Milestone 4 Retrospective

for

NASA EVA Path Phase 3

Version 2.0

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i. Revision History

Revision	Author	Date	Description
1.0	Lincoln Powell	7/1/18	Created document.
1.1	Tenadam Weldesemayat	7/1/18	Reviewed document
1.2	Tenadam Weldesemayat	7/22/18	Reviewed document
2.0	Lincoln Powell	8/12/18	Updated document for Milestone 4.

1. Introduction

1.1 Purpose

This document provides a summarized list of considerations, improvements and lessons learned by the NASA EVA Path Phase 3 project team. The items therein are intended for review by the project team for consideration when continuing project deliverables in future milestones, as well as for future teams as a glimpse into the unique challenges and evolution of the Phase 3 project team. Our ultimate aim for this document is to increase the probability of success of the NASA EVA Path project by identifying potential pitfalls or successes and areas of improvement.

1.2 Scope

This document will organize the summarized list of identified items into the following categories: (1) communication, (2) project management, (3) schedule estimation, (4) design and implementation and (5) closing. Each item will be accompanied by the area of concern, the problem or success identified, the impact on the project in terms of low, medium, high or critical, and, finally, a recommendation for improvement.

2. Considerations, Improvements and Lessons Learned

2.1 Communication

Table 1. Communication.

Area of Concern	Problem/Success	Impact	Recommendation
Group meetings (to include informal or standups)	Pre-scheduling and mandating attendance of all group members yielded positive attendance and involvement.	High	Ensure all meetings are preannounced to all group members and fit their unique scheduling concerns. Identify team members routinely absent and escalate matter to professor.
Stakeholder contact (to include email, phone or web conferencing)	Routine communications to stakeholder needs to remain paramount regardless of progress on in progress items.	High	Keep stakeholder updated and engaged as a project team member to build satisfaction with the product. Refrain from structured communications and too much formality; reach out to the stakeholder

			with any and all questions and updates to keep engagement high.
Collaborative tools	Chosen collaborative tools need to be standardized to retain use of all group members.	Medium	Lock in collaborative solutions (LEO, email or etc.) early to get head start on group adoption and familiarization. Identify members who may resist direction made and compromise on workable tools.

2.2 Project Management

Table 2. Project Management.

Area of Concern	Problem/Success	Impact	Recommendation
Team roles	Despite former teams finding team roles as a successful strategy, we have explored using a role-less strategy employing Kanban, which could allow for further collaboration and energy towards backlog items.	High	This paradigm helped our team members who were knowledgeable on using the methodology and comfortable working on tasks alone (or pair programming). However, for team members with limited skills, it was difficult to keep their momentum consistent with the group. More, not all team members valued group collaboration/groupthink; only offering input if provoked.
Producing waterfall artifacts while adhering to Agile	Though it was identified early, team members sought the inclusion of earned value analysis, project timelines structured using waterfall phases, work breakdown structures	Critical	The project team discovered early challenges with disagreements of what necessary to include in Milestone 1. As such, lone team members sought the inclusion of artifacts in the

	not transformed to fit sprints and resource management tools.		Project Plan which offered little value to the team nor to the stakeholder. Our team recommends if you seek to use Agile, remember the values!
Project Plan	Project team built upon existing Phase 1 and 2's Project Plan, which appeared beneficial until feedback received.	High	The Project Plan includes various sections that do not offer the project any value. We advise to construct a new Project Plan tailored to specific challenges and direction instead of being locked in to a document which may appear usable and assumed to be enhanced by semesters of feedback.

2.3 Schedule Estimation

Table 3. Schedule Estimation.

Area of Concern	Problem/Success	Impact	Recommendation
External priorities and scheduling concerns	As with all projects, the demand on external priorities (e.g. work and family) will continue to impact the level of focus on project tasks.	Low	Despite this concern, group member involvement has been consistent. Early task decomposition allowed group members to stay engaged, understand to do items and feel productive.
Familiarity training	Utilize all group members' strengths and occupational knowledge as much as possible to bolster confidence in the technology stack.	Medium	It is imperative for future teams to support each other and fill knowledge gaps through collaboration versus creating knowledge silos.

2.4 Design and Implementation

Table 4. Design and Implementation.

Area of Concern	Problem/Success	Impact	Recommendation
High-level backlog items	Items in backlog are high-level requirements which require decomposition in order to progress.	Medium	Adopting Kanban has allowed group members to take on items and engage in communications with the stakeholder to work on task decomposition individually (via email or stakeholder meetings). This paradigm helped keep communications with the stakeholder narrowed on each feature and also kept overall complexity of work minimal.
High number of backlog items	As of the start of Milestone 2, there was 22 backlog items.	Low	From the onset of the project, it was communicated to the group to focus on priority project concerns and tasks.
Use of development tools	Chosen development tools need to be standardized to retain use of all group members.	Medium	Lock in agreed upon development tools (Eclipse EE for Java Developers) early to ease the collaboration and/ or support efforts between group members.

2.5 Closing

Table 5. Closing.

Area of Concern	Problem/Success	Impact	Recommendation
Milestone wrap-up	Identify all artifacts for milestone delivery and begin work early on completion.	Low	Obtaining a head start on artifacts and keeping artifacts up-to-date before the delivery date to reduce impact of course work deliverables slowing down project work.
Artifact	Created artifacts by team	Medium	Although it is not desired,

standardization	members were unique, lacking consistency amongst the group (leading to some artifacts having commentary others lacked).		having a consistent standard for artifact creation (feature documentation and test plans) would help reduce issues of missed but critical sections excluded from artifacts or poorly constructed artifacts.