

Document ID: OAK-SCM-PR



Software Configuration Management Process

Version 1.7.1

01-Aug-11

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Abstract: This document describes the Software configuration Management Process to be followed by all the groups.

CHANGE HISTORY

Version	Release Date	Authors	Review Team	Description
1.0a		Swati	Pradeep, Pai, Asmita	Refer below line
Draft				
1.0	15-Jul-03	Swati	Pradeep, Pai Bala, Swati, Asmita, Santosh, Ben, Manik	Refer below line
Org SCM role identified, Build and release, status accounting sections changed according to PM process, process changed for ISO compliance				
1.1		Asmita	Pradeep	Refer below line
As per CR(47), severity of process/product defect(change) is added in sec 5.5				
1.2	13-Apr-05	Prashant S.O	Shashidhar Joshi	Refer below line
As per CR 151 Address, email-ID and phone number is changed in the first page of the process. As per CR 165 sec 5.5 CMP flow diagram is corrected. Responsibility of PL is updated in section 3.0 as per CR 164. In section 5.4 example for unapproved CIs are mentioned and section is updated as per CR 159.				
1.3	30-Nov-05	Hanumanth M	Asmita, Prashant S O	Refer below line
As per CR 20 and 61 form OAK-SCM-FR-CHRF is updated and new template OAK-SCM-FR-CRT is added. As per CR 84 new checklist (OAK-SCM-CL-DC) is added and sec 5.5 is updated. As per CR 210 in sec 5.1 table configuration items is updated with two more rows.				
1.4	15-Jun-06	Deepa G C	Asmita	Refer below line
As per CR 262 Phone Number was changed in the first page of the process.				
1.5	23-Jul-07	Asmita	Asmita	Refer below line
As per CR 267, 330-Necessity of Backup request Form for other groups elaborated. CR 331 Time span for accommodating CR depending upon category				
1.6	10-Aug-09	Asmita	N Pai	Refer below line
As per CR 386: ISO 9001:2008 referred. CR 388: address change				
1.7	09-Aug-10	Asmita	N Pai	Refer below line
As per CR 371: Writing of analysis in CRT is made optional. Analysis column heading is modified as optional (OAK-SCM-FR-CRT ver 1.1)				
1.7.1	01-Aug-11	Vinoth	N Pai	Refer below line
CR 406 : Address change				

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1.0 SOFTWARE CONFIGURATION MANAGEMENT PROCESS

1.1 Purpose

This document describes the Software Configuration Management (SCM) process to be carried out by all the projects and groups at Oaksys to ensure proper control of the software artefacts and documents.

1.2 Scope

This process is applicable to all the groups and the project within at Oaksys.

1.3 Target Audience

All members of Oaksys

1.4 Glossary

Admin- Administration
 CD-Compact Disc
 Check-In-Putting in the CIs in the freeze area
 Check-Out-Taking out the CIs from the freeze area
 CI-Configuration Item
 CMP-Change Management Procedure
 CRF-Change Request Form.
 HBD—Head Business Development
 HLD—High Level Design
 SRS—Software Requirement Specification
 LLD—Low Level Design
 STP—System Test Plan
 ITP—Integration Test Plan
 UTP—Unit Test Plan
 HBD – Head Business Development
 HO&D- Head Operations and Delivery
 HR- Human Resource
 IQA- Internal Quality Audit.
 ISO- International Organization for Standardization
 MR- Management Representative.
 Oaksys- Oak Systems Pvt.Ltd.
 Org- Organization.
 PL-Project Leader
 QMS- Quality Management System
 SCM-Software Configuration Management
 SQA-Software Quality Assurance
 TM-Team Member

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1.5 References

- ISO 9001: 2008, Clauses 4.2.3, 7.5.3 and 7.5.5
- Document and Data control Process-OAK-DDC-PR
- Project Closure Process- OAK-PC-PR
- Documentation Standard Guidelines-OAK-DDC-GL-DSD
- Project Plan Turnkey-OAK-PM-FR-PPTK

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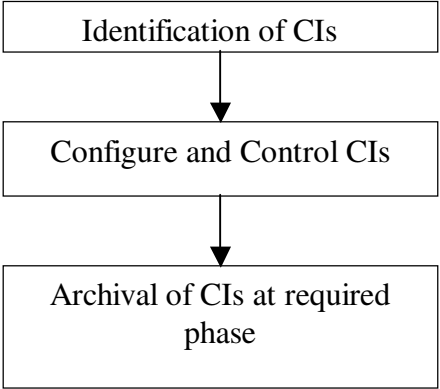
2.0 ENTRY CRITERIA

- SCM activities for a project start once the project is initiated

3.0 RESPONSIBILITIES

Role	Skills	Responsibility
Project Leader		<ul style="list-style-type: none"> • Identifies the Project SCM for the Project. • Plans for Training Project SCM in SCM activities, if required. • Monitors Project SCM activities. • Baselines the CIs
Project SCM	Experienced /trained in SCM activities	<ul style="list-style-type: none"> • Identifies Configuration Items • Manages Project backups & Archival • Controls Freeze area • Check-out and Check-in of CIs • Prepare Status accounting Report. •
Org SCM	Experienced in SCM activities	<ul style="list-style-type: none"> • Collects CIs at Org level not tied to projects along with Project's CIs. • Manages & reports on Monthly Org. backups • Checks-out and Checks-in Org CIs • Prepare Org Status accounting Report.

4.0 PROCESS FLOW



5.0 PROCESS DESCRIPTION

5.1 Identification of Configuration Item

PL and Project SCM shall identify all project specific configuration items, which can be internally generated and externally procured from customer. Name them as per **Document and Data Control process (OAK-DDC-PR)**, **Documentation Standard Guidelines (OAK-DDC-GL-DSD)** and list them in the Project Plan. The Following list gives guidelines for identification of CIs.

List of some CI that can be identified in the project

<i>Configuration Items</i>
Customer provided documents
Proposal
Contract Agreements
Project Plan
SRS
HLD
LLD
Code
STP, ITP & UTP
Release Notes
User manual
Help files
Templates
Test Reports
Development Software
Test drivers
Standards & Checklists
Process documents
Defect logs
Change Notices
Minutes of important meetings
Milestone Documents
Customer Response Sheets
Configuration Items list
Estimation Documents

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5.2 Version Numbering

All CIs shall be version numbered as per the **Documentation Standard Guidelines (OAK-DDC-GL-DSD)**.

5.3 Directory structure

All projects shall identify the Freeze, Work and Backup areas for their projects. The test / Review area can also be optionally identified. This structure and access control to these areas shall be documented in the **Project Plan**. The contents of different areas of the directory structure are as below

- *Freeze Area*: This area shall contain all the base-lined CIs and has restricted access.
- *Work area*: This area contains the CIs under construction. The PL can decide upon the directory of TMs.
- *Back up Area*: This area contains the backup of project data.
- *Test / Review Area*: This is an optional area, where the team members can put their work products for review or test

5.4 Baselines

All the CIs reviewed and approved by the Project Leader shall be put in the freeze area of the project. These CIs will be referred to as the '*baseline*'. Any modifications required to be done to these CIs shall go through the formal 'Change Management Procedure' defined later in this process.

Apart from these, PL can also identify some CIs to be put in the freeze area, which are not approved. For example, Customer Communication, submitted documents, references, Images. For these CIs, this CMP may be optional as decided by the PL.

5.5 Change Management procedure

All projects shall follow this Change Management Procedure. Changes to the CIs may be requested either by the customer or internally. All change requests are raised using Change request form OAK-SCM-FR-CHRF. In the case of customer requested changes, the Project SCM enters the change request form and keeps for discussion. The requested changes are reviewed. Each change request shall be classified with the Defect category and Defect severity. Defect category shall be any of FURPS+ characteristics (Functionality, Usability, performance, etc.). Defect severity shall be assigned by referring to Defect Classification Guidelines (OAK-PM-GL-DFC). All change Requests with Defect severity major and above shall be accommodated in the respective documents within a period of 2 months. However pilot can be initiated immediately for critical change requests. However, individual project can define its own policy of defect classification (severity & category).

After analyzing and evaluating the impact of changes in all areas, the PL can take decision to approve or reject the changes. If the requested changes are deemed not feasible for

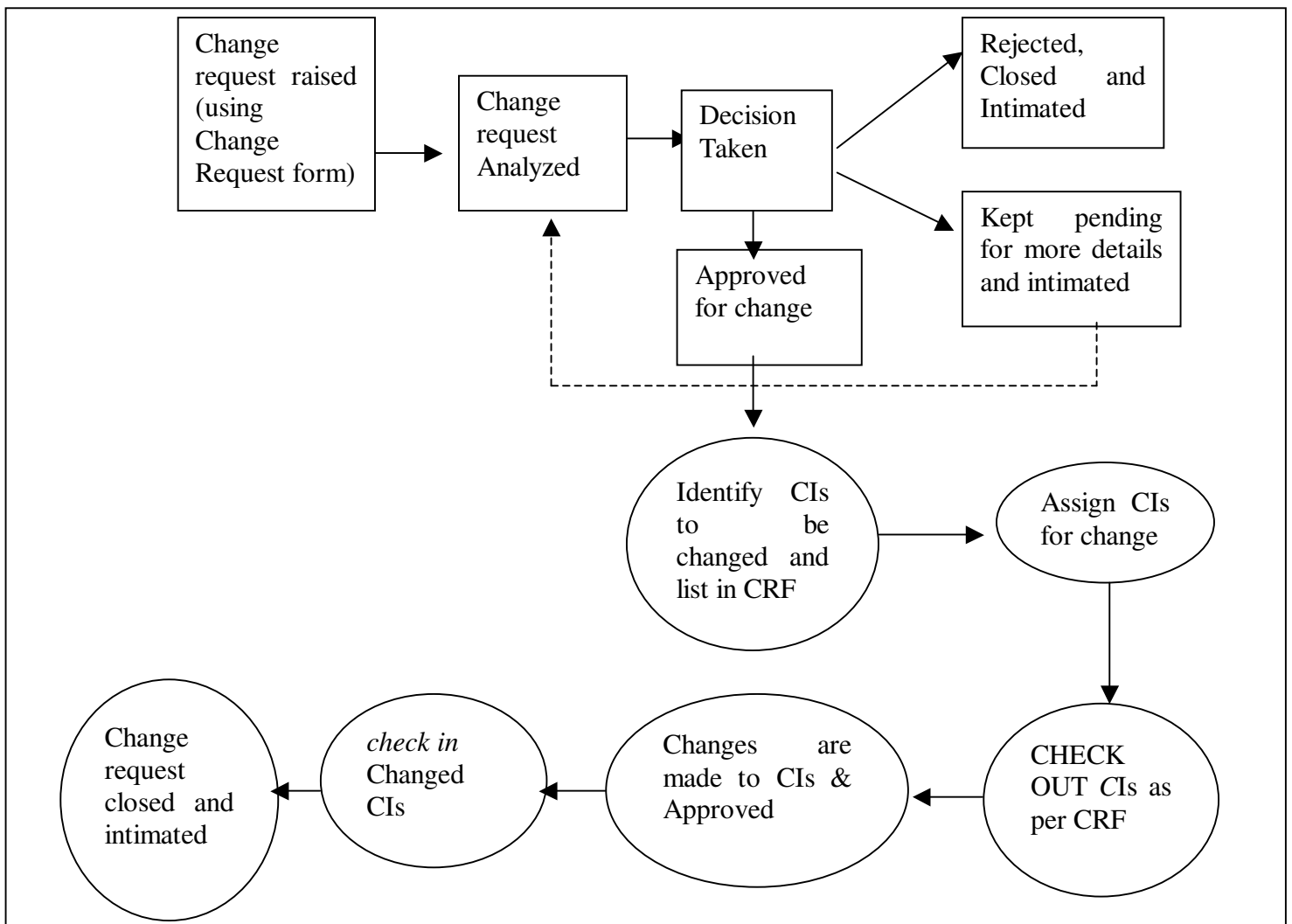
incorporation, PL can take a decision to reject the change request or keep pending for want of more details for decision.

If the change request is approved for incorporation, the list of required CIs shall be prepared and the same will be checked out from the freeze area to the work area of the team member responsible for working on these CIs. A team member shall refer checklist (OAK-SCM-CL-DC) while making changes and reviewer shall also refer same checklist while reviewing the changes. After the work, approved CIs will be checked in to the freeze area.

In all the cases the decision will be made known to the requester (customer/ TM) through mail/phone and the same will be recorded in the change request form and change request will be closed.

Similarly Change request to QMS are discussed by Quality Group and decisions are taken and implemented. All the individual project will be captured and have there own change request tracker (OAK-SCM-FR-CRT).

The Project SCM at project level and Org SCM at Organization level shall maintain all change request forms.



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5.6 Build and Release Management

5.6.1 Build

The build mechanism for the work products specific to projects shall be detailed in the SCM section of the Project Plan. This shall explain how the data for build is to be taken, from which area etc.

< E.g.: The project teams will baseline the work products in the freeze area and the work products shall be checked out from freeze area to test teams, and they will perform their own build of executables. The required build document in free format will be released. >

5.6.2 Release

The deliverables will be packaged, virus checked, and smoke tested for completeness and correctness. This procedure will be used for both major and minor releases. All the related documents shall be shipped in the specified format. The project specific release mechanism can be discussed in SCM section of the Project Plan.

5.7 Backup and Recovery

Project shall maintain regular backups of their project data. Each project can define their own backup mechanism and document SCM section of the Project Plan. The mechanism shall identify the frequency, location and responsibility for back up in this section.

At organization level, backups shall be taken on a monthly basis. This backup shall contain the backup data of all projects and data of all the groups not tied to projects. The Org. SCM sends the **Backup Request Form** (OAK-SCM-FR-BRF) to all the Project leaders and group heads. For Turnkey Projects the PL/Project SCM shall fill up the form and carry out the necessary activities and shall send filled form to Org SCM or System Admin. Other groups can communicate System Admin from where backup data is to be picked up for monthly backup. Then the Org SCM shall keep the backup on one machine and another one on CD. This backup shall be checked for restoration and properly named as per **Documentation Standard Guidelines** (OAK-DDC-GL-DSD). The report of monthly backup shall be prepared by the org SCM and submitted to Quality leader using Org SCM report template.

Disaster Recovery:

The org level backup taken on CD shall be maintained in some specified place other than the office premises, which shall be documented in the Org SCM Report (OAK-SCM-FR-SCMR).

5.8 Archival

The archival procedure is handled in detail in the **Project Closure process** (OAK-PC-PR).

5.9 Status Accounting

The **Status Accounting Report** (OAK-SCM-FR-SR) for all the identified CIs in the project shall be prepared by the Project SCM, at the defined frequency in the project plan and be submitted to PL

The org SCM shall prepare the organizational level status accounting report and submit it to Quality lead. The report shall cover the summary of all types listed in the list and their status as

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on that report date.

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6.0 DELIVERABLES AND QUALITY RECORDS

- Project level: Status accounting reports- OAK-SCM-FR-SR.
- Organization Level: Status accounting reports- OAK-SCM-FR-SR
- Project level: Change request forms- OAK-SCM-FR-CHRF
- Organization Level: Change request forms- OAK-SCM-FR-CHRF
- Org SCM Report-OAK-SCM-FR-SCMR
- Backup request forms-OAK-SCM-FR-BRF

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7.0 VERIFICATION

- Status accounting Reports- OAK-SCM-FR-SR.
- Org SCM report-OAK-SCM-FR-SCMR

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8.0 EXIT CRITERIA

- Closure of any Project in the organization

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9.0 APPENDIX

- 9.1 Change Request Form-OAK-SCM-FR-CHRF
- 9.2 Status Accounting Report -OAK-SCM-FR-SR
- 9.3 Backup Request Form -OAK-SCM-FR-BRF
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