CMM Level 1 -> 2

Ryan Dockstader

# Waterfall

## Part of the Methodology

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| **Name** | **Quote** | **Description** |
| Requirements Gathering |  | A phase of a project where all requirements are gathered |

## Key Process Area

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| **Name** | **Quote** | **Justification** |
| Requirements Management | Here we tried to sharpen &e focus on requirements management as seen fi-om a software-engineering perspective, while recognizing that the development and revision of requirements typically is not the responsibility of the softwareengineering group. | Waterfall has a very large focus on requirements gathering, and doing it first and getting it absolutely right. |

## Help/Hinder

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| **Name** | **Rationale** |
| Both | This document does end up being very helpful, but it doesn’t necessarily advance us from stage 1 to stage 2 in my opinion. Since you have to start from basically scratch from project to project it forces you to stay on level 1. |

# Spiral Model

## Part of the Methodology

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| **Name** | **Quote** | **Description** |
| Transform Model | The transform model assumes the existence of a capability to automatically convert a formal specification of a software product into a program satisfying the specification. | With this model we’re able to predict what’s going to happen in a future development cycle. |

## Key Process Area

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| **Name** | **Quote** | **Justification** |
| Software Project Planning | We added a verification practice to address senior management's involvement in planning activities. | The transform model is supposed to assist with planning the future of the project |

## Help/Hinder

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| **Name** | **Rationale** |
| Hinder | The transform model makes a lot of assumptions that aren’t necessarily true, and can really end up hurting the repeatability of the software, hindering us in advancing to level 2. |

# XP

## Part of the Methodology

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| **Name** | **Quote** | **Description** |
| Release | The Quarterly Cycle is synonymous to a release. The purpose is to keep the detailed work of each weekly cycle in context of the overall project. The customer lays out the overall plan for the team in terms of features desired within a particular quarter, which provides the team with a view of the forest while they are in the trees, and it also helps the customer to work with other stakeholders who may need some idea of when features will be available. | Here the release is discussed as a quarterly cycle, and how the release meeting will tend to happen. |

## Key Process Area

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| **Name** | **Quote** | **Justification** |
| Software Project Tracking and Oversight | Many of the changes in this area are intended to clarify who does what., emphasizing the software engineering group’s responsibilities. | The release schedule and meeting are all about making sure we know where the software is, and who is doing what |

## Help/Hinder

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| **Name** | **Rationale** |
| Help | The release schedule allows us to better track progress, and work towards a real end goal. This further allows task assignment, and accountability within a release cycle. |

# Scrum

## Part of the Methodology

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| **Name** | **Quote** | **Description** |
| Sprint Plan | “At the beginning of each Sprint, the Product Owner and team plan which Product Backlog Items they will attempt to convert to working product during the Sprint” | M. James describes that there will be a sprint at the beginning of which a plan will be made |

## Key Process Area

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| **Name** | **Quote** | **Justification** |
| Software Project Planning | “Software development successes are repeatable. The processes may not repeat for all the projects in the organization. The organization may use some basic project management to track cost and schedule.” | CMM level two must achieve repeatability. This is what a sprint is built around. Repeated actions, that lead to repeated effort and repeated results |

## Help/Hinder

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| **Name** | **Rationale** |
| Help | With the sprint you are able to fall into a cycle and start making more and more things repeatable. Meetings become more repeatable, and templates start to form for all of the different documents that float around. |

# Works Cited

McKay, V. (n.d.). What is the Capability Maturity Model? (CMM). Retrieved June 07, 2020, from <http://www.selectbs.com/process-maturity/what-is-the-capability-maturity-model>

M. James, "Scrum Reference Card," [Online] Available: <http://scrumreferencecard.com/ScrumReferenceCard.pdf>

M. Paulk et al., "Capability Mature Model for Software, Version 1.1," Chapter 1-3 IEEE Software, vol. 10, no. 4, pp. 18-27, Jul. 1993.

[Online] Available: <http://dx.doi.org.byui.idm.oclc.org/10.1109/52.219617>

# Rubric

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Exceptional 100%** | **Good 90%** | **Acceptable 70%** | **Developing 50%** | **Missing 0%** |
| **Reference 30%** | The source cited is reputable and complete describes the notation used. | The citation is "sound" and is correctly referenced. | The source is of insufficient quality. | The notation cited is not appropriate for the stack. | No formal notation is cited. |
| **Formality 40%** | It is possible to conduct a formal proof from this definition. | Every aspect of the stack behavior was *modeled*. | The notation was syntactically correct | Every aspect of the stack behavior was *described to some degree*. | Large components of the definition are up for interpretation. |
| **Correctness 20%** | The description is unambiguously correct. | All the behaviors of the stack are correctly modeled. | A minor error exists in the definition of one of the interfaces. | One major error exists or multiple minor errors exist. | The model does not resemble the stack. |
| **Professional 10%** | All ideas were clearly and elegantly presented. | Everything was done professionally. | One aspect of the write-up was unprofessional. | The quality of the write-up was below what one would expect from a senior. | Extreme difficulty in readability, etc. |