***<Group assignation (1)>***

**project Management**

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**1.Introduction**

**1.1 Project Management Process Areas:**

**CMMI Standard**

**Risk Management**

**Risk:** Deviation from plans and it has a negative or positive impact.

**Risk Management:** Prediction of the risk that may occur and how to manipulate with.

**SG1: Prepare For Risk Management:**

* It’s about how to manage risk, by planning to minimize the impact of this risk when it happens.

**SP1.1: Determine Risk Resources and Categories.**

* Define the source of the risk
* Define which phases will be affected with the risk

**SP1.2: Define Risk Parameters.**

* Impact, likelihood , effect , probability and Severity.

**SP1.3: Establish a risk Management Strategy.**

* After prioritizing risk and analyzing it, there should be a strategy to deal with risks and categorize the sources that will have a great impact.
* Setup procedures to be done to mitigate risk**.**
* **Risk handling Strategy:**

**Evaluate Risk**

**Avoid**

**Transfer**

**Accept**

**Mitigate**

To a third Party

Live with it

Do a plan with actions to lower the impact and probability

**Accept & Mitigate (Plan B): has Contingency plan**

* If choosing accept or mitigate its necessary to introduce a plan B.

**SG2: Identify and Analyze Risks:**

**Sp2.1 Identify risks:**

**Sp2.2 Evaluate , categorize and prioritize risks:**

* After Prioritizing the risk and setup the strategy to deal with a mitigation plan.

**SG3: Mitigate Risks :**

**Sp3.1 Develop Risk mitigation plans:**

* How to mitigate the plan to minimize the risk, and take action of mitigation.

**Sp3.2 Implement risk mitigation plans:**

* Implementation of the plan already developed.

**Risk Parameters:**

1. Risk Source.
2. Impact.
3. Probability.
4. Risk Score ( Impact X probability )

Take into consideration when planning and estimation of the negative impact as it costs high and it may produce to project crashing and termination.

**Risk is a Continues activity starting from planning through Generic Goals of Managed Level till the release:**

**GG.2 Managed**

* **Gg2.1 (Organizational Policy)**

This policy establishes organizational expectations for defining a risk management strategy and identifying, analyzing, and mitigating risks.

* **Gg2.2 (plan the process)**

This plan for performing the risk management process can be included in (or referenced by) the project plan, which is described in the Project Planning process area. The plan called for in this generic practice addresses the comprehensive planning for all of the specific practices in this process area. In particular, this plan provides the overall approach for risk mitigation.

* **Gg2.3 ( provide resources )**

Examples of resources provided include the following:

* Risk management databases
* Risk mitigation tools
* Prototyping tools
* Modeling and simulation tools
* **Gg2.5 ( Train People )**

**PMC Elaboration:**

* Risk management

**PP Elaboration:**

* Identifying and analyzing risks

**RSKM Elaboration:**

Examples of training topics include the following:

* Risk management concepts and activities (e.g., risk identification, evaluation, monitoring, mitigation)
* Measure selection for risk mitigation
* **Gg2.6 ( Control work products )**

**RSKM Elaboration:**

Examples of work products placed under control include the following:

* Risk management strategy
* Identified risk items
* Risk mitigation plans
* **Gg2.7 ( identify relevant stakeholders )**

**PMC Elaboration:**

* Reviewing project risks

**PP Elaboration:**

* Reviewing and resolving issues on the completeness and correctness of the project risks

**QPM Elaboration:**

* Identifying and managing the risks in achieving the project’s quality and process performance objectives

**RD Elaboration:**

* Assessing product cost, schedule, and risk

**RSKM Elaboration:**

* Establishing a collaborative environment for free and open discussion of risk
* Reviewing the risk management strategy and risk mitigation plans
* Participating in risk identification, analysis, and mitigation activities
* Communicating and reporting risk management status
* **Gg2.8 ( Monitor & Control the process )**

**RSKM Elaboration:**

* Number of risks identified, managed, tracked, and controlled
* Risk exposure and changes to the risk exposure for each assessed risk, and as a summary percentage of management reserve
* Change activity for risk mitigation plans (e.g., processes, schedule, funding) Occurrence of unanticipated risks
* Risk categorization volatility
* Comparison of estimated versus actual risk mitigation effort and impact
* Schedule for risk analysis activities
* Schedule of actions for a specific mitigation
* **Gg2.9 (Objectively Evaluate Adherence)**

**RSKM Elaboration:**

**Examples of activities reviewed:**

* Establishing and maintaining a risk management strategy
* Identifying and analyzing risks
* Mitigating risks

**Examples of work products reviewed:**

* Risk management strategy
* Risk mitigation plans
* **Gg2.10 (Review Status with Higher Level Management)**

**RSKM Elaboration:**

Reviews of the project risk status are held on a periodic and event driven basis, with appropriate levels of management, to provide visibility into the potential for project risk exposure and appropriate corrective action. Typically, these reviews include a summary of the most critical risks, key risk parameters (such as likelihood and consequence of the risks), and the status of risk mitigation efforts.

**Risk Management ( CMMI )**

El risk handling strategy : eh el mmkn a3mlo 3shan at3aml m3 el risk lma y7sal

Estimates: used to decrease risk occurrences بقلل حدوث ال

Estimation is associated with risks.

Risk handling cost (risk mitigation): لو البروجكت هياخد يومين.. زود يوم كمان

لو البروجكت كوست 100 دولار زود 10%

**SG2 > Develop a project plan:**

**2.5 )** Plan for needed Knowledge And Skills لازم أكون عارف السكيلز اللى عندي و اعمل حساب الريسك بلان و اكون عامل حسابي في ان عندي شورتدج في ال سكيلز

**SG3 > Obtain Commitment to the plan**

Sp1.3 Monitor project risks: a3ml monitor lel plan el ana 7atetaha 3shan el risk my7slash , lw risk 7asal

**Mitigation plan:** de el plan 7atetaaha 3shan t3ml minimize el risk

CMMI Standard:

p.349 -> Risk Management ( level 3 process area - Maturity ) ( Defined )

Presented in 22 process areas in the category of Project Management

Project Planning process area is “Refer to the Risk Management process area for more information about identifying and analyzing risks and mitigating risks.”

A defined process that is characteristic of a maturity level 3 organization can be placed at great risk if maturity level 2 management practices are deficient. For example, management may commit to a poorly planned schedule or fail to control changes to baselined requirements. Similarly, many organizations prematurely collect the detailed data characteristic of maturity level 4 only to find the data uninterpretable because of inconsistencies in processes and measurement definitions.

**Gg3.2 (Collect Process Related Experiences)**

**PP Elaboration:**

Examples of process related experiences:

* Risk impacts and probability of occurrence

**RSKM Elaboration:**

Examples of process related experiences

* Risk parameters
* Risk categories
* Risk status reports