Software Process Implementation Guide for Small-to-Medium Enterprises
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Project Management

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Goal

Utilizing Project management process areas in CMM/CMMI® - as the major source of reference, provide step-by-step guidance and information on implementing the project management process on projects of small and medium-size Egyptian enterprises.

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Process Description

- Decomposed into 7 process elements (sub-processes).
- Flow diagram describes the sub-processes ordering, interfaces, and interdependencies.

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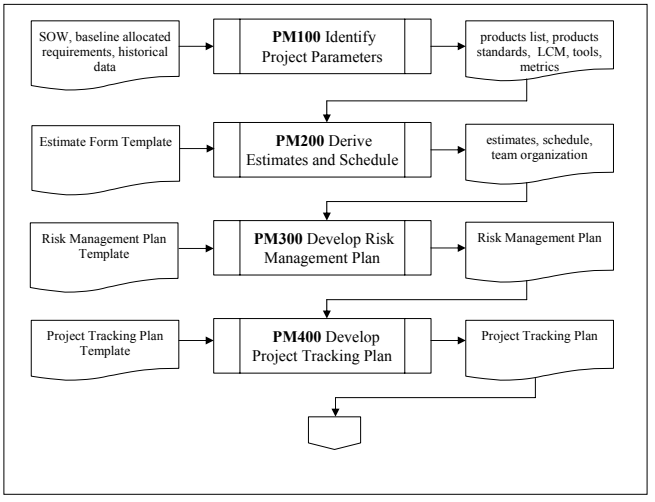
Process Flow Diagram -1-



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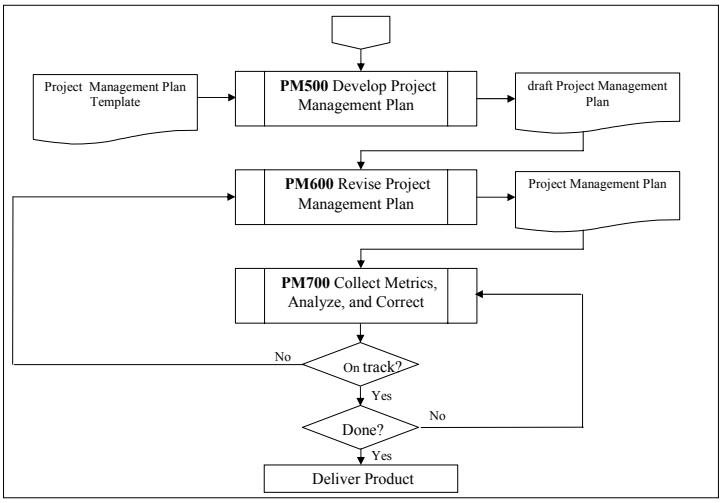
Process Flow Diagram -2-



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Sub-processes

- PM100, Identify Project Parameters
  - Identify the products to be developed in the satisfaction of the statement of work and the baseline requirements allocated to software
  - Identify the standards by which these products are to be developed
  - Select a life cycle model for software development
  - Select tools and metrics to be used on the project

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Sub-processes (*cont.*)

- PM200, Derive Estimates and Schedule
  - Estimate the software size
  - Estimate the project's effort and cost
  - Estimate the project's critical computer resources
  - Develop the project's schedule and project team organization
- PM300, Develop Risk Management Plan
  - Identify and prioritize risks
  - Identify risk contingencies
  - Develop the risk management plan

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Sub-processes (*cont.*)

- PM400, Develop Project Tracking Plan
  - Determine what will be tracked during project execution
  - Assign tracking responsibilities
  - Develop Project Tracking Plan
- PM500, Develop Project Management Plan
  - Develop draft Project Management Plan (PMP)
- PM600, Revise Project Management Plan
  - Review, revise, and approve the Project Management Plan

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Sub-processes (*cont.*)

- PM700, Collect Metrics, Analyze, and Correct
  - Collect and analyze tracking metrics
  - Determine whether or not the project is on track
  - Take corrective actions when the project significantly deviates from the Project Management Plan

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Templates

- Project Management Plan
- Project Tracking Plan
- Risk Management Plan
- Estimate Form
- Change Request
- Tracking Report

Samples

PMP Template: Project Software Work Products

Products List is identified using PM110, Analyze SOW and Baseline Allocated Requirements. Sizes estimates are obtained using PM210, Estimate Software Size. Responsibilities and deadlines are the results of applying PM240, Derive Project Schedule and Develop Team Organization. Subsections below identify software work products for the project. Deliverables are listed first, then followed by non-deliverables.

Samples (*cont.*)

PMP Template: Project Software Work Products (*cont.*)

<Software Work Product>

Description:

Deliverable (Y or N):

Person Responsible:

Size: Planned Re-planned Actual

Estimate Artifact: <specify reference sequence numbers>

Deadline:

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Samples (*cont.*)

PMP Template: Project Software Work Products (*cont.*)

Threshold Management Procedure

If the size for a software work product exceeds <75%> of the current estimate, the Project Manager acts as follows:

1. Check that the development is in accordance with the plan.
2. If necessary, convene a Technical Review to determine if adjustments to the technical approach are necessary.
3. If inevitable, adjust, in coordination with Tech Lead, the effort, cost, resources, and schedule accordingly.
4. Revise the PMP to reflect any changes.

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Samples (*cont.*)

Estimate Form

Item	Project ID_1		Project ID_2		Expert Estimate	Method Estimate	New Project Estimate
	V	S	V	S			

Samples (*cont.*)

Risk Management Plan

This plan is the result of implementing PM300, Develop Risk Management Plan. Subsections below identify project risks. Risks are ranked in descending order based upon score.

Samples (*cont.*)

Risk Management Plan (*cont.*)

<Risk>

Risk ID:

Status (open/close):

Category*:

Impact (I)**:

Probability (P)**:

Score (I x P):

Action Person:

Preventative Action:

Contingency Plan:

** Impact and Probability can be high (3), average (2), low (1), and negligible (0).

Samples (*cont.*)

Risk Management Plan (*cont.*)

Management Procedure

The Project Manager acts as follows:

1- **Review risks <weekly>.**
2- **Adjusts Risk Management Plan as new information becomes available.**
3- **Record risks with an open status on the status report.**
4- **Elevate risks with scores higher than <4> to Senior Manager.**

The Action Person acts as follows:

1. **Apply preventative action.**
2. **If preventative action fails and the risk occurs, tailor the contingency plan so as to resolve the risk.**
3. **Elevate the plan to the Project Manager (PM) who if inevitable, adjusts, in coordination with the Tech Lead, the effort, cost, resources, and schedule accordingly. The PM revises the PMP to reflect any changes.**

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Thank You