Logistics Coherence
Information Architecture

High Level Stand-Alone Presentation
Defence Operational Drivers

- Changing Operational Concepts
  - Network Enabled Capability
  - Directed Logistics
- Logistics Transformation
  - Contracting for Availability
  - Lean Support
  - Reliability Centred Maintenance
  - Reduced deployed logistic footprint
  - E2E and Through Life Management
Logistics Performance Issues

Mission success sits firmly on the back of operational logistics, but we still have...

- Poor visibility across the logistics enterprise
- No standardized and integrated logistics process
- Lack of rapid, precise, and reliable information

*Logistics Information* is key
What Needs to Change?

• Where are we now?
  - Many different implementations of the same basic logistic functions
  - Multiple user interfaces
  - Isolation from a natural IT upgrade path
  - Payment many times over to solve the same problems across different projects, services and environments

• What do we need to do?
  ✓ Rely less on bespoke information systems
  ✓ Not duplicate functionality already provided
  ✓ Applier clearer policies and more effective governance
  ✓ Develop business and technical architectures and enforce compliance with them
The Strategic Blockers

- Lack of a single view of what the joint MOD/Industry logistic business should look like
- Lack of a joint MOD/Industry information architecture
- Lack of effective information exchange standards
- Lack of funding to initiate the transformation of the logistic information capability
Joint Coherence Project 2006

- Joint MoD and Industry project
- Defined the control framework of rules, tools and standards within defence logistic information
- Key deliverables:
  - High-level end-to-end logistic functional model
  - Logistics information architecture (the Logistic Coherence Information Architecture or LCIA)
  - Logistic information exchange standards
What is the Logistics Coherence Information Architecture (LCIA) ?

- LCIA is a model that defines a joint logistics architecture
- It has common processes, standards and information flows across the whole network of support.
- It collates the logistics information that needs to be shared between MoD and Industry to deliver improved through-life capability management.
- It will reduce costs and lead-times for delivery of information requirements in support of future equipment support contracts.
- Logistic Information and the LCIA are fundamental enablers of both the Defence Industrial Strategy (DIS) and the Defence Logistic Strategy
Describes the logistic information service groups found at an enterprise level.

Describes the functions used by the logistic information service groups.

Describes the information objects used by the service group functions.

Describes standards and formats for all of the information objects.

These are the help files. Includes FAQs and how to navigate around the model.
LCIA Model – Navigation Overview

Level 0 – Enterprise Functions
Level 0 – Enterprise Functions
Level 1 – Operation Functions
LCIA Model – Navigation Example

Level 1 – Operation Functions

LEVEL 0 – ENTERPRISE FUNCTIONS

MAINTENANCE

PLAN MAINTENANCE

EXECUTE MAINTENANCE

MONITOR & CONTROL MAINTENANCE
LCIA Model – Navigation Example

LEVEL 0 – ENTERPRISE FUNCTIONS

LEVEL 1 – OPERATION FUNCTIONS

LEVEL 2 – OPERATION SUB FUNCTIONS

MAINTENANCE

PLAN MAINTENANCE

PLAN

STRUCTURE MAINTENANCE

SCOPE MAINTENANCE

SCHEDULE MAINTENANCE

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LCIA Model – Navigation Example

LEVEL 0 – ENTERPRISE FUNCTIONS

LEVEL 1 – OPERATION FUNCTIONS

LEVEL 2 – OPERATION SUB FUNCTIONS

MAINTENANCE

PLAN MAINTENANCE

STRUCTURE MAINTENANCE

PLAN

SCHEDULE MAINTENANCE

SCOPE MAINTENANCE

STRUCTURE MAINTENANCE
LCIA Model – Information Categories

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LEVEL 0 – ENTERPRISE FUNCTIONS

LEVEL 1 – OPERATION FUNCTIONS

MAINTENANCE

PLAN MAINTENANCE

LEVEL 3
INFORMATION FLOWS

NAME
Asset Details

EXPLANATION
Specific minimum set of information that identifies and describes the state of a particular asset.

STANDARD
PLCS

COMPONENTS
Asset Actual Fault Data
Asset Actual Usage Data
Asset Configuration Status
Unique Asset Item ID

2 x LCIA – INFORMATION CATEGORIES

TRACK & AUDIT ASSET

Asset Details
Asset Availability

STRUCTURE MAINTENANCE
LCIA Navigation Support Domain Mapping

- To provide projects with a ‘generic’ guide when designing Support Solution information architectures and supporting IT systems
- To propose who has overall contractual ownership and responsibility for a particular function in each domain at each stage of the Support Options Matrix
Support Domain Matrix - Responsibilities

**CONTRACT TYPES**

1. Traditional
   - Industry is contracted for the supply of assets.

2. Spares Inclusive
   - Industry has responsibility for the repair of assets.

3. Availability
   - Industry is responsible for ensuring that platforms are available for use against a predetermined target. Industry will therefore take responsibility for the planning and execution of maintenance tasks and the supply chain activities that support them.

4. Capability
   - Industry is responsible for the operation of platform to deliver a service / capability.

**FUNCTION**

- 01 Strategic and Defence Planning
- 02.1 Ops Planning and Control
- 02.2 Operate Asset
- 03.1.1 Initiate Fleet Composition Change
- 03.1.2 Monitor and Control Fleet Composition Change
- 03.1.3 Audit Fleet Capability
- 03.2.1 Define Fleet Composition
- 03.2.2 Define Fleet Support Structures
- 03.2.3 Plan Upgrades
- 03.3.1 Initiate Support Structure Change
- 03.3.2 Monitor and Control Fleet Support Structure Change
- 03.3.3 Audit Fleet Support
- 03.4.1 Identify Sustainment Tasks
- 03.4.2 Plan and Initiate Sustainment Tasks
- 03.4.3 Execute Other Sustainment Tasks
- 03.4.4 Monitor and Control Sustainment Tasks
- 03.4.5 Audit asset
- 03.5.3 Allocate Asset to Op Task
- 07.1 Event Management
- 07.2 Change Management

**DOMIAN**

- Red = MoD
- Yellow = Industry
- Green = Shared
- Blue = Cross Domain Capability
Identify MoD / Industry Interfaces

Using the same example of Maintenance
LCIA Model – MoD / Industry Interfaces

Discover the Industry / MOD interfaces for a particular function, in a particular domain, in a particular contract

Contract for Availability – Forward Domain
LCIA Model – MoD / Industry Interfaces

Discover the Industry / MOD Interfaces for a particular function, in a particular domain, in a particular contract

Contract for Availability – Deployed Domain
LCIA Model – Summary

- A generic top down model of logistic functions, information categories and information flows
- Sets out the generic logistic information that has to be exchanged electronically in order to execute logistics and through-life management effectively
- Functions are mapped to support domains for particular contract types.
- Information categories are mapped to international logistic standards.
Information Standards

- ISO 10303 AP 239 Product Life Cycle Support (for E&AM related information)
- OAGIS 9.0 (for Material Flow transactions)
- ASD S1000D (for technical documentation)
- Mandated for MoD projects (SSE 4.2)

Data Exchange Definitions

- PLCS described in DEXs
- OAGIS 9.0 described in BODs
If your current (or proposed) support solution relies on these existing systems, you will need to plan for migration to future systems that will replace them – LCIA will define your Information exchange requirements.

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<th>Year</th>
<th>Applications</th>
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<td>2010</td>
<td>BFIS, BODMS/WTMS, RAF SCCS, WITS</td>
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<td>2020</td>
<td>TAV(-), UMMS,</td>
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MoD Supply Chain Business Systems – ‘Current’

Deployed Systems
- OASIS
- UNICOM
- GLOBAL
- USAS

Base Systems
- CRISP
- WITS
- Stores System 3
- BODMS
- SCCS
- WTMS

Consignment Tracking Systems
- RIDEELS
- TAV(-)
- VITAL
- DSDA
- Waterfront Storage
- Deployed Systems
- Base Systems
- Consignment Tracking Systems

JDTS

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MoD Supply Chain Business Systems – ‘Future’
LCIA deliverable – Logistics Information Plan

Supra model (project facing view)

- logistic elements
- logistic capabilities
- logistic structure
- information flows
- process threads

architectural building blocks, rule sets and standards

through life management plan

informs

logistic information matrices

delivers

LCIA (engine)

LCIA logical template
- business functions
- business services
- information classes
- roles
- standards
- governance
- assurance

stakeholder

describes the logistic elements & information needs of the project

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MINISTRY OF DEFENCE
## MoD Projects Engaged with LCIA team

### Maritime
- ASTUTE
- TYPE 45
- MARS
- CVF
- JES EDDISTONE
- MP&H
- Underwater Warfare Sys
- JPT
- SEA WOLF

### Land
- FRES
- GSV
- BOWMAN
- AVSI
- PECOC
- LASS
- MASS
- Future Battlefield Power
- UMPIRE
- JOUST
- HILDING
- Generic Training Facility

### Air
- A400M
- Harrier
- JCA
- Future Lynx
- MRA4
- Nimrod
- Tristar
- UKASCACS
LCIA Contacts

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