**HW #3 Assignment**

GK Posted Jan 2023

**Instructions:**

Your answers should be *direct and explained*. Show your calculations, formulas, logic you follow etc. Explanations do not have to be verbose; they should be just enough for the instructor and/or TA to understand what you are doing. 80% of the grade goes to the explanations and logic you follow and 20% goes to the result. *Correct result with no explanations gets zero points*.

Please respond with your own words and own understanding. Copying the answers without understanding them, defeats the purpose of this homework -- it violates the code of ethics and the integrity of the course.

* *If you are* ***suspected*** *of copying any part of your answers either from a classmate or a web site (without a reference link), you get a zero to the entire homework.*
* *If it is* ***proven*** *that you have copied or plagiarized, you will be reported to your advisor, your sponsor, and the School; serious consequences to your academic record and/or your student status should follow.*
* *This is applicable to both the giving student and the recipient student*.

For the problems/exercises, it is expected to use a spreadsheet (Excel) and/or your own drawing tool (PowerPoint, Visio, Drawsoft, etc) or make a neat drawing by hand. ***You must embed*** these assets into your WORD file with no external references, specifically for Excel. Unless the TA or I click-and-open the object to see your calculations, you will be missing points. *If you do not know how to do so, ask your colleagues, post the question to the Discussion Homework Area, ask our TA and/or ask me.*

Please use font Arial or Calibri of 9pts or 10pts.

DO NOT REMOVE THIS PAGE FROM YOUR SUBMISSION. Also, answer the questions below:

*How long did it take you to complete this homework? \_\_\_\_\_\_\_\_5\_\_\_\_\_\_\_ hours*

*How many hours did you work on your project this week? \_\_\_\_\_\_3\_\_\_\_\_ hours*

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## STYLES, 7pts

Watch this video: [Organizational Structure - YouTube](https://www.youtube.com/watch?v=zUd0UNHyy60) (<https://www.youtube.com/watch?v=zUd0UNHyy60>).

1. (2pts) What are the three organizational styles described?
2. (2pts) Compare the above with the material we covered in Class#3
3. (3pts) As a “team organizations” evolve, then members …. *fill-in with your learning from the video* ….

### Answer:

1. Hierarchy; team-based; matrix. 0:32
2. Hierarchy style refers to functional organization; team-based refers to projectized organization; matrix style is just the same as matrix organization referred to in class#3.
3. Start to learn and speak a common language that brings the team members together and helps them do high-quality work. 3:04

## CMM, 10pts

Research the Capability Maturity Model (CMM) by Carnegie Mellon University.

1. (2pt) Attach a sketch or picture which illustrates the five maturity levels. Respond with five complete sentences describing each level.
2. (2pt) What is the level of most medium size companies?
3. (3pt) Give an example of an organization at Level 5
4. (3pt) Explain and relate this to the PMO/Project Management Maturity

*Note: do not omit you references. Zero credit if omitted.*

### Answers:

1. 图示

   描述已自动生成
2. The software process is characterized as ad hoc, and occasionally even chaotic. Few processes are defined, and success depends on individual effort.
3. Basic project management processes are established to track cost, schedule, and functionality. The necessary process discipline is in place to repeat earlier successes on projects with similar applications.
4. The software process for both management and engineering activities is documented, standardized, and integrated into a standard software process for the organization. All projects use an approved, tailored version of the organization's standard software process for developing and maintaining software.
5. Detailed measures of the software process and product quality are collected. Both the software process and products are quantitatively understood and controlled.
6. Continuous process improvement is enabled by quantitative feedback from the process and from piloting innovative ideas and technologies.

Reference: The picture is from *Figure 2.1 The Five Levels of Software Process Maturity* and the text is copied from the content below the figure in *Capability Maturity Model for Software (Version 1.1)*

1. Repeatable and defined levels.
2. Apple company. It has cadent feedback and many research team.
3. PMO’s work are on the initial stage.

## LOCATIONS, 8pts

Your virtual project team is primarily located in Boston, but includes members also from London, Amsterdam, and Hyderabad. You have organized a Project Design Review meeting and you want to be sensitive to their cultural stereotypes.

1. Who is/are most likely to have “strong opinions”?
2. Who is/are most likely to go along with the Technical Approach you and your Architect presented?

### Answer:

1. People in Hyderabad. The cultural difference is the greatest.
2. People in Boston. There is no time zone issues.

## AGILE, 10pts

Based on what you have read on Agile management (from the Study Guide of Class #3), which of the projects below the (pure) Agile methodology is not applicable?

1. Pavement of Huntington Avenue before school year starts in Sep 2023.
2. Delivering the daily newspaper to South Boston
3. Development of an EV Chassis consisting of parts from various manufacturers
4. Getting FDA approvals of a new medical device
5. Writing the navigation code of the 737 MAX

For each of the above explain why or why-not.

*Note: 2pts each. Zero credit if explanations are missing. Subtract 2pts if answer is incorrect.*

### Answers:

1. Not applicable. The finishing time is specified.
2. Not applicable. This cannot be regard as a project.
3. Not applicable. Inter-manufacturer coordination cannot be agile.
4. Not applicable. Procedures are almost fixed and time-consuming.
5. Not applicable. Code for airplanes cannot have any error, it’s related to lives.

## B-CORP, 10pts

Consider the Slide titled “Example: Project Teams at B-Corp”

* 1. Explain this slide in terms of functional groups and project groups.
  2. What is the meaning of the “three little circles” with labels team-1, team-2, etc

### Answer:

1. Functional: OTG Codebase Groups, ITH Codebase Groups, Mobile Apps Codebase Groups, Product Services Group, Cloud Platform

Project: team-1, team-2, … , team-N

1. Represents team members from marketing, manufacturing and engineering departments.

## MATURITY, 7pts

Refer to Class#3 slide “Selecting the right Org Structure”

Refer to Class#1 slide “Example: D-Corp Product Maturity”.

* + - 1. (3pts) Explain the differences of the two slides
      2. (4pts) How do these two slides relate to each other?

### Answers:

1. The first slide is from organization level and the second is from product level, so in the first slide there is an extra phase (Splits, Spinoffs).
2. The second slide describes the product’ maturity inside a organization. From a larger scale, if we regard forming an organization as maturing a product, then they share many similarities.

## MOORE, 9pts

Geoffrey Moore is a prolific author and high-tech company advisor. His classic book of Crossing the Chasm is a required reading by all new entrepreneurs. I found one of his presentations in Youtube which you will enjoy – easier to grasp his big ideas than reading his book. Here is the link:

[Crossing the Chasm by Geoffrey Moore - Lean Product Meetup - YouTube](https://www.youtube.com/watch?v=887i04NjDjc). The clip is about an hour; you can skip the last Q&A section. As you are watching it, see if you can answer the following questions:

1. (3pts) What is the “Chasm”? When (mm:ss) does he talk about it?
2. (3pts) What are the four Adoption Strategies?
3. (3pts) When did he talk Whatsapp and Groupon he made a point. What was that?

### Answer:

1. Things that we do not expect. 16:26
   * + 1. Go ahead of the herd for competitive advantage;
       2. Go ahead of the herd to address a painful problem;
       3. Stick with the herd as it transitions to new infrastructure;
       4. Go after the herd for less disruption and a lower price

28:44

1. > If you are doing a b2c plan or if there’s a b2c component to your larger plan, figure out in any given quarter what’s our slowest gear, how could we speed it up and then just focus everything on getting that at that thing as speed up as fast as we can. 48:30

## **PMO, 8pts**

Mark and explain the tasks the PMO should perform. Explain if should not performed by the PMO. *(-2 pnts for every incorrect answer)*

1. (2pts) Serve as a home for the product managers related to the project
2. (2pts) Help project managers with the specific timeline charts of their projects
3. (2pts) Hire more program managers
4. (2pts) Negotiate contracts of projects

### Answers:

1. Should not. PMO is short for Project Management Office not Product Management Office.
2. Should not. PMO is not involved with certain project.
3. Should. Program manager reports to PMO.
4. Should not. That’s project managers’ job.

## STYLES, 9pts

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## **PAINT, 6pts**

Consider a painting company. Next spring, they already have booked five paining jobs. They also have established business agreements with vendors for acrylic paints with Benjamin Moore and Sherwin-Williams.

1. (3pts) Who will write the contracts engaging with clients?
2. (3pts) Who likely negotiated the contracts with the vendors?

### Answer:

1. FM
2. PM

## MAIL, 8pts

You are developing a complex new product such as a new automated mail sorting machine with optical recognition of addresses. You have a choice of organizing this project as functional, productized, matrix, composite, virtual etc.

* Which of the above you will NOT choose to organize. Explain you answer sufficiently.

### Answer:

Projectized. This is highly segmented and does not need to hire people with other skills and expertise. Therefore the project can just be formed inside a functional department.

## MATRIX, 8pts

Watch this video: [Disadvantages of a matrix organization - YouTube](Disadvantages%20of%20a%20matrix%20organization%20-%20YouTube) (<https://www.youtube.com/watch?v=iKArFiYfXWQ>)

1. (4pts) List the two main disadvantages of matrix organizations mentioned in this video.
2. (4pts) List what “should be done” or “should be avoided” in order for matrix organizations to work

### Answer:

1. Increase in the number of meetings; delays to decision making 1:26
2. 1. Building skills

2. Changing ways of working