



MINISTRY OF DEFENCE

JSP 886 DEFENCE LOGISTICS SUPPORT CHAIN MANUAL

VOLUME 7 INTEGRATED LOGISTIC SUPPORT

PART 8.10 SUPPLY SUPPORT

**THE MASTER VERSION OF JSP 886 IS PUBLISHED ON
THE DEFENCE INTRANET.**

**FOR TECHNICAL REASONS, EXTERNAL LINKS ON THIS
INTERNET VERSION HAVE BEEN REMOVED.**

VERSION RECORD		
Version Number	Version Date	Version Description
1.0	12/09/08	Initial version
1.1	01/02/10	Renamed from Volume 7 Part 5 to Volume 7 Part 8.10
1.2	27/04/10	Updated to incorporate current policy
1.3	20/06/11	Updated to include policy updates and add Chapter 2
1.4	10/08/11	Updated to include ILS policy updates

Contents

Contents	2
Figures	3
CHAPTER 1: SUPPLY SUPPORT POLICY.....	4
CONTEXT	4
POLICY	4
MANDATED REQUIREMENTS	4
Precedence and Authority	4
KEY PRINCIPLES	5
Initial Provisioning	5
Codification.....	5
Re-provisioning	6
Repair and Overhaul	7
ASSOCIATED STANDARDS AND GUIDANCE	7
APPLICABILITY	8
OWNERSHIP	9
CHAPTER 2: SUPPLY SUPPORT ADVICE AND GUIDANCE	10
SECTION I: INTRODUCTION	10
AIM	10
SCOPE	10
Background	11
Supportability Analysis (SA)	12
Supply Support Implementation	15
Configuration Change Management Committee (CCMC)	16
SECTION II: SUPPORT SOLUTION DEVELOPMENT	16
SS Requirements	16
Assurance.....	17
SECTION III: CONTRACTING FOR SUPPLY SUPPORT.....	18
Defence Standard 00-600	18
SS Contractual Documentation	18
Materiel Management Standards	19
ASD Specification 2000M (S2000M)	19
Projects Using S2000M.....	20
Re-provisioning (RP) (In-service phase)	20
Purchase to payment (P2P)	20
Electronic Business Capability (EBC)	21
Single Item Ownership	22
Agreeing the Price	22
Dues In	23
Delivery.....	23
Engineering Managed Items (EMI)	23
SECTION IV: PROCUREMENT OF THE SUPPORT PACKAGE.....	23
Initial Provisioning	23
Initial Support Package	24
Early Optimisation	24
Procurement Tailoring	26
Repairables	27
Affordability.....	27
Final Spares List.....	27
Inventory Planning.....	27
Support Solutions Improvement Team (SSIT)	27
Analysis and Modelling.....	28
OPERATIONAL SUPPORT	28
SECTION V: CODIFICATION	30
Codification Guidelines.....	30
Codification Procedures	31
Codification Options	31
Codification Contract Conditions.....	31
Dissemination of Codification Data	31

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

Supply Management Data	32
SECTION VI: TECHNICAL DOCUMENTATION	32
General	32
Policy Advice and Guidance	32
Content	32
SECTION VII: DATA MANAGEMENT	33
General	33
Policy	33
MANAGEMENT OF LOGISTICS INFORMATION	34
Assumptions	35
Electronic Data Interchange (EDI)	35
Configuration Management	36
Logistic Information Repository (LIR)	36
ANNEX A: SUPPLY SUPPORT - QUICK REFERENCE GUIDE	38
ANNEX B: GENERAL REQUIREMENTS FOR GUIDANCE CONFERENCES	40
Initial Provisioning Guidance Conference Requirements	40

Figures

Figure 1: Scope of Supply Support Procedures	5
Figure 2: Scope of SSPs within the Acquisition Cycle	10
Figure 3: Relationship of Supply Support Procedures to Supportability Analysis	14
Figure 4: SSE Supply Support Evidence Aide Memoire	39

CHAPTER 1: SUPPLY SUPPORT POLICY

CONTEXT

1. This chapter provides key points of policy to enable the selection of the appropriate type and level of Supply Support (SS) required for the effective Through Life Support (TLS) of equipment in accordance with MOD Integrated Logistic Support (ILS) policy.
2. SS is the function within ILS which links a discrete set of technical and supply aspects of support, using engineering data¹ to enable spares procurement, NATO codification and the creation of the Technical Documentation (TD). Although the emphasis of SS is primarily on the introduction to service of equipment it is also routinely applied during the In-Service phase to maintain the configuration management between the equipment and its spares, tools & test equipment and TD.
3. The practical application of SS on equipment acquisition² projects is enabled through the provision of Supply Support Procedures (SSP). The aim of SSP is to provide MOD Programme Boards, DE&S Delivery Teams and Industry with a practical guide to the planning and implementation of SS as part of the project's ILS plan, irrespective of its procurement strategy.

POLICY

4. It is MOD Policy that Integrated Logistic Support (ILS) will be applied to all equipment acquisition this policy is detailed in JSP 886 Volume 7 Part 1. The policy applies to the acquisition of all equipment for the MOD including Technology Demonstrator Programmes, major upgrades, software projects, collaborative projects, non-development and off-the-shelf procurement. SS is an integral part of ILS and this document provides the policy for all equipment acquisition projects to produce SSP.

MANDATED REQUIREMENTS

5. It is mandated that all MOD equipment acquisition projects comply with relevant legislation and safety requirements. SSP are not required to comply with specific safety or legislative requirements, however the output of SS processes is crucial to the activities required to maintain a safe working environment for the equipment user and maintainer.

PRECEDENCE AND AUTHORITY

6. Ownership of Logistics policy in support of the Logistics Process falls to the Assistant Chief of Defence Staff Logistics Operations (ACDS Log Ops) as CDM's Process Architect. This role is exercised through the Defence Logistics Policy Working Group (DLPWG) and the Defence Logistics Steering Group (DLSG) reporting up to the Defence Logistics Board (DLB). It is against this governance framework that sponsorship³ for ILS policy is delegated to Hd JSC SCM.

¹ Engineering data derived from the ILS process of Supportability Analysis (formerly known as Logistics Support Analysis).

² Throughout this document 'Equipment acquisition' includes equipment, Information, software, services, service systems and system of systems.

³ Sponsor - The person responsible for the content, currency and publication of a JSP (as per letter of delegation). Responsibility established through Letters of Delegation (LoD), issued through the DLPWG chair and exercised through Terms of Reference.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

7. JSP899: Logistics Process Roles and Responsibilities requires that support solutions must comply with the Support Solutions Envelope (SSE). D JSC is the single point of authority for support solution development and has sponsorship of the SSE. Project Teams (PTs) are responsible for their own internal support solution assurance and are required to demonstrate compliance with key policies and governance as signposted by the SSE.

8. All equipment acquisition projects must produce SSPs in the Assessment phase of the CADMID cycle as part of their ILS plan; however their scope must be 'through life' and detail the activities designed to deliver the outputs in Figure 1 below:

Figure 1: Scope of Supply Support Procedures

Activity	Output	Timescale
Scope requirement	SS Element Plan	By Main Gate (MG)
Design for SS	Data for codification Procurement recommendations Initial Provision List (IPL) Re-provision requirements	Sufficient time to meet spares procurement, TD requirements and component identification timescale
Deliver SS	Populate Logistic information systems Deliver spares	By Logistic Support Date (LSD)
In-service review	Updated spares holding	Configuration Change Management Committees in accordance with the project schedule

KEY PRINCIPLES

9. Cost-effective materiel management is achieved by the provision of structured SS information flows enabled by exchange of consistent and unambiguous data between the contracting parties. The key principles of the SSPs are:

Initial Provisioning

10. Initial Provisioning (IP) is the process of identifying, listing and presenting the support items and spares⁴ necessary to provide adequate spares support for an initial in-service period, usually 2 years. The main output of IP is that procedures and processes for the purchase and delivery of the initial spares, as agreed on the Master Initial Provisioning list during the manufacture phase of the CADMID cycle, will be in place to meet the project Logistic Support Date (LSD). The Project Team (PT) will need to have procedures in place to ensure a supply of spare parts before, or at least as soon as the equipment or platform is bought into use; DEFCON 82 is used to cover this requirement in a contract with industry.

Codification

11. It is MOD policy that all items held within the Defence Inventory are to be codified, by the allocation of a unique NATO Stock Number (NSN) in accordance with NATO and UK National Codification Bureau (UK NCB) procedures. The requirement to codify applies equally to items procured under Urgent Operational Requirement (UOR) arrangements. The selection of items requiring NATO codification is generally based on the Illustrated Parts List. To do this the PT will need:

- a To ensure that procedures are in place to obtain all relevant source data; DEFCON 117 is used to cover this requirement in a contract with industry.

⁴ Spares includes repairable and consumable items.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

- b To ensure that the contractor has procedures in place to supply UK NCB with the source data.
- c To ensure that the contractor meets the UK NCB's requirements to communicate any codification relevant messages and exchange data.
- d All items of supply, procured using public funding by DE&S PTs or by Industrial partners under Contractor Logistic Support (CLS) arrangements, which enter or are likely to enter the Joint Support Chain (JSC), must be codified with a NSN.
- e All items to be procured as spares and NATO codified must be introduced to the relevant Base Inventory System (BIS) (e.g. CRISP, SCCS, SS3). Normally this is done automatically via the Electronic Supply Management Data (ESMD) link with ISIS. Once the Item Data Record is established it should be regularly reviewed to ensure it is up to date.

Re-provisioning

12. Re-Provisioning is the routine process of re-stocking items that have been consumed. Spares replenishment will be required to maintain the availability of the equipment through life and orders need to be placed taking into account the procurement lead time of the items concerned; different categories of spares will be managed in different ways, for example, items classified as 'mission essential', repairables or Capital spares will require proactive management, whereas consumable items will require routine re-provisioning which is normally undertaken automatically by the relevant BIS. When setting up a support solution it is necessary to determine the responsibility for re-provisioning and repair (contractors, MOD or other organisations) and ensure there is an efficient process by which they are managed.
13. When the equipment's in-service use has matured and sufficient spares consumption data has built up spares holdings can be optimised further. Optimisation can be enabled by the BIS, using defined algorithms, and modelling tools. In addition, a greater understanding of inventory behaviour can be gained through the application of analytical techniques. Optimised Support Planning (OSP) is a planning process that provides DE&S PTs with the ability to make best use of their resources by providing the appropriate level of equipment support.
14. Continuous monitoring of 'In Service' spares usage will be required to allow timely replenishment and also to inform future spares procurement decisions. Consumption of spares used in repairs should also be monitored to ensure an efficient repair loop. Efficient business optimisation procedures should include a regular 'In Service' stockholding reviews.
15. As the defence equipment nears the end of its service life then consideration must be given to the disposal of the spares inventory and associated support equipment. Spares replenishment should reduce with the reduction in numbers of the end item. All options for final disposal should be considered such as sale, scrap etc.
16. Initial and Re-provisioning is enabled by the following SS procurement processes:
- a **Procurement Planning.** This process establishes a method of requesting quotations, issuing formal quotations and Customer Price Lists. This activity is usually undertaken by using the Purchase to Payment (P2P) system. The output of Procurement Planning is requests for quotation by the PT, issuing of formal

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

quotations and Customer Price Lists by the Contractor, and the subsequent decision by the PT.

b **Order Administration.** This embraces all the activities undertaken in connection with processing an order, from the time it is placed by the customer with a supplier, through all associated amendment, diversion, inquiry, progression and advice stages, to confirmation of delivery of the ordered articles. This activity will be undertaken electronically using P2P processes. The output from this process is a pre-negotiated contractual framework by which the Customer may place and progress orders with the Contractor. The contractual framework provides the ability to use standardized messages, known as transactions, for the exchange of data between computer systems. P2P uses standard messages, for placement of the order and confirmation of receipt, enabling automatic exchange of data between computer systems.

c **Invoicing.** When an order is delivered an invoice will be generated by the contractor for payment. An invoice is normally an individual request for payment on a single or multiple order delivery. This activity is normally carried out using the P2P system.

17. As the MOD moves to Contractor Logistics Support (CLS) and Contracting for Availability (CFA) and Contracting for Capability (CFC) type arrangements and the contractor takes over responsibility for spares provisioning these processes will be suitably modified. However, the Department cannot afford to be unsighted on issues further down the Supply Chain as ultimately the risk of insufficient serviceable platforms or equipments remains with the MOD. The PT must therefore be confident that the package offered is optimised to ensure operational availability and satisfy the data and information exchange requirements of MOD procurement, inventory management, asset management and accounting systems.

18. The introduction of single item ownership and the 'gatekeeper' role across DE&S will result in common items used across multiple equipments and platforms being supplied from one authorised DE&S source of procurement. This will mean that some spares are provided from outside the equipment project team under an Internal Business Agreement.

Repair and Overhaul

19. Repair & Overhaul procedures cover the management of the repair of items, to re-establish them as serviceable spares. It includes all the activities from the time the repair order is placed by the customer with a supplier, through all associated amendment, diversion, inquiry, progression and advice stages, to confirmation of delivery of the repaired articles. For simple items this activity will normally be the same as for spares provisioning but more complex Engineering Managed Items will merit more proactive management through the employment of an asset management system.

ASSOCIATED STANDARDS AND GUIDANCE

20. General SS advice and guidance can be found in this document. There are several references that can be used in conjunction with this guide:

a JSP886 : Defence Logistic Support Chain Manual:

(1) Volume 1 Part 4: Support Solution Matrix.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

- (2) Volume 2 Part 1: Policy & Process for Inventory Management.
- (3) Volume 2 Part 2: Project Team Inventory Planning.
- (4) Volume 2 Part 3: Single Ownership of Items of Supply in the Defence Inventory
- (5) Volume 2 Part 4: NATO Codification in the United Kingdom.
- (6) Volume 2 Part 5: Purchasing Inventory using P2P.
- (7) Volume 3 Part 2: Contractor Logistic Support.
- (8) Volume 3 Part 3: Purple Gate.
- (9) Volume 3 Part 5: Packaging for the Handling, Storage and Transportation of Materiel
- (10) Volume 3 Part 7: Consignment Tracking.
- (11) Volume 3 Part 8: Reverse Supply Chain.
- (12) Volume 3 Part 12: Deployable Stocks.
- (13) Volume 7 Part 1: ILS Policy.
- (14) Volume 7 Part 2: ILS Management.
- (15) Volume 7 Part 3: Support Analysis (SA) Guide.
- (16) Volume 7 Part 5: Management of Support Information.
- (17) Volume 7 Part 6: ILS Tailoring.
- (18) Volume 7 Part 8.05: Technical Documentation.
- (19) 7 Part 8.14: Management of Items Requiring Special Identification.
- b Support Solutions Envelope (SSE).
- c Electronic Business Capability Website.
- d Acquisition Operation Framework (AOF).
- e DEFSTAN 00-600: Integrated Logistic Support. Requirements for MOD Projects.

APPLICABILITY

21. This policy is to be applied to all equipment acquisition projects including those using CLS, CfA and CfC arrangements.

OWNERSHIP

22. The sponsor for Supply Support policy is DES JSC SCM-EngTLS-PEng. DES JSC SCM-EngTLS-SS is responsible for formulating SS policy, which is subject to ratification by the DLPWG. Assistance is available:

23. Policy Sponsor for technical matters:

[DES JSC SCM-EngTLS-Supply Support](#)

Elm 2b, #4222, MOD Abbey Wood, BRISTOL, BS 34 8JH

Tel: Mil: 9679 80398, Civ: 030679 80398

24. Document Editor for editorial matters:

[DES JSC SCM-SCPol-Editorial Team](#)

Cedar 1a, #3139 MOD Abbey Wood, BRISTOL, BS 34 8JH

Tel: Mil: 9679 82891, Civ: 03679 882891

CHAPTER 2: SUPPLY SUPPORT ADVICE AND GUIDANCE

SECTION I: INTRODUCTION

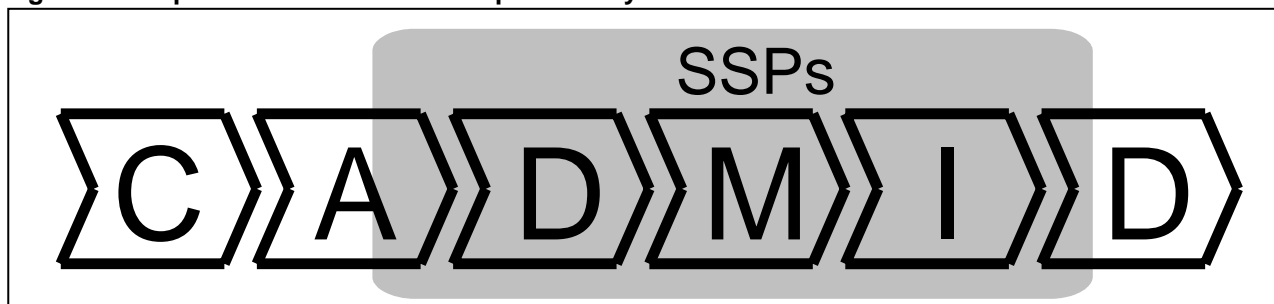
AIM

1. The aim of this advice and guidance document is to provide the acquisition community⁵, particularly Integrated Logistic Support Managers (ILSMs) within Defence Equipment & Support (DE&S) Project Teams (PTs) with a practical guide to planning and implementing through-life supply support (SS) procedures within an ILS programme. It is the responsibility of the ILSM to ensure that SS Procedures (SSPs) are comprehensively planned and implemented to ensure the new equipment is supportable and supported when it is handed over to the user.

SCOPE

2. SS is the function that enables the identification of spares, tools and test equipment needed to support equipment through-life, across the CADMID⁶ acquisition cycle. SS is a shared space where supportability engineering and supply chain experts come together to ensure that supportability engineering data collected during the assessment and demonstration phases is fully utilised to provide the necessary management information throughout the in-service phase to enable a fully optimised joint support chain⁷. This document has been prepared to reflect both the 'through-life' and 'shared space' aspects for the benefit of the equipment acquisition⁸ community. The category and scale of the project, the proposed use of the equipment and the selected support solution(s) will significantly influence the SS requirements. The scope of SSPs in relation to the acquisition cycle can be seen at Figure 2.

Figure 2: Scope of SSPs within the Acquisition Cycle



⁵ The acquisition community refers to the MOD unified customer and includes DE&S Project Teams, Programme Support Functions and Operating Centres; Heads of Capability and Programme Boards; Front Line Commands and other customers.

⁶ CADMID - Concept, Assessment, Demonstration, Manufacture, In-Service, Disposal. For service provision Disposal is replaced by Termination so CADMIT.

⁷ **Joint Support Chain** is the in-service operation of Support Solutions, including the physical flow of materiel, people, services and information. The **Joint Supply Chain (JSC)** is that element of the Support Chain that covers the policies, end-to-end processes and activities associated with receipt of stocks from trade to their delivery to the demanding unit and the return loop for all 3 Services. DE&S Corporate Governance Portal provides full details of the Joint Support Chain.

⁸ Throughout this document 'Equipment acquisition' includes equipment, Information, software, services, service systems and system of systems procured in support of Defence capability.

BACKGROUND

3. SSPs manage the procurement of the initial spares pack (ISP) during introduction to service in the Assessment, Demonstration & Manufacture phases of the CADMID cycle and allow for re-provisioning during the in-service phase. SSPs also enable delivery of vital information required for the technical documentation (TD). SS uses the output from the Supportability Analysis (SA) to develop the following project outcomes:

a **Initial Provisioning (IP).** Identifying, cataloguing and procuring the spares and support items necessary to support the through-life operation of the equipment. IP produces the Initial Spares pack (ISP) which will provide spares support for an initial in-service period, usually 2 years. The final ISP will normally be a trade off between the range and scale of spares identified by the SA data, enhancements proposed through the application of spares modelling techniques and the available funding. It is important to notify the contract dues-in data for these items to the relevant PT who can update the Base Inventory System (BIS)⁹ and monitor the delivery of the ISP to enable a credible assessment of logistic readiness against agreed project milestones, such as the Logistic Support Date (LSD). It is also important to provide Joint Support Chain Services (JSCS) with delivery and consignment details, particularly volumetric data and storage requirements. After the initial in-service period re-provisioning is to be carried out in accordance with the mandated project inventory plan¹⁰.

IP includes screening, to identify items already in the Defence inventory, and negotiating agreements for their provision with the DE&S PTs, managing these items¹¹. It is essential that the PT identifies and contracts for the delivery of all the supply management data (SMD) required for the support of the equipment through-life. IP attempts to answer the questions “which spares do you require?” and “how many of each?” for this initial period in service. Once the range of spares is known then work can be undertaken to establish the scale, or how many, are required for a specific application within the project. For example, scales of spares will need to be provided for operational support, depot support, installation, trials and setting to work and support and test equipment. The scales will establish requirements for spares holding and will form the basis of re-provisioning activity throughout the equipment life. It is essential that the initial spares requirement is optimised at platform level rather than for individual system/equipment requirements and as such procurement

⁹ The MOD has a number of BIS to provide approved stock accounting systems. These systems are feeders to the MOD Fixed Assets Register (FAR) and as such are Resource Accounting and Budgeting (RAB) compliant. The majority of items, including minor equipments are hosted on:

Comprehensive RNSTS Inventory System Project (CRISP) used predominantly for the management of items to support the maritime environment. **Stores System 3 (SS3)** used predominantly for the management of items to support the Land environment and for general stores ranges. **Supply Central Computer System (SCCS)** used predominantly for the management of items to support the Air environment. **Management of Equipment Resources, Liabilities and Information Networks (MERLIN)** is used predominantly for the management of registered number equipments that require asset management to comply with the Road Traffic Act. D JSC policy is progressive convergence towards a single defence inventory, where each item must have a unique NSN, a single owner and be hosted on one BIS. In November 2007 SS3 was nominated as the target base inventory system (TBIS) and it is expected that, in future, it will be the default system to which all items will be loaded. Projects are to seek guidance from DES JSC SCM-SSIT about the BISs and associated Domestic Management Codes (DMCs) that their project should use.

¹⁰ Advice and guidance on inventory planning and management can be found in JSP886, Volume 2, Part 2.

¹¹ Management of the Defence Inventory is based on the principle of Single Item Ownership of all Items of Supply including the hosting of items on a single Base Inventory System (BIS). Details can be found in JSP 886, Volume 2, Part 3.

of the Initial spares package (ISP) will normally wait until ranging and scaling has been carried out for the whole platform.

Predictions made during the demonstration phase are replaced with actual in-service data, enabling more refined arrangements to be implemented for the longer term support of the equipment. Despite thorough analysis and demonstration, complex platforms and their associated support will need to be refined through modification during the initial period in service. Modification may affect the support requirements and so any long-term support arrangements need to cater for these potential changes.

b **NATO Codification.** Identification of items likely to enter the Joint Supply Chain (JSC)¹²; codify those items which are not codified, and add UK interest to foreign items not on ISIS¹³. This allows the JSC Logistics Information Systems (LogIS) to use commonly constructed special identifiers. It is Defence policy that all items of supply that enter the Joint Supply Chain (JSC) and are managed, demanded or tracked on JSC LogIS are to be NATO codified. PTs are to mandate the supply, from design authorities and manufacturers, the essential SMD required for the identification and codification of items of supply in accordance with the minimum data requirement set as specified in JSP 886 Volume 2 Part 4: NATO Codification.

c **Illustrated Parts Catalogue.** Identification of the items to appear in catalogue elements of the TD, principally in the Illustrated Parts Catalogue (IPC), and their inclusion in the TD schedule. This is determined from the list of probable and selected possible in-service activities determined by the supportability analysis (SA)¹⁴.

SUPPORTABILITY ANALYSIS (SA)

4. SA consists of a series of investigations designed to identify and assist in the selection of the maintenance plan, which combined with the other elements, provides the optimum support solution for the system. An early task is to develop the support strategy with its associated maintenance strategy. A key SA task is to develop the maintenance plan; this in turn identifies the maintenance tasks. Task analysis then identifies the tools, inspection equipment, spares and TD¹⁵ required to carry out each maintenance task within the following categories:

¹² Entering the JSC includes but is not limited to the physical movement of the item through the JSC. It also incorporates any of the following functions: demanding and receipting of materiel and the subsequent through life management and accounting of materiel including its subsequent disposal. These functions will take place using either base or deployed in-service MOD Logistic Information systems. Where a CLS contract is in place with a bespoke CLS system, items must still be codified in order to enable a seamless interface with MOD Log IS.

¹³ Item of Supply Information System (ISIS); is the UK National Codification Bureau's database which contains over 5½ million items of supply, 11 million manufacturer's part numbers, 30 million item characteristics and 8 million Supply Management Data records.

¹⁴ SA is a structured method of analysing the support implications of items of a product as they are being developed, with the aim of identifying features of the design that could result in excessive expense In-Service. Once identified, these areas can be the subject of trade-offs to revise the design in order to reduce later costs. SA helps identify the optimum support system resource requirements for the whole life of that system. During the design stage of a project the SA process assists the design engineer to incorporate supportability requirements into equipment design. As the design becomes fixed, the SA process generates data which defines the specific resources required to support equipment throughout the in-service phase. This data is used by the SS function to plan, procure, deliver and manage support resources to ensure deployed systems meet the readiness and supportability objectives at optimum Whole Life Cost (WLC). Advice and guidance on SA can be found in JSP886 Volume 7 Part 3.

¹⁵ Trade skills (considered under Human Factors Integration) and facilities considered separately.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

a **Preventative Maintenance.** This comprises items that are replaced, regardless of condition, after a stated period of use. This may be measured in calendar time, elapsed running time or other usage criteria such as distance, landings, firings, dives, etc. These items will be codified and included in the ISP. The spares required to support this type of maintenance are considered easy to predict in range and scale.

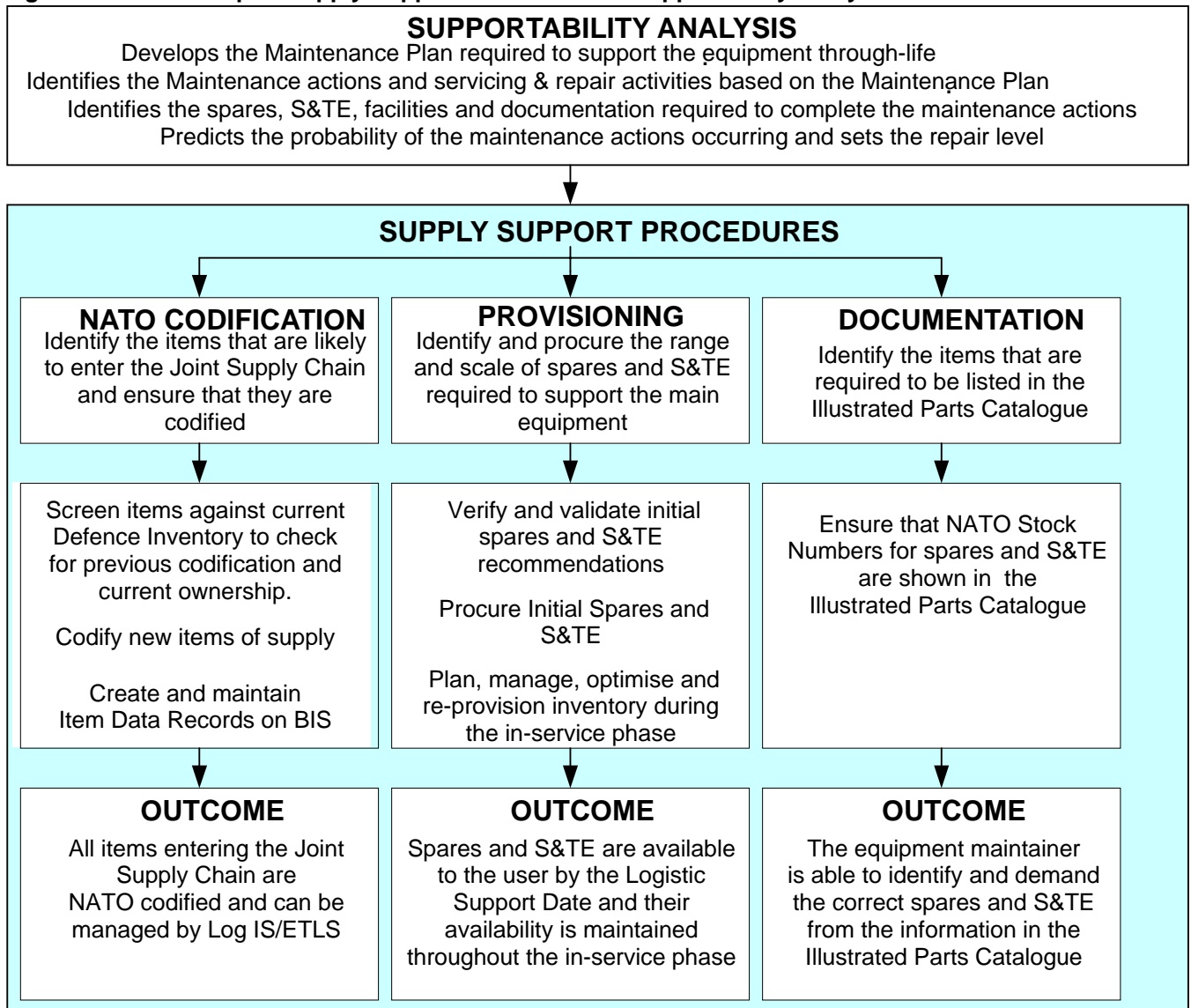
b **Reliability Centred Maintenance (RCM).** This comprises of items that are replaced based on their condition. The condition can be determined by visual inspection & or non destructive measuring techniques. Typical items are tyres, brake components, track, condition monitored assemblies, and safety critical items. These items will probably be codified and in the ISP. The spares required to support this type of maintenance are relatively easy to predict in range but the scale can be more difficult to determine.

c **Corrective Maintenance.** This comprises items that are replaced when they fail. Some of these items will be NATO codified and in the ISP, but probably not to the correct scale. The spares required for this type of maintenance are difficult to predict in both range and scale.

5. Figure 3 below illustrates the relationship of SS to SA. The three outcomes are inter-related and the configuration management of the data used to determine each is essential.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

Figure 3: Relationship of Supply Support Procedures to Supportability Analysis



6. SA, IP and TD data is collected and stored as part of a shared data set (and associated systems) known as the Logistics Information Repository (LIR). The LIR can be used to generate reports detailing resource requirements for each line and level of maintenance based on the selected repair policy. There is no set format or template for a LIR, it must be tailored to the individual requirements of the project; for small projects a LIR may be as simple as a spreadsheet or stand alone database, whereas larger, complex projects will need a fully integrated toolset capable of meeting standardised SA, IP and TD¹⁶ requirements. Data and information created during the SA tasks is used many times throughout the life of the equipment, thus the updating and configuration management of the LIR is essential to ensure the continued availability, reliability and maintainability (ARM) of the equipment/platform.

¹⁶ For example: ASD S3000L for SA, S2000M for IP and S1000D for TD.

SUPPLY SUPPORT IMPLEMENTATION

7. **Introduction to Service (CADM) phases.** This involves the following business processes:

- a Identification of Items for NATO Codification.
- b Codification and transfer of Item data to BIS via Electronic Supply Management Data (ESMD) interface.
- c Identification of Items for inclusion in TD.
- d Cooperate with TD to ensure appropriate standards are met.
- e Identification of Items for IP.
- f Inventory optimisation through modelling, ranging and scaling¹⁷.
- g Screening against existing Defence inventory to prevent duplication of supply.
- h Procurement of IP and transfer of contract data to BIS.

LOGISTIC SUPPORT COMMITTEE (LSC)

8. The Logistic Support Committee (LSC) is the SS management control mechanism applied during the introduction to service of new equipment and is a formal gathering which is held to discuss support and in-service matters. It takes forward ILS elemental plans and although it is a committee the driver is the MOD ILS Manager (MILSM). The LSC forms the heart of the ILS management process through the life of the project. The MILSM should identify a functional specialist to cover SS on a project by project basis, depending on the acquisition phase. The SS functional specialist may well be from an Agency or other organisation that require a Customer Supplier Agreement (CSA) or Service Level Agreement (SLA) before any work can be carried out on behalf of the project.

9. **In-Service Phase.** During the in-service phase SSPs facilitate the effective materiel management by the Log IS, particularly BIS and Engineering through-Life Support (ETLS) systems. JSP 886 Volume 2, Part 1: Inventory Management describes the end to end Inventory Management (IM) procedures necessary for PTs to follow from IP to the in-service support and management of inventory, culminating in eventual disposal. JSP 886 Volume 2, Part 2: Inventory Planning describes the IM procedures for re-provisioning (RP), modification and inventory sustainability activities throughout the life of the equipment. It is essential that planning for the in-service phase takes into account the MOD policy for the effective operation of the 'Purple Gate', which is the process to ensure the regulation of materiel flow into the JSC for sustainment of deployed force elements and is contained in JSP 886 Volume 3, Part 3: Purple Gate. The maintenance of a seamless, single supply chain to a theatre of operations is an essential component of the JSC. When approved and employed, separate contractor supply chains are to seamlessly interface with the JSC. The Purple Gate policy controls the entry of materiel into the JSC at pre-designated nodes. This is the key enabler of seamless supply, which must be followed by all PTs and their

¹⁷ Policy on logistic modelling is contained in JSP 886 Volume 2 Part 2: Project Team Inventory Planning. All of the models used are to be validated and verified; guidance is available from DES JSC SCM-SCO-Analysis.

contractors. PTs are to mandate that direct delivery of materiel and equipment from contractors for deployed units is to a nominated Purple Gate location. PTs and contractors are to comply with Purple Gate and consignment tracking policy contained within JSP 886 Volume 3 Part 7: Consignment Tracking for the movement of sustainment materiel and Urgent Operational Requirements (UORs) into and out of operational theatres. This includes the provision of data and information essential for consignment tracking.

CONFIGURATION CHANGE MANAGEMENT COMMITTEE (CCMC)

10. The Configuration Change Management Committee (CCMC) is the SS management control mechanism applied during the in-service phase and is a formal gathering which is held to discuss support matters post Logistic Support Date (LSD) and to authorise changes to the product, associated elements or the support. The CCMC forms the heart of the ILS management post LSD. The MILSM should identify a functional specialist to cover SS on a project by project basis. The SS functional specialists may well be from an Agency or other organisation that require a Customer Supplier Agreement (CSA) or Service Level Agreement (SLA) before any work can be carried out on behalf of the project.

SECTION II: SUPPORT SOLUTION DEVELOPMENT

SS REQUIREMENTS

11. SS requirements and procedures will depend on the type of support solution selected by the PT. The following support solution options are not definitive but are intended to illustrate how the SS aspects are influenced by the support solution type.

- a **MOD Managed Support.** Traditionally the MOD has used various options of MOD managed support, ranging from total MOD control, including in-house spares manufacture and repair, to the more prevalent MOD control of the decision process for spares procurement and repair contracting. MOD Managed Support is typified by MOD staff using bespoke Log IS and modelling techniques to forecast spares and repair requirements which are met from Industry. The PT is fully responsible for defining the SS requirements and ensuring their delivery:
- b **CLS.** CLS is a range of support options that involves the transfer of responsibility for delivering an agreed level of equipment support, to a contractor. CLS does not reduce the need for ILS, but should reinforce its applicability, giving the contractor the incentive to undertake the SA and maintain the SS data to minimise their WLC. The DE&S PT is responsible for defining the SS requirements and ensuring that the contractor delivers the agreed SS data required to support and sustain the equipment through-life. The PT will be responsible for monitoring the performance of an in-service support CLS contract. Advice and guidance on CLS can be found in JSP 886 Volume 3 Part 2: Contractor Logistic Support.
- c **Availability Contracts.** Contracting for Availability (CfA) is a contracting strategy designed to support equipment at an agreed availability level over an agreed period of time. Often better value for money can be achieved by letting the contract over longer periods. CfA agreements often use the MOD infrastructure; the JSC, TD and engineering reporting; as part of the support solution. Where the CfA support solution touches the MOD support chain it is to conform to the MOD policy and

procedures, e.g. the Purple Gate. It is the responsibility of the PT to set the SS requirement.

d **Capability Contracts.** Contracting for Capability¹⁸ (CfC) arrangements places the responsibility for delivery of the entire capability provision with a contractor. The contractor would be responsible for providing the 4 pillars of operational capability Manpower, Equipment, Training and Sustainability¹⁹ (METS). The MOD retains control of particular Defence Lines of Development (DLODs) such as Doctrine and Concepts and still sets the requirement which may put constraints onto the contractor, e.g. equipment must be optimised for strategic air transport. The PT will be responsible for setting requirements, such as the need to carry out ILS, however all of the SS data will remain with the contractor and the PT will only be responsible for monitoring availability.

ASSURANCE

12. All Defence equipment acquisition projects are required to develop assured support solutions, based on tailored, independent assessments of support risks to the project in terms of operational effectiveness and/or through- life cost. PT Leaders are required to ensure that support solutions are coherent and comply with MOD and DE&S policy as articulated within the Support Solutions Envelope (SSE) governing policies (GPs).

13. DE&S Corporate Governance Portal Index requires that PTs must assess compliance of developing support solutions through life, with key policies signposted by the SSE, underpinning the development of effective and coherent support solutions for all projects and Urgent Operational Requirements (UORs). Key project milestones and decision points must refer to SSE development as evidence that the project's support solution will meet user requirements, be coherent with other support solutions and address all DLODs. PTs should be able to demonstrate they have optimised their support solution, exploiting opportunities to achieve value for money and sharing best practice.

14. PTs must engage with the Support Solutions Improvement Team (DES JSC SCM-SSIT), whose role is to provide customers with an integrated service from the outset of a project, working in conjunction with SSE GP Sponsors and Subject Matter Experts (SME's), particularly where detailed technical knowledge, including possible exception to the rule, needs to be applied.

15. The SSE Development Matrix is the recommended method for recording the assessment of a support solution for compliance with policy and best practice. It is a traffic light reporting system that enables a PT, with advice and guidance from the DES JSC SCM-SSIT, to manage its activity. It does so by providing an information and evidence repository in which the PT is able to record decisions and activities against each GP. As a project moves through the acquisition cycle, the evidence requirements it is required to demonstrate for each GP will change. There are therefore 4 versions of the Development Matrix - one for each of the major decision points:

¹⁸ We define capability as the integral sum of personnel, training, equipment, logistics, information, infrastructure, concepts and doctrine and organisation. The basic currency of Departmental planning is the 'force element at readiness' (FE@R), where readiness is the preparedness of individual force elements for tasking and is measured in terms of manpower, equipment, training and sustainability, and is graduated according to the timescale within which that force element may be required to deploy.

¹⁹ The ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives. (AAP-6)

Initial Gate (IG)
Main Gate (MG)
Logistic Support Date (LSD) Review
In-Service Review (ISR).

In addition, there is a separate Development Matrix specifically designed for UORs. An evidence guide for SS requirements can be seen at Annex A.

SECTION III: CONTRACTING FOR SUPPLY SUPPORT

16. SS contracting arrangements differ across the CADMID cycle. Policy advice and guidance for PTs contracting for SS during the introduction to service (CADM phases) of new equipment is found within this document, however policy, advice and guidance for contracting for in-service SS is contained within JSP 886 Volume 3 Part 2: Contractor Logistic Support. The category²⁰ and scale²¹ of the project will influence the contracting method used for IP and NATO codification. Electronic Data Interchange (EDI) arrangements for NATO Codification are detailed in JSP886, Volume 2 Part 4: NATO Codification.

DEFENCE STANDARD 00-600

17. The current policy for support solution development, promulgated via DE&S Corporate Governance Portal Index, mandates the use of the ILS methodology. The mandated standard for contracting for ILS is DEFSTAN 00-600 – 'Integrated Logistic Support Requirements for MOD Projects' which superseded DEFSTAN 00-60²².

SS CONTRACTUAL DOCUMENTATION

18. SS contract deliverables (tasks, outputs and timescales) are detailed in Clause 17.11 of DEFSTAN 00-600 and can also be found at paragraph 8 of chapter 1 of this publication. The following 3 contractual documents contain key SS planning information:

- a **Supply Support Plan.** The SS plan provides the SS elements of the ILS programme, described in clause 8.2 of DEFSTAN 00-600, and will be updated throughout the life of the equipment. An example outline of a SS plan, identifying typical areas that may be addressed, can be seen in JSP 886 Vol. 7, Part 2, Annex K.
- b **Use Study.** The SA 'Use Study' task will provide the basic information that each tenderer will need in order to plan for ILS. Typical SS areas that may be addressed within the Use Study can be seen in JSP 886, Vol. 7, Part 2, Annex H.
- c **Statement of Work (SOW).** SS areas to be addressed in the SOW will depend upon the nature of the project. For guidance, aspects of SS that may be included are shown in JSP 886, Vol. 7, Part 2, Annex C.

²⁰ Defence equipment acquisition projects are categorised by the Investment Approvals Board (IAB) as follows: Cat A = above £400M, Cat B = £100M - £400M, Cat C = £20M - £100M, Cat D = < £20M.

²¹ A large scale complex equipment project such as a major warship would need to contract to a recognised material management standard such as ASD S2000M to effectively manage and integrate the massive amounts of SS data; smaller equipments such as a new combat helmet may not need this level of standardisation.

²² There are still projects contracted to DEFSTAN 00-60 and these will continue until contract termination.

MATERIEL MANAGEMENT STANDARDS

19. Key to the provision of cost effective materiel management is the ability to regularly, rapidly and efficiently exchange data between the contracting parties throughout the acquisition and support processes. In today's highly technological market place, it is vital that computer applications utilise common standards so that vendor and client can exchange information rapidly and accurately at minimum cost; and that means with minimum human intervention. Policy advice and guidance on the management of support information can be found in JSP 886, Vol. 7, Part 5. The need for and benefit which can be derived from contracting to a materiel management standard will depend on the following factors:

- a Project Type (i.e. platform/equipment; major/minor; complex/simple Project).
- b Procurement Type (i.e. Developmental Item (DI), Non-Developmental Item (NDI), Commercial Off The Shelf (COTS), Government Furnished Equipment (GFE)).
- c Procurement Phase (i.e. Manufacture = IP; in-service = RP).

ASD SPECIFICATION 2000M (S2000M)

20. S2000M is the MOD's preferred standard that specifies the information exchange requirements for most materiel management functions commonly performed in supporting international projects. S2000M is based on a business model agreed between military customers and industry suppliers. Using a common data set, S2000M defines business rules to be followed at various stages of the materiel management process, and provides various sets of standard messages that are to be used by business partners to exchange information in an unambiguous way. Specification S2000M is arranged in six chapters:

- a Chapter 1 - Provisioning - defining how the supplier should provide information to the customer about the selection of support items and spares.
- b Chapter 2 - Procurement Planning - defining how the supplier should provide information on parts offered for sale and how prices should be agreed.
- c Chapter 3 - Order Administration - covering placement of orders, monitoring of order processing and delivery.
- d Chapter 4 - Invoicing - defining how invoice data is to be transmitted to the customer.
- e Chapter 5 - Repair Administration - covering management of repair orders, monitoring spares consumption and repair forecast planning.
- f Chapter 6 - S2000M Light - providing guidance on how to operate "light" S2000M procedures covering the essential business processes, while still operating to the principles described in the "full" specification (chapters 1 to 5).

21. It is recommended that PTs, procuring large and complex platforms such as a major warship or aircraft, use S2000M Chapter 1²³; however this will require bespoke IS capable of integrating, managing and delivering SS, SA and TD data and information in

²³ It is MOD policy that all new contracts should be completed with eProcurement conditions, with a view of going onto P2P so S2000M Chapters 2 – 5 are not currently used by the UK MOD.

accordance with the S2000M processes and messaging format. Smaller projects may benefit from using S2000M Chapter 6. S2000M enables users to exploit the maximum efficiencies offered by modern EDI techniques, using either the original S2000M protocol, or the UN/EDIFACT standard. S2000M uses the international EDI standard, EDIFACT. The EDIFACT standards are widely used around the world; they are supported on IT networks and Value Added Networks and a large number of subsets and software packages are readily available. S2000M is particularly powerful when used with ASD S1000D for TD and ASD S3000L for the SA/LIR.

PROJECTS USING S2000M

22. The contract shall specify the agreed S2000M issue, revision, and change pack. Only in exceptional circumstances should individual changes, from a change pack, be adopted in isolation. S2000M configuration control is detailed in Chapter 1 of S2000M.

23. S2000M includes reference to a Guidance Conference at which requirements relating to IP are agreed as a preliminary to commencement of activity. The requirement for holding IP Guidance Conferences is contained within JSP 886 Volume 7 Part 2 and the conditions, under which they are to be held, are defined in Annex B of this document.

24. S2000M contains a number of options that have to be tailored to fit a customer/contractor application; options may vary from the adoption of national-specific features, to the agreement of the 'conditionality' of a data element, and even to the adoption of selected data elements only. PT SSPs should identify those aspects of S2000M that MOD has tailored to meet its generic requirements. Guidance on tailoring is given at JSP 886 Volume 7 Part 6: ILS Tailoring. SSPs should also identify those occasions when MOD has introduced a variance from S2000M to enable compatibility with other standards.

25. Further information on S2000M can be found at the ASD S2000M Website or by contacting the Supply Support Policy Team.

RE-PROVISIONING (RP) (IN-SERVICE PHASE)

26. It is important to give early consideration to the MOD requirements for RP within a CLS contract for in-service support. MOD is committed to more effective trading partnerships with its suppliers through exploitation of electronic tools. The MODs eProcurement vision is for an end to end fully electronic process integrated with financial, logistics and service support processes. eProcurement can act as a driver and provide the necessary information to control and better manage procurement. eProcurement does require changes in traditional procurement methods but the introduction of eProcurement brings benefits to both the Business Unit, at a local level, and the Department as a whole. eProcurement benefits can be realised through timely, relevant and accurate management information allowing for and increased visibility which leads to better negotiation, and opportunities for the aggregation of contracts.

Purchase to payment (P2P)

27. Purchase to payment (P2P) is the MOD's preferred strategic ePurchasing tool and; it enables electronic ordering receipting and invoicing. It utilises a Commercial off the Shelf (COTS) Information System (IS) solution that meets both MOD commercial and financial policy, giving global visibility of all purchasing activity. P2P is a combined electronic purchasing application which fully supports the business process. It provides a three-way

match against an order, receipt and invoice or a two-way match against an order and invoice (this is based on the business need). It is MOD policy that all new contracts should be completed with eProcurement conditions, with a view of going onto P2P.

28. At the tactical level P2P provides users with the ability to manage purchases on line, including sending purchase orders and receiving responses from trading partners electronically using the Defence Electronic Commerce Service (DECS). Trading partners submit their invoices electronically to P2P, thus doing away with the MOD Form 640 paper based payment processes. This considerably improves the time taken from delivering the goods or services ordered from the trading partner to authorising payment. The main benefits that arise through using the P2P processes are:

- a A single record of contracts on one system thus providing a comprehensive source of management information about on line contracts, purchases and payments. Whilst P2P is a primary source of contract information, contract information will continue to be available on BIS.
- b Electronic messaging between the MOD and Trading Partners with no resulting paperwork.
- c Automated ordering and approval to speed up workflow through P2P.
- d System controlled authorisation and approval of contracts, purchase orders, amendments and payments.
- e Simple process for recording receipts.
- f Electronic invoice and payment system with no use of MOD Form 640s and no further requirement for the manual checking of claims for payment by the Defence Bills Agency (DBA).
- g Prompt payments to Trading Partners.
- h Automatic feed of information about invoices and payments to update the accounts on Defence Financial Management System (DFMS).
- i Earlier visibility of materiel in the supply chain through production of advanced shipping notification.

29. Further information on P2P is contained in JSP 886 Volume 2 Part 5: Purchasing Inventory using P2P.

Electronic Business Capability (EBC)

30. EBC is being rolled out across the Land environment PTs to enable direct communications between Stores System 3 (SS3) and trading partners operating CLS contracts, via the SC EAI Service²⁴ and DECS by utilising an XML message format based on OAGIS 9. However, unlike other demand requirements processed by DECS, the requests generated by SS3 will be routed directly to the contractor and not through the MOD P2P system or processes. SS3 EBC supports both the forward and reverse JSC

²⁴ The SC EAI (Enterprise Application Integration) Service fulfils an important role in the transformation and routing of transactional data flowing between SS3 and DECS. CLS transactions will be automatically transmitted to SC EAI from SS3 and transformed into XML messages.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

processes by passing messages to and receiving messages from the CLS supplier. The SC EAI service fulfils an important role in the transformation and routing of transactional data flowing between SS3 and the CLS contractors systems. CLS transactions will be electronically passed from SS3 to the SC EAI service and transformed into XML messages. The messages are passed to the DECS for onward routing to the CLS contractor. Likewise messages received from the contractor via DECS are transformed by the SC EAI service into the appropriate transactions and passed to SS3 or VITAL.

31. As the Defence electronic gateway to industry DECS handles the routing of all EBC CLS messages to and from industry. All CLS contractors have to be DECS registered to conduct business through the system. Further information is available from Electronic Business Capability Website.

THE GATEKEEPER ROLE

32. It is DE&S policy that PTs, including those involved in delivering capabilities against Urgent Operational Requirements (UORs), are required to undertake the process of Standardisation Analysis, by engaging with “Gatekeepers”, to ensure the utilisation of common Defence materiel, this policy is promulgated in JSP 886, Vol. 7, Part 8.15. Standardisation analysis is an Integrated Logistic Support (ILS) activity requiring Project Teams (PTs) to carry out ‘front-end’ analysis during the Concept/Assessment / Demonstration phases to identify, and where possible utilise existing support infrastructure, equipment, materiel and services. Standardisation will be included as part of the Invitation to Tender Contract. Standardisation Analysis aims to avoid the uncontrolled acquisition of new equipment and services and focuses on “interoperability” aspects with MOD capabilities, NATO and other alliance partners. Lack of standardisation can adversely affect supportability, interoperability and operational effectiveness. Standardisation will reduce duplication within the Defence inventory, and minimise the impact of the introduction of equipment on the existing support infrastructure.

SINGLE ITEM OWNERSHIP

33. The PT should not limit itself to procuring spares from the prime contractor. Many parts may already be codified or available from other sources at a lower price. If an item is found to be already provisioned by the MOD, the managing PT needs to be notified of the requirement for the item by the new equipment; this is a mandatory requirement under the Single Item Ownership policy promulgated in JSP 886, Vol. 2, Part 3. The future management of the item may need to be agreed between the two PTs. The item should normally be deleted from the IPL. If the item is already provisioned by another PT, and that team retains management of it, any additional requirement may still have to be funded by the “new” project.

AGREEING THE PRICE

34. The contractor is normally required to provide prices in their recommended parts list however if, following IP, the quantity required varies a great deal from that recommended there may be a need to negotiate a revised price. Agreeing the price with the contractor is largely a contracts and finance function however the ILSM may be able to bring expertise to bear by involving the DE&S Inventory Manager/Supply Manager and their provisioning staff.

DUES IN

35. Once the order or contract is placed delivery needs to be monitored and progressed. Dues In can also be created to monitor deliveries of items being supplied against a CLS agreement. A copy of the contract, or reference document, must be sent to the DE&S Inventory Manager/Supply Manager for their provision staff who will record details of items due in from the contractor on the selected BIS for specified depot(s). The Dues In record is then used to monitor the delivery of the IPL. Guidance on the CLS options and P2P are at JSP 886 Volume 3 Part 2: Contractor Logistic Support, JSP 886 Vol. 3, Part 5: Packaging and in the AOF Commercial Toolkit.

DELIVERY

36. Delivery is traditionally arranged “ex-works”, with the MOD arranging collection from the manufacturers’ premises through Joint Supply Chain Services (JSCS). Before arranging ex-works contracts, the PT is to ensure that the appropriate Internal Business Agreement is in place with JSCS to cover the required ex-works service. The PT should ensure that Defence Contract Clause 129 (DEFCON 129) is included in the contract; this DEFCON lays down the conditions for packaging and labelling.

ENGINEERING MANAGED ITEMS (EMI)

37. In addition to the main equipment/platforms many of the spares, particularly spare main assemblies and repairable LRUs will be high value assets or critical to operational success and will be controlled under EMI policy and procedures. It is important to ensure that EMIs are easily identifiable at point of delivery to ensure the appropriate procedures governing the receipt, storage, maintenance and issue of assets controlled under EMI policy can be implemented. EMIs are tracked through-life by a unique serial number which has to be recorded on deployed inventory management systems²⁵ and E&AM IS²⁶ at point of receipt. PTs should ensure that EMI special requirements²⁷ in their included in their contract with their industrial supplier early in the acquisition cycle during the assessment/demonstration phases. EMI policy can be found at chapter 3 of JSP 886 Vol. 7 Part 8.14: Management of Items Requiring Special Identification.

SECTION IV: PROCUREMENT OF THE SUPPORT PACKAGE

38. In addition to the procurement of the main equipment there is a need to procure a support package. This will consist of spares to support the main equipment, tools and test equipment to enable the maintenance plan, spares to support the support and test equipment, spares to support the training equipment and technical documentation.

INITIAL PROVISIONING

39. Within the SSP IP is the first step in the formal process for the acquisition of initial spares to support Defence equipment. The procedures define the detailed methods by which the initial spares support requirements are identified listed and presented to the MOD Integrated Logistic Support Manager (MILSM). IP should not normally begin until the

²⁵ BIS do not require serial numbers to be recorded.

²⁶ Current E&AM systems in-service are JAMES, UMMS, LITS and WRAM.

²⁷ Special requirements could include providing the PT with a list of the asset serial numbers, ensuring the assets carry their serial number, providing additional data elements to satisfy specific data fields on the relevant E&AM system, populating the E&AM system data fields at the contractor’s storage facility etc.

design is frozen; this is likely to be at the beginning of the Manufacturing phase of the CADMID cycle. Orders for spare parts are therefore normally placed after the main production contract to be delivered by Logistic Support Date (LSD). An exception is where the design is already frozen (e.g. an off the shelf buy).

INITIAL SUPPORT PACKAGE

40. The PT should ensure that DEFCON 82 is included in the contract. This DEFCON lays down the conditions for supply of initial spares. The ISP ensures that the physical deliverables of the support solution are in position to meet the requirements of the LSD and ensures through-life support is in place where appropriate. The quality of the ISP will depend on the availability of engineering data output from the ILS supportability analysis (SA) activities such as the level of repair analysis (LORA), maintenance task analysis (MTA) and failure modes effects and criticality analysis (FMECA). For a COTS/MOTS solution SA data should be purchased with the equipment subject to ITAR requirements. Whether the project will identify and procure the ISP or industry depends on the project support solution strategy. Even if the task lies with Industry the PT, as intelligent decider, needs to understand the factors and criteria used to compile the ISP and be able to analyse and assess the quality of the deliverable. Further advice and guidance on how to carry out this analysis can be found in JSP 886 Volume 2 Part 2: Inventory Planning.

41. The ISP comprises those elements that are necessary to operate and maintain the equipment which are calculated on the MOD deployment and operating forecasts. It is an addition to the contract element for the main equipments. The ISP divides into parts:

- a Those items where the full through life requirement is procured; for example the repair pool, the special tools and test equipment and insurance spares. The range and scale may be amended during the life of the equipment. Elements may be amended due to modification of the equipment or its support solution or through inventory optimisation techniques based on the collection of equipment through-life R&M data.
- b Those items where a specific period of support is procured; for example consumable spares. The period, often two years, is a critical factor in the calculation of the range and particularly, scale. After the completion of the initial period the supply of spares reverts to MOD provisioning and procurement or a CLS arrangement in accordance with the project inventory plan.

42. The ISP may also include contractor repair support for a specified period; where all repairs arising are repaired and returned to the MOD within the terms of the support contract.

43. The delivered ISP will depend on:

- a The SA output of identified maintenance tasks.
- b The affordability of the package.
- c The assessment of procurement risk.

EARLY OPTIMISATION

44. When new equipment is brought into service it is vital that its operational efficiency is not impaired by a lack of spares, special tools and TD. Spares requirements predictions

made during the demonstration phase will eventually be replaced with actual in-service data, enabling more refined arrangements to be implemented for the longer term support of the equipment. However it is important to optimise the spares at the earliest opportunity, often when there is little or no usage data available. This means that the aim of ensuring that there are sufficient spares to ensure the required availability for the deployed fleet from the LSD, while ensuring that there is no over procurement by range, is difficult; If the ISP is too lean there is a risk of compromising operational capability, while if the package is too lavish then some items will be redundant and scarce resources will have been wasted. Many legacy projects have been marred by excessive surplus unused spares still existing within the MOD inventory at the end of the equipment's life. Where the Initial Support Period is 2 years a formal review of the ISP should be carried out between 12 to 18 months.

45. It is important that platforms/equipment procured under UOR arrangements are delivered with the right ISP. UORs are usually procured for special requirements of a particular military operation or campaign and as such will have a shorter in-service life than most Defence equipment procured as part of the Equipment Procurement Plan (EPP). This may mean that the UOR is delivered with a lifetime buy of spares and in this case it is even more important to get the range and scale of spares correct; this may mean that extra time will be needed to apply analysis and modelling techniques or compare in-service data from comparable equipments deployed on comparable operations. The continuous review, and subsequent amendment, of the initial ranging and scaling of spares for UORs from the point of fielding onwards in order to take into account evolving demand profiles, failure mechanisms and consistent damage patterns is essential. If UORs, originally fielded for a specific operation, then move onto a campaign footing, as soon as it is identified that the UOR will endure over the initial 2 years for which the ISP was designed, it should be subject to further ranging and scaling activity.

46. There are a range of Inventory analysis and simulation tools and techniques available to help achieve this aim; at their most complex, these could include taking a wide range of data (engineering, supply chain, financial and operational) and putting it through a suite of sophisticated modelling and simulation tools, analysing the output and presenting an optimised inventory to meet a required level of availability within budgetary constraints. This can be achieved, for both IP and RP, including sustainability planning in support of contingent military operations.

47. When analysing the proposed ISP the PT should ask the following questions:

a **How was ranging and scaling activity sourced; in-house, through SCM-SCO or through a contractor?** Where impartiality or increased confidence levels are required 'comparative analysis' can be carried out using a combination of resources.

b **What Optimisation Tools and Methodologies have been applied to the ISP?** This might range from simple engineering judgement, single item modelling through to Multi-Indenture Multi-Echelon (MIME) modelling analysis. Best practice involves the use of a tool which has been Validated & Verified (V&V) by SCM-SCO to ensure accuracy of output and suitability for inventory optimisation. Where V&V has not taken place the Inventory plan should demonstrate that the PT has actively encouraged V&V of the tool and have advised SCM SCO and that a form of comparative analysis has been used in the interim period.

c **When is ISP analysis planned to be undertaken and reviewed?** The PT should detail in the Inventory Plan the date and designated key points on the CADMID cycle when ISP analysis is to be carried out and reviewed.

d **What approach has been adopted for the management of repairables?** The PT needs to understand how repairables are going to be managed, reviewed and optimised in relation to Initial Provisioning (IP), Re-provisioning (RP) and the warranty period, and what measures are in place to improve the performance of repairables within the inventory. By applying realistic data to repair management calculations PTs will increase system availability, reduce operational risk, and improve coherence with the JSC. Additionally, logistics analysis may result in a reduction in the equipment tied up in the repair loop, or result in disposal action. Particular attention is drawn to the need to be realistic when using reverse supply chain processing time (RSCPT) parameters, currently detailed in JSP 886 Volume 3 Part 8: Reverse Supply Chain; in particular, this states that materiel for return will be moved at a routine Standard Priority Code (SPC). The value of the materiel should not be used to determine movement priority. Items in short supply may be given a higher priority for movement by the PT provided they are prepared to accept the additional cost that may arise from this decision.

e **Are there any reasons that legitimately impede further inventory optimisation?** The following list is not prescriptive but it does indicate where routine optimisation may not be carried out:

- (1) Inventory level influences such as CLS / IOS / CfA / CfC, current or future, whereby inventory has yet to pass to the contractor, or is being held on balance sheet until consumed or reviewed by the contractor for disposal.
- (2) Planned inventory transfers out of PT / Business Unit / Environment. (This in itself should not preclude optimisation).

PROCUREMENT TAILORING

48. Procurement tailoring is an appreciation of the criticality of a spare against its ease of procurement so that informed decisions can be made about the inclusion, or not, of items in the IPL. Another factor is the predicted probability of use of the item derived from modelling. There are four categories of items:

a **Critical / Difficult to Procure.** These items should remain on the list almost regardless of their probability of use. For example a ship's propeller shaft may not be expected to fail but if it does its long procurement lead-time would adversely affect the ship's availability. Difficulty in procurement can be due to long lead times, strategic materials, foreign procurement, and competition for resources etc.

b **Critical / Easy to Procure.** These should remain on the list but consideration should be given to reducing the quantities. Additional procurement can take place once usage has been proven.

c **Not Critical / Difficult to Procure.** Unless the probability of use is high and preferably proven, consideration should be given to taking these items off the list.

d **Not Critical / Easy to Procure.** These items should be taken off the list. Buy as required.

REPAIRABLES

49. The repairables, also known as major spares and rotables are maintained by specialist repair and are rarely scrapped. They are critical to assuring the required availability of the main equipment. By their nature it is likely that repairables will also be EMIs. The range for these items is normally easy to determine although the scale can be very complicated to calculate. It is commonly stated that the procurement of repairables follows the Pareto principle in that they represent 20% of the quantity of spares but 80% of the cost of the spares, therefore more effort should be used to calculate their range and scale. The determination of the quantity of major spares required to meet the equipment availability targets is a major task. The requirement must be modelled using the guidance on inventory planning from DE&S SCM Analysis Team. This is to either establish the requirement for MOD support or to act as a comparator for an Industry calculated figure. The data used for the modelling must be accurate and realistic and agreed prior to the modelling. The calculations result in the quantities, commonly known as repair pools, of major spares required to support the projected equipment fleet size at the planned utilisation. Quantities to satisfy logistic sustainability requirements are calculated separately.

AFFORDABILITY

50. The project will have a budget for the procurement of the initial spares. The modelling and calculations described above will result in a spares procurement list. Typically the cost of the list and the available budget will be divergent. The DE&S PT will need to tailor the list to match the available funds; this should be carried out in conjunction with the prospective in-service managers, to allow mitigation of any increased risk. In addition the DE&S finance staff should be consulted to determine funds that may be available to buy out some of the risk.

FINAL SPARES LIST

51. The final IPL should represent an optimised compromise. This list needs to be signed off by the PT and, if appropriate, put to contract. In a large project there may be progressive iterations²⁸ of the list as the deliveries of the equipments are made.

INVENTORY PLANNING

52. Inventory planning policy is contained within JSP886 Volume 2, Part 2: Inventory Planning. PTs are to consult with DES SCM about the production of the mandatory Inventory Plan for the project and determining the methodology to be used in determining the range and scale of spares.

SUPPORT SOLUTIONS IMPROVEMENT TEAM (SSIT)

53. The SSIT provide focus at the PT and Operating Centre (OC) level for efficiency and effectiveness improvements within the Supply Chain Management (SCM) disciplines by joint working with senior SCM and OC reps network to identify problem areas and their solutions including requirements for policy and process improvements, better ways of working and training requirements / interventions. Specifically they:

²⁸ Projects using ASD S2000M may have a draft, formal and master IPL.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

- a Provide a forum for SCM problem resolution, mentoring and sharing of LFE and best practice.
- b Ensure that Defence has a comprehensive and up-to-date body of inventory planning policy to meet all requirements and advise on the application of that policy.
- c Provide all PTs with the best inventory planning support, in line with their needs, circumstances and the applicable single-Service regulations and procedures, to agreed time, quality and cost.
- d Assist PTs to progress or maintain a 'Green' assessment, an optimised inventory and efficient inventory performance statistics.

54. The SSIT provides SMEs on inventory planning and GP 3.3 within the SSE. When approaching Main Gate approvals, PTs will require to comply with GP3.3 to ensure that their support solution meets the requirements of inventory planning policy. The SSIT will work with PTs, from very early on in the CADMID cycle, to assist them in determining how best to plan their future inventory.

ANALYSIS AND MODELLING

55. DE&S SCM Analysis Team provides a full suite of logistics modelling techniques, from single item modelling through to complex modelling, to assist PTs in providing optimised support solutions enabling system availability. This includes the following:

- a Level of Repair.
- b Ranging and Scaling of Inventory.
- c Force Elements at Sustainability (FE@S)²⁹ requirements.
- d Validation and Verification of logistics modelling tools.
- e Comparative Analysis.
- f Simulation to test the modelling results against "real life".
- g Responsible for the Support and maintenance of the Asset Optimisation tool.
- h Development and implementation of inventory segmentation techniques across DE&S.
- i Algorithm development and implementation advice in support of MOD Inventory Provisioning.

OPERATIONAL SUPPORT

56. Units deploying on contingent operations at short notice will require immediate in-theatre supply support until the theatre specific joint supply chain is established. Further guidance is given in JSP 886 Volume 3 Part 12: Deployable Stocks. The Maritime, Land and Air environments approach this problem differently:

²⁹ FE@S is a metric used by RP Centre used to assess the shortfall in sustainability stocks held in support of contingent operations. It is only based on the Equipment DLOD and unlike the readiness metric, FE@R, does not give a pan-DLOD assessment of logistic sustainability.

a **Maritime.** Maritime platforms deploy with a spares outfit derived from the Onboard Documentation (OBD), specifically the OBD Volume 3: Consolidated Allowance List (CAL) which is an authorised list of spares and Support and Test Equipment designed to support the vessel for a limited period of time. The CAL is compiled from equipment scales and lists generated by DE&S PTs and will be optimised through-life. Items annotated as critical or mission essential are always to be carried by the vessel. In addition to the CAL platforms deploying to specific theatres or operations will also be required to embark specialist Military Tasking Equipment (MTE). Advice and guidance is available from DES JSC SCM-SCO-Analysis.

b **Land.** Priming Equipment Pack (PEPs) are pre-scaled materiel packs, maintained at an appropriate readiness to meet a units Readiness & Preparation Time (RPT), for deployment on contingent operations. They contain the range and depth of materiel required to sustain a deploying force for 28 days, split between units and their formation level supporting RLC & REME units, with the balance being held by the Logistic Brigade (Log Bde) in the force area. PEPs aim is to improve operational effectiveness by delivering the materiel required for deployment on contingent operations and major exercises in order to:

- (1) Create materiel scales based on previous operational analysis which are optimised for specific contingent operations.
- (2) Reduce the initial strain on the strategic Supply Chain to meet high priority and routine demands prior to deployment additionally removing this burden from Unit QMs prior to deployment.
- (3) Provide Land and Commodity IPTs with liabilities prior to the mounting of contingent operations.
- (4) Provide FLCs with detailed availability of materiel fulfilment against each contingent operation (Fill Status).
- (5) Prime the lines of support within the operational supply chain.
- (6) Improve the level of demand fulfilment during the deployment.

Advice and guidance on PEPs is available from DES JSC SCM-SCO-FI-PEP (PEPs Team)

c **Air.** Military Air Environment (MAE) equipments are also supported by a PEP, sometimes referred to as a “fly away pack” or “deployed spares pack”. The PEP is deployed at the same time as the main equipments and provides limited support until a more permanent system is established. All deployable MAE equipments are required to have a PEP calculated. Advice and guidance is available from DES JSC SCM-SCO-Analysis-SL.

57. There may be a requirement for certain spares to be held on the equipment (Built-in Spares), at the unit, or at a secondary stores point (Royal Fleet Auxiliary (RFA) or Secondary Depot) in addition to the primary stockholding point (MOD depot or industry). During steady state peacetime operations the spares holdings for these locations are calculated automatically based on spares usage, equipment usage, equipment holdings and local input. Initial stocks need to be calculated as part of SSPs and distributed to the stock holding units as part of the equipment deployment plan. The range

and scale for each type of holding unit needs to be calculated in collaboration with the relevant FLC. The aim should be to have the unit and secondary depot holdings as slim as possible initially and to build up stocks based on usage data.

Logistic Sustainability and Contingent Operations.

58. Logistic sustainability requirements are mandatory and listed in the Support Solutions Envelope (SSE) under Key Support Area (KSA) 1. The sponsor, ACDS (Log Ops) D Def Log Pol, provides advice and guidance. In general the requirement is for the equipment, associated support and munitions to be procured and maintained to satisfy the Defence Capability requirements. The majority of the sustainability requirement is calculated by DE&S and any shortfalls are reported to RP Centre via the FE@S metric.

59. The inventory plan is to identify the spares required to sustain the equipment in the most likely, most demanding contingent operation. This identifies the items that are different in range and/or scale to normal peacetime and Standing Military Task usage. In general the majority of the affected spares are associated with elements of the equipment with significantly different duty cycles in peace and war. For example the quantity (more shots fired) and severity (greater released energy) of usage of weapon systems can increase spares usage significantly. This also has the potential for severe embarrassment if the equipment does not perform in its war role when called upon to do so.

60. The output of the Munitions Stockpile Planning process is production of a Munitions Stockpile Register (MSR) endorsed by the Policy and Programme Steering Group (PPSG) in MOD Centre stating overall quantities required for each munition type (and includes those coming into service). Ultimately this will lead to DE&S PTs arranging contracts with the manufacturers to deliver the munitions over a stated particular time period taking into account; operational tempo, manufacturing rate, budget available and the overall stock level to be maintained.

SECTION V: CODIFICATION

CODIFICATION GUIDELINES

61. It is MOD policy that projects must NATO Codify their equipments, including those procured under UOR procedures, if they are likely to enter the joint supply chain, unless dispensation has been actively granted as part of the support solution assurance process. NATO codification procedures results in a unique thirteen figure code known as a NATO Stock Number (NSN). The codification policy and processes are given in JSP 886 Volume 2 Part 4: NATO Codification. All items of supply, procured using public funding by DE&S PTs or industrial partners under CLS arrangements, which enter or are likely to enter the JSC, must be NATO codified. The requirement to codify is irrespective of both the number of times the item of supply is required and the value of the item and applies equally to items that support equipment procured under a UOR.

62. NATO codification is required to allow the MOD Log IS to be used to identify, receive, store, maintain, demand, issue, consignment track (CT) and account for materiel. The following categories of item are to be codified:

- a The main equipment and its derivatives; these NSNs are used as a primary reference on asset management systems in conjunction with other appropriate equipment identifiers such as Serial Numbers, Maritime Call Sign, Equipment Registration Marks or Tail Numbers. Specifically:

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

- (1) On MERLIN the equipment NSNs are linked to Liability and Asset Codes to uniquely identify the equipment and any significant derivatives.
 - (2) Munitions NSNs are used to create the new item data records on ASTRID and generate the Ammunition Descriptive Asset Code (ADAC).
 - (3) On JAMES vehicles and EMLs with NSNs and/or Asset Codes are linked to unique serial numbers to enable accurate through-life asset engineering and safety management.
- b The spares that are going to be procured; spares are items required to support the maintenance of the equipment through-life. Spares may be required to support Complete Equipment Schedule (CES) items.
 - c The Special Tools and Test Equipment (STTE) that are going to be procured.
 - d The items of Complete Equipment Schedule (CES) that are going to be procured. CES items are those required to operate the equipment.
 - e Associated items, such as training aids, if appropriate.
 - f Items that are not being procured, but are likely to be needed in the future, should also be codified and included in the TD, so as to aid their identification and future procurement.

CODIFICATION PROCEDURES

63. The control and procedures of NATO codification for all UK based entities and for facilitating the codification of foreign items is the responsibility of DES JSC SCM-UK-NCB.

CODIFICATION OPTIONS

64. It is normal for codification of large projects to be arranged by the Prime Contractor using specialised contract cataloguing firms to carry out the screening and codification applications. For small projects, including modifications and UORs, it may be more appropriate for the PT to carry out the screening and to raise codification applications directly with the UKNCB.

CODIFICATION CONTRACT CONDITIONS

65. The project should ensure that Defence Contract Clause 117 (DEFCON 117) is included in the contract. This DEFCON lays down the conditions for supply of data for NATO Codification purposes and makes it clear that where data is supplied by a manufacturer and is marked to indicate its proprietary nature, it shall be used solely for codification purposes and shall not, without written permission of the manufacturer, be reproduced or disclosed to any third party. The Design Control Authority is not required to disclose particulars of proprietary processes, manufacturing techniques or proprietary material specifications.

DISSEMINATION OF CODIFICATION DATA

66. The PT needs to ensure that NSNs discovered as part of the screening, including foreign NSNs, created or changed during codification are promptly disseminated to all interested members of the MOD and Industry. This is to ensure that:

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

- a The TD contains the latest accurate detail.
- b That items being delivered are labelled correctly.
- c That item creation and contract dues in creation on the BIS is accurate and the labelling of the items reflects the latest standard.

SUPPLY MANAGEMENT DATA

67. Supply Management Data (SMD) is created as part of the codification process. The SMD information is automatically sent from the Item of Supply Information System (ISIS), which is the database of codified items, to nodes in the supply system. This SMD is then used to create a record of the new or amended item on the BIS. The development of Electronic SMD (eSMD) now means that the NSN data is electronically transmitted from ISIS enabling automatic item header creation on the relevant BIS.

SECTION VI: TECHNICAL DOCUMENTATION

GENERAL

68. TD is defined as the information necessary to operate, maintain, repair, support and dispose of equipment throughout its life. This information includes SA data, data modules, text or illustrations, reproducible master material, interactive electronic technical publications (IETPs) and any output derived from such regardless of the media. The aim is to provide a suite of TD for the equipment, allowing it to be managed, operated and maintained effectively, efficiently and safely. To achieve this aim, the various users of the TD: operators, maintainers, managers and contractors, must be able to access the TD, in an appropriate manner, wherever they, or the equipment, are deployed.

POLICY ADVICE AND GUIDANCE

69. It is MOD policy that TD shall be produced and delivered in electronic format and will be provided to every equipment to support, maintain, train and provide technical support from the first usage. This allows it to be operated, managed, maintained and disposed of effectively, efficiently and safely. Key points of policy and guidance in the selection of the type and appropriate level of Technical Information and Data for through life support are contained in JSP 886 Volume 7, Part 8.05: Technical Documentation. General advice and guidance on TD is available on the EngTLS-Technical Documentation Website.

CONTENT

70. The main requirement is that the TD reflects the latest version of the maintenance plan, the build standard of the equipment and contains the correct NSNs. It is a major configuration management task to ensure that the details contained in the TD are coherent. If the prime contractor is carrying out the SA, managing the IP and codification and the production of the TD there should not be any need for the MOD to be involved in the specifications used for data transfer and manipulation.

SS Requirements

71. It is important to ensure that all the SS information within the following parts of the TD are correct:

a **User Instructions.** This lists the procedures required to operate the equipment. The instructions may list deviations to cater from climatic and other variations. The user instructions may list initial actions to be taken to identify and correct simple failures.

b **Maintenance Tasks.** This lists the periodic inspections and maintenance that need to be carried out.

c **Repair Tasks.** Provides details of the repair tasks that can be carried out; there may be separate sections to cover different levels of repair.

72. Catalogues:

a **Illustrated Parts List.** An illustrated list which identifies the hierarchical location and gives technical data of a spare.

b **Illustrated Parts Catalogue.** An illustrated catalogue containing the technical drawings of equipment, assemblies and spares and their NSNs.

c **Other Item Lists.** E.g. Complete Equipment Schedule or a Special Tool List.

SECTION VII: DATA MANAGEMENT

GENERAL

73. SSPs require the routine and repeated transfer of large amounts of data between the contractor, sub contractors and the MOD with iterative changes to content and quantity. It is a significant task to maintain the configuration management of this data as the equipment design and support solution evolve over the life of the equipment.

74. Contracting for the essential SS data, required to effectively manage the support of equipment through-life, during the equipment design and manufacture stages is essential for any equipment acquisition project if the equipment WLC are to be optimised and value for money is to be achieved. It is not unusual for the Defence acquisition cycle (CADMID)³⁰ of a military platform to be in excess of 40 years³¹ which makes it extremely difficult for a project ILSM to fully understand what Log IS data fields will need to be populated by the LSD to provide the necessary information to fulfil the logistics support and sustainability³² requirements of the operational commanders some 40 years in the future.

POLICY

75. Current MOD policy states that PTs are to plan, develop and assure support solutions 'through-life', thus optimising supportability and through-life finance (TLF) and reducing risk, through the application of ILS. Policy and guidance on ILS is contained in JSP 886 Volume 7 Part 1: ILS Policy. There are no legal or safety requirements arising from applying ILS however PTs are required to demonstrate that they have applied ILS to

³⁰ Concept, Assessment, Demonstration, Manufacture In-service, Disposal

³¹ Nimrod developed 1964, FV 430 series developed 1961, T42 Destroyer developed 1968

³² The ability of a force to maintain the necessary level of combat power for the duration required to achieve its objectives. (AAP-6)

influence the design of their support solution. The UK Defence Standard for the application of ILS is DEFSTAN 00-600 which is applicable to Defence acquisition and support contracts.

MANAGEMENT OF LOGISTICS INFORMATION

76. The MOD has accumulated a large number of diverse, interdependent Log IS and applications. These impose a significant training and support burden to Front Line Commands, and present an overhead on operational effectiveness that must be controlled. Also, Defence Logistics³³ has an ever increasing requirement to exploit the information contained within these systems more efficiently and effectively. The Defence Logistic Information Strategy³⁴ identifies that this can be best achieved through maximising re-use of existing and planned systems, and limiting future proliferation. Logistic information requirements planning (LIRP) enables PTs to understand their logistic information needs to support their equipment through-life. It ensures that PTs align with MOD Logistics Information Policy, contained in JSP 329: Information Coherence for Defence, and aids understanding of how Log IS can best support their equipment. By treating information as a key asset, LIRP provides the clarity needed for effective through life decision making, by assessing the cost and utility of logistics information and reducing operational risk.

77. The final deliverable from the LIRP process will be a project specific Logistics Information Plan (Log IP)³⁵ tailored to meet the needs of the PT and Industry by identifying the critical logistics information triggers and exchange requirements necessary to ensure the support solution functions effectively. The Log IP identifies who owns and delivers the logistic information needed to support their capability through life, and when complete shall form part of the contracting schedule for the project. The benefits of developing the Log IP are:

- a A clear picture of information exchange requirements between MOD and Industry to support the capability through-life.
- b Identifies logistics information needs, owners, costs, roles and responsibilities ensuring they are contracted for up-front.
- c PTs will be able to identify the costs of exchanging logistics information with industry and interfacing with the Defence infrastructure.
- d The PT has assurance that their support solution is interoperable with the Defence log IS and services.
- e Alignment with current MOD policy for information management and architecture.
- f The PT will be able to identify operational risk and understand the implications of failing to comply with Logistics Information Policy.

³³ Logistics is defined as the science of planning and carrying out the movement and maintenance of forces. It comprises the aspects of military operation which deal with: design and development, acquisition, storage, movement, distribution, maintenance, recovery and disposal of materiel; transport of personnel; acquisition or construction, operation and disposition of facilities; acquisition or furnishing of services; and medical and health service support. (JDP 4-00)

³⁴ Defence Logistics Information Strategy (Interim Version) - A Paper by ACDS (Log Ops) -1 Sep 2009

³⁵ DEFSTAN 00-600 Clause 14 requires the contractor to supply information for the LIP.

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

g Enables shared situational awareness to the end user and industry to enable effective logistics decision support.

h To enable effective through-life SSPs it is crucial that the LIP includes sufficient detail³⁶ to identify:

(1) What data and information management systems will be used through-life by:

(a) The PT/Industry during the introduction to service (CADM phases) for storage, manipulation and exchange of supportability analysis, initial provisioning, NATO codification and technical documentation data³⁷.

(b) The PT/Industry/User during the in-service phase for the management of the support chain (e.g. base inventory, deployed inventory, consignment tracking, repair and engineering, asset management and eProcurement systems).

i The PT/Industry/Disposal Agency to secure the best possible financial return in the disposal of surplus MOD materiel and equipments.

j What IS data fields are required to be populated. The UKNCB has a minimum data set to populate ISIS; this enables the automatic Item Data Record (IDR) creation on the MOD BIS³⁸.

k How the systems will interface with each other. During the CADM phases SS Data will need to be exchanged between the OEM, the prime contractor, the contract cataloguer, the PT and the UKNCB. Every effort should be made to ensure seamless electronic data exchange.

ASSUMPTIONS

78. It will be necessary to make assumptions early in the projects lifecycle regarding the data requirements of Log IS which will be used to support the equipment during the in-service phase. Assumptions can be based on what Log IS is in-service today, what are the OSDs of these systems and what are the planned replacements and their ISDs. The UKNCB minimum data requirement for ESMD is a good indicator.

ELECTRONIC DATA INTERCHANGE (EDI)

79. It is essential that the data used in the design for the codification of items, to populate the TD and to procure the IP spares is as coherent and up to date as possible. The aspiration is to minimise the waste - codify the minimum, restrict the technical publications to the aspects which will be carried out in-service and only procure the spares that will be used in-service. An EDI Service Agreement can be used to establish the business rules,

³⁶ DEFSTAN 00-600 Clause 14 requires that the contractor develops a set of logistics Information Systems and Services (IS&S) requirements and delivers a Logistics IS&S implementation plan and support agreement with Hd LogNEC

³⁷ Complex platform acquisition projects will benefit from the use of a materiel management standard. ASD Specification 2000M (S2000M) is a standard that specifies the information exchange requirements for most materiel management functions commonly performed in supporting international projects. Using a common data set, S2000M defines business rules to be followed at various stages of the materiel management process, and provides various sets of standard messages that are to be used by business partners to exchange information in an unambiguous way.

³⁸ The MOD BIS are currently Stores System 3 (SS3), CRISP and SCCS

DEFFORM 30 can be used for this purpose and it must be included in all Invitations to Tender for contracts that will be run on Purchase to Payment (P2P). PTs and Industry must familiarise themselves with the scope and coverage of the DEFFORM 30 before taking procurement action. The size and scope and complexity of the project determines the difficulty in managing the data:

- a Small projects where the equipment build standard only comprises of a few thousand items or less, is probably manageable without resorting to specialised software. The design in these types of projects is often stable which eases the configuration management problems. It would be normal for a minority (nominally 10% but variable by equipment) of the build standard to be considered as spares. DEFCON 82 and the DES SCM UKNCB e-Tasking system can be used in this case.
- b Larger complex projects, particularly those with a high new technology element, a high number of items in the build standard or the involvement of sub contractors, need dedicated data management techniques and systems. In these cases the use of ASD standards S1000D and S2000M should be encouraged. Advice on the appropriate standards to use should be sought from ACDS (Log Ops) Log Info and DES JSC SCM-EngTLS-SS.

CONFIGURATION MANAGEMENT

80. It is normal for the manufacturer, as the Design Authority (DA), to be formally responsible for the configuration management of the design. Occasionally a separate DA is appointed. It is the responsibility of the DA to:

- a Maintain a historical record of the design, including configuration changes.
- b Maintain the relationship between items in the design; this may be through the adoption of an indenture notation system.
- c Maintain a full drawing repository of the design recording the shape, materiel, techniques and tolerances for each item.
- d Maintain the record of Manufacturers Part Numbers (MPNs), where allocated the associated NSN, and the associated sub-contractors' MPNs.
- e The responsibility for the configuration management of data being passed between industry and MOD needs to be agreed and a system developed that allows this to be achieved while imposing the minimum of delay. Generally, the larger the project the more difficult it is to ensure the configuration management of the data. This can be achieved in a variety of methods:
 - (1) Passing the data through a node, often the DA, as part of each transmission of data to ensure that the base data is correct.
 - (2) Adoption of a recognised standard, such as ASD S2000M, which has data checking protocols incorporated into it.

LOGISTIC INFORMATION REPOSITORY (LIR)

81. The Configuration Management data is the primary source for the item identification data used in the Supportability Analysis (SA). The data derived from the SA is stored in the Logistics Information Repository (LIR); this can be a formal record constructed to the

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

guidance given in DEFSTAN 00-600 or a less formal record. The following record sets are derived from the LIR:

- a Hierarchical structure, showing items' relationship to the equipment, used to construct the Maintenance Tasks, Illustrated Parts List (IPL) and Complete Equipment Schedule (CES).
- b Items associated with repair tasks used in the preparation of Maintenance Tasks.
- c Items identified as spares used in the preparation of IPL.
- d Codified items used in the construction of the Maintenance Tasks, IPL and CES.
- e Items identified as special tools, used in the construction of the Maintenance Tasks, IPL and CES.

ANNEX A: SUPPLY SUPPORT - QUICK REFERENCE GUIDE

1. Key Policy and Standards:
 - a JSP 886 Volume 7 Part 8.10 Supply Support Procedures.
 - b DEFSTAN 00-600 Integrated Logistic Support - Requirements for MOD Projects.
 - c ASD Specification 2000M (S2000M).
 - d DE&S Corporate Governance Portal Index.
 - e Support Solution Envelope containing the relevant Governing Policies.
 - f AOF Guidance on Develop Supply Support Plan.
 - g **Reference Material.** There are several references that should be used in conjunction with this guide:
 - (1) JSP 886 The Defence Logistics Support Chain Manual:
 - (a) Volume 1 Part 4: Support Options Matrix.
 - (b) Volume 2 Part 1: Policy & Process for Inventory Management.
 - (c) Volume 2 Part 2: Project Team - Inventory Planning.
 - (d) Volume 2 Part 3: Single Ownership of Items of Supply.
 - (e) Volume 2 Part 4: NATO Codification in the United Kingdom.
 - (f) Volume 2 Part 5: Purchasing Inventory Using P2P.
 - (g) Volume 3 Part 2: Contractor Logistic Support.
 - (h) Volume 3 Part 3: The Reverse Supply Chain.
 - (i) Volume 3 Part 7: Consignment Tracking.
 - (j) Volume 7 Part 2: ILS Management
 - (k) Volume 7 Part 3: Support Analysis
 - (l) Volume 7 Part 5: Management of Support Information.
 - (2) The Support Solutions Envelope (SSE).
 - (3) The Electronic Business Capability.
 - (4) Project Documentation Affecting Supply Support Requirements.
 - (5) User Requirement Document (URD).
 - (6) Systems Requirement Document (SRD).

INTERNET VERSION – MASTER IS ON THE DEFENCE INTRANET

- (7) Use Study.
- (8) Statement of Work.
- (9) Policy Outputs Advice & Guidance

2. SSE Supply Support Evidence Aide Memoire – See figure 4 below.

Figure 4: SSE Supply Support Evidence Aide Memoire

JSP 886 Volume 7 Part 1 JSP 886 Volume 7 Part 8.10	SS Strategy (Concept / Assessment Phase) Consider: Acquisition Strategy, ILS Strategy and SSE KSAs	DEFSTAN 00-600 JSP 886 Volume 1 Parts 1, 2, 3 & 4 JSP 886 Volume 7 Part 2 JSP 886 Volume 7 Part 8.10 DACMT ILS Community Website ASD S2000M OAGIS9 SO 8000 ISO 22745 LCIA
	SS Resources (Concept / Assessment Phase) Consider: TLF, Initial Spares, S&TE, Lifetime buys. (Part of BC for IG / MG submissions)	
	SS Plan (by MG) Consider: SS Schedule, IP Guidance document, data exchanges and standards, FLIS, e-business	
JSP 886 Volume 2 Part 1 JSP 886 Volume 2 Part 4	Conduct SS Activities (Demonstration / Manufacture Phase) Consider: Initial Provisioning, NATO Codification, Technical Documentation provision, spares optimisation	JSP 886 Volume 2 Part 4 JSP 886 Volume 7 Part 8.10 DEFCON 82 DEFCON 117 ASD S1000D
JSP 886 Volume 2 Part 1 to 5 JSP 886 Volume 3	Deliver In-Service SS (by LSD) Consider: Populate LogIS, deliver spares, re-provisioning, Inventory Management, repair and overhaul, Purple gate, CLS	JSP 886 Volume 1 Part 1, 2 & 3 DEFCON 129 ESCIT OSP
JSP 886 Volume 1 Part 3	Monitor, Review & Update (Through Life) Consider: Spares optimisation, Configuration Management, Modifications and upgrades	JSP 886 Volume 2 Part 2

ANNEX B: GENERAL REQUIREMENTS FOR GUIDANCE CONFERENCES

1. The tenderer shall ensure concise understanding of MOD requirements. Any matters requiring further information or resolution can be raised either at bidders' conferences prior to the submission of tenders or at clarification meetings or Guidance Conferences prior to the award of the contract.
2. Guidance Conferences may be held after the award of the contract but will have the sole purpose of agreeing how the detailed requirements of the contract are to be implemented. The onus will be on the contractor to raise dilemmas, propose solutions and seek agreement to outstanding issues to which the MOD will respond. These conferences may expose issues the resolution of which may require a change to the contract. However, the conference itself is an inappropriate forum to propose any amendments to the contract or to the contract price; such proposals can only be discussed at separate formal contractual negotiations.
3. After contract award, ILS review/coordination meetings should be held, as part of the project review process, appropriate to the phase to monitor and to facilitate the Contractor's progress with the ILS Programme.

Initial Provisioning Guidance Conference Requirements

4. The IP Guidance Conference will be jointly chaired by the MOD ILS manager or nominated representative and the contractor's ILS manager or nominated representative.
5. The conference will be called by the MOD at a date and time agreed with the contractor.
6. The conference format and agenda shall cover a list of topics which should be developed and tailored to suit individual project requirements. The following should normally be included in the agenda:
 - a Confirmation and explanation of the contractor's approach to IP in order to reflect the developing maintenance concept and support policy.
 - b Establishment of the level of IP presentation required.
 - c Outline for the IP programme.
 - d Timescales for the IP programme.
 - e Requirement for advance part-number orientated Initial Provisioning Lists (IPL).
 - f Customer's support parameters on which all spares recommendations shall be based.
 - g Parts data commonality.
 - h Concurrent ordering of production and spare, line replaceable items, together with any procedures to be followed.