

Asset tracking and reception, staging and onward movement

UK Lessons identified from recent operations and future developments

Recent operations in Iraq (OPERATION TELIC) have identified a number of lessons for the British Army. This article concentrates on two specific logistic areas, those of Asset Tracking and Reception, Staging and Onward Movement (RSOI).

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Asset Tracking

Asset tracking is the means of providing timely and accurate information on the location, movement, status and identity of units, personnel, equipment and materiel. It consists of 4 key elements:

- **Consignment Tracking.** The tracking of consignments when prepared for and in the process of being moved at any point in the supply chain.
- **Management of Deployed Inventory.** This is the visibility of personnel, equipment and materiel when deployed.
- **Asset Identity and Condition.**
- **Status of Force Element.** Providing up to date information of individual elements of a deployed force.

Ever since the first Gulf War in 1992 the British Forces have been aware of shortfalls in the ability to identify and track individual items from vehicles to spare parts. At the time it was specifically commented on by commanders and the Parliamentary Defence Committee but over the following years, amongst conflicting

budgetary requirements, the MOD gave only limited priority to the problem and though 2 single service systems were introduced (VITAL for the Army and RIDELS for the Navy) they were limited by their dependence on other information systems which were never designed to be part of an integrated supply chain.

This situation is changing in the light of recent operations in Iraq.

During the initial planning phase when consideration was being given to a UK/US "Northern Option" (i.e. an invasion through Turkey) the need to permit the UK forces to work with the US required UK buy-in to the US Total Asset Visibility system (tagging of consignments i.e. containers and pallets (not individual items) by passive radio frequency signals). Work on this had commenced before the decision to change to an invasion from the south was made (where it proved to be of equal utility) and the contract was allowed to run its course. The system was not in place for the first deploying units, but was running from early on, albeit only tracking as far forward as the point of breaking bulk (pallet broken down or container opened). This should not overshadow a remarkable

achievement however; having only commenced contracting in December, operating procedures were developed, training conducted, containers electronically tagged and the interface with the UK's VITAL tracking system were all put in place in time for the main deployment in early March. The weakness was not that the UK did not have a working system in place but that once an item was extracted from the tagged container in theatre the British Forces could not track its move on to the final point of delivery. This capability simply did not exist; the flow of information from theatre was therefore poor, some key containers were misplaced and therefore some equipment did not reach the troops before they crossed the start line. Hence the logisticians in the base organisations were confident that sufficient stocks had been sent forward and had arrived in theatre but once items had been taken out of containers or off pallets they could no longer be effectively tracked and commanders continued to report shortages. Thus the UK achieved partial success with the consignment tracking element of the process but the other components were incomplete or missing.

Since the end of the war fighting stage of the operation work on a joint system has had a high priority and the new freight distribution information technology (IT) systems which are being developed by the Services will provide the facility for dynamic management of the freight distribution system to the theatre of operations. Real time information will be available to key supply personnel at the nodal points in the system which will guarantee stores visibility, tight control and provide the information required for an effective prioritisation procedure. This will ensure the most economic use of resources. The following are **some of the key elements of the future asset management system:**

- **Management of the Joint Deployed Inventory (MJDI).** Current capability is vested individually in the 3 Services but there is a programme of experimentation looking at bringing them together under a joint system that will take the requirement of the operational unit and feed it back to the base organisation. There will be an interim capability in late 2006 and Initial Operating Capability (IOC) in late 2007.
- **Management of the Base Inventory System (MBIS).** Again currently single service the intent is that this will be joint and that the request coming into the system will be analysed, availability confirmed, prioritised and a depot tasked to provide. There is currently a “business case” being prepared for this joint capability.
- **Management of Materiel in Transit (MMIT).** MMIT allows real time visibility of each item from packaging in the depot to the foxhole. Many elements already exist including radio frequency tags on containers and the IOC for MMIT is 2006.

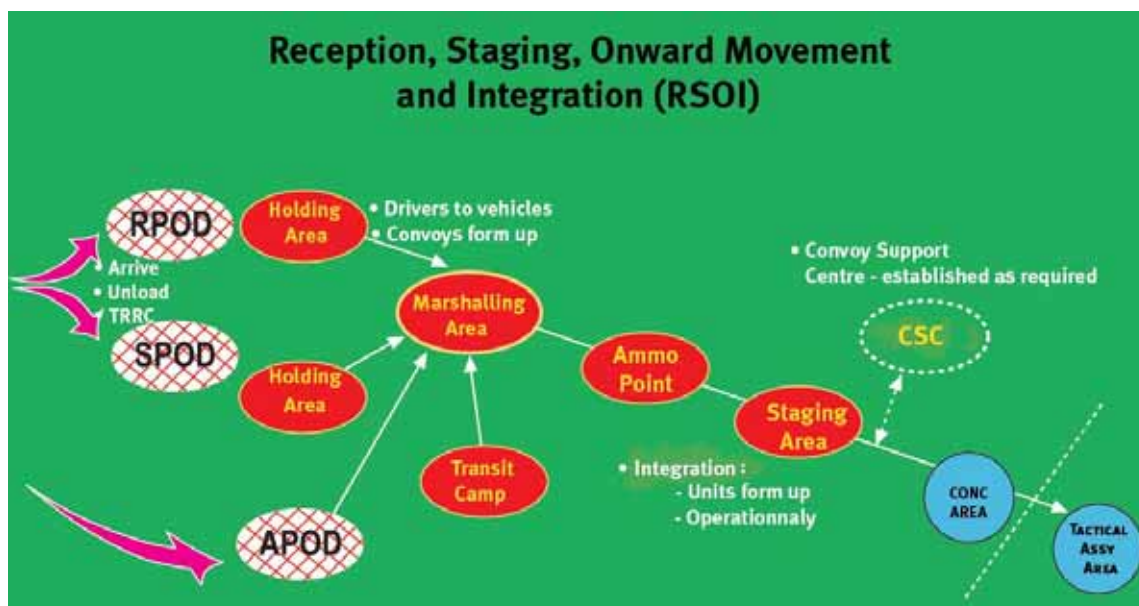
- **Joint Logistic Picture (JLP).** Brings together data from all the other logistic systems to allow a comprehensive real time operational and logistic information to be available on all logistic units at the touch of a button (or click of a mouse). This is very much in its infancy and its successful development dependant on the introduction of the other systems.

Together these programmes and systems will properly address a **major logistic concern** that has been facing the British Forces for more than 10 years.

Reception, Staging and Onward Movement (RSOI)

RSOI is the process that transitions deploying forces, consisting of personnel, equipment and materiel arriving in theatre, into forces capable of meeting the Force Commander’s operational requirement. Although this is **a specific concept developed in both the US and UK and currently being adopted by NATO** it is in fact simply a method of formalising into doctrine the complex series of interrelated activities that take place once a force arrives in theatre and before it is committed to operations. It is shown diagrammatically below:

For the second Gulf War the UK deployed into theatre a **logistic brigade HQ (102 Logistic Brigade)**, before the main body of the force, to act as the HQ of the Joint Force Logistic Command (JFLogC). Thus the JFLogC HQ had the responsibility for receiving the personnel at the airfields, inprocessing, administering, equipping, briefing and acclimatising them. Then for bringing together the personnel with their vehicles, which had been received separately at the ports, and forming them up as units and supplying them with munitions, rations and water before taking the formed units in convoys down the line of communications and handing them over to the force commander in a fit state to be integrated into a fighting formation. This organisation was therefore responsible for the RSOI functions for the whole joint force. The Logistic Brigade HQ itself was normally designed to support Divisional operations and could only provide the core of an organisation whose task was to command and control a major logistic operation which would eventually, over 10 weeks, be responsible for the successful reception, staging and onward movement of 32,000 personnel, 15,000 vehicles, 9,800 tons of munitions and 5,500 containers. Once the deployment was complete though the JFLogC continued to exist and provide the rear part of the logistic support to the joint force meanwhile



102 Logistic Brigade deployed forward to support the Land Component Commander for the invasion of Iraq.

As a result of the lessons identified in OP TELIC the UK has **now** created **a standing JFLogC HQ based in the Permanent Joint Headquarters (PJHQ) and capable of deploying and providing the trained core of the JFLogC HQ**. This now frees the 2 operational logistic brigade HQs (HQ101 & 102 Logistic Brigades) to carry out their other tasks. The JFLogC commander has two tasks as he also commands the UK logistic mounting and reception units in peacetime as “Commander 104 Logistic Brigade”. During the operation and directly related to RSOI it also became clear that there was an essential need for timely information and effective communications in the areas of responsibility of the JFLogC. In reality, during the operation the logisticians were using poor, disparate and dated logistic communications systems where in fact what was needed was properly developed, compatible and integrated logistic information systems

to support all types of logistic operations including RSOM and Asset Management.

The logistic plan for the operation also called for units to deploy with traditional cold war levels of spares and consumables but this in fact proved a hindrance as there was neither the time nor the capacity within the supply chain for units to provision to this level. There was also a decision for the force to deploy with significantly reduced scale of munitions (compared with the first Gulf War) and this proved to be a wise decision as the force was operational on time and had a sufficiently flexible supply chain in place to meet the resupply needs of the force. These 2 points together contributed significantly to the development of the new concept of “Directed Logistics (DL)” currently being adopted by the British Army. This concept directs that **logistic elements will need to have an optimized footprint, particularly at the tactical level, yet provide effective, flexible and assured logistic support**.

The concept seeks to harness the capabilities created through digitisation of the battlespace in order to contribute to improvements in operational agility, tempo and flexibility. DL seeks to improve support to units by meeting sustainment demands more precisely through predictive forecasting of the requirements for forthcoming missions(s) and using enhanced visibility and Situational Understanding (SU) to direct required resources more effectively and efficiently in support of the operational commander’s priorities. By reducing redundancy and mass and by increasing the velocity of support, resources can be more effectively directed to the point of demand by commanding resources at the most appropriate level. The success of a concept of holding fewer logistic stocks forward and concentrating them where they are needed relies heavily on the digitisation of the logistic battlespace and TAV to ensure the necessary information is available to the logistic commanders.

It is also worth mentioning that **all these new concepts, doctrines, processes and plans** which are developed as a result of lessons identified, experiences of allies, emerging technology, changing political and military priorities and other changes to the UK military environment **are now used at the joint level in a process called “LOGWAR”**. This has been designed to support the Chief of Defence Logistics (4 star officer) by delivering logistic improvement through the validation of doctrine, concepts, processes and plans and by influencing balance of investment decisions and resource allocation.

The LOGWAR concept is a recent development, which last year addressed, in retrospect, operational experience in Iraq using the 3 key pillars of prepare, project and sustain headed by 1* Military Officers. **LOGWAR is a joint analytical exercise conducted at the joint strategic level** which culminated in a LOGWAR Output Briefing in April 05 where the Defence Logistics Board (DLB) (4 star level) and allies were briefed on the results and recommendations. This year LOGWAR has evolved to consider three future scenarios. The participants will be split into Study Groups, led at the 1 and 2 star level. This year the Study Groups will consider in theatre support, C2 systems, strategic reach, the industrial base and medical capability. In addition there will be a multinational advisory group. They will address specific topics relating to the endorsed scenarios. At the end of this process the results will be briefed to the 4 Star DLB and allies in Apr 06. Future LOGWAR exercises will continue to evolve to provide the DLB with sound Balance of Investment advice.