

**3 April 2001**



# **PLAN FOR NATO CALS TRANSITION**

## **Table of Contents**

<b>1. BACKGROUND .....</b>	<b>2</b>
<b>2. TRANSITION OF NATO CALS.....</b>	<b>2</b>
<b>3. RATIONALE FOR LIFE CYCLE INTEGRATION CPG.....</b>	<b>3</b>
<b>4. CNAD PARTNERSHIP GROUP ON LIFE CYCLE INTEGRATION .....</b>	<b>4</b>
4.1. AIM.....	5
4.2. MISSION.....	5
4.3. OBJECTIVE.....	6
4.4. TERMS OF REFERENCE FOR CPG ON LCI.....	6
4.5. PROGRAM OF WORK .....	6
4.6. BUSINESS CASE .....	6
<b>5. NATO CALS TRANSITION PLAN .....</b>	<b>6</b>
5.1. OVERVIEW .....	6
5.2. BENEFITS OF TRANSITION APPROACH.....	7
5.3. TRANSITION SCHEDULE .....	7
<b>ANNEX A      TERMS OF REFERENCE .....</b>	<b>9</b>
<b>ANNEX B      PROGRAMME OF WORK .....</b>	<b>11</b>
<b>ANNEX C      BUSINESS CASE .....</b>	<b>15</b>

## **NATO CALS TRANSITION**

### **1. BACKGROUND**

The NATO CALS Management Board was initiated in 1993 responsible for progressing the development and implementation of CALS within NATO. NATO CALS has accomplished its objective through the development of guides, handbooks, models, and direct support to programs including Viking, NH-90 and EF 2000. **The CNAD goal to proliferate these results across all NATO nations, to enhance and develop product and coalition logistics, directed the NATO CALS Management Board (NCMB) to develop a plan to transition CALS to a permanent NATO organization.** The NCMB established a transition-working group chaired by Germany. The results of the working group effort, which included the establishment of a permanent management board, were briefed to the CNAD at the April 2000 CNAD meeting. The NCMB did not provide a formal recommendation to the CNAD due to the uncertainty associated with the ongoing assessment and restructuring of the CNAD Partnership Groups. Rather, the NCMB recommended the continued evaluation of transition options in concert with the CPG restructuring and the emerging results of the life cycle working group.

The results of the life cycle working group indicated a continuing need to define and harmonize defense system life-cycle processes, practices and Information for all areas of Logistics, i.e. acquisition, acquisition logistics and operational logistics. The NCMB noted the need to integrate life cycle practices, processes and information, and at its June 2000 board meeting the NCMB agreed to recommend to the CNAD that NATO CALS transition to a CNAD Partnership Group for Life Cycle Integration.

During the October 2001 CNAD meeting, the NCMB recommended the establishment of a CNAD Partnership Group (CPG) for Life Cycle Integration (LCI) be established by summer 2001. The CNAD accepted this recommendation in principle pending release to the NADREPs the final Terms of Reference (TOR) and Program of work (POW). The Final draft TORs and POW were approved by the NCMB in December 2000 and then provided to the NADREPs for review in February 2001. The final TOR and POW are incorporated into this document.

### **2. TRANSITION OF NATO CALS**

At the October 2000 CNAD meeting the NCMB recommended that transitioning to a CPG on life cycle integration is a logical and necessary extension of current NATO CALS efforts. The NCMB continues to

unanimously support this recommendation. The LCI CPG transition supports the Defense Capability Initiative and the CNAD Armaments Review objectives to foster multi-national development and co-production of defense systems and coalition logistics. It also addresses life-cycle issues arising from other NATO bodies such as the SNLC.

NATO CALS has focused on interoperable technical information across the life cycle. The transition of the NATO CALS effort to the CNAD Partnership Group on Life Cycle Integration will provide a permanent NATO body to continue the interoperability effort and the necessary work outlined by the Life Cycle Working Group.

### 3. RATIONALE FOR LIFE CYCLE INTEGRATION CPG

The acquisition and logistic environment across NATO has undergone continuous and rapid change over the past several years. Some of these changes include:

- The shift of logistics improvement focus from national wholesale operations to war-fighter-driven operational requirements.
- Rapid changes in Defense Systems throughout their life cycle.
- Increasing Industrial involvement in equipment support.
- Increased requirement to exchange and share information throughout NATO Armed Forces.

The result of these changes has brought about a need to focus on life-cycle support of defense systems and find better ways to enable coalition operations. Excerpts from recent multi-national meetings, reviews, reports, and working groups find an increased awareness and inability to effectively address problems such as interoperability and information exchange / sharing within NATO and nations. Below are excerpts from recent events:

- a. **Defense Capability Initiative** – *“The alliance should develop and implement an integrated interoperable logistic information system architecture as part of the consultation, command and control process, which is also interoperable with national information systems, to facilitate the coordinated assessment, planning and management of logistic resources, including the continuous tracking of critical assets for NATO commands, agencies, and nations.” (DCI SL-14 Research and Technology Organisation)*
- b. **Phase 2 Report of the NAR (pg16)** – *“The Review has further determined that the Core Function of Armaments Procurement would be enhanced by the wider application to NATO armaments programmes (managed by dedicated Project Groups under the*

*auspices of the CNAD) of the “life-cycle support” approach already practiced widely in individual Alliance nations, drawing on the advice of the NATO CALS Organisation, the Senior NATO Logisticians’ Conference, AC/313 and the NATO Maintenance and Supply Organisation.”*

- c. **Life Cycle Management Working Group (First Findings)** – *“Traditionally, NATO acquisition and logistics have operated through a series of relatively independent processes and organisations. The delivery of materiel and services focused on each element of the process (e.g., supply, maintenance, transportation, procurement, and finance) operating independently but interfacing at appropriate points along the delivery path. Concurrently, diverse organisations were responsible for stand-alone portions of the logistics process. This approach has resulted in sub-optimal efficiency of the total process, some duplication of effort, and management and technical solutions oriented to individual segments of the process. At the same time, focus on customer requirements and satisfaction has been absent or at best, dependent on each logistics sub-process or organisation’s perception of customer needs. The working group identified that through adoption of **Life Cycle Management** principles, NATO can develop a more integrated, efficient, and customer-oriented logistics process.”*

The outcomes of these events clearly indicate a continuing need to define and harmonize life cycle management practices across NATO. They also highlight the need to enhance information sharing and exploit digital business processes to more fully integrate acquisition and logistics processes to enable life cycle management. Therefore, the NCMB notes there remains a need to establish a group to assist the CNAD in working through these challenges on the way to development of an integrated life cycle management process. The NCMB, at its meeting in June 2000, unanimously agreed to recommend to the CNAD that NATO CALS transition to a CNAD Partnership Group on Life Cycle Integration, with close relationship with the SNLC and other appropriate NATO bodies and groups.

#### **4. CNAD PARTNERSHIP GROUP ON LIFE CYCLE INTEGRATION**

The establishment of a CNAD Partnership Group (CPG) on Life Cycle Integration (LCI) is an important next step toward further improving NATO acquisition and logistics processes. The CPG on life cycle integration will be the focal point for establishing how NATO will capitalize and expand on best practices and transform weapon system support processes to meet the emerging operational needs of our warfighters. It will emphasize the role of

information in Life Cycle planning and management as an essential element to enable coalition development, production, and in-service support.

The task of the CPG on life cycle integration is tremendous and will take many years to complete but a long journey always begins with a first step. The transition of NATO CALS to such a CPG is considered the first step in defining and harmonizing life cycle practices, process, and information across NATO.

#### **4.1. AIM**

The ***Aim*** of the LCI CPG is to be an important contributor toward continuously improving NATO defence system acquisition and logistic processes. The LCI CPG will help NATO identify best business practices which support and capitalise on these processes in order to efficiently and effectively meet the operational needs of the warfighter. In today's environment information management is a critical element for process improvement. The LCI CPG work will focus on identifying and applying high value information management concepts across defence system life cycle planning and support activities to further refine coalition defence system development, production, and in-service support.

Specifically, Life Cycle Integration is defined as:

***The coordinated and coherent deployment and exploitation of advanced management information techniques and practices in order to enhance the effectiveness and efficiency of NATO's business processes across the life cycle of defence systems, resulting in measurably improved support to NATO's operational capabilities.***

Life cycle integration ensures cross-functional processes are harmonised across all acquisition, acquisition logistics, and operational logistics functions through effective use of product information and information technology. By necessity, life cycle integration encompasses the evolution of a new life cycle framework that builds upon modern information technology, clear identification of the information required by the new framework, and identification of the functional requirements for applications and telecommunications capacity to manage the information.

#### **4.2. Mission**

The ***mission*** of the LCI CPG is to enhance the ability of NATO to operate in a coalition environment through the sharing of information in all phases of the defence system lifecycle, enabled by the use of improved processes, and practices, application of international standards, advanced tools and

technologies, and increased co-operation with operational logistics through the SNLC and in co-operation with the NIAG.

#### **4.3. Objective**

The LCI CPG *objective* is to establish and maintain a NATO policy and strategy that promotes and monitors the use of improved processes based on best practices, acknowledgement of international standards, the use of advanced tools and technologies, and increased co-operation with industry. To adopt, in close co-operation with other NATO Logistics and Standardisation bodies, and in co-operation with the NIAG, a consistent model for defence system life cycle support. To provide a coherent information framework (as a part of the overall NATO information architecture) that enables information sharing between the differing national approaches to acquisition and logistics and which facilitates multi-national development, production and sustainment of NATO defence systems.

#### **4.4. Terms of Reference for CPG on LCI**

See Annex A

#### **4.5. Program of Work**

See Annex B

#### **4.6. Business Case**

See Annex C

### **5. NATO CALS Transition Plan**

#### **5.1. Overview**

The NCMB has carefully considered how to effect a managed transition of the NATO CALS activity in to a NATO organisation. The essential elements of the Transition Plan recommended by the NCMB are as follows:

- Migrate into a CNAD Partnership Group (CPG) on Life Cycle Integration with a target date of July 2001.
- The CPG will be established according to the 1997 CNAD agreed mode of operation for a CPG. The CPG will maintain close coordination with the SNLC. Initially the new CPG will be formed by

at least the NATO CALS Nations.

- The NCMB will integrate with the CPG with the sunset clause of December 2002. The NCMB will continue to oversee NCO efforts and resources consistent with the NATO CALS MoU. The CPG Programme of Work for 2001 and 2002 will be approved by the CNAD.
- The MOU will run to its established termination at the conclusion of 2002.
- The NCMB shall be responsible to the CNAD for the full transition. Therefore, the NCMB members will, for the period of transition until the termination of the MOU, be members of the new CPG. Other NATO Nations and Partnership Nations will be invited to join the CPG.
- The NCMB will continue to exist and the NCO will continue to be responsible to the NCMB until December 2002.
- The NCMB will establish and maintain close relationships with the SNLC and other appropriate NATO bodies and groups.
- The detailed schedule for transition is provided below in section 5.3

## **5.2. Benefits of Transition Approach**

- Continuity of direction and support is maintained over the transition period.
- The LCI CPG is allowed time to take on its new challenging role.
- The LCI CPG has interim resource available to kick off vital new tasks.
- A joint programme of work will avoid duplication of effort and ensure appropriate application of resources
- Administrative impacts are minimized.

## **5.3. Transition Schedule**

**Major Milestones** - Below are the major milestones for completion of the NATO CALS transition. This is a working schedule and may change over time but it provides the overall approach and timing of the transition.

- (7 Aug 00) Draft Transition Plan released for review - Nations expected to review and comment. Comments will be rationalized at

upcoming TWG meeting. (Completed)

- (6-7 Sept) Transition working group meeting -TWG will rationalize comments and prepare final draft of Transition Plan and White Paper for presentation to the NCMB. (Completed)
- (21 -22 Sept) - 26th NCMB Meeting - NCMB to approve Transition Plan and White Paper for presentation to NADReps in support of October CNAD Meeting. (Completed)
- (2 Oct) Brief NADREPs on Transition Plan and present White Paper. (Completed)
- (24-25 Oct) Brief CNAD on progress and present the Transition Plan. (Completed)
- (Nov 00) Begin development of final the business case and transition schedule. (Completed)
- (Dec 00) 27th NCMB meeting. Review progress on business case and transition schedule. (Completed)
- (Feb 01) Complete business case and transition schedule and distribute for review and comment to all NCMB members. (Completed)
- (Feb 01) TWG to rationalize all comments approve business case and transition schedule for final presentation to NCMB. (Completed)
- (Mar 01) NCMB meeting to approve final Transition Package (Transition Plan & Business Case) for presentation to NADReps and CNAD. (Completed)
- (Apr 01) Present Transition Package and White Paper to NADREPs. (Completed)
- (May 01) Present Final Transition Package to CNAD for approval.
- (Jul 01) Stand-up new CNAD Partnership Group on Life Cycle Integration and begin transition.
- (31st Dec 02) Complete transition. Officially terminate NATO CALS MoU.

## **ANNEX A - Terms Of Reference**

### **General**

The present Terms of Reference for the Group are as agreed by the NATO CALS Management Board (NCMB) and agreed in principle by the CNAD.

### **Guiding Principles**

AC/XXX/CPG applies the following basic principles in pursuit of its mission:

- (a) foster technical and managerial cooperation associated with all phases of the lifecycle of defense systems among Nations;
- (b) pursue an integrated, systems approach to management and information through the whole lifecycle of defence systems. This includes all logistics functions (acquisition, acquisition logistics, operational logistics and disposal). This encompasses functional processes, information management and enabling telecommunication infrastructure requirements across the defense system lifecycle;
- (c) promote acknowledgement of international and commercial standards as NATO standards when/where appropriate;
- (d) influence the evolution of international standards to the benefit of NATO;
- (e) promote continuous improvement of life cycle process and information integration;
- (f) remain abreast of the state-of-the-art developments/thinking in life cycle Integration and related disciplines;
- (g) avoid duplication of effort with other NATO bodies by developing and maintaining formal interfaces with other related NATO groups/organisations such as NC3, SNLC, NSA. Systematically coordinate appropriate work effort and documents with other NATO bodies;
- (h) solicit industry's perspective in the development of NATO LCI policies and processes through close coordination with NATO Industrial Advisory Group (NIAG); and
- (i) promote the use of best practices by the exchange of information on national/NATO practices.

- (j) use metrics to determine the level of achievement and to determine development targets.

### **Role**

Due to the lifecycle nature of AC/XXX/CPG, it coordinates and actively involves stakeholders from across the lifecycle to include other CNAD subordinate groups, or other NATO groups such as SNLC, NC3A, NSA, and NIAG representing industry. With this cooperation, AC/XXX/CPG undertakes activities related to its mission and guiding principles and delivers products through a sub-structure of Sub-Groups and Ad Hoc Working Parties. Activities (not in order of priority) for which AC/XXX is responsible include:

- (a) develop and publish a NATO policy on life cycle integration;
- (b) establish and maintain an information framework for life cycle integration within NATO;
- (c) coordinate CNAD life cycle initiatives with the SNLC;
- (d) provide leadership in the development and implementation of Life Cycle Integration concepts within NATO;
- (e) maintain awareness of technological advancements and anticipate the future needs of NATO with respect to Life Cycle Integration;
- (f) facilitate exchange of successes and lessons learned associated with life cycle integration;
- (g) provide and evaluate methods and guidance for implementation and use of end-state and process metrics.
- (h) actively participate in ISO Standardisation work in order to maintain coherence between LCI products (e.g. NPDM) and ISO.
- (i) Seek advice and feedback from, and give guidance to, NATO agencies, commands, groups (including NIAG) and collaborative projects.

## **ANNEX B - Program Of Work**

### **PROGRAM OF WORK**

The NCMB envisions the CPG on Life Cycle Integration will undertake the following tasks in concert with other NATO groups (including NIAG representing industry) as appropriate:

#### **Role:**

Develop and publish NATO policy on life cycle integration.

#### **Tasks:**

- 1) Evaluate current defence systems related information policies.
- 2) Create strategies for management and sharing of information.
- 3) Coordinate with other NATO groups.
- 4) Develop implementation guidelines for the NPDM
- 5) Establish the Implementation guidelines as an Allied Publication
- 6) Register NPDM Data elements with the NATO Data Administration group (NDAG)
- 7) Initiate a cover STANAG for Information Management which will refer to NATO Product Data Model (NPDM) and associated Implementation Guidelines, both published as Allied Publications (APs).

#### **Role:**

Establish and maintain an information framework for life cycle integration within NATO.

#### **Tasks:**

- 1) Extend the use of existing NATO CALS products (TLBM, NCOPS and the NPDM) and services by active business change agents in NATO, National and Multi-national acquisition or logistic projects, to accelerate the implementation of Through Life Information Management.
- 2) Improve information exchange / sharing among nations and NATO bodies.
- 3) Support the development of standards that will contribute to interoperability and information sharing across NATO and nations.
- 4) Support SNLC Ad-Hoc Working Group (AHWG) on Co-operative Logistics.
- 5) Develop architectures
- 6) Evaluate and make recommendations to nations w/r/t infrastructure.
  - (a) Nations

(b) Industry

- 7) Develop high level data and process models.
- 8) Ensure security is a major component of the information framework.
- 9) Monitor and influence technical architectures to ensure secure, interoperable, defense systems related technical information sharing throughout the life cycle.

**Role:**

Coordinate CNAD life cycle initiatives with the SNLC.

**Tasks:**

- 1) Assist the SNLC Ad Hoc Working Group on Co-operation in NATO logistics, by assisting in the development of new business models, identifying process improvements and selection / development of standards.
- 2) Continue support of Asset Tracking Working Group, by attendance to meetings and or information exchange. (i.e. minutes, briefings)

**Role:**

Provide leadership in the development and implementation of Life Cycle Integration concepts within NATO.

**Tasks:**

- 1) Develop, with SNLC and others, a vision of how NATO, Nations, and Industry IT infrastructures can inter-relate in the digital age.
- 2) Identify and document examples of the benefits of Life-Cycle Integration, including a business case, which can be used to encourage nations to adopt this concept.

**Role:**

As appropriate, maintain awareness of technological advancements and anticipate the future needs of NATO with respect to Life Cycle Integration.

**Tasks:**

- 1) Maintain, as appropriate, close liaison with industry through attendance to industry sponsored symposiums, conferences, and training.
- 2) National LCI CPG representatives engage in information exchange activities such as, providing presentations at CPG meetings and distribution of materials and information gathered at various conferences.

**Role:**

Facilitate exchange of successes and lessons learned associated with life cycle integration.

**Tasks:**

- 1) Continue to use an internet based electronic information repository to foster information exchange within the CPG, across NATO agencies and among nations.
- 2) Create and maintain, within the repository, a lessons learned database gathered from NATO agencies, projects and national sources.

**Role:**

Provide and evaluate methods and guidance for implementation and use of end-state and process metrics.

**Tasks:**

- 1) Continue the development of a single metrics model for NATO use and provide recommended standards / metrics to be applied.
- 2) Create an internet based best-practice repository for access by all nations.

**Role:**

Actively participate in ISO Standardisation work in order to maintain coherence between LCI products (e.g. NPDM) and ISO.

**Tasks:**

- 1) Actively participate in ISO standardisation work in order to maintain coherence between NPDM and ISO.
- 2) Actively participate in ISO standardisation to ensure development of NATO life cycle standards consistent with ISO.
- 3) To identify those standardisation activities that impact NATO's programme of life cycle integration.

Successful completion of these tasks will provide the CNAD and NATO with a comprehensive framework for life cycle management that enables multi-national development, production, and sustainment of NATO defense systems.

**Role:**

Seek advice and feedback from, and give guidance to, NATO agencies, commands, groups (including NIAG) and collaborative projects.

**Tasks:**

- 1) Identify relevant NATO bodies.
- 2) Create a web based information repository and exchange tool.
- 3) Sponsor Life Cycle Integration (LCI) based seminars and conferences.

## ANNEX C - Business Case for a CNAD Partnership Group on Life Cycle Integration

### Background

In 1989 the Conference of National Armaments Directors (CNAD) took the lead on all NATO CALS issues by establishing a CALS working group under Allied Committee/301 (Standardisation of Material and Engineering Practices) Subgroup D. In 1993 the CNAD endorsed the creation of the NATO CALS Organisation responsible for the overall direction of all CALS activities within NATO. The NATO CALS Mission is:

- **To:** increase interoperability, decrease defence equipment life-cycle costs, ensure the readiness of NATO forces and decrease acquisition lead times,
- **By:** facilitating continuous improvement of business processes,
- **Through:** the use of international standards and practices, application of advanced tools and technologies, and increased co-operation with industry,
- **Thereby:** creating an opportunity for NATO industry to enhance its global competitiveness.

Subsequent to the establishment of NATO CALS, both the North Atlantic Council (NAC) and the Conference of National Armament Directors (CNAD) have determined that NATO needs to streamline its operations in order to provide greater flexibility in response to a rapidly changing world environment and the demands which it places on the organisation. The final report of the CNAD directed NATO Armaments Review (NAR) was issued on 25 October 1999. This report highlighted the need for:

- Harmonised military requirements
- Broad-based equipment interoperability
- Maintenance of a collective technological lead through sharing defence research resources and technologies  
to be achieved by:
- Improved Armaments Procurement including "Co-ordinated Acquisition" ... Procurement would be enhanced by the wider application in NATO armaments programmes of the "Life-cycle support" approach already practiced widely in individual Alliance Nations.
- Information Exchange
- Leveraging Defence Technology and Industrial Resources

In 1999 the Defence Capabilities Initiative (DCI) was launched to improve the defence capabilities of the Alliance, to ensure the effectiveness of future multinational operations across the full spectrum of Alliance missions in the present and foreseeable security environment, with a special focus on improving interoperability among Alliance forces and where applicable also between Alliance and Partner forces. A temporary High-Level Steering Group was established to oversee the implementation of the Defence Capabilities Initiative and to meet the requirement of co-ordination and harmonisation among relevant planning disciplines, including for Allies concerned force planning, with the aim of achieving lasting effects on improvements in capabilities and interoperability.

In support of the objectives of the NAR and DCI, the CNAD directed the NATO CALS office to lead the Life-Cycle working group (LCWG). A principal recommendation of the LCWG is the requirement for a single focal point for Life-Cycle management issues within NATO.

As a result of the NAR and the DCI reports, the CNAD also directed a review of its committee structure in order to improve the efficiency, effectiveness and responsiveness of CNAD subordinate structures. As part of this re-structuring effort the CNAD directed the NCMB to find a permanent home within the NATO structure for the activities currently managed by NATO CALS. The NCMB recommended NATO CALS be transitioned to a CPG with the following mission and objective.

## **Options considered**

The NCMB established a transition-working group (TWG) initially chaired by Germany and then by the US. The TWG identified several alternatives for a future home for NATO CALS. These included:

1. Moving NATO CALS within the International Staff (Defence Support or SILCEP)
2. Moving NATO CALS to NAMSA
3. Transitioning NATO CALS to a CNAD Partnership Group (CPG)

The final recommendation was to establish the CPG for LCI. This recommendation is supported by the results of the Life Cycle Working Group which indicated a continuing need to define and harmonise life cycle management practices across NATO and to exploit digital business processes to more fully integrate acquisition and logistics processes to enable the sharing of information.

## **Resource Implications**

Resource requirements for the LCI CPG will be provided by nations through voluntary commitment of resources (as is the case in all other Allied Committees). During transition, NATO CALS will provide dedicated resources consistent with the MoU. Initial secretarial support for the CPG will be provided by an existing NCMB volunteer nation.

## **Benefits**

The use of through-life management techniques for equipment, underpinned by digital technology, has become a commercial imperative for industry in order to both meet the demands of its customers and to control its costs of production, logistics and maintenance. The overarching benefits to be achieved include:

- Increased interoperability
- Increased sustainability
- Improved acquisition and logistics processes across NATO
- Improved visibility over the level of life cycle integration in NATO
- Decreased Total Defence System Life Cycle Cost

Specific examples, taken from the a US DoD-sponsored study undertaken by Coopers & Lybrand Consulting identify the following examples of decreased costs and increased competitiveness:

- Engineering--50-60% reduction in time for design activities; Engineering Change Proposal (ECP) time savings of 30-50%.
- Acquisition--98% data error rate reduction; 40% reduction in search and retrieval time; 30-50% reduction in overall acquisition process time.
- Manufacturing--80% improvement in quality; QA process time reduction of 85%; 30-50% reduction in inventory.
- Life Cycle Support--30-50% reduction in cycle time for technical document changes; 70-80% savings in training planning.

These are but a few of the numerous documented examples of delivered benefits arising from technology insertion and the integrated use of information throughout the life of Defence Weapons Systems. Although there is a growing awareness throughout NATO of the need for an integrated Defence System Life-Cycle approach, there is no single focal point for such activities at present.