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| GENUS INNOVATION LIMITED |
| Estimation Procedure |
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| **Genus** |
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| This procedure demonstrates a consensus based methodology for arriving at effort estimates. |

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# Overview

This procedure demonstrates a consensus based methodology for arriving at effort estimates.

# Objective

To estimate the project efforts against each requirement.

# Scope

This procedure applies to all Projects in Genus.

# Inputs

* Functional Specifications.

# Entry Criteria/Triggers

* Completion of Requirements Development
* Approved Change Requests
* Project Monitoring and Control activities
* The practitioners have undergone QMS trainings with focus on performing their processes.

# Tasks

| Sr. No | Task | Owner/Role |
| --- | --- | --- |
|  | **Prepare for Estimation** |  |
|  | Identify and select participants, called as estimators, from all functional teams (Firmware, Hardware & PCB, Mechanical). These may include Developers, Functional Head/s or Testers. | Project Manager |
|  | Send the developed requirements to the identified participants for estimation. | Project Manager |
|  | **Perform Estimation** |  |
|  | Estimate the complexity of each requirement with respect to the functional area of expertise on a scale of “LOW”, “MEDIUM” and “HIGH” where “LOW” indicates minimal complexity and “HIGH” indicate very high complexity. For determining the complexity of a requirement, refer “Estimation Guidelines” (GDLN\_ESTMAT). Due diligence must be exercised in arriving at the estimates.  Estimate total efforts required in reference to the available tentative schedule and resource availability. Calculate Total Efforts with reference to Lifecycle Distribution and total efforts.  For effective and accurate estimations, refer “Estimation Guidelines” (GDLN\_ESTMAT).  For past effort estimates of similar tasks/projects, use “Data collection, Measurement, Analysis and Reporting Tool” (TOOL\_MESURE). Also refer the Lifecycle distribution specified in “Final Estimations” (TMPL\_ESTFNL) and the “Lifecycle Distribution History” maintained by the PEG. | Estimator/s |
|  | Send the estimates to the Project Manager for final effort estimation. Use templates “Firmware Estimation” (TMPL\_ESTFRW), “Hardware and PCB Estimation” (TMPL\_ESTHDW), “Mechanical Estimation” (TMPL\_ESTMCH) for each functional estimation. | Estimator/s |
|  | Consolidate all 3 functional estimation used for project planning. Use template “Final Estimations” (TMPL\_ESTFNL) for all the above steps. | Project Manager |

\* Improvements/Suggestions are solicited on “Process Improvement Proposals Database”.  
\*For details on the Roles and Responsibilities of the practitioners, Refer "Roles and Responsibility" document in the QMS.

# Verification

* Project Manager verifies the estimates with respect to project needs.
* Review of the process and its work products by PPQA members.
* Review of the process and its work products by Senior Management.

# Guidelines

# “Estimation Guidelines” (GDLN\_ESTMAT).

Refer "Configuration Management and Release Procedure" (PRCD\_CONFIG) for Access Rights, location of work products, naming convention and types of controls.

# Applicable Measurements

NA

# Exit Criteria/Outputs

* Final Complexity and Effort Estimates