

### **Software Configuration Management:**

Software Configuration Management is pivotal for projects to succeed in today's highly complex and sophisticated Software Development environment.

Understanding SCM concepts goes a long way to shorten the product development cycle, improve quality, reduce the cost associated with unwanted change, and help build integrity into systems.

This course demystifies the basics of SCM and also gives an in-depth understanding of SCM functions. Advanced topics like SCM tool selection, implementations, SCM plans and standards are also discussed to give a complete conceptual view of SCM.

We also dwell on understanding how SCM and RM, when addressed together can go a long way in shaping successful projects.

Understanding the importance of SCM in the latest Application Lifecycle Management framework is also covered.

#### **Who should attend?**

- New comers to SCM and seasoned SCM professionals
- SEPG/SQA professionals interested in understanding SCM processes
- Developers
- Project Managers to understand SCM in the big picture of Application Lifecycle Management Product Managers
- Configuration Managers
- Tools group/people interested in understanding/evaluating SCM tools

#### **Course takeaway:**

At the end of the course, skills necessary to establish effective SCM procedures at the project level and organizational level are driven home.

The workshop will help the participants to:

- Plan for SCM at Organization/Application/Project level
- Identify software configuration items
- Baseline configuration items
- Understand the change control process and the role of Configuration Control Boards (CCBs).
- Understand the benefits of a good configuration status accounting system
- Conduct functional configuration audits, physical configuration audits and in-process SCM audits.
- Improve on their approach to software build and release management.
- Gain an understanding of SCM tools and guidelines for evaluating and selecting the right SCM tools for your organization
- Align tools and SCM processes
- Develop an SCM plan
- Understand SCM in the picture of Application Lifecycle Management

**Programme Contents:**

<p><b>Introduction</b></p>	<ul style="list-style-type: none"> <li>✓ What is SCM?</li> <li>✓ Evolution of SCM</li> <li>✓ Latest trends in SCM</li> <li>✓ SCM: Common SCM architectures</li> <li>✓ SCM and Requirements</li> </ul>
<p><b>Understanding SCM terminology</b></p>	<ul style="list-style-type: none"> <li>✓ Repository</li> <li>✓ Item library</li> <li>✓ Configuration Management Database</li> <li>✓ Baselines</li> <li>✓ Check-in, check-out</li> <li>✓ Version, variant, release</li> <li>✓ Concurrent development and branching</li> <li>✓ Version Control</li> <li>✓ Source and derived items</li> <li>✓ System building</li> <li>✓ Deltas</li> <li>✓ Releases</li> <li>✓ Item types</li> </ul>
<p><b>SCM functions</b></p>	<ul style="list-style-type: none"> <li>✓ Configuration identification <ul style="list-style-type: none"> <li>○ Selecting CIs</li> <li>○ Naming and describing CIs</li> <li>○ Acquiring CIs</li> </ul> </li> <li>✓ Configuration control <ul style="list-style-type: none"> <li>○ Understanding changes</li> <li>○ Uncontrolled changes: issues</li> <li>○ Change initiation</li> <li>○ Change classification</li> <li>○ Change evaluation</li> <li>○ Change disposition</li> <li>○ Change implementation</li> <li>○ Change verification</li> <li>○ Baseline change control</li> <li>○ Escalation</li> <li>○ Emergency changes</li> <li>○ Problem reports</li> <li>○ Change control boards: roles, composition, functions</li> <li>○ Understanding and using CR forms</li> </ul> </li> <li>✓ Configuration status accounting <ul style="list-style-type: none"> <li>○ Status accounting database</li> <li>○ Status accounting reports</li> <li>○ Automating status accounting</li> </ul> </li> <li>✓ Software Configuration Audits <ul style="list-style-type: none"> <li>○ Functional Configuration Audit</li> <li>○ Physical Configuration Audit</li> <li>○ Auditing SCM tools</li> <li>○ Tools and audits</li> </ul> </li> </ul>
<p><b>Configuration management plans</b></p>	<ul style="list-style-type: none"> <li>✓ Developing a SCM Plan</li> <li>✓ Basis of SCM planning</li> <li>✓ Structure of a SCM plan</li> </ul>

	<ul style="list-style-type: none"> <li>✓ Sample SCM plan</li> </ul>
<b>SCM standards</b>	<ul style="list-style-type: none"> <li>✓ International/commercial standards</li> </ul>
<b>SCM and process models</b>	<ul style="list-style-type: none"> <li>✓ SCM and lifecycles</li> <li>✓ SCM and CMM</li> <li>✓ SCM and CMMi</li> <li>✓ SCM and ISO</li> <li>✓ SCM in Agile development</li> </ul>
<b>SCM tools</b>	<ul style="list-style-type: none"> <li>✓ Typical functionality available in SCM Systems</li> <li>✓ Tool evaluation and selection</li> <li>✓ Popular tools</li> <li>✓ SCM tool implementations</li> </ul>
<b>SCM conversion from one tool to another</b>	<ul style="list-style-type: none"> <li>✓ Why convert?</li> <li>✓ Risks</li> <li>✓ Conversion process</li> </ul>
<b>SCM and ALM</b>	<ul style="list-style-type: none"> <li>✓ The new face of SCM</li> </ul>