MARINE CORPS IN-TRANSIT VISIBILITY (ITV) STRATEGY

2017

FOREWORD

In supporting the MAGTF of 2025 - and beyond, the Marine Corps must aggressively develop in-transit visibility (ITV) enabling capabilities. This ITV Strategy, in conjunction with other Marine Corps and Department of Defense (DOD) guidance documents, will help to inform and shape the actions of the Corps.

We will benefit by integrating legacy logistics platforms and processes with emerging capabilities to support the future Marine Corps Operating Concept, excel in distributed operating environments, and support the next generation of naval operational concepts. Over the next 15-20 years we will require a mix of old and new logistics – hybrid logistics.

We will incorporate ITV into Next Logistics (NexLog) efforts, such as Autonomous Logistics Systems (air, ground, and sea), thereby expanding the Marine Corps overall logistics innovation portfolio.

ITV is a critical warfighting enabler that provides the location of Marine Corps resources in order to inform decision makers across the DOD logistics enterprise from the tactical to strategic level. This strategy outlines the approach for integrating asset visibility (AV) and ITV capabilities within the Marine Corps Logistics Information Technology (Log IT) Portfolio in order to inform tactical and operational logistics support to Marine Air Ground Task Force (MAGTF) operations.

Semper Fidelis,

Michael G. Dana
Lieutenant General,
U.S. Marine Corps
Deputy Commandant,
Installations and Logistics

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EXECUTIVE SUMMARY

ITV is a critical capability that provides the location of resources at any moment in the Defense Transportation System (DTS) pipeline. Marine Corps resources include equipment, supplies, and personnel. The Defense Transportation Regulations (DTR) require the Marine Corps to provide ITV of assets in order to inform strategic business processes through the Department of Defense (DOD) logistics enterprise. In order to comply with this mandate, the Marine Corps requires a strategy that outlines requirements for the integration of AV and ITV capabilities within the Marine Corps Logistics Information Technology (Log IT) Portfolio in order to inform the tactical and operational logistics posture supporting Marine Air Ground Task Force (MAGTF) operations. The Marine Corps ITV Strategy provides a brief overview of ITV at the various levels of war, as well as what this document terms "Expeditionary ITV," and how the Marine Corps will attempt to design and implement ITV gap solutions in the future. The Marine Corps ITV Strategy provides a common understanding about how the Marine Corps plans to leverage ITV enablers as a means of providing a range of ITV capabilities for the visibility of the movement of Marine Corps resources. This strategy is derived from national, DOD, maritime, and Marine Corps strategies, along with the Marine Corps Log IT Portfolio Strategy.

The Marine Corps ITV Strategy draws from and integrates guiding principles from DOD and Service directives, and functional documents; specifically, enterprise logistics and supply chain strategy, policy and practice. The scope considers cargo visibility at all levels of war. It also acknowledges that a formal requirement determination process must be conducted; clear and actionable policy codified; and formal training improved, expanded, and standardized.

In the recent past (Operation Iraqi Freedom [OIF] and Operation Enduring Freedom [OEF]), Marine Corps ITV efforts focused on the tracking of resources during land-based operations. The pivot to the Pacific Theater, with its vast maritime domain, as well as requirements identified in "Marine Corps Operating Concept" (MOC) provides even greater ITV challenges and opportunities. ITV capability becomes even more important to commanders with such an emphasis on maritime requirements.

Strategic ITV enables the United States Transportation Command (USTRANSCOM) and Defense Logistics Agency (DLA) to support Combatant Commanders (COCOMs) with movement visibility of deployment (unit move) and distribution (sustainment) requirements, tracked by a standard method in order to support asset visibility, ITV, and improve logistic business processes throughout the enterprise.

All levels of war require ITV, but more so at the operational level. In order to synchronize strategic and tactical efforts, ITV of unit and Maritime Prepositioning Force (MPF) cargo flowing into a theater of operation for force closure and sustainment cargo during operations is critical to operational commanders. Additionally, in order to obtain actionable information and to contribute to decision making by logisticians at the operational level, further integration of ITV data into the Log IT Portfolio is needed.

Generally, the MAGTF conducts tactical-level logistic operations. ITV within the tactical battlespace is a key ingredient to operational tempo and battle rhythm. When logisticians can accurately report what equipment or sustainment supplies are in the tactical distribution pipeline, commanders can better plan based on anticipated readiness and capability improvements.

ITV within the expeditionary environment has proven to be a challenge. Expeditionary ITV includes visibility of items/personnel moving through the DTS, both into and out of a theater of operation. It is generally nodal in nature, but should include non-nodal satellite Global Positioning System (GPS) technology, as well. Both land and sea nodes (e.g., shipboard nodes managed by Marine Expeditionary Unit [MEU] Distribution Liaison Cells [DLCs]), to include MPF operations (as well as Fly-In-Echelon [FIE])

provide input to the overall ITV picture. However, ITV in the expeditionary environment is one of the most critical to support the Marine Corps' ability to appropriately scale and support MAGTFs to meet the dynamic range of military operations per the tenets of the MOC. The Marine Corps ITV Strategy addresses the challenges of the expeditionary environment, to ensure ITV capabilities support MAGTFs within these environments to evaluate logistic and operational postures.

Marine Corps ITV contributes to informing MAGTF Commander's decision making ability and has improved since the beginning of OIF/OEF. However, Supporting Establishments (SEs) and operating forces have identified, in multiple forums, that Marine Corps ITV requires improvement to fully realize applicability to the MAGTF and fully integrate within the Marine Corps Log IT Portfolio. The Marine Corps ITV Strategy establishes the ends and means necessary to define and measure requirements to train and equip the Marine Corps with ITV in accordance with the Log IT Strategy.

MISSION STATEMENT

The Marine Corps will provide ITV of assets in order to inform strategic logistics business processes through the DOD Joint Logistics Enterprise in accordance with the DTR. In compliance with this mandate, the Marine Corps will integrate AV and ITV capabilities within the Marine Corps Log IT Portfolio in order to support tactical and operational logistical requirements. The portfolio must also have a robust capacity to provide logistics chain and life cycle management for the total depth of our assets and infrastructure.

END STATE

To attain enterprise visibility of Marine Corps resources within the transportation pipeline, for both unit move and sustainment, beginning with the source of supply and ending at the point of employment. Also, providing commanders with timely and relevant resource information in both degraded and normal communications situations, and in both expeditionary and garrison environments.

GUIDING PRINCIPLES

The Marine Corps ITV Strategy recognizes

mandates imposed by the DOD, and considers unit move, sustainment, and distribution ITV requirements. The below guiding principles are drawn from DOD AV/ITV Strategy, the Commandant's Planning Guidance of 2015, the Naval Logistics Integration (NLI) Strategic Plan, NLI Annual Guidance for Fiscal Year 2016 (FY-16), the Marine Corps Log IT Portfolio Strategy, as well as other published pertinent logistics guidance documents. The following guidelines will be used (where applicable) in the formulation and execution of the Marine Corps ITV Strategy:

1. Technology enablers must be conducive to effective ITV in a forward deployed environment, in order to maintain visibility in an expeditionary environment with reduced networking capabilities.

2. The Marine Corps will maximize its use of Automatic Identification Technology (AIT), Passive Radio Frequency Identification (pRFID), Active RFID (aRFID), linear, and two-dimensional bar code technologies whenever possible, and will pursue improvements. This includes equipment standardization for AIT and Automated Information Systems (AIS) as they pertain to aRFID and pRFID, in order to provide AV/ITV.

3. ITV AIS and AIT must be adaptable and versatile in its use across all Service branches in order to support logistical planners and operators with actionable information that informs decision making.

4. Include the aggregation of naval logistics capabilities through the use of common tactics, techniques, and procedures, and interoperable ITV systems in order to ensure visibility within the sea base.

5. Seek joint interoperability wherever possible in order to effectively leverage existing technology and integrate with Joint Task Forces and combined operations, and to comply with both Joint and Service operational architecture.

6. Improve ITV operational capabilities in order to provide force closure and supply chain performance information.

7. Ensure transparency in ITV investments in order to measure and determine operational values.

8. Use clearly defined metrics and measureable objectives.

9. Support the Marine Corps as a naval expeditionary force, by ensuring the maintenance of ITV at all naval expeditionary distribution hubs and nodes, including at-sea nodes (i.e. MEU DLCs aboard Amphibious Ready Group [ARG] ships).

10. Facilitate integrated requirements that are complementary to all air, ground and logistics components in order to provide visibility of all MAGTF assets.

CONCEPT OF EMPLOYMENT

The Marine Corps ITV Strategy defines a desired capability and how the Service intends to attain this capability. It considers cargo and personnel visibility at all levels of war, to include strategic, operational, and tactical areas of concern. It also acknowledges that a formal requirements determination process must be conducted, clear and actionable policy developed, and formal training improved, expanded and standardized.

The Marine Corps ITV Strategy describes essential ITV capabilities and technologies such as cargo visibility, data integration, scanners, printers, and interoperability of AIS, the use of pRFID and aRFID, electronic data interface transactions, bar codes, and manual processes. Lastly, the Marine Corps ITV Strategy provides a comprehensive snapshot of cargo visibility within the transportation segment of Marine Corps logistics support and prescribes the way ahead for further refinements to this critical capability.

ITV provides visibility of Marine Corps equipment and supplies as they move. Through integration within the Log IT Portfolio, logisticians shall have the ability to determine and report to MAGTF commanders when equipment and supplies will arrive in place within the area of operations. Additionally, ITV will provide visibility of sustainment materiel within the transportation pipeline and evaluate against theater stocks to provide MAGTF commanders confidence in logistical supportability of operational employment. In order to provide such capabilities, asset visibility is a core requirement from which ITV must effectively integrate as resources move from origin to destination.

METHODOLOGY

The Marine Corps ITV Strategy developed as the result of a review and thematic analysis of current DOD and Service-level AV/ITV strategies, policies, studies, lessons learned, and high-level gap findings. The strategic direction is derived from the documents referenced in Appendix A.

PROBLEM STATEMENT

In order to provide the supported commander with identification, location, and status information on key materiel shipments, ITV protocols used by Marine Corps activities provide each shipment's data to the ITV authoritative data source (Integrated Data

> " ... PROVIDE ASSET AND IN-TRANSIT VISIBILITY, INCREASING CERTAINTY, CONTROL, AND EFFECTIVENESS OF THE LOGISTICS CHAIN.
>
> **The Marine Corps Installations and Logistics Roadmap** "

> " LOGISTICS 'PULL' FROM ASHORE, AS OPPOSED TO THE 'PUSH' CHARACTERIZED BY THE LAND-BASED STOCKPILE APPROACH, WILL BE FACILITATED BY NAVAL TOTAL ASSET VISIBILITY LINKED TO THE OPERATIONAL (THEATER) AND STRATEGIC LEVELS . . . "
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> - **Expeditionary Force 2021**

Environment [IDE]/Global Transportation Network [GTN] Convergence [IGC]) so that it can be tracked from the source of supply to the point of employment, in near real time.

However, the Marine Corps' current ITV protocol is based on recent land based operations and does not adequately consider the full spectrum of MAGTF and maritime operations using a variety of connectors and scenarios.

Additionally, ITV enabler efforts have not been well synchronized throughout the enterprise and tend to focus on the individual functional area for which they were designed (i.e. unit move, sustainment and aviation) vice an enterprise end-to-end supply chain approach with complete MAGTF interoperability as a foundational tenet.

Moreover, ITV is not sufficiently integrated into training continuums and is generally not

exploited during training exercises. By not considering complete MAGTF and multifunctional area interoperability, maritime operations, and emphasizing all facets of ITV during training and exercises, the current ITV protocol makes the Marine Corps less able to support the maritime strategy and the whole MAGTF concept. Lack of ITV creates an unfavorable support posture and adds to the "fog of war."

AV/ITV data contributes important information to the logistical picture. In order to do so, it is important that the right assets are visible, the right data concerning the DTS is accessible, and that the data presents to the correct systems within the Log IT Portfolio.

The USTRANSCOM AV/ITV hub is IGC, but the collection of this data is external to the Marine Corps Log IT Portfolio and currently does not provide our logistics community with complete visibility due to the nodal and segmented nature of the network.

> **THE INTEGRATION OF THE NAVAL LOGISTICS COMMUNITIES MUST CONTINUE IN ORDER TO MOVE BEYOND INTEROPERABILITY AND SEEK INTEGRATED NAVAL LOGISTICS SUPPORT TO DEPLOYED FORCES (BOTH AFLOAT AND ASHORE).**
>
> **- Marine Corps Vision and Strategy 2025**

Through better integration of our Service systems at the tactical, operational, and strategic levels, data such as transportation schedules and manifests will aid in gauging the performance of the strategic pipeline to meet requirements for employment. Integration through the Log IT Portfolio for both AV and ITV are essential to establishing supply chain management confidence through more transparency at the operational and tactical levels.

ITV AT THE STRATEGIC LEVEL OF WAR
DEFINITION

ITV at the strategic level of war is the timely and accurate in-transit information made visible from the source of supply (origin), to and through the initial strategic distribution nodes and modes within the DTS, (e.g., source of supply truck docks, sea and aerial ports of embarkation [S/APOE]) and shall be available to all users and logistics managers in a standard format adequate to satisfy needs.

The Marine Corps deploys and sustains itself by using supporting strategic providers, such as USTRANSCOM and its three Transportation Component Commands (Air Mobility Command, Surface Deployment and Distribution Command, and Military Sealift Command), as well as DLA, General Services Administration, and others such as home base/stations and direct support from vendors. These strategic partners are responsible for providing ITV data, which facilitates AV/ITV for the Marine Corps and within the Joint Deployment and Distribution Enterprise (JDDE).

ITV is available and maintained as part of an integrated capability that allows requisitioned line items (sustainment cargo) to be tracked by a standard method throughout the entire Strategic and Operational Theater transportation pipeline and linked to the related requisition, return, or procurement.

Line item manifest and/or packing information must be available on DOD standard AIT, in accordance with Marine Corps Order (MCO) 4000.51C, to provide rapid identification of the contents within containers, pallets, and consolidated shipments. Per the DTR, procedures and electronic transactions shall be standardized throughout all segments of the transportation system to maintain item visibility.

Each line item at the pallet, container or consolidated shipment level, shall be identified and linked through the use of a Transportation Control Number. Carriers with electronic communication capabilities shall provide the status of shipments moving commercially to the extent that interfaces can be established and are operationally or cost beneficial.

Transportation receipt confirmation shall be captured and the positive identification of receiving personnel may aid tracking frustrated in-transit materiel. Ensure communication capability is available to transmit transaction status data.

Joint Publication 3-35 provides additional information pertaining to visibility.

ROLES & RESPONSIBILITIES

The Marine Corps is dependent upon external agencies or organizations for many aspects of ITV; therefore, it is vital that coordination for system and technology insertions occur to ensure an ITV capability. The following organizations, as well as other science and technology organizations, are pivotal to ensuring ITV capability:

Geographic Combatant Commander (GCC)
The GCC and subordinate Joint Force Commander (JFC) Staffs (principally the J-4 Logistics Directorate) plan and oversee logistics from a theater strategic perspective, and rely on a variety of organizations to coordinate logistics activities within the Joint Force. ITV is designed to support the GCC by facilitating proper decisions regarding asset priority and visibility.

Joint Movement Center (JMC)
The J-4 operates the JMC, which is responsible for coordinating the employment of transportation to support the theater concept of operations. The JMC, in close coordination with the Joint Deployment and Distribution Operations Center (JDDOC), establishes theater transportation policies relative to need, port and terminal capabilities, transportation asset availability, and the JFC's priorities. As the theater movement control agency, the JMC also maintains theater-level ITV, which includes establishing and maintaining AIT and infrastructure capability to support ITV at the strategic, operational, and tactical levels.

USTRANSCOM
As the DOD Distribution Process Owner (DPO), USTRANSCOM is the lead proponent for ITV, RFID, and related AIT implementation for the DOD supply chain. It also manages IGC, asset visibility, and maintains dynamic control of resources flowing through the DTS to and from all geographic theaters.

DOD Distribution AIT and AIS Portfolio Manager
Additionally, USTRANSCOM incorporates AIT into the Distribution Portfolio Management architecture and oversees data quality and performance using portfolio management methodology under Defense Business Systems Management Committee oversight.

Defense Logistics Agency (DLA)
DLA provides AIT devices, as required, on all shipments originated, configured, and or consolidated at DLA activities, DLA prime vendors, and the Direct Vendor Delivery program that requires vendors to utilize the Distribution Planning Management System.

HQMC

As the logistics advocate for the Marine Corps, the Deputy Commandant, Installations and Logistics (DC, I&L) at HQMC manages all aspects of logistics, its systems, and the Marine Corps supply chain. As a critical aspect of the supply chain, ITV is considered a required capability for the Marine Corps. DC, I&L is responsible to ensure that AIT/AIS enablers of ITV are sufficient to provide enterprise visibility of Marine Corps resources within the transportation pipeline, beginning with the source of supply and ending at the point of employment, providing commanders with timely and relevant resource information in both degraded and normal communications situations, and in both expeditionary and garrison environments.

DC, I&L works with GCCs and COCOMs to ensure they are supported with appropriate ITV enablers that possess interoperability with other Marine Corps, naval and joint AIT/AIS, and that provide ITV information to the Marine Corps retail supply and maintenance information technology system, Global Combat Support System Marine Corps, as well as the joint authoritative data source (i.e. IGC).

Within I&L, the Assistant Deputy Commandant, Logistics Plans, Policy, and Strategic Mobility Division (LP) manages ITV. Within LP several branches maintain equity in the development of the ITV landscape. The DC, I&L charges three branches in particular, the Logistics Vision and Strategy Branch (LPV), the Logistics Plans and Operations Branch (LPO), and the Logistics Distribution Policy Branch (LPD) with managing Log IT integration efforts through the Log IT Portfolio Management (PfM) (LPV) and ITV strategy and policy (LPD).

Marine Corps Log IT PfM

LPV provides the vision and sets the framework and conditions for the development and transition of future logistics in order to improve Service logistics that impact and direct change, inside and outside of the MAGTF. LPV also provides command and control (C2) for all Marine Corps ITV efforts, ensuring that systems comply with approved DOD and Navy frameworks, and coordination of all ITV AIT efforts with the DC for Combat Development & Integration (CD&I).

Marine Corps ITV Strategy and Policy

LPD develops, plans, coordinates, supervises and synchronizes Marine Corps and DOD policies, procedures and initiatives in order to provide optimally effective deployment and distribution support to the Marine Corps Total Force.

As the Transportation and Distribution (T&D) Operational Advisory Group (OAG) Lead, the LPD Team also helps to manage the T&D OAG ITV Working Group (WG) along with LPO and LPV. This WG's charter charges it with the coordination and development of ITV strategy and policy. As such, the T&D OAG ITV WG works closely with Capability Portfolio Managers, LPV, and operational logisticians to mitigate capability gaps and to ensure that the Marine Corps Logistics Enterprise is provided with improved ITV enablers and policy directing the use of ITV for unit move, sustainment, and MPF Arrival and Assembly Operations, and provides guidance on optimum AIT/AIS capabilities and systems to employ.

Marine Corps Installations Command (MCICOM)
MCICOM provides C2 for the bases and air stations that are integral in directly supporting and performing tactical distribution and ITV in garrison environments, and supporting strategic distribution, deployment, and ITV for those MAGTFs deployed to a GCC's theater. MCICOM helps to maintain ITV infrastructure, and facilitates training through the use of its local facilities and network support, as well as ensuring Marine Corps and DOD ITV policy compliance.

In garrison, MCICOM provides vital ITV infrastructure (per assigned tasks in message Date-Time-Group [DTG] 171841Z Jun 14) in conjunction with Marine Corps Systems Command (MARCORSYSCOM). It is part of the DOD enterprise ITV network, and enables a complete ITV picture to commanders at all levels.

Additionally, MCICOM provides opportunities to train our MAGTF logisticians about how to properly leverage ITV AIT and AIS by integrating the MAGTF and installation staffs and operations.

Combat Development & Integration (CD&I)
CD&I advises the Commandant of the Marine Corps on force development matters by assessing the strategic landscape and translating vision into capability, producing solutions for capability gaps, developing and evaluating innovative concepts, integrating processes to organize, train, and equip the Force, and acting as the joint integrator for combat development.

The Capabilities Development Directorate (CDD) within CD&I develops and integrates warfighting capabilities solutions, to include ITV, that provide

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The Marine Corps, as an integral part of both the Naval force and the Combined/Joint force, must be a tailorable, flexible, and versatile force capable of responding to any crisis across the full range of military operations (ROMO).

- The Marine Corps Operating Concept

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for an effective, integrated MAGTF capability, current and future, anticipating strategic challenges and opportunities for the nation's defense. CDD executes planning during the Planning, Programing, Budgeting, and Execution (PPB&E) process.

The MAGTF Integration Division is a cross-functional division within the CDD, and includes the Marine Corps Capabilities Based Assessment (CBA) Branch. The CBA Branch organizes and facilitates the Marine Corps CBA process, in close collaboration with Capability Portfolio Managers (CPMs), and is responsible for enterprise data and information that culminates in the final Marine Corps CBA Marine Corps Enterprise Investment Plan. It serves as the common thread that ensures adherence to the intent of Service guidance throughout the PPB&E process. As a direct tie-in to management of ITV capability via the Log IT Portfolio, CPMs are an essential part of the collaboration between CD&I, I&L, and the operating forces.

The Logistics Integration Division (LID) integrates future and evolving logistics concepts with identified capabilities, requirements, and supporting programs to synchronize Marine Corps initiatives and to shape naval and joint initiatives within the Joint Capabilities Integration and Development System process.

MARCORSYSCOM
Serves as the Department of the Navy's systems command for Marine Corps ground weapon and information technology system programs in order to equip and sustain Marine Forces (MARFORs) with full-spectrum, current and future expeditionary and crisis response capabilities.

MARCORSYSCOM procures AIT equipment based on MARFOR or SE requirements, as validated by CD&I, using DOD established AIT and RFID contracts, as applicable. Further, it acts as the focal point for all Marine Corps AIT procurement and life cycle management activities. It also develops, identifies, and pursues appropriate funding, via the Logistics Functional Advocate Manager (Log FAM) at HQMC (LPV-2), for the acquisition, operation, integration, sustainment, and maintenance of AIT.

An aRFID investment, sustainment, equipment initial and lifecycle refresh procurement, fielding, project management, and Field Service Representative

ITV AT THE STRATEGIC LEVEL OF WAR

support have been assigned or delegated to MARCORSYSCOM (per assigned or delegated tasks in message DTG 171841Z Jun 14). As such, MARCORSYSCOM advocates for the funding and budgeting of modernization upgrades to the Marine Corps' RFID network infrastructure.

Existing Marine Corps ITV Policy

Current Marine Corps ITV policy exists in the form of naval messages (DTG 021537Z APR 12 and DTG 291451Z Jan 14), as well as MCO 4600.41 (Marine Corps Distribution Manual) acting as interim policy guidance until the Marine Corps publishes an Order specifically addressing ITV.

MARINE CORPS ITV ADVOCACY

Naval Logistics Integration (NLI)

The overall goals and objectives of NLI are to achieve an integrated naval logistics capability across the Department of the Navy and the United States Coast Guard by focusing on strategic initiatives that improve support of naval expeditionary warfare as the Naval Service returns to the littorals and meets the requirement for the conduct of future naval expeditionary logistics. The NLI Annual Guidance for FY-16 (Strategy 1.5) directs the alignment of Navy and Marine Corps AIT efforts to develop advanced logistics solutions for application in the joint warfighting environment.

When feasible, Marine Corps ITV AIT gap solutions will leverage NLI initiatives for improved ITV capabilities in the joint environment. Additionally, Navy and Marine Corps approaches to addressing key AIT initiatives that enable ITV will be standardized, while ensuring common expeditionary communication architecture.

MAGTF Logistics Integration (MLI)

MLI is a Marine Corps initiative to integrate its ground and aviation logistics processes in order to optimize MAGTF readiness empowered to develop specific solutions to logistics challenges (including ITV efforts) and make recommendations, via its governance structure, to DC, I&L and the DC for Aviation.

Operational Advisory Group (OAG)

The Logistics Advocacy Process created OAGs as forums for developing future Marine Corps requirements, addressing logistics issues, and integrating logistics across other Service Advocates. Logistics Advocacy is the method in which the Marine Corps works to improve expeditionary logistics capabilities and innovate past obstacles. OAGs are the nucleus of the Logistics Advocacy Process and are comprised of voting members who are subject matter experts from Headquarters Marine Corps and operating forces staffs.

Transportation & Distribution (T&D) OAG

The T&D OAG is chartered as a forum to identify and establish community priorities, and to develop consistent, unified solutions. It also promotes functional interface between supported and supporting commands (Joint and internal Marine Corps), the operating forces, the Logistics Advocate (DC I&L), HQMC requirements officers, program managers, resource sponsors, technical advisors, and working level representatives involved with issues related to this community.

T&D OAG ITV WG

The T&D OAG ITV WG represents transportation and distribution related ITV activities for the Logistics Advocate, DC I&L. The T&D OAG ITV WG is chartered as the ITV PfM for the Marine Corps, and as such, all other advocacy efforts involving ITV will coordinate their ITV efforts with the T&D OAG ITV WG. The WG has ITV equity and will engage with stakeholders in processes and activities like supply chain management, freight transportation, embarkation, landing support, port and terminal operations, and air delivery.

The T&D OAG and the T&D OAG ITV WG, as advocacy forums, directly engage in writing and providing input to this document (Marine Corps ITV Strategy), the Marine Corps transition from MAGTF Deployment Support System (MDSS) II to the Integrated Computerized Deployment System (ICODES), the MEU Proof of Principle (which focuses on at-sea and land-based nodal ITV as an enabler to increased cargo throughput velocity), as well as working with Marine Corps Logistics Command (MARCORLOGCOM) and LPV to propagate and refine ITV and metrics reporting.

TRANSITION FROM STRATEGIC ITV TO OPERATIONAL ITV

The transition from strategic ITV to operational ITV should be seamless and viewed as a simple pass-off between nodes, no matter what technology and data elements are used now or in the future. Subject to battery life, the current aRFID tags required from the origin source of supply (e.g., DLA-Distribution) normally will remain on cargo pallets and containers through the entire flow and transition between strategic and operational theater nodes, to enable end-to-end ITV from the source of supply to the MAGTF's point of need (e.g., MAGTF Materiel Distribution Center [MMDC], DLC, Supply Management Unit [SMU]).

Maintaining consistent ITV from origin to point of need facilitates near-real-time status of the movement of all classes of supply. The ability to track the movement of all classes of supply from the source of supply to the end user, including the flow of cargo from the consignor to the consignee, port, servicing airhead, intermediate supply support area, or other designated destinations, enables accurate and actionable metrics.

The Marine Corps' primary challenge beyond the point of need (the last node within operational distribution), is to provide accurate, reliable, and timely ITV from the point of need to the point of employment within the tactical distribution node network. In austere tactical environments, or during the early stages of a deployment, it is logical to expect that ITV may be more difficult due to limited infrastructure and a lack of sophistication of communications and information networks available.

ITV AT THE OPERATIONAL LEVEL OF WAR
DEFINITION

Operational level logistics is the responsibility of MARFOR Commanders or the senior MAGTF Command Element (CE), and are assisted by HQMC and the Supporting Establishment (SE). MARFOR Commanders frequently establish a Marine Corps Logitics Command (MARCORLOGCOM) Forward element to support operational level logistics in theater, as well as tactical logistics requirements.

ITV is required at all levels, but particularly at the operational level. In order to synchronize strategic and tactical efforts, ITV of unit and MPF cargo flowing into theater for force closure, and sustainment cargo during combat operations, is critical to operational logisticians.

In addition to force closure, sustainment, and MPF operations, as well as other functions, operational logistics coordinates with Joint, other-Service, and Host Nation agencies for the support of tactical forces in theater. Operational logistics is critical to linking tactical logistics requirements with strategic logistics support in order to achieve operational goals. Operational ITV is a key enabler for force synchronization at all levels.

ROLES & RESPONSIBILITIES

MARFOR

The MARFOR plans, coordinates, and supervises the execution of operational (theater) logistics for the assigned MAGTF, to include ITV of unit move and sustainment items entering, transiting and exiting the theater. Each Service provides administrative and logistics support to its forces assigned or attached to a Joint Force. The JFC may have the authority to direct a single Service to provide common item logistics to components of the Joint Force (e.g., the Army has surface, port, and inland waterway transportation responsibilities). Consequently, the MARFOR coordinates operational logistic support for the MAGTF per Marine Corps Service responsibility and for other Service components as directed by the JFC.

MARCORLOGCOM

MARCORLOGCOM provides a centralized ITV management and metrics reporting capability for the Marine Corps with the ability to tailor cargo metrics reporting, using ITV as an enabler, to both strategic and tactical requirements.

Distribution Node Management and ITV Cognizance

MARCORLOGCOM functions as the sole Marine Corps distribution node manager. It provides logistics chain (to include transportation, distribution and ITV) management, reporting, advocacy, and (where appropriate) Distribution Process Advocates (DPAs). DPAs provide assistance to Marine Corps aerial and sea port customers regarding sustainment cargo transiting the DOD distribution pipeline. DPAs facilitate Marine Corps process improvements to minimize the occurrence of frustrated cargo and resolve cargo-related issues.

MARCORLOGCOM provides ITV-related services (e.g., metrics reporting and process monitoring) between the MAGTF and outside sources, and acts as a critical link between strategic and tactical ITV enablers.

As the ITV conduit for the MAGTF, MARCORLOGCOM reports on supply chain performance by using ITV as an enabler for end-to-end visibility. By maintaining and monitoring ITV at the operational level, it can synchronize strategic ITV capabilities with tactical ITV requirements for the visibility of sustainment cargo moving within the DTS.

MARCORLOGCOM offers commanders, at all levels, the ability to maximize supply chain performance. ITV enables supply chain metrics reporting to COCOMs, HQMC, and USTRANSCOM in order to improve efficiency and flexibility in the execution of operational goals and objectives.

TRANSITION FROM OPERATIONAL ITV TO TACTICAL ITV

With ITV at the strategic and operational distribution levels (from source of supply to point of need) being standardized within the Joint Community, a transition occurs by each Service after cargo is received at the last operational node (the point of need, being a Supply Support Area, MMDC, DLC, SMU, or smaller supply unit).

From the last operational node forward, the Services, per their U.S. Code, Title 10 role, execute "tactical distribution," as they design and control it. As ITV requirements transition to support tactical distribution, from the point of need to their assigned points of employment (i.e. Forward Operating Bases [FOBs] of all sizes within the battle space), the methods used to gain ITV also transition, typically to a non-nodal or near-real-time technology (e.g., GPS device).

ITV AT THE TACTICAL LEVEL OF WAR
DEFINITION

Tactical logistics involves the coordination of functions required to sustain and move units, personnel, equipment, and supplies. C2 of logistics at the tactical level focuses on monitoring, directing, and executing logistics operations and maintaining communications with supporting operational-level forces. Generally, the MAGTF conducts tactical level logistic operations. ITV within the tactical battlespace is a key ingredient to operational tempo and battle rhythm. When logisticians can accurately report what equipment or sustainment supplies are in the tactical distribution pipeline, commanders can better plan based on anticipated readiness and capability improvements.

ROLES & RESPONSIBILITIES
MAJOR SUBORDINATE COMMANDS

Command Element (CE)

The CE maintains C2 for the MAGTF and receives logistics support from the Logistics Combat Element (LCE), to include ITV support. The CE staffs the MAGTF Deployment and Distribution Operations Center (MDDOC), which conducts integrated planning, provides guidance, coordinates, and monitors transportation and inventory resources as they relate to the management of the MAGTF's distribution process. ITV efforts are centralized within the MDDOC, which coordinates and maintains asset visibility requirements and implementation throughout the MAGTF distribution pipeline, and manages all deployment and distribution related AIT and AIS.

Each Marine Expeditionary Force (MEF) CE has voting representatives on the T&D OAG ITV WG, who continue to work closely with operating forces and the SE as ITV policies and processes are developed and modified, and ITV AIT and AIS are refined and updated.

Logistics Combat Element (LCE)

The LCE provides all support functions not organic to, or in excess of the capabilities of, other elements of the MAGTF, to include ITV support. The LCE employs ITV capabilities at all MAGTF logistics nodes, ensuring that all elements of the MAGTF have unit equipment and sustainment cargo visibility as it moves through the DTS.

As discussed later in this document, integration of ground and air logistics capabilities is critical to the Marine Corps as it attempts to reduce supply chain redundancies and increase internal effectiveness.

LCE logisticians will continue to work closely with Aviation Combat Element (ACE) logisticians in order to leverage the LCE (and other) ITV, and the ACE air-lift capabilities in theater. During force closure, Reception, Staging, Onward Movement & Integration and retrograde, MPF operations, including the FIE, it is imperative that the LCE plan and execute a comprehensive ITV strategy, in coordination with the MDDOC. Active RFID, pRFID, AIT, and AIS interoperability must be considered. As the T&D OAG ITV WG works toward ITV gap mitigation, it will rely heavily on the LCE from each MEF to provide input as ITV policies and processes are developed and modified, and ITV AIT and AIS are refined and updated.

Air Combat Element (ACE)

The ACE provides all or a portion of the six functions of Marine aviation necessary to accomplish the MAGTF's mission. The LCE provides general logistics support to the ACE, to include ITV capabilities.

ACE collaboration with the LCE during MLI initiatives will continue to enhance overall Marine Corps logistics capabilities. Moreover, ITV at airfields during FIE and airlift sustainment operations remains a critical piece to the overall ITV picture desired by commanders at all levels. The T&D OAG ITV WG will heavily consider MLI initiatives and ACE equities as ITV policies and processes are developed and modified, and ITV AIT and AIS are refined and updated.

Ground Combat Element (GCE)

Although the GCE has some organic logistics support capability, the LCE provides most of its logistical support, to include ITV support. Since the MAGTF effort often focuses on the GCE, ITV capabilities must provide GCE commanders with a complete picture of items moving through the distribution pipeline.

EXPEDITIONARY ITV
DEFINITION

Expeditionary ITV includes visibility of everything moving through the DTS, both in and out of a Theater AOR, and is generally nodal in nature, but could include non-nodal satellite GPS technology, as well. Land and sea nodes (i.e. shipboard nodes managed by a MEU DLC), MPF operations (to include FIE), provide input to the overall ITV picture. Expeditionary ITV is the most difficult to maintain, due to communications degraded or denied areas, enemy threats and actions, but is the most critical in terms of supporting operational objectives. Maintaining consistent ITV from origin to point of employment facilitates near-real-time status of the movement of all classes of supply. The ability to track the movement of all classes of supply from the source of supply to the end user, including the flow of cargo from the consignor to the consignee, port, servicing airhead, intermediate supply support area, or other designated destinations, enables accurate and actionable metrics.

Land-Based Nodes

ITV at land-based distribution nodes includes areas such as military bases, air stations, naval Fleet Logistics Centers (FLCs), airports, seaports,

and mature FOBs. AIT for ITV at these locations is typically mature and operates with little operating force input, but must still be periodically checked and maintained for optimal performance.

The interoperability of ITV AIT and AIS used at land-based distribution nodes is an area the Marine Corps has identified as having gaps. As the Marine Corps, via the T&D OAG ITV WG, works to mitigate identified ITV gaps, it must consider data and systems interoperability as a top priority.

At-Sea Nodes (MEU/Marine Expeditionary Brigade [MEB] DLC)

At-sea nodes refers to shipboard nodes with afloat units managed by MEU/MEB DLC teams. In the past, cargo and ITV doctrine, policy, and process documentation generally ignored these nodes. This was largely due to immature ITV and cargo technology, a shortage of trained Distribution and Supply Chain Management Marines, as well as strategic operations focused on two land-based campaigns (Iraq and Afghanistan).

As the Marine Corps begins to refocus its efforts on its amphibious roots, at-sea distribution nodes will become increasingly important to strategies of the future. Technology has significantly improved over the last 14 years of war, and Distribution and Supply Chain Management Marines have been redirected to support distribution operations at sea (increased MEB/MEU assignments).

The T&D OAG ITV WG will include at-sea distribution nodes and MEU/MEB operations as ITV policies and processes are developed and modified, and ITV, AIT and AIS are refined and updated.

Maritime Preposition Force (MPF)

The MPF program provides the GCC a rapid response capability enabled through Maritime Prepositioning Equipment and Supplies (MPE/S) loaded aboard forward deployed Maritime Prepositioning Ships (MPS). When combined with the MAGTF and its equipment arriving in the FIE, MPS provide forward deployed equipment and supplies needed to sustain a MEB-sized MAGTF for 30 days of sustained combat operations; thus, reducing total strategic lift requirements.

Marine Corps proficiency in MPF operations and its AV and ITV requirements have decreased after more than a decade of war. These skills must be regenerated through education and training, both in the classroom and through live training events (e.g., MPF offload exercises), including the application of ITV AIS and AIT enablers.

Improvements in AIT using pRFID technology may increase velocity of an offload and improve ITV for MPF operations, as well as container and equipment yard management. Often, manual processes and updates, due to a lack of interoperability, contribute to ITV and process gaps during MPF operations.

The T&D OAG ITV WG will ensure both, aRFID and pRFID, as well as nodal and non-nodal technology, are considered and leveraged as it works to mitigate ITV gaps in MPF operations. It will include FIE operations as part of any future MPF process improvements, and will work to refine the Marine Corps training and education continuum, to include MPF operations at formal learning centers. Finally, the WG will help to develop policy that is clear and actionable, directs the use of ITV for MPF offload and provides guidance on optimum AIT and AIS capabilities, and systems to employ.

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In-transit visibility refers to the ability to track the identity, status, and location of unit and non-unit cargo, passengers, and patients from origin to destination.

- Marine Corps Warfighting Publication (MCWP) 3-40, *Logistics Operations*

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GOALS AND OBJECTIVES

Achieving the Marine Corps Installations and Logistics Roadmap (MCILR) intent and the Log IT Strategy vision statement will be done by establishing a set of clearly defined goals and objectives. Each goal has associated objectives. The objectives synthesize each goal into specific focus areas. Accomplishing each objective will result in realizing the overall goal. The following table outlines the goals and supporting objectives.

GOALS AND OBJECTIVES	
GOAL	OBJECTIVES
1. Expand ITV capability outside of "normal" nodes.	» Identify potential tactical distribution nodes » Review Marine Corps ITV Policy » Publish Policy/Guidance » Identify ITV Training Opportunities » Provide increased formal training on ITV » Identify, fund and develop current AIT and AIS capabilities to provide improved ITV
2. Provide improved ITV systems capability, to include operating in information-degraded environments.	» Review current and developing systems » Develop an alternative plan for ITV procedures in degraded communications environments » Develop manual ITV procedures » Incorporate manual ITV procedures in formal learning environments
3. Provide improved ITV capability within the tactical distribution battle-space, to include sea-based and littoral operations.	» Review current and emerging technology » Validate MARFOR and SE ITV capability requirements » Identify MARFOR and SE ITV gaps » Develop MARFOR and SE ITV gap mitigation strategies

GOAL 1: EXPAND ITV CAPABILITY OUTSIDE OF "TRADITIONAL" NODES

ITV has been possible within certain normal nodal parameters (e.g., APOE and aerial port of debarkation), but tend to be land-based, and limited to certain technologies. As the Marine Corps begins to shift its emphasis to maritime operations, new ITV solutions and employment of updated technologies within a wider variety of nodes are required. The Marine Corps has embraced NLI and its initiatives to integrate Marines on naval staffs, and has begun to integrate Marine logisticians at various naval nodes (e.g., FLCs) across the globe. Distribution Management Marines have also begun to deploy aboard naval ships as an integral part of MEU staffs on a regular and consistent basis, and have facilitated enhanced ITV while at sea. This new capability aboard ship has created a previously unheard of "at-sea" point of need reception node. Additionally, HQMC (LP) engages in initiatives, which include non-standard methods of delivering cargo, such as Unmanned Aerial Vehicles and traditional air delivery techniques. As such, these new "non-standard" modes and nodes should also be included in any ITV focus effort, in order to ensure interoperability of Navy and Marine Corps AIS and AIT ITV enablers.

Objective 1.1:

Identify potential distribution nodes.

Objective 1.2:

Identify existing Marine Corps publications with ITV applicability and publish a review of Marine Corps ITV policy and associated gaps.

Objective 1.3:

Publish guidance on ITV data collection (i.e. type of data, format, method of transmission, MPF and other expeditionary operations ITV processes) at distribution nodes.

Objective 1.4:

Identify potential live ITV training opportunities (e.g., exercises and MEF Material Readiness Training Cells) and applicable Occupational Field formal learning centers (04XX, 30XX, and 31XX, etc.) where ITV education may be increased.

Objective 1.5:

Provide increased formal training on performing ITV data collection at nodal and non-nodal collection points.

Objective 1.6:

Identify, fund, and develop current AIT and AIS capabilities to provide ITV in accordance with Marine Corps ITV policy.

GOAL 2: PROVIDE ITV CAPABILITY IN INFORMATION-DEGRADED ENVIRONMENTS

The Marine Corps has *some* current capability to provide ITV in information-degraded environments and must continue to expand and promote this capability to other systems as much as possible, and ensure that this capability is retained in future systems. One example of a technology capable of providing ITV in an information-degraded environment is the "NANO Shout" iridium transponder. As an upgrade to bridging technologies to support ITV from the point of need to the point of employment, LPD has begun to experiment with the employment of an iridium transponder to provide position location information to the National Radio Frequency ITV Server, which in turn can provide route mapping capability using "Google Earth." Current and future ITV enablers must consider and mitigate information-degraded environments.

Objective 2.1:
Identify and conduct a review of current and developing ITV enabler systems to ensure that ITV communication capability is maintained in the functionality, as well as ensuring the interoperability of ITV AIS and AIT.

Objective 2.2:
Develop alternate procedures to ensure that ITV communication capability is maintained in degraded environments, and ensure those procedures are included in ITV policy.

Objective 2.3:
Develop manual procedures for all ITV operations. For example, consider using bar codes and bar code readers as a backup system (in case RFID tags or readers fail), and set up alternative read locations to cover reader failure.

> ## GOAL 1: PROVIDE END-TO-END (E2E) LOGISTICS CHAIN VISIBILITY.
>
> **- LogIT Strategy**

> ❝ THROUGHPUT IS THE FLOW OF SUSTAINABILITY ASSETS IN SUPPORT OF MILITARY OPERATIONS, AT ALL LEVELS OF WAR, FROM POINT OF ORIGIN TO POINT OF USE...
>
> – Marine Corps Tactical Publication (MCTP) 3-40F, *Transportation Operations* ❞

Objective 2.4:

Incorporate manual ITV procedures into formal learning and field training environments.

GOAL 3: PROVIDE IMPROVED ITV CAPABILITY WITHIN THE TACTICAL DISTRIBUTION BATTLE-SPACE, TO INCLUDE SEA-BASED AND LITTORAL OPERATIONS

A renewed emphasis on maritime operations requires a new look at the technology, organizational roles, and policies that are needed to define and provide ITV within this environment. NLI and MLI will be prominent actors in this capability.

Objective 3.1:

Create and review a list of current and emerging technologies (e.g., Integrating Placement and Registration for Identified Material and Equipment [IPRIME]) with a view toward ITV within a tactical distribution scenario, including maritime operations (e.g., MPF).

Objective 3.2:

Validate MARFOR and SE ITV capability requirements.

Objective 3.3:

Identify MARFOR and SE ITV gaps.

Objective 3.4:

Develop MARFOR and SE ITV gap mitigation strategies (i.e. include in POM-19 Marine Corps Gap List [MCGL]).

POM/CAPABILITIES AND GAP LIST PROCESS

The POM/Capabilities and Gap List Process provides the means by which ITV capability requirements can be identified. This, in turn, provides a basis for capability gaps to be highlighted and prioritized, which feeds a justification for funding for material and non-material ITV solutions. The Marine Corps CBA is a deliberate and cyclic process that supports the Marine Corps' annual PPB&E process and future capability development. This process is executed via CPMs, and is important to ITV because it is required to purchase new, or to modify existing, ITV AIT or AIS. There are five phases of the annual Marine Corps CBA: Strategic Planning, Capabilities Analysis, Gap Analysis, Solutions Analysis, and Risk Analysis.

Strategic Planning
The Marine Corps CBA represents the first phase of the PPB&E process, "Planning." CD&I leads the Marine Corps CBA and is supported by advocates, proponents, and MARFOR Commanders.

Capabilities Analysis
Capabilities Analysis, the second phase of the Marine Corps CBA process, involves identifying, defining, characterizing, and prioritizing Marine Corps required capabilities.

Complete capability requirements consist of an identified capability or specific course of action, the tasks that must be performed, the conditions under which tasks must be conducted, the standards that must be achieved, and the performers who execute the tasks. Past POM drills required CD&I-led development of the Marine Corps Capabilities Investment Plan to influence the second 'P' in PPB&E. As such, CPMs were implemented to advocate for capabilities such as logistics C2 (ITV enablers) equities on behalf of the enterprise. CPMs at CD&I work directly with MARFOR CPMs, who most accurately represent operational force requirements, to ensure those requirements are properly captured. ITV falls within Marine Corps Capabilities List (MCCL) 4.0, "Logistics."

Gap Analysis
The third phase of the Marine Corps CBA process is the Gap Analysis. This phase identifies gaps, overlaps, and redundancies by examining capability requirements from capabilities analysis and evaluating the ability of the current and programmed Marine Corps force to perform these requirements. Capability gaps are identified by the inability to achieve a task to standard under the given set of conditions. The gap title, statement, and type are important data collected in this phase.

Solutions Analysis
Solutions Analysis is the fourth phase of the

CBA process. This phase examines prioritized capability gaps identified in the MCGL across Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, and Policy areas. Solutions Analysis identifies strategies and supporting tasks designed to eliminate or mitigate gaps.

Risk Analysis

The fifth and final phase of the Marine Corps CBA process is Risk Analysis. This phase translates future focused strategic guidance by articulating Marine Corps CBA analytical results and consolidating the MCCL, MCGL, and Solutions Planning Directives into resourcing recommendations in support of the Commandant's Service goals for the Marine Corps' future 10 year objectives. Once approved by the Marine Requirements Oversight Council, the culminating document created and signed at the end of phase five is the Marine Corps Enterprise Integration Plan.

EXTERNAL FACTORS

Fiscal Uncertainty

Fiscal austerity will likely impact the pursuit of an RFID strategy involving a dual (passive and active) RFID or a non-nodal approach. As a mature technology, aRFID costs continue to decline and are generally included in most Marine Corps budgeting processes; however, to better leverage the added advantages of pRFID, the Marine Corps must make a larger investment in pRFID AIT and AIS (e.g., IPRIME). A decreased logistics funding stream could impact the required investment into RFID AIT and AIS enablers.

Training

Marines use different ITV capabilities, both aRFID and pRFID, during various training and contingency scenarios; however, Marines lack adequate training and equipment to use AIT enablers in all situations. Marines must gain a better understanding of how AIT integrates with AIS (e.g., MDSS II [transitioning to the Sea Service Deployment Module], National ITV Server). Marines need specialized training at schoolhouses (requires increased Training and Education Command engagement) and units, in order to better plan and execute ITV during an operation, for this Marine Corps ITV Strategy to become an effective tool.

Shift in Strategic Direction

A shift in direction of planning (and operating) back to land-based operations would not affect all goals, but would de-emphasize the particular goals affecting maritime operations. Additionally, a decision to pursue a new technology, other than active or passive RFID, could impact the Marine Corps ITV strategy.

FINAL THOUGHTS

As logistic technology and innovation efforts continue to gain momentum, we must ensure our ability to track materiel, in near real-time as it moves through the DTS, keeps pace. Although establishing and maintaining ITV during disaggregated operations from afloat or ashore is challenging, our commitment to this critical logistic enabler will be a key to ensuring world-class support to the warfighter. Success will be driven by a well-integrated Log IT Portfolio, interoperability with joint systems and an innovative mindset.

Appendix A: Foundational Documents

The Marine Corps derives its ITV Strategy from larger strategies designed to set the expeditionary force in motion:

Cooperative Strategy for 21st Century Sea Power (March 2015) http://www.navy.mil/local/maritime/150227-CS21R-Final.pdf

Marine Corps Operating Concept (MOC)
http://www.mccdc.marines.mil/Portals/172/Docs/MCCDC/young/MCCDC-YH/document/final/Marine%20Corps%20Operating%20
Concept%20Sept%202016.pdf?ver=2016-09-28-083439-483

Naval Logistics Integration 2011- 2015 Strategic Plan.   http://www.dtic.mil/dtic/tr/fulltext/u2/a555461.pdf

NLI Playbook.   http://www.marines.mil/Portals/59/Publications/NAVMC%204000.4.pdf

Marine Corps Vision and Strategy 2025. http://www.marines.mil/Portals/59/Publications/Vision%20Strat%20lo%20res.pdf

Marine Corps Installations and Logistics Roadmap.
http://www.iandl.marines.mil/Portals/85/Docs/Division%20LP%20Documents/MCILR_lowres_June20-1.pdf

Marine Corps Information Enterprise Strategy.
http://www.hqmc.marines.mil/Portals/156/Newsfeeds/SV%20Documents/Marine_Corps_Information_Enterprise_Strategy%20
%28MCIENT%29%20V1.0.pdf

Marine Corps Logistics Information Technology Portfolio Strategy.
http://www.iandl.marines.mil/Portals/85/Docs/Division%20LP%20Documents/Log%20IT%20Portfolio%20Strategy.pdf

DoD Strategy for Improving Asset Visibility.
http://gcss.army.mil/Documents/Articles/Strategy_for_Improving_DoD_Asset_Visibility.pdf

Automatic Identification Technology (AIT) Initial Capabilities Document, 7 May 2013

MCO 4000.51C: Automatic Identification Technology (AIT)

Appendix B: Acronyms

ACE: Air Combat Element
AIS: Automated Information Systems.
AIT: Automatic Identification Technology
APOE/D: Aerial ports of embarkation/debarkation
aRFID: Active Radio Frequency Identification
AV: Asset Visibility
C2: Command and Control
CBA: Capabilities Based Assessment
CD&I: Combat Development and Integration
CE: Combat Element
COCOM: Combatant Commander
CPM: Capability Portfolio Manager
DC, I&L: Deputy Commandant, Installations and Logistics
DLA: Defense Logistics Agency
DOD: Department of Defense
DTS: Defense Transportation System
DTR: Defense Transportation Regulation
FIE: Fly In Echelon
FOB: Forward Operating Base
GCC: Geographic Combatant Commander
GCE: Ground Combat Element
HQMC: Headquarters, United States Marine Corps
IDE: Integrated Data Environment
IGC: Integrated Data Environment (IDE)/Global Transportation Network (GTN) Convergence
IPRIME: Integrating the Placement and Registration of Identified Materials and Equipment
ITV: In-transit Visibility
JMC: Joint Movement Center
LCE: Logistics Combat Element
LPV: Logistics Vision and Strategy Branch
LPO: Logistics Plans and Operations Branch
LPD: Logistics Distribution Policy Branch
Log IT: Logistics Information Technology
MAGTF: Marine Air Ground Task Force
MARCORLOGCOM: Marine Corps Logistics Command
MARFOR: Marine Forces
MC CBA: Marine Corps Capabilities Based Assessment
MCCL: Marine Corps Capabilities List
MCGL: Marine Corps Gap List
MCICOM: Marine Corps Installations Command
MLI: MAGTF Logistics Integration
MOC: Marine Corps Operating Concept
NLI: Naval Logistics Integration
OAG: Operational Advisory Group
PPB&E: Planning, Programming, Budgeting and Execution
SE: Supporting Establishment
T&D: Transportation and Distribution
USTRANSCOM: U.S. Transportation Command
WG: Working Group

Appendix C: Definitions

Active RFID Systems: aRFID systems are omnidirectional, and may consist of either less expensive low data capacity (license plate) or moderately expensive high data capacity transponder devices. Active devices are effective portable databases and facilitate the rapid transfer of data from the transponder/tag to AIS with standoff capability.

Automated Information System: AIS is a combination of computer hardware, computer software, data, or telecommunications that performs functions such as collecting, processing, storing, transmitting, and displaying information. Excluded are computer resources, both hardware and software, that are an integral part of a weapon or weapon system; used for highly sensitive classified programs (as determined by the Secretary of Defense); used for other highly sensitive information technology (IT) programs (as determined by the DoD Chief Information Officer [CIO]); or determined by the Defense Acquisition Executive (DAE), that is, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD AT&L), or designee to be better overseen as a non-AIS program (e.g., a program with a low ratio of research, development, test, and evaluation [RDT&E] funding to total program acquisition costs or that requires significant hardware development).

Asset Visibility: Provides users with information on the location, movement, status, and identity of units, personnel, equipment, and supplies, which facilitates the capability to act upon that information to improve overall performance of the Department of Defense's logistics practices.

Automatic Identification Technology: A suite of technologies enabling the automatic capture of data, thereby enhancing the ability to identify, track, document, and control assets (e.g., materiel), deploying and redeploying forces, equipment, personnel, and sustainment cargo.

Distribution Pipeline: Continuum or channel through which the Department of Defense conducts distribution operations, representing the end-to-end flow of resources from supplier to consumer and, in some cases, back to the supplier in retrograde activities.

End-to-end: A term that describes joint distribution operations boundaries, which begin at the point of origin and terminate at the geographic combatant commander's designated point of need within a desired operational area, including the return of forces and materiel.

In-Transit Visibility: The ability to track the identity, status, and location of Department of Defense units, and non-unit cargo (excluding bulk petroleum, oils, and lubricants) and passengers; patients; and personal property from origin to consignee or destination across the range of military operations.

Integrated Data Environment/Global Transportation Network Convergence: IGC is the in-transit visibility system of record providing expanded common integrated data and application services enabling a common logistics picture, distribution visibility, and materiel asset/in-transit visibility for distribution solutions.

Interoperability: 1. The ability to operate in synergy in the execution of assigned tasks. 2. The condition achieved among communications-electronics systems or items of communications-electronics equipment when information or services can be exchanged directly and satisfactorily between them and/or their users.

Joint: Connotes activities, operations, organizations, etc., in which elements of two or more military departments participate.

Mode of transport: One of, or a combination of, the following modes used for a movement: Inland surface transportation (manned and unmanned): rail, road, and inland waterway; Sea transport (coastal and ocean); Air transportation; and Pipelines.

Passive RFID Systems: pRFID systems generally require line-of-sight interrogation of powerless, inexpensive, low capacity transponder devices. Passive devices are adaptable for use at the item, case, and pallet level.

RFID: RFID is a family of technologies that enables hands-off processing of materiel transactions for cargo deploying through the DTS. RFID provides operators a means to remotely identify, categorize, and locate materiel automatically within relatively short distances. Remote interrogators (located a few inches to 300 feet from the transponder device) electronically retrieve the data via electromagnetic energy (normally in the RF or microwave frequency range) and send the data to the AIS. The technology is divided into two categories of data storage and retrieval systems – active and passive.