# Maturity Level 2 – Managed

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| **Sr.** | **Abbreviation** | **Process Area** | **Category** | **Entry-Exit Criteria** | **Tasks** |
| 1 | CM | Configuration Management | Support | **Entry Criteria**       * Project initiated * Receipt of Change Request * Configuration Item ready for review/testing/release   **Key Input**   * CM plan * Configuration tools such as SVN.   **Exit Criteria**   * CM Plan reviewed and approved * Unique version number/identification is given to the each ‘Configuration Item’ * Baseline Library is maintained * Actions from Configuration Audit Report are tracked to closure * The Configuration Status Report in the form of CI Register is generated as per plan * Project closure   **Key Output**   * CM Plan document (part of project plan) * Baseline register document * Backup tracker – Org level * Backup -Recovery Drill. * Audit report document – PCA & FCA   **Metrics & Measures**   * No of audits conducted * Time taken for recovery   **Process Owner**   * PM & PL | 1. Plan CM Activities 2. Review and Approve of CM Plan 3. Execute CM activities 4. Baseline CI’s & maintain baseline register 5. Periodic backups of CI and Maintain backup register 6. Track change requests for the configuration items 7. Maintain CM status accounting records 8. Conduct CM Audits as part of PPQA audit & PCA, FCA |
| 2 | MA | Measurement and Analysis | Support | **Entry Criteria**       The criteria for initiating the MA Process are listed below:   * Project Management Plan (PMP) is available * Resources have been allocated for measurement and analysis activities * Completion of phase for data collection   **Key Input**  The inputs for the MA Process are listed below:   * Organization’s Business Objectives * Project scope * Estimation * Base measures / raw data   **Exit Criteria**   * A documented Project Measurement Plan is established and is under configuration control * Measurement data for periodic reports and reviews has been collected, analyzed, stored in a data repository, and packaged for presentation to management in accordance with the project’s measurement plan * Preliminary and final conclusions have been drawn from the collected data   **Key Output**   * Approved Project Measurement Plan * Metrics Analysis report   **Metrics & Measures**   * Efforts * Schedule * Defects & Size   **Process Owner**   * PM | 1. Identify Measurement Objectives 2. Identify measures and metrics 3. Identify metrics data collection, storage and analysis mechanism 4. Identify risks related to MA 5. Collect measurement data and store the data 6. Analyze the measurement data collected and Communicate 7. Update Measurement Repository |
| 3 | PPQA | Process and Product Quality Assurance | Support | Entry Criteria      The criteria for initiating the PPQA Process are listed below:   * Projects are initiated * Organizational and project standards, requirements, specifications, checklists, and process definitions against which audits will be conducted are available.  Key Input The inputs for the PPQA Process are listed below:   * Project work products * Processes, checklists, standards, guidelines  Exit Criteria The PPQA Process is a continuous activity that supports the entire life cycle of the project. At the conclusion of the project life cycle, the PPQA Process may be exited when:   * Process and Work product audits are conducted, respective records are maintained and NCs are closed  Key Output  * Audit report * PPQA-Tracker & Analysis   **Metrics & Measures**   * No of planned process and work product audits * Actual process and work product audits * Efforts spent * Project Maturity level   **Process Owner**   * SQA Head | 1. Plan process and work product audits 2. Review the audit plan 3. Identify and Involve relevant Stakeholders 4. Prepare for process audit 5. Perform the audit 6. Identify the non-compliance from process point of view 7. Resolve NCRs 8. NCR Analysis 9. SQA/product quality audit 10. Communicate the Audit Status to Senior Management 11. Establish the records |
| 4 | PMC | Project Monitoring and Control | Project Management | **Entry Criteria**   * Approved project plan and schedule is available.   **Key Inputs**   * Various MoM Templates * Project Plan * Project Schedule * Risk Register   **Exit Criteria**   * Project Status is tracked and meetings documented in MOM * Necessary CA/PA are planned and tracked to closure.   **Key Output**   * Various MOMs to track action points * Updates to various documents such as project plan, project schedule, risk register, Metrics sheet etc.   **Measures**   * Efforts spent in Project Monitoring and Control activity   **Process** **Owner**   * PM | 1. Execute the project activities 2. Monitor the project progress – Daily standups 3. Monitor the project progress – weekly status 4. Monitor the project progress - Milestone review meeting 5. Monitor Commitments 6. Monitor Data Management 7. Work stack progress meetings 8. Manage the Project Using Integrated Plans 9. Contribute to Organizational Process Assets 10. Coordinate and Collaborate with Relevant Stakeholders 11. Manage Corrective Action to Closure 12. Handover activities 13. Reconciliation of the project plan & risks 14. Review and approve the revised project plan 15. Project closure |
| 5 | PP | Project Planning | Project Management | **Entry Criteria**       * Contract is available. * Project is initiated. * PM, PL is assigned. * High level requirements are available.   **Key** **Input**   * Proposal (scope) * Documents provided by customer   **Exit Criteria**   * Project Plan, Integrated schedule and Process Tailoring form is approved   **Key Output**   * Project Plan * Integrated schedule * Process Tailoring form   **Measures**   * Efforts spent in Project Planning and process tailoring activity   **Process** **Owner**   * Project Manager | 1. Project Scoping 2. Identification of Project life cycle 3. Revisit estimates 4. Review and approve revised estimates 5. Identify Resources 6. Human resource allocation 7. Identify/establish the project work environment 8. HW/SW resource allocation 9. Plan trainings 10. Plan stakeholder involvement 11. Plan project data management activities 12. Integrated Project Plan 13. Establish projects defined process 14. Review Project Plan 15. Submit process tailoring form 16. Review and approve process tailoring form 17. Create project schedule 18. Review and approve project schedule 19. Project induction meeting 20. Reconcile the Project Plan |
| 6 | REQM | Requirements Management | Project Management | **Entry Criteria**       * High level requirements are available for RDD process area. * Change in requirements for REQM process area.   **Key Input**   * High level requirements - Documents from customer, proposal. * Project plan, schedule, estimates. * Various templates, guide lines and process: RA- checklist, * RTM, Change request log, Risk register etc.   **Exit Criteria**   * System prototypes & RA document approved by client. * RTM is updated and tracked. * Changes are managed and tracked to closure. * Revision in project plan, schedule and estimates if applicable * Identification and recording of risks if applicable   **Key Output**   * System prototypes * RA document * RTM * Change request log. * Project Plan & Schedule * Estimation sheet * Defects logged in MANTIS * Project RISK register.   **Metrics & Measures**   * No of CRs raised * Efforts spent * Defects logged * Duration of work   **Process Owner**   * PM & PL | 1. Requirement gathering and understanding 2. Preparation of Requirement analysis and system work flow document 3. Assessment of risks related to requirements 4. Review and Signoff of the RA document 5. Preparation of system prototype 6. Review and signoff of system prototype 7. Baseline the RA document 8. Manage Requirements Changes 9. Requirement traceability 10. Revision of estimates, project plan and schedule |
| 7 | SAM | Supplier Agreement Management | Project Management |  |  |

# Maturity Level 3 – Defined

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| **Sr.** | **Abbreviation** | **Process Area** | **Category** | **Entry-Exit Criteria** | **Tasks** |
| 1 | DAR | Decision Analysis and Resolution | Support | **Entry Criteria**   * Need for arriving at a point where there are more than one solution available, and one solution needs to be selected for the project.   **Key Input**   * All the solutions are available for decision making.   **Exit Criteria**   * The Best solution from alternate solution is selected   **Key Output**   * DAR Form and Alternate solutions   **Metrics** & Measures   * Efforts spent in DAR activity   **Process** **Owner**   * PM | 1. Identify the area/issue/problem where structured decision analysis method needs to be used 2. Plan for DAR 3. Identify alternative solutions 4. Select Evaluation Methods 5. Identifies the selection criteria 6. Evaluates the alternatives 7. Select a solution 8. Review and approve the DAR 9. Update the DAR Repository |
| 2 | IPM | Integrated Project Management | Project Management | **Combined with PP ML2 #5** | **Combined with PP ML2 #5** |
| 3 | RSKM | Risk Management | Project Management | **Entry Criteria**       * The criteria for initiating the RSKM Process are listed below: * Projects are initiated * Organizational level risk repository is available.   **Key Input**   * Project Scope (proposal) * Project plan defined during the project planning process   **Exit Criteria**   * The Risk Management Process is a continuous activity that supports the entire life cycle of the project. At the conclusion of the project life cycle, the risk management process may be exited when: * Risk repository is updated * Necessary CA/PA actions are tracked to closure.   **Key Output**   * Risk Management section in the project plan * Risk sources and risk categories list * Project risk tracker * Organization risk register * Lessons learnt   **Metrics & Measures**   * Efforts spent are logged in project mgmt. activities   **Process Owner**   * Project Manager | 1. Risk Identification 2. Risk Analysis / Prioritization 3. Risk Planning 4. Review and approval of risk register 5. Risk Tracking and Control 6. Managing Learning from Risks |
| 4 | PI | Product Integration | Engineering | **Entry Criteria**   * Signed off requirement analysis & system workflow document   **Key Input**   * RA document. * Project Plan, schedule & estimates * Various templates, checklist , guidelines e.g. – RTM, Technical-Specification-Checklist , Coding standards checklist , risk register etc   **Exit Criteria**   * TS, code & user manual are Issued for Techincal solution process area. * The integrate application is deployed in required environment for product integration process area.   **Key Output**   * TS – System Architecture, Data base design , Data flow diagrams , interface specification * DAR report (If applicable) * Integrated code * Integrated application * Release and deployment * Installation guide , Release notes * UAT / GO live signoff * User manual * Defects logged in MANTIS.   **Metrics & Measures**   * Efforts, schedule, defects   **Process Owner**   * PM & PL. | 1. Develop the Design -   Preparation and review of Technical Specification document   1. Implement the Product Design -   Coding and Review   1. Readiness for integration 2. Integrate the code |
| 5 | RD | Requirements Development | Engineering | **Combined with PP ML2 #6** | **Combined with PP ML2 #6** |
| 6 | TS | Technical Solution | Engineering | **Combined with PP ML3 #4** | **Combined with PP ML3 #4** |
| 7 | VAL | Validation | Engineering | **Combined with PP ML3 #8** | **Combined with PP ML3 #8** |
| 8 | VER | Verification | Engineering | **Entry Criteria**   * Artefacts ready for review and issued for testing   **Key Input**   * Artifacts such as RA doc, TS doc, code, test plan, test cases , project plan, schedule & risk register for review * Artifacts such as code for testing   **Exit Criteria**   * Artifacts reviewed and defects if any closed. * Testing completed, defects if any tracked and closed as per exit criteria * Known issues identified for Milestone delivery. * All test cases should have passed for Final delivery.   **Key Output**   * Issued artifacts * Defects logged in Mantis * Testing completed   **Metrics & Measures**   * Defects , size & efforts   **Process Owner**   * PL,PM & SM | 1. Prepare for Verification & validation 2. Perform Review 3. Prepare the Test Plan 4. Review and Approve Test Plan 5. Prepare Unit, System/Integration Test Case Document 6. Review and Approve the Unit, System/Integration Test Case Document 7. Prepare the Test Environment 8. Prepare the Test Data 9. Execute Unit testing 10. Ensures Readiness for IT/system testing 11. Execute IT/system testing 12. Release for UAT 13. Support For UAT 14. Analyze Verification Results 15. Prepare for Release (Go Live) 16. Release (Go Live) 17. Develop product support document/User manual |
| 9 | OPD | Organizational Process Definition | Process Management | **Entry Criteria:**   * Process improvement need exist   **Key Inputs:**   * NC Analysis report * Process improvement feedback * Process tailoring needs   **Exit Criteria:**   * Process improvement rolled out & feedback collected for further improvement. * Organization level documents defined   **Key Output**   * Process improvement plan * Standard process documents , templates, guidelines, checklist * Tailoring guidelines * Descriptions of lifecycle models * Measurement Repository * Process Asset Library * Work environment standards   **Measures**   * Efforts spent in Process improvement activities. * Feedback from project team   **Process Owner**   * SEPG Head | 1. Establish Organizational Process Needs 2. Appraise the Organization’s Processes 3. identify the Organization’s Process Improvements 4. Plan the steps to make improvements/ Establish Process Action Plans 5. Review and Approval of Process Improvement Plan 6. Implement Process Action Plans 7. Establishing the Standard Process 8. Review and Approval of the Associated Process Elements 9. Process Tailoring Guideline 10. Review and Approve of Process Tailoring Guideline 11. Establishing the organization environment standards 12. Setup organization measurement library 13. Prepares Process Asset Library 14. Establish Lifecycle Model Descriptions 15. Establish Teaming Guidelines 16. Prepare a Release Notes 17. Review and Approval of Release Notes 18. Training plan for training the Organization 19. Review and Approval of Training Plan 20. Execution of training 21. Deploy Standard Processes/ Organizational Process Assets 22. Monitor the process implementation 23. Feedback from the organization/people 24. SEPG Process Improvement Meetings |
| 10 | OPF | Organizational Process Focus | Process Management | **Combined with OPD ML3 #9** | **Combined with OPD ML3 #9** |
| 11 | OT | Organizational Training | Process Management | **Entry Criteria:**   * Training needs exist   **Key Inputs:**   * Organization training needs * Organization capability index   **Exit Criteria:**   * Training has been conducted and training data recorded and analysed for improvement.   **Key Output**   * Approved Training Plan * Approved Training schedule * Training course definition * Training records * Training Feedback * Attendance-Sheet * Training-Tracker   **Measures**   * Efforts spent in training * Revised capability index   **Process Owner**   * Training Head | 1. Identify the Training needs 2. Raise training request 3. Define course content & evaluation mechanism 4. Prepare a Training Plan Document 5. Identify the Trainer 6. Identify Trainees 7. Prepare a Training schedule 8. Review and Approval of Training Plan 9. Review and Approve Training Schedule 10. Communicates with the Trainer and Trainees 11. Setup the Facility 12. Execute the Training 13. Analyze the effectiveness of the training |