MINISTRY OF DEFENCE

JSP 886
THE DEFENCE LOGISTICS SUPPORT CHAIN MANUAL

VOLUME 1
THE DEFENCE LOGISTICS SUPPORT CHAIN

PART 2
INTRODUCTION TO
THE JOINT SUPPLY CHAIN BLUEPRINT

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SECTION 1 - INTRODUCTION TO THE JOINT SUPPLY CHAIN BLUEPRINT

PURPOSE

1. The Joint Supply Chain (JSC) is a core enabling capability for Defence. The effectiveness of its performance is critical to most areas of MOD activity. When fully applied, the Blueprint will ensure that the future JSC is a fully integrated enabling capability. It will be planned, configured and executed to make the optimal contribution to the delivery of military effect.

2. The effectiveness of the JSC in support of operations has been a recurring concern for a number of years. Notwithstanding its overall success in supporting operations, concerns over the level of military effect enabled by the JSC prompted a detailed examination of its performance and processes.

3. In 2004 the End to End (E2E) Study Joint Supply (JS) Wave 1 Report[1] recommended that Defence should 'develop a detailed design of the JSC future state based on the stated design principles', and that all logistics should be able to 'rely on an effective Supply Chain'. The JSC Blueprint provides that detailed design with the intent of delivering optimised reliability, effectiveness and efficiency, taking account of other logistic developments including contracting for availability and capability.

POINT OF CONTACT

4. Formulation of policy on the subject of the JSC Blueprint is vested in the Assistant Director Supply Chain Support (Policy) (AD SCS (Pol)) and is subject to Ratification by the Joint Supply Chain Committee (JSCC).

5. Enquiries concerning the content of this instruction should, in the first instance, be addressed to:

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GLOSSARY OF DEFENCE LOGISTICS SUPPORT CHAIN TERMS AND DEFINITIONS

6. Defence Logistics Support Chain terms and definitions are included in the Glossary and printed in *italics.* A hyperlink to the Glossary is included at the foot of each page.

SCOPE

7. Military logistics has a number of principles – foresight, economy, simplicity, co-operation and flexibility which are enshrined in NATO and national doctrine. The logistic estimate process uses the 'Four Ds' – Demand, Distance, Duration and Destination[2]. The

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1 Joint Supply Wave 1 Report, 28 May 2004.
2 JWP 4 Article 217.

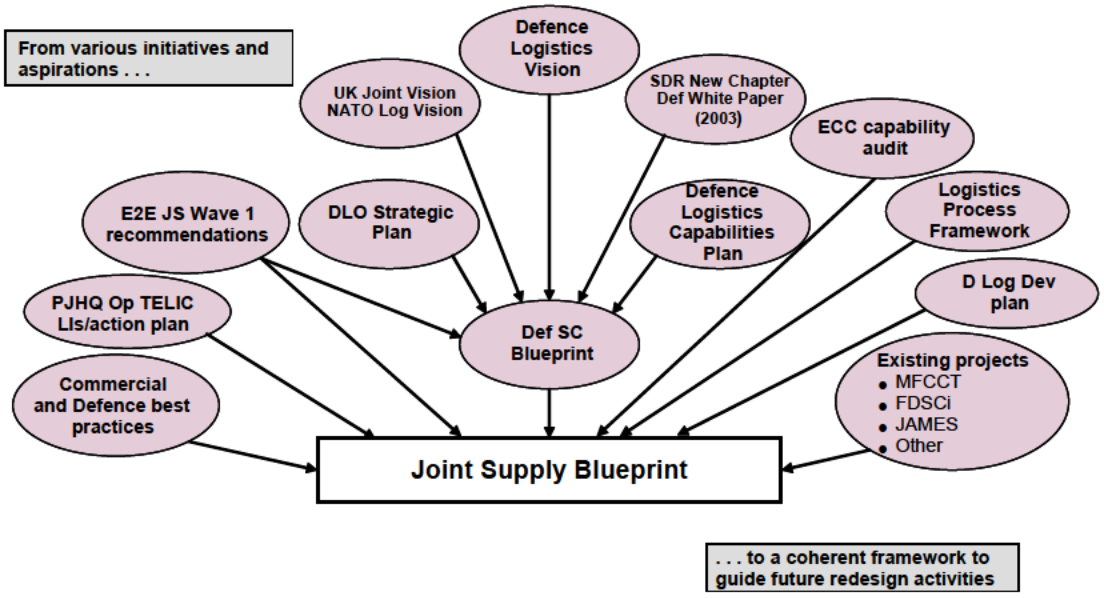
Blueprint work has not identified any need to alter these, indeed their application through the components and processes of the Blueprint serves to confirm their enduring nature.

8. Although a considerable amount of supply chain (SC) improvement work had already taken place in the Defence community, no clear view of the overall capabilities required by the JSC had yet been formed. Furthermore, IPTs were often selecting solutions that had an adverse effect on JSC performance, and consequently operational support.

9. The Blueprint is a guide for those involved in leading, planning, developing and delivering SC and supply solutions. This ranges from DLO and DPA IPTs, Industry (as either a manufacturer or provider of CLS) through logistic planners, to deployed Commanders and supply chain operators in a JOA or single Service environment. To address the needs of the JSC the Blueprint fulfils three main roles:

a. **Statement of Requirement**. The Blueprint defines the effects that JSC is required to deliver, and the capabilities needed to achieve them. Figure 1 illustrates how the Blueprint provides focus for a wide spectrum of current logistic policy, projects and initiatives by stating the desired vision for the JSC.

Figure 1: The Blueprint pulls together various SC improvement initiatives and aspirations into a coherent framework to guide future redesign activities



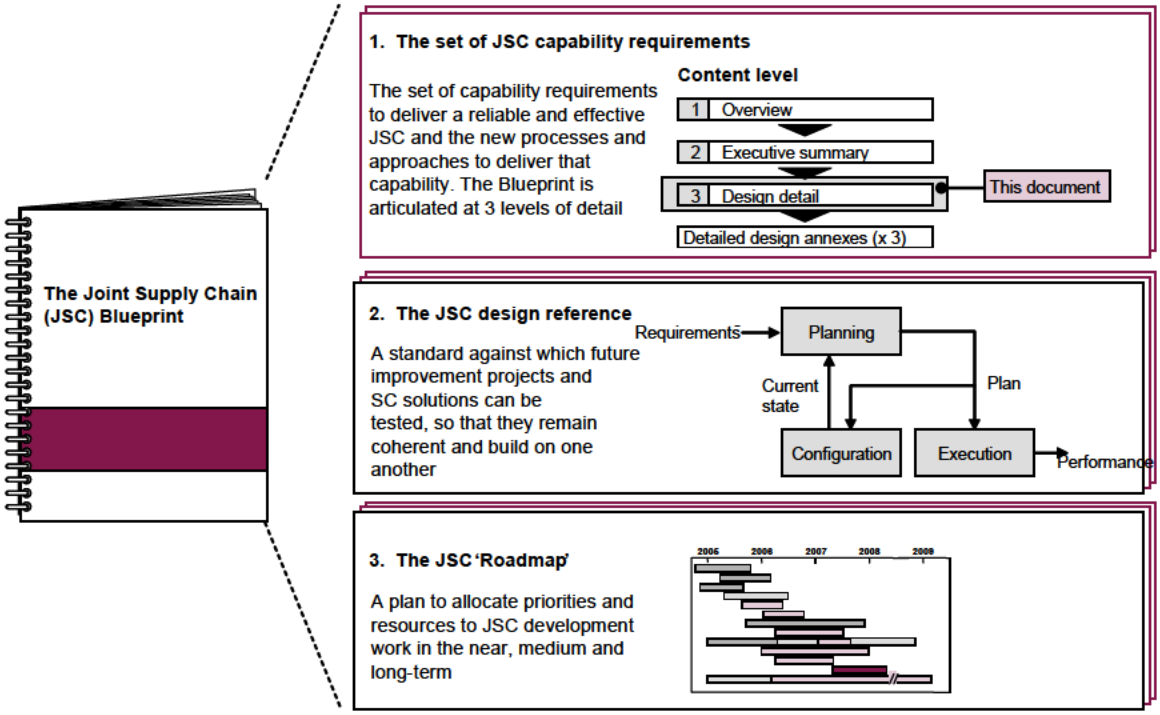
b. **Design Reference**. As well as providing the statement of requirement for the JSC, the Blueprint acts as the design reference against which future SC planning, improvement projects and supply solutions are tested. This ensures coherency and that all aspects of the JSC remain focused on the primary need to enable supported commanders[3] to rely on an effective SC.

[3] The term 'supported commander' in this context is to be construed in a wide sense and includes commanders supported by both core and operational supply chains.

c. **Roadmap**. The third role of the Blueprint is to act as the 'Roadmap' for all JSC development by evaluating and prioritising short, medium and long term work, against the capabilities required by the future JSC. Figure 2 illustrates this structure.

Figure 2: What is the JSC blueprint?

The JSC Blueprint is a guide for those who will lead, develop and deliver the future JSC.

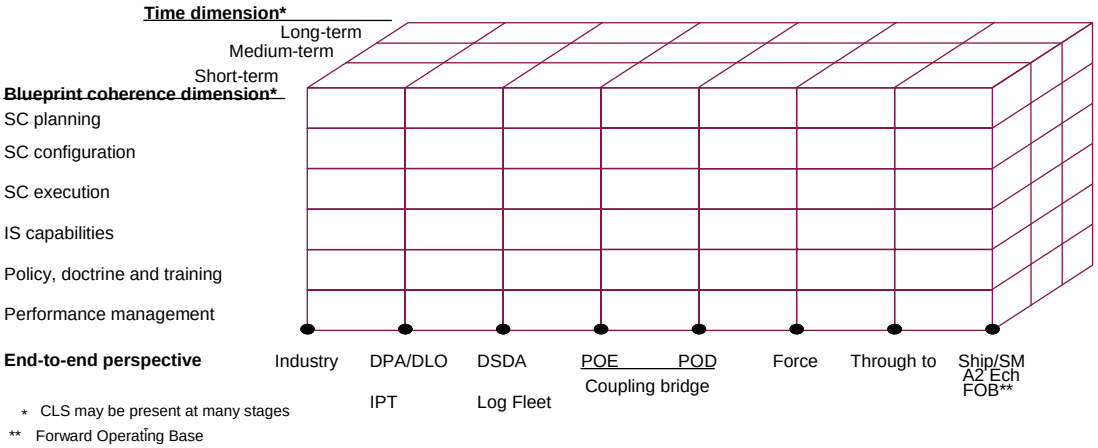


Source: DLTP JST

THE SCOPE OF THE BLUEPRINT

10. To ensure consistency with the E2E work from which it originated, the Blueprint has an end-to-end scope across the JSC. Figure 3 illustrates the scope, and provides examples of the areas included.

FIGURE 3: The Scope of the JSC Blueprint



It should be noted that the scope includes all IPT (DPA and DLO) and CLS activity related to the JSC. The scope also reflects a three dimensional view of the JSC:

a. **Time**.

(1) Short term.

(2) Medium term.

(3) Long term.

b. **Blueprint Design Areas**.

(1) Planning.

(2) Configuration.

(3) Execution.

(4) IS capabilities.

(5) Policy, doctrine and training.

(6) Performance management.

c. **End-to-End**. From industry to the operational end-user which in this instance is defined as:

(1) RN – store-room on a ship or submarine.

(2) Army – A2 echelon.

(3) RAF – Forward Operating Base.

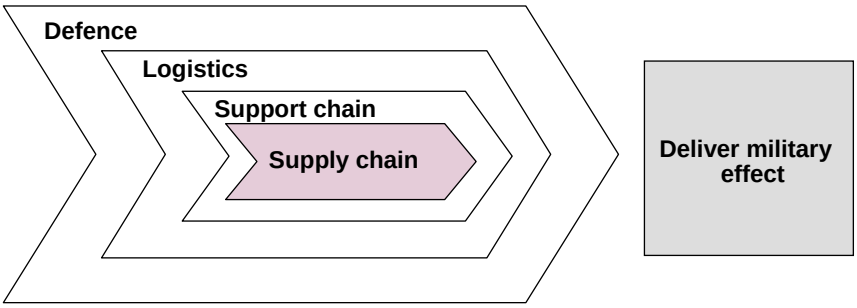
It is essential that all three dimensions are addressed to achieve total transformation of the JSC.

THE IMPORTANCE OF IMPROVING THE JOINT SUPPLY CHAIN

11. The JSC is a core enabling capability for Defence. The effectiveness of its performance (Forward and Reverse) is critical to most areas across of MOD activity eg supported commanders, deployed personnel, IPT inventory managers. A poorly performing SC has adverse implications for all those who use it, or rely on it to sustain them.

12. When applied in its entirety, the Blueprint will ensure that the future JSC is a fully integrated enabling capability. It will be planned, configured and executed to make the optimal contribution to the delivery of military effect. See Figure 4.

FIGURE 4: The JSC process is a core enabling capability for Defence



SECTION 2 - THE BLUEPRINT STRUCTURE AND HOW IT WORKS

STRUCTURE

1. The Blueprint was constructed in a manner that could make best use of both military best-practice and a proven commercial approach. Figure 16 illustrates the design framework used.

2. Three core design areas were identified which are fundamental to an effective supply chain (SC):

   a. SC planning.

   b. SC configuration.

   c. SC execution processes.

3. Each core design area has a distinct set of deliverables. These are set out in Figure 17. Additionally, there are a further three areas which enable and support the capabilities required in the core design areas:

   a. Policy, Doctrine and Training.

   b. Accountability and Performance management.

   c. Information solutions.

4. As at 16 June 2005, the three core design areas have been completed, and the development of the Performance Management (PM) is being taken forward through the JSC PM Board. Policy, Doctrine and Training, and Information solutions will be addressed by the Director Supply Chain Support (D SCS), and is referred to under **Future Work**.

HOW IT WORKS

5. Figure 18 shows how the three core design levers fit together, and complement each other. The sequence can be illustrated by the following steps (although in reality, due account will need to be taken of levels of concurrency of activity, time compression and uncertainty:

   a. SC planning takes the supported commanders' requirements and produces plans to meet them.

   b. Planning will also be conducted in accordance to the formal planning model and templates prescribed by the Blueprint to ensure coherency and effective E2E solutions.

   c. During production of these plans, planners will take account of existing capabilities and constraints and will use the Approach, Rules and Model provided by Blueprint Configuration to inform the process.

   d. The plans will define the required SC configuration including capabilities, locations and resources. They will also define the performance targets for the JSC.

The new approach will allow future configurations to be tested, refined and approved before actual deployment.

e. The execution processes have been analysed by the Blueprint to ensure that the required capabilities are clearly defined. Using the capabilities provided by JSC configuration they execute according to the plans to deliver stipulated levels of JSC performance.

f. By using effective and meaningful metrics, JSC performance is measured to keep all informed as to the level of performance being achieved, with appropriate management action being taken to correct underperformance.

6. In addition to defining the approach to be followed when designing SC, and the factors necessary for success, the Blueprint content also enables:

a. Identification of capability shortfalls and gaps that will require further work to address them.

b. Re-scoping and reprioritisation of current and future SC development activities.

THE TEN KEY ASPECTS

7. The JS Wave 1 Report identified three principles:

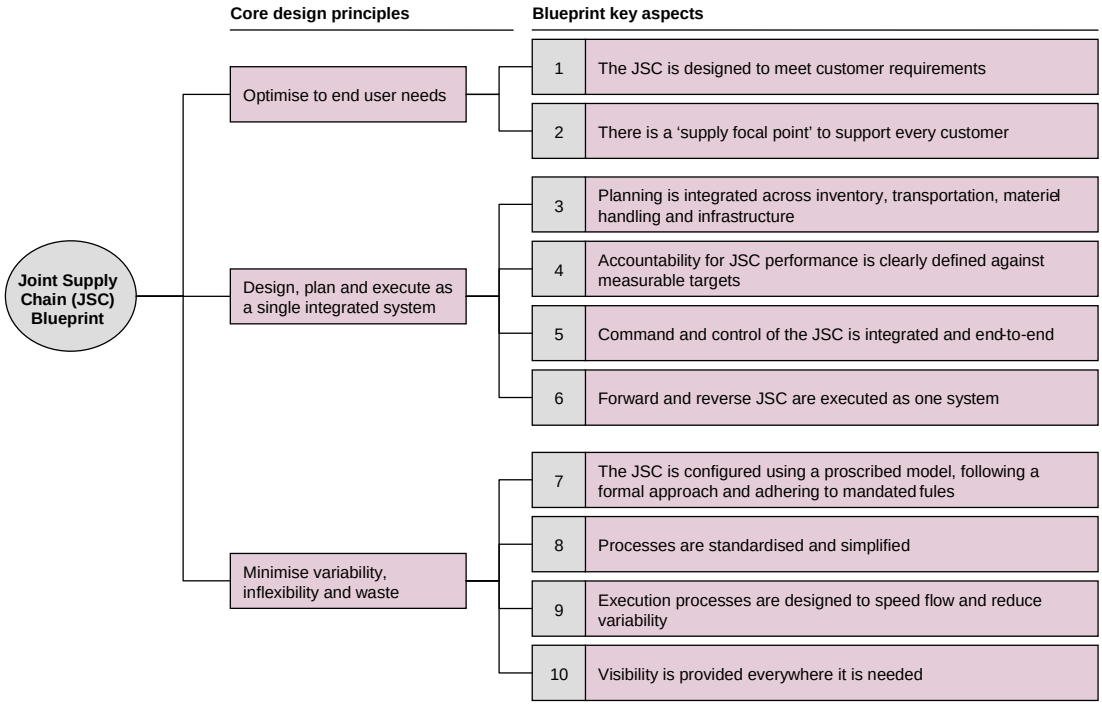
a. Optimise to meet end-user needs.

b. Design plan and execute as a single integrated system.

c. Minimise variability, inflexibility and waste.

8. Despite the fact that the E2E Study only examined some Service environments and support arrangements, these principles were accepted for all and formed a basis for Blueprint work to start. Figure 5 shows how the Blueprint expanded these three principles into ten key aspects that will shape in the future JSC. Each aspect will now be explained.

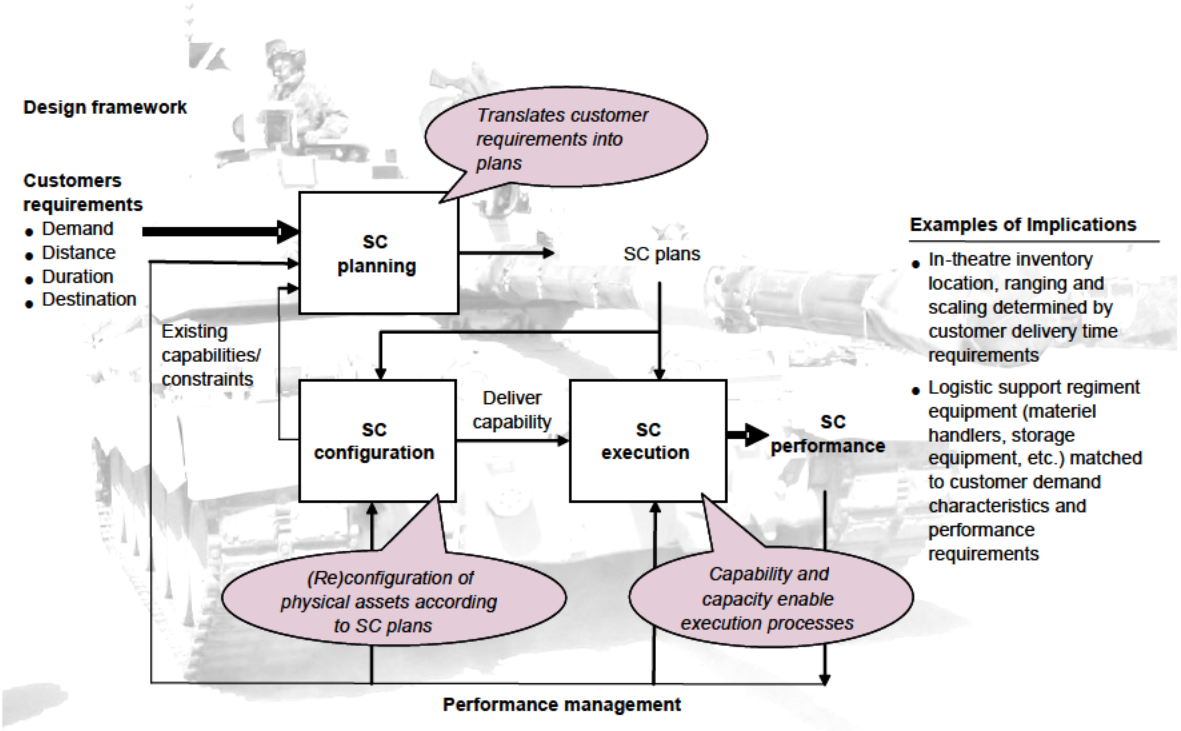
FIGURE 5: The JSC Blueprint intent is captured in 10 key aspects



Source: DLTP JST

a. **The JSC is Designed to Meet Supported Customer Requirements**. **Figure 6**. All of the Blueprint work is aimed at addressing this overarching aim. The Blueprint specifies the need for clear requirements to be placed on the JSC, and improvements to SC planning, configuration, execution processes and performance management. In essence, the entire JSC will be aligned to meet the requirements of supported commanders. The process by which this will be achieved is illustrated at Figure 6.

FIGURE 6: Key aspect 1 - The JSC is designed to meet customer requirements

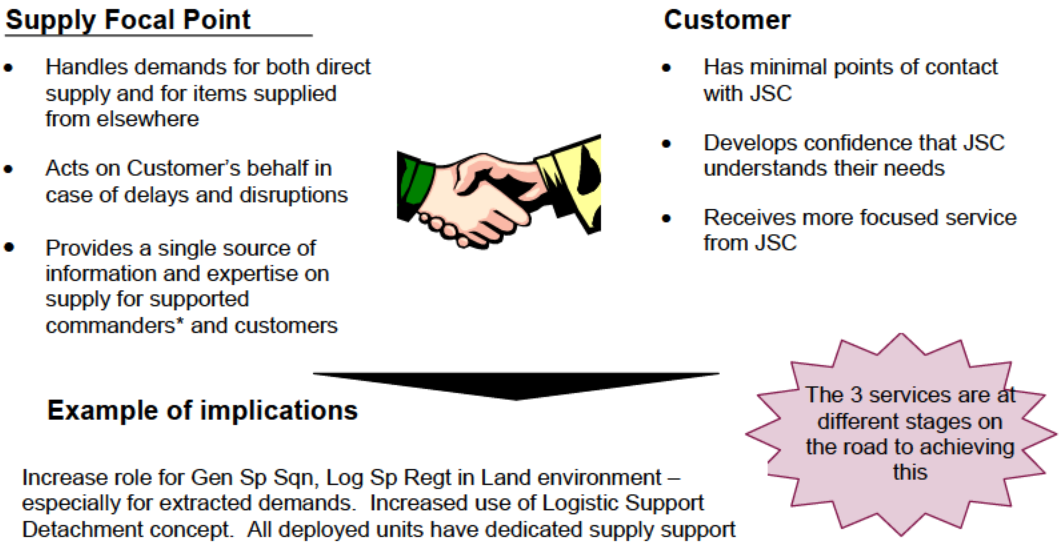


Source: DLTP JS team

b. **There is a 'Supply Focal Point' to Support Every Customer. Figure 7.** Currently, customers have numerous interfaces with the JSC. The number and complexity of the interfaces varies across the three environments, with the worst situation being faced by some 'unsupported[4]' land units. The Blueprint has identified the need to develop the concept of a 'Supply Focal Point', whereby a customer has one point of contact with the JSC for all their supply and Reverse SC needs. The aim will be to reduce complexity and confusion, and save time for the customer and, through doing so, provide them with greater clarity, assist their planning and develop their confidence in the reliability of the JSC. The aspiration for the Supply Focal Point would be to handle all demands, act on the customer's behalf in resolving delays and disruption, and provide a single source of supply information and expertise for supported commanders. An illustration of this aspiration is at Figure 7. The development work is expected to begin in early 2006.

[4] Not currently supported by Bde Sp Sqn or equivalent.

FIGURE 7: Key aspect 2 - There is a Supply focal point to support every customer



c. **Planning is Integrated Across Inventory, Transportation, Materiel Handling and Infrastructure. Figure 8** illustrates the importance of integrating JSC planning to ensure that requirements are clearly identified and stated (and therefore are more likely to be accurately interpreted) and that the subordinate key planning activities of:

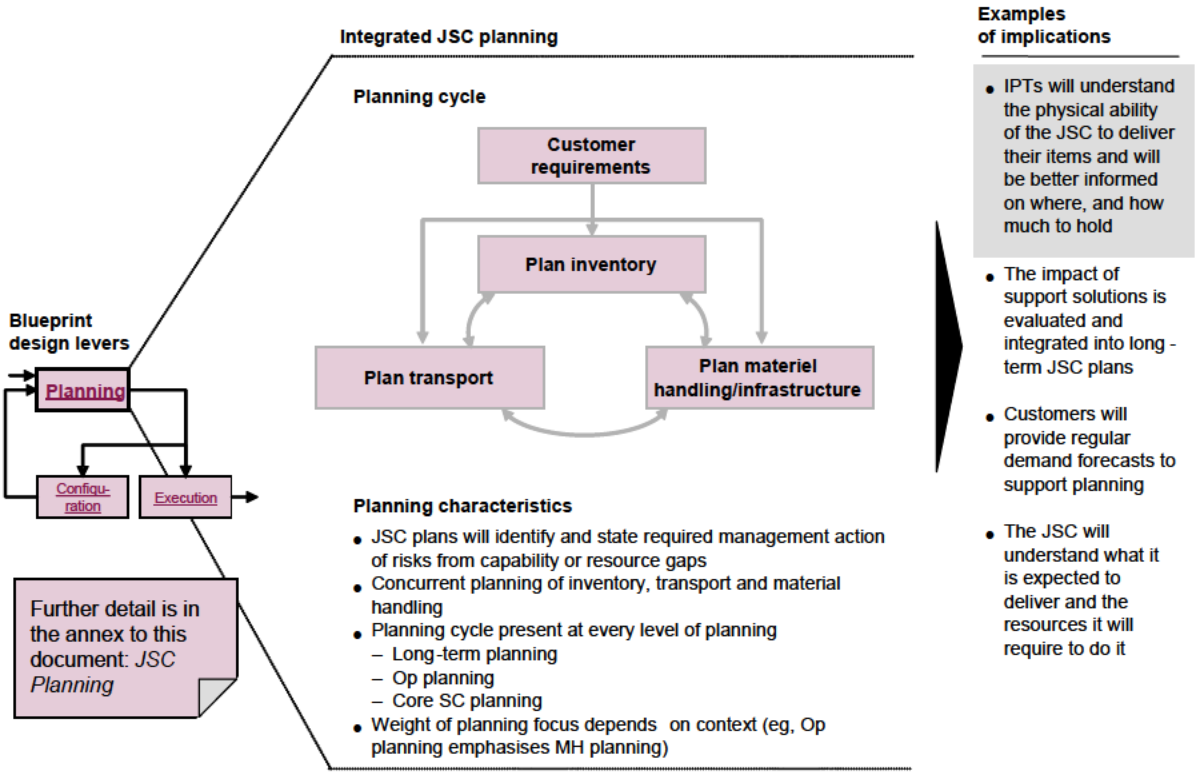
(1) inventory

(2) transportation

(3) materiel handling and infrastructure

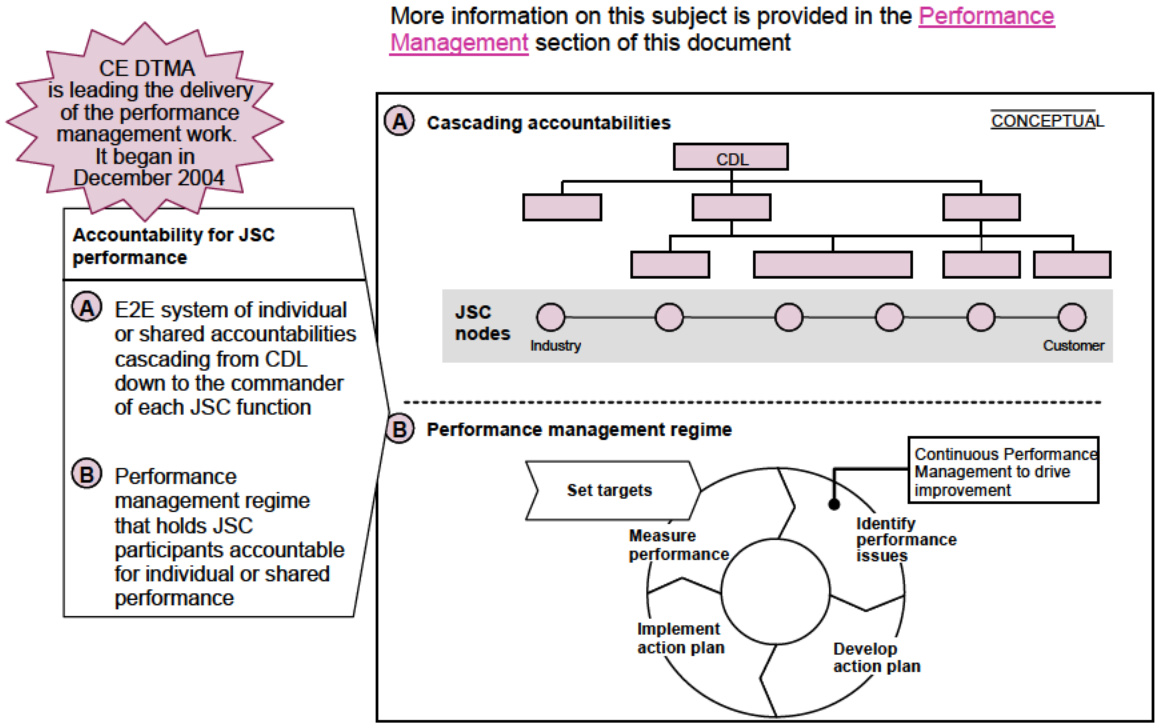
inform and are informed by each other to present coherent JSC solutions. Planning has fundamental relationships at Defence, strategic and operational levels. These linkages, together with further details of the activities identified above are explained later in this document and in the accompanying 'Planning' annex.

FIGURE 8: Key aspect 3 – Planning is integrated across inventory, transportation, materiel handling and infrastructure



d. **Accountability for JSC Performance is Clearly Defined Against Measurable Targets**. **Figure 9.** Figure 9 shows the role of Performance Management across the JSC as a means of determining E2E performance across segments or nodes which will be accountable to different authorities and Commands. It all comes together under CDL as the MOD's Process Owner for Logistics. In order to develop a culture of continuous improvement, a Performance Management regime was established in December 2004. It is monitoring performance across the JSC against a set of metrics which have been carefully selected and which remain under review. Further detail is provided later in this document.

FIGURE 9: Key aspect 4 – Accountability for JSC performance is clearly defined against measurable targets



e. **C2 of the JSC is Integrated and End-to-End. Figure 10.** The intention is for JSC C2 arrangements to be logically aligned with the execution processes to ensure clear responsibility and the ability to influence the JSC quickly and effectively. This will be a key contributor to delivering 'Directed Logistics' on future operations. The C2 alignment must reach from the operational end-user all the way back to the IPTs and industrial suppliers. There will be well-defined interfaces at each stage of the JSC, specifically end-users, Force, Coupling Bridge, the Home Base and industry. Considerable work is already under way to improve JSC C2. Examples are:

(1) D Def Log Pol work to embed CDL policy direction in all C2 development tasks, and to ensure coherence E2E.

(2) Permanent JFLogC.

(3) Coupling Bridge paper.

(4) Establishment of DSCOM (Def SC Ops and Movement Group).

(5) 'Purple Gate' (entry/exit in the JSC).

Figure 10 provides a summary of the situation.

FIGURE 10: Key aspect 5 - C2 of the JSC is integrated and end-to end

C2 arrangements will:
- Be aligned to the SC processes
- Stretch from the customer back to the IPTs and industry
- Provide a defined interface between unit, force, Coupling Bridge the Home Base and industry

Examples of Implications:
- Improved decision making between authorities along the JSC
- A need to fill the gaps in JSC management and resource prioritisation
- JSC performance management is the key enabler of E2E C2

There is a considerable amount of emerging work already addressing this issue:
- D Def Log Pol C2 work
- Permanent JFLogC
- Coupling Bridge paper
- Introduction of DSCOM (Def SC Ops & Mov Gp)
- Purple Gate

f. **Forward and Reverse JSC are Executed as One System**. **Figure 11.** The Reverse SC needs to be operated as effectively as the forward SC and the Blueprint identifies the capabilities required to achieve this. Reverse JSC performance is critical to sustaining the readiness and operational availability of equipment by getting defective items back to repair facilities as quickly as possible. In doing so, inventory holdings can be adjusted to allow for reduced repair loop times. Future supply solutions being investigated by IPTs such as Joint Combat Aircraft are seeking rapid Reverse JSC performance to meet the requirements being sought by contractors. The Blueprint Execution processes are designed to enable high performance in each direction, although operational circumstances will determine front line Force Elements' ability to receive and send materiel. The creation of specific performance metrics for the Reverse JSC will ensure that it is effectively monitored and managed. Figure 11 summarises the benefits and implications involved with aligning Forward and Reverse processes.

FIGURE 11: Key aspect 6 – Forward and reverse JSC are executed as one system

The forward and reverse JSC must be planned and executed using a common set of processes to:

- Improve readiness and operational availability of equipment
- Meet requirements of future support solutions
- Create more effective inventory holdings

Examples of Implications

- Specific reservation of transport capacity back across the Coupling Bridge to return unserviceable items from theatre
- E2E inventory management for unserviceable repairables
- Management of special transport containers. Automatic delivery to collection location

g. **The JSC is Configured Using a Formal Model, Approaching and Adhering to Mandated Rules**. **Figure 12.** The Configuration section of this document and supporting 'Configuration' annex explains how future SC planning will:

(1) Follow a defined approach to configuring SC.

(2) Plan against 12 configuration rules to ensure effectiveness.

(3) Use the Blueprint configuration model to define the required capabilities, locations and resources and facilitate modelling, refinement and validation of SC configurations before they are physically deployed.

All of the above will ensure that future configurations provide the capabilities to enable effective execution of the JSC and meet the needs of the supported commanders. Figure 12 provides a description of how configuration works an example of what it would look like, and the benefits this approach will offer.

FIGURE 12: Key aspect 7 - The JSC is configured using a prescribed model following a formal approach and adhering to mandated rules

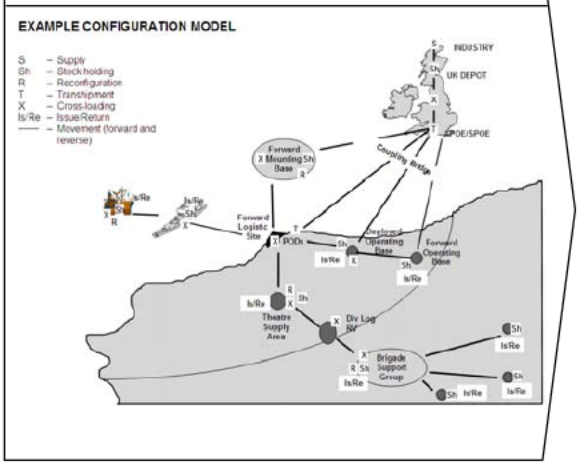
How does it work?

Based on the supported commander's requirements, the JSC is configured using:

- Configuration approach
- 12 configuration rules
- Blueprint configuration model

To guide planning and ensure the capabilities are in place to enable effective execution of the JSC

Example configuration



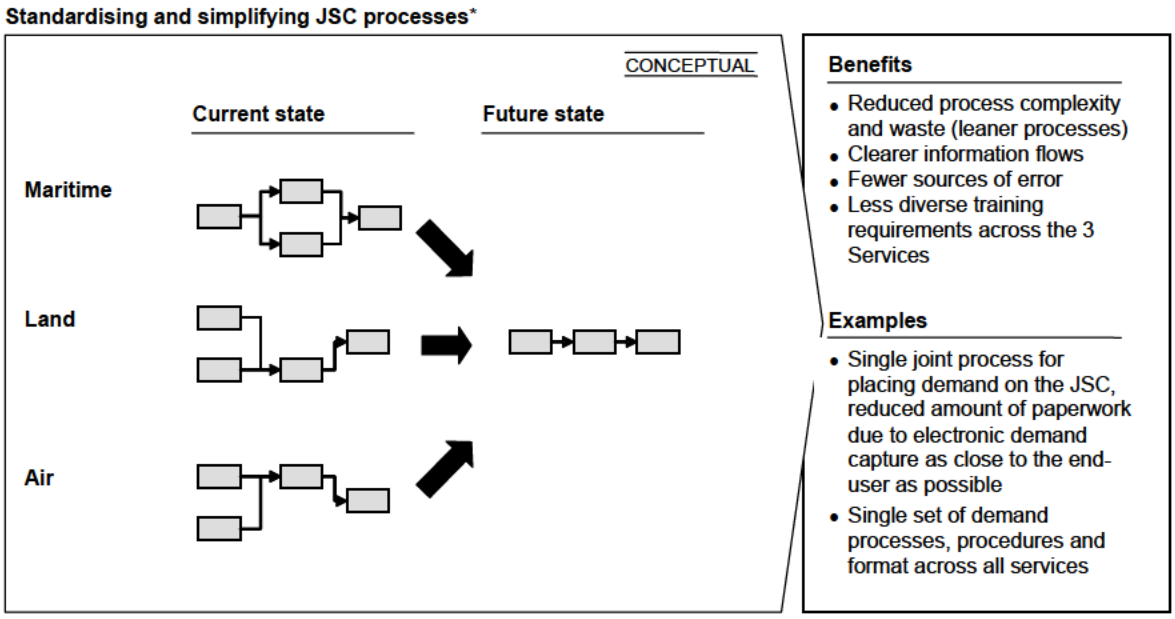
Benefits

- Bottlenecks and their root cause can be identified early
- On deployments, the JSC will achieve higher performance levels sooner
- Equipment requirements and performance trade offs will be easier to identify
- Planners will be able to test configurations before deploying them

Further detail is in the annex to this document: JSC Configuration

h. **Processes are Standardised and Simplified. Figure 13.** The Blueprint has defined capabilities, models, approaches and templates to standardise and simplify as many aspects of JSC Planning, Configuration and Execution as possible. This will be expanded on later in the document, and is detailed in the supporting Annex. In principle, wherever possible, Joint rather than Single Service processes and procedures will be adopted unless it is necessary to be different. Support solutions will be scrutinised to avoid platform or equipment stovepiping. Both need to be progressively implemented to reduce current levels of variability and avoid sub-optimal use of the JSC. Although Defence manages to overcome the existing lack of standardisation and consequent complexity, it frequently requires disproportionate levels of effort and resources to do so. The intent of key aspect 8 is to reduce the need for unnecessary activity by formalising simple, standard approaches that are effective and efficient, wherever possible. Figure 13 provides a simplified illustration of the intent.

FIGURE 13: Key aspect 8 - Processes are standardized and simplified



* Joint processes where possible

i. **Execution Processes are Designed to Speed Flow and Reduce Variability.** **Figure 14.** Following on from the broader intention to standardise and simplify all JSC processes given in key aspect 8, this aspect relates specifically to the Execution processes themselves, and the application of 'Lean[5]' principles. When applied to JSC execution processes, the aim is to make things easier for the end-users and operators and to reduce complexity, information ambiguity and sources of error. The Blueprint defines the essential processes required to demand items and satisfy demands effectively, and states the capabilities required to achieve this. Further detail is provided in the 'Execution Processes' section of this document and a comprehensive explanation is given in the supporting annex. Figure 14 highlights some of the improvements objectives and examples.

5 Lean – the application of techniques to reduce waste variability and inflexibility and meet customer requirements.

FIGURE 14: Key aspect 9 – Execution Processes are Designed to Speed Flow and Reduce Variability

Objectives for execution process improvements

Forward and reverse JSC processes will be re-engineered for:

- Improved JSC responsiveness (items travel faster)
- Improved reliability against Required Delivery Date (items arrive on time)
- Improved utilisation of JSC resources (optimised logistic footprint, enhanced JSC capability)
- Improved utilisation of Defence inventory

Further detail is in the Annex to this document: *JSC Execution Processe*

Examples of process improvements

- Coupling Bridge transport schedule drives picking of items from shelf and packing and loading of pallets
- Consignments packed minimise the need for in-theatre breaking and re-packing
- Inventory accounting will be updated by issuing and receipting process

j. **Visibility is Provided Everywhere it is Needed. Figure 15.** The following elements of Visibility were identified for the Blueprint as:

(1) Demand.

(2) Consumption.

(3) Inventory demand status.

(4) Consignment location and history.

(5) JSC performance.

Current levels of visibility vary across the Services and in different areas of the end-to-end SC. The Blueprint states the capability required to ensure that all types of visibility are provided in the JSC and at levels appropriate to the needs of the people who require it to perform their tasks. Figure 15 provides examples of this. Nothing in this area is to be taken or construed as being inconsistent with NATO agreed policies, principles and terms for Asset Tracking[6].

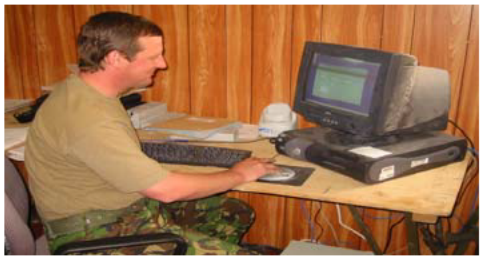
[6] AAP 35 and STANAG 2184.

FIGURE 15: Key aspect 10

5 Types of JSC Visibility

- Demand and consumption visibility
- Inventory visibility
- Demand status visibility (single demand)
- Consignment location and history visibility

JSC performance visibility



People receive appropriate visibility to perform their tasks

Participant*	Visibility Requirement Examples
Customer	+ Receives immediate supply response + Receives exception based messages in case of delays and disrup ions
Single Supplier	+ Demand status visibility for all demands from supplier's customers + In-theatre component inventory visibility + Consignment location and history visibility + Visibility of own performance
JFLogC	+ Global inventory visibility + Demand status visibility + Consignment location and history visibility + In-theatre performance visibility
DSCOM/ JSCPMB	+ Visibility of E2E JSC performance + Demand status visibility. Consignment loca ion and history visibility

FIGURE 16: To ensure that the Blueprint would lead to a world-class SC, military best practice and a proven commercial approach was adapted to meet the demands of UK defence

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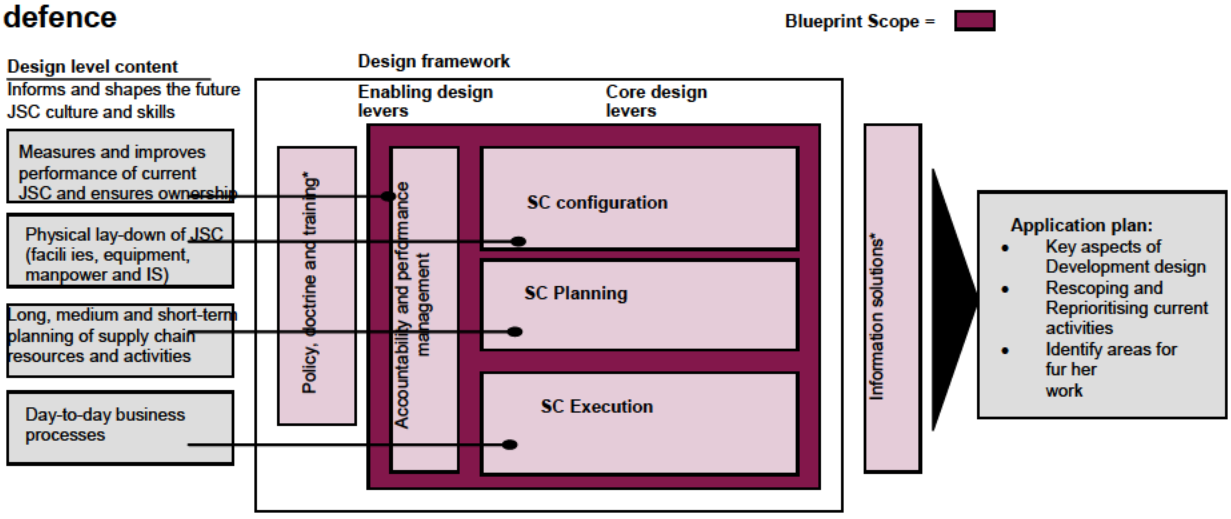
scop



Source: Will be addressed in implementation
JSC Blueprint team

FIGURE 17: Each lever will have distinct deliverables

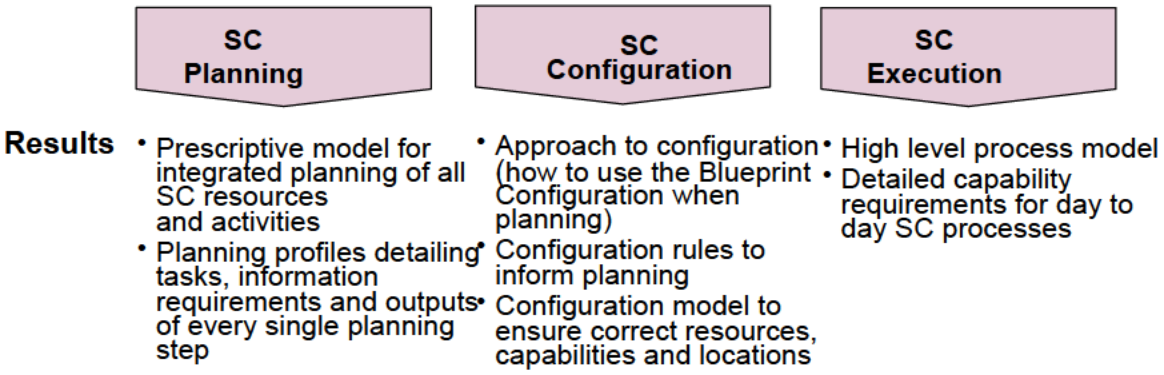
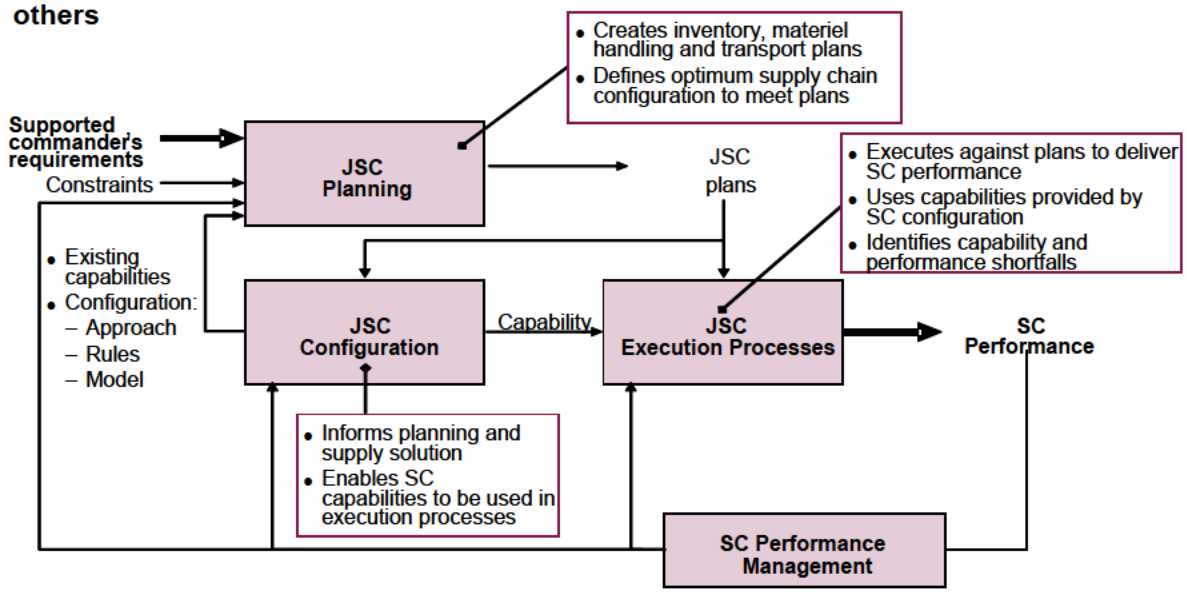


FIGURE 18: The design levers address the core activities essential to achieving a reliable and effective SC. Each is equally important and must be integrated with the others



SECTION 3 THE BLUEPRINT CORE DESIGN LEVERS

1. The Core Design Levers were introduced earlier in this document. This chapter illustrates their inter-relationship (Figure 18) and in the sections below, describes the principal components of each. Supplementary annexes provide further detail.

SUPPLY CHAIN PLANNING

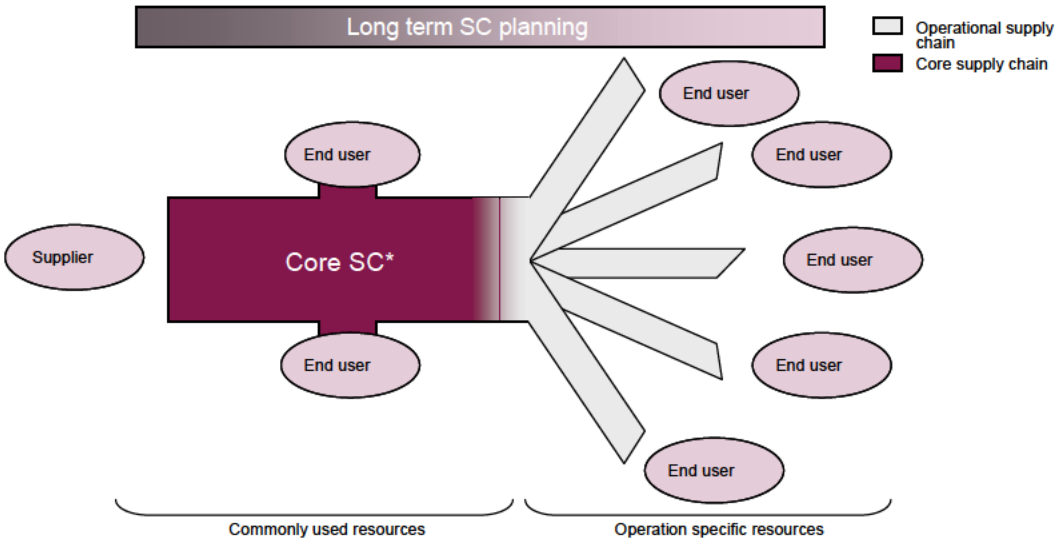
2. Defence supply chain (SC) planning must be viewed in three perspectives (see Figure 19):

a. **Long-Term SC Planning.** Long term SC planning is the planning of activity out to timelines approximately 20 years in the future (eg construction of a new warehouse). It is the highest level of SC planning and provides interpretation of strategic levels of logistic and Defence planning.

b. **The Core SC.** The core SC is the consolidation of all SC activity. Core SC planning is the planning of mid and short term activity related to those common resources involved in providing routine support for Naval bases, barracks, air stations and overseas locations. These resources are predominantly in the base area, such as a Defence depot. In addition to providing routine support the core SC also provides the non-deployed infrastructure and resources required to support operational SC, eg air freight facilities.

c. **Operational SC**. The operational SC provide support for a specific deployment. In the deployed space it is likely that resources will provide support solely for a specific operation, while towards the rear of the JSC, in the UK base and across the coupling bridge, the resources will be shared with other operations and routine (non-operational) activity as part of the Core SC.

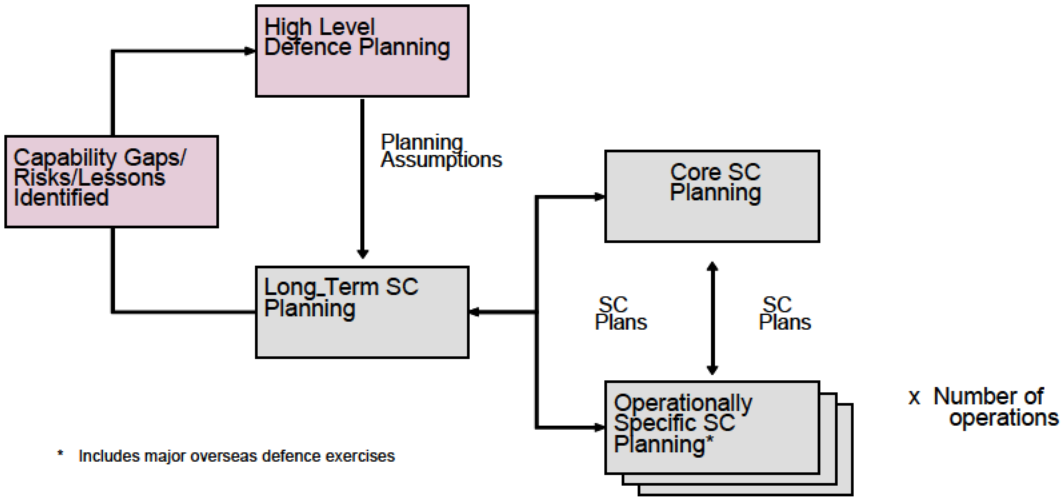
FIGURE 19: There are different planning requirements within the Defence SC



* Consolidation of all SC activity
Source: DLTP JS team

3. All aspects of SC planning are interdependent. The Blueprint JSC planning model confirms that all levels of supply chain planning are inter-dependent, and details the information flows between each. Figure 20 provides a simplified view of the planning relationships.

FIGURE 20: High level defence planning will be effectively linked to long term SC planning, which in turn will drive the lower levels of SC planning



4. A common approach. Within every level of SC planning the Blueprint has applied a common approach whereby:

a. The requirements for the SC are defined.

b. Inventory, transportation, materiel handling and infrastructure are all planned in an integrated manner to provide a coherent and effective solution to the requirement.

5. Figure 21 illustrates the key activities common to all levels of planning and provides examples. Within the Blueprint Planning annex are Planning Profiles which detail :

a. Information inputs.

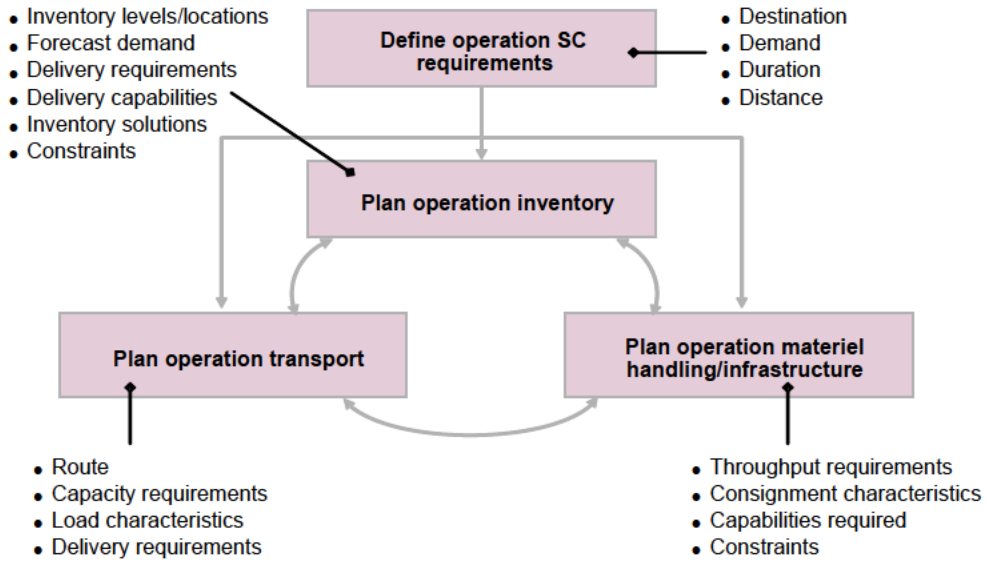
b. Planning activities.

c. Desired outputs i.e. plans.

d. Supporting tools and systems.

A profile is provided for each activity at every level of planning.

FIGURE 21: The Blueprint identifies 4 key activities at the heart of all levels of SC planning



SUPPLY CHAIN CONFIGURATION

6. Configuration is the layout and capabilities of physical components to enable end-to-end information and materiel flow. The Blueprint uses the Configuration Design Lever to:

a. Inform planning.

b. Allow the effectiveness of configuration plans to be modelled, tested and validated prior to deployment.

c. Define the capabilities to enable effective execution of the JSC processes.

d. Contribute to the JSC policy for configuration and support solutions.

e. Support the measurement of performance metrics to enable effective performance.

7. JSC planning should produce appropriate configurations, thereby enabling execution of SC processes to meet the requirements of supported commanders. The Blueprint defines three specific configuration products:

a. The approach to creating appropriate configurations.

b. 12 configuration rules.

c. A configuration model that can be applied to any specific situation.

8. **The Approach to Configuring the Future Defence SC.** The process for planning, configuring and executing SC is illustrated at Figure 22 and can be described as follows:

a. The requirements of the supported commanders initiate the process. Details as to how these requirements can be clearly defined are explained in the Configuration annex.

b. Planners consider the current JSC configuration and the capabilities and constraints resulting from it.

c. Using the Blueprint Configuration model and the existing JSC capabilities, they begin to create a configuration solution that meets the supported commander's requirements.

d. The model is assessed for consistency against the 12 Rules of Configuration (see Section 3, Paragraph 9) and revised as necessary.

e. The model solution is tested and validated (eg by using simple materiel flow algorithms and operational analysis).

f. The findings allow refinement until the optimum solution is determined.

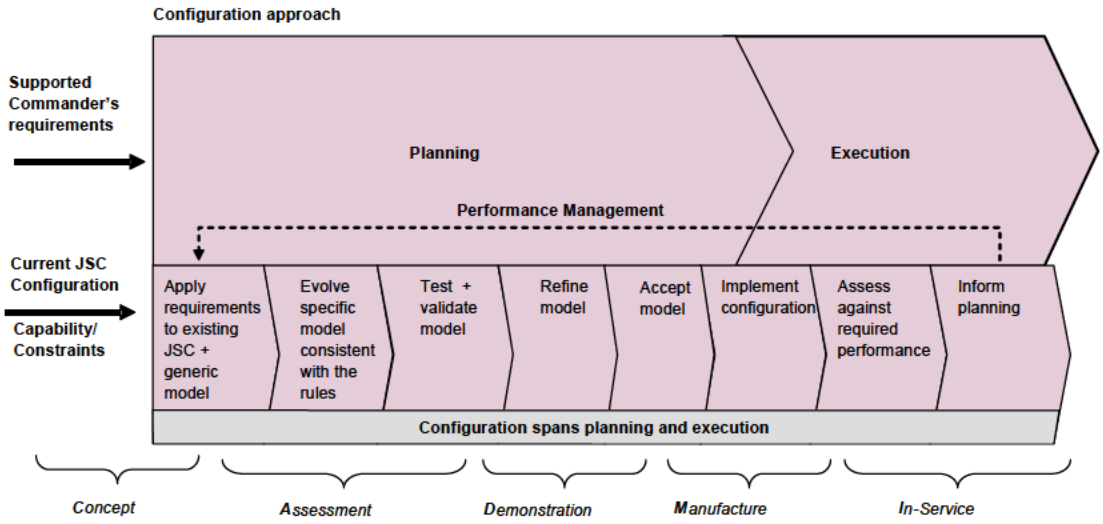
g. The model is formally accepted on behalf of the supported commander, or further refined before final acceptance.

h. The SC is configured according to the model.

i. Performance is measured and assessed.

j. The assessment of performance is used to inform planning as to what, if anything needs to be done to improve performance.

FIGURE 22: Approach to configuring the future Defence SC



(This is not a pure application of CADMID but is intended as an illustrative overlay)

Source: DLTP JS team

9. **The 12 Rules of Configuration.** The 12 Rules of Configuration are listed at Figure 23. They will be used not only to inform planning, but also as primary policy for the future JSC. In future all users of the JSC must comply with the configuration rules pertaining to their specific intentions and requirements.

FIGURE 23: 12 Rules of configuration have been endorsed* to ensure the effectiveness of future JSC

1. Configuration must enable effective execution (including surge) of the supported commander's plan.

2. JSC operational resilience and footprint (including inventory levels) must be acceptable to the supported commander.

3. Configuration must enable accountability and visibility.

4. Configuration must achieve required forward and Reverse SC performance levels. Each node must have the resources and capabilities required to achieve acceptable performance levels.

5. Initial configuration of the JSC should minimise the need for subsequent re-configuration.

6. Functions should be brigaded into single nodes wherever it is appropriate.

7. Transport, material handling capabilities, manpower and scheduling must be matched to required flow rates which must not exceed JSC capacity.

8. Instances of material handling, cross-loading and transhipment are to be minimised.

9. Inventory holding locations and inventory levels must be determined by the need to guarantee delivery to the end-user within the agreed timings.

10. Every support solution (including Contractor Logistic Support (CLS)) must interface with the JSC at designated nodes which may be restricted when operational circumstances dictate. Deliveries into the JSC are only permitted at designated nodes.

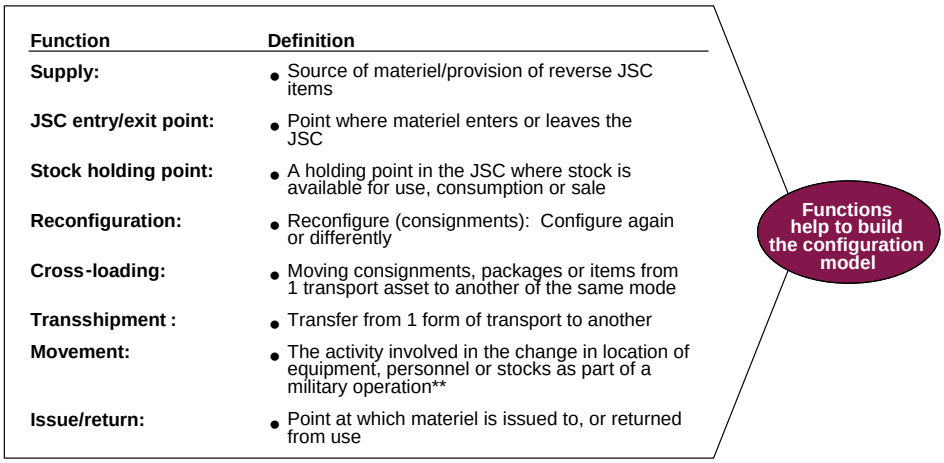
11. Information systems and communication bearers must coherently and resiliently support JSC processes.

12. Individuals involved with the JSC must be trained and competent to support the process.

* Endorsed by the Joint Environmental Board, 12 December 2004

10. **The Configuration Model.** The model provides a logical way of looking at the functions that must be present in order for SC configuration to be effective. The functions of the JSC are listed at figure 24; an explanation of each is provided in the Configuration annex. By clearly defining the range of generic functions required in any SC configuration, it is possible to determine the components (eg manpower and skills, IS-required) within each function for an operation. This is done by evaluating the required functions against known planning factors for the operation. Figure 25 illustrates this and provides examples of the planning factors that must be considered. The configuration can then be modelled to determine the effectiveness of the plan. Figure 26 shows how the functions have been laid out to provide a solution that meets the operational requirements. Figure 27 shows how a JSC configuration might look to support an operation in North West France.

FIGURE 24: A Configuration model can contain up to 8 functions



* Further detail is provided in JSP336 Volume 3, Part2, Pamphlet 4 – The Purple Gate.

** NATO MC319/1

FIGURE 25: Evaluating configuration functions against planning factors will define necessary configuration components

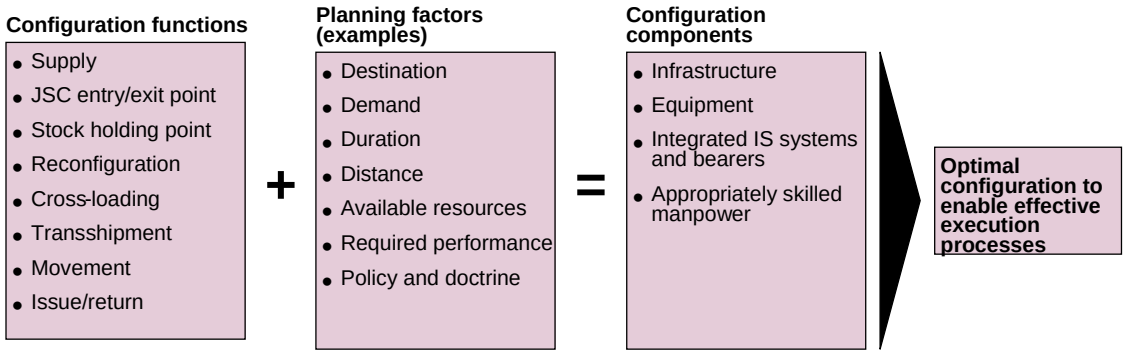
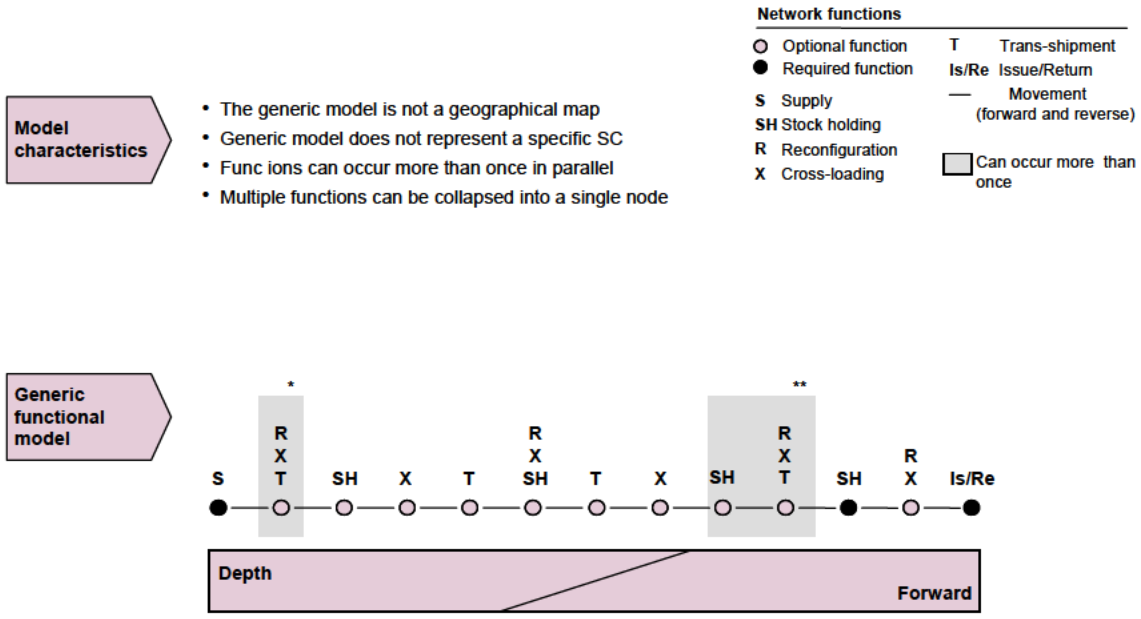


FIGURE 26: The Generic Configuration Model

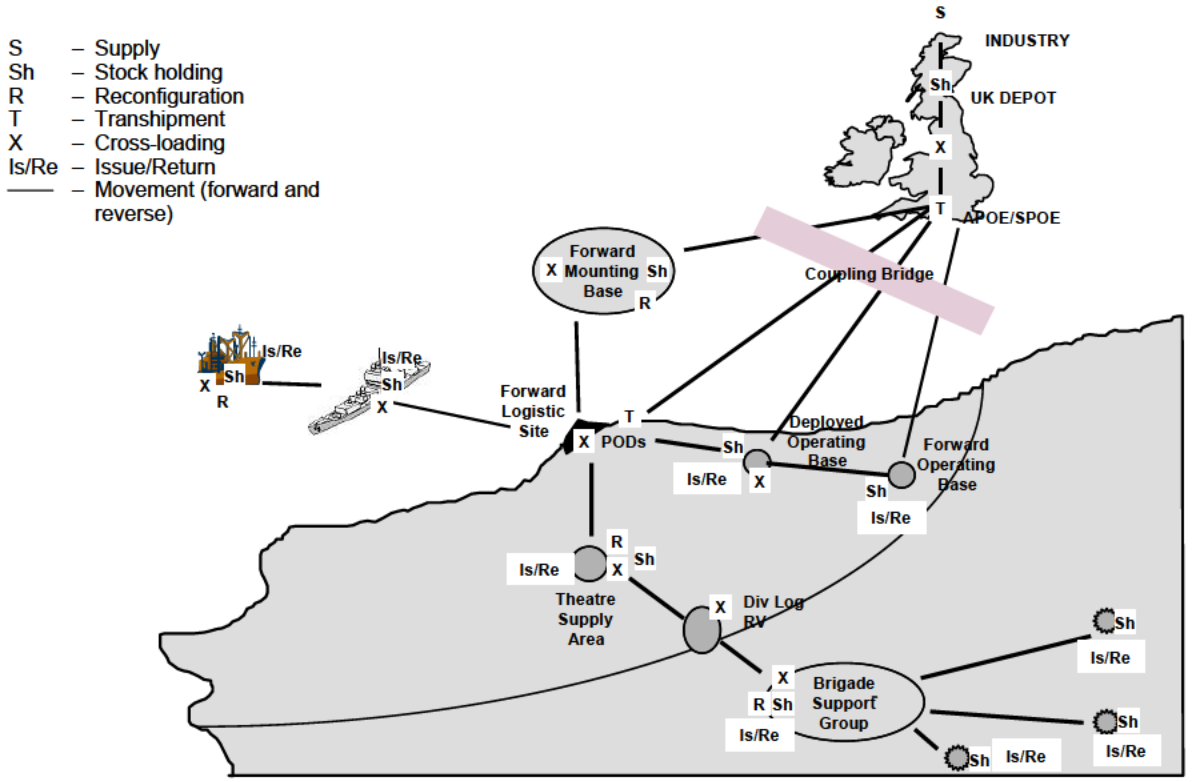
TO BE ENDORSED



* Dependent on length of inbound SC

** Dependent on length of line communication and performance requir ements

FIGURE 27: Example Configuration Model NOT TO SCALE



SUPPLY CHAIN EXECUTION

11. The execution processes are the activities involved in the day to day running of the JSC. The Blueprint identifies the capabilities and effects that must be achieved. This will not necessarily place constraints on existing projects and processes as it is the what, rather than the how, that has been defined.

12. There are five main processes, one of which is further sub-divided:

a. Demand capture.

b. Demand handling.

c. Distribution (divided into four):

(1) Materiel handling[7].

(2) Transport scheduling.

(3) Transport.

---

[7] Materiel handling includes inbound, outbound and storage activity at stock holding, cross docking and issue/return points.

(4) Management and tracking of consignments.

(5) Inventory management.

(6) Local purchasing/local contracting.

13. In addition, the Blueprint recognised three important capabilities that were applicable to all processes:

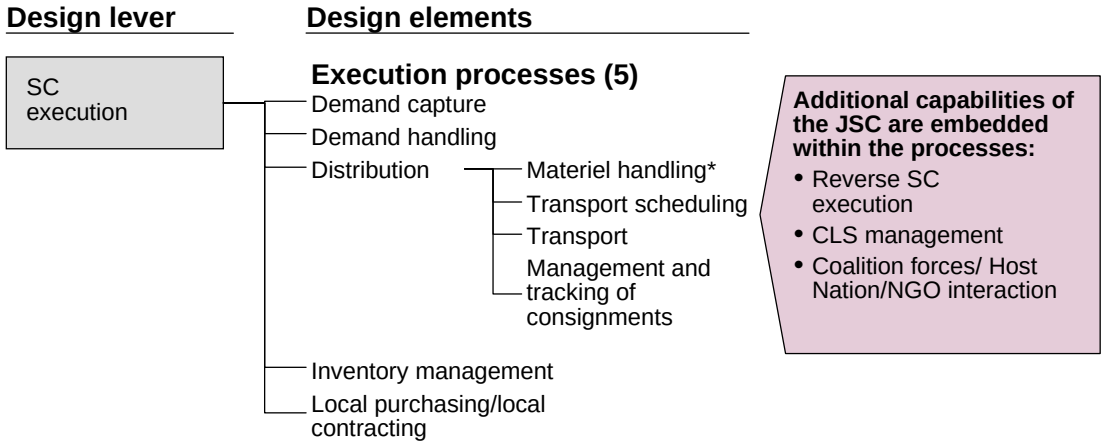
a. Reverse SC execution.

b. Contracted Logistic Support (CLS) management.

c. Coalition forces/Host Nation/NGO interaction.

Figure 28 illustrates the main processes and capabilities, to provide a reminder of where Execution fits with regard to the other Blueprint Core Design Levers (JSC Planning and Configuration).

FIGURE 28: The SC execution lever contains 5 main processes. Each of the processes and the 3 additional capabilities are described in detail in the annex to this document



* Material handling includes inbound, outbound and storage activity at stock holding, crossdocking, and loading/unloading points
Source: DLTP JS team

14. JSC planning combines the requirements of the supported commander, with factors relating to the existing JSC configuration to create the physical layout of the SC. During this phase, planning is guided by the Blueprint's configuration approach, rules and model. The physical 'lay down' of resources provides the capabilities required to conduct the JSC Execution processes. The performance required of these processes will be defined as part of the planning process, then measured and managed to ensure that the required levels are met.

15. The processes and capabilities detailed in the Execution annex are based on the application of best practice 'Lean' principles to eliminate waste and increase effectiveness. Examples of these would be:

a. Reducing unnecessary waiting time in the JSC.

b. Optimising the use of transport by effective scheduling and vehicle utilisation.

c. Optimising inventory levels to truly meet the needs of the end-user.

d. Making the most of people's potential.

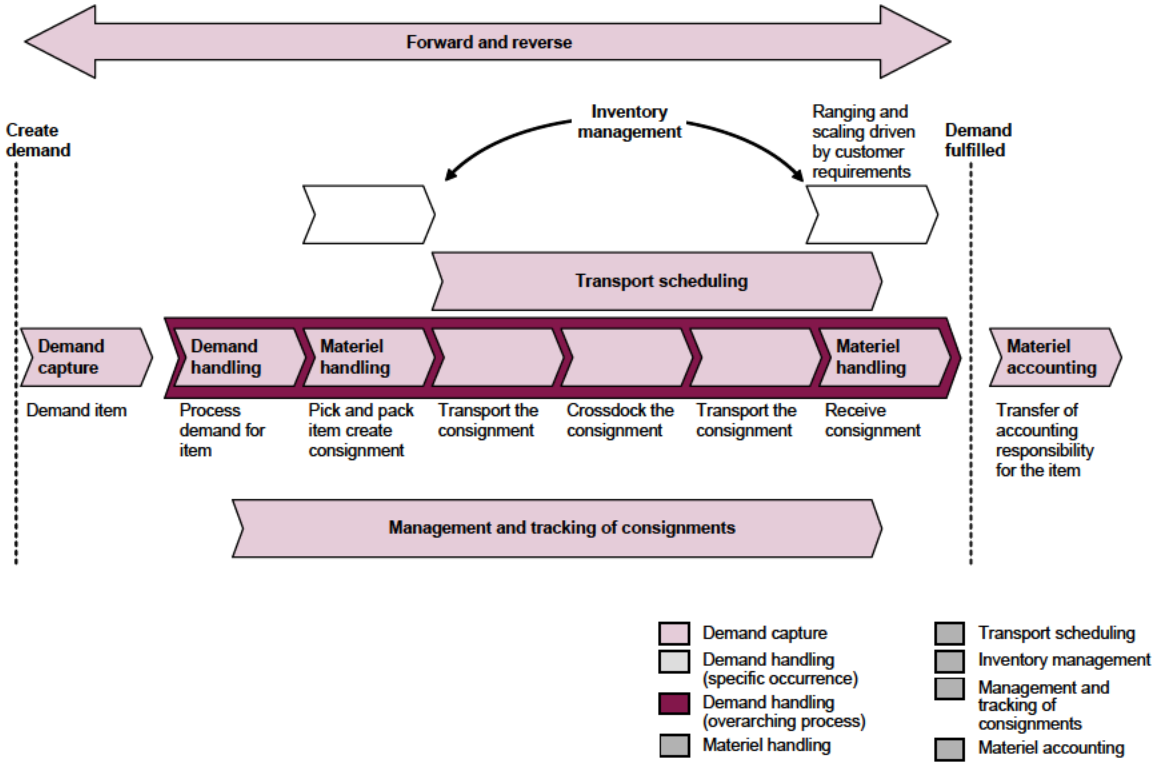
Lean is not about cutting things to the bone and creating unnecessary and unacceptable risks. Application of Lean principles may indeed result in having more of some things, eg holding more inventory in theatre to ensure it is available for the end-user when needed. Lean is about having the right things in the right places when they are needed.

16. When improving each of the processes, great care has been taken to ensure that the improvements benefit the SC in its entirety, avoiding improvements in a specific area that have a detrimental effect on overall performance. For example, we will not create a consignment tracking process that provides every conceivable type of visibility but takes users twice as long to operate, thereby delaying the flow of consignments.

17. The future state of JSC Execution processes is depicted at Figure 29. In essence it shows the sequence of processes that occur from a demand being created, through to its fulfilment and the transfer of accounting responsibility. Although some processes occur only once or twice in JSC, others span several activities, eg Transport scheduling. The two dimensions of demand handling relate to the initial activity of processing a demand, and the wider dimension which spans all of the activities ultimately involved in handling a demand.

18. The arrow at the top of Figure 29 illustrates the Forward and Reverse nature of the future JSC. While there will be some differences within the processes between the two directions of flow, the basic design remains largely similar.

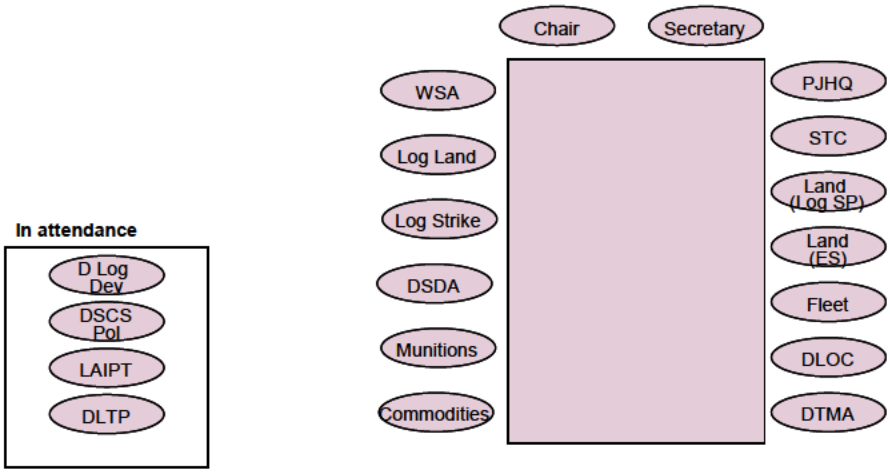
FIGURE 29: Future State JSC Execution Processes



PERFORMANCE MANAGEMENT

19. Earlier mention has been made of performance management being one of the key enablers of the future JSC. Development of this aspect has already begun under the 1* direction of Director Defence Supply Chain Operations and Movements (DSCOM) on behalf of Director General Logistics (Supply Chain) (DG Log (SC)). A JSC Performance Management Board has been established. Its current membership is shown at Figure 30.

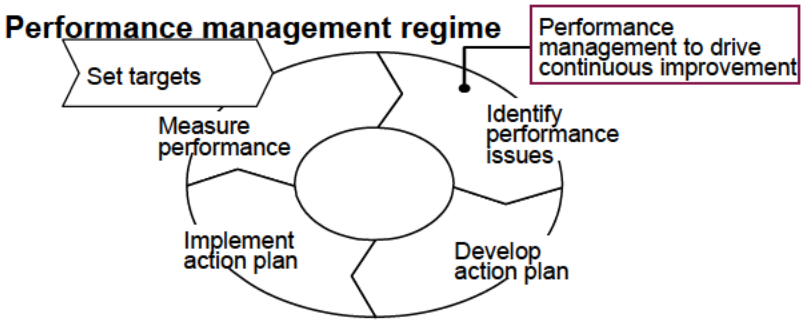
FIGURE 30: A JSC Performance Management Board (JSC PMB) has been established to ensure the work is driven forward



20. The Board is empowered to set targets for the SC and then measure performance against them. The results of the performance measurement identify performance issues, via a monthly report, and highlights where delays are occurring. Identifying the areas of constraint and under-performance will allow action plans to be developed to resolve the problems. The process is illustrated at Figure 31.

FIGURE 31: The JSC Performance Management Regime

A performance management regime has been created to drive continuous improvement within the JSC



This regime, coupled with clear accountabilities (all the way down from CDL to the commanders of each JSC function) will ensure effective performance management within the JSC

21. Clear accountability cascades down the commanders of each JSC function from CDL to ensure that when an area needs improvement, a person is clearly identified as being responsible for achieving it.

22. **The Performance Attributes of the Joint Supply Chain.** The JSC performance management regime build is consistent with the Supply Chain Operations Reference (SCOR) and the MOD Logistics Process Framework (LPF) structures and reporting regimes as illustrated in Figure 32. Six key attributes of JSC performance have been identified through this work:

a. Readiness.

b. Responsiveness.

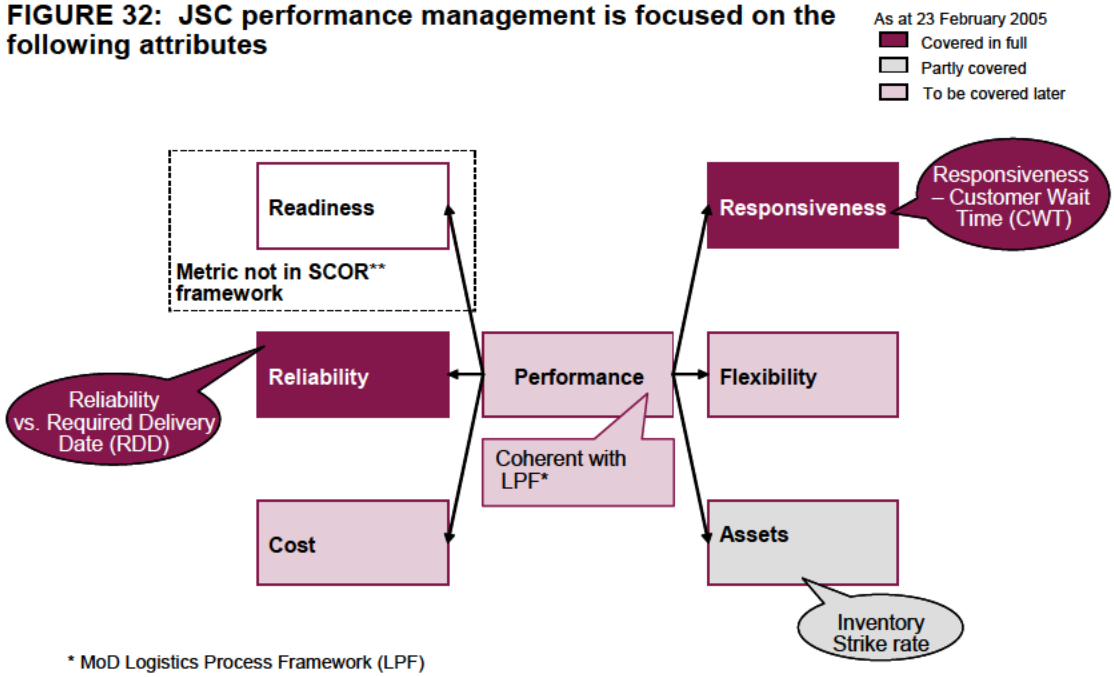
c. Reliability.

d. Flexibility.

e. Cost.

f. Assets.

FIGURE 32: JSC performance management is focused on the following attributes



* MoD Logistics Process Framework (LPF)
** Supply Chain Operations Reference (SCOR)
Source: LPF, derived from SCOR and United States Marine Corps (USMC) logistic scorecard

23. Initial focus for the JSCPMB to 16 Jun 05 has been on:

a. Responsiveness, eg how long a customer waits between creating a demand and it being delivered to them.

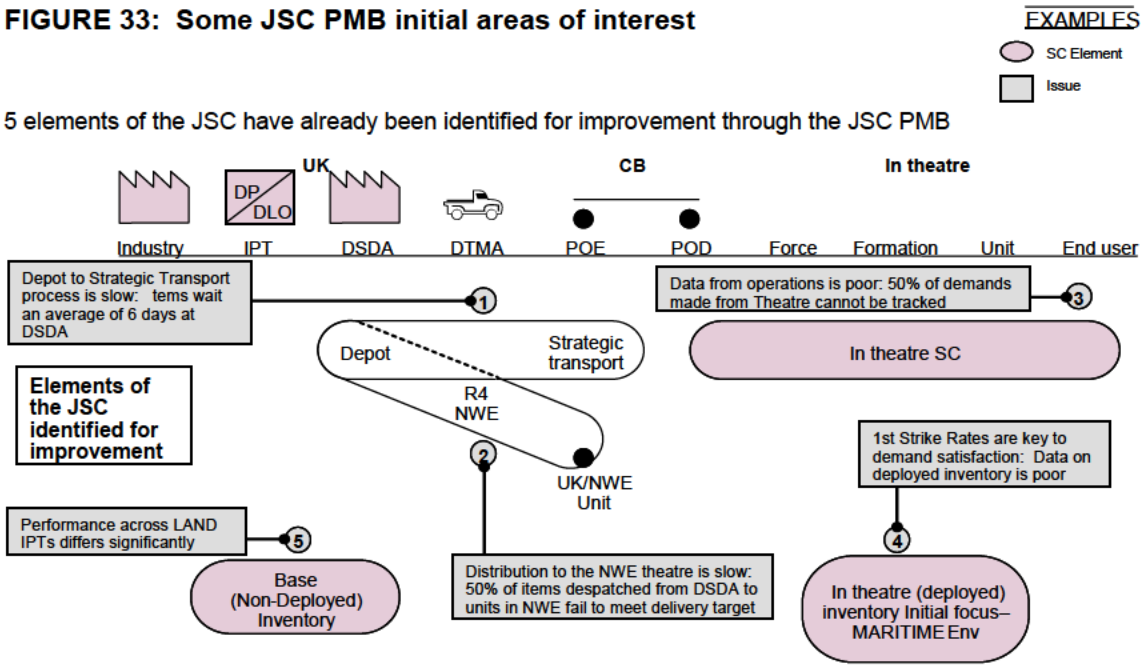
b. Reliability, eg the ability of the JSC to provide items on their Required Deliver Date (RDD).

c. Assets, eg inventory and the ability of the JSC to satisfy a demand from the appropriate stock holding point.

The JSCPMB will focus on the remaining attributes as their work progresses.

24. Examples of where the performance management regime has identified areas in need of improvement are shown at Figure 33. Each area will be addressed and resolved; the pace of improvement is generally governed by resource availability.

FIGURE 33: Some JSC PMB initial areas of interest



Source: JSC PMB Jan 05

25. A Performance Management annex will be produced to accompany this document in due course.

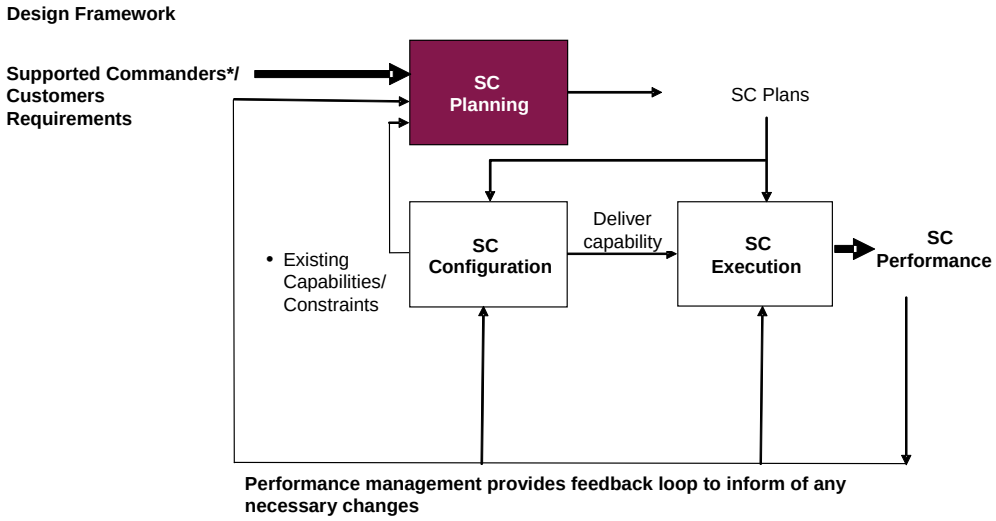
ANNEX A
(Introduced at Paragraph 1)

PLANNING THE JOINT SUPPLY CHAIN

INTRODUCTION

1. This annex to the Level 3 Blueprint Main Report explains what is meant by Supply Chain Planning, identifies the different levels of involved, and sets out how it will take place. This includes a detailed definition of the inputs, activities and outputs required at each planning level. The Blueprint planning model is explained, and examples are provided to illustrate how planning integrates with the other design aspect of Configuration, Execution processes and Performance Management.

FIGURE 1: SUPPLY CHAIN PLANNING IS 1 OF THE 3 CORE DESIGN LEVERS WITHIN THE JSC BLUEPRINT



* The term 'supported commander' in this context is to be construed in a wide sense and includes commanders supported by both core and operational SC

THE PURPOSE OF SUPPLY CHAIN PLANNING

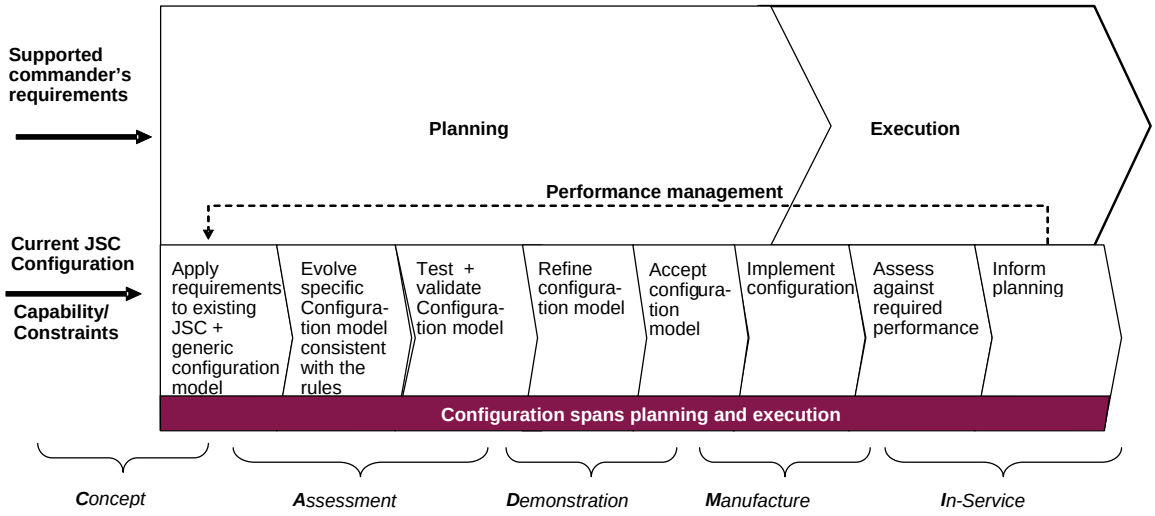
2. Figure 1 illustrates the position of planning as one of the three core design levers within the JSC Blueprint. Taking the requirements of supported commander and customers, the planning process produces plans which state the configuration, performance and capability requirements for the SC execution processes.

3. During planning, the Blueprint configuration approach[8] takes account of existing SC capabilities and constraints, and using the twelve Configuration Rules and the Configuration Model creates the optimum SC configuration to provide the capability required to enable effective SC execution processes[1(Section 1, page 2)].

4. The JSC performance management regime identifies performance differences from the planned requirement and provides a feedback loop to inform of any necessary changes and inform future planning.

5. The integrated relationship between JSC planning, configuration, execution processes and performance management is shown at Figure 2.

FIGURE 2: JSC PLANNING, CONFIGURATION, EXECUTION PROCESSES AND PERFORMANCE MANAGEMENT WILL BE TOTALLY INTEGRATED



(This is not a pure application of CADMID but is intended as an illustrative overlay)

Source: DLTP JS team

THE JOINT SUPPLY CHAIN PLANNING MODEL – OVERVIEW

6. To understand the JSC planning function it is necessary to understand the inputs, activities and outputs required to produce genuinely effective plans together with the planning layers that exist. A coherent planning model was constructed to illustrate this at Figure 3, the numbered components of which will be introduced in this Chapter. Formal planning templates have also been established.

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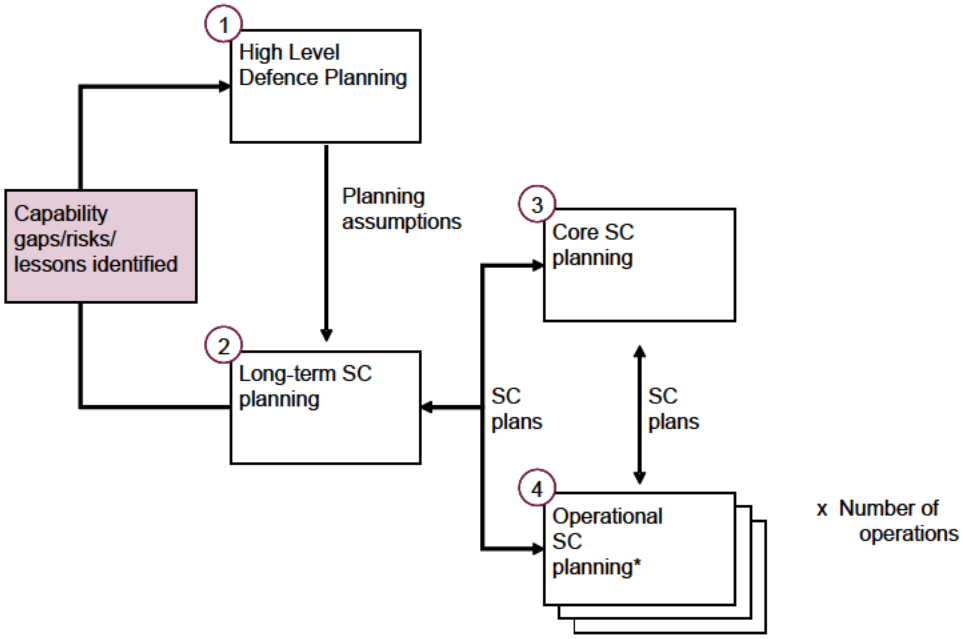
8 JSC Configuration and Execution Processes are detailed in the companion Level 3 annexes to this document.

FIGURE 3: THE JSC PLANNING MODEL

SIMPLIFIED OVERVIEW

(1–4) Planning level

To achieve effective JSC planning it was necessary to construct a coherent model



* Includes major overseas defence exercises

7. The model explains the inter-relationship between high level Defence planning, and the various aspects of SC planning:

a. Long-term[9].

b. Core[10].

c. Operational[11].

8. It identifies the need for clear unambiguous requirements to be placed on the JSC to enable SC planning that is entirely coherent with the supported commander's intent.

9. Additionally, the model highlights the necessity to identify capability gaps, risks, lessons identified, the criticality of feeding this information back into higher levels of planning, and the need for an effective risk management regime.

---

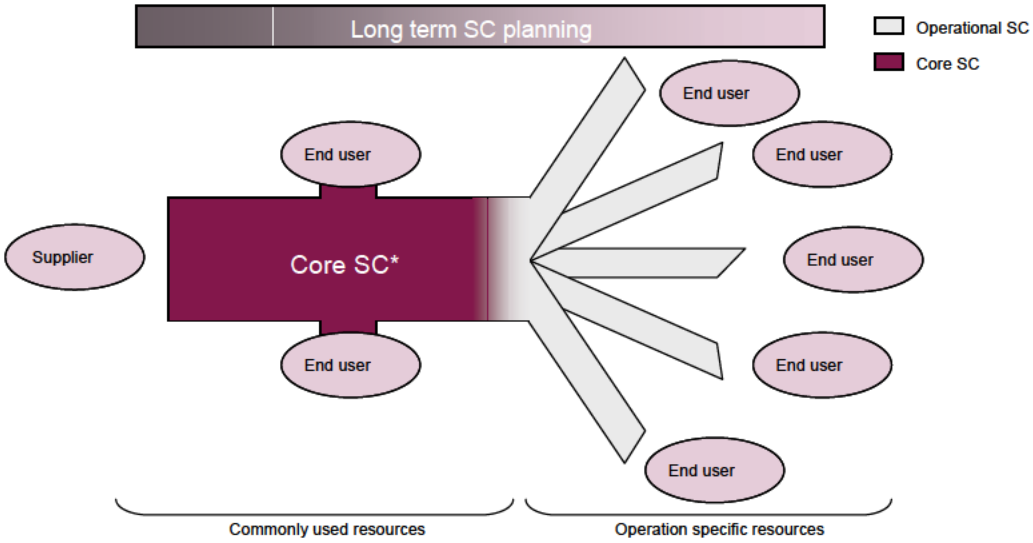
9 The equivalent of strategic supply chain planning. Decision was that Logistics was strategic, supply chain was not.

10 The consolidation of all supply chain activity.

11 Specific to an operation or major overseas exercises.

10. Figure 4 illustrates the rationale behind the definitions 'Core' and 'Operational' SC. Core SC refers to a consolidation of all medium and short-term SC resources used to support both 'Routine' and operational activity. This may also include service to 'mature' operational theatres or exercises where the requirements are well established and enduring. Operational SC refers to resources dedicated solely to a specific operation, deployment or major exercise.

FIGURE 4: There are different planning requirements within the Defence SC



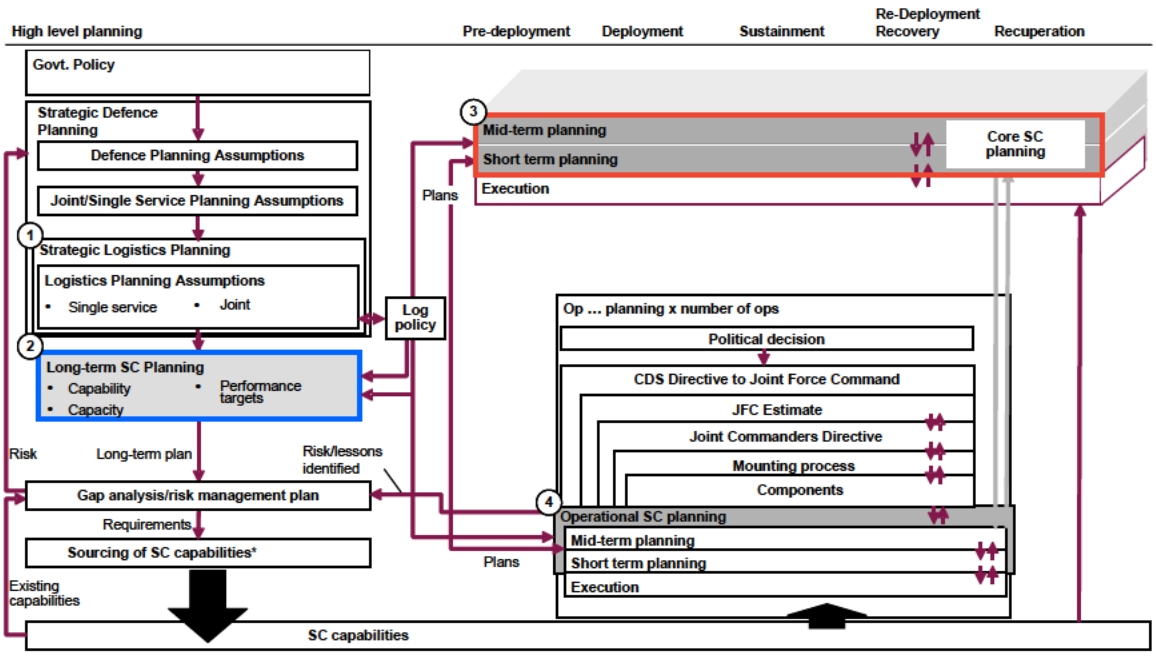
* Consolidation of all SC activity
Source: DLTP JS team

11. A more detailed view of the JSC planning model can be found at Figure 5. Here we see the content of areas such as 'High level planning', and how government policy cascades down through the various levels of strategic Defence planning until it is eventually assimilated into 'long-term' SC planning. From there the process continues to cascade down into Core and Operational planning. The feed–back loops from lower levels back into higher levels are also clearly shown in the model.

FIGURE 5: JSC PLANNING MODEL (DETAILED VIEW)

SC planning

The JSC planning model (detailed view)



* Common to all SC planning functions

Source: DLTP JS team

THE 4 KEY PLANNING ACTIVITIES

12. At the heart of all levels of planning are 4 key planning activities. These are:

    a. Define SC requirements.

    b. Plan inventory.

    c. Plan transportation.

    d. Plan materiel handling and infrastructure[12].

These must be undertaken in an integrated manner to create effective and comprehensive SC plans as illustrated by Figure 6. The definition of the key planning activities is as follows:

---

[12] Collectively 'Configuration'. However, for clarity of description in Planning, it has been broken out into the components of Materiel Handling and Infrastructure.

e. **Define SC Requirements**. The better defined the requirements placed on the JSC, the better it will be able to configure itself to meet them, and articulate the gaps in its capabilities. To enable the JSC to operate effectively, what is required of it needs to be clearly stated. Only through doing so can the components of inventory, transportation, materiel handling and infrastructure be properly identified together with the resources necessary to undertake the task and the capability gaps which may inhibit it.

f. **Plan Inventory**. By interpreting the requirements for their areas of responsibility, Integrated Project Teams (IPTs) and commodity clusters will determine the most effective plan for their inventory and its disposition. As well as articulating aspects such as stock levels, they will evaluate the delivery capabilities of the JSC by taking into account transport availability, and materiel handling and infrastructure planning to determine how quickly it can deliver their items. Consequently, IPTs will be better able to decide where they need to locate stock, and how much will be in each location to ensure that the needs of the supported commander[13] are met. By understanding the capabilities of the JSC, IPTs will be better placed to evaluate the relative merits of CLS solutions and their contribution to achieving effective customer support. In instances where operational risk dictates that some CLS solutions are deemed unacceptable by the supported commander[14], neither the IPT nor the JSC will be unprepared as pre-arranged contingency plans will have been produced for use of the 'Purple Gate'[15] to cross the Coupling Bridge. The totality of all IPT plans must be considered to achieve effective inventory planning.

g. **Plan Transportation**. Transportation planning will consider the requirements placed on the JSC, the requirements driven by delivering the Defence inventory, force elements and personnel and the characteristics and constraints imposed by the materiel handling and infrastructure plan. Within this aspect of planning will be determined subjects such as the strategic lift requirement and the most appropriate mode of transport. As transportation planning evolves it must continue to inform the other three key planning activities.

h. **Plan Materiel Handling and Infrastructure (MH and I)**. This activity is primarily driven by the requirements placed on the JSC. Additionally, it must consider inventory (eg nature, volume, throughput requirements and characteristics of the inventory) and transport planning (eg vehicle characteristics and anticipated transport flow rates). Only by considering all of these factors can effective MH and I plans be produced. Examples of things to be included in a MH and I plan would be depot locations, type and number of warehouses, location, type and numbers of materiel handling assets.

13. Having considered these aspects, the plan can be developed. The reality of resource constraints means it is unlikely that the JSC will have everything it needs to meet the tasks placed upon it. Planning must mitigate against this by conducting an accurate gap analysis to determine the short-falls, and then either remedy them or articulate its conclusions for higher level consideration in order for the effects, and thereby constraints,

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[13] The term 'supported commander' is used throughout and is to be construed as covering FLCs and PJHQ as appropriate to the mission concerned.

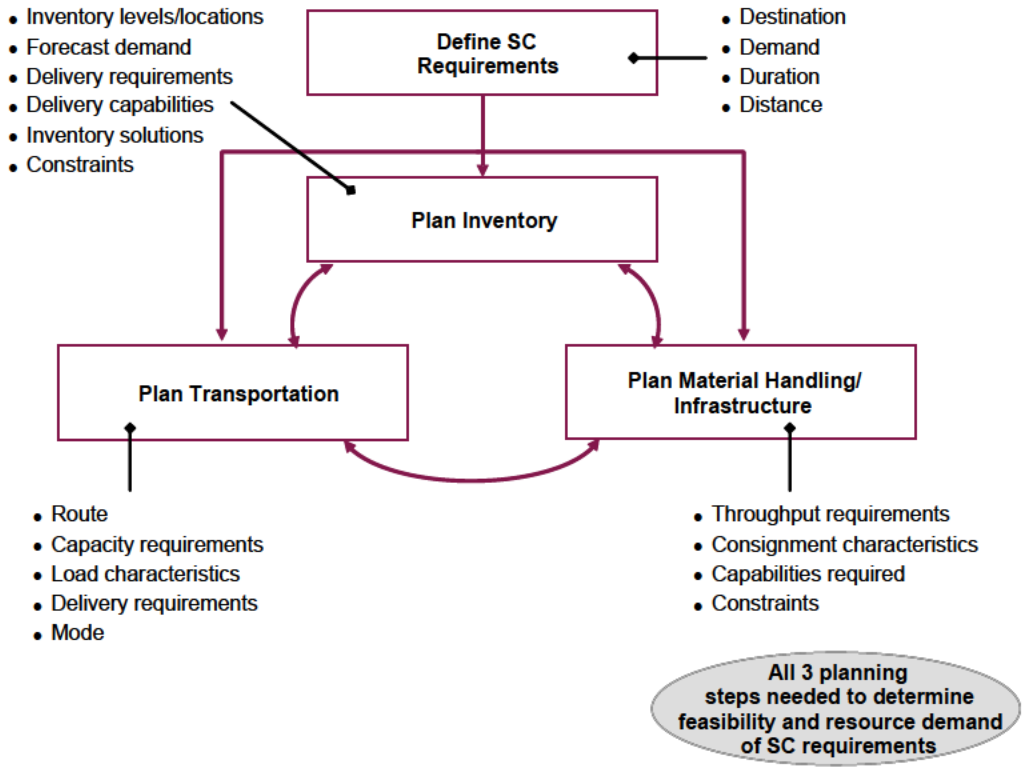
[14] Second rule of configuration – see Level 3 document for details.

[15] Tenth rule of configuration – see Level 3 document for details.

to be either mitigated at that level, the remit adjusted or the increased level of risk appreciated.

14. Ideally, the capabilities and capacity of the JSC are matched to the levels of service required by its users. In turn by understanding the limitations of the JSC users are able to have more realistic expectations of its ability to support them, and of the risk involved in not filling capability gaps. The importance of effective risk management at every level of planning cannot be over-emphasised and is a constant message throughout the Figures within this document.

FIGURE 6: THE 4 KEY PLANNING ACTIVITIES EXAMPLES



THE PLANNING PROFILE

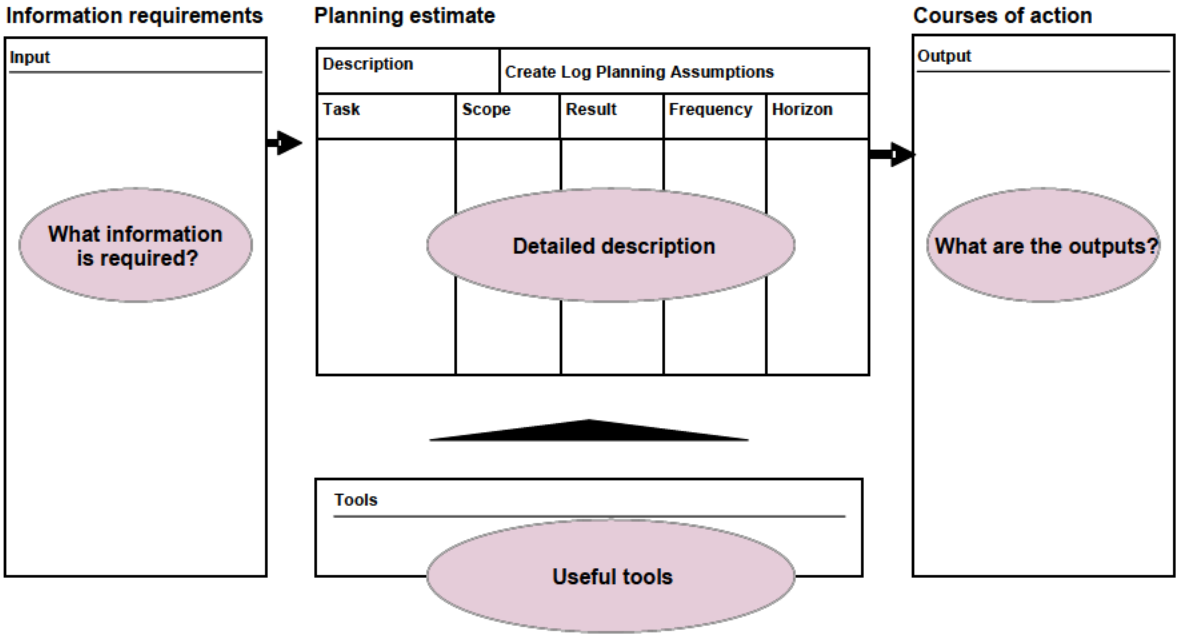
15. To formalise the activity of SC planning, profile templates have been identified as illustrated at Figure 7. The planning profile:

a. Sets out the required information inputs, planning estimate activity, and courses of action (outputs) for every level of planning in the JSC model.

b. The direction on conducting the planning estimate process indicates tasks, scope, desired results, frequency and planning horizons relating to every level.

c. Recommendations on the planning tools which would usefully support that specific aspect of the process.

FIGURE 7: EXAMPLE OF A PLANNING PROFILE



CONDUCTING SUPPLY CHAIN PLANNING

16. By using the JSC planning model to effectively interpret high level requirements, much can be done to prepare the JSC to support future operations. When a specific operation arises, the operational aspect of the JSC planning model and the supporting templates can be applied to ensure that effective plans are produced. This will include gap analysis, articulation of risk and a comprehensive risk management regime.

17. The following pages will explain the various planning levels and detail the profiles for each level. The levels will be covered in the following order:

a. Strategic logistics planning.

b. Long-term SC planning.

c. Core SC planning.

d. Operational SC planning

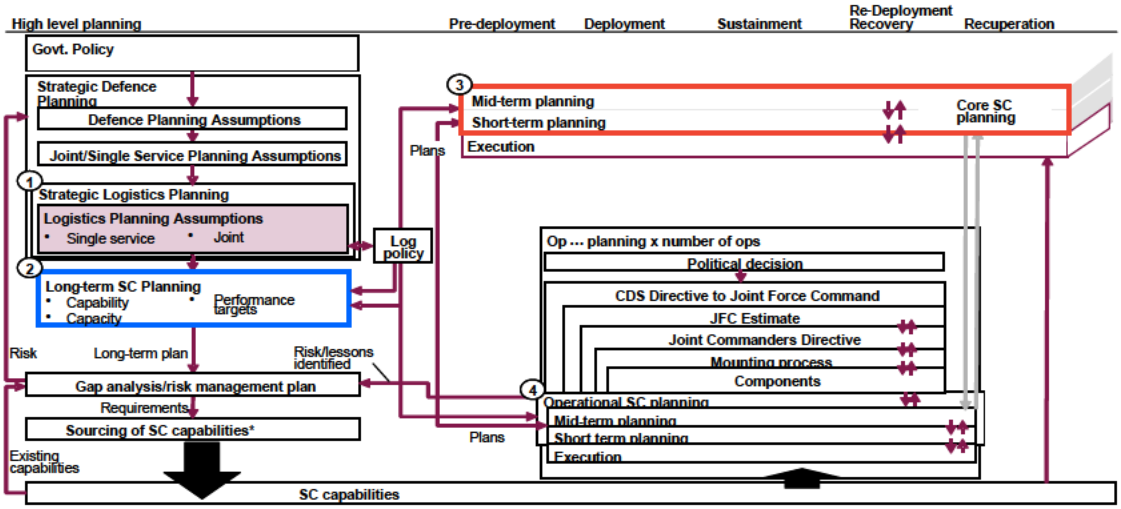
STRATEGIC LOGISTICS PLANNING

18. From a JSC perspective the objective of Strategic Logistic planning is to create Logistic Planning Assumptions (Log PAs). In terms of the 's' model, the Log PAs are the highest level of planning specifically addressed. Log PAs will inform, and be informed by, Defence logistic policy and Defence procurement policy[16]. Figure 8 illustrates the situation of Log PAs in the planning hierarchy.

FIGURE 8: LOGISTIC PLANNING ASSUMPTIONS

Area of focus

The JSC planning model long-term SC planning



* Common to all SC planning functions
Source: DLTP JS team

19. Log PAs are the foundation for sound long-term SC planning. The quality of the higher level plan will have an exact bearing on the ability to produce high quality lower level plans. Log PAs are a key input into defining long-term SC requirements. Regardless of the channel through which Log PAs are provided, they should be interpreted into SC requirements as centrally as possible.

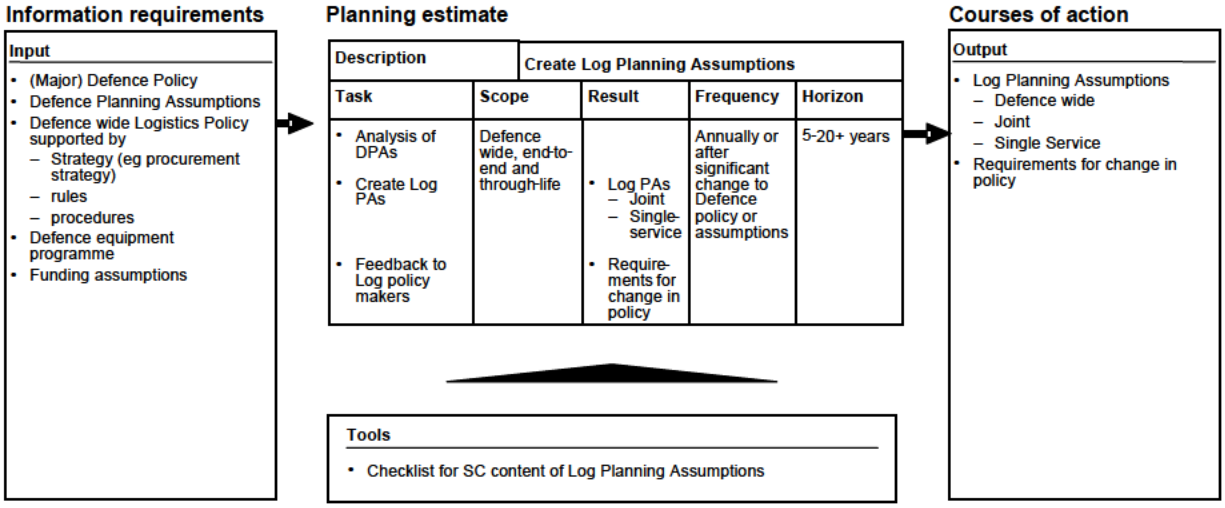
20. Within the JSC planning process there is no difference between the ways that Joint and Single Service Log PAs relate to the rest of the model. Although in reality the channels of information between the sources of the Log PAs may be subject to procedural variations, these should be minimised wherever possible to avoid complication, and to achieve commonality across Defence.

21. Figure 9 details the planning profile required to achieve effective Log PAs.

---

16 The need to fully integrate supply chain planning and procurement policy is covered in more detail in the long-term supply chain planning section.

FIGURE 9: PLANNING PROFILE – Create logistics planning assumptions



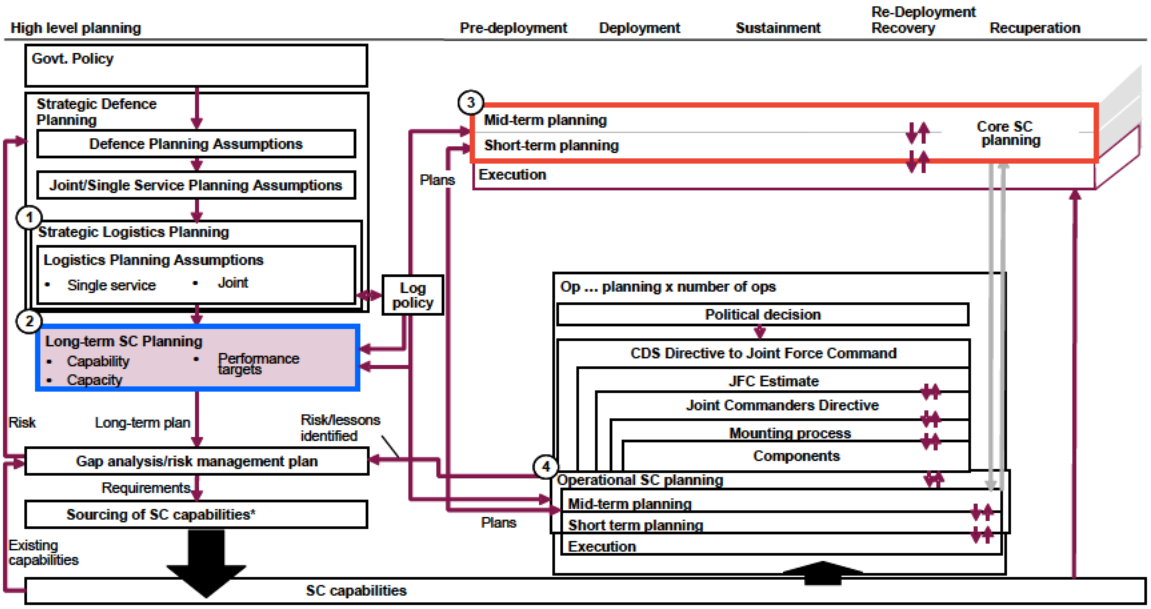
LONG-TERM SUPPLY CHAIN PLANNING

22. Long-term supply planning fits into the overall JSC Blueprint planning mode as illustrated in Figure 10. Figure 11 shows the components in greater detail with this level of activity identified in the box numbered 2.

FIGURE 10: LONG TERM SUPPLY CHAIN PLANNING

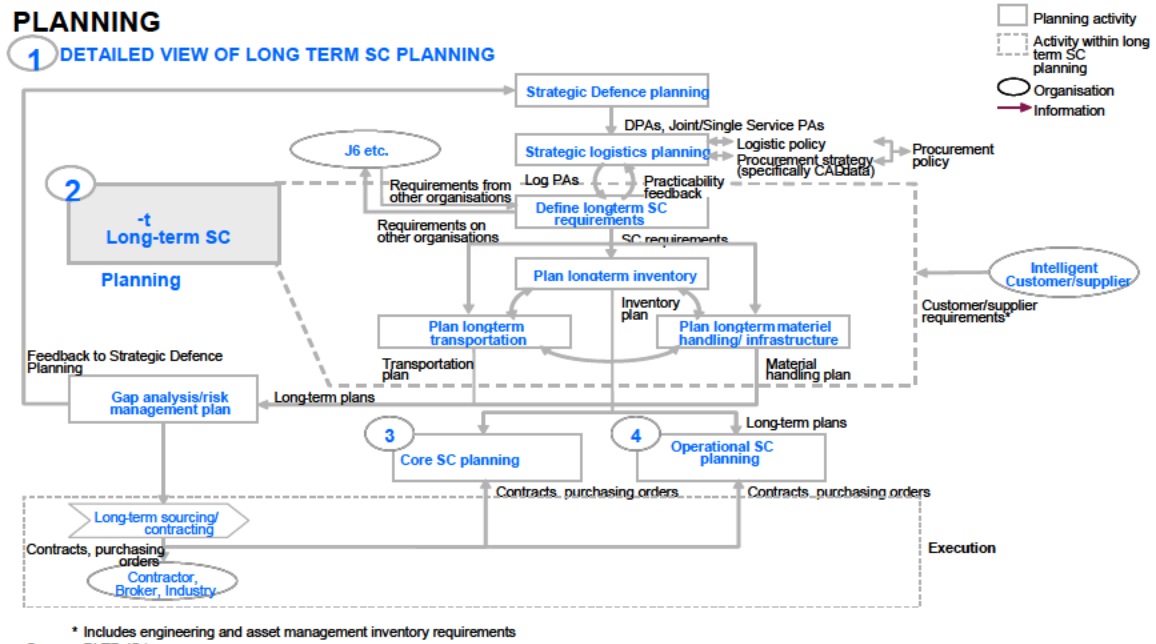
Area of focus

The JSC planning model – long-term SC planning



* Common to all SC planning functions
Source: DLTP JS team

FIGURE 11: DETAILED VIEW OF LONG-TERM SUPPLY CHAIN PLANNING



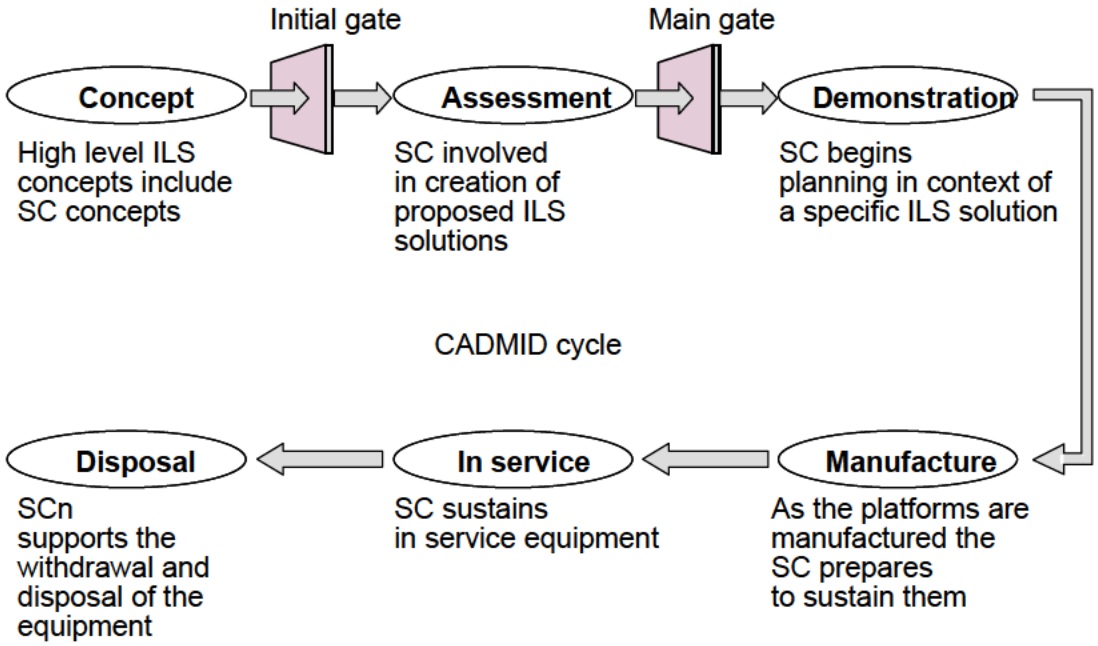
* Includes engineering and asset management inventory requirements
Source: DLTP JS team

23 Strategic defence planning in the form of DPAs and Joint/Single service PAs informing strategic logistics planning. Feeding back into Strategic defence planning is the output from the gap analysis and risk management plan created during the long-term SC planning process.

24. Strategic logistics planning creates Log PAs using the DPA and Joint/Single Service PAs. It also has a two way relationship with logistic policy. Additionally, there is a direct relationship with procurement strategy and policy. From a JSC perspective this is an area that has not been satisfactorily addressed in the past. Procurement solutions must consider and involve JSC expertise from the earliest stages in order to factor JSC capability into support solution planning. The Support Solutions Envelope (SSE) provides the guidance on engagement with the JSC. The JSC needs to adopt a more pro-active approach to new and existing procurement projects to ensure that it engages effectively. Only through effective engagement will the JSC fully understand the implications of the requirements placed upon it, and therefore how best to configure in order to meet them. Figure 12 illustrates the process.

FIGURE 12: SUPPLY CHAIN EXPERTS WILL EFFECTIVELY ENGAGE WITH EQUIPMENT THROUGH LIFE MANAGEMENT PLANNING AT THE EARLIEST OPPORTUNITY

EXAMPLE

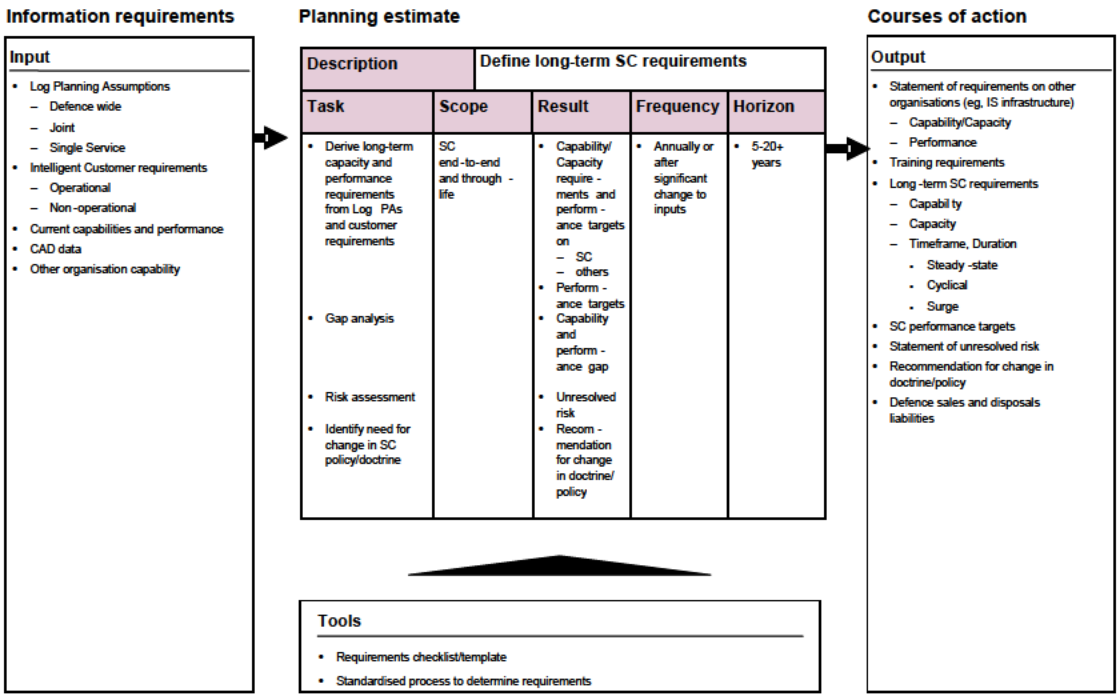


25. Within long-term supply planning are the four principal activities:

a. **Define Long-Term Supply Chain Requirements**. Other inputs will include requirements from external organisations, eg J6 and also the Intelligent

Customer/Supplier requirements. This planning activity will in turn place requirements on external agencies. Continuing with the J6 example, this could be stating the capabilities required of communication bearers to support logistic IS. Feeding back the practicality of achieving the current Log PAs allows for them to be revised or at least for the difficulties identified to be factored into strategic logistics planning. Figure 13 details the planning profile for defining long-term SC requirements. The main output of this aspect of planning is to inform long-term inventory, transportation, material handling and infrastructure (MH and I) planning. The '4 Ds' of Destination, Demand, Duration and Distance are prime examples of the type of output required.

FIGURE 13: PLANNING PROFILE – DEFINE LONG-TERM SUPPLY CHAIN REQUIREMENTS



b. **Plan Long-Term Inventory**. Taking the long-term SC requirements and the requirements specific to their individual commodities, inventory managers must create long-term inventory plans. Each of these plans needs to be integrated with long-term transportation planning and long-term MH and I planning to ensure that the JSC implications of delivery, handling and storage are completely factored into the inventory planning. The planning profile at Figure 14 provides greater detail on the inputs, activities and outputs necessary to achieve effective planning. At this level, the consolidation of all IPT inventory plans is important. By doing this, the JSC will be able to understand the totality of the requirements it will be expected to meet and the degree of concurrency required.

FIGURE 14: PLANNING PROFILE– PLAN LONG-TERM INVENTORY

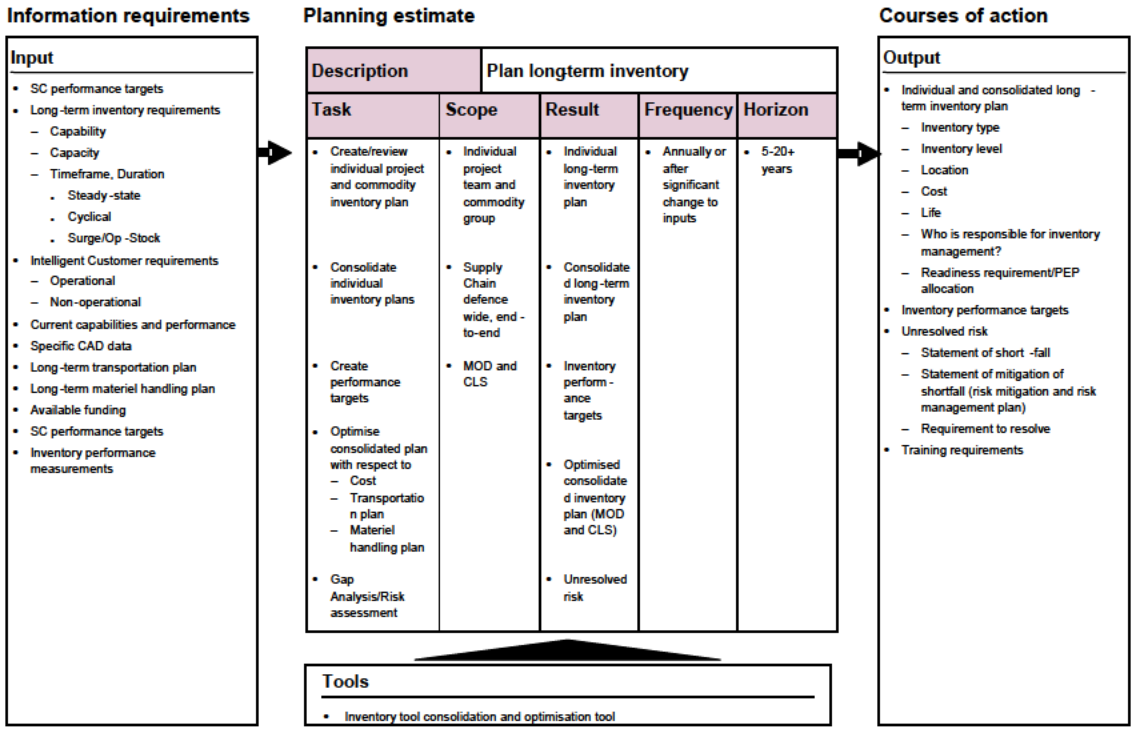
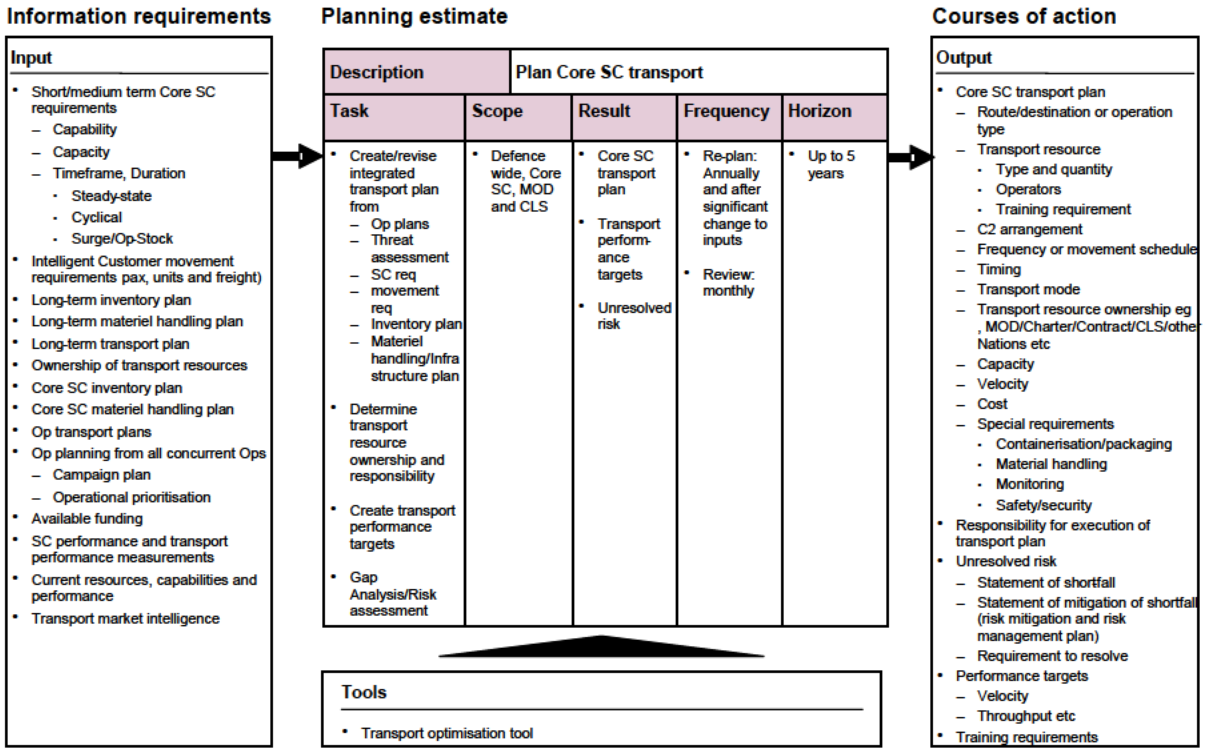


FIGURE 15: PLANNING PROFILE – PLAN CORE SUPPLY CHAIN TRANSPORTATION



c. **Plan Long-Term Transportation**. Figure 11 illustrated how the long-term SC requirements will drive long-term transportation planning together with the need for the transportation plan to be totally coherent with those for long-term inventory and materiel handling and infrastructure. The planning profile at Figure 15 provides greater detail of the inputs, planning activity and outputs required to achieve effective long-term transportation planning. The need for dynamic transport planning has been identified also. As with every other level of SC planning, outputs include the capability gap analysis and the accompanying risk management plan.

d. **Long-Term Materiel Handling and Infrastructure (MH and I) Planning**. In common with inventory and transportation planning, MH and I planning is also driven by the definition of SC requirements. For reasons already explained it is essential that these key SC planning activities are integrated and fully coherent. Effective MH and I planning will ensure that all aspects of materiel handling (not just the equipment) and both the core and operational SC infrastructure is configured to meet requirements and provide the capability to enable effective SC execution. A detailed planning profile can be found at Figure 16. This illustrates the requirements, considerations, planning activity and outputs fundamental to the creation of successful long-term MH and I plans.

FIGURE 16: PLANNING PROFILE – PLAN LONG TERM MATERIEL HANDLING AND INFRASTRUCTURE

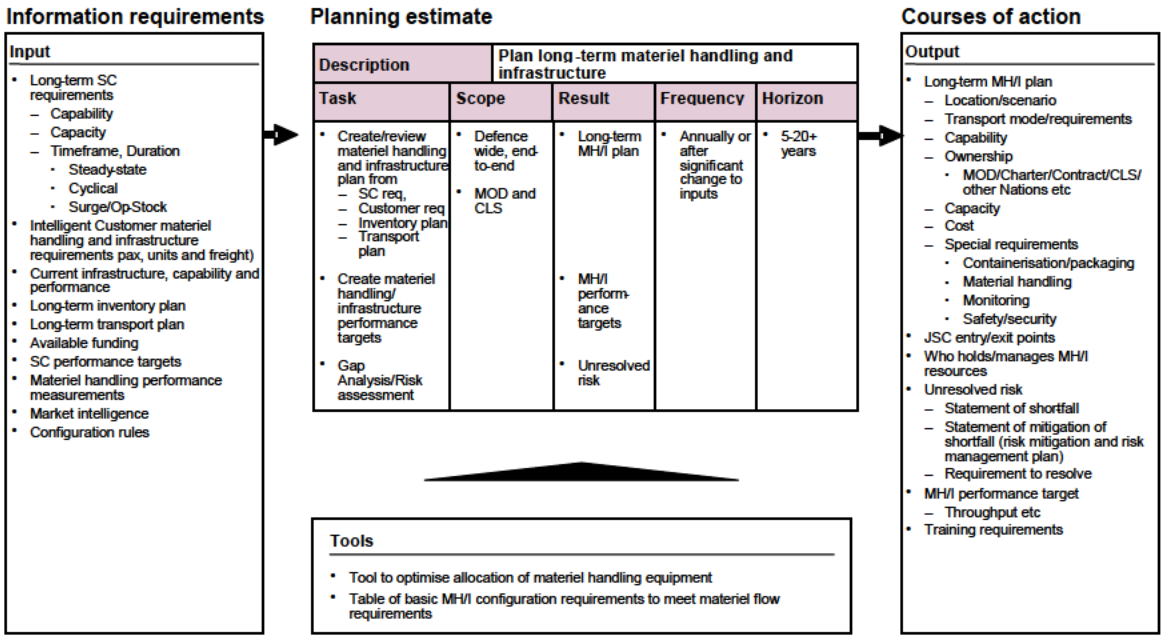
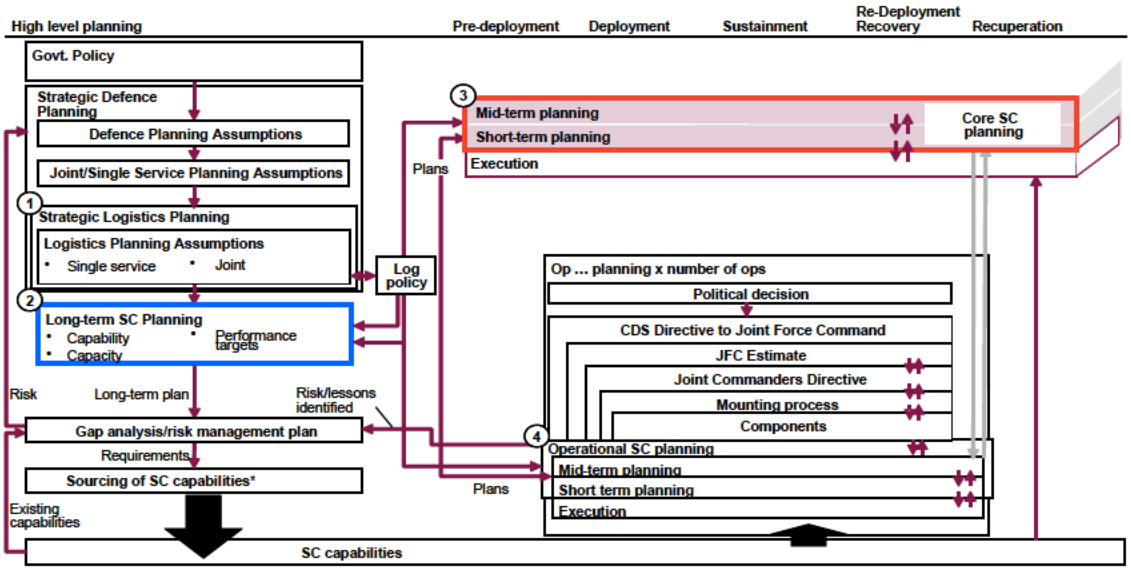


FIGURE 17: CORE SUPPLY CHAIN PLANNING

Area of focus

The JSC planning model – long-term SC planning



* Common to all SC planning functions

26. **Long-Term SC Planning – Gap Analysis and Risk Management Plan**. Although all of the key planning activities may each produce a gap analysis and risk management plan, their consolidation is essential. This consolidated analysis and risk management plan can then be fed back into the higher levels of strategic Defence planning as an input to actual capabilities and constraints.

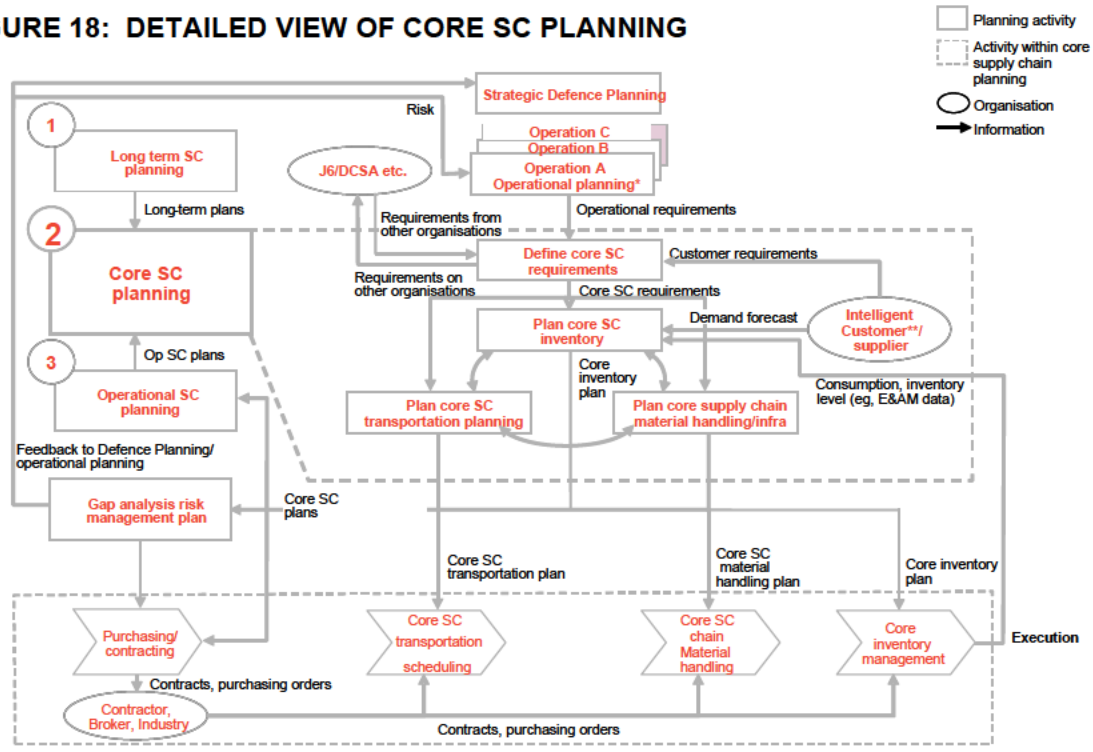
27. **The Relationship with Core and Operational SC Planning**. Decisions made during long-term SC planning will shape the overall environment for the mid and short-term aspects of Core and operational SC planning.

CORE SUPPLY CHAIN PLANNING

28. In essence the Core SC supports all operational SC to a greater or lesser degree, and in addition conducts the 'routine' or non-operational support to every area of Defence not deployed on operations, eg training establishments, naval bases (although ships and submarines operating from them will be supported), home and overseas garrisons etc.

29. Figure 18 shows where Core SC planning fits into the overall JSC planning model. Core planning is focused on the mid and short-term, with the latter directly linking into Core SC execution processes.

FIGURE 18: DETAILED VIEW OF CORE SC PLANNING

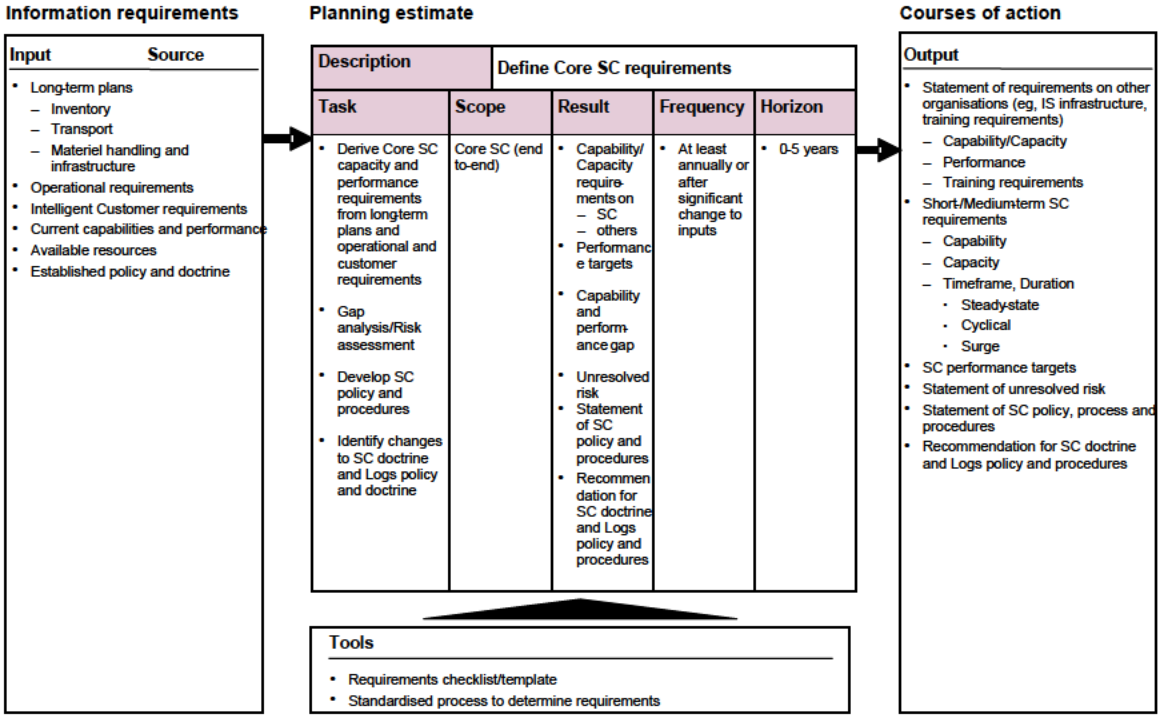


* For specific operations
** Operational and non-operational customers

30. Additionally, it shows the reliance of the Core execution processes on the finished plans.

31. In concept, the processes within Core SC planning are almost identical to the detailed view of long-term SC planning (Figure 13). The difference lies in the level of detail, the sources of information, the shorter planning horizons and a closer relationship with the day-to-day execution processes. The planning profile detailing this is to be found at Figure 19.

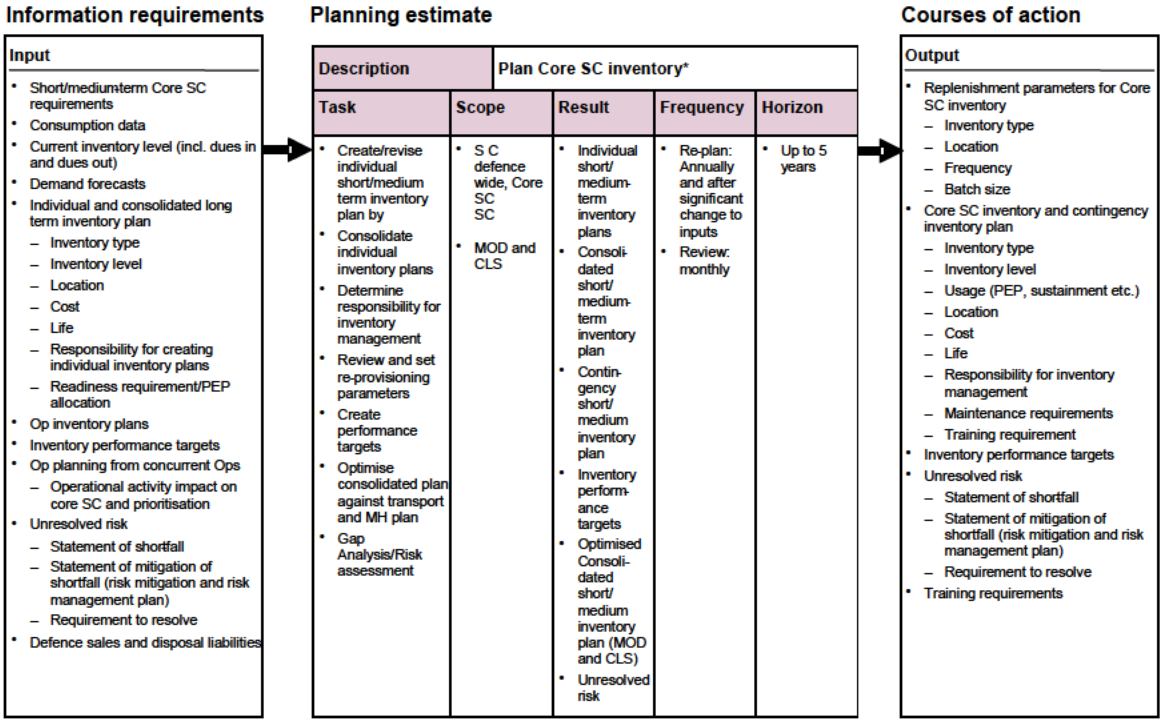
FIGURE 19: PLANNING PROFILE – DEFINE CORE SUPPLY CHAIN REQUIREMENTS



32. The Core SC must balance a multitude of operational and non-operational requirements to provide acceptable levels of support to all end-users.

33. As well as receiving requirements from operations, Intelligent Customer/Suppliers and other organisations, the Core SC will also place requirements on other organisations eg J6 and DCSA, owners of strategic lift assets.

FIGURE 20: PLANNING PROFILE – PLAN CORE SC
C INVENTORY



* Possibly assisted by tool to consolidate demand forecasts, consu mption data and individual inventory plans

34. The four fundamental outputs required of Core SC planning are:

a. Gap analysis and a risk management plan (common to all levels of the JSC planning model).

b. The Core SC Inventory Plan.

c. The Core SC Transportation Plan.

d. The Core SC MH and I Plan.

FIGURE 21: PLANNING PROFILE – PLAN CORE SC TRANSPORTATION

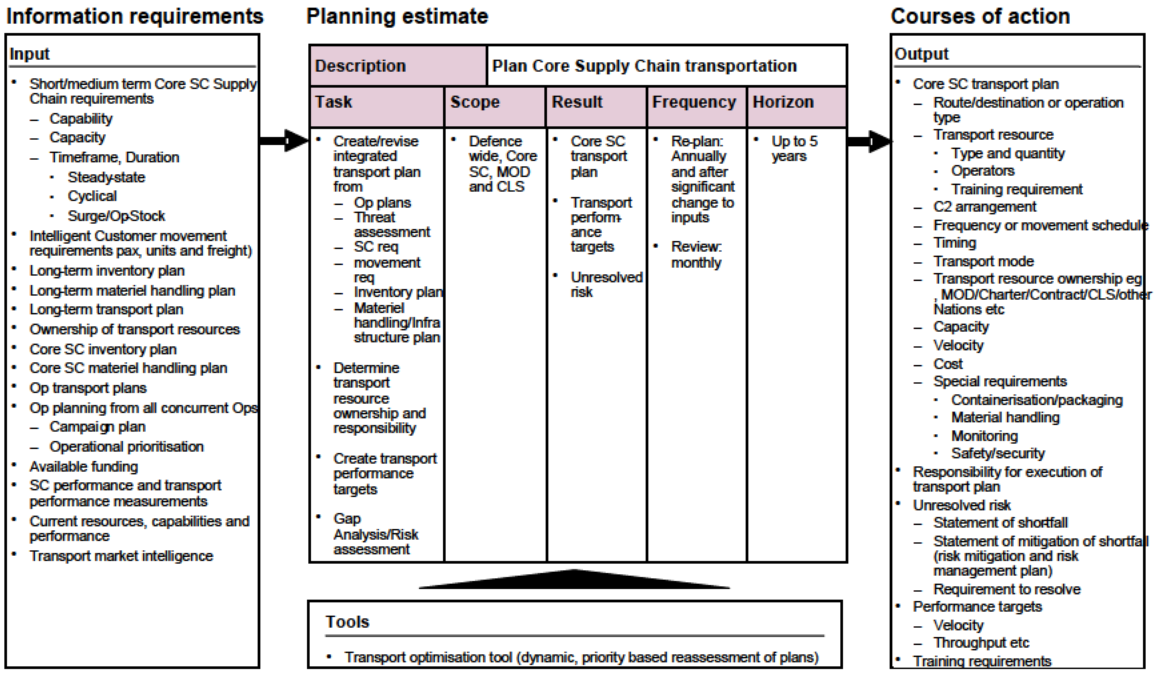
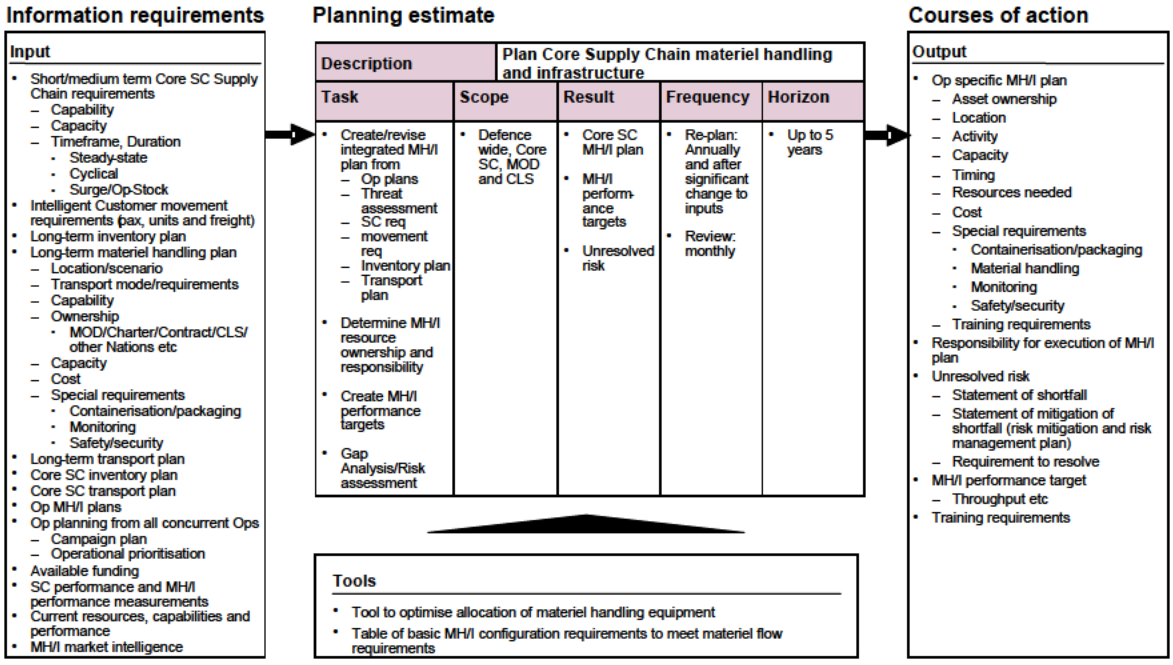


FIGURE 22: PLANNING PROFILE – PLAN CORE SUPPLY CHAIN MATERIEL HANDLING AND INFRASTRUCTURE



OPERATIONAL SUPPLY CHAIN PLANNING

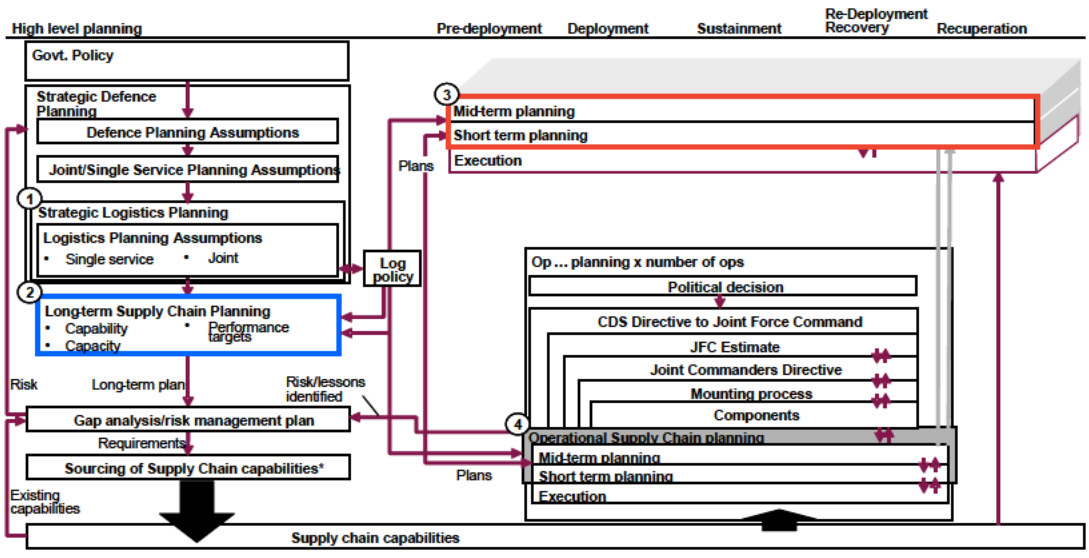
35. The fact that Operational SC planning is focused on support to individual operations suggests that it might be viewed as the simplest aspect of JSC planning. However, factors such as the unpredictability of events, enemy disruption, the dynamic operating environment and extended lines of communication, together with the need for integration with other operations serve to make it the most challenging aspect of JSC planning.

36. The JSC planning model is explicit in stating the need for operational SC plans to ensure that the needs of the supported commander are met. Figure 23 highlights the various levels of direction, estimates, process and components that influence operational SC planning. In common with all levels of planning, the quality of the higher level information, together with an understanding of available capabilities and resources are important determinants of the quality, and subsequent effectiveness of the lower level plans. The time available to put operational plans together will be a critical factor. In addition to the usual feeds back into higher level planning found elsewhere in the model, a further requirement is to produce operational lessons identified. These provide a structured method to review JSC operational plans and planning, configurations and execution processes, within the context of other operational factors to identify where performance improvements are needed.

FIGURE 23: OPERATIONAL SC PLANNING

Area of focus

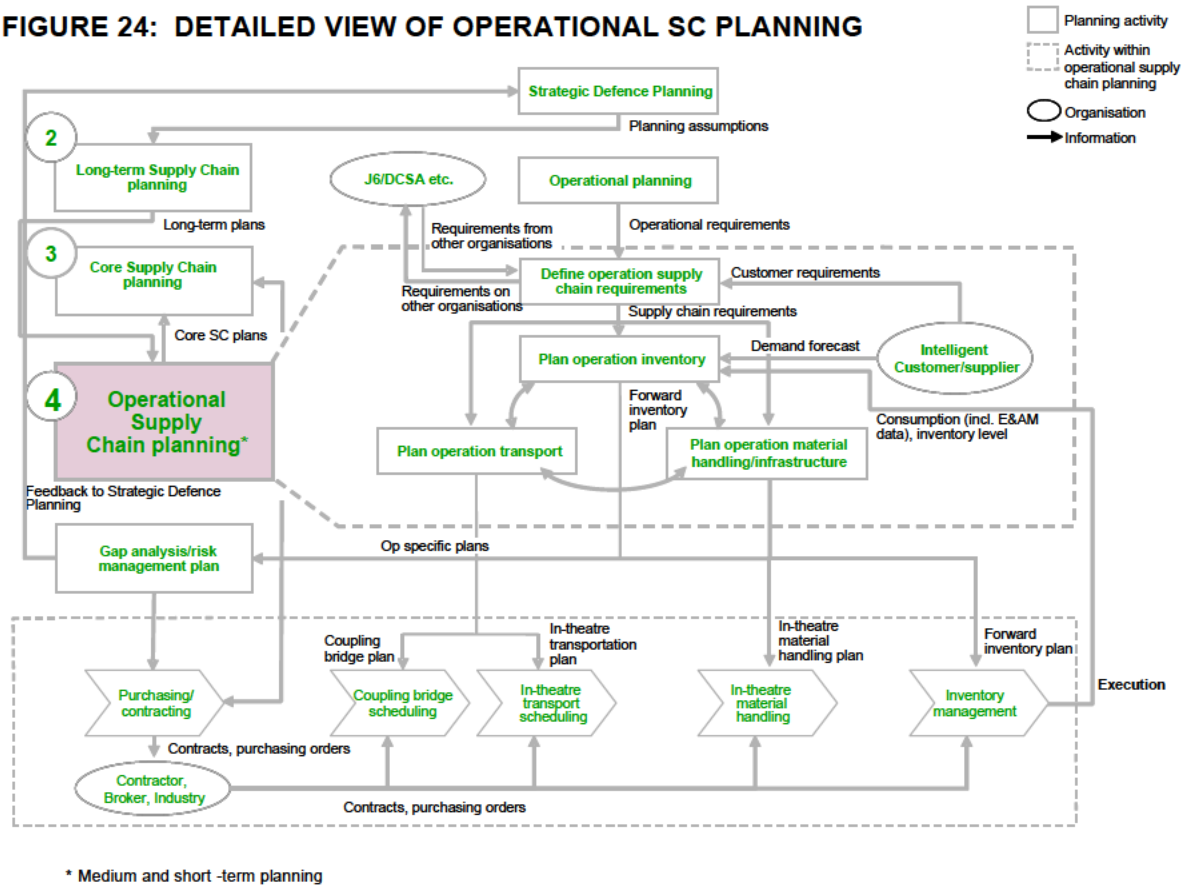
The JSC planning model (detailed view)



* Common to all supply chain planning functions

37. Figure 24 provides a detailed view of Operational SC Planning. The main difference from Core SC planning is the focus on a single operation, and the increased importance of accurate planning assumptions. The greater the inaccuracies between assumption and reality, the greater will be degree of adjustment and crisis planning required of the JSC to meet the operational requirement.

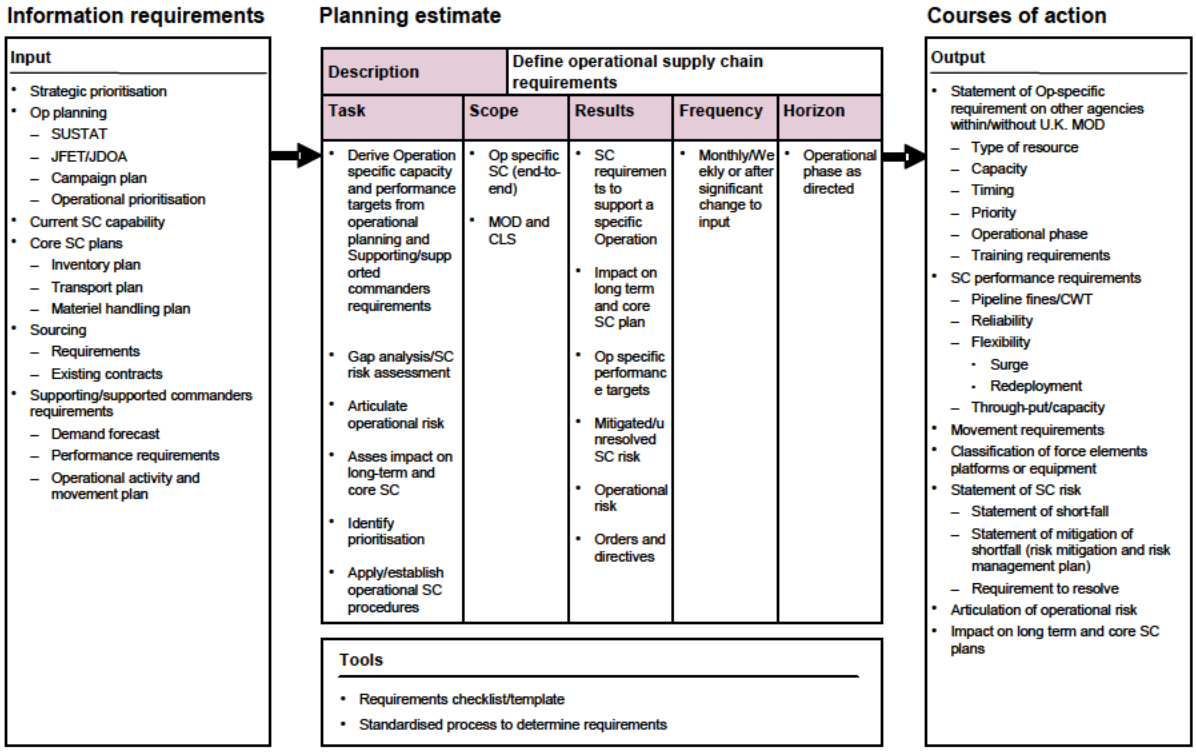
FIGURE 24: DETAILED VIEW OF OPERATIONAL SC PLANNING



* Medium and short -term planning

38. To avoid unnecessary repetition, the key tenets of operational SC planning will be summarised briefly. Inputs such as the SUSTAT, JFET and JDOA need to be meaningful, logical and contain sufficient levels of details that will make it possible to translate them into successful JSC performance. Figure 25 defines the inputs, planning activity and outputs required to provide a high standard of definition necessary to facilitate the production of sound lower level plans. However, the 'flexibility' principle of logistics applies, and the evolving nature of operational planning may lead to a number of iterations of the process.

FIGURE 25: PLANNING PROFILE – DEFINE OPERATIONAL SUPPLY CHAIN REQUIREMENTS



39. The standard iterative process between the key planning activities is the engine that drives the creation of the essential deliverables of operational SC planning. These are:

a. The gap analysis, risk management plan and (at a later stage) lessons identified.

b. The operational inventory plan (Figure 26).

c. The operational transportation plan (Figure 27).

d. The operational MH and I plan (Figure 28).

The dynamic environment of operations will require the flexibility to adapt the SC configuration, often at short notice. This task spans MH and I and Transportation planning. The requirement for configuration management tool(s), to be used by both MH and I and Transportation planners has been identified.

FIGURE 26: PLANNING PROFILE – PLAN OPERATIONAL SUPPLY CHAIN INVENTORY

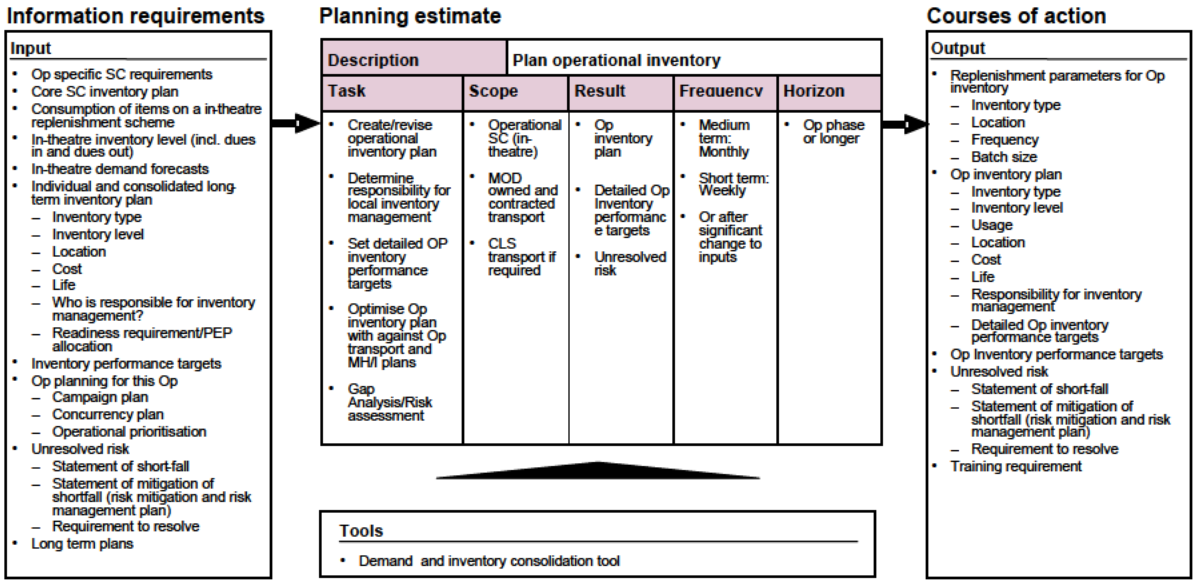


FIGURE 27: PLANNING PROFILE – PLAN OPERATIONAL TRANSPORTATION

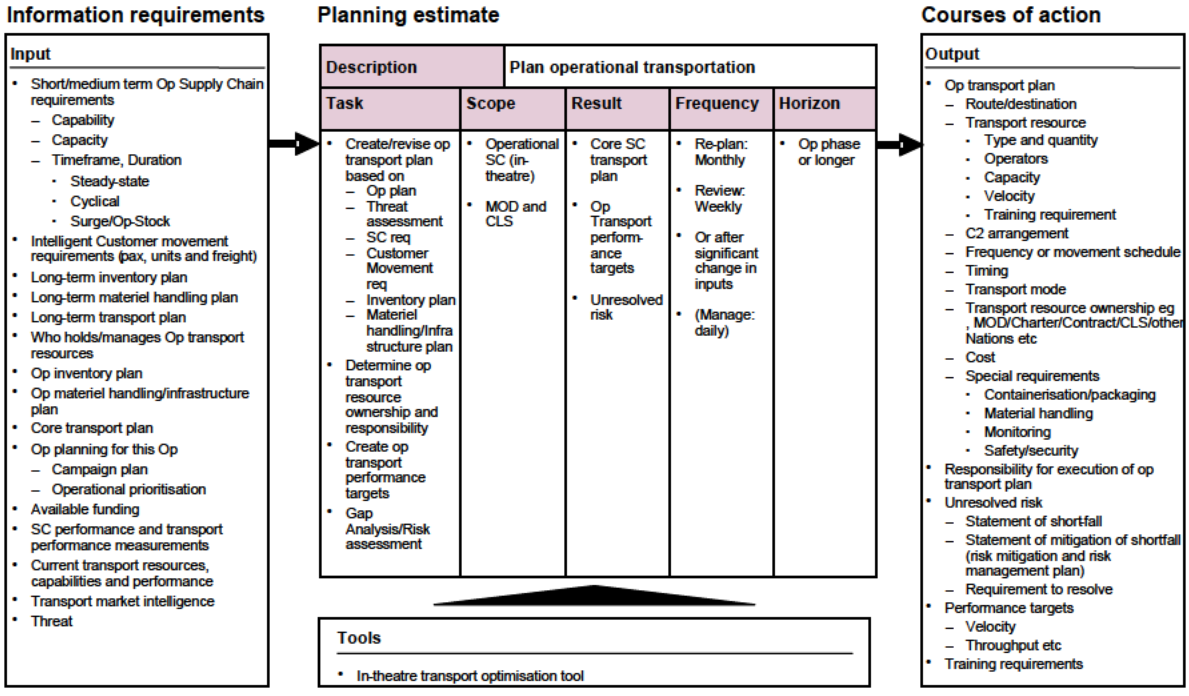
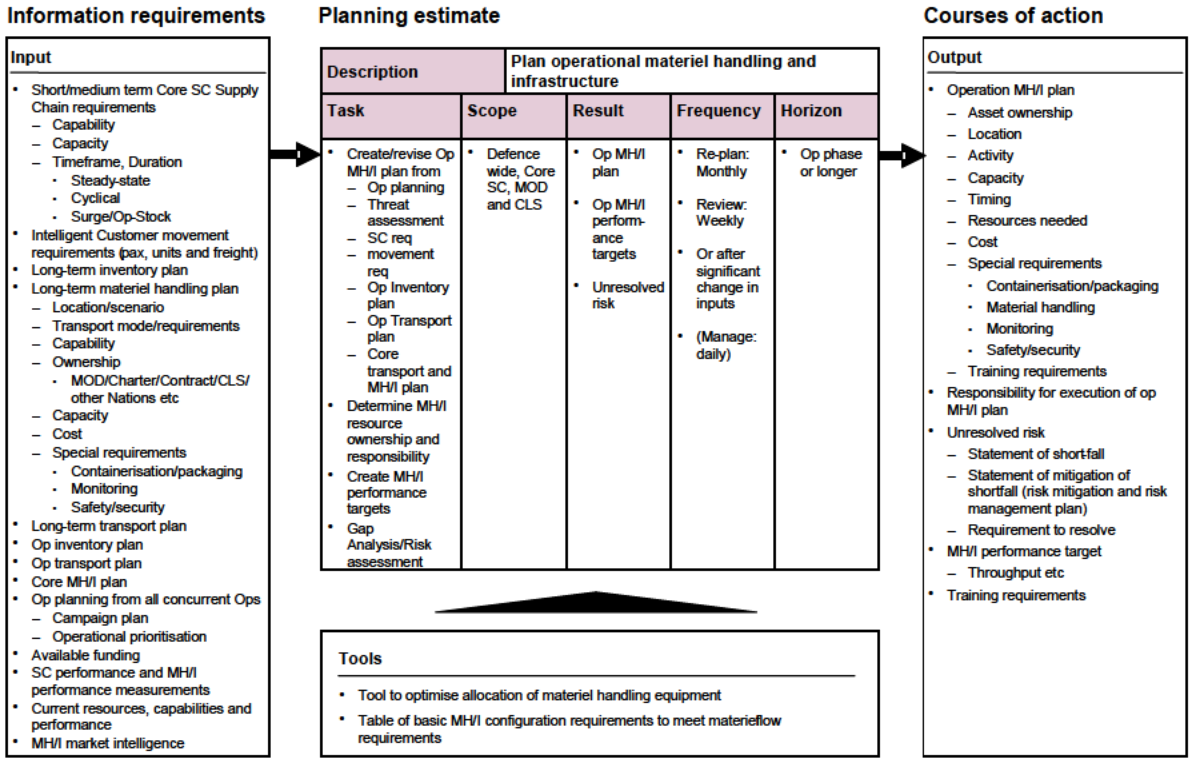


FIGURE 28: PLANNING PROFILE – PLAN OPERATIONAL MATERIEL HANDLING AND INFRASTRUCTURE

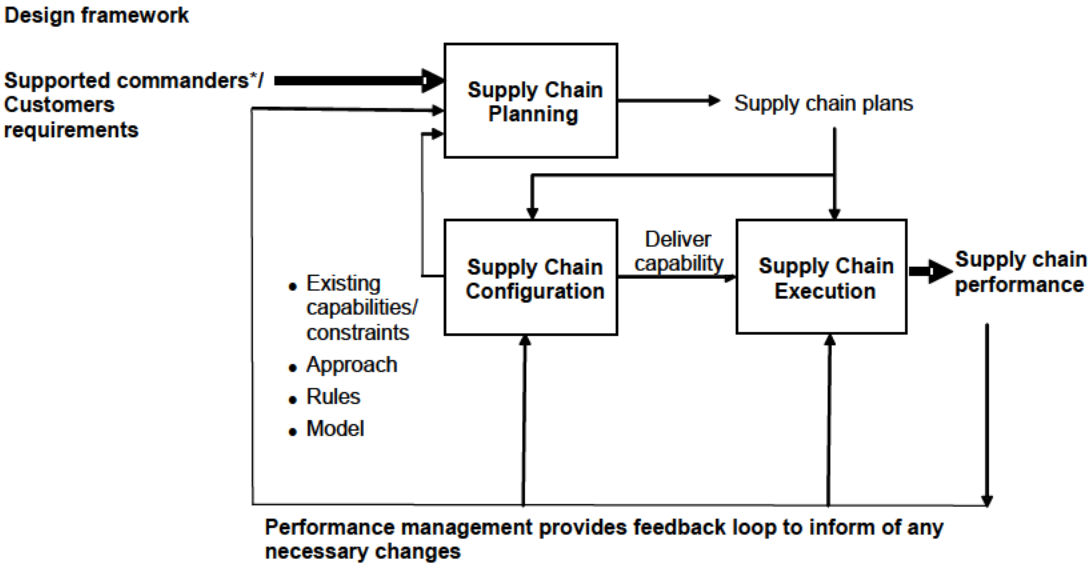


SUMMARY

40. SC planning is an essential part of achieving effective JSC performance. Making improvements solely in this area will achieve benefits; however, maximum benefit can only be realised by improving all three of the core design levers and imposing an effective performance management regime, which is illustrated at Figure 29.

41. Each of the core design levers is designed to complement the others. For this reason it is essential that all are employed in a balanced manner to drive improvements in the JSC.

FIGURE 29: ALL 3 CORE DESIGN LEVERS MUST BE IMPROVED AND UTILISED TO ACHIEVE MAXIMUM BENEFITS FOR JSC PERFORMANCE



* The term 'supported commander' in this context is to be construed in a wide sense and includes commanders by both core and operational SC

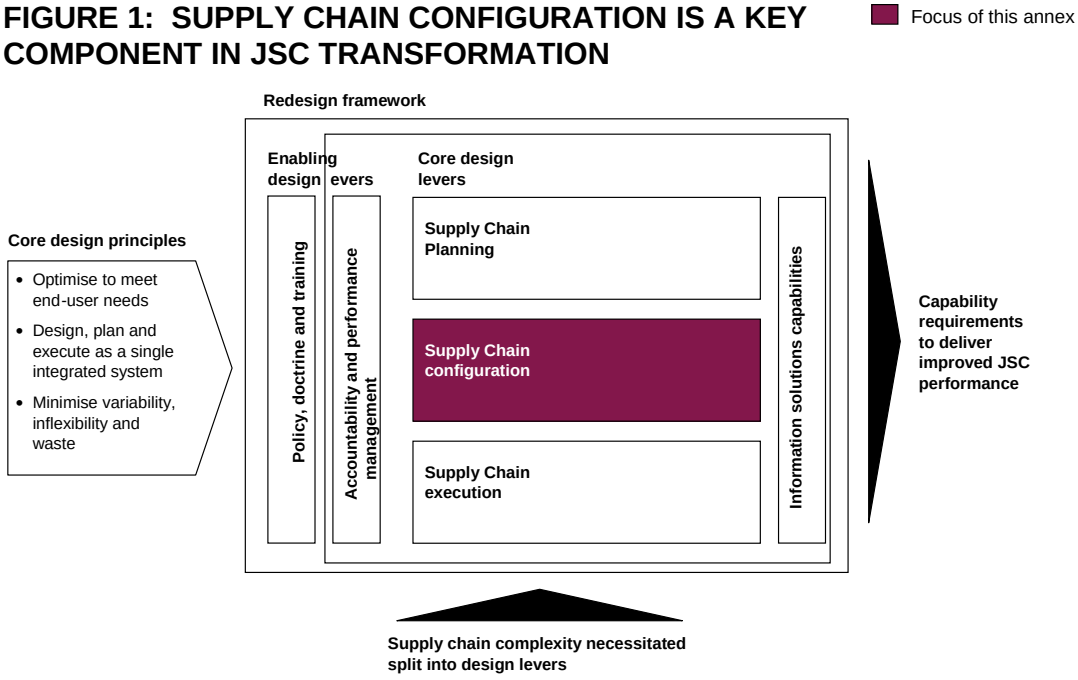
ANNEX B
(Introduced at Paragraph 1)

CONFIGURING THE JOINT SUPPLY CHAIN

INTRODUCTION

1. This annex to the Level 3 main document explains what is meant by SC Configuration, and the approach taken by the JSC Blueprint in creating a future design state. It defines, in detail, the capabilities and effects that Configuration will enable, and how they fit with the wider aspects of SC Planning, Execution and Performance Management. It will explain the 12 rules of configuration, functions, the configuration model, and provide an example of how the model can be used. Figure 1 shows how Execution fits into the redesign framework used by the Blueprint to transform the JSC.

FIGURE 1: SUPPLY CHAIN CONFIGURATION IS A KEY COMPONENT IN JSC TRANSFORMATION



2. SC configuration[17] is the layout and capabilities of physical components to enable end to end[18] information and materiel flow, and the rules that govern the flow.

3. The purpose of the JSC Blueprint configuration design lever is to ensure that the JSC is configured to allow SC plans to be effectively executed[19].

4. Configuration within the Blueprint is seen as having a number of facets and should be viewed as follows:

a. Configuring a SC is not a discrete activity, but an integral part of planning.

b. Configuration links together planning and execution to achieve coherency.

c. Configuration rules have been defined to structure SC planning.

d. Creating effective configurations will require development of a data set containing details of current capabilities and the effects that they are able to deliver i.e. Planners must understand the capabilities of the resources available to them in order to configure SC that meet the requirements of supporting and supported commanders.

5. The JSC Blueprint has defined an approach to creating appropriate configurations, using 12 configuration rules, and a configuration model that can be applied to any specific situation: Figure 2.

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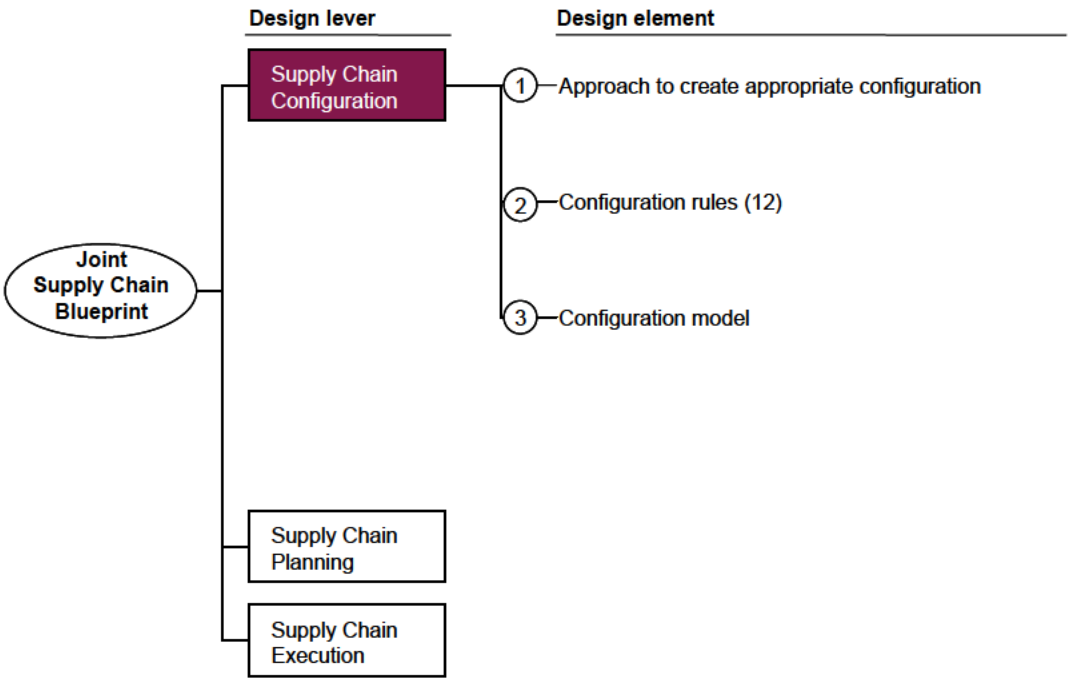
17 For ease of description in the Planning annex, configuration has been divided into 'Transportation' and 'Materiel Handling and Infrastructure' segments.

18 From industry, to the supply chain end user, ships storerooms, A2 Echelon, Forward Operating Base stores. Includes Forward and reverse SC flow.

19 JSC Planning and Execution Processes are detailed in the companion Level 3 annexes to this document.

FIGURE 2: JOINT SUPPLY CHAIN CONFIGURATION CONSISTS OF 3 DESIGN ELEMENTS



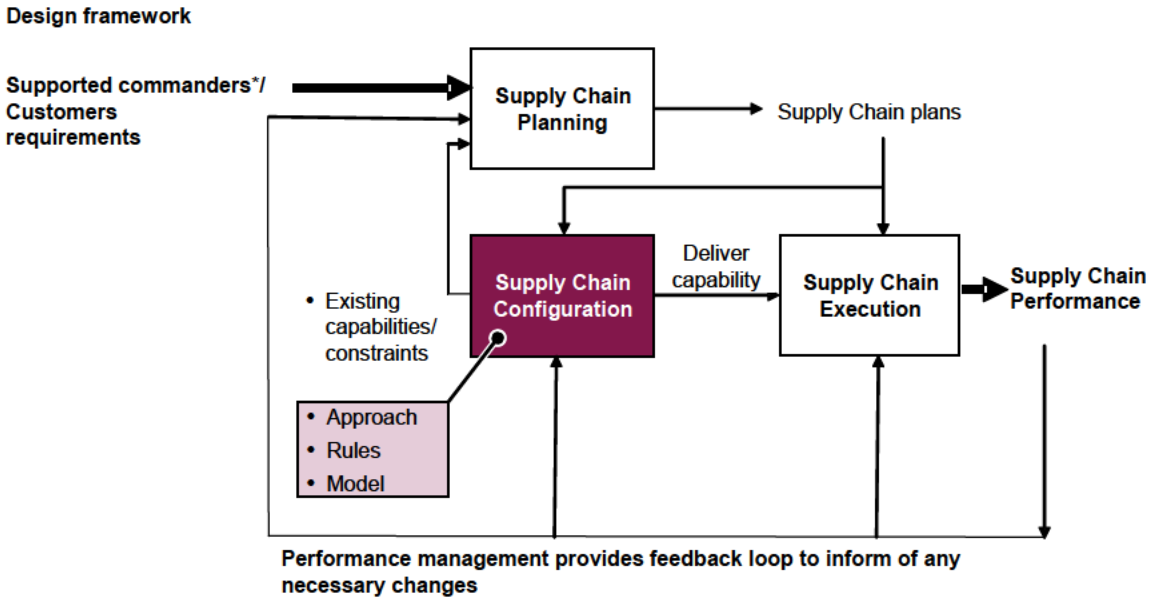
Source: DLTP JS team

6. Defining the appropriate SC configuration to meet customer requirements is an important part of SC planning. During planning, the 12 configuration rules and the configuration model are used to identify the optimum SC configuration, thereby showing the capability required to enable effective application of SC execution processes.

7. The JSC performance management regime provides a feedback loop to inform of any necessary changes in future planning, by identifying a shortfall in SC performance.

8. Figure 3 illustrates the integrated relationship between JSC planning, configuration, execution processes and performance management.

FIGURE 3: JSC PLANNING, CONFIGURATION, EXECUTION PROCESSES AND PERFORMANCE MANAGEMENT WILL BE TOTALLY INTEGRATED



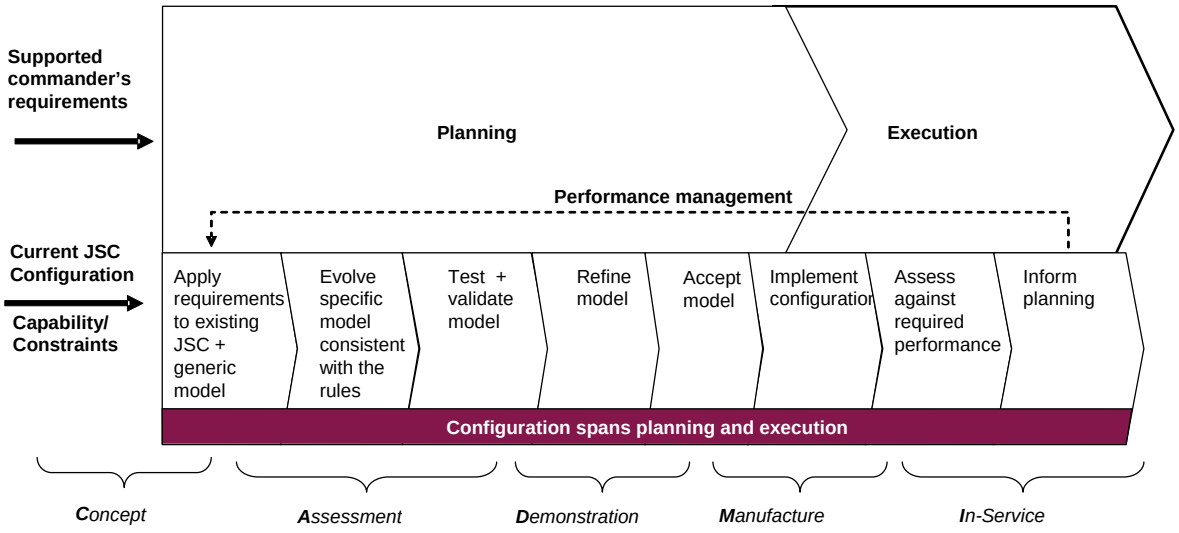
* The term 'supported commander' in this context is to be construe d in a wide sense and includes commanders supported by both core and operational SC

THE SUPPLY CHAIN CONFIGURATION APPROACH

9. The configuration approach, rules and model will enable the JSC to translate the logistic requirements of the supported commander into the configuration and other activities necessary to meet them. Collectively, they describe the lifecycle of planning, implementing and using an SC configuration.

10. Figure 4 illustrates the SC configuration approach.

FIGURE 4: THE CONFIGURATION APPROACH SPANS THE ENTIRE PROCESS OF PLANNING, CONFIGURATION AND EXECUTING A SUPPLY CHAIN



(This is not a pure application of CADMID but is intended as an illustrative overlay)

11. The SC configuration approach is as follows:

a. The supported commander's requirements are fed into the SC planning process via inputs such as directives and SUSTATS.

b. As the SC planning process begins, the current JSC configuration capabilities and constraints are assessed to determine the degree to which it can meet the supported commander's requirements. This will be done by using the logic embedded in the generic configuration model (details to follow later in this document).

c. The planning process derives a specific model that is consistent with the 12 rules of configuration (details to follow later in this document).

d. Once the model reaches a suitable stage of maturity it can be tested and validated by the use of simple modelling techniques, and the application of expert military judgement. The effort required, and the number of iterations to develop a mature model, is dependant on the complexity and constraints of the particular situation.

e. If necessary, the model can be refined, re-tested and re-validated until a satisfactory conclusion is achieved, and the model is accepted.

f. Once the model is accepted, the configuration for the specific SC can be implemented.

g. The configuration will provide the capability required to enable the SC execution processes.

h. The effectiveness of the execution processes will be assessed against required performance levels by means of a robust performance management regime.

i. The performance management information is fed back into planning to inform the planning process. Should performance drop below an agreed level, an assessment will be made as to whether that degradation is due to inappropriate configuration. If this is the case, the configuration will need to be changed. This will be done by reinitiating the configuration approach process.

THE BENEFITS OF THE CONFIGURATION APPROACH

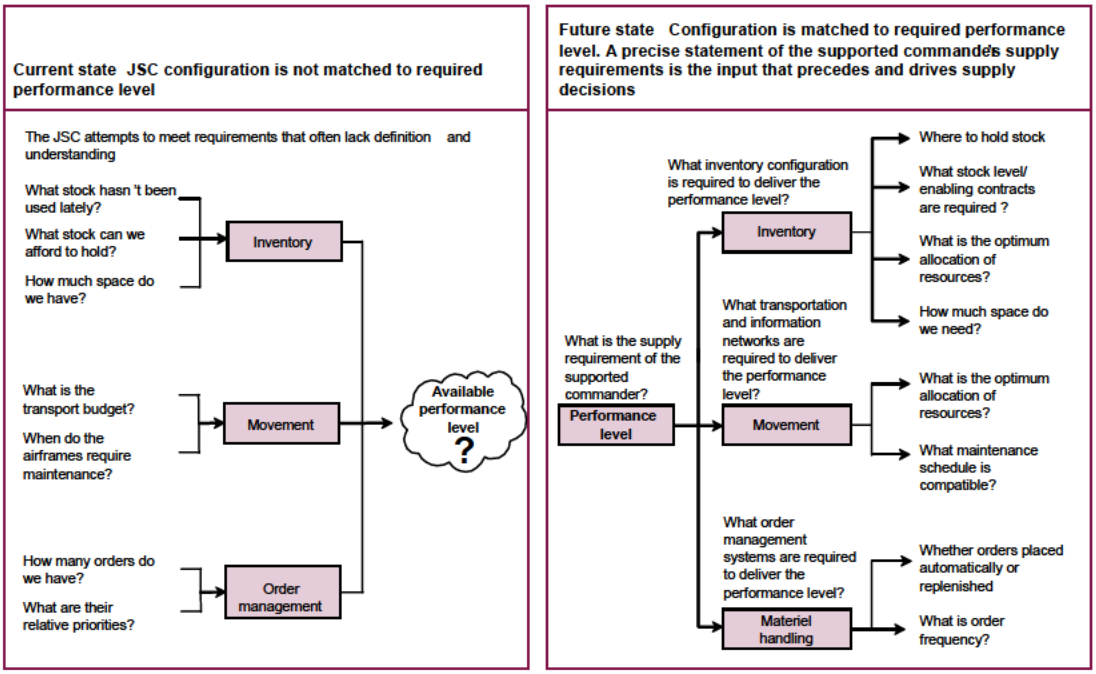
12. Three factors provide the solid foundation on which successful future SC will be built:

a. A clear articulation by the supported commanders of what their requirements are.

b. The ability of the JSC to understand exactly what its current capabilities are, and what additional capabilities are required to meet the needs of the supported commanders.

c. Supported and supporting commanders reach clear agreement on the required level of JSC performance. Figure 5 provides an example of how this will be done.

FIGURE 5: BY ACCURATELY STATING THEIR SUPPLY REQUIREMENTS SUPPORTED COMMANDERS WILL ENABLE THE JSC TO CONFIGURE TO EXACTLY MEET THEIR NEEDS



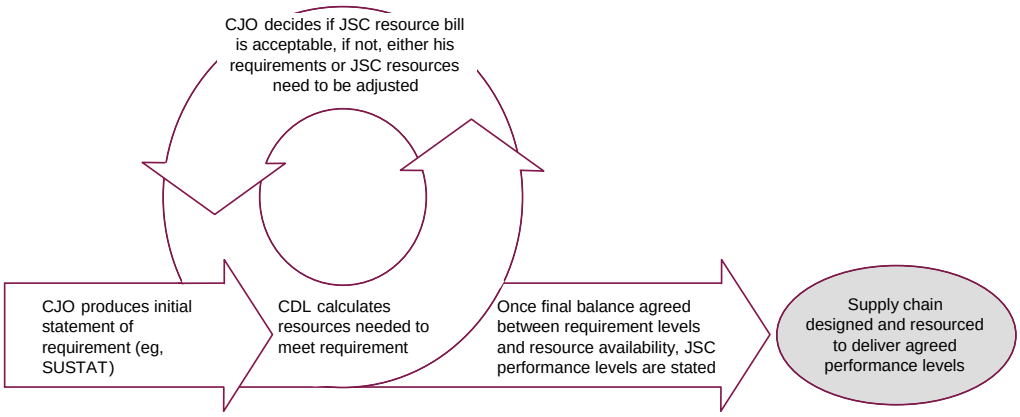
13. The process will ensure that the performance of the JSC is as closely matched to the needs of the supported commander as possible, whilst taking available resources and existing constraints into account. It will then ensure that the JSC continues to perform at a high standard or, if necessary, improves.

14. By thoroughly understanding its own capabilities and constraints, the JSC is better able to inform the supported commander of the levels of performance available prior to deployment commencing. This provides the supported commander with greater clarity of the flexibility and options which are afforded him by existing configuration resources, or if it is necessary to allocate more resources to the JSC in order for it to meet his requirements, eg the size and structure of the in-theatre logistic footprint will have a direct bearing on the services and capabilities it is able to provide.

15. Figure 6 illustrates the iterative process that may be necessary between a supported commander (in this example represented by Chief Joint Operations (CJO)) and the JSC (in this example represented by Chief Defence Logistics (CDL)), to decide on the acceptable balance between required performance levels and necessary JSC resources.

FIGURE 6: FOR A GIVEN OPERATION, THE JSC PERFORMANCE LEVEL IS AGREED, BASED ON AN ITERATIVE PROCESS BETWEEN SUPPORTED COMMANDERS SUPPLY REQUIREMENTS AND AVAILABLE JSC RESOURCES

CJO in negotiation with CDL decides JSC performance levels



16. The more accurately supported commanders state their logistic requirements, the easier it is for the JSC to accurately interpret them, and prepare to provide the level of service required. In the current state, the performance levels required are often not explicitly stated. Inventory managers and planners within the JSC attempt to provide the best possible level of service, but ultimately lack a defining and unifying target. Where required performance levels have not been decided previously, or indeed may still be unclear as an operation mounts, an SC is configured using the resources available in the hope that the level of performance it delivers will be acceptable. It reacts as quickly as possible to improve performance if it is initially unacceptable. The JSC has a responsibility to ensure that the type of information it requires is communicated to the supporting/supported commanders to assist in the provision of useful requirement statements and effective directives.

17. In the future state, by accurately estimating their logistic requirements, supported commanders will enable the JSC to determine the resource bill for meeting the requirement and configure accordingly. It will also provide the detail required to provide accurate articulation of the capability gaps and resulting risks.

18. The earlier the actual or likely requirements of supported commanders are understood, the great the preparation time available to the JSC to ensure that it has the capabilities to generate effective configurations when required to do so.

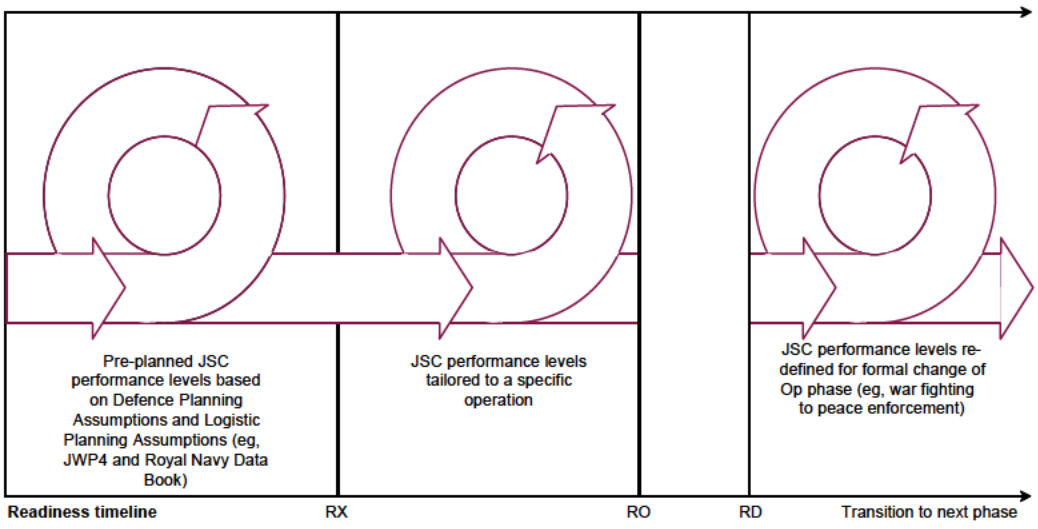
19. Sources such as Defence Planning Assumptions (DPAs), the Joint/Single Service Planning Assumptions and Joint/Single Service Logistic Planning Assumptions (eg JWP4 and the Royal Navy Data Book[20]) inform long-term planning of JSC resources, creating greater preparedness to meet future requirements. Improved mid and short-term planning will ensure that performance level definition is more specific. From its position of greater preparedness the JSC can produce more effective configurations, thereby reducing the risk of logistic drag to future operations.

20. Delivery of the required performance levels drives all activity within the JSC in order to ensure that they are met. The definition of performance levels must be agreed at a high level to ensure that the JSC contributes to the overall intent of the senior supported commander. JSC effort must not become fragmented by attempting to react to a myriad of requirements based on local imperatives. Figure 7 provides an example of how JSC performance levels might be defined against readiness timelines.

FIGURE 7: JSC PERFORMANCE LEVELS SHOULD BE REDEFINED FOR EACH PHASE OF AN OPERATION. CHANGING PERFORMANCE LEVELS IS A FORMAL PROCESS AGREED BY BOTH THE SUPPORTED COMMANDER AND JSC AUTHORITIES

EXAMPLE

JSC performance levels evolve by formal redefinition



21. This will not be a simple 'one-off' task. It is likely to demand a full time, high calibre Operational, Planning and Logistic staff effort to ensure that the JSC configuration plans remain sound and current. The price of failure will be the loss of confidence by users and a return to old practices.

THE 12 RULES OF CONFIGURATION

[20] Greater detail on supply chain planning can be found in the companion document: JSC Blueprint – Level 3 Annex: Planning.

22. The 12 rules of configuration (Figure 8) were created to enable JSC planning to create effective configurations. They are focused on the needs of the supported commander but also have general application. As the specific configuration model evolves, it is checked against all 12 rules to ensure consistency. Only when an evolving model has achieved sufficient consistency will it move forward to the 'testing and validation' stage.

23. The Rules are explicit in their intent, but to add further clarity, a brief explanation is given for each.

a. **Rule 1:** Configuration must enable effective execution (including surge) of the supported commander's plan. This rule states the fundamental purpose of JSC configuration, which is to enable a supported commander to effectively execute his plan, ideally with minimum constraint and maximum flexibility. As well as considering the 12 Rules of configuration, planners incorporate other appropriate elements of logistic policy and doctrine.

b. **Rule 2:** JSC operational resilience and footprint (including inventory levels) must be acceptable to the supported commander. Implicit within this rule is the need for IPTs developing CLS solutions[21], to ensure that in terms of operational resilience and footprint they are deemed acceptable by the supported commander. Adherence to guidance provided by the SSE and emerging policy on the 'Purple Gate' (JSC entry/exit point) will assist IPTs in this matter. The Defence SC must be able to accurately interpret the implications of proposed supply solutions in order to advise both the IPTs and General Staff planners. The use of the Blueprint configuration model and the planning profiles detailed in the companion Planning Annex are designed to assist in evaluating of CLS supply solutions. This rule may lead to SC solutions that do not entirely follow commercial principles for efficiency and effectiveness, but in the military environment this is of secondary importance to operational effectiveness. By using the Configuration model and the planning profiles detailed in the companion Planning Annex, the size and shape of the 'footprint' (which will encompass the inventory level) required to support the force elements involved in a given undertaking will be established. The level of operational resilience can also be determined. CLS arrangements affecting configuration, including the 'Purple Gate' entry and exit points to and from the JSC, will need to be worked into these proposals. However, the proposed configuration must be acceptable to the supported commander. Through doing so, the primacy of operational effectiveness as a driver of the JSC in the Forward area is recognised.

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21 Includes IPTs responsible for designing support solutions, and those with an 'in life' inventory management role.

FIGURE 8: 12 RULES OF CONFIGURATION

1. Configuration must enable effective execution (including surge) of the supported commander's plan.	7. Transport handling capabilities manpower and scheduling must be matched to required flow rates which must not exceed JSC capacity.
2. Joint Supply Chain (JSC) operational resilience and footprint (including inventory levels) must be acceptable to the supported Commander.	8. Instances of material handling, cross loading and transhipment are to be minimised.
3. Configuration must enable accountability.	9. Inventory holding locations and inventory levels must be determined by the need to guarantee delivery to the end-user within agreed timings.
4. Configuration must achieve required forward and Reverse supply chain performance levels. Each node must have the resources and capabilities required to achieve acceptable performance levels.	10. Every support solution (including CLS) must interface with the JSC at designated nodes, which may be restricted when operational circumstances dictate. Deliveries into the JSC are only permitted at designated nodes.
5. Initial configuration of the JSC should minimise the need for subsequent reconfiguration.	11. Information systems and communication bearers must coherently and resiliently support JSC processes.
6. Functions should be brigaded into single nodes wherever it is appropriate.	12. Individuals involved with the JSC must be trained and competent to support the process.

c. **Rule 3:** Configuration must enable accountability and visibility. Rule 3 moves the concept of achieving visibility beyond the concept of a single demand or item, in order to ensure that an effective performance management (PM) regime is supported and facilitated by SC configuration. It recognises that data gathering and access infrastructure must be part of the JSC configuration. Designing configuration in such a manner will improve PM information flows and increase the responsiveness of the SC. This will in turn provide greater visibility of the areas that need to be adjusted to improve performance. Accountability and visibility will be enabled by information systems which cover:

(1) Inventory at stock-holding points throughout the JSC.

(2) Inventory on the move using consignment and asset tracking [22] systems.

[22] As defined in AAP-35 and STANAG 2184.

d. **Rule 4:** Configuration must enable required forward and Reverse SC performance levels. Each node must have the resources and capabilities required to achieve acceptable performance levels. The future JSC will need to perform equally well when delivering items forward, or returning them back from end user locations, to contribute to sustained readiness and the operational availability of equipment. The JSC can expect to be subject to increasingly demanding performance requirements. The SC Planning and Execution processes detailed in the companion annexes create a common set of processes to enable forward and Reverse SC performance and set appropriate metrics.

e. **Rule 5:** Initial configuration of the JSC should minimise the need for subsequent reconfiguration. Having tested, validated, refined and accepted the JSC configuration, it should be better positioned to deliver the required performance levels immediately, rather than having to be continually adapted to do so. By understanding and considering all details relating to the longer term operational plan, SC planners will be better placed to anticipate what the emerging requirements on the JSC will be. Designing an SC to meet both immediate and future requirements should be foremost in planners' minds, minimising as far as possible the need for short-notice, reactive re-configuration, which invariably has an adverse effect on performance and user confidence.

f. **Rule 6:** Functions should be brigaded into single nodes wherever it is appropriate. JSC functions should be co-located wherever it is logical to do so. Co-location at nodal points reduces distribution times and demand for transport resources. It simplifies C4[23], and can provide benefits in terms of collective protection. The desire to achieve co-location must always be subject to operational dispersion requirements, commensurate with the assessed threat level.

g. **Rule 7:** Transport, materiel handling capabilities, manpower and scheduling must be matched to required flow rates which must not exceed JSC capacity. Coherent planning and correct application of the configuration approach described earlier will ensure that the capacity and capability of the JSC is matched to the requirements placed upon it. Unless the JSC is able to handle required flow rates, backlogs, disruption, confusion and delays will occur and desired performance levels will not be reached. This will incur a compromise on the required operational effects. It is equally important for supported commanders to understand the limitations of the JSC when placing requirements upon it in order to recognise the level of risk being taken and avoid generating unrealistic expectations. A desire to increase the load placed on the JSC must be accompanied by the acceptance that this will almost inevitably be accompanied by a bill for additional resources if performance levels are to be maintained.

h. **Rule 8:** Instances of materiel handling, cross-loading and trans-shipment are to be minimised. In principle, every instance of materiel handling, cross-loading and trans-shipment should be viewed as a disruption to the flow within the JSC. Reality dictates that it is rarely possible to satisfy a demand in one, seamless delivery using the same vehicle. Therefore, it is to be expected that there will be a need to transfer items from one delivery vehicle or mode of transport to another, often more than

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[23] C4 – Command, Control, Communications, Computers (JWP 0.01.1, Joint Services Glossary).

once. However, planners should wherever possible avoid disturbing materiel flow. Changes in materiel flow may well involve changes in process responsibility. Once again, these instances should be minimised as they have proven to be one of the main contributors to poor information flows (eg consignment tracking inaccuracies), confused accountability, and a general reduction in JSC performance levels.

i. **Rule 9:** Inventory holding locations and inventory levels must be determined by the need to guarantee delivery to the end user within agreed timings. The Blueprint Planning annex describes how inventory managers will be able to understand better where to locate their inventory, and what levels to hold by implementing the Blueprint Planning model. Using the four key activities at the heart of SC planning:

(1) Define requirements.

(2) Plan inventory.

(3) Plan transportation.

(4) Plan material handling and infrastructure.

The inventory manager should gain an appreciation of how soon and in what quantities end-users are likely to need a commodity, and how quickly the JSC will be able to deliver it. Armed with this information, the inventory manager can calculate locations (subject to operational constraints) and stock levels in order to provide the best possible level of service to the supported commander.

j. **Rule 10:** Every support solution (including CLS) must interface with the JSC at designated nodes, which may be restricted when operational circumstances dictate. Deliveries into the JSC are only permitted at designated nodes. The intent of Rule 10 is that any interface between contractor and JSC will be planned, correctly managed, and will avoid causing any disruption to SC flow. Interfaces will only occur at designated nodes in the JSC, ie specified by the JSC, which must have the appropriate resources and capabilities to perform the task. The number and location of designated nodes may be restricted when the operational situation dictates it. CLS solutions must have this option factored into their planning to avoid being caught off-balance should such a situation arise. It will be necessary for an IPT setting up a supply solution to liaise with DSCS to determine options for entry/exit points for various operational situations. The 'Purple Gate' policy has been developed by DSCS as a practical application of this configuration rule[24]. Those responsible for creating CLS supply solutions must engage with DSCS to ensure coherence with 'Purple Gate' and SSE direction. Conversely momentum must be maintained to ensure DSCS engagement with IPTs.

k. **Rule 11:** Information systems and communication bearers must coherently and resiliently support JSC processes. The requirement for coherent and resilient logistic IS and communication bearers lies at the heart of JSC transformation. The availability of the right information in the right place at the right time will enable the informed decision making on inventory location and the ability to move it to the point

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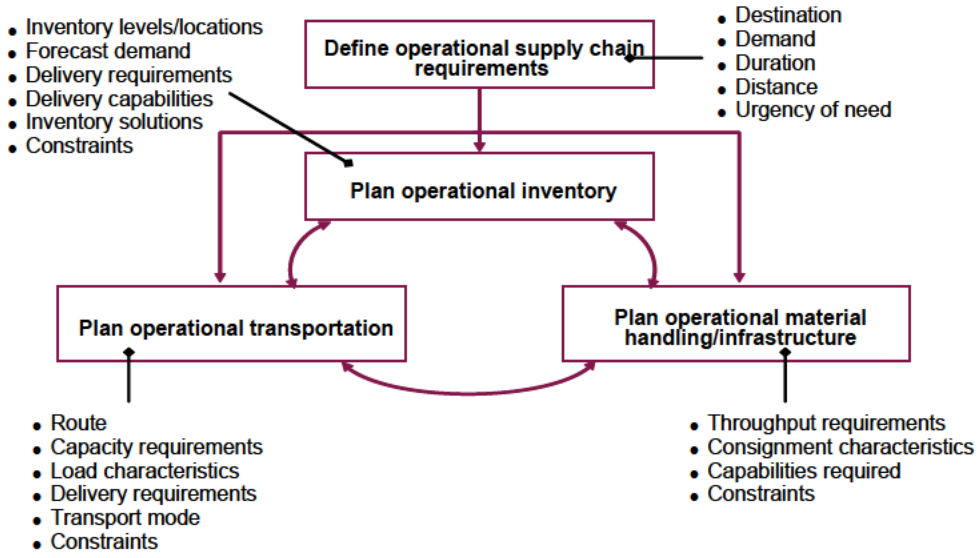
[24] JSP 886

of need in a timely manner. The D Log Information Defence Logistics Information Strategy[25] provides the vision and overarching strategic direction for Defence logistics information and the technology that delivers it. As the development of a true Network Enabled Capability[26] continues, it is apparent that it will bring the same step change benefits to JSC performance as it will everywhere else across Defence and the JSC must aim to be in the vanguard of this development.

l. **Rule 12:** Individuals involved with the JSC must be trained and competent to support the process. Appropriately trained and competent people enable the process to work. In future, DSCS as formal owners of the JSC Blueprint will be involved in the training needs analysis process, to ensure that the appropriately skilled people are available to perform the tasks expected of them.

FIGURE 9: THERE ARE 4 KEY ACTIVITIES AT THE HEART OF ALL LEVELS OF SUPPLY CHAIN PLANNING



THE SUPPLY CHAIN CONFIGURATION MODEL

24. The configuration model is the final part of the Blueprint configuration toolset. This section explains the purpose of the model, functions contained within it, and how it might be applied.

THE PURPOSE OF THE SUPPLY CHAIN CONFIGURATION MODEL

25. The purpose of the model is to provide SC planners with a logical, formalised method of viewing configuration in order to:

a. Enable optimised execution of the JSC.

[25] D Log Info 1/1 dated 1 March 2005, Defence Logistics Information Strategy (needs to be updated. 2* Version now on circ).
[26] JSP 777, edition 1, Network Enabled Capability.

b. Provide the ability to test plans and proposed supply solutions.

c. Determine JSC capability requirements during planning.

d. Better articulate SC C4 requirements.

e. Standardise interfaces and capability requirements.

f. Provide a common language to assist in the description and planning of the JSC.

THE 8 FUNCTIONS CONTAINED IN THE CONFIGURATION MODEL

26. The model covers the 8 functions that can be contained in any SC configuration. These are listed and defined at Figure 10.

FIGURE 10: A CONFIGURATION MODEL CAN CONTAIN UP TO 8 DIFFERENT FUNCTIONS

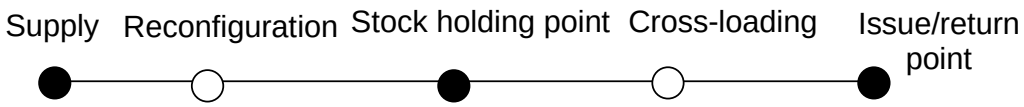
Function	Definition
Supply:	• Source of materiel/provision of reverse JSC items
JSC entry/exit point:	• Point where materiel enters or leaves the Joint supply chain (JSC)
Stock holding point:	• A holding point in the JSC where stock is available for use, consumption or sale
Reconfiguration:	• Reconfigure (consignments): Configure again or differently
Cross-loading:	• Moving consignments, packages or items from one transport asset to another of the same mode
Transshipment:	• Transfer from one form of transport to another
Movement	• The activity involved in the change in location of equipment, personnel or stocks as part of a military operation*
Issue/return:	• Point at which materiel is issued to, or returned from use.

Functions help to build the configuration model

* NATO MC319/1

27. An SC will always consist of the following 3 out of the 8 possible functions:

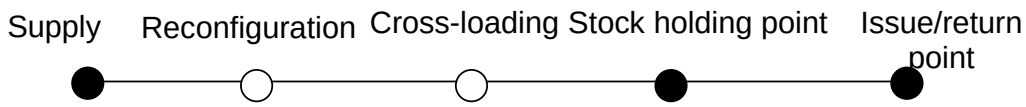
28. As complexity and the length of lines of communication increase, it may be necessary to include some or all of the remaining 5 functions:



29. The application of Configuration Rule 8 will seek to minimise the use of optional functions for the reasons given when describing that rule.

30. Application of configuration Rule 6 sees functions brigaded together wherever it is logical to do so:

31. It may be necessary for functions to occur more than once:



32. Figure 11 provides some further examples of how the model is to be applied to determine various SC configuration.

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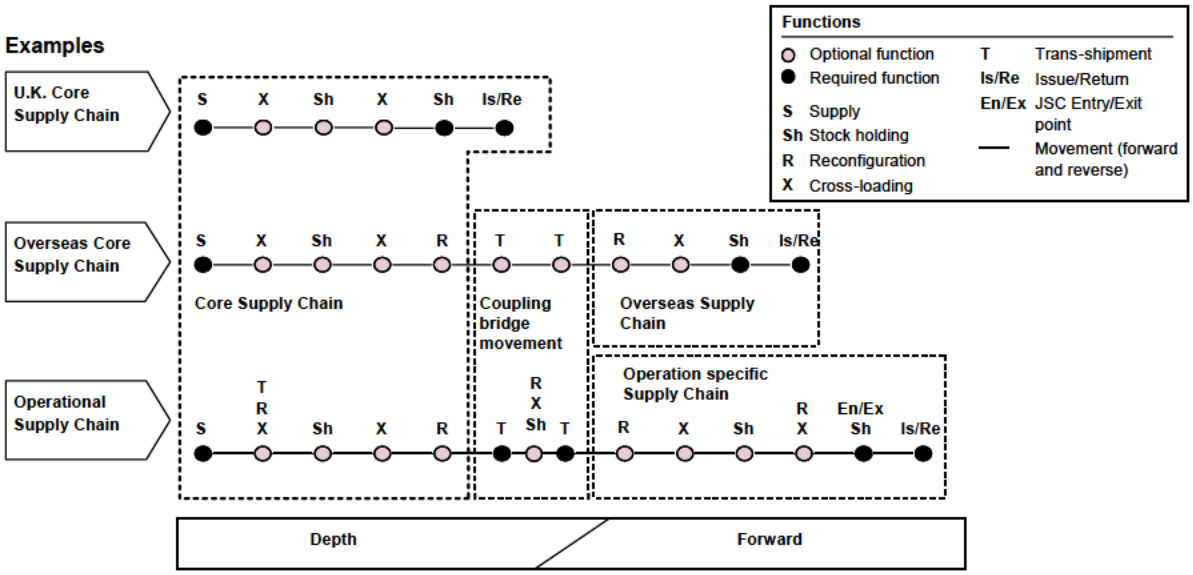
[27] Stock holding point includes the stock held by the end-user regardless as to how long it is held before use or consumption.

FIGURE 11: THE CONFIGURATION MODEL AND EXAMPLES OF ITS APPLICATION



Source: DLTP JS team

THE MODEL ALSO CONTAINS CONFIGURATION COMPONENTS

33. At each node in the SC configuration (eg a node responsible for performing a stock holding function), it is necessary to describe the resources needed to provide the required capability. In the model these are called Configuration components:

a. Infrastructure.

b. Equipment.

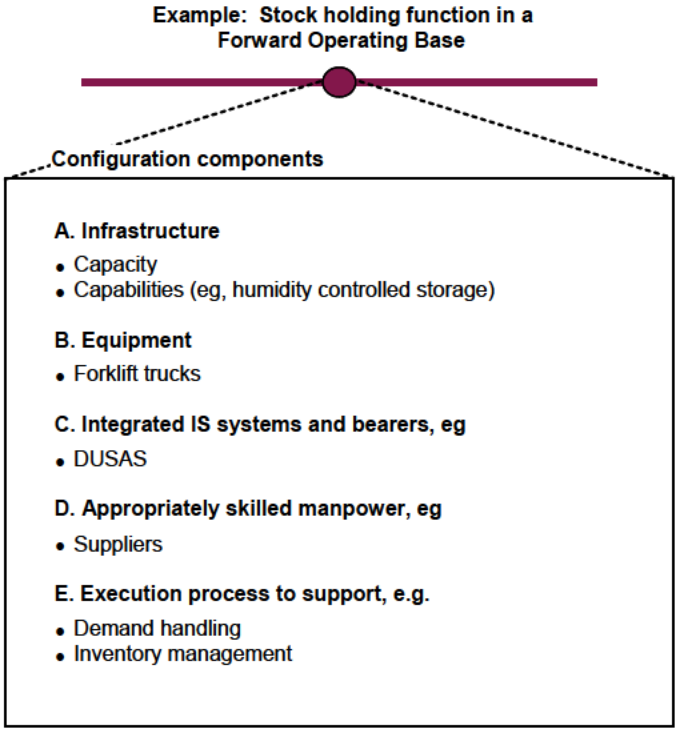
c. Integrated IS and communication bearers.

d. Appropriately skilled manpower.

e. The execution processes that the node is required to support.

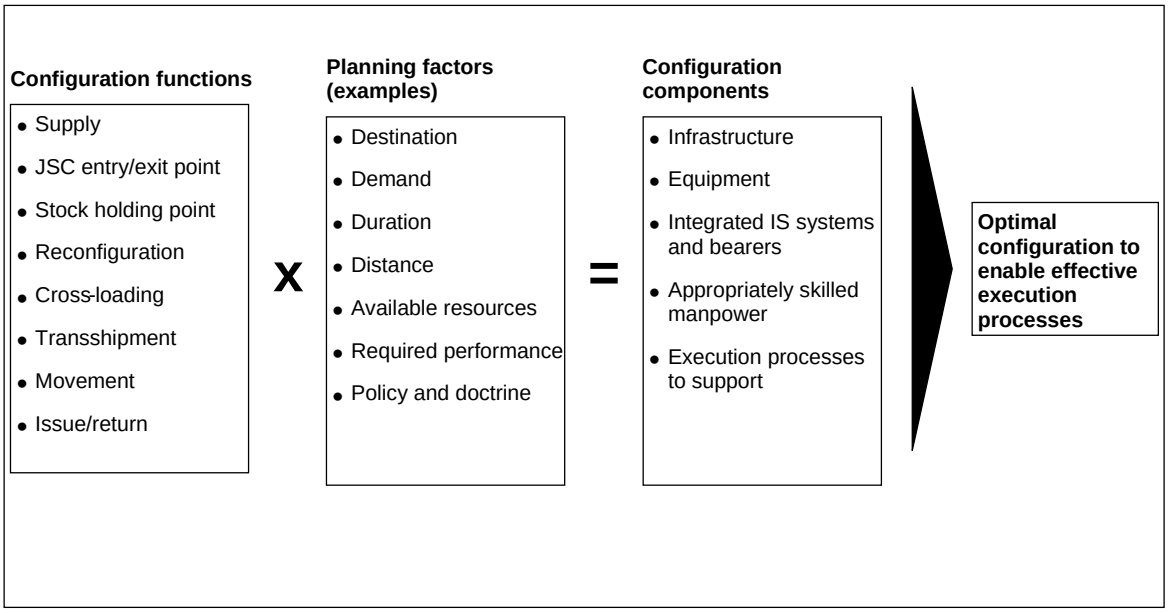
34. Figure 12 provides examples of the configuration components that may be found in an RAF Forward Operating Base.

FIGURE 12: CONFIGURATION COMPONENTS



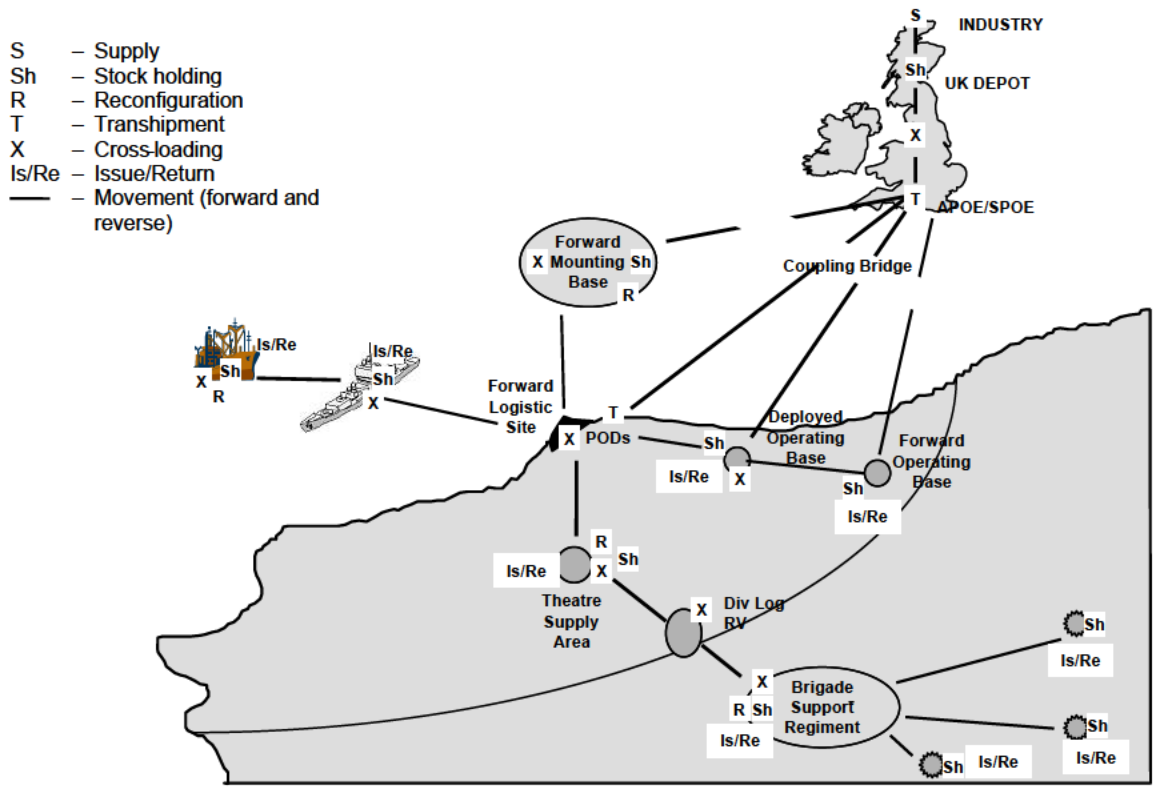
35. To determine precisely what is required within each of the components, planners must evaluate the 8 configuration functions against all known planning factors as depicted in Figure 13. The outcome will be a configuration model capable of supporting the JSC execution processes. Further testing, validation and refinement will refine the model, and give the justification necessary to enable the proposed configuration to be formally accepted by the supported commander, prior to actual implementation.

FIGURE 13: EVALUATING CONFIGURATION FUNCTIONS AGAINST PLANNING FACTORS WILL DEFINE THE NECESSARY CONFIGURATION COMPONENTS



36. A pictorial example of the model is provided at Figure 14.

FIGURE 14: EXAMPLE CONFIGURATION MODEL



SUMMARY

37. This annex has described the purpose of SC configuration i.e. to ensure SC planning creates the configuration capabilities required to enable effective execution of the JSC.

38. It has described the 3 main aspects of configuration:

a. Configuration approach.

b. The 12 Rules of configuration.

c. Configuration model.

39. It has described how they fit together with the other main design features of the JSC Blueprint:

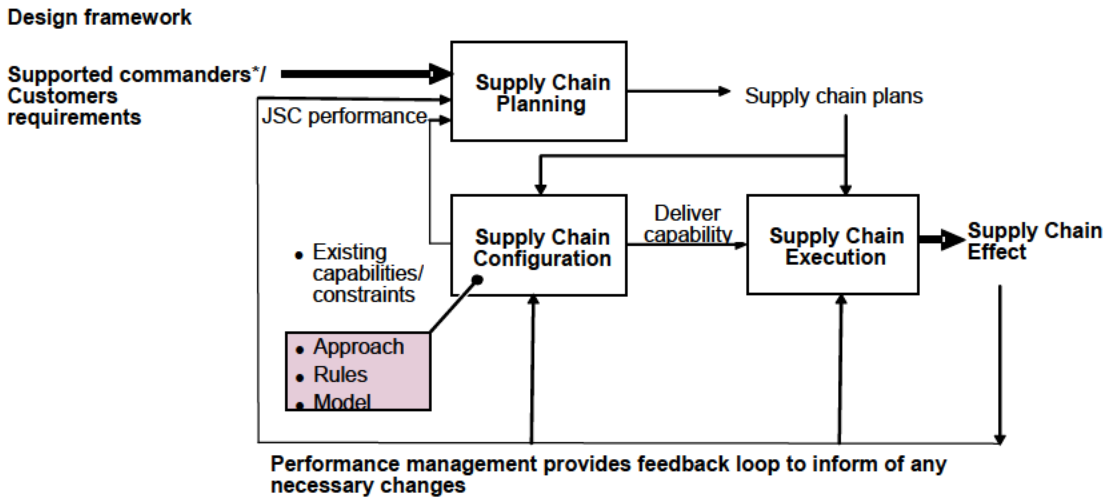
a. SC planning.

b. SC execution processes.

c. Performance management.

40. SC configuration is an essential part of achieving effective JSC performance. It provides the necessary lay-down of resources required to deliver JSC plans and to execute against required performance levels. Making improvements solely in this area will achieve benefits; however, maximum benefit can only be realised by improving all 3 of the core design levers and imposing and effective performance management regime.

FIGURE 15: ALL 3 CORE DESIGN LEVERS MUST BE IMPROVED TO DELIVER OPTIMUM JSC PERFORMANCE



41. Each of the core design levers is designed to compliment the others. For this reason it is essential that all are developed in order to drive the transformation Defence logistics.

ANNEX C
(Introduced at Paragraph 1)

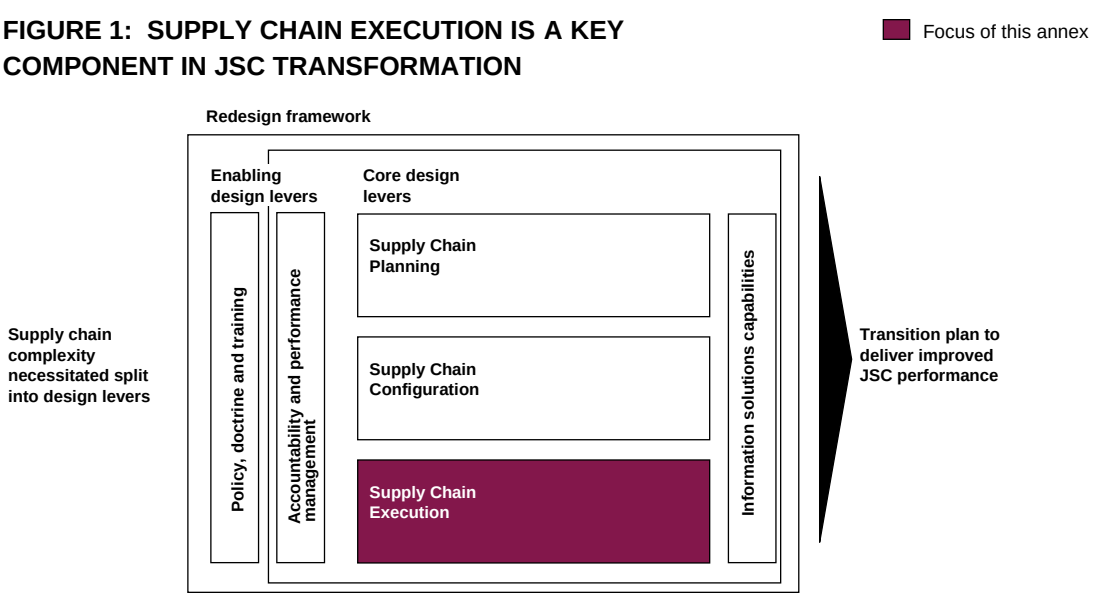
EXECUTING THE JOINT SUPPLY CHAIN

INTRODUCTION

1. This annex to the Level 3 main document explains what is meant by SC Execution Processes, and the approach taken by the JSC Blueprint in creating a future design state. It defines, in detail, the capabilities and effects that each process must deliver, and how they fit not just with the other processes, but with the wider aspects of SC planning, configuration and performance management. Figure 1 shows how Execution fits into the redesign framework used by the Blueprint to transform the JSC.

2. The JSC Execution Processes encapsulate the activities required to ensure effective SC performance. Each process is described and the capabilities and effects required to ensure successful prosecution of the process are listed.

FIGURE 1: SUPPLY CHAIN EXECUTION IS A KEY COMPONENT IN JSC TRANSFORMATION

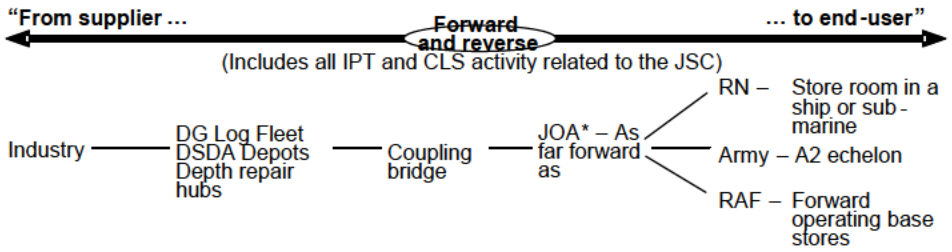


WHAT ARE THE SUPPLY CHAIN EXECUTION PROCESSES?

3. Execution Processes are the day-to-day activities involved in operating the JSC. Figure 2 illustrates the parts of the JSC that were deemed 'In Scope' for the Blueprint work. Of note is the fact that the work covers both Forward and Reverse activity, all IPTs associated with inventory management and CLS activity related to the JSC.

4. The Blueprint design process identifies the essential JSC Execution processes and a further 3 additional capabilities that are applicable to all processes (Figure 3). Details of the above are provided in later sections of this annex.

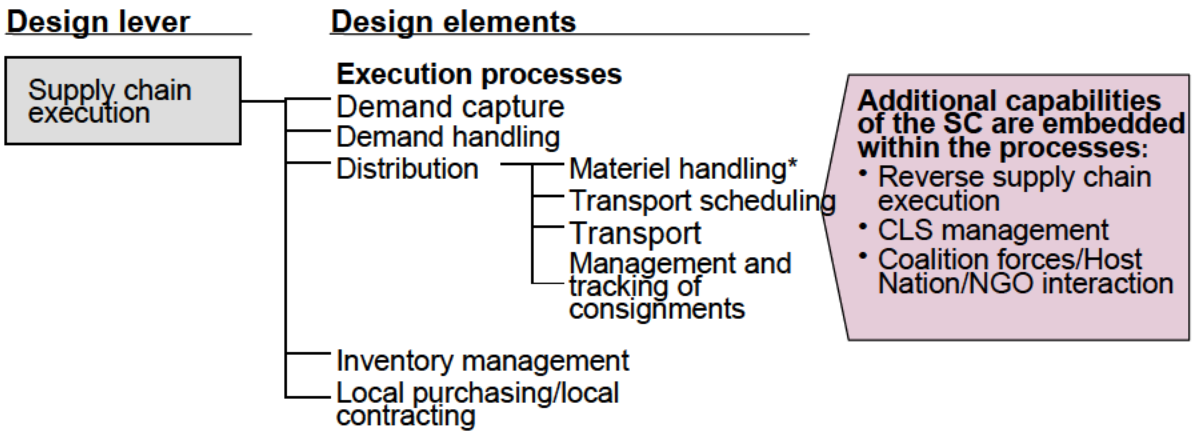
FIGURE 2: THE SCOPE OF THE EXECUTION PROCESSES ACROSS THE JSC



* Joint Operating Area

FIGURE 3: THE SC EXECUTION LEVER STATES THE PROCESSES AND CAPABILITIES REQUIRED BY THE FUTURE JSC

Blueprint Design Model



* Material handling includes inbound, outbound and storage activity at inventory holding, crossdocking, and loading/unloading points
Source: DLTP JS team

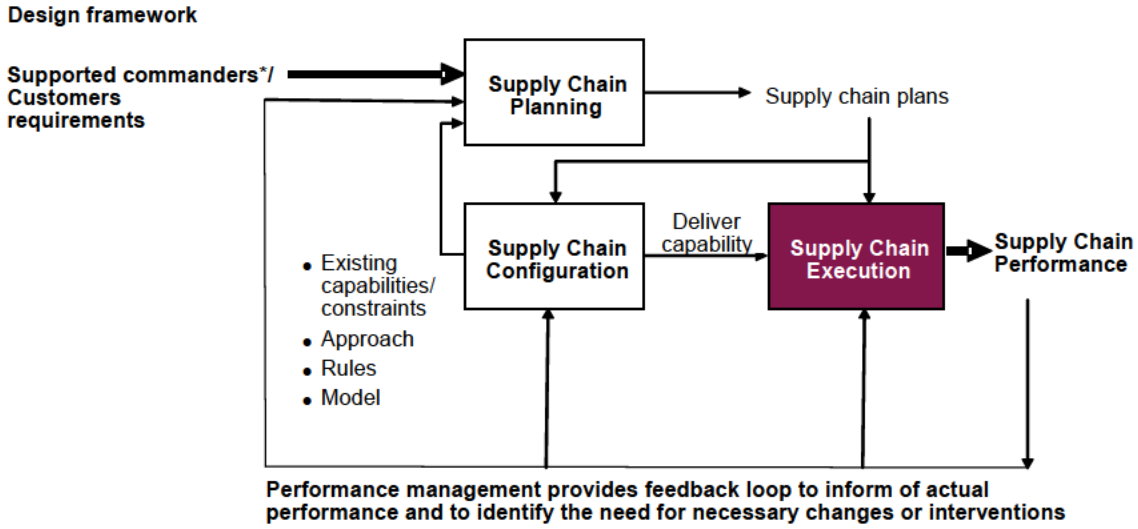
HOW THE EXECUTION PROCESSES FIT INTO THE BLUEPRINT DESIGN

5. The SC planning process takes the requirements of the supporting and supported commanders[28] to produces SC plans. The Planners will use the Approach, Rules and Model described in the Blueprint Configuration Annex. This ensures that the physical layout of the JSC (See Annex B) provides the capability required for effective execution of the SC processes to deliver the required performance.

6. SC planning also defines the performance levels that the Execution Processes must achieve. The performance management regime allows end-to-end performance levels to be monitored and, through feedback, informs the planning process of any adjustments required. Figure 4 illustrates the relationship between the Blueprint core design levers.

7. The Execution processes themselves are shown in overview at Figure 5. Essentially they provide the **'How'** of delivering JSC capability and are explained in this Annex.

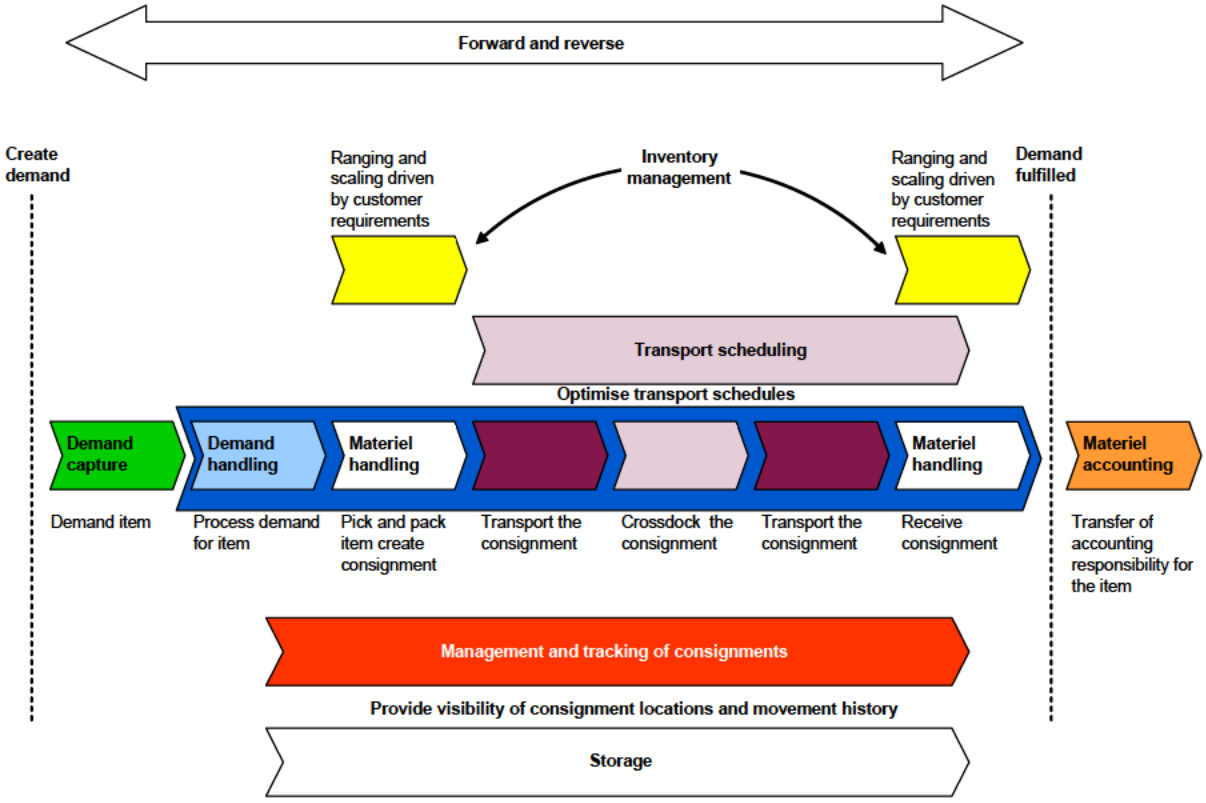
FIGURE 4: SUPPLY CHAIN EXECUTION PROCESSES DELIVER THE PERFORMANCE NEEDED TO MEET COMMANDERS' REQUIREMENTS



* The term 'supported commander' in this context is to be construed in a wide sense and includes commanders supported by both core and operational supply chains

[28] The term 'supported commander' in this context is to be construed in a wide sense and includes commanders supported by both core and operational SC.

FIGURE 5: FUTURE STATE JSC EXECUTION PROCESSES



DEMAND CAPTURE

8. **Definition**. Demand – a request for materiel submitted by a demanding unit to the supply chain [29].

9. **Intent**. To realise the following benefits:

a. Easier processes for the end-user.

b. Reduced opportunity for error.

c. Reduced time required to create a demand.

d. Improved visibility of demands to the JSC.

e. The Demanding authority will have greater ability to influence consignment and delivery characteristics.

f. Inventory managers will obtain greater visibility of materiel consumption.

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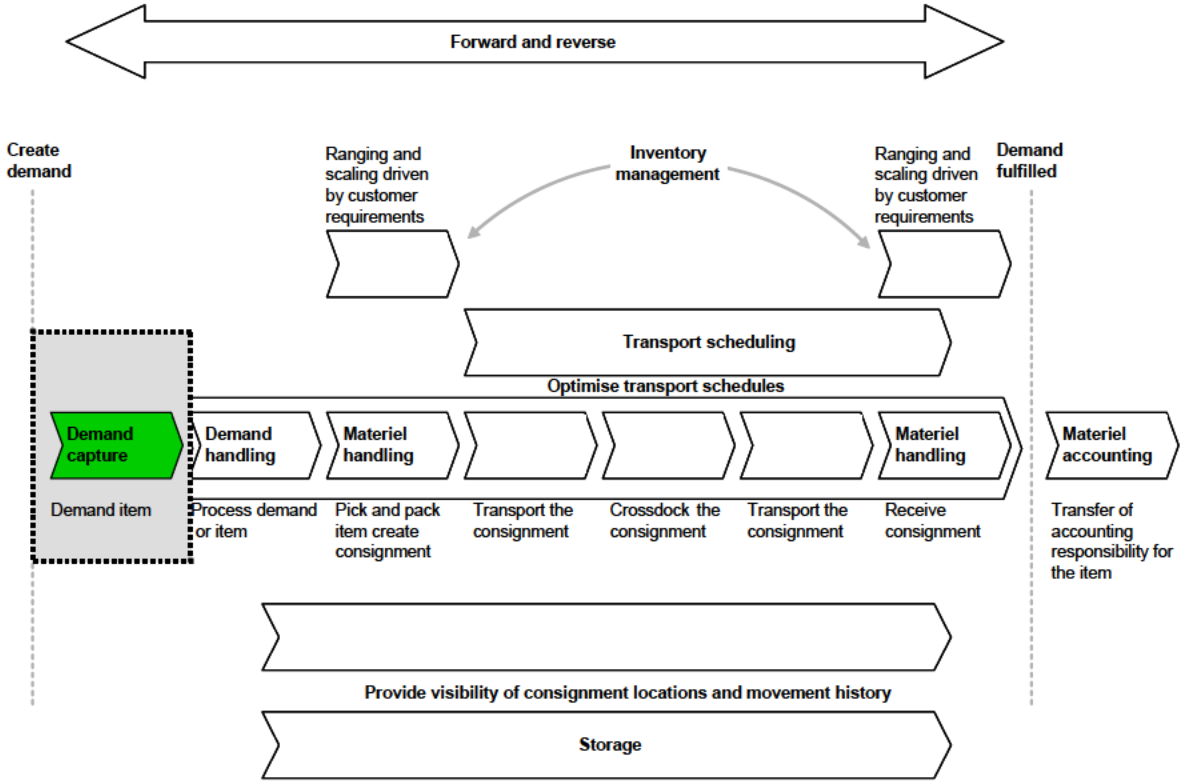
[29] Source JSP 886.

g. Simplify overall training effort by adopting Joint solutions wherever appropriate.

h. Minimise amount of paper-based work.

Figure 6 illustrates where Demand Capture fits into the overall JSC execution processes.

FIGURE 6: DEMAND CAPTURE PROCESSES



10. **Characteristics**. The future JSC must have demand capture processes that provide the following capabilities:

a. A common process across all environments for operational and non-operational use. Whenever possible this process alignment should be used as a driver to harmonise IS solutions.

b. Depending on the situation, the ability to state unambiguous demand priorities by either:

(1) A single set of criteria.

or

(2) A coherent and complimentary set of criteria.

c. The use of a standard demand format across all environments.

d. Mobile demand capturing as close to end-user as possible (eg automated transfer of data from Engineering Management Systems) to ease data entry and reduce error.

e. Logistic IS will be the default for demand capture and transmission, with paper-based solutions only used as backup or to meet operational requirements where necessary.

f. The ability to capture additional information over and above the basic demand data, in accordance with JSP 886 (Joint Instruction on this area is still to be produced. Current single Service instructions can be found in Volume 11 – RN, Volume 12 – Army, Volume 13 – RAF).

g. The ability to capture additional information, over and above the basic demand data:

(1) The reason for a demand to assist with determining eligibility, and to identify consumption drivers.

(2) To request specific consignment configuration (eg spare part in same box as necessary gasket and nuts) to optimise for the end-user's requirements.

(3) To specify packing sequence desired by user (eg what is case loaded at the front/back of a container).

(4) To state delivery sequence (eg if a consignment has 5 cases, which does the workshop want to arrive first?).

(5) To generate an availability message showing local inventory availability.

(6) Identify alternatives and higher modification state of demanded item. This must be available when end-user places demand.

(7) Required Delivery Date (RDD) feasibility message.

(8) Ability to satisfy security requirements for classified and caveat materiel.

h. The demand capture system must generate an availability message on or after the time of placing a demand, although not all of the criteria will need to be covered in the same timeframe. Visibility proportional to needs of user/role:

(1) Local inventory visibility to Operational end-user.

(2) Global inventory visibility at appropriate level of JSC (not Operational end-user). Global inventory visibility will include MOD and MOD owned inventory at industry/CLS sites.

(3) Demand data availability as up to date as operationally justified (subject to technical feasibility and affordability).

(4) Volumetric data.

i. There will be four basic types of demand:

(1) Replenishment demand (unit level and higher).

(2) High Priority specific demand (end-user and higher).

(3) Task issue or initial outfit demand (eg to Consolidated Allowance List (CAL)).

(4) Recovery/disposal demand.

j. The ability to create automatic replenishment orders at unit level by using a number of options:

(1) Parameters set by inventory manager (IPT or CLS) as a result of configuration and standing Sustainability requirements.

(2) Parameters set by inventory manager can be adjusted locally when authorised by inventory manager, FLC, Theatre Comd.

(3) Replenishment demand parameters set locally (eg consumables).

(4) Automatic parameter adjustment based on logistics support analysis (eg truck size, storage constraints on board a ship).

k. Users in operational or non-operational settings must have the ability to trigger customer demand.

l. There must be the ability to initiate task issues centrally.

m. Recover/disposal process (centrally initiated pull process):

(1) The ability for an Inventory Manager (IM) to create recovery/disposal demands for excess inventory held by units, based on rules (trigger parameters set by IM).

(2) The ability to locally create recovery demands for repairables (trigger parameters set locally).

n. Recovery/disposal process (locally triggered push process) triggered by end-user/log staff (observing existing priority rules).

o. There must be a robust and coherent process/IS interface between JSC management and engineering/asset management for reasons of Task Organisation, reaction to FET/ORBAT changes, configuration control and Whole Fleet Management processes:

(1) JSC system must be able to receive orders from on-board platform monitoring systems (i.e. Health and Usage Monitoring Systems (HUMS)) for high value equipment (eg JSF/JCA/FRES etc).

(2) There must be the ability for spare part demand to be linked to specific equipment by UID in which case the final delivery destination is that specific equipment.

DEMAND HANDLING

11. **Definition**. Demand Handling is the process through which a 'captured demand' is translated into materiel in transit from its point of origin. It can be viewed on two levels:

a. The detailed steps involved in taking the demand from the end of 'Demand Capture', up to the generation of the initial materiel handling activity required to pick the item: see Figure 7.

b. The continued process of C2 information, initiated with Demand Capture, up to the point at which the item is received by the consignee: see Figure 7. This is to enable effective control over the sub-processes involved and outlined below.

12. **Intent**. To realise the following benefits:

a. Improved visibility of demand status.

b. Optimised use of inventory to satisfy demands.

c. More accurate forecasting of delivery dates.

d. Improved control over material handling activity.

e. More effective management of items moving to and from the end-user.

13. **Characteristics**. The future JSC must have Demand Handling processes that provide the following capabilities:

a. Demand status to be transparent:

(1) Visibility: appropriate visibility to meet requirement at local inventory holding point.

(2) If locally unavailable, Forecast Delivery Date (FDD) for delivery through SC. FDD based on current position in SC and capacity of available SC delivery assets.

(3) Demand confirmation with information on NSN supercession or quantity changes.

(4) End-user ability to accept/reject alternative change as there may be circumstances where change may create problems.

(5) Actual issue date.

(6) Actual location.

(7) Consignment contents and location (accessible for logisticians and E&AM specialist/systems at unit level and above only).

(8) Message to demanding unit in case RDD/LDD (Latest Date for Delivery (Sea only)) will not be met/not likely to be met.

(9) Message to advise on new FDD.

b. Inventory allocation from nearest inventory holding location subject to Command approval (established by C2 arrangements/protocols):

(1) Demand fulfilment from nearest inventory holding point, if not available within specified RDD.

(2) Ability to escalate demand to higher SC level until RDD/CWT can be met. This will require supporting justification.

(3) If demand escalation is not successful, delivery request is automatically routed to the nearest unit where the item is available.

(4) Denial of a request by the inventory holding unit flags the demand up to the next higher decision making level. Acceptance of request triggers the delivery to demanding unit and replenishment demand for holding (Sea – MATCONOFF route).

(5) Environment specific rules to determine nearest SC node to fulfil demand from (eg, Sea will need to be able to switch nodes on/off as ships move locations).

(6) Appropriate authority to clear request for other unit's inventory.

(7) Oversight/policing of inventory demands to ensure appropriate behaviour and use of the SC (eg a high level of denials would prompt investigation into the reasons).

(8) Ability to evaluate alternatives for fulfilling customer demand.

(9) Ability to forecast delivery data (Logistic staffs/IMs only).

(10) Automated ability to resort to local purchasing resources if RDD cannot be met from centrally purchased inventory, the operational imperative exists and the appropriate item can be obtained.

c. Reservation of allocated inventory under a set of rules (eg to meet the higher commanders need over that of an individual unit).

d. Ability to set reserves against planned inventory (Logistic staff only).

e. Demand urgency is managed according to RDD versus current date ie does anything extraordinary need to be done at the current time to ensure the demand meets its RDD?

f. Delivery date for each SC node determined by reverse scheduling from RDD based on Supply Chain Pipeline Time (SCPT) for each SC leg, ie using dynamic SCPT (taking destination and transport mode into account). Note: security of unit location must be maintained.

g. Notification of demand completion upon receiving items:

(1) Date and time of delivery.

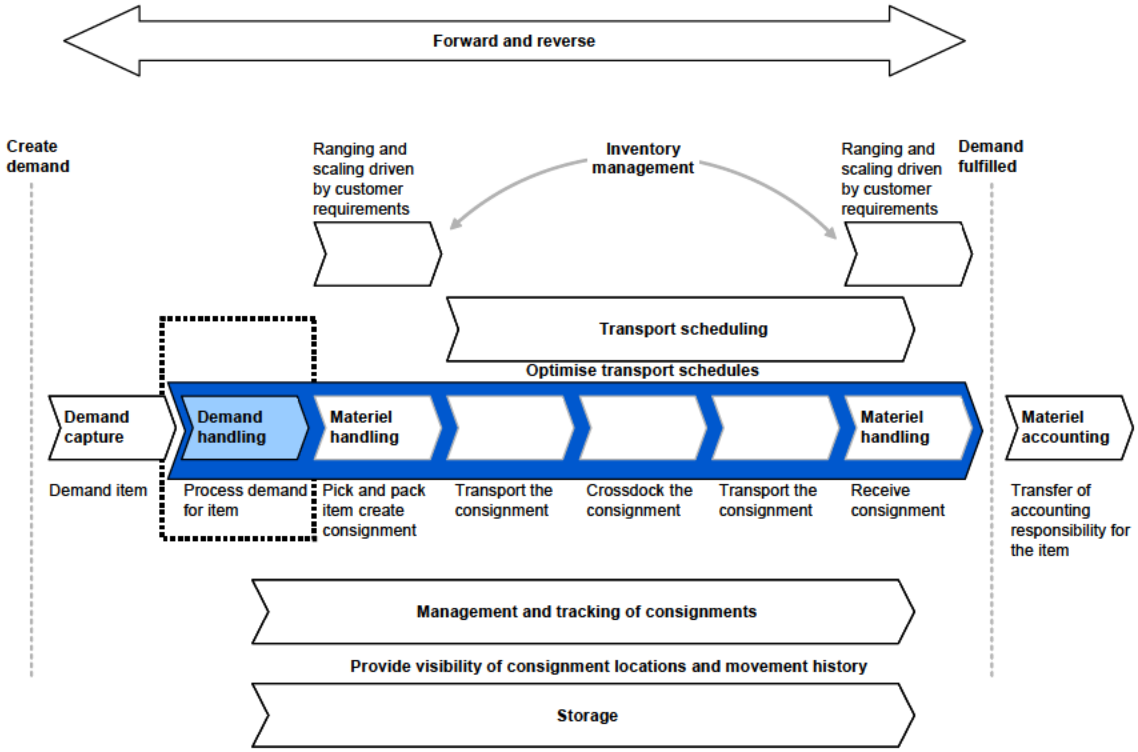
(2) Details of person receiving.

(3) A discrepancy report is automatically raised when appropriate.

(4) Receipting action automatically updates demands status.

h. Ability to interface to/from demand processing systems into engineering and asset management systems (MOD and industry upload of demand/ download of demand/consignment data).

FIGURE 7: DEMAND HANDLING PROCESSES



MATERIEL HANDLING

14. **Definition**. Materiel handling is defined as physical activity, including picking, pre-issue inspection, packing (including labelling, creating/amending consignment tracking information), configuring a consignment and preparing it for distribution, intermediate

storage, together with similar activity (unpacking etc) at the final destination. Materiel handling is therefore present at every JSC node.

15. Materiel handling is integral to all three Blueprint core design elements: planning, configuration and execution. Within the JSC execution processes it is sub-divided into three distinct, but coherent areas, recognising that there is a degree of overlap between them:

a. Inbound materiel handling (when arriving at a node).

b. Storage (when being stored at a node).

c. Outbound materiel handling (when leaving a node).

16. **Intent**. To realise the following benefits:

a. Improved JSC flexibility and velocity.

b. Improved (less disrupted) materiel flow

c. Optimisation of packaging.

d. Reduction of reconfiguration.

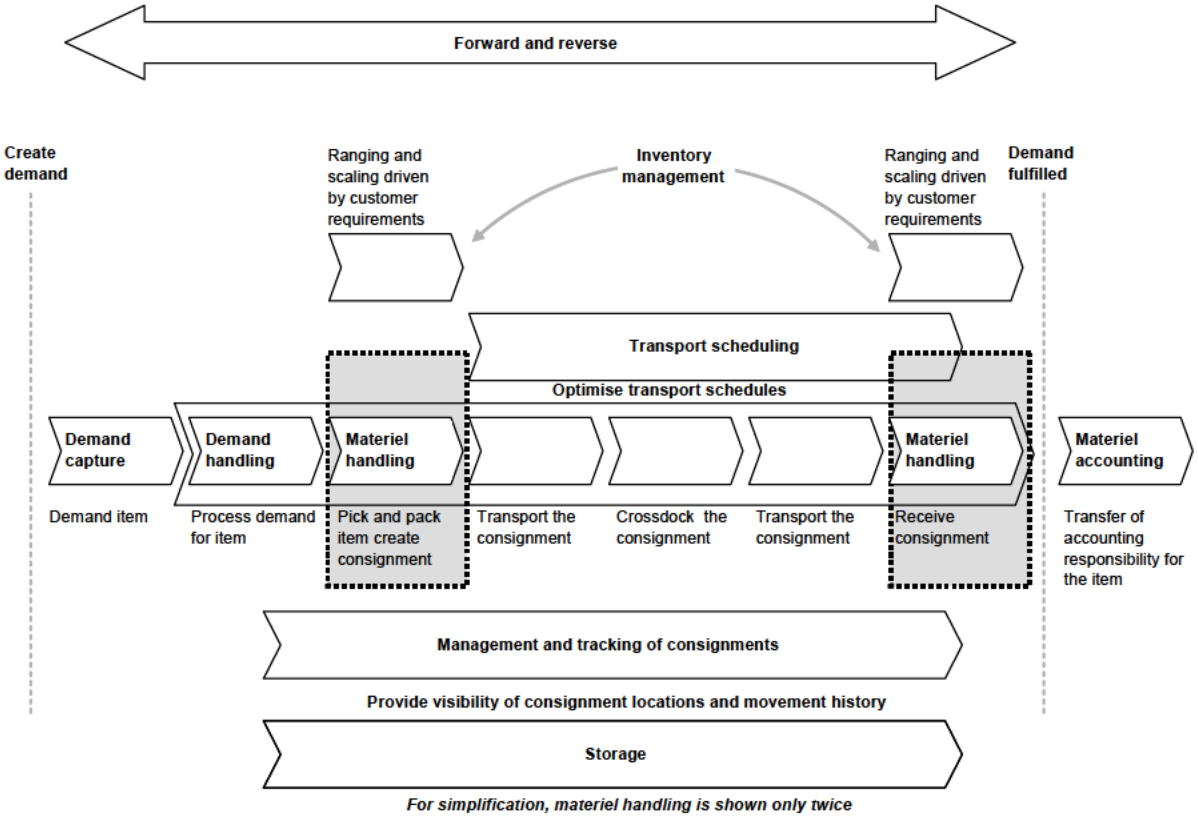
e. Improved ability to deal with materiel that has special handling characteristics.

f. Increase in percentage of items fit for use when delivered to the end-user.

g. Reduced operator/end-user effort.

Figure 8 illustrates where materiel handling fits into the overall JSC execution processes.

FIGURE 8: MATERIEL HANDLING PROCESSES



INBOUND MATERIEL HANDLING

17. **Characteristics**. Automated receiving to reduce manual effort to a minimum:

a. To match received items against demanded items with the least possible amount of manual effort.

b. To generate automatic discrepancy report when appropriate.

c. Receipting an item at inventory holding point or end-user will automatically bring it on to account. Readiness for issue only after checking of item quality and completeness.

d. Receipting a consignment at buffer or materiel handling point will update the consignment tracing record.

e. To inform the payment process when receipting an item at first MOD inventory holding point.

f. Performance record for commercial suppliers updated by consignment receipt to inform the performance management metrics and targets set by IPT and SC organisation.

18. Minimise repacking and reconfiguration workload (particularly for HAZMAT and inter-modal traffic):

a. Packaging and consignment configuration of inbound materiel done in such a way as to minimise the need for repacking and reconfiguration at depot and subsequent materiel handling nodes through to end-user.

b. Packing of items for PEPs and CALs must be able to survive handling and storage in a deployed environment.

c. Inbound and outbound packaging identical where feasible.

d. Single, standardised freight manifest containing information required for all modes of transport.

19. Synchronisation of materiel handling activity with required materiel flow rates:

a. Balance delivery schedule and delivery quantities with receiving resources at major inventory holding points.

b. Notification that materiel is ready for collection to transport personnel (Forward and Reverse SC).

c. Advance consignment/delivery notification to receiving SC node to assist materiel handling scheduling. Notification can be provided by supplier/industry, DSCOM or Logistic staff.

d. Determine required materiel handling equipment (MHE) in advance of delivery. Delivering unit should have appropriate materiel handling equipment if delivery destination has no or insufficient MHE (eg for containers or bulky materiel). If delivery unit cannot provide MHE, it becomes a Command responsibility to ensure MHE availability.

e. Enable fixed or pre-scheduled time windows for deliveries to established location (eg depots, regional distribution centres, repair agents, NWE locations, naval bases, units in barracks, established operations locations etc.) on a regular basis (eg milk runs).

20. To recognise special handling materiel in line with regulations:

a. Store and handle special handling materiel in line with regulations.

b. Generate appropriate documentation (eg medical supplies).

c. Ability for CLS supported PEPs items to be delivered to a PEP configuration point rather than delivered direct to unit under normal arrangements.

21. **Characteristics**. Storage capabilities must be in line with inventory ranging and scaling and performance requirements. Also, ensure appropriate compliance with SHEF.

22. Items delivered to the end-user must be in required serviceability state:

a. Item should be fit for use or fit for final preparation when picked.

23. Full awareness of item condition and possible future demand characteristics:

a. Full awareness of usability of item/inventory. Prevent unfit items from being issued.

b. Single set of usability definitions across the MOD (using definitions in E&AM systems).

24. To perform services on stored items (conditioning, repair, maintenance, testing etc.) based on service agreement between customer and service provider:

a. End-user or demanding unit must specify priority of service (default: service requirement inherits demand priority).

b. Service in the most appropriate and practical location.

c. Enable demand forecast for services (includes maintenance schedules in E&AM systems).

d. Enable resource planning for services (includes maintenance schedules in E&AM systems).

e. To carry out routine services at depots with high efficiency options (dependent upon situation):

(1) Decentralised locations at each depot.

(2) Centralised location at one depot (items to be transported from depot to service point and back).

(3) Combination of decentralised and centralised servicing.

OUTBOUND MATERIEL HANDLING

25. **Characteristics**. Materiel handling scheduling:

a. Materiel handling processes must be synchronised with outbound transportation. Transportation scheduling is driven by demand priority. Scheduling of materiel handling processes to optimise capacity utilisation within boundaries set by transportation schedule.

b. Consignments configured as close to despatch time as possible without jeopardising actual despatch success (within time and performance constraints).

This will reduce the amount of time wasted in rushing to prepare consignments only for them to then sit waiting for transport for hours or days.

c. 'Frozen period[30]' for outbound consignments. Can only be disrupted by authorised commander.

d. Pick consignments according to demand priority and given capacity.

e. Consolidate consignments according to:

(1) Demand priority/RDD and given capacity.

(2) UIN for customer specific orders and task issues.

(3) Inventory final holding point for replenishment orders.

26. Reduce overall picking and packing workload:

a. Building a consignment at depot to reduce amount of cross docking.

b. Maximise number of single consignee or single destination consignments.

c. Loading of consignments to match required order of unloading at destinations.

d. Build aircraft pallets at centralised pallet building facility (this may be at depot or elsewhere) to allow APOE staff to concentrate on primary role of air movement, not item consolidation. Pallets must be built by qualified personnel to meet air cargo safety regulations (NASP compliant). Delivery of items for configuration at APOE will be by exception only .

e. Optimise air transport processes and containers to maximum flexibility for last minute building/reconfiguration of air pallets.

f. Optimise method of picking towards demand pattern and item characteristics (manual versus automated, centralised versus decentralised picking).

27. Consignment consolidation policy to produce business rules for specific theatre/ops.

28. Consignment despatched must be fit for onward transportation. Special handling regulations (eg biohazard) and configuration requirements (eg airworthiness) must be satisfied.

29. Ability to reprioritise and redirect consignments within the JSC to meet changing operational requirements:

a. Consequences of priority change on the SC can be determined before change (eg new planned delivery date for expedited consignment, provides details on consequences for SC performance).

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[30] A period after which there will be no further changes to the configuration of the consignment. This will reduce the confusion caused by constant reconfiguration right up to the departure time.

b. Authorities within Chain of Command to authorise priority changes. Authority may be delegated to subordinate authorities to enable decision making appropriate to level of change (eg Brigade deconflicts priorities between Battle Groups).

c. Appropriate Logistic staff and end-users will be alerted about reallocated consignments.

d. Appropriate Logistic staff and end-users will be alerted about late delivery/imminent late delivery.

e. Ability to filter alerts.

f. Ability to redirect consignments to a new location (eg, if a unit moves).

INVENTORY MANAGEMENT

30. **Definition**. Within the Blueprint design, Inventory management involves forecasting, locating, maintaining, ranging and scaling, configuring and replenishing inventory in stockholding points. It also includes all aspects of Reverse SC inventory management. Inventory management will be carefully determined by planning and modelling to ensure that end-user requirements are met.

31. The inventory management processes set by the Blueprint applies to both base and deployed inventories, and reflect emerging requirements such as the 'Priming Equipment Packs' (PEPs) initiative for Land. Figure9 provides examples of where inventory management may occur within the JSC.

32. **Intent**. To realise the following benefits:

a. Contribution to improved foresight throughout the JSC.

b. Improved (more effective) inventory management processes.

c. Improved visibility of inventory.

d. More effective inventory holdings (availability, condition etc).

e. Increased ability to store, maintain and create modular deployment packs (eg PEPs).

33. **Characteristics**.

a. Inventory management capabilities apply to both core and operationally specific SC.

b. Global inventory and consignment visibility for Logistic staff and higher Commanders.

c. Active in-theatre inventory management to increase item availability:

(1) Manage in-theatre materiel at Joint Force level to reduce surplus inventory and increase inventory availability.

(2) Inventory management processes designed to handle large breadth of in-theatre.

d. Inventory level primarily driven by demand forecast, availability/customer wait time requirements, planning requirements from E&AM data and replenishment/sourcing lead time.

e. Range and scale of inventory holding at each SC node influenced by factors determined by materiel class, demand pattern at inventory holding point and end-user requirements eg:

(1) Stability and predictability of demand.

(2) Surge capacity requirements.

(3) Safety stock level.

(4) Market availability.

(5) Item cost.

(6) Item life time.

(7) Item volumetrics.

(8) Inventory storage capacity.

(9) Item readiness requirement.

(10) Manage inventory level for repairables and special transport containers. Inventory level driven by various additional, repairable specific factors (eg statistical failure probability (using repair loop time, life time buy life time failure curve, number of units in operation, operational hours/miles, wear factors etc.) and safety level for operationally critical items).

f. Method of demand forecast is adapted to inventory range and scale, demand pattern and function of inventory holding point.

g. Ability to identify, investigate and challenge anomalies in inventory level (eg by use of rules). Alert Inventory Manager and Logistic staff of possible future shortages for critical items and induce measures to prevent problems arising.

h. Ability to deal with special inventory characteristics and requirements:

(1) Ability to manage inventory levels by deployment pack, DMC, NSN, recognisable part number where NSNs are not available, modification state and individual item level if required.

(2) Ability to manage inventory with special characteristics (items with set life span, equipment related items, classified items etc).

(3) Ability to put inventory or single items on quality, quarantine and safety hold (not available for delivery before testing, refurbishing etc).

(4) Ability to manage inventory of construction materiel and self-manufactured items including required raw materiel (eg Royal Engineers materiel).

(5) Earmarks for PEPs scales must be comparable and have the capability to change on a regular basis to reflect technical or programmed changes to a PEP scale.

i. Store and maintain module deployment packs (PEP, FAP etc). Ensure timely and complete delivery of modular deployment packs according to user requirements:

(1) PEPs for the Land environment require a capability to be held at readiness rather than specifying that stock must be held, eg stock may not need to be held if readiness availability can be guaranteed by industry.

(2) PEP stock held within the JSC should be earmarked wherever possible.

j. Differentiate inventory holdings by required readiness state associated with item:

(1) Enable differentiated levels of item readiness within an item inventory.

(2) Ensure item availability for each readiness level.

(3) Ability to report on readiness where stock holdings do not match PEPs earmarked.

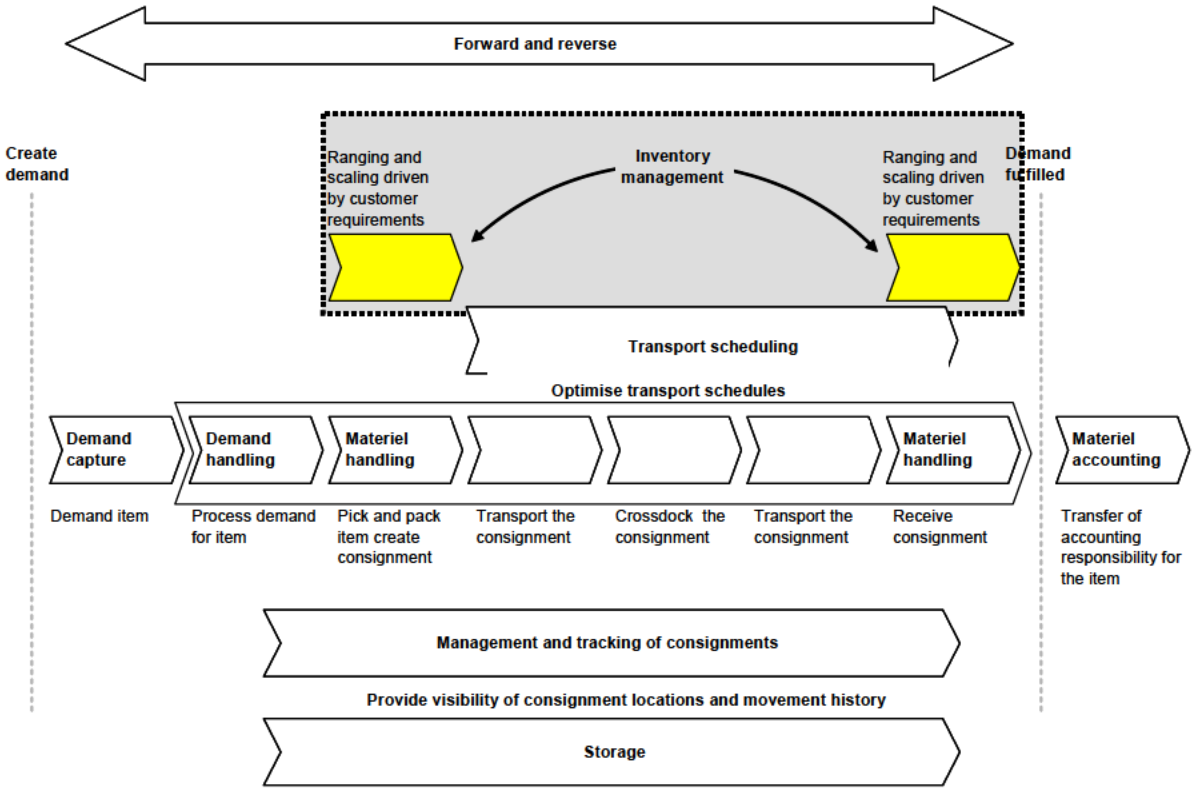
(4) Inventory holding for PEPs need to be associated with specific units (by UIN).

k. Ability to source materiel locally at force level (solely or in addition to SC, eg by specialist teams). Once sourced inventory managed as any other inventory (distinction is still required between items procured locally and NSN items this is particularly important for air assets). See section ‘local purchasing/local contracting’.

l. Enable demand planning and inventory management as well as consignment data sharing with industry and CLS. See section ‘contractor logistics support’.

m. Provide standard logistics data and process interfaces for collaboration with other nations’ SC. See section ‘coalition forces/host nation support/NGO interaction’.

FIGURE 9: INVENTORY MANAGEMENT PROCESSES



INVENTORY MANAGEMENT (MATERIEL ACCOUNTING)

34. **Definition**. Materiel accounting processes will be performed to enable capability and materiel assurance, satisfy NAO requirements, identify the location of items, clarify ownership (ie who currently has the items in their custody), and provide an assessment of value.

35. **Intent**. To realise the following benefits:

a. Increased inventory transparency (local and global).

b. More efficient materiel accounting processes.

c. Harmonised policy, procedures and systems to reduce complexity, simplify application of common solutions and increase understanding.

d. Reduction of manual workload.

Accounting policy, procedures, commodities and systems need to be harmonised across the three services and the remainder of the MOD involved with the JSC. Materiel accounting processes should not be overly demanding as a consequence of attempting to fill information gaps caused by poor inventory management. Figure 10 shows how materiel accounting fits into the overall JSC execution processes.

36. **Characteristics**.

a. Harmonised accounting policy, procedures, commodities and systems across all 3 Services, the remainder of the MOD and the JSC.

b. Materiel accounting performed in order to enable capability assurance and materiel assurance, satisfy NAO requirements, location of items, ownership (who currently has the items in their custody) and assessment of value. Inventory visibility to be delivered by largely automated inventory management procedures. Accounting regime to be rigorously enforced to ensure requirements are met.

c. Reduction of manual workload to a minimum:

(1) Automated and simplified data capture. Widespread use of integrated information technology making use of a comprehensive, integrated data model ie reduce manual workload.

(2) Minimise amount of materiel checking/accounting required at all points of JSC (whilst satisfying requirements highlighted at Paragraph 2 of this section).

(3) Refocus physical checking into high value (operational and financial) or otherwise vulnerable items.

(4) Minimise physical checks by developing sampling and estimating techniques instead of 100% checking where feasible, and acceptable.

(5) Optimise frequency of checks (including spot checks).

(6) Single item counting for low volume items (eg upon movement/picking) when value of item warrants it.

(7) Ability to manage discrepancy process in simple and effective manner, automated wherever possible.

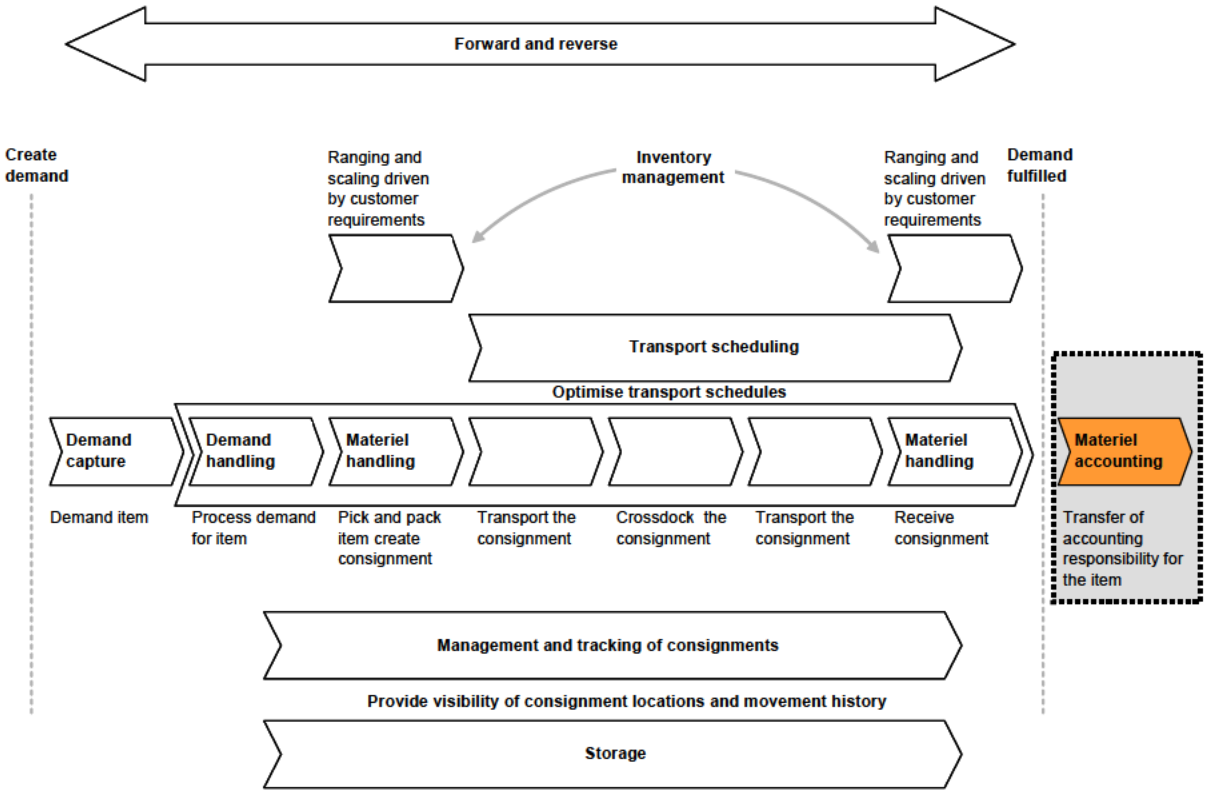
(8) Ability to adjust account.

(9) Ability to include financial write off process.

(10) Retrigger demand from loss.

(11) Ability to support ‘Output Costing’.

FIGURE 10: MATERIEL ACCOUNTING



TRANSPORT SCHEDULING

37. **Definition**. Transport scheduling is the process that ensures appropriate transport assets are available to deliver consignments through the JSC to meet customer requirements. Transport scheduling is performed in 3 areas of the JSC:

a. UK and NWE distribution.

b. Coupling Bridge transport.

c. ROW transport.

38. **Intent**. To ensure that transportation scheduling is effective throughout the JSC in order to:

a. Contribute to SC reliability and ensure deliveries are on time.

b. Minimise disruption to other areas of the JSC, and optimise JSC throughput.

c. Reduce unnecessary consignment waiting time.

d. Optimise use of transport assets.

Figure 11 illustrates how transportation scheduling fits into the overall process. The Blueprint focuses on delivering four broad benefits by defining the transportation capabilities that must be achieved by the JSC as follows:

- Unambiguous scheduling authority.
- Improving transport flexibility.
- Improved effectiveness throughout the process.
- Early indication of transport requirements.

39. **Characteristics**.

a. Clear transportation scheduling authority:

(1) Single operating organisation to plan, schedule and contract UK and NEW distribution, coupling bridge, ROW transport.

(2) Single in-theatre operating organisation to plan, schedule and contract in-theatre transport.

(3) Common and coherent processes used by both organisations.

(4) Process and information interfaces to ensure seamless materiel flow, C2 process management and decision making.

b. Flexible transportation scheduling:

(1) Transport easy to arrange and reschedule.

(2) Ability to take into account transport requirements from surge demand and readiness.

(3) Use of forecasts, customer and CLS demand, volumetric data and special handling characteristics to determine transport capacity requirements.

(4) Ability to react to changing priorities using a single reprioritisation process for all customers.

(5) Ability to identify available capacity.

(6) Ability to identify and report capacity constraints in advance.

(7) Ability to monitor capacity utilisation.

(8) Ability to task scheduled transportation (assign fixed portion of capacity to specific payload).

c. Planning and scheduling based on a three-tier approach:

(1) Ability to determine long-term transportation demand for all transport modes and determine long-term capacity needs. Ability to trigger external contracting and rescheduling of existing transportation schedules.

(2) Ability to create a medium-term overall plan, with increasing granularity and accuracy matching capacity with actual or forecast transport requirements.

(3) Ability to manage (amend and execute) transport plan in a responsive manner on a weekly and daily basis.

d. Appropriate tools provided to support planning and scheduling:

(1) Short term scheduling decision support to enable flexible and informed response to changes. Ability to program tasking of transport capacities by various techniques.

(2) Responsive IT tool to support operational deployment planning.

e. Ability to plan intra-modal transport:

(1) Ability to easily transfer information between transport mode-specific forms of documentation, (eg standardised documentation for all modes, available in e-copy).

(2) Synchronise transport schedules.

(3) Manage and maintain consignment configuration to prevent transport delay. Enable information and process interfaces between transportation scheduling, materiel handling and consignment tracking to ensure that all systems use and provide coherent information.

f. Ability to integrate Reverse SC into transportation scheduling.

g. Ability to integrate CLS transport capacities and transport schedule into planning, thereby creating the ability to effectively use CLS transport resources.

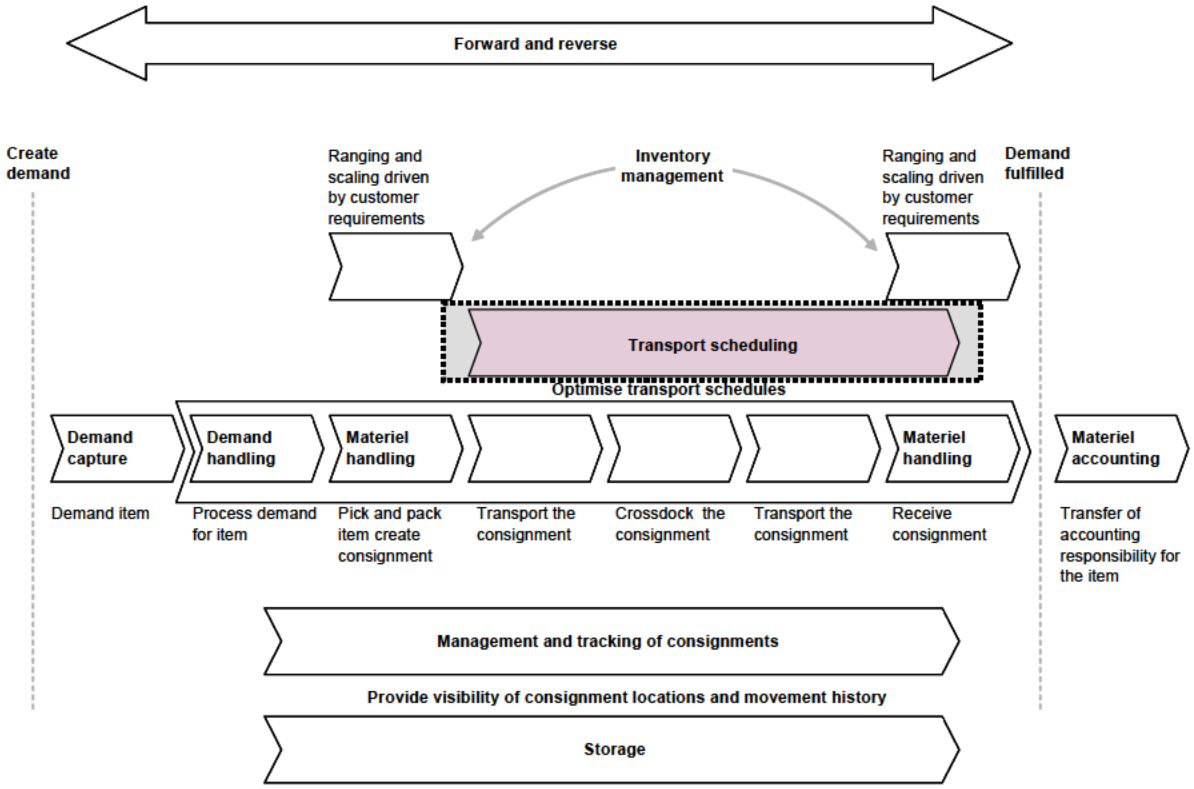
h. Ability to integrate another nation's transport capacities and transport schedule into planning creating the ability to effectively use other nation's transport resource eg:

(1) Determine appropriate consignment configuration.

(2) Provide required information.

(3) Receive consignment tracking information.

FIGURE 11: TRANSPORTATION SCHEDULING PROCESSES



MANAGEMENT AND TRACKING OF CONSIGNMENTS

40. **Definition**. The processes required to effectively manage and track any consignment in the JSC (either Forward or Reverse) to realise the intent detailed below.

41. **Intent**. To realise the following benefits for the future JSC:

a. Improved consignment visibility.

b. Contribution to end-user confidence.

c. Improved alerting and investigative capabilities regarding consignments.

d. Reduced manual effort.

e. Reduced errors.

f. Greater understanding of JSC performance.

g. Improved information availability across systems.

Figure 12 illustrates how this process spans the JSC execution processes.

42. **Characteristics**. The JSC must have management and tracking of consignment capabilities that provide the following capabilities:

a. The End-User shall be able to track a consignment within the JSC from the point it is physically created until it is received at its final destination.

b. Global consignment visibility for Log staff and Higher Command. End-user will be able to view demand status data (eg when will it arrive).

c. Capture consignment movement and configuration information as timely as possible. Consignment tracking (CT) process will be synchronised with materiel handling progress.

d. Minimal manual data input, ideally by exception only.

e. IS system requirements:

(1) Single solution for access to CT data. Access point is dependent on available infrastructure.

(2) Globally consistent data set (eg time stamp/time zones), data classified no higher than 'restricted', ideally 'unclassified[31]'.

(3) CT information refreshes as close to real time as possible (whilst recognising OPSEC, environmental, resource constraints and user requirements).

(4) User able to see age of data.

(5) Consignment tracking creates minimum demand on operational bandwidth capacity, consistent with achieving CT future state requirements.

(6) Special consignment tracking capabilities (not applicable to all types of consignments):

i. Environmental monitoring where applicable (Medical, Food, Munitions). Ability to trigger quality hold or generate message (eg if environmental parameter limit has been exceeded).

ii. Ability to track ad hoc and use postal delivery to move demanded items by a limited data set.

(7) Investigative capabilities:

i. Ability to investigate consignments based on one or more search criteria, eg NSN and receiving unit.

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[31] U.S. CT intention.

ii. Ability to identify how long a consignment takes to pass through a node and how long it takes to travel between two nodes.

iii. Provide an audit trail for consignments processed by a node for the life of an operation[32].

iv. Consignment tracking satisfies security requirements.

(8) Ability to interface with other systems:

i. Provide and receive data to and from MOD and appropriate third parties.

ii. Management information/performance management.

iii. Engineering/asset management.

iv. Consignment tracking.

v. System effectively contributes to provision of Joint Logistic Picture.

vi. Inventory management.

vii. Transportation scheduling.

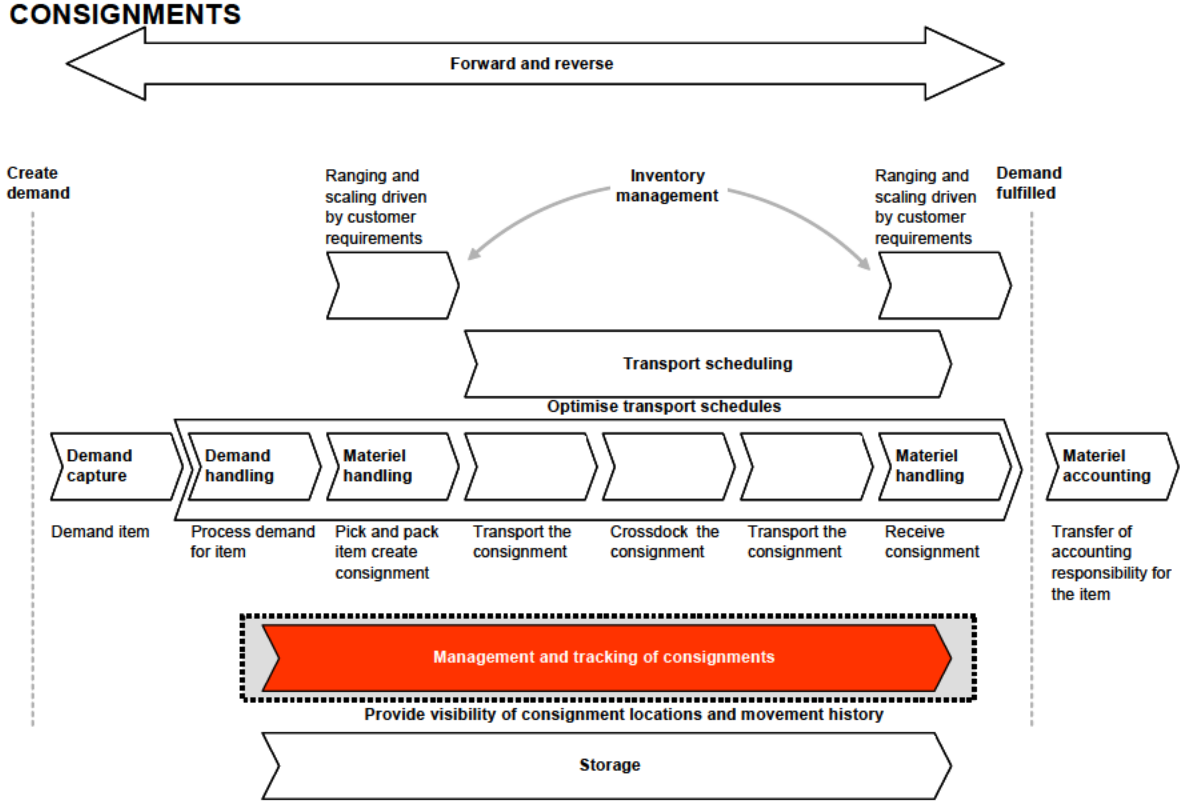
viii. Accounting.

ix. Ability to provide consignment tracking data for other coalition nations using U.K. JSC.

x. Interfaces compliant with ISO requirements and NATO STANAGS.

[32] As required by BPM NATO CT Edition 1.2.

FIGURE 12: MANAGEMENT AND TRACKING OF CONSIGNMENTS



LOCAL PURCHASING AND LOCAL CONTRACTING

43. **Definition**. Local purchasing: the purchasing of materiel in the Joint Operational or other deployed area from commercial sources. Local contracting: the arrangement (including negotiation, tender, supervision and payment) of contracts with in-theatre contractors to meet specific, local requirements. These contracts are outside of existing JSC global enabling contracts.

44. **Intent**. The Blueprint recognises that effective prosecution of both of these areas could significantly enhance the performance of the main JSC. Examples of the potential benefits achievable are:

a. Improved demand satisfaction.

b. Easier to arrange – less effort and duplication.

c. Greater control of locally sourced items.

d. Reduction of load placed on main JSC, eg buy items locally where appropriate rather than deliver from UK.

e. Reduced costs of ownership.

45. **Characteristics**.

a. Local purchasing is to be part of the overall purchasing concept. Demand satisfaction from centrally purchased stock has priority. Clear, established rules are provided for using central and local purchasing.

b. Use of local purchasing must not conflict with assurance of supply and quality of delivery. No abdication of inventory responsibility if opportunity to locally purchase increases.

c. Advance deployment of agile, effectively trained self-contained local purchasing/local contract expertise. Local purchasing/contract negotiation capability in place from early phases of deployment.

d. Purchasing function enables single purchasing orders and supply contracts for operational end-users to draw upon.

e. Established and well communicated local purchasing process supported by appropriate expertise from all organisations involved. Local purchasing/local contract capability has:

(1) Authority to approve/reject demand.

(2) Appropriate budget to finance purchase and contracts without incurring time consuming referral delays.

(3) Purchasing and contract tender/negotiation/management expertise as well as timely access to market intelligence to ensure quality of goods and services as well as purchasing at market prices.

(4) Ability to review all purchasing options before making purchasing decision.

f. End-user demand for locally purchased items captured through standard demand capture process.

g. Ability to differentiate locally purchased items from centrally sourced items (particularly important for items with safety implication – eg airworthiness standards etc).

h. Develop commercial intelligence for likely operating areas.

i. Local purchasing available for:

(1) Items and services which can be purchased locally at significantly lower costs (on a basis of total cost of ownership including transportation costs) in accordance with purchasing guidance and regulations.

(2) Items and services which meet required RDD when centrally purchased items will not and operational imperative exists.

(3) Items and services which are readily available locally but are not available through the fixed SC (eg non-standard/non-NSN demand).

j. Controlled entry of locally purchased items into the SC (Purple Gate).

k. Local codification process to provide efficient cross-reference to in-service item.

l. Visibility of locally purchased items to all purchasing teams along the JSC.

m. Locally purchased capital items should be accounted for in the same manner as centrally purchased items (see materiel accounting).

n. Processes and ability to dispose of locally procured items effectively and efficiently. Disposal process harmonised with process for centrally purchased items.

o. Ability to effectively purchase and manage local services.

JOINT SUPPLY CHAIN EXECUTION PROCESSES –ADDITIONAL CAPABILITIES

46. Figure 4 described the three additional capabilities that are embedded within all of the specific JSC execution processes. The three additional capabilities are:

a. Reverse SC.

b. Contracted Logistic support.

c. JSC interaction with coalition forces/host nation support and non-governmental organisations.

47. Meeting these capabilities must be a key requirement when improving the specific execution processes. The approach to implementing the capabilities must be on an end-to end basis rather than limiting them to a single execution process. This is the main reason for extracting the capabilities from the overall processes.

REVERSE SUPPLY CHAIN

48. **Definition**. The movement of materiel back from the end-user to repair facilities, depots or industry.

49. **Intent**. In future, the Forward and Reverse JSC will perform as one system, using common Joint processes and performance targets. As mentioned elsewhere in this Annex, inventory management, transport and materiel handling scheduling will include the Reverse SC eg this may involve sending an empty container to theatre (assuming non-available in theatre) to recover unserviceable items.

50. Figure 13 provides an example of what the future Reverse JSC will look like.

51. There are many benefits to be realised by improving JSC Reverse SC performance. Some examples are given below:

a. Improved performance.

b. Increased platform availability

c. Improved flexibility for inventory managers.

d. Improved ability to satisfy increasingly demanding SC and CLS requirements.

e. Reduction in inventory costs by reducing need for items to be held to compensate for slow JSC performance.

f. Reduction of unserviceable items in-theatre.

52. **Characteristics**. The future JSC must have Reverse SC processes that provide the following capabilities:

a. Forward and Reverse SC are to be executed as one system. Ability to apply forward SC policies, principles and procedures to Reverse SC wherever possible.

b. Provide special Reverse SC inventory management capabilities:

(1) Ability to manage inventory for repairables and special transport containers at global and local level.

(2) SC must be able to cope with non-codified items.

c. Provide Reverse SC demand capture and demand handling capabilities:

(1) Ability to centrally and locally trigger Reverse SC activity. Rules based processes to accommodate unit/ship/DOB push and IM pull; process must be as automated as possible:

i. Automatic adjustment of inventory levels based on centrally set and adjusted parameters.

ii. Locally triggered activity (eg by unit, ship or FOB).

(2) Dedicated demand priority system for Reverse SC.

(3) Priority system without strict segmentation into operational and non-operational priority.

(4) Preset priority where applicable (eg repairables).

(5) Ability to describe the condition of an item sent back. Use existing data and solutions to minimise manual effort.

(6) Automatic identification of organisation tasked with checking and returning items to their operational state (eg repairing, cleaning etc) for items entering the SC using data link with E&AM systems.

d. Provide Reverse SC transportation planning and scheduling capabilities:

(1) Ability to integrate Reverse SC demand into transportation planning and scheduling.

e. Ensure packing requirements are met to prevent delay in entering, transiting and leaving the SC:

(1) To deal with unpackaged items entering the Reverse SC.

(2) Put item on hold for transportation until required special packaging container is available, to avoid wasting transport resources.

(3) Track special packaging (delivered through Forward SC) to point of entry into Reverse SC.

(4) Provide special packaging (delivered through Forward SC) to point of entry into Reverse SC.

(5) Automatically generate demand for transport of special packaging to point of entry into the SC.

(6) Ensure ability to identify any item entering the SC (at any node). Ideally by use of standard codification.

(7) To identify anything entering the SC with minimum manual effort.

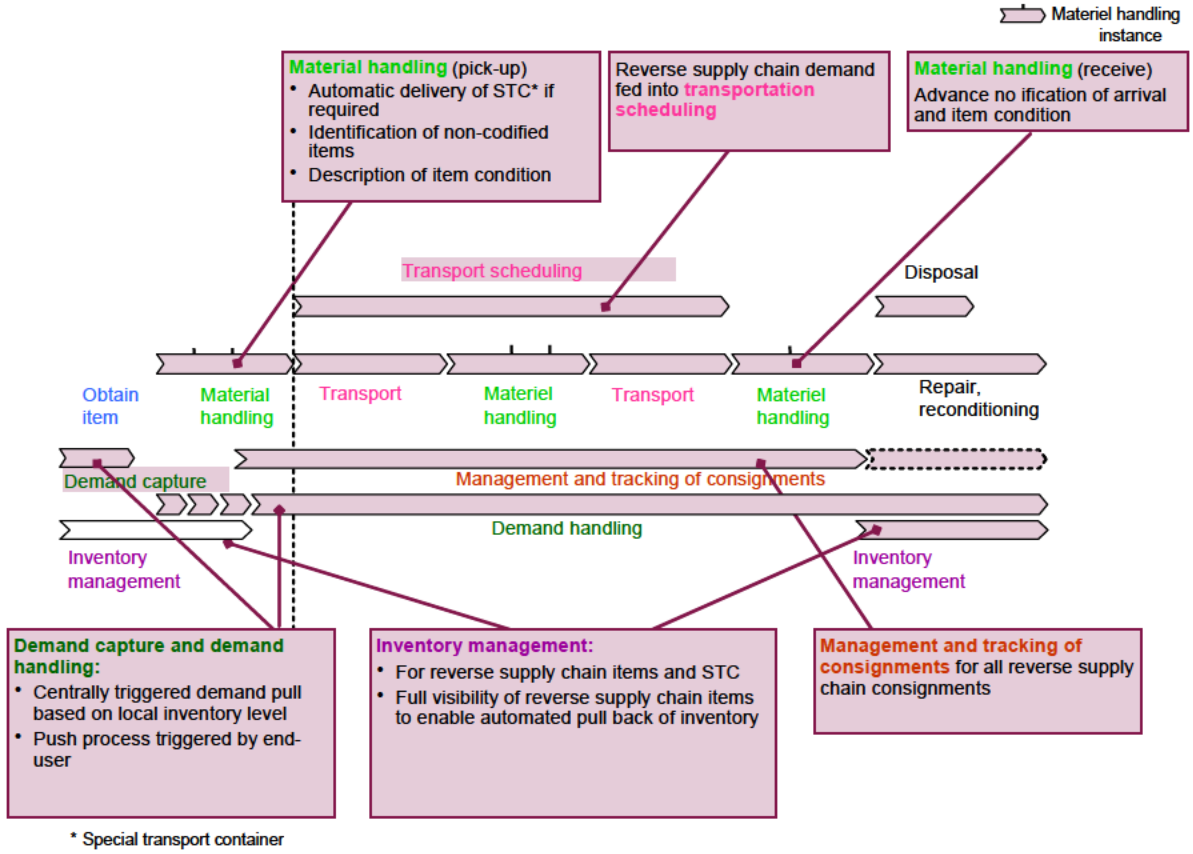
f. Provide Reverse SC capabilities for materiel handling processes:

(1) Ability to deal with unpackaged items entering the Reverse SC. Put item on hold for transportation until required special packaging container is available. Track and provide special packaging (delivered through forward supply chain) to point of entry into Reverse SC. Automatically generate demand for transport of special packaging to point of entry into the JSC.

(2) Ability to deal with special handling requirements originated in theatre (eg enemy equipment, tank hit by DU round).

(3) Reduce operational footprint by minimising degree of checking and conditioning in theatre but reduce load on base SC by returning items in a steady flow, wherever possible this should be matched to their capability to receive items. Prevent stockpiling to reduce surge effect, and ensure essential flow of repairables for SC.

FIGURE 13: REVERSE SUPPLY CHAIN



CONTRACTOR LOGISTIC SUPPORT (CLS)

53. **Definition**. Logistic support to the MOD provided by commercial contractors.

54. **Intent**. The eight capabilities required by the Blueprint in this Execution process annex provide the high level (in conjunction with the Configuration Rules) direction for the SSE and 'Purple Gate'. IPT leaders are to ensure that their contracts and solutions comply with this direction.

55. By achieving the CLS capabilities stated in the Blueprint it will be possible to significantly improve the integration between industry and the JSC. Some examples of the benefits this would bring are:

a. More effective CLS solutions in terms of meeting end-user deliver requirements, and returning items from the end-user.

b. JSC benefiting from commercial best-practices and economies of scale.

c. Simplified and improved demand and materiel handling to reduce effort and delay.

d. Improved information flows.

e. Reduced end-user effort.

56. **Characteristics**.

a. Managed and controlled CLS contracts. Total coherency between DPA/DLO in terms of defining logistic support solutions. Early involvement of DLO (DG Log SC) in contract definition process.

b. Mandated and effective Support Solutions Envelope or equivalent document.

c. Process standardisation and harmonisation.

d. Standardised process/procedure for end user to make use of CLS.

e. Harmonised processes regardless of whether JSC solution or CLS solution.

f. JSC has full visibility and receives advance notification of what is entering the SC (eg by agreed data feeds and data provision times). Visibility of items leaving the JSC with advance notification to CLS.

g. CLS entry/exit point into the JSC must be centrally authorised and agreed (Purple Gate).

h. Common policy and procedures at entry/exit point wherever an item enters/exits JSC (eg codification, packaging standards). 'Purple Gate' seeks to develop this capability.

JOINT SUPPLY CHAIN INTERACTION WITH COALITION FORCES/HOST NATION SUPPORT (HNS) AND NON-GOVERNMENTAL ORGANISATIONS (NGO)

57. **Definition**. Coalition forces: the other forces within a formal coalition that includes UK service personnel. Host Nation Support: the support provided by a nation on whose territory UK forces are deployed. Non-Governmental Organisations: Organisations working within the JOA that do not form part of a governmental department, eg The Red Cross. It is increasingly likely that future U.K. military operations will be conducted alongside coalition forces and will involve relationships with HNS and NGOs.

58. **Intent**. This final section of the execution processes states the capabilities required of the JSC to ensure it interacts with other areas as effectively as possible. Examples of the benefits achievable by improving JSC interaction would be:

a. Enhanced ability to plan.

b. More effective and efficient partnerships.

c. Greater degrees of trust.

d. Greater flexibility, increased ability to deliver effect.

59. **Characteristics**.

a. Develop the use of standard policies and procedures with likely partners to enable common solutions.

b. Advance exchange of policy, procedure with third parties.

c. Advance notification of consignments entering or leaving the JSC.

d. Advance notification of requirements to/from third parties.

e. Use of international data standards to enable common data models.

f. Ability to revert to manual processes to interface with forces/organisations not using international data standards.

g. Ability and flexibility to absorb external resources and processes into JSC.

h. Ability to provide SC services to CF/HNS/NGO with existing standard SC processes through entry and exit Purple Gate(s).

i. SC must be able to cope with non-codified items whilst retaining ability to maintain visibility.

AN EXAMPLE OF PROCESS IMPROVEMENT

60. By adopting 'lean' improvement principles across the JSC execution processes, it will be possible to reduce waste, variability and inflexibility, and increase reliability and end-user confidence. This approach has been proved to be highly successful in other Defence Logistic Transformation programme (DLTP) work, and will now be applied to the JSC.

61. An example in the context of the JSC:

"A customer in theatre places a demand electronically and is notified that the demand has been received on the central inventory management system shortly afterwards. They are informed whether or not their demand will be met within required timelines, and provided with the option to cancel or adjust the demand if it cannot meet the timeline. If the demand is for an item in a UK depot, it is processed immediately, picked and packed within agreed timelines, and transported to the Port of Embarkation (PoE) for loading on to the next available ship/airframe. It is transported to theatre, and on arrival is delivered to the customer without unnecessary delay. If at any stage of its journey the item is delayed (beyond the RDD), the customer is notified immediately. JSC staff are able to track the item from the depot to the point of delivery and will know if it arrived on time, and if it did not, why not?"

SUMMARY

62. This annex has described the purpose and capabilities required of JSC execution processes to perform effectively and deliver a reliable service than can be trusted by the end-user.

63. It has described the specific execution processes of:

a. Demand capture.

b. Demand handling.

c. Materiel handling:

(1) Inbound.

(2) Storage.

(3) Outbound.

d. Inventory management:

(1) Materiel accounting.

e. Transportation scheduling.

f. The management and tracking of consignments.

g. Local purchasing and local contracting.

64. It has also explained the capabilities embedded to a greater or lesser extent in all of the above of:

a. The Reverse SC.

b. Contracted Logistic support.

c. JSC interaction with coalition forces/HNS and NGOs.

65. It has described how they fit together with the other main design features of the JSC Blueprint:

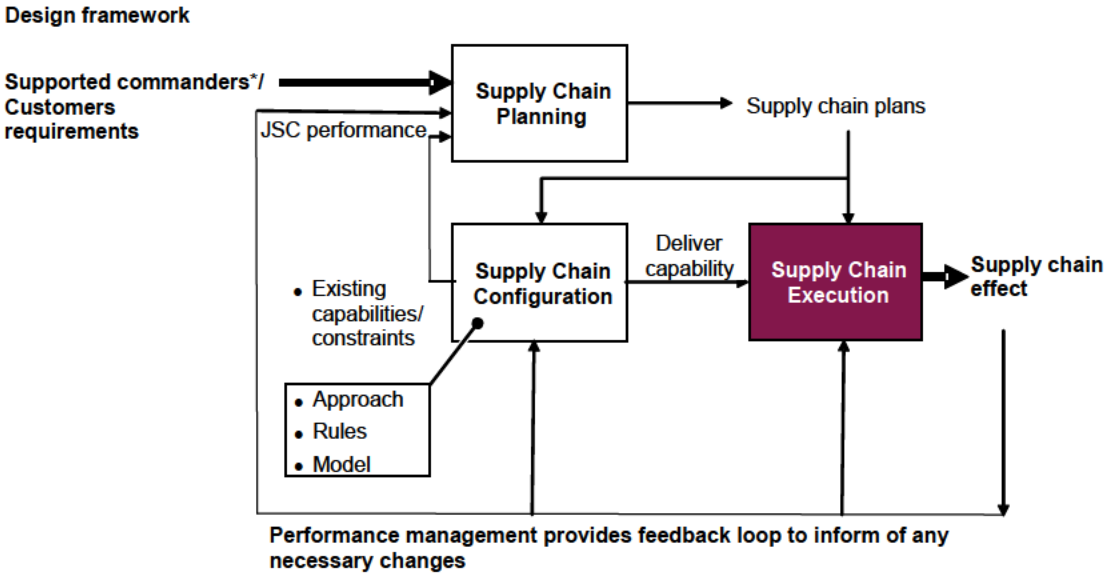
a. SC planning.

b. SC configuration.

c. Performance management.

66. SC execution processes are an essential part of achieving effective JSC performance. Making improvements solely in this area will achieve benefits. However, maximum benefit can only be realised by improving all three of the core design levers and imposing an effective performance management regime: Figure 14.

FIGURE 14: ALL 3 CORE DESIGN LEVERS MUST BE IMPROVED TO DELIVER OPTIMUM JSC PERFORMANCE



SECTION 4 - FUTURE WORK

COMPLETING THE BLUEPRINT

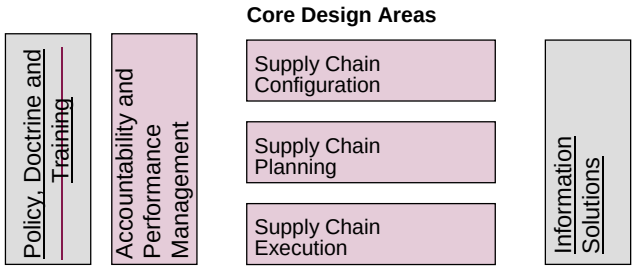
1. Two enabling design areas need to be addressed to complete the Blueprint (see Figure 34):

   a. Policy, doctrine and training.

   b. Information solutions.

Both of these, together with Performance Management (Supporting Annex only), will need to be reflected in future Versions of the Blueprint Documentation.

FIGURE 34: DSCS will lead the deployment of the remaining 2 areas of the Blueprint redesign framework: policy, doctrine and training, and information solutions



APPLYING THE BLUEPRINT

2. Elements of the work needed to apply the Blueprint have already started. In addition to Performance Management work there is Improving Supply Chain Planning for an Operation (ISPO). This initiative will take forward the SC planning work in the Blueprint and enhance the effectiveness of JSC planning for operations. Work commenced in April 2005 and is expected to influence planning for any operation occurring in or after 2006. It involves, amongst others, PJHQ, FLCs, ACDS (Log Ops), DSCOM and DSCS. The work is led by ACOS J1/J4. Examples of the planned deliverables are:

   a. Improved SUSTAT.

   b. Formal risk forecast, analysis, reporting and management process.

   c. Identification of areas most in need of improvement in long term and core SC planning.

   d. Improving the planning for an actual operation.

   e. Blueprint Compliance Assessment.

This will ensure coherence and that all aspects of JSC and supply solution development are focused on the intent espoused within the Blueprint, ie enable supported commanders to rely on an effective SC. The DLTP Joint Supply team is developing and testing the approach for conducting compliance assessments. The work will then be tasked to examine SC projects and support solutions in accordance with the governance process.

GOVERNANCE

3. Blueprint governance operates at several levels. Organisationally, high level governance of the JSC Blueprint is provided by ACDS (Log Ops) through D Def Log Pol: this covers the requirement for ensuring logistics coherence across defence, and providing a macro-level guidance for the application of the Blueprint. Leadership and development of the Blueprint rests with D SCS on behalf of DG Log (SC): this role includes identifying further opportunities to develop the Blueprint framework; maintaining, reviewing and revising documentation; publicising and promoting Blueprint principles,, and driving the application of the Blueprint. Assurance and scrutiny is conducted by the Supportability Assurance Group in TES for IPT projects and by D SCS for JSC projects. In terms of committee structures, and with representatives from across the SC community, the JEB has responsibility for driving JSC compliance with the Blueprint. The JSCTSB prioritises and monitors compliance activity, and the Joint Supply Chain Committee, with representatives at working level from across the SC community, provides broad working level management of Blueprint activity. Once the Blueprint reaches stead-state, the Logistic Capability Steering Group adopts the Blueprint, receives reports on progress, sets priorities and directs effort accordingly.