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**Software Engineering Process G****roup**

**Version History**

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| --- | --- | --- | --- | --- | --- |
| Ver. No | Date | Comments | Author | Review By | Approved By |
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| 2.0 | 28th May, 2009 | Reformation of the SEPG Team | Abhishek Rautela | SEPG | Mr. Sudhir Saxena |
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| 5.1 | 8th Oct, 2012 | Reformation of the SEPG Team and update dev ver1.2 to 1.3. and update section 2.2 | Rahul Raj | SEPG | Ajay Kumar Zalpuri |
| 5.2 | 26th Feb 2013 | Reformation of the SEPG Team. Remove Tapish Name from the list. | Rahul | Dhananjay Kumar | Ajay Kumar Zalpuri |
| 5.3 | 21st March 2013 | Reformation of the SEPG Team. Include Dev Tripathi in SEPG team members | Rahul | Dhananjay Kumar | Ajay Kumar Zalpuri |
| 6.0 | 16th Aug 2013 | Roles & Responsibilities of **I**nformation **S**ystem **S**ecurity added | Rahul | Dhananjay Kumar | Ajay Kumar Zalpuri |

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# 1.0 Introduction:

This document defines the Software Engineering Process Group (SEPG) activities performed for the maintenance and improvement of NST’s quality management systems. This document should be referred to and modified by the SEPG in an effort to comply with the ISO 9001:2008, 27001:2005 and CMMI Level 3 Ver1.3 KPA’s.

The SEPG is responsible for coordinating and sustaining changes to the Process architecture and for supporting QMS operations. The SEPG shall ensure that all changes to the process are documented and performed in a manner that will maintain consistency as well as compliance to ISO 9001:2008, 27001:2005 and key process areas of CMMI Level 3 ver1.3. This document contains details on changing process documentation and other activities to be performed by the SEPG.

The specific roles and responsibilities of SEPG are mentioned below:

* Process identification and definition
* Process deployment and process training
* Process Improvement
* Process Reviews through SEPG meetings
* SEPG will perform the role of ISSC also

# 2.0 Software Engineering Process Group (SEPG)

## 2.1 SEPG Responsibilities:

The SEPG shall perform two main tasks: coordinating/sustaining process change and monitoring the QMS. In order to coordinate, sustain and improve the software processes, the SEPG shall follow the Change Process defined in section 2.2. Monitoring of the project software engineering activities should be done once in two months by going over the process architecture activities and ensuring that all responsible engineers are aware of the activities to be performed at each cell.

The specific roles and responsibilities of SEPG are mentioned below:

* Process identification and definition
* Process deployment and process training
* Process Improvement
* Process Reviews through SEPG meetings
* Roles and Responsibilities defined for **I**nformation **S**ystem **S**ecurity **C**ommittee (ISSC-SEPG will perform the role of ISSC also)

## 2.2 NPA Change Process:

* Any member of the organization can initiate changes. The SEPG shall ensure that the changes are discussed and if found suitable are approved. Once the changes are approved it shall be the responsibility of individual functional head to effectively implement the same.
* Initiator fills out a NPA Change Proposal form (located in the VSS/TFS under templates folder) and emails it to the SEPG.
* SEPG will verify ISO\CMMI compliance and post the proposal.
* Upon approval, the member responsible for initiating change will ask the SEPG to check out the document(s), and make the appropriate changes with respect to the Documentation standard document.
* Once changes are complete, the SEPG will organize a NPA Change Review with the initiator, PC and Quality personnel.
* Upon a successful Change Review the respective Engineer will ask the Quality team to check in the document(s).
* In the case of an unsuccessful NPA Change Review - Either the change proposal is dropped and the document(s) are checked in as original or - the Engineer incorporates the deviations from the Change Review and proceeds back to previous steps.

**2.3 *Software Process Improvement Model***



# 3.0. SEPG Focus Area

* OPD (Organizational Process Definition)
* OPF (Organizational Process Focus)
* OPP (Organizational Process Performance)
* OPM (Organizational Performance Management)

OPD (Organizational Process Definition

* **Purpose**: The purpose of OPD is to establish and maintain a usable set of organizational process assets
* Existing processes must be described before they can be well understood, managed, and improved. An organization must then define what these processes should be before attempting to support them with software engineering tools and methods; in fact, the definition forms the requirements for tool and method support. A variety of process description and definition technologies is available

OPF (Organizational Process Focus)

* **Purpose**: To plan & implement organizational process improvement based on a thorough understanding of the current strengths and weaknesses of the organization’s processes and process assets
* **Goal 1:** Strengths, weaknesses, and improvement opportunities for the organization's processes are identified periodically and as needed
* **Goal 2:** Improvements are planned and implemented, organizational process assets are deployed, and process-related experiences are incorporated into the organizational process assets

OPP (Organizational Process Performance)

* **Purpose:** The scope of this process covers the organizational level analysis on different processes and process measures selected based on the organizational objectives. It also covers what to collect, and how to collect the data, basis and frequency of collecting the data for Organizational wide analysis. This process also covers the steps/method for analysis, type of control charts and their calculations
* **Goal 1:** Process performance models shall be calibrated based on the past results and current needs.
* **Goal 2:** Process performance models will be reviewed with relevant stakeholders for their agreement and buy-in.
* **Goal 3:** Process performance models will be piloted to validate the results.

OPM (Organizational Performance Management)

* **Purpose**: Organizational Performance Management focuses on actively managing the performance of the organization to achieve the desired business goals. The organization’s business performance is managed using statistical and other quantitative techniques to understand process performance shortfalls, and to identify areas for process improvement

### **Goal 1:** Identification of Pilots

* **Goal 2:** Tracking of Pilot Implementation
* **Goal 3:** Training & Deployment.

# 4.0 Abbreviations.

**NPA: -** North Shore Process Activities.

# 5.0 Reference Documents:

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