

BCS CMSG Conference 2005

**“Configuration Management and its Friends
From Womb to Tomb”**

The Lifecycle Phases of Configuration Management:-

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Session

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“Configuration Management and its Friends from Womb to Tomb”

“The Big Configuration Management Question”.

**When do we instigate the Configuration
Management Process?**



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When do we instigate the Configuration Management Process?

As soon as possible!



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When do we instigate the Configuration Management Process?

**From the experience gained over a large number of CM
programs:**

**It is of the utmost importance, that Configuration Management is
promoted from the earliest stages of a program.**



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When do we instigate the Configuration Management Process?

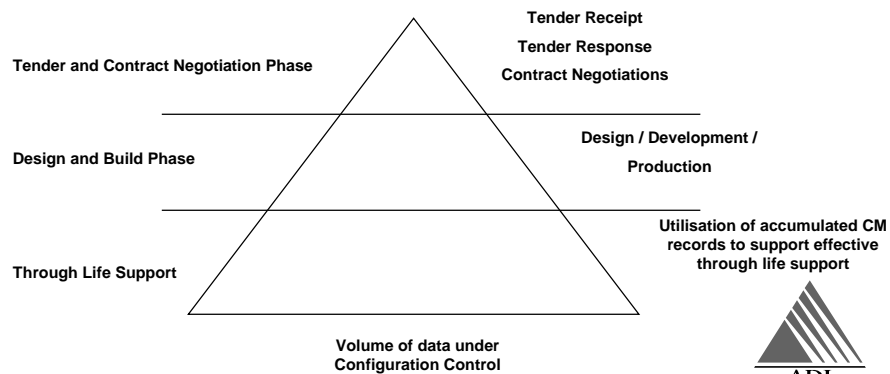
As soon as possible!

WHY?



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The CM process is required to be established early to begin collecting the data that will support the life of the program.



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When do we stop the Configuration Management Process?

Product Disposal


Legal responsibilities Phase One

Legal responsibilities Phase Two

Archive


The requirements for legal responsibilities will obviously vary from country to country.

The aim of this illustration is to identify that the CM responsibility may not end at disposal. That is the CM data collected to support the earlier program phases may be required to be utilised post disposal.



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“CM’s Friends”.



“Configuration Management and its Friends from Womb to Tomb”

“CM’s Friends”.

**Throughout the following slides are references to other program
“Functional Responsibilities and or Disciplines”.**

These I refer to as,

“CM Friends”.



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“Why CM’s Friends?”

**Without the effective understanding, support, co-operation of
interfacing and impacted parties involved throughout all phases
of the program,**

“CM will fail”.

**CM must establish friendly and effective working relationships
with all impacted parties within the program.**



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“CM’s Friends cont’d”.

**When we are able to establish effective and solid relationships
that will support our CM needs throughout the program,**

“CM will succeed”.



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“CM’s Friends cont’d”.

**The Configuration Manager MUST ensure that the CM Staff
establish confidence with all other players in the program.**

Covering:

- **CM planning, processes, training.**
- **CM capabilities.**
- **Quality of support it will provide.**



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“CM’s Friends cont’d”.

**Where should CM be placed in the program
organisation?**

This has been traditionally an ongoing argument.

**From experience, I believe CM should be positioned such that
it’s organisational report is directly to the Program Management.**

This will allow CM to report non process compliance effectively.



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Program Phases, Relationships and Impacts.



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“Beginning at the Request For Tender” (The Womb)

Initial introduction to the CM process for the Program Team.

Ensure their acceptance and therefore buy in.

Plan the through life CM requirements of each program.

(Determine the specific CM requirements of the program).



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“Beginning at the Request For Tender” (The Womb) cont'd

**Opportunity to begin to establish the required relationship with
the other program responsibilities.**

Begin the Initial / Intro CM Training / Re-Training.

Begin collecting CM Data / Records.



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“Beginning at the Request For Tender” (The Womb) cont’d

Budgeting for the CM requirements. (Ensure adequacy)

**Avoid duplication of effort between other responsibilities and
CM functions, through promotion of effective communication.**

**Establish interfaces, work flows and support between CM and
other program disciplines.**

**Establish a tailored CM process, capable of evolving in
accordance with the program plan for CM.**



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“Submission of the Tender”

Tender baselines established. (Foundation for subsequent phases).

Tender response, formally CM controlled and distributed.

**Maintenance of the tender, resulting from clarification Questions
and Answers.**

Amendments controlled formally by the CM process.

(Based on the Tender Response Baselines).



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“Contract Negotiations”

The beginning of the payback for the tailored CM process we have established.

Our first real opportunity to begin establishing relationships with our customers functional personnel.

(Very, Very Important)

CM is able to support the other program functional areas during the negotiations with the records it has collected and controlled during the tender response phase.



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“Receipt of the Contract”

We are now starting to get very serious.

Register Contract documentation.

Parent and Child relationships.

Control the distribution and Maintenance of the hard and soft contracts. (Colour coding may be of value)



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**“Establishment of the Baselines based on the
Contracted Specifications”**

Analyse and establish contracted baselines.

**Re-establish relationships with Design, Engineering, ILS and
Program Management.**

Functional baseline established
(Basis for all subsequent configuration changes)



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“Establishment of the Baselines based on the Contract Specifications” cont’d.

Establish requirements and basis for the Allocated baselines
(Design, Vendor Spec etc).

Negotiate the Pre-Product baselines (Whatever baselines are required).
(Design, Development, Pre Prod, Production etc)

Applicability product references establishment.



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“Design Management Interface”

**Establishment of the Design Management requirements for the
project.**

Expected Inputs and Outputs for the Design process.

Miscellaneous aspects of the CM Design interface.



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“Vendor/Subcontractor Management Interface”

**Configuration Management of Technical Specifications provided to
Vendors and or Sub-Contractors.**

**Beginning of the control of data distribution and maintenance to
Engineering, Design, ILS and Program Management.**

(Again Very Important)



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“Production Planning Interface”

Training in basic CM process (Production Planning).

Agree and document interface process.

Covering Data Release and Distribution Control.

Data recall process.

Work Pack Closeout (The Definitive Configuration record).



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“Production Interface”

More CM Training (Production).

No Verbal Orders allowed.

Utilisation of Engineering Orders to avoid verbal orders.

Problem Identification Reports (Production Feedback).

Engineering change incorporation feedback.



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“Production Test and Trials Interface”

Even more CM Training (Test and Trials).

Utilisation of CM Tools to support Test and Trials.

Control of data (Requirements, Plans, Instructions and Reports).

Linking of Test and Trial Documentation to build records.

Verification and Validation (V&V) Deliverable maintenance.



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“Contract Data Requirements List (CDRL)”

Determine the content and control requirements of the CDRL for all functional areas.

(Set a minimum time span for receipt of data prior to distribution)

Utilisation of the CM Tools and data to record relationships and distributions.

Effective CDRL numbering
(Makes CDRL compliance reporting and closure easier)



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“Acquisition Closeout”

**Liase with Program Management to assist with closeout, as CM
control the bulk of related data.**

CDRL Compliance Matrix.

V&V Compliance Matrix.

Change Incorporation Matrix.

Archiving Data for through life support.



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“Transition to Through Life Support”



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“Transition to Through Life Support (TLS)”

**Through Life Support Contract, control as for the acquisition program, but will have additional and changed requirements.
(Ensure any Delta's are clearly identified).**

CM Training for TLS staff and new requirements are addressed.

Establish TLS Data Requirements, Maintenance, Certification, etc.

Establish an Obsolescence process based on the data and knowledge gained during acquisition the phase.



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“The New Customer Interface”



“Configuration Management and its Friends from Womb to Tomb”

“The New Customer Interface (A new culture).”

TLS CDRL process establishment.

Business to Business (B2Bs), Work Flows are great tools.

Training, Contractor/Customer, Integrated Project Teams (IPTs).
(Identify, discuss, establish and refine B2Bs)

CM participation in TLS program meetings.



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**“Value of effective acquisition program CM to Through
Life Support CM”**



“Configuration Management and its Friends from Womb to Tomb”

“Value of effective acquisition program CM to Through Life Support CM”

**Experience and Data gained during the acquisition phase will be
utilised for TLS.**

**Technical data collected during the acquisition phase will support
obsolescence analysis.**

**Acquisition Change History, utilised and will support TLS.
(Description, Reasons and Incorporation history).**

**All the above will assist the awarding of the TLS contract and a
smooth transition from the Acquisition phase.**



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“Disposal”

(The Tomb)



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Disposal:

- **Ensure understanding of the legal requirements.**
- **What data is required to be archived?**
- **How long must the supporting data be retained?**
- **What is the required environment for archiving?**
- **“Lay-up” or “Mothball” considerations.**



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Summary



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Summary: Engineering Support tool selection.

**This is the most important decision required to be made and spans both
acquisition and through life support programs.**

**Select a tool that will effectively achieve Configuration Management and its
support rolls related to other disciplines through all phases of the program.**

The tool must be available from the earliest stages to begin collecting data.



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Summary: Engineering Support tool selection cont'd.

**An incorrect tool selection from the beginning of the program will not allow
our CM goals and deliverables to be achieved.**

**CM will not have effective interfaces and therefore lack the support it
requires from other program functional disciplines.**



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Summary: Engineering Support tool selection cont'd.

Some tips as far as tool selection is concerned:

- **Choose a tool that will suit your program. (Production Line, Concurrent)**
- **Utilise a fully integrated Engineering and Program Support application where possible.**
- **Don't rely on application vendors slide shows to illustrate tool capability, see real data demonstrations.**
- **If an integrated application is not available, minimise the number of air gaps between the applications required to support the program.**
- **Standardise data bases.**



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Summary Cont'd.

Important aspects to ensure effective CM coverage from “Womb to Tomb”.

- **CM Training from induction with scheduled updates.**
- **Make Friends.**
- **Communicate.**
- **Promote confidence in the CM process.**
- **Support other disciplines at every opportunity.**
- **Understand your contracted requirements.**
- **Select the correct tools.**
- **Budget for the level of CM required of the program.**
- **Be firm.**
- **Ensure CM is effectively placed to the organisational structure.**
- **Continually Audit for process compliance.**



Thanks for your interest!

