



## Mind the Gap!

Case Study of an assessment of a Software  
Development Lifecycle

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Presentation Overview

- Background
  - Organisation
  - CCRM Requirements
  - Processes
- Methodology
- Results Overview
- Action Plan

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Organisation

- Consumer & Business Banking services
- Ensure compliance to industry bodies
  - e.g. FSA, Sarbane Oxley.
- IS Development & Support
  - 3 separate development groups
- SDLC Captures current practices
  - No CCRM Capability
- Challenge is to identify and document appropriate CCRM processes

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Requirement for CC&RM

- SDLC Mandated
  - One set of processes
  - Common framework
  - Adaptable Implementation
- Compatible Organisation
  - All applications in one IS Development & Support Department
    - Development
    - Minor Changes
    - Live Systems Support.
- CC&RM Centre of Excellence in Development & Support
- Migration from independence to a common approach
- Implementing 'enterprise' CC&RM.
  - Common CM processes
  - Configuration auditing
  - CI identification & Labelling
  - A CM Tool for all systems?
- Implement Project Metrics
  - CIs as deliverables
  - Status Accounting for metrics

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Processes

- Production (Live) System
  - Outsourced Service management
  - All changes subject to CAB Approval
- Application Development
  - Implements Changes triggered by business requests or Help Desk incidents
  - Follows documented SDLC

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Methodology

- Setting the scope
- Defining the standard
- Assessment
- Analysis
- Auditing
- Reporting

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006

**Mentor IT Limited**  
• Schüler des Exzellenz- und Serviceleistungs

# Setting the Scope

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006

**Mentor IT Limited**  
• Schüler des Exzellenz- und Serviceleistungs

**Integrated CCRM framework**

	Release Mgt Framework	Change Mgt Framework	Issues / Problem Mgt Framework	Configuration Mgt Framework	Environment Mgt Framework	3rd Party Mgt Framework	CM Data Mgt
SEUC	8	8	43	8			8
ISSUES		119					35
CCRM Processes	22		70				
Education	1	1	1	1	1	1	1
Organisation / Communication							
Planning							
Tools				346			
Monitoring		14					
Improvement / Automation				70	180		

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Setting the Scope End to End CCRM

- Project scope
  - initially driven by separate issues in CCRM
  - Set into a CCRM framework
- Requirement agreed for gap analysis
  - How well does the SDLC address CCRM requirements?

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Methodology

- Setting the scope
- Defining the standard
- Assessment
- Analysis
- Auditing
- Reporting

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Defining The Standard

- Five Capability Areas
  - Release Management
  - Change Management
  - Issues & Problem Management
  - Configuration Management
  - Configuration Data Management

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Release Management

- RM1 - An agreed Department Policy has been issued defining the purpose, scope, planning, organisation and labelling aspects of releases (ITIL-SS 7.3.1; 9.3.2)
- RM2 - Approved Procedures are in use to implement Release Policy are in use and being monitored (ITIL-SS 9.5.1)
- RM3 - System Release Mgt Plans define the organisation, schedules, processes, resources and tools required to build, test and implement a Release into production (ITIL-SS 9.5.1)
- RM4 - All CIs deployed in a releases are derived from a secure software library (ITIL-SS 9.3.6)
- RM5 - All CIs deployed in a release have appropriate controlling documents required by the SDLC (ITIL-SS 9.6.3)
- RM6 - All releases identify backout tasks (ITIL-SS 9.3.11)
- Rm7 - All releases are logged in the CM Database with links to relevant change requests and impacted CIs. (ITIL-SS 9.3.8)
- RM8 - Metrics are used to monitor and report on status of Releases and the effectiveness of Release management (ITIL-SS 9.7.2)

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Change Management

- CM1 An agreed Department Policy has been issued defining the purpose, scope, planning, organisation and control aspects of change management (ITIL-SS 7.3.1; 8.2)
- CM2 Approved Procedures implementing Change Management Policy are in use and being monitored (ITIL-SS 8.5.13)
- CM3 All changes are initiated by a documented request for change (ITIL-SS 8.5.2)
- CM4 All changes are assessed for their impact on the business operation, costs, project deliveries, and other systems / applications (ITIL-SS 8.5.6)
- CM5 All changes are reviewed by members of Change Advisory Board (ITIL-SS 8.3.2)
- CM6 All Changes are scheduled for implementation (ITIL-SS 8.5.8)
- CM7 All Changes are recorded in a CM Database (ITIL-SS 7.3.7)
- CM8 Metrics are used to monitor and report on status of Change Requests and the effectiveness of Change management (ITIL-SS 8.7)

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Incident & Problem Management

- IP1 An agreed Department Policy has been issued defining the purpose, scope, planning, organisation and control aspects of Incident and Problem Management (ITIL-SS 5.8; 6.11)
- IP2 Approved Procedures are in use to implement Incident & Problem Management Policy are in use and being monitored (ITIL-SS 5.8; 6.11)
- IP3 All incidents have defined escalation paths, prioritisation rules and resolution SLA (ITIL-SS 5.3)
- IP4 Problem management analyses incidents, system performance, provides a known Errors database, and supports incident management (ITIL-SS 6.61; 6.7)
- IP5 Problem Management results in preventative action and process improvement (ITIL-SS 6.8)
- IP6 Known Errors are documented and made accessible to staff involved in incident and problem management (ITIL-SS 6.7)
- IP7 All Incidents and problems are documented and related to CIs in the CM Database (ITIL-SS 7.6.3)
- IP8 Metrics are used to monitor and report on the occurrence of incidents and the effectiveness of incident and problem management (ITIL-SS 5.9; 6.10)

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Configuration Management

- CF1 An agreed Department Policy has been issued defining purpose, scope, objectives and organisational context of Configuration Mgt (ITIL-SS 7.3.1)
- CF2 Approved Procedures are in use to implement CM Policy are in use and being monitored (ITIL-SS 7.3.1)
- CF3 Configuration Mgt Plans are used to implement CM Policy and define technical context of Config Mgt (ITIL-SS 7.5)
- CF4 All Configuration Items (CIs) are identified in a Configuration Structure (ITIL-SS 7.3.2)
- CF5 The labelling of CIs and their versions follow documented guidelines (ITIL-SS 7.6.2)
- CF6 Only authorised and correctly identified CIs are controlled and accepted (ITIL-SS 7.6.3)
- CF7 Requires that CIs are not deployed without appropriate controlling documents (ITIL-SS 7.6.2)
- CF8 All CIs are recorded in the CM Database (ITIL-SS 7.5.7)
- CF9 Metrics are used to monitor and report on the management of CIs and the effectiveness of CM (ITIL-SS 7.9.4)

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Configuration Data Management

- CD1 A Configuration Management Database is routinely updated and all data is accessible for routine and ad hoc reporting (ITIL-SS 7.6.4)
- CD2 All Releases are logged in the CM Database and the information held meets the requirements of Release Mgt (ITIL-SS 9.6.6)
- CD3 All Change Requests are logged in the CM Database and the information held meets the requirements of Change Mgt (ITIL-SS 7.3.7)
- CD4 All Incidents, Problems and Known Errors are logged in the CM Database and the information held meets the requirements of Incident & Problem Mgt (ITIL-SS 7.3.7)
- CD5 All CIs are logged in the CM Database and the information held meets the requirements of Configuration Mgt (ITIL-SS 7.3.7)
- CD6 The CM Database provides traceability between Change Request, CI, and Release (ITIL-SS 7.3.7)
- CD7 The status history of all CIs is accessible for routine and ad hoc reporting (ITIL-SS 7.6.4)
- CD8 The incident and problem history of all CIs is accessible for routine and ad hoc reporting (ITIL-SS 7.4.1)
- CD9 The CM Database is routinely audited for data integrity (ITIL-SS 7.3.5)

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



# Methodology

- Setting the scope
- Defining the standard
- Assessment
  - SDLC against Requirements
- Analysis
- Auditing
- Reporting

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



# Assessment Matrix

	Version	Approved Department Policy has been issued and implemented in objectives and requirements of organization or division Only (Mgt)	Approved Procedures are in place for the CM Policy are in use and being monitored	Only authorized and correctly identified CIs are recorded and accounted	Required but CIs are not deployed without appropriate controlling documents	All CIs are recorded in the CM Database	Metrics are used to monitor management of CIs and the effectiveness of CM	Comments
<b>PROCESSES</b>								
0	System Development Lifecycle	0	N	N	N	N	0	CF1: no CMgt reqt so not referenced in SDLC. CF8: no reqt to collect metrics to improve CMgt effectiveness in SDLC
2	Process Improvement and Documentation	N	N	2	1	2	1	CF7: PCR is the only controlling document, but not a mandatory reqt for change CF9: No data collected relating to configuration of SDLC and constituent processes etc.
6	Folder Structure Specification	N	1	2	2	0	0	CF1: No CMgt policy so basis of folder structure by agreement CF2: Use of folder structure for all CIs not monitored. CF5: Relies on version labeling by developers CF8: location of CIs not documented. CF9: No metrics reqt
11	How projects are initiated	N	N	1	2	1	0	CF3: The PID does not require CM plans as per Prince 2 CF8: The control of CIs not addressed by process (via PID / QR) CF9: CIs are logged and managed via a sfs CF9: No metric reqts
13	How to complete terms of reference	N	0	N	N	N	N	CF2: No reference to configuration reqt CF3: No reqt for CM plan (as per GAMP) CF4: No reqt to identify code base for change implementation
14	Change Initiation & prioritisation	N	N	0	N	N	0	CF4: No requirement for CR to assess impact on CIs CF8: No reqt to refer to CIs in SW Catalogue CF9: No reqt collect metrics / relate to CIs
16	Change Management within D&S	N	1	1	2	1	0	CF2: Although Version control reqd no reference to code baselines CF3: No reqt for CM Plan CF4: No reqt for SW Catalogue CF8: Version control is reqd - no labelling reqt CF9: No reqt to track CIs to CR / Remedy CF9: No metrics reqt

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



# Methodology

- Setting the scope
- Defining the standard
- Assessment
- Analysis
  - Making Sense of 1638 data values
- Auditing
- Reporting

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



# Scoring of SDLC Processes

	Count of N	Count of 0	Count of 1	Count of 2	Total In-Scope	Score
N = Not Applicable 2 = Fully addresses requirement 1 = Partially addresses requirement 0 = Does not address requirement						
<b>PROCESSES</b>						
System Development Lifecycle	8	1	0	0	1	0%
Process Improvement and Documentation	0	4	5	0	9	28%
Folder Structure Specification	9	0	0	0	0	N/A
How projects are initiated	2	4	3	0	7	21%
How to complete terms of reference	7	2	0	0	2	0%
Change Initiation & prioritisation	5	1	3	0	4	38%
Change Management within DAS	1	7	1	0	8	6%

- Score = SDLC providing the capability
- 100% - meets all reqts so capability fully exists
- score = (a\*No of 2 rating + b\*No of 1 rating + c\*No of 0 rating)/ No of in-scope reqts

(a = 1; b=0.5; c=0)

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Scoring of Requirements

	Version	CD1	CD2	CD3	CD4	CD5
N = Not Applicable 2 = Fully addresses requirement 1 = Partially addresses requirement 0 = Does not address requirement	A Configuration Management Database is implemented and all data is accessible for routine and ad hoc reporting.	All Releases are logged in the CM Database and the information held meets the requirements of Release Mgt	All Change Requests are logged in the CM Database and the information held meets the requirements of Change Mgt.	All Incidents, Problems and Known Errors are logged in the CM Database and the information held meets the requirements of Incident & Problem Mgt	All CIs are logged in the CM Database and the information held meets the requirements of Configuration Mgt	
<b>PROCESSES</b>						
Count of N		23	20	19	23	10
Count of 0		2	7	1	4	18
Count of 1		12	8	15	10	8
Count of 2		0	2	2	0	1
Total In Scope		14	17	18	14	27
Score		43%	35%	53%	36%	19%

Same scoring as SDLC Processes

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Methodology

- Setting the scope
- Defining the standard
- Assessment
- Analysis
- Auditing
  - Using Key Performance Indicators
- Reporting

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## Key Performance Indicators

- Audit – this is the next stage of the project
  - Measurable
    - What is actually happening
    - Use Key Performance Indicators
    - Is data available?
  - Relevant
    - Current organisation
    - ITIL Standards
    - Current processes
  - Time bound
    - Review evidence over a defined time frame
- Demonstrates level of capability in CCRM

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## KPI – Release Management (Examples of Current Proposal)

- Activities follow documented and approved Processes / Procedures.
- When back-outs are required these are proven to be successful in that the environment contains the correct versions of software.
- Releases are entirely based on deployments from Changeman or other secured software libraries.
- All Releases have passed the agreed Quality Checks prior to deployment to test and production environments.
- All Releases meet the SOx requirements for test and production environments.
- No unauthorised software has been deployed to any environments.
- The appropriate number of licenses is being used in the development and test environments.
- The environment report reflects the releases deployed / backed-out.
- Learning Reviews of Release Deployments are carried out and actions are followed up.

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006



## KPI – Change Management

### (Examples of Current Proposal - 2)

- Activities follow documented and approved Processes / Procedures.
- All changes to the configuration of test and production environments are recorded in an approved Remedy.
- All Remedies are approved prior to being actioned with exception of emergency Remedies.
- All Remedies and Change Request have a documented impact assessment prior to approval.
- Remedies raised to change the configuration of an environment have authorisation for change in the form of references to the initiating Help Desk Incident, Bug Tracker, Change Board request or Software Release documentation.
- Configuration changes to Test and production environments are planned with the exception of Emergency changes.
- All Personal Lending System changes deployed to test and production are approved by appropriate CM Team members.

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006

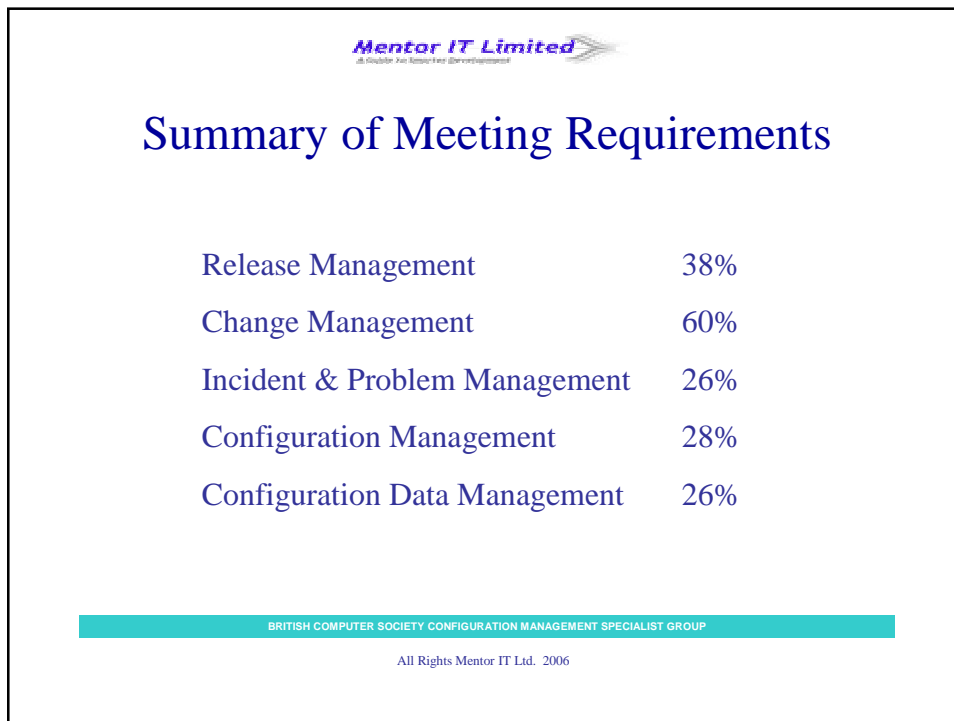
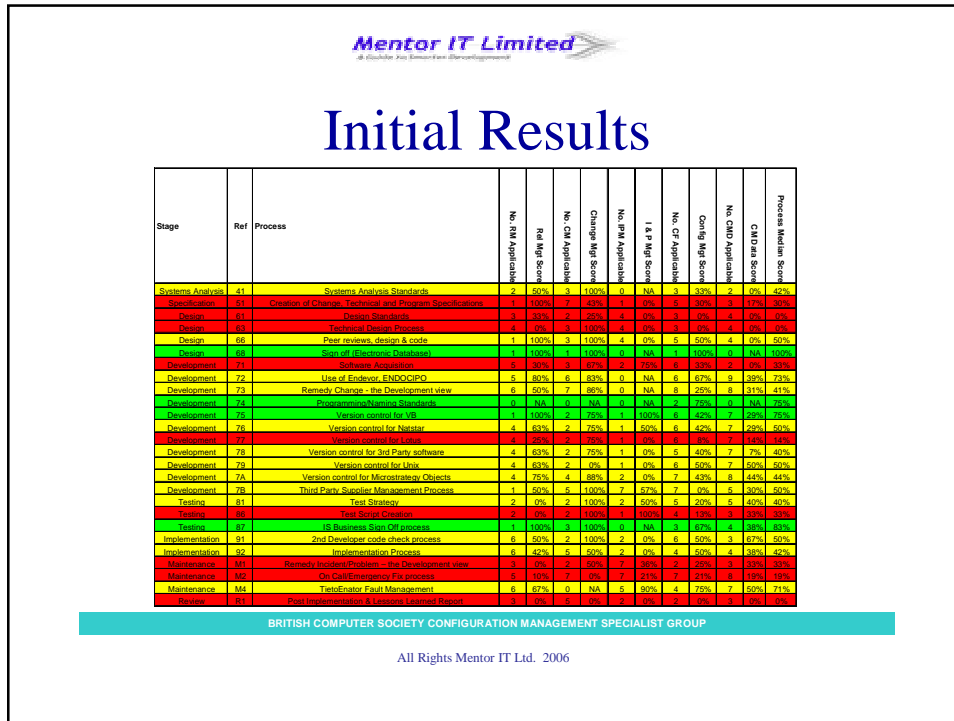


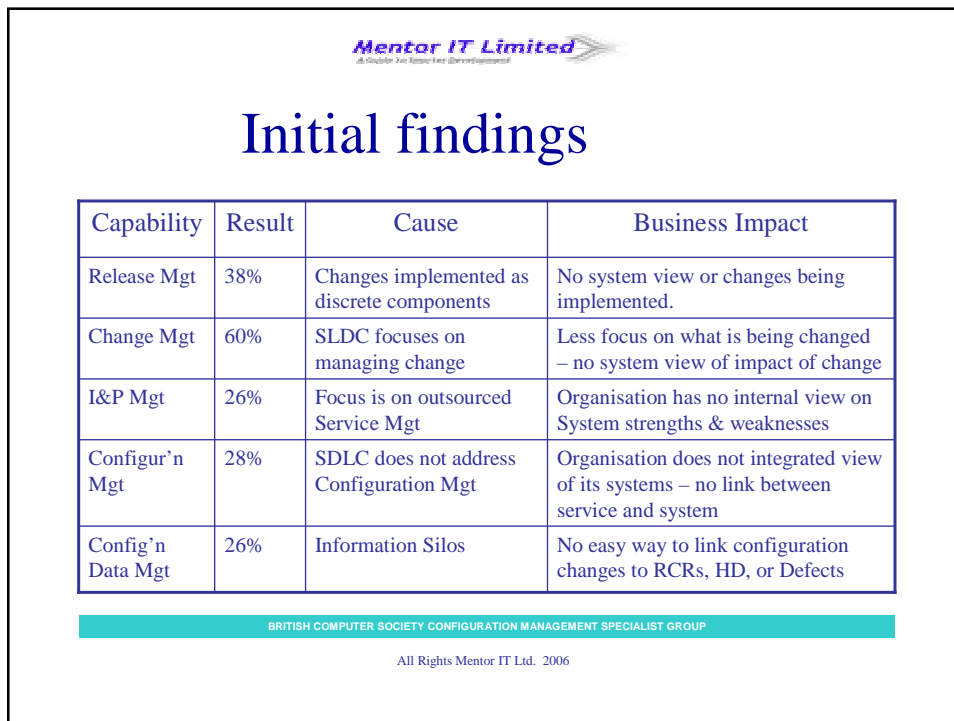
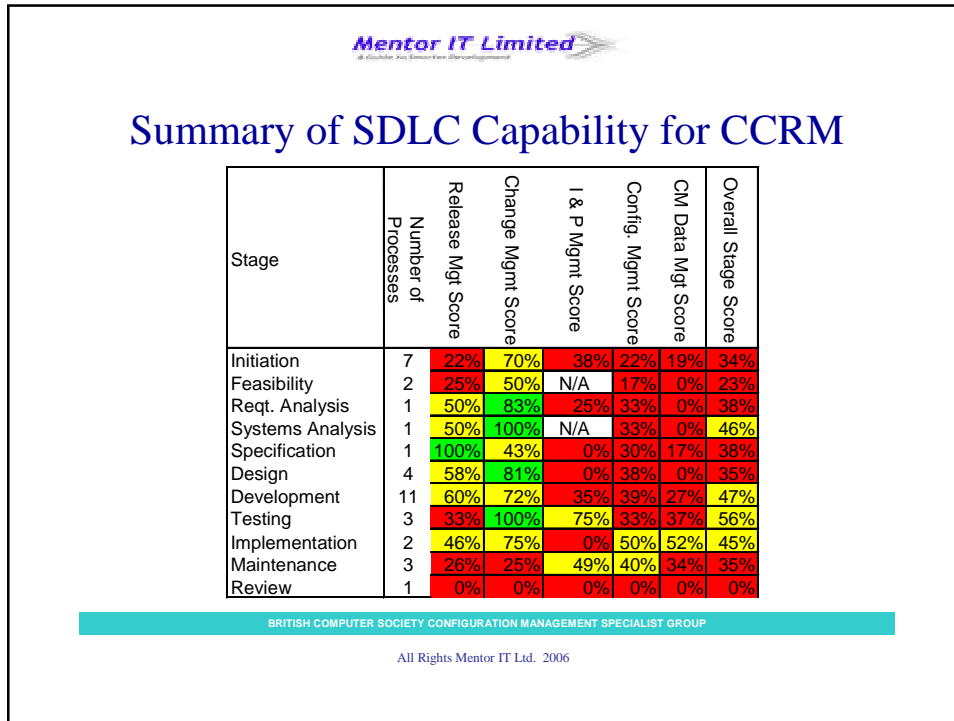
## Methodology

- Setting the scope
- Defining the standard
- Assessment
- Analysis
- Auditing
- Reporting

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006





## Next Steps

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006

## Action Plan

- Present findings to senior management
  - Renew sponsorship for the call to action.
- Set-up Audit / Interviews
  - Establish the difference between documented process and exercised process
- Produce Final Report
  - Refine scoring
  - Revisit initial estimates and plans
- Initiate Change Project to incorporate CCRM processes

BRITISH COMPUTER SOCIETY CONFIGURATION MANAGEMENT SPECIALIST GROUP

All Rights Mentor IT Ltd. 2006