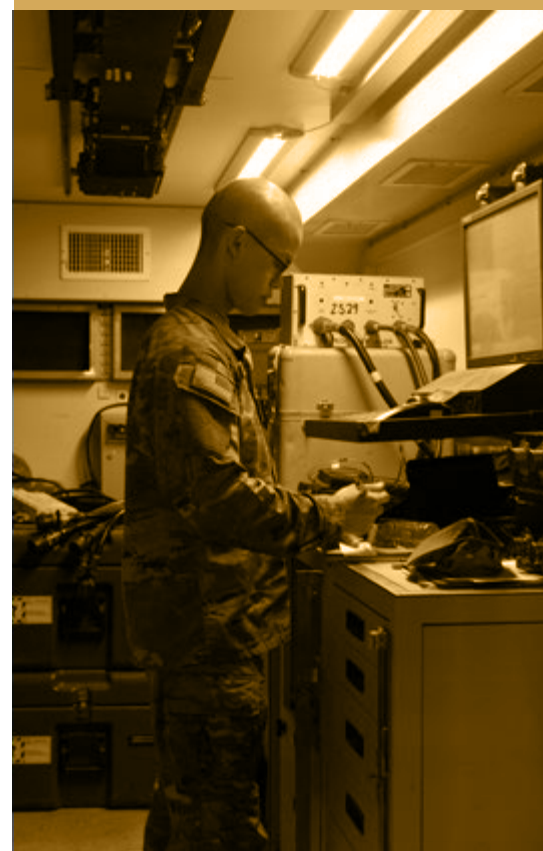
2nd Armored Brigade Combat Team, "Dagger," 1st Infantry Division, at Fort Riley, Kansas was fielded the NGATS in June 2022 and by September 2022 the

Dagger Brigade had already put the new system to the test during the Brigade's Emergency Deployment Readiness Exercise NTC Rotation 22-09. Immediately upon return from NTC, the NGATS was again prepared for shipment overseas to support Dagger across Europe as part of Operation European Deter, Assure, and Reinforce. After a year and half of around-the-clock operations, nobody is more qualified than Dagger to answer the important question; is the Army fully leveraging the astonishing capabilities available in the NGATS? After a year and a half of experiences with NGATS the Dagger brigade has identified three additional sub-questions important to help find the answer. 1) Is the NGATS durable enough to endure the rigors of the Army life? 2) Does the Army have the right MTOE of personnel and equipment to take full advantage of the NGATS capability? 3) Is there a sufficient quantity of NGATS fielded to ABCTs?

"The Next Generation Automatic Test System (NGATS) combines all previous legacy capabilities into one system for a more modern approach to the battlefield."



U. S. Army Private First Class Joseph Caldwell, a Next Generation Automatic Test System (NGATS) Operator assigned to B Company, 299th Brigade Support Battalion, 2nd Armor Brigade Combat Team, 1st Infantry Division, diagnosing line replaceable units (LRUs) for Abrams battle tanks and Bradley infantry fighting vehicles on Fort Riley, Kansas, April 26, 2024. (Photo by Sfc. David L. Edge)



NGATS operators test blackout procedures in the shelter, preparing for an upcoming field training exercise (FTX) on Fort Riley, Kansas, on April 26, 2024. (Photo by Sfc. David L. Edge)

DURABILITY: One lesson Dagger learned early on through its back-to-back deployments was that the NGATS is it is not designed sufficiently to handle the harsh conditions of repeated deployments like other modular container systems. It is critical to utilize the guidance given by Force Management System (FMS) web which is 'only transport by Air

sustained it is expected the system will have to be returned to the manufacturer for repairs, directly affecting the brigade's ability to maintain combat power.

On sea vessel, Dagger also learned that the NGATS interior will be exposed to the ocean elements if taking too much exterior damage. During the return voy-

"The Army has fielded the NGATS to ABCTs and thereby greatly increased its repair capability."

and land (M1120 Load Handling System {LHS}). Each time the NGATS was transported as general cargo it sustained substantial damage at ports, during rail operations, line-hauls, and during sea voyages. On land, a majority of the damage to NGATS was caused by Materiel Handling Equipment (MHE). Dagger NGATS Systems experienced severe damage such as the forks of the MHE actually puncturing through the outer walls of the system and minor damage such as metal shearing from the bottom as MHE forks slide through the built-in MHE slots. Unfortunately, the NGATS containers are not as durable as standard 20ft containers and are easily damaged if not handled with extreme caution. This was experienced both times upon receipt of the equipment at NTC and in Europe. Additionally, Dagger learned that the NGATS equipment cannot be stored at port with standard shipping containers where they are stacked on top of each other. This is due to NGATS having a weaker type of metal on the walls which can get damaged by physical contact of the 40ft shipping containers.

To help mitigate continued MHE damage, Dagger assigned a service member from the NGATS section to oversee the downloading of the equipment. Majority of the damaged sustained was able to be repaired by skillful Allied Trades technicians. However, if further damage is

age from Europe water leaked into one of the NGATS containers resulted in water damage throughout, and the walls, electronics, and circuit cards were covered in mold. This immediately impacted the brigade's ability to conduct maintenance toward Line Replaceable Units (LRUs) and took several weeks to clean and test the equipment ensuring it was fully mission capable (FMC).

RIGHT MTOE: Heading into NTC Rotation 22-09, Dagger estimated having to repair at least 10 LRUs each day; output of FMC LRUs would need to be high in order to keep up with the expected workload. As the rotation progressed, all of Dagger 94Ys (x4) and 94As (x2) were utilized to the fullest to maintain outflow but the requirement outpaced the available manpower. Dagger was forced to request support from 11th ACR NGATS personnel and equipment as well as some additional 1st AD NGATS personnel.

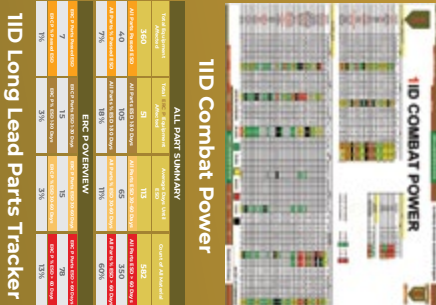
During its deployment in Europe, the brigade was spread out across Eastern Europe due to multiple missions. Because of this, the NGATS section was split in half between two locations. They quickly realized the authorized quantity of 94Ys was insufficient to support both locations. At times they were forced to allocate other 94 career management fields to fill NGATS personnel gaps. This instantly

IID Division Materiel Readiness Center (DMRC)

1. IID DMRC Synchronizes sustainment across the Division to include enterprise integration, SME advisory, reporting, tracking, and validating, analyzing data for the Commander.



2. Lead Integrator for IID readiness, providing analysis and coordination through the sustainment enterprise to expedite critical parts to sustain operations.



IID Long Lead Parts Tracker

IIDS8 GENERAL SUPPLY SECTION

Warehouse Activity Monitor

Warehouse	Quantity	Value	Unit
Warehouse 1	100	1000	1
Warehouse 2	200	2000	1
Warehouse 3	300	3000	1
Warehouse 4	400	4000	1
Warehouse 5	500	5000	1
Warehouse 6	600	6000	1
Warehouse 7	700	7000	1
Warehouse 8	800	8000	1
Warehouse 9	900	9000	1
Warehouse 10	1000	10000	1

IIDS8 GENERAL SUPPLY SECTION

90N Monthly Inventory

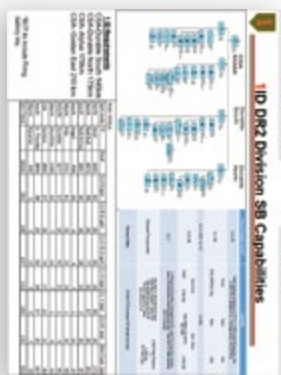
Item	Quantity	Value	Unit
Item 1	100	1000	1
Item 2	200	2000	1
Item 3	300	3000	1
Item 4	400	4000	1
Item 5	500	5000	1
Item 6	600	6000	1
Item 7	700	7000	1
Item 8	800	8000	1
Item 9	900	9000	1
Item 10	1000	10000	1

IIDS8 GENERAL SUPPLY SECTION

90N Customer Wait Time (by Priority/CLM)

Priority	CLM	Wait Time
High	1	10
High	2	20
High	3	30
High	4	40
High	5	50
High	6	60
High	7	70
High	8	80
High	9	90
High	10	100

How the DMRC supports IID



3. Develop sustainment estimates to determine the adequacy of the current support concept and make Recommended changes to the concept as required
4. Develop and employ Brigade Assistance Teams (BAT) as FWD Sustainment Support packages to support each IID Maneuver Brigade. When deployed the FWD Sustainment Support Package is augmented with C2 and expanded sustainment support to synchronize the sustainment enterprise to fully support any FWD mission (NTC, Deployment, DSCA, Home station readiness issues) leveraging the IIDS8 DMRC capabilities from deployment through mission completion Worldwide

EXAMPLE OF DMRC FWD SUSTAINMENT SUPPORT PACKAGE (5 X PERSONNEL)



Who we are:

The DMRC is designed to be the senior subject matter experts on all sustainment and materiel readiness issues within the First Infantry Division. The DMRC integrates and synchronizes sustainment functions: maintenance, CL VII management, GSO, supply and services, transportation, operational contract support, human resources, sustainment information systems and manages distribution ICW the sustainment enterprise and IID Staff to ensure IID Commander's freedom of action, prolonged endurance, and extend the Division's operational reach to achieve any mission from FRKs to Large-Scale Combat Operations (LSCO).



1st Infantry Division Sustainment Brigade



NGATS capability, this would provide ABCT's the pass-back capability that currently does not exist and could cut diagnostics and repair time in half.

IN CONCLUSION

The answer to the question, "is the Army fully leveraging the incredible capabilities available in the NGATS?" is both yes and no. The Army has fielded the NGATS to ABCTs and thereby greatly increased its repair capability. However, it still has a long way to go to fully leverage all that NGATS has to offer. The current equipment/personnel MTOE is still not compatible for the ABCT workload and will never maximize the performance of the NGATS until it is increased. The NGATS containers needs to be manufactured with thicker gauge sheet metal and watertight if it is expected to withstand mobility movements, and until then, units need to comply with the guidance to only move NGATS by LHS system and Air. Finally, the Army needs to field the SMCs within the DSSBs with the NGATS to provide backup support to the ABCTs. With these adjustments, the Army is well on its way to taking full advantage of a remarkable system.

position. The lack of 94Y NCOs damages section efficiency, once split apart from one another there is an absence in direction, QA/QC, and leadership required for one team. Due to the needs of the current mission set, the number of tracks needing LRU testing is still overflowing within the brigade.

QUANTITY OF NGATS in ABCT/DIV:

It is fair to ask the question, would adding an NGATS to the Support Maintenance Company's (SMC) within the Division Sustainment Support Battalion (DSSB) be beneficial to the Army?

Dagger Brigade's M1A2 SEP V2 platforms are constantly requiring maintenance from the high performance and taxing field training environments. This results in hundreds of LRUs each year needing repair or replacement. Throughout the fiscal year the NGATS section is backlogged with the immense amounts of LRUs that require diagnostics and repair.

This backlog results in usage of the Logistics Readiness Center's (LRC) Direct Support Electrical Systems Test Sets (DSESTS) section for the overflow of LRUs needing service. 1st Armor Brigade Combat Team, 1st Infantry Division has also confirmed they have had to utilize the same resources due to the influx of damaged LRUs. If the SMC were to have

reduced capabilities from other missions 94s could have been employed towards. Likewise, not having the proper amount of 94Ys in both locations prevented the NGATS section from becoming a self-sustaining entity putting them at the mercy of each attached battalion's availability.

Through the crucibles of NTC and their European deployment, Dagger developed recommendations for tactics, techniques, and procedures and MTOE changes to mitigate the lack of manpower. Firstly, use teams of three instead of teams of two to increase throughput of diagnosing, testing, and repairing LRUs (one to run an LRU in the NGATS; the other to repair LRUs; and the last would be the QA/QC supervisor). This is necessary due to the high volume of jobs that come in at one time and it would assist in maintaining high production.

Secondly, update the current MTOE authorization to a minimum of six, maximum of eight 94Ys to compete with mission workloads without forcing the need of outside the unit support. This would also allow the NGATS section the ability to move itself with its authorized four M1120 Load Handling Systems (LHS), to which with its current authorized personnel configuration it cannot. Lastly, increase the authorized number of 94Y E5 to two, and one 94Y SSG/E-6



Division Sustainment Brigade Support to the First Infantry Division

Distribution Integration Branch

Integrates anticipated available transportation assets (by mode and node as provided by the transportation operation branch) with forecasted materiel and service requirements (provided by the materiel management branch) to develop a distribution plan.

Coordinates within the sustainment enterprise to create a shared understanding, maintain visibility of commodities for distribution,

Transportation section

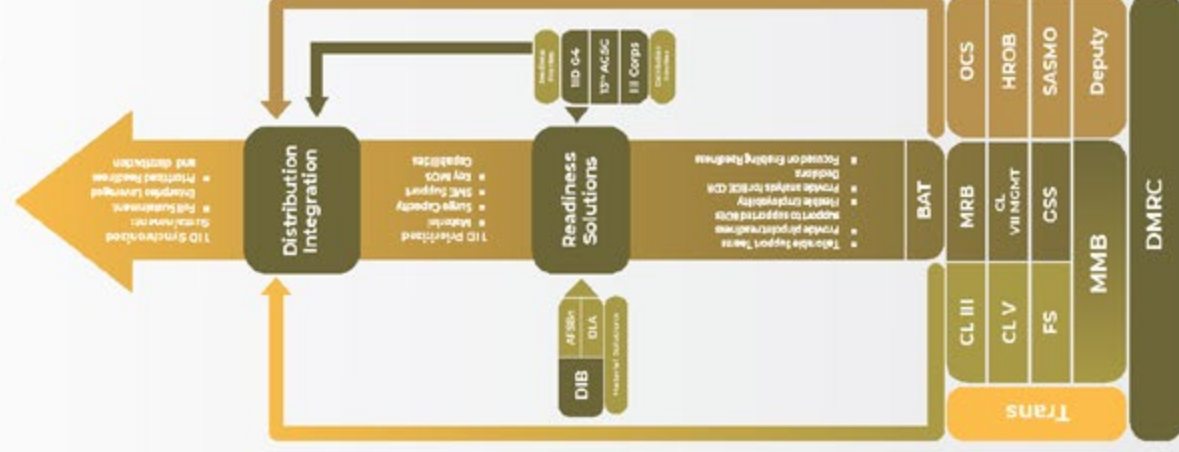
Validates and executes the division's movement program via Transportation Movement Releases (TMR) and levied against the Divisions priorities provided by the G3 and DTO. The section tracks the Common User Land Transport (CULT) status for the IIDSb. TRANS synchronizes and coordinates with the DTO/CTO/TSC/ESC and another adjacent units to maximize distribution to meet the IID CG's priorities

Sustainment Automation Support Management Office (SASMO)

Responsible for providing dedicated automation support to logistics automation systems. Conducts upgrades, patching, training, and Software installs on all LIS (Logistical Information Systems).

End State

IID, as the principal warfighting formation, can leverage the Sustainment Enterprise at home or deployed to accomplish any mission and defeat any enemy.



Materiel Management Branch

The Materiel Management Branch (MMB) executes divisional materiel management and readiness functions. It is responsible for managing, forecasting, and analyzing materiel stockage, consumption and readiness within the division AO. Materiel management functions are the warehousing, managing, cataloging, requirements determination, and requirements validation and prioritization for procurement, distribution, redistribution of excess, and retrograding of materiel. The sections within the materiel management branch include supply, fuel and water, munitions, maintenance, class VII, and field services.

The MMB directs all classes of supply to maximize combat power and enable freedom of action in accordance with the division commander's priorities.

Operation Contracting Support

synchronizes operational planning in coordination with the division G-4 and supporting contracting elements. The DSB OCS section reviews statements of work or performance work statements, independent government estimates, requirement justification documentation, and purchase requests from division subordinate units for IID decision.

Human Resource Operations Branch

Responsible for providing dedicated automation support to logistics automation systems. Conducts upgrades, patching, training, and Software installs on all LIS (Logistical Information Systems).

[Left] The NGATS team conducts daily operations in the 299 Brigade Support Battalion motor pool. (Photo by Sfc. David L. Edge)

U. S. Army Private First Class Joseph Caldwell, a Next Generation Automatic Test System (NGATS) Operator assigned to B Company, 299th Brigade Support Battalion, 2nd Armor Brigade Combat Team, 1st Infantry Division, repairing line replaceable units (LRUs) for Abrams battle tanks and Bradley infantry fighting vehicles while in blackout procedures for Fort Riley, Kansas, April 26, 2024. (Photo by Sfc. David L. Edge)

Create Positive Change in an Organizational Maintenance Culture through Soldier and leader Buy-in and Business Process Transformation

Operationalize Maintenance Culture

by LTC Christian Gathbonton

"Leaders must be actively involved in maintenance activities and set the example for their Soldiers."

Commanders are directed by Army Regulation 750-1 (Army Materiel Maintenance Policy) to maintain equipment to 10/20 standard. To meet this requirement, it is critical for any organization to have a culture that is grounded through systems and processes, maintenance buy-in (ownership), and pride in mission accomplishment. These systems and processes become degraded over time due to leadership change over, major training events, deployments, and shifts in priorities. One of the most difficult tasks faced by any unit is to implement or restore this culture. Numerous internal and external factors inhibit progress. Any true change comes at a cost of either time or overcoming resistance to change. Leaders and even the most experienced Soldiers can become more resistant and polarized to transformation if they are not open-minded or lack the grit to persevere. (Epstein 2019) Even then, most leaders may not want to expend energy to affect change knowing that they will not see immediate results; true change

is not a short-term win. However, this should not prevent leaders and Soldiers from leaving an indelible mark that enable future units to deploy, fight and win our Nation's wars.

Maintenance Processes

The foundation of organizational change begins with predictability through the establishment of clearly defined roles and responsibilities of maintenance and established systems and processes. In making changes to a maintenance culture, the Army has already provided the means to establish these systems and processes by allocating the first day of the week for command maintenance and the use of an information technology tool (GCSS-Army) to manage daily supply and maintenance activities. Leaders and maintenance personnel (operators, crews, and mechanics) must execute command maintenance utilizing the Preventive Maintenance Checks and Services (PMCS) model that outlines 15

steps using an Equipment Maintenance and Inspection Worksheet (commonly referred to as 5988-E). (See figure for Command Maintenance Process / Weekly 5988E Flow Chart)

These steps coupled with guidance from a commander provide the framework to plan and prepare, execute, and evaluate maintenance activities and readiness of their equipment on the Equipment Status Report (ESR). A maintenance PMCS program, if poorly planned, will yield little to no effect on the provision of combat power. Although command maintenance begins on the first day of the week, Steps 1 to 6 occur the week prior with Company Commanders communicating their PMCS focus and the Company Executive Officer distributing the 5988-E to platoon leadership before their weekly motorpool close-outs. Command maintenance at the start of the week encompass nine remaining steps between operator PMCS and fault verification by a mechanic. All steps are critical; however,



U.S. Army Command Sgt. Maj. Adam Bezanson, the 1st Infantry Division Sustainment Brigade, 1st Inf. Div., incoming command sergeant major (left), Command Sgt. Maj. Clarence Raby, the 1st Inf. Div. Sust. Bde. command sergeant major, and Command Sgt. Maj. Nelson Rivas, the Div. Sust. Troops Battalion command sergeant major, observe SPC. David Cartwright, an intelligence analyst assigned to Headquarters and Headquarters Company, Div. Sust. Support Battalion, 1st Inf. Div. Sust. Bde., 1st Inf. Div., assembling an M240B machine gun, Fort Riley, Kansas, Nov. 30, 2023. The brigade conducted "Leaders Time Training," which allowed Soldiers to work on their warrior tasks and battle drills and show the 1st Inf. Div. Sust. Bde. and Bn. Command Sergeants Major how they are training. (U.S. Army photo by Sgt. Daniela Lechuga)

the most important step in the process is Step 14: ordering of parts in GCSS-Army and ensuring equipment is reflected in the equipment status report (ESR). This critical step is what takes the physical reality of the condition of the equipment in the motorpool and translates it into usable data for maintenance managers and leaders to conduct decision-making and resource prioritization. The ESR provides critical information for maintenance support as long as faults are accurately captured. Given the range of expertise (training and experience) of

operators and mechanics, maintenance faults on 5988-E are often inaccurately annotated (not intentionally) due to various reasons. The Vehicle operators that make up the Monday maintenance formations and are conducting the PMCS are mostly junior Soldiers with 1-3 years of experience in the Army. Much like Army Warrior Tasks and Battle Drills, Soldiers with similar time of service will make and learn from their mistakes. As such, leaders need to guide Soldiers and junior leaders, underwriting honest mistakes (FM 7-0 Training 2021). Training and expe-

"Commanders are directed by Army Regulation 750-1 (Army Materiel Maintenance Policy) to maintain equipment to 10/20 standard."



[Left] U.S. Army Command Sgt. Maj. Clarence Raby, the 1st Infantry Division Sustainment Brigade command sergeant major (center) and Command Sgt. Maj. Adam Bezanson, the incoming 1st Inf. Div. Sust. Bde. command sergeant major (left), ask Soldiers about their experience in the new "Reliable Academy" course at Troops School on Fort Riley, Kansas, Nov. 30, 2023. Reliable Academy is a three-day course which teaches specialists, corporals, and sergeants how to become successful leaders. (U.S. Army photo by Sgt. Daniela Lechuga)

rience gaps in command maintenance affect organizational management of fleets and the ability to project readiness due to the mismatch this causes from the reality on the condition of the equipment and the data being provided to commanders for decision in the form of the ESR.

Team Buy-in (Ownership)

The single most contentious point to change is commitment and the long-standing traditions with "things have always been done this way" attitudes that inhibit transformation. To overcome this, leader presence is needed, and priorities and clear expectations must be communicated to Soldiers to accomplish their task with subordinate feedback to the Commander (confirmation briefs, back-briefs). This is complicated and compounded by the lack of open and candid communications between Soldiers and their leaders. The view of contrary and minority viewpoints is important to creating buy-in and shared understanding in an organization. (ADP 6-22 Army Leadership and the Profession 2019) Although the operator primarily conduct PMCS, the leader must be present to provide guidance and ensure the task is done correctly and to standard. This will drive effi-

ciency, demonstrate care and ownership, and improve communication between operators, leaders, and mechanics. This will also have the effect of improving the data presented to commanders for decisions on resource prioritization.

Pride in Mission Accomplishment

Commanders and senior NCOs can reinvigorate the art and science of maintenance in our junior leaders and Soldiers by instilling ownership and pride through training and certification of vehicle gun crews (driver, vehicle commander, and gunner) (Creed, 2020). Although commanders are responsible for training, non-commissioned officers train individuals, crews, and small teams. The first step to improving crew lethality is building a maintenance culture to achieve operational readiness (10/20 standard). Both maintenance and lethality go hand in hand requiring a systems approach to training through a maintenance lens. A properly trained crew requires fully mission-capable (FMC) equipment to be effective, just as FMC equipment relies on a properly trained crew for its effective use. To accomplish this, leaders and Soldiers must understand the requirements outlined in AR 750-1 on the 10 level standards

for operators and 20 level standards for unit level maintenance (mechanics). With in these standards, the fundamental element is field maintenance for 10 level operator PMCS specific to individuals and crews. Operator/crew maintenance in the use and care of their assigned equipment is critical to lethality. (Army Materiel Maintenance Procedures 2023) Maintenance is training, commanders must fight to train and protect the training schedule to build their operator/crew proficiency. With the predictability provided by the established systems and processes and the buy-in of change at all levels, a new culture has been established. Every Soldier and leader that participated in the change has some level of ownership and organizational pride in their shared accomplishment. Those who placed genuine effort towards the shared accomplishment are less likely to want to see their efforts destroyed. The "new norm" for existing Soldiers will be the only culture that new service members will know when arriving to the organization.

The three elements of creating a maintenance culture are mutually reinforcing. The absence of any one of these elements can significantly damage the maintenance culture, degrade the com-

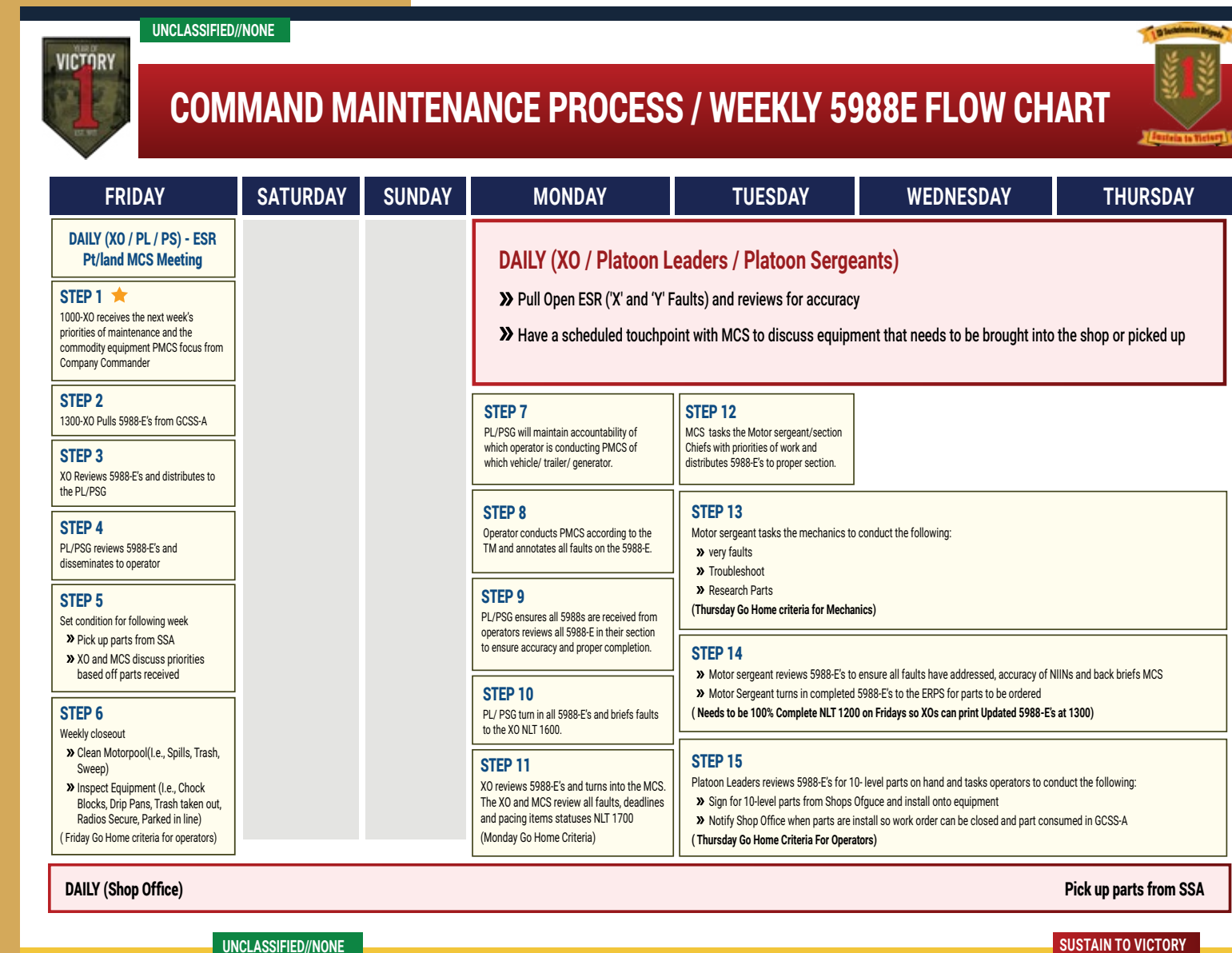


Figure for Command Maintenance Process / Weekly 5988E Flow Chart

mand climate, and reduce unit readiness. Commanders must provide purpose, direction, and motivation to foster good behavior. Commanders and senior NCOs must have shared understanding of maintenance priorities that reinforce ownership to improve operational readiness. Officers and NCOs at the platoon

and squad level must own the mission and processes. To maintain continuity of progress and reduce the risk of potential downtrends, transitions between leaders at all echelons must be monitored, and briefed at command out-briefs to include resource challenges.

Unveiling the Strategic Blueprint for establishing a Maintenance Surge Team in the Army

Part 1: Standing Up the MST

Fostering Operational Excellence

by 1LT Ty Wilcox & 1LT Lawford Domineck



M1152 & Trailer x 1	
M88A2 x 4	
MTV x 4	
PLS & Trailer x 4	
M1152 x 4	
FRS x 4	

Heavy MST Prime Movers

[Left] U.S. Army Soldiers with the 3rd Battalion, 66th Armored Regiment, 1st Infantry Division, participated in a battalion-wide training event consisting of attacking and defending Bradley Fighting Vehicles and M1 Abrams Main Battle Tanks, on Fort Riley, February 4, 2024. The defending teams dug hasty trench defenses to further conceal and provide cover for their tanks. (U.S. Army Photo by Spc. Kenneth Barnett)

Implementing the MST throughout the Army calls for renewed discussion on leading these formations. Standing up a new unit is an enormous task for a Second Lieutenant fresh out of BOLC, or even a seasoned First Lieutenant. More than this, standing up a new unit, operating on a new concept, makes this task far

Maintenance Surge Team stood up in January of 2023, and has had success in supporting the 1st Infantry Division. Initially, the platoon's leadership needs to focus efforts on three areas. The first is becoming an expert on the doctrine related to the MST. ATP 4-33 Section 2-28 is an excellent foundation for any leader

"Strategic competition against near-peer adversaries drives the Army's future formations, concepts, and thinking."

more challenging. Despite these formations' daunting outlook, simple Tactics, Techniques, and Procedures (TTPs) can be implemented to create a successful MST. In this series of essays, the intent is to share the systems and processes of the 206th Maintenance Surge Team, 541st Division Sustainment Support Battalion, 1st Infantry Division Sustainment Brigade, since last year's implementation. The topics which will be discussed include "Standing up the MST", "Operationalizing the MST for Large Scale Combat Operations (LSCO)", and the "MSTs Garrison Operations". The focus of today's essay will be on standing up the Maintenance Surge Team.

responsible for standing up an MST. It covers the roles and responsibilities for an MST in a garrison and combat environment, in reference to how it would look in the battlefield array. Leaders must understand all doctrine directly associated with the MST but also the Combined Arms Battalion (CAB), Brigade Combat Team (BCT), and Brigade Support Battalion (BSB). When leaders understand where the MST fits into the higher headquarters' concept of support, leaders can create systems and processes to support their platoon.

The second step is providing the unit with a clear vision and expectations. Setting the left and right limits of what the PL and PSG want to accomplish; while providing subordinate leaders the latitude to exercise disciplined initiative within that intent provides the PLT the area to grow and develop efficiently. Setting a vision becomes even more crucial for the MST because the concept is new to the Army, and each team will need to create systems and processes designed for their organization.

The final area PLT leadership must focus is on providing shared understanding of the MSTs operations. With this command emphasis, leader involvement, consolidating gains, and providing accurate and timely SITREPs (Situation Reports) to higher headquarters is vital. The MSTs leadership plays a vital role in providing

Strategic competition against near-peer adversaries drives the Army's future formations, concepts, and thinking. The U.S. Army's shift to the Division as the principal tactical warfighting formation calls for logisticians to consider new concepts to enable the division-level fight. The Maintenance Surge Team (MST) is one of those concepts. The MST provides echelons above brigade (EAB) surge maintenance capability that is tailorable and flexible. It reinforces maintenance support and rapidly generates combat power at critical points throughout the Division's area of operation.

The MST conducts field maintenance support for the Stryker, Abrams, and Bradley combat systems. The team represents a temporary capability to accelerate repairs but does not offset workload performance by maneuver units' personnel. In an armor division such as the 1st Infantry Division, the MST is designed as a heavy maintenance platoon. Consisting of four maintenance teams, two 91M (Bradley Mechanic) and two 91A (Abrams Mechanic) teams.

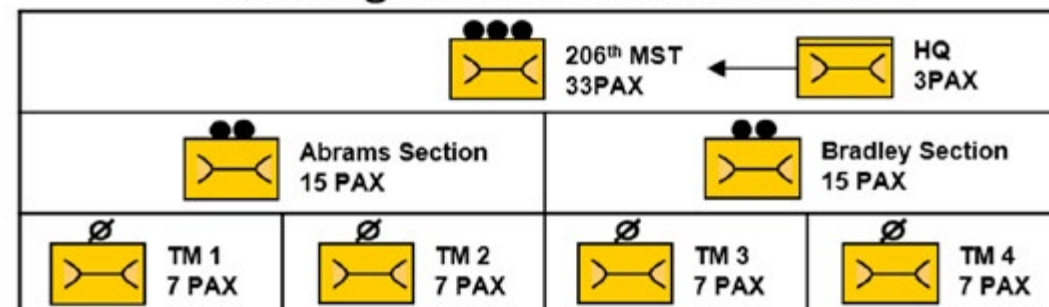
In a heavy division, the MSTs prime movers consist of four M88A2s, four Contact Trucks, four FRSs, four PLSs, and four MTVs. This equipment allows each team to operate independently and deploy maintenance assets to critical points on the battlefield. Due to the armor divisions' MSTs use of M88A2s, the MST is also

authorized 16 H9 Qualified crew members split between the 91As and 91Ms.

authorized 16 H9 Qualified crew members split between the 91As and 91Ms.

Heavy MST Prime Movers:

Task Organization with full MTOE :



U.S. Army Soldiers with the 3rd Battalion, 66th Armored Regiment, 1st Infantry Division, participated in a battalion-wide training event consisting of attacking and defending Bradley Fighting Vehicles and M1 Abrams Main Battle Tanks, on Fort Riley, February 4, 2024. The defending teams dug hasty trench defenses to further conceal and provide cover for their tanks. (U.S. Army Photo by Spc. Kenneth Barnett)



the division maintenance leaders with information concerning the MSTs operations. When shared understanding is generated from the ground up, leaders are given the latitude to make informed decisions on where and when to implement the MST. Once leadership has clear guidance from the divisions maintenance leaders, they must focus on three lines of effort.

Lines of Effort

While standing up an MST, three lines of effort become paramount to the unit's daily operations. Neglecting any one effort could impact the MST's support capabilities and have long-term impacts for the unit. The three lines of effort are 1) Manning, 2) Equipping, and 3) Training.

LOE 1) Manning

Manning must be the decisive effort for the unit. Without Soldiers, any unit serves no purpose. Leaders must develop a plan for how the MST will be manned. There are two approaches to manning these units. The first is to build the PLT using gains from Soldiers PCS'ing to the Duty Station. This approach will allow the PLT to mold 10-level Soldiers to their organization's standards and prevent bad habits brought from past units. However, this comes with the cost of knowledge and experience on the tactical and technical side.

The second option for manning is to develop a plan to pull Soldiers from installation. This concept relies on getting the best soldiers to serve on the MST. On installation manning relies on buy-in to the MST concept at the BDE and BSB levels. While it may be difficult for a CSM to give up high-performing maintainers within their organization, they must consider the MST's core mission and wide-ranging influence and importance to the division or command. A heavy MST can influence and provide maintenance support for up to 12-18 BNs. By manning the MST with high-performing maintainers, the overall capability of the PLT increases, and

hence, supported units. Each week, the PLT has the potential to support units with 1,200 man hours of maintenance. For either method of manning to succeed, the MST must convey to stakeholders that they own a piece in securing gains.

LOE 2) Equipping

Equipment fulfillment is driven at the PLT and CO levels. With the attached nature of the MST to a support maintenance company in a DSSB or CSSB, the PLT will rely upon that support maintenance company for all supply concerns. Understanding how the property book officer, BN S4, and the company supply team operate enables the MST to drive PSD (Proposed Sourcing Disposition) fulfillment. Fielding of new equipment is likely for heavy MSTs who require M88A2s. During fielding, the MST must provide motor pool bays with a 7.5-ton lift capacity, an area for driver training, and a classroom. The fielding of new equipment offers excellent training. As the 206 MST fielded four M88A2s, the Soldiers were given a thorough POI (Period of Instruction) on recovery operations, drivers training, and maintenance.

LOE 3) Training

Training for the MST is a continuous effort. The MST must focus on training from two facets. The first is basic warrior tasks and battle drills. Despite the formation is composed of mechanics, the MST must train Soldiers to do the most basic soldiering tasks. When the PLT is proficient in close-order drill, extended-order drill, and tactical convoys, the PLT builds trust between Soldiers. These training events offer opportunities to build discipline and teamwork within the organization. Military leaders throughout history have recognized the importance of focusing on the basics in Army training. In "About Face", COL David H. Hackworth stated, "Our transformation into Soldiers inspired and monitored by those battle-savvy NCOs, who well knew that discipline and tactical proficiency on the battlefield were direct results of discipline and combat skills instilled on the parade and training grounds." This statement holds true for all units, especially the MST. By focusing on this, the entire organization and climate grow in a positive manner. The second facet of training is focusing on maintenance and technical expertise. The MSTs location in the DSSB means that the PLT must look to their supported brigades to get hand on training with Abrams and Bradleys. To do this, the 206 MST established a shadow training program with 1-4CAV. This program paired a junior mechanic from the MST with a

proficient mechanic in 1-4CAV. By organizing this program, the Soldiers from the MST received not only maintenance knowledge and skills on their assigned platforms, but also an understanding of how the Forward Support Companies (FSC) maintenance teams operate. Some Soldiers first assignments will be with an MST, hence, they will lack an understanding of how line teams operate in an FSC. This program gives the MST Soldiers the opportunity to see the systems and processes of the FSC, and gives Soldiers an understanding of how they can nest operations within the FSC once on a SRF (Support Request). This also allows them to build rapport and trust with maneuver units. In conclusion, this program has benefited 206 MST to build internal maintenance capabilities.

With the MST focusing on leadership, and the lines of effort the core components of building a new unit are established. Each line of effort builds capability for the PLT and helps to enable the Division. However, this is not where the MST mission stops. The next discussion in this essay series will discuss MST operations in garrison, sharing TTPs (Tactics, Techniques, and Procedures) the 206 MST used to build garrison support packages.

"Leadership is the foundation for the MST and standing up a new unit."

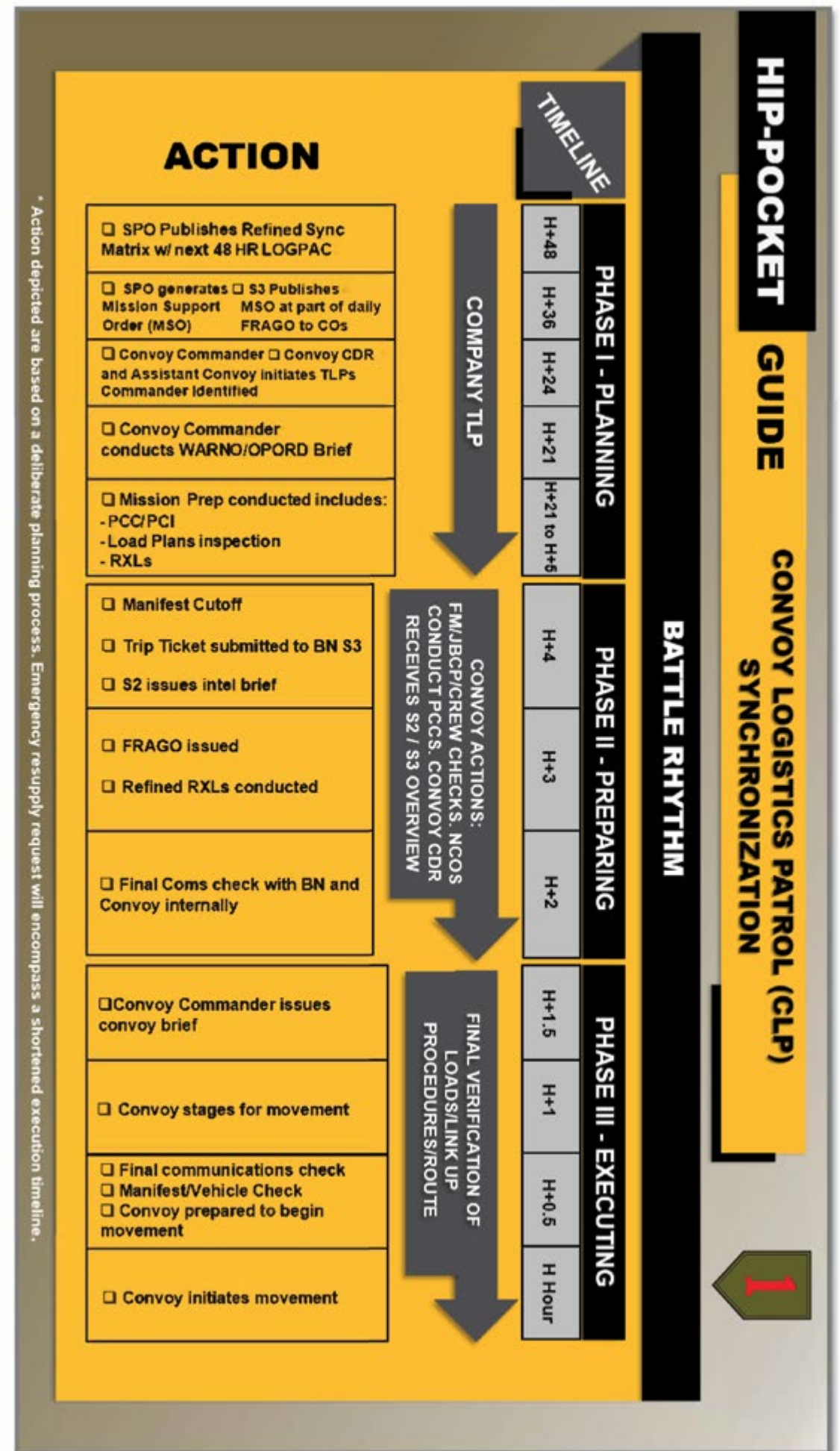
U.S. Army Soldiers with the 3rd Battalion, 66th Armored Regiment, 1st Infantry Division, participated in a battalion-wide training event consisting of attacking and defending Bradley Fighting Vehicles and M1 Abrams Main Battle Tanks, on Fort Riley, February 4, 2024. The defending teams dug hasty trench defenses to further conceal and provide cover for their tanks. (U.S. Army Photo by Spc. Kenneth Barnett)



"Leaders must ruthlessly merge data during routine coordination sessions to ensure the precise sustainment resources are aligned with the maneuver force to maintain prolonged endurance."



U.S. Army Soldiers with the 3rd Battalion, 66th Armored Regiment, 1st Infantry Division, participated in a battalion-wide training event consisting of attacking and defending Bradley Fighting Vehicles and M1 Abrams Main Battle Tanks, on Fort Riley, February 4, 2024. The defending teams dug hasty trench defenses to further conceal and provide cover for their tanks. (U.S. Army Photo by Spc. Kenneth Barnett)





A Humvee, assigned to the 1st Infantry Division, is staged on Marshal Airfield during Danger Ready 2 field exercise on Fort Riley, Kansas, October 29, 2023. Danger Ready is a series of ongoing exercises designed to prepare Soldiers for the culminating multinational Warfighter exercise. (U.S. Army photo by Spc. Steven Johnson)

Setting Conditions for Regenerating Combat Power through Supply and Maintenance

Operationalizing Regeneration at NTC

by MAJ Renee Kane & CPT (P) Nicholas Pruitt

Introduction

Training for battle is tested through the art and science of mission command culminating at NTC. The Greek lyric poet, Archilochus, could not have said it better, “We don’t rise to the level of our expectations, we fall to the level of our training.” (www.themilitaryleader.com) During NTC 24-2, the 541st Division Sustainment Support Battalion (DSSB) was tasked to equip, train, and regenerate combat power to all assigned and attached units in support of the 3rd Armored Brigade Combat Team (ABCT), 4th Infantry Division. (FORSCOM Regulation 350-50-1) From the arrival of the first Soldier to the departure of the last Soldier, 43 days focused on the replication of deployment and redeployment operations through Reception, Staging, Onward Movement and Integration (RSOI), training days, and regeneration (REGEN). The 541st DSSB task organization of 10 companies across 5 installations created the capabilities required to support an ABCT which included a functional Headquarters Company, Composite Supply Company, Support Maintenance Company, Composite Truck Company (Heavy), and a Modular Ammunition Ordnance Platoon. Since non-organic units were tasked organized under the 541st DSSB communication of priorities, expectations, SOPs, and understanding each unit’s personnel and equipment capabilities were essential to mission success. As a division-level

supporting unit, 541st DSSB drew 276 pieces of equipment from preposition sock (PREPO), transported 282 pieces of equipment from home station, drew over 380 personal MILES gear, and took responsibility for 384 personnel. The alignment of multiple companies and new faces created a challenge for NTC. In this article we will discuss setting conditions for a successful 12-day REGEN. In order to reset the preposition equipment with minimal cost-outs (the price of equipment that cannot be fixed during REGEN), turn in MILES and basic issue items (BII), and prepare equipment for transportation back to home station, the staff operationalized regeneration throughout the NTC rotation by setting conditions during RSOI and training days for supply and maintenance. To accomplish operationalizing regeneration, starting from the top down leaders set priorities, clearly defined roles and responsibilities, and implemented effective processes.

What is REGEN and why is it important?

Regeneration mirrors redeployment operations with a focus on maintenance of equipment, turn-in of commodities, MILES gear, and PREPO equipment, and clearing the installation. REGEN is the reverse of RSOI. Instead of personnel and equipment flowing into the theater, it is the flow out of the theater that requires deliberate planning. Units tend to narrow their focus on preparing for the training

days which is the decisive action of the NTC rotation. REGEN too often is left to plan “when time permits” because once the rapid pace of RSOI operations begins, leaders are less intentional with their time.

Regeneration’s focus on maintenance operations highlights the importance of maintaining equipment during training days and regenerating combat power. Deliberate planning factors in the timeline for PREPO equipment turn-in while regenerating home station equipment for follow-on missions. Units depend on fully mission capable (FMC) equipment to fight and win wars so they must consolidate gains continuously while maximizing the opportunity of designated REGEN operations. The Army could push the easy button by hiring contractors to maintain equipment due to their skill set and the unit’s operational tempo (OP-TEMPO) but in a realistic battle Soldiers must know and maintain their equipment for survival and victory. Additionally, minimizing contracted maintenance ensures prudent and efficient use of Army funds.

Setting Conditions - RSOI - Maintenance

The operator-to-equipment relationship is a continuous process during the before, during, and after PMCS initially conducted during PREPO draw. Ideally, the equipment the Soldier draws from PREPO remains with that Soldier throughout NTC. It is the responsibility of the platoon

leadership to ensure the right Soldier signs for the right equipment. To the best of your ability, prevent Soldiers from signing for multiple pieces of equipment or pieces of equipment leadership knows they will not operate. This seems like an easy assignment but I assure you that this must be deliberately planned (Soldiers to seats) prior to the arrival of NTC to ensure the operators arrive before the PREPO draw. If the operator maintains the equipment from PREPO through REGEN then the maintenance flow process is more efficient and the Soldier can take ownership. Maintenance is

a command responsibility in which they hold subordinates accountable for the maintenance of their equipment. (Army Regulation 750-1) Sustaining a disciplined maintenance program starts with the operator signing for the equipment during RSOI, maintaining the equipment throughout NTC, and accomplishing all REGEN tasks to turn in to PREPO.

To lay the foundation for REGEN, during RSOI the BCT briefed the overall staging plan for the Rotational Unit Forward Maintenance Area (RUFMA) which included the equipment and unit layout (see RUFMA Layout A Way). The staging plan prepared units for a smooth arrival into RUFMA so all Soldiers knew the designated areas for certain equipment and units. FORSCOM Regulation 350-50-01 explains that the Rotational unit (RTU) schedules redeployment timelines NLT D-2 (during RSOI) forcing units to plan the force flow during REGEN. After finalizing home station and PREPO equipment (there were minute changes due to maintenance) the battalion headquarters and company leadership determined the personnel and equipment flow out of NTC ensuring the right personnel and equipment departed at the right time. For example, armorers and sensitive items departed first while mechanics and tools departed last. Setting conditions for REGEN began during RSOI and continued through the Training Days (also known as “the box”).

Setting Conditions – RSOI - Supply

During RSOI, all units drew MILES gear for vehicles and personnel. Automation and printer capability within the battal-

RUFMA Layout A Way



ny's hierarchy in preparation for potential FLIPLS during REGEN. If not, the hierarchy remains with home station's higher headquarters which can cause a delay in processing the FLIPL. The five days of RSOI were fast and furious with a few tasks trickling into training days to continue to set the conditions for REGEN.

Setting Conditions- Training Days

During the 14 Training Days, the battalion focused on PMCS, 20-level maintenance, daily maintenance meetings, and necessary administration ac-

tion S4 expedited the process of signing equipment to the end users. To emphasize the importance of a detailed force flow into NTC, Soldiers must sign for the equipment they are responsible for throughout the rotation to establish ac-

countability from the start. One additional recommendation is to include the administrative number and bumper number on the DA Form 2062 to ensure an organized REGEN process. The units that followed this system were significantly faster in turning in vehicle MILES gear. During the individual MILES gear and BII issue, all supply representatives must be on the signature cards to prevent a bottleneck of the battalion S4 conducting all supply actions. Individual MILES gear is signed by each company and then to the end user. Due to the length of time the BII boxcars must be available to issue to end users, the battalion S4 must utilize supply representatives from all companies as part of the operation. To allow the battalion S4 to be fluid throughout RSOI and REGEN, they cannot be dedicated to one task. For example, the battalion S4 OIC and NCOIC are brought into each compa-

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of the non-mission capable faults fixed during training days included replacing a HMWWV transmission, replacing PLS steering gearboxes, and electrical wire repairs. The daily battalion maintenance meetings were led by the Battalion Executive Officer and senior maintenance technician. Early on, we recognized during the maintenance meetings that units were not ordering parts. As expected, the transition from RSOI to Training days disrupted battle rhythm events, such as the maintenance meeting. The Battalion Commander reemphasized the importance of maintenance which the companies adopted and implemented. Additionally, the senior maintenance technician and the Battalion Executive Officer worked through challenges to ensure that battalion representatives had BZ90 rights for all companies task organized under 541st DSSB, the

were clear of all other REGEN tasks before arrival at RUFMA. Once vehicles arrived to RUFMA they remained there for maintenance without any distractions.

SLocs were aligned with the NTC SSA for parts flow, and contact information for all ZPARK/funding personnel were readily available. Once the administrative portion was complete the CLIX parts flow from the Supply Support Activity (SSA) to the Division Support Area (DSA) ran smoothly due to communication with the SSA accountable officer and a small team of 92As on-site at the SSA to separate CLIX parts by unit.

To set conditions for REGEN operations the right people must be established at RUFMA to receive 541st DSSB units. By Training Day 10, the Battalion S3 issued the REGEN OPORD. On training days 11 and 12, the companies conducted a confirmation brief and the convoy command-

was deliberately planned to include specific leadership and capabilities. Fortunately, the DSSB departed the training area one day before the BCT to prevent a choke point at the wash rack. The Torch Convoy consisted of the Battalion Executive Officer, Battalion S4, unit armorers, unit supply representatives, maintenance technicians, and maintenance leaders from each company. The Advanced Echelon (ADVON) included all of the Support Maintenance Company and unit maintenance teams minus recovery assets. As the main body arrived each vehicle immediately downloaded sensitive items, MILES gear, BII, equipment, and personal gear in their perspective areas in preparation for wash rack operations. Vehicles

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Soldier assigned to Headquarters and Headquarters Company, Div. Sust. Support Battalion, 1st Inf. Div. Sust. Bde., 1st Inf. Div., disassembles a M240B machine gun, Fort Riley, Kansas, Nov. 30, 2023. The brigade conducted "Leaders Time Training," which allowed Soldiers to work on their warrior tasks and battle drills and show the 1st Inf. Div. Sust. Bde. and Bn. Command Sergeants Major how they are training. (U.S. Army photo by Sgt. Daniela Lechuga)



REGEN

Operationalizing REGEN kept units in sync, leadership informed, and subordinate units on track to accomplish REGEN tasks. The REGEN phase of NTC 24-02 began with the displacement from the “Box” into the RUFMA. The 541st DSSB prioritization of the Quarters Party and Advanced Party movements with key leaders, supply, armorer, and maintenance personnel to the RUFMA, enabled the team to successfully receive the main body. Sending key personnel forward on the initial movements allowed the battalion to surge on wash rack operations, conducting PMCS, identifying faults, and ordering parts ahead of REGEN Day 1. The 541st DSSB operationalized REGEN with a continuous communication flow from battalion leadership to the individual

Soldier and promoted feedback to flow back through the chain of command. 541st DSSB began RUFMA operations on Training Day 14 with battle rhythm synchronization meetings between the Battalion Commander, executive officer, maintenance technicians, and the company command teams at 0900 hrs., 1300 hrs., and 1700 hrs. The occurrence of these synchronization meetings was reduced to once daily when processes were in place, running efficiently, and approved by the Battalion Executive Officer. This communication and planning effort resulted in 85 out of 273 pieces of PRE-

PO equipment turned in within the first 26 hours of REGEN operations, meeting the 30% threshold by REGEN Day 2. In comparison, the other battalions did not reach the 30% equipment turned-in threshold until approximately the 3rd or 4th day of REGEN operations. The battalion and companies identified a single person responsible for updating the Common Operating Picture (COP) to display a shared understanding of the battalion's progress. The maintenance control officer (MCO) within the support maintenance company ensured companies updated their portion of the

U.S. Army Pfc. Sebastian Stubblefield, an infantryman assigned to the 1st Battalion, 16th Infantry Regiment, 1st Armored Brigade Combat Team, 1st Infantry Division, aims through the scope of an M1101A1 Semi-Automatic Rifle at a sniper range on Fort Riley, Kansas, April 18, 2023. Soldiers of the 1st Bn., 16th Inf. Regt., conducted sniper qualifications to broaden their understanding of versatile weapons systems. (U.S. Army photo by Sgt. Charles Leitner)



tracker routinely and validated the accuracy of the information. As the appointed lead, the MCO resolved issues with each company representative keeping them on track. The MCO worked with an identified company leader (the company XO) to routinely update the board with their organization's statuses. Utilizing the synchronization meetings, the Battalion Commander, Executive Officer, maintenance technicians, and company com-

manders resolved friction points. Due to the early alignment of SLocs and BZ90 rights given to battalion representatives, maintenance technicians were able to assist companies with any issues in GCSS-Army. For example, BZ90 rights enabled the maintenance technicians to close work orders and order parts preventing a disruption in maintenance activity. The senior maintenance warrant officer ensured correct parts were placed

on order and picked up across the battalion. At the close of each day, the battalion conducted a scrub of the Equipment.

Status Report (ESR) with the Battalion Executive Officer, maintenance technicians, and company leadership. The senior maintenance warrants attended the ESR scrub validating the correct faults and parts were on the ESR. Additionally, they assisted the companies in prioritiz-

ing vehicles. The GCSS-Army access, sync meetings, and ESR scrub decreased the NMC status timeline. In addition to the ESR, the battalion consolidated PREPO bumper numbers allowing the BN to maintain visibility on the status of each piece of equipment. The battalion deconflicted equipment that had not been inspected or on the ESR to create a plan for troubleshooting. In retrospect, tracking by bumper number early in the REGEN process enabled the battalion to better understand the status of turn-in operations and allowed the battalion to make adjustments early in the REGEN process.

As companies reached 100% turn-in of their PREPO equipment, the battalion surged mechanics, drivers, and TCs to other companies to assist with

repairing NMC equipment and turn-in of PREPO equipment. The Battalion Commander identified this friction point from the battalion's previous 23-09 NTC rotation. The Battalion Commander avoided a small team of mechanics being held responsible for a significant portion of maintenance operations, while other capable personnel departed NTC. This process continued until the battalion was 100% complete with PREPO turn-in. By the time most of the battalion departed NTC, there were 12 pieces of equipment remaining. Two company mechanics and battalion leadership remained until all equipment was turned in.

The 541st DSSB's ability to operationalize REGEN in the same manner

that they planned for each phase of Force on Force operations contributed to their overall success. Setting the conditions during RSO&I and Training Days were critical to REGEN operations. The deliberate planning and execution for the battalion's displacement provided the foundation needed to begin REGEN operations. Consistent communication, comprehension of the REGEN plan, and flexibility from battalion leadership down to the individual Soldier ensured REGEN operations occurred with minimal friction points. Operationalizing this portion of the NTC 24-02 rotation enabled the 541st DSSB to complete REGEN ahead of their anticipated schedule and with a level of effectiveness not often observed by the NTC PREPO turn-in team.

2023

SOLDIER OF THE YEAR

SGT Ramirez, Danilu
HHC, 1ABCT



SPC Kinzie, Dustin J.
HHC, 1-63AR, 2ABCT

NCO OF THE YEAR

2023

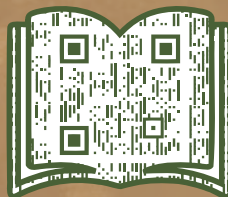
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