

REPORT DOCUMENTATION PAGE					<i>Form Approved</i> OMB No. 0704-0188	
The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.						
1. REPORT DATE (DD-MM-YYYY)		2. REPORT TYPE Master of Military Studies (MMS) thesis			3. DATES COVERED (From - To) AY 2019-2020	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER N/A		
				5b. GRANT NUMBER N/A		
				5c. PROGRAM ELEMENT NUMBER N/A		
6. AUTHOR(S)				5d. PROJECT NUMBER N/A		
				5e. TASK NUMBER N/A		
				5f. WORK UNIT NUMBER N/A		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) USMC Command and Staff College Marine Corps University 2076 South Street Quantico, VA 22134-5068					8. PERFORMING ORGANIZATION REPORT NUMBER N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A					10. SPONSOR/MONITOR'S ACRONYM(S)	
					11. SPONSOR/MONITOR'S REPORT NUMBER(S) N/A	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited.						
13. SUPPLEMENTARY NOTES						
14. ABSTRACT						
15. SUBJECT TERMS						
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON USMC Command and Staff College	
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (Include area code) (703) 784-3330 (Admin Office)	
Unclass	Unclass	Unclass				

*United States Marine Corps
Command and Staff College
Marine Corps University
2076 South Street
Marine Corps Combat Development Command
Quantico, Virginia 22134-5068*

MASTER OF MILITARY STUDIES

Joint Logistics Efficiency: Keeping the Global Combat Support System-Joint

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

Major Keith D. Twichell, U.S. Army

AY 2019-20

Mentor and Oral Defense Committee Member: Dr. Craig Swanson

Approved: SIGNED

Date: 30 April 2020

Oral Defense Committee Member: CDR Stephen Kelley, USN

Approved: SIGNED

Date: 30 April 2020

DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

QUOTATION FROM, ABSTRACTION FROM, OR REPRODUCTION OF ALL OR ANY PART OF THIS DOCUMENT IS PERMITTED PROVIDED PROPER ACKNOWLEDGEMENT IS MADE.

The practice of logistics used in conjunction with the military has existed as far back as 2000 BC with the creation of the first standing armies in China and ancient Egypt. Since then, the logistics industry, like the military, has experienced periods of technological advancement. However, when modernization of the military is discussed, experts typically focus on tanks, munitions, or the next fighter jet. On today's joint battlefield, modernizing the Department of Defense (DoD) logistics system requires the integration of all services to create an efficient tool for planners. Currently, each service operates a duplicative sustainment system that does not communicate or share information with one another. The Global Combat Support System-Joint (GCSS-J) eliminates the inefficiency of existing multi-service logistics automation tools by providing a single platform for the Joint Force, which is important for operating efficiently in a contemporary time sensitive environment. The GCSS-J provides the DoD with end-to-end logistics and total asset visibility while supporting a unity of command and rapid force projection for the joint force.

Automation tools have revolutionized military logistics. DoD does not rely on the most efficient tools to provide support to the joint force. The joint logistics community needs GCSS-J to leverage the benefits of software solutions to support the collection, sharing, and use of logistics data and information. Logistics integrates strategic, tactical, and operational support and associated efforts to project and sustain the military's power "across the globe at a chosen time and place."¹ GCSS- J eliminates the structural redundancy of multiple users and systems while enabling efficient and sustainable power projection. Unfortunately, the efficiencies and shared capabilities GCSS-J provides will not be realized, as the Joint Staff Director for Logistics (DJ4) and Logistics Functional Capability Board (FCB) decided to cancel GCSS-J as a program of record at the end of fiscal year 2020 (FY20). The system was not fielded to the military

¹ Joint Publication 4-0. *Joint Logistics, Incorporating Change 1*. (May 8, 2019).

services and there is no evidence that the Joint Staff and DoD support an improvement or replacement for GCSS-J.

Citing cost and the ability for Geographic Combatant Command's (GCC) and Joint Task Force's (JTF) to access the required data through multiple systems and users from all services, the Joint Staff Deputy J-4 (DJ4) determined that the requirement for interoperability is no longer valid. Cost of the program presents an argument against GCSS-J when the force is completing its mission currently without the use of the system. GCSS-J is currently available to Combatant Commands only and is not the system of record for joint logisticians. The DJ4 is pushing back against the fielding of the GCSS-J system because the GCC's currently have the capability to access the data direct from multiple data sources to meet their respective requirements. While this may be true, it is completely inefficient and requires multiple personnel from all services with a multitude of accesses to source data. The DoD must "be prepared to adopt better practices in supporting the warfighter as we face a future with reduced budgets and constrained resources."² The reorganization to create a process of supply across a global distribution network, while incurring a cost in the short-term, will decrease manpower and increase efficiency and effectiveness in the long-term.³

GCSS-J has not been fully utilized and should continue to be fielded across Combatant Commands and Joint Task Forces to allow the systems capabilities to provide meaningful efficiency. DoD undertook initiatives geared toward creating a logistics system that is highly responsive and more effective in supporting a joint force commander. Larger staffs accessing multiple systems instead of embracing the single user, single system model is, in effect, a choice to be inefficient no matter the cost.

² Ibid.

³ Ibid.

An innovative vision is required for the military to ensure that the Joint Force can quickly adapt to new challenges and unexpected circumstances. The information synthesized in this study clearly demonstrates that GCSS-J would benefit all armed services components while ensuring the right items are received at the right time, in the right place, and by the right people. Moreover, easy access to the logistics system using a web browser would enable complete, accurate, and global visibility of all the resources in the supply chain. GCSS-J provides joint commanders with an efficient capability that other single service systems cannot provide. This study will demonstrate, GCSS-J must not be terminated and is a vital investment into the DoD's global supply chain system of the future ensuring effective and efficient support to the warfighter. While all DoD service logistics automation aspire to provide efficiency and effectiveness, the ways in which they attain their capability are different. The individual service logistics automation systems work well internally however, none of the systems communicate with one another and lack any joint capability or advantage for GCC and JTF planners. GCSS-J is a useful tool for any joint commander, giving them the ability to communicate with all existing service systems under a single platform providing a distinct advantage over single service platforms.

Background

The information joint military planners can generate against a threat is constrained by their ability to plan for, gain access to, and deliver data using multiple systems. Each military service currently operates their own logistics automation system and software to manage their individual supply chains. The Army and Marine Corps use a version of the Global Combat Support System (GCSS-A, GCSS-MC), the Navy uses multiple automation systems, while the

Air Force uses the Standard Base Supply System (SBSS) to plan and provide logistics support to their services.

The Air Force SBSS is a component of the Integrated Logistics System-Supply (ILS-S) that was originally fielded in 1965. The system is actively used by over 100,000 Air Force personnel to enable the ordering, stocking, storing (warehousing) and daily management of worldwide operational supply needs.⁴ With technology improving the SBSS moved from a large basement computer mainframe setup to a Common Business-Oriented Language (COBOL) to improve Air Force sustainability. Throughout the 70s and 80s the SBSS saw many expensive COBOL updates leading the Air Force to look for a more cost-effective alternative.

Unlike any of the other services, the Air Force decided to change their logistics operating system from a proprietary framework to an open source one. The previous proprietary framework was vendor-based and a significant drawback, as it is a costly contract with license fees and non-competitive pricing for updates. The open source software is free to download without a contract binding the user to the vendor's system construct. The additional benefits of open source frameworks are improved security, flexibility, transparency, interoperability and affordability saving the Air Force \$25M annually.⁵ As successful as the SBSS program has become, it is important to emphasize that this system is completely internal to the Air Force and thus offers no real-time logistics capability to anyone outside of Air Force. This means a joint staff must have Air Force personnel with SBSS access to provide information and planning data for their service.

By leveraging cutting-edge industry capabilities through commercial off-the-shelf software, the Global Combat Support System–Army (GCSS-A) has transformed the way the

⁴ Ellis, Nicholson, Briggs, Hunter, Harbison, Saladna., *Lifting and Shifting the Air Force Retail Supply System*, (28 August 2017).

⁵ Ibid.

Army arranges tactical logistics and financial management.⁶ The German based software company SAP uses a similar system for the German Bundeswehr. The US Army saw the advantages SAP could provide to the over 100,000 US Army users and contracted the off-the-shelf software.

In 2013, the Army began to field the first of two components of GCSS-A beginning with the Standard Army Retail Supply System (SARSS) and the financial system associated with it. The second wave replaced the Property Book Unit Supply Enhanced (PBUSE) which provided maintenance and property accountability for the Army. With GCSS-A fully fielded the Army expects GCSS-A to provide about \$11.8B in financial benefits through fiscal year 2027.⁷ With efficient cost savings and real-time logistics management capabilities for commanders, GCSS-A has been a break through development in Army sustainment. Fielding GCSS-A represents the largest enterprise resource planning (ERP) deployment in the U.S. Army's history and is currently deployed to more than 300 supply-support warehouses and in over 650 individual units.⁸ Like the Air Force, the Army has experienced internal success with their logistics automation system. However, GCSS-A falls short with regards to joint and coalition interoperability. GCSS-A does not incorporate other service logistics automation tools to provide joint commanders with a total view of all logistics in their formation. With more joint and coalition-based operations in the future the Army will require the ability to interact with other country and service ERPs to optimize resource planning.

Like the Army, the Marine Corps has also employed the GCSS to provide the logistics management automation to their service. GCSS-Marine Corps (GCSS-MC) is a commercial off-the-shelf ERP similar to the US Army system, except that it uses the Oracle E-Business suite and

⁶ James McDonough, *US Army's signature logistics system completes full-system deployment*, (June 2018).

⁷ Government Accountability Officer, *AO-15-378R Army Logistics*, (April 2015).

⁸ James McDonough, *US Army's signature logistics system completes full-system deployment*, (25 June 2018)

the German based company, SAP. Built out of the necessity for modernization, GCSS-MC includes all transactional Combat Service Support systems related to supply chain management and enterprise asset management functionality, enabled with service management functions.⁹ With both land component services employing two separate vendors and contracts to provide essentially the same services, one can question the efficiency of DoD's use of multiple supply systems.

Originally, the Marine Corps developed their version of GCSS as an effort to follow the Joint Staff J-4 initiative to have a DoD family of interoperable logistics systems. The Navy and the Air Force, however, did not fully integrate GCSS into their service, leaving a gap between systems when operating in joint environments. Because the Marine Corps operates under the Department of the Navy, their automation systems are considered more joint on the surface than the Air Force and Army. However, the same could be said for the SBSS system supporting the Air National Guard and GCSS-A being the logistics system of record for the National Guard and Army Reserve.

While GCSS-MC has done an exceptional job of consolidating previous supply and logistics systems into a single user platform for the Marine Corps, it does not provide any real-time capability to the joint force. Without a joint interoperability system, GCC and JTF planners will require a Marine Corps GCSS-MC user and system to provide logistics data that would be consolidated with other services to create a joint Logistics Common Operating Picture (LCOP), i.e., a single and identical accounting of the logistics capabilities, requirements, and shortfalls in an area of operations that is shared between the supporting and supported elements.

In 1991, with the material build-up prior to Operation Desert Storm/Shield the US Navy turned to Naval Supply Systems Command (NAVSUP) to develop a logistics automation tool to

⁹ DOT&E, Office of the Secretary of Defense. *Navy Programs FY15, GCSS-MC* (2015).

provide support to the fleet. The program developed was called the Standard Automated Logistics Tool Set (SALTS). For 27 years, SALTS has been utilized for supply communication both ashore and afloat, providing the capability to upload requisitions, inventory supply parts, food, and fuel while also providing financial audit data.¹⁰ The Navy's operational supply capability is currently supported by several information systems—systems that are antiquated, stove piped, decentralized, and increasingly expensive to maintain. As a result, the Navy seeks to modernize the afloat and ashore operational supply capabilities.¹¹

NAVSUP manages the Navy's future logistics automation programs. Using multiple logistics systems like Navy Enterprise Resource Planning, Citibank Enhanced, and One Touch Support (OTS) Navy logisticians are able to manage their supply chain at a lower cost than previous systems. The Navy supply system is completely internal and operates multiple systems that do not have real-time logistics capability when operating in a joint environment. As the narrative above demonstrates, the DoD operates numerous service-specific logistics management systems. While these systems work well within a particular service stovepipe, operating multiple systems with different users within the Joint framework is inefficient and is unable to provide a joint force commander, such as a GCC or JTF commander, with a single, integrated logistics picture. The GCSS-J provides the capability to fill this gap while also providing efficiency and interoperability across the joint logistics enterprise (JLEnt).

The Marine Corps and Navy's close relationship provides both services with a high level of understanding of each other's logistic systems, which is an advantage that enables better service integration. This advantage disappears in a joint environment, however, as the two Department of the Navy logistics automation systems are stove piped and would require a GCC

¹⁰ Foehl, James E., *SALTS, Departing... Legacy Supply System Set to Retire in August*, (Navy.mil, 9 July 2018).

¹¹ RAND, *Naval Operational Supply System*, (2018)

or JTF to include Navy and Marine Corps logisticians that maintained access to their respective systems in order to compile data for a joint force commander. The GCSS-J provides a joint Logistics Common Operating Picture that the Marine Corps' GCSS-MC system cannot provide.

This examination of each DoD service's logistics automation systems reveals a common thread: a lack of interoperability. While these single systems may be useful in a single-service context, they are insufficient at providing the GCC and JTF with any advantage. The Air Force operates a highly competitive open source software for their SBSS logistics automation system. The SBSS has provided the Air Force with cost savings and a platform to build on into the future. The Army operates one of the largest supply chains in the world and modernized its supply chain and financial automation systems with the introduction of GCSS-A. The Marine Corps likewise chose to upgrade its logistics system to a GCSS platform, albeit from a different vendor than the Army to provide essentially the same system. Lastly, the Navy upgraded its SALTS logistics program after 27 years, using multiple automation systems to provide support to their fleet. All DoD services selected logistic automations tools that provide adequate support for their needs, but these systems do not provide GCC and JTF planners with a viable and efficient option.

Joint Logistics Enterprise

When the DoD mobilizes its forces they are supported by a logistics network that includes the services, along with government departments and agencies called the Joint Logistics Enterprise (JLEnt). The JLEnt is a globally integrated network of responsive logistics providers structured to achieve a common purpose.¹² This network is managed by the Joint Staff J-4 to bolster joint force logistics networks and global integrated operations (see Figure 1). Lt. Gen

¹² MG Kenneth D. Jones, *The joint logistics enterprise of the future*, www.us.army.mil, Army Sustainment Magazine, (February 2019).

Stephen R. Lyons, the director of logistics J-4, said in 2019, “the purpose of today’s JLEnt is to project and sustain military power, enable global reach, and survivability.” GCSS-J is the solution to provide the logistics automation conduit for the JLEnt. The JLEnt of the future looks to develop capabilities to seize advantages for the joint force. With a single logistics automation system for the joint force, GCSS-J gives joint decision makers additional time to make accurate and informed plans with speed not offered in the current model. The JLEnt must continue to evolve its global resource allocation process so it can best respond at the speed of war.¹³ GCC and JTF commanders depend on strategic support from the JLEnt and an integrated flow of information so they can synchronize planning for operations.

Figure 1. Joint Logistics Enterprise



14

¹³ Ibid.

¹⁴ CJCS, *Joint Concept for Logistics*, (2010).

GCCs and JTFs require access to joint logistics data for planning, forecasting, and mission preparation. Joint logistics must recognize specific trends, including global demand, enemy area denial, resource constraints, and threats in cyberspace.¹⁵ In 1997, the Joint Staff Director for Logistics (DJ4) determined GCCs and JTFs required global integration of logistics operations. The Global Combat Support System-Joint (GCSS-J) was designed by the Defense Information Systems Agency (DISA) as a logistics automation system to provide interoperability across all logistics support functional areas.¹⁶ The production of the system was in response to the 1997 GCSS Mission Needs Statement (MNS) and the 2000 GCSS Capstone Requirements Document validating the Joint Requirements Oversight Council Memorandum 129-11, within the Information Technology Box construct.¹⁷ In 2010, DISA awarded initial contract to Northrup Grumman with the goal to make GCSS-J the primary information technology application used to support automation for the joint logistician.

To identify resources, requirements, and capabilities, GCSS-J uses a services-oriented architecture to link the joint logistician to a component, service, and other multinational agencies. Thus, all GCSS-J users can use shared data to plan, execute, and control joint logistic operations. The GSCC-J can be accessed easily via a web browser, such as Microsoft Internet Explorer. Moreover, any user from any service with access privileges can view logistics data from all services. Speed and efficiency are created for the GCC and JTF when only a single user can leverage one system to access the critical logistical functions across all applications. The system's common logistics picture encompasses all the logistics information available across all

¹⁵ Joint Publication 4-0, *Joint Logistics. Incorporating Change 1*, (8 May 2019), https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp4_0ch1.pdf?ver=2019-05-10-120259-860, 1-1 to 1-2.

¹⁶ Memorandum for Record, *Global Combat Support System-Joint Program Termination*, (19 April 2019)

¹² Ibid.

functional areas, provides data that is close to real-time, and can be accessed from any location on the globe.¹⁸

The GCSS-J system was specifically designed for use via a Secret Internet Protocol Router Network (SIPRNet) and a Non-classified Internet Router Network (NIPRNet) environment and contains different data source connections and SSOs. The SIPRNet user will need a hard-Public Key Infrastructure (PKI) token, and the NIPRNet user must have a Common Access Card (CAC). A CAC or PKI hard token is also required prior to a user request for a GCSS-J account.¹⁹ GCSS-J is a one-stop logistics shop that is highly accessible and compatible with DoD's preexisting computer networks, requiring only a Google Earth Plug-in, a browser, and a hard token PKI for the NIPRNet and SIPRNet. GCSS-J is still online and can be introduced with a clear roll out plan to the major stakeholders involved in joint planning.

Keeping the GCSS-J alive will require a transition from current practices that must be carefully planned when integrated into the DoD joint environment. There will likely be some hesitancy to adopt new technology, so it will be important to carefully inform logisticians, planners, and commanders of how useful the system can be when its capability is fully realized. Adapting to a new system will make training critical to address the perceived ease of use in the technology acceptance model.²⁰ However, minimal training will be required for acceptance of the new system as most current joint staff logisticians are already familiar with their service version of GCSS and will understand the interface.

The GCSS-J core functions are deployment and distribution, supply, maintenance, logistics services, operational contract support, engineering, and joint health services.

¹⁸ GAO, Army Logistics: Global Combat Support System-Army is Supporting Requirements at Selected Units, GAO-15-378R Army Logistics

¹⁹ Defense Information Systems Agency (DISA). *Global combat support system- joint (GCSS-J)*. (2020).

²⁰ Ibid.

Deployment and distribution functional capabilities include moving and sustaining the force and operation of the joint development and distribution. The supply core function manages equipment and supplies, inventory, and the global supplier networks. The maintenance function addresses the depot and field maintenance operations and the equipment reset. The logistics services include food, water, ice, contingency, hygiene, and mortuary services.²¹

Operational Contract Support has the function of contracting support integration and support, as well as managing contractors. Engineering has the function of general, combat, and geospatial engineering and the Joint Health Services protects the health of the forces and supports health services. Command unity and rapid force projections are accomplished with GCSS-J, meeting the changing needs of the military and its suppliers to ensure velocity, reliability, efficiency, and effectiveness. GCSS-J enables more effective projection of military power by ensuring that everything will be in the right place at the right time and in the right quantities. GCSS-J leverage the same processes supply chain managers in the civilian sector use, such as end-to-end logistic and total asset visibility, while also adapting to nuances that do not factor into most civilian logistics models, like unity of command and rapid force projections.

End-to-End Logistics

GCSS-J provides GCC's and JTF's with end-to-end logistics capability to manage personnel and equipment within their command. The end-to-end processes support efficiency across the JLEnt. At the operational level, GCSS-J enables coordination, integration, and synchronization because it enables commanders to integrate joint requirements with national systems. Tactically speaking, the joint operation's effectiveness is ensured by measuring the

²¹ Defense Information Systems Agency (DISA), *Global Combat Support System- Joint (GCSS-J)*, (2020), <https://www.disa.mil/Mission-Support/Command-and-Control/GCSS-J>

outcome; however, operational readiness supports the freedom of the action.²² The desired outcomes move optimization from strategic to tactical levels with single logistics picture GCSS-J creates for planners.

The joint logistics operating framework enables end-to-end logistics at the strategic, operational, and tactical levels and provides an operating environment with complete visibility of all resources at all locations in terms of what is available, what is degraded and can no longer be used, what is needed, where it is needed, and when, enabling the delivery at the right time and place. The end-to-end framework integrates the processes horizontally and vertically and increases optimization for the services, agencies, GCC, multi-national actors, interagency groups, NGOs, and commercial partners.

With all the joint logistics information available in one platform, GCSS-J makes it easy to identify stockage levels and shortages across a GCC or JTF. GCSS-J creates clear communication networks between logisticians and their systems to provide information, facilitate collaboration, and distribute data to areas in which deployment occurs. Joint military doctrine emphasizes the need for efficiency, as “in the tactical and operational environments, inefficiency increases the logistics footprint, force protection requirements, and inefficiency increases the cost and risk for the operation.”²³ All service logistics automation systems provide end-to-end logistics with warehousing, inventory management, and distribution capabilities, but only for their service. GCSS-J provides efficiency with end-to-end logistics capability for the entire joint force.

Total Asset Visibility

²² United States. Department of Defense. *US JP-4.0, Joint Logistics*. (Washington, DC: Chairman Joint Chiefs of Staff, 16 October 2013), I-9.

²³ Ibid.

The GCSS-J protects and sustains the military’s power worldwide by providing leaders with Total Asset Visibility (TAV). This term refers to supplies (expendable items) and equipment (nonexpendable items)—on order, in transit, in storage, or on hand—that are owned or destined for the military services, DOD agencies, or coalition partners.²⁴ Joint planners require visibility to access logistics processes, resources, and data needed to make decisions. The joint logistics visibility model provides the methods for information sharing and optimizes the capabilities of logistics, which increases readiness and provides access to authoritative logistics information and enables a rapid response to the changing needs of the joint forces.²⁵ The GCSS-J enables Soldiers, Sailors, Marines, and Airmen to perform inventory management from the same system with a single user not matter which service they belong to.

Inventory management is a process of “managing, cataloging, and determining requirements, procuring distributing, overhauling, and disposing of material.”²⁶ GCSS-J allows logisticians to use inventory management processes to balance material availability and meet the requirements of joint operations. Managing and seeing inventory across joint operations enables the capitalization of real-time accurate information, as well as information that is widely visible. It also reveals trends in performance and ultimately provides information on decisions across the supply chain.²⁷

Unity of Command

Unity of command requires coordination and cooperation to meet common objectives, even when participants are not part of the same organization or command. In fact, “unity of effort is the product of successful unified action,” and unified action is a critical aspect of a joint

²⁴ LTC James C. Bates (Ret), *Joint Asset Visibility: Why So Hard?* Army Logistician. (July 2007).

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

logistics effort.²⁸ In the joint environment it is necessary that logisticians clearly understand how the multinational logistics and joint logistics processes work and know the responsibilities and roles of the providers who execute the tasks. GCSS-J gives joint planners the ability to leverage a single logistics supply chain which offers timeliness, flexibility, and unity of command. Unity of command is a necessary principle in synchronizing the resources and efforts of the joint mission. It is important to emphasize when operating in a joint or coalition environment under a single commander, GCSS-J is the most efficient logistics automation system. Unity of command is necessary during joint operations as a single commander takes responsibility for multiple formations, from different services and there must be a clear ensuring a clear unity of effort.

Rapid Force Projections

The precise and rapid response capability of GCSS-J reflects the logistics functions' capacity to meet military demands that are changing constantly. GCSS-J is the logistics key enabler for DoD's ability to efficiently project power globally. Adaptive and innovative adversaries are chipping away at long-standing American and partner-nation strategic mobility overmatch in all domains. These adversaries understand and exploit our joint deployment process and vulnerabilities.²⁹ In the past, DoD has projected military might by moving personnel and millions of pounds of equipment across the world to fight against a secondary tier adversary.

Long distance power projection generates the most demanding requirements for military capacity and capabilities, determines many systems the services buy, and shapes the concepts the services develop. Enemies of the future will target force generation capabilities and logistics systems to slow joint reception, staging, onward movement, and integration (JRSOI). The supported GCC's are responsible for the deployment and redeployment of units supporting their

²⁸ Ibid.

²⁹ John Fasching, LTC (Ret), *Transforming America's Force Projection Capability: Strategic Partner Integration Required*, NDTA.com, (September 2019).

mission. The GCC's and JTF's are responsible for units while they are mobilizing and they track each unit's equipment status, personnel levels, and overall readiness through their respective chain of command on the service specific systems. This process is inefficient and wastes time and manpower. GCSS-J applications allow joint planners to produce all current reports as well as display force readiness, cargo movement reports, seaport schedules, unit details, and match them with the Time Phased Force Development Data (TPFDD) viewer.

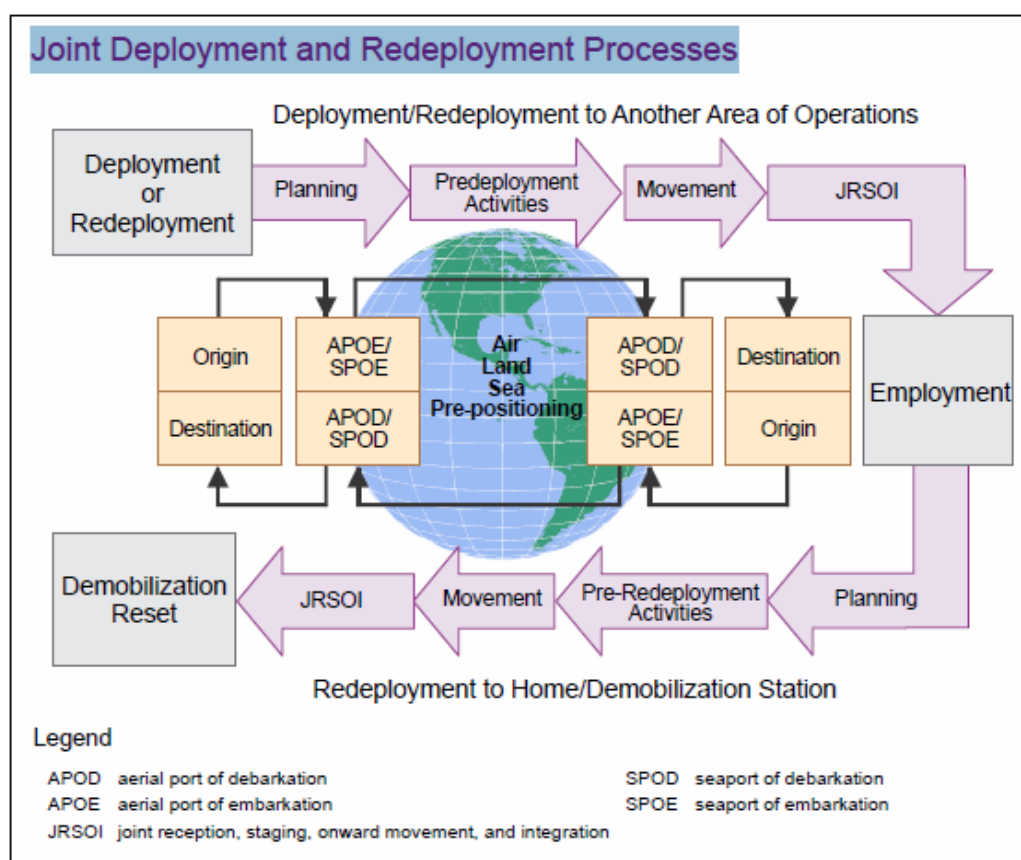


Figure 2. Joint Deployment and Redeployment Processes³⁰

The Joint Publication for deployment and redeployment (see figure 2) JP 3-35 states, "through Global Combat Support System (GCSS) programs, commanders can obtain asset

³⁰ Joint Publication 3-35, Deployment and Redeployment Operations (January 2018).

visibility, as well as manage the flow of forces in-theater and through the numerous PODs.”³¹

As the way the US projects power evolves, the DoD joint logistic automation systems must evolve with it. GCSS-J demonstrates to the DoD that we can do more with less, providing GCC and JTF planners with an efficient logistics tool for sustaining future joint operations.

Don't Kill It Before You Try It

While logistics is a relatively new term, the practice of supplying a standing army has been around for thousands of years. Over the years, great powers have made military innovations like the Egyptian chariot, Chinese gunpowder, and British radar to seize advantages on the battlefield. It is easy to overlook logistics when researching military innovation. But logistics determines how countries project power, where they can fight, and for how long. As the United States faces future challenges, the DoD will require efficient and agile logistics systems to enable an advantage for the joint force. GCSS-J provides a single logistics automation tool for the Joint Force, which is important for operating effectively in a contemporary time sensitive environment.

This study examined how the Air Force, Army, Marine Corps, and Navy use duplicative logistics automation systems to provide support for their service. While each system works effectively for the individual services, none meet the joint requirement for GCC and JTF planners. A single user from any service with GCSS-J access can provide all the logistics planning data the current joint staffs provide. Further, the GCSS-J enables joint total asset visibility, end-to-end logistics, unity of command, and sustains global power projection for DoD within the JLEnt. Considering this evidence, the DJ4 has decided to kill the GCSS-J program at the end of fiscal year 2020, but this is a mistake. GCSS-J has not been fully utilized and should be the only logistics automation platform used on joint staffs. This study affirms that the GCSS-

³¹ Joint Publication 3-35, *Deployment and Redeployment Operations*, (10 January 2018).

J must not be terminated and is a vital investment for the DoD ensuring effective and efficient support to the joint warfighter.

Bibliography

- Achkasova, L. *Aspects of Financial Flow Management in Logistics*. Economics of the Transport Complex, vol. 0, no. 31, (June 2018).
- Barnett-Page, Elaine, and James Thomas. "Methods for the Synthesis of Qualitative Research: A Critical Review." *BMC Medical Research Methodology* 9 no. 59 (2009).
<http://www.biomedcentral.com/1471-2288/9/59>
- Bates, James C. LTC (Ret), *Joint Asset Visibility: Why So Hard?*, Army Logistician. (July 2007)
- Bellais, Renaud. *Technology and the Defense Industry: Real Threats, Bad Habits, or New (Market) Opportunities?* Journal of Innovation Economics and Management 12, no. 78 (2013): <https://www.cairn.info/revue-journal-of-innovation-economics-2013-2-page-59.htm#>
- CJCS, *Joint Concept for Logistics*, (2010). https://www.jcs.mil/portals/36/Documents/102710173839_Joint_Concept_for_Logistics_v1_FINAL_with_CJCS_Sig.pdf
- DOT&E, Office of the Secretary of Defense. *Navy Programs FY15, GCSS-MC* (2015).
<https://www.dote.osd.mil/Portals/97/pub/reports/FY2015/navy/2015gcss-mc.pdf?ver=2019-08-22-105642-177>
- Defense Information Systems Agency (DISA). *Global combat support system- joint (GCSS-J)*. N.D. 1-1. Retrieved from: <https://www.disa.mil/Mission-Support/Command-and-Control/GCSS-J>
- Echevarria, Antulio J. *Military Strategy: A Very Short Introduction*. New York: Oxford University Press, 2017
- Ellis, Nicholson, Briggs, Hunter, Harbison, Saladna. "Lifting and Shifting the Air Force Retail Supply System." Journal of Defense Analytics and Logistics, Vol 1. No.2, 2017.
- Foehl, James E., *SALTS, departing...' Legacy Supply System Set to Retire in August*, Navy.mil, Story Number: NNS180709-11, (9 July 2018).
- Fasching, John LTC (Ret), *Transforming America's Force Projection Capability: Strategic Partner Integration Required*, NDTA.com, (September 2019).
- GAO, Army Logistics: *Global Combat Support System-Army is Supporting Requirements at Selected Units*, GAO-15-378R Army Logistics
- Hathaway, Michael, *The Military Learner: The Acceptance of New Training Technology for C-130 Aircrews*. Aeronautics and Aerospace, 3, no. 2 (2016):
<https://commons.erau.edu/cgi/viewcontent.cgi?article=1102&context=ijaaa>

- Joint Publication 1-0. *Joint Personnel Support*, 2016, pp. 1-60, vii.
https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_0.pdf
- Joint Publication 3-0. *Joint Operations. Incorporating Change 1*. October 22, 2018.
- Joint Publication 3-35. *Joint Deployment and Redeployment Operations*. January 10, 2018.
<https://www.jcs.mil>
- Joint Publication 4-0. *Joint Logistics, Incorporating Change 1*. May 8, 2019. <https://www.jcs.mil>
- Jones, Kenneth D. MG, *The joint logistics enterprise of the future*, www.us.army.mil, Army Sustainment Magazine, (February 2019).
- Lai, Kee-hung, and TC Edwin Cheng. *Just-in-time logistics*. Burlington, VT: Gower Publishing, Ltd., (2009).
- Luttwak, Edward N., *The Price of Efficiency*, Military Logistics Forum, (July/August 1984).
- Mann, Robert P. *Where Are We Going? The Future of Joint Logistics*. Army Sustainment, 42, no. 6. https://alu.army.mil/alog/issues/novdec10/spectrum_future_jointlog.html
- Mazarr, Michael J., *Toward a New Theory of Power Projection*., War on the Rocks. (April 15, 2020).
- McCarter, Timothy CW4, *Logistics Status Reports and the Logistics Common Operating Picture*, Army Logistician Magazine, (December 2008).
- McDonough, James, *US Army's signature logistics system completes full-system deployment*, Defense News, (25 June 2018)
- Rutner, Stephen & Aviles, Maria & Cox, Scott. *Logistics evolution: A comparison of military and commercial logistics thought*. International Journal of Logistics Management, The. 23. 96-118. (2012).
- Warren, Jason W., *"Drawdown: the American Way of Postwar."* New York: New York University Press, 2016.
- Wilson, Bradley, *Naval Operational Supply System: Analysis of Alternatives (AoA)*, RAND (2018).
- Zachinno, James Jr., *A Neglected Principle of War in Logistics Advising*. Army Sustainment, PB 700-10-06, Volume 42. Issue 6. November 2010.