Life Cycle Plan (LCP)

Discovery Tool

Team 3

Josh Bendig - IIV&V

Xizhao Deng - Project manager

Jingzhou Hong - Requirement Engineer

Guancheng Liu - Tester

Michael Russo - Prototyper

Shenghao Tang - Feasibility Analyst

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10/21/18

Version History

Date	Author	Version	Changes made	Rationale
10/16/18	XD	1.0	section 1-5, 6.1	Initial draft for Discovery Tool LCP of DC package
10/21/18	XD	1.1	Small fix in section 5	Redo COCOMOII estimation

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1. Introduction

1.1 Purpose of the LCP

The purpose of this LCP is to document and manage the lifecycle of the Discovery Tool (an idea management system). The LCP artifact is designed to provide descriptions of deliverables, define workflow, identify individual and team responsibility, and track progress over each iteration of the project.

1.2 Status of the LCP

The status of the LCP is currently at the development commitment package version 1.0. This is the initial version that is being developed at the end of DCR-ARB presentation.

1.3 Assumptions

- The duration of this project is 12 weeks in Fall 2018 semester
- The team will be using 8 individuals, 6 being on-campus students, and 2 being remote DEN students
- The plan is tracked and strictly following MS project
- The project is one-semester only
- The project can repivot once at most
- The client will provide responsive feedback

2. Milestones and Products

2.1 Overall Strategy

The Discovery Tool idea management system is following the strategy of ICSM NDI/NCS because the system is aimed to be a cloud based web application and it heavily relies on technology such as React, python Flask, JWT, Webpack, Heroku, Swagger UI, Creative TIM, material, mlab and AWS EC2.

Exploration Phase I

Duration: 9/3/18 - 9/23/18
Concept: Identify operational concept, system and software requirements and life cycle plan for the next phase
Deliverables: Client Meeting notes, Progress Report, Project plan, use cases, team website
Milestone: Valuation Commitment Review

Strategy: One Incremental Commitment Cycle, Win-Win negotiation session #1

Valuation Phase I

Duration: 9/21/18 - 9/23/18
Concept: Monitor risks, prioritize requirements, validate crawling based trend identifier, validate API based trend identifier
Deliverables: Win-Win condition report, prototype presentation
Milestone: Foundation Commitment Review
Strategy: One incremental Commitment Cycle, Win-Win negotiation session #2, planning poker, risk analysis assessment

Foundations Phase I

Duration: 9/24/18 - 9/28/18
Concept: Project requirements, Project plan, develop prototype, design preliminary software architecture, investigate API availability
Deliverables: None
Milestone: None
Strategy: One incremental Commitment Cycle

Exploration Phase II

Duration: 10/2/18 - 10/17/18
Concept: Identify operational concept of the new client proposal, system and software requirements and life cycle plan for the next phase, new Win-win conditions
Deliverables: Client Meeting notes, Progress Report, Project plan
Milestone: Content manager meeting
Strategy: One Incremental Commitment Cycle, Content manager meeting

Valuation Phase II

Duration: 10/10/18 - 10/22/18
Concept: Develop frontend UI prototype, develop backend data endpoint prototype, monitor risks, prioritize requirements
Deliverables: updated use cases, updated win-win agreement
Milestone: None
Strategy: One incremental Commitment Cycle, risk analysis assessment

Foundations Phase II

Duration: 10/10/18 - 10/22/18
Concept: Implement ARB deliverables, develop DC package, Project requirements, Project plan, continue to develop prototype, design preliminary software architecture
Deliverables: DC package
Milestone: DC ARB presentation
Strategy: One Incremental Commitment Cycle

Development Phase

Duration: 10/23/18 - 11/30/18
Concept: Develop core capability, implement the full system with agreed features, perform test, implement documentation
Deliverables: Project archive, Core capability report
Milestone: Core capability presentation, Transition Readiness Review
Strategy: One Incremental Commitment Cycle, development, test, deployment

2.2 Project Deliverables

2.2.1 Exploration Phase

Artifact	Due date	Format	Medium
Jira Weekly Survey	Weekly Monday	Jira ticket	Google survey
Team website	9/12/18	Website	Website
Project Plan	Bi-weekly Wednesday	.mpp .pdf	Team site
Risk and Defects Report	Bi-weekly Wednesday	.pdf	Team site
Progress Report	Bi-weekly Wednesday	.pdf	Team site

Table 1: Artifacts Deliverables in Exploration Phase

2.2.2 Valuation Phase

Artifact	Due date	Format	Medium
Jira Weekly Survey	Weekly Monday	Jira ticket	Google survey
Project Plan	Bi-weekly Wednesday	.mpp .pdf	Team site
Risk and Defects Report	Bi-weekly Wednesday	.pdf	Team site
Progress Report	Bi-weekly Wednesday	.pdf	Team site
Prototype Presentation	9/28/18	.pdf	Team site

Table 2: Artifact deliverable in Valuation Phase

2.2.3 Foundations Phase

Artifact	Due date	Format	Medium
Jira Weekly Survey	Weekly Monday	Jira ticket	Google survey
Project Plan	Bi-weekly Wednesday	.mpp .pdf	Team site
Risk and Defects Report	Bi-weekly Wednesday	.pdf	Team site
Progress Report	Bi-weekly Wednesday	.pdf	Team site
DC package: ● FED ● LCP ● SSAD ● TPC ● PRO ● OCD	10/22/18	.pdf	Team site
Prototype	10/17/18	Source code	github

Table 3: Artifact deliverable in Foundations Phase

2.2.4 Development Phase

Artifact	Due date	Format	Medium
Jira Weekly Survey	Weekly Monday	Jira ticket	Google survey
Project Plan	Bi-weekly Wednesday	.mpp .pdf	Team site
Risk and Defects Report	Bi-weekly Wednesday	.pdf	Team site
Progress Report	Bi-weekly Wednesday	.pdf	Team site
Technical Debt Report	Bi-weekly Friday	.pdf	Team site
CCD Report	TBD	.pdf	Team site

TRR Report	TBD	.pdf	Team site
Functional system	11/30/18	Functional web app	AWS, github
Documentation	11/30/18	Swagger UI rendered doc, .pdf	Github, Team site

Table 4: Artifact deliverable in Development Phase

3. Responsibilities

3.1 Project-specific stakeholders' responsibilities

Other than the stakeholders identified for Discovery Tool so far, which are the client and dev team, we have no any project-specific stakeholders.

3.2 Responsibilities by Phase

Primary / Secondary Responsibility					
Team Member / Role	**Exploration**	**Valuation**	**Foundations**	**Development-Construction Iteration**	**Development-Transition Iteration**
Name: Joshua Bendig **Role:** IIV&V, Requirement Engineer	**Pri. Res:** Participate in Win-win negotiation **Sec.Res:** Implement system requirements	**Pri. Res:** Refine system requirements **Sec.Res:** Review Jira ticket	**Pri. Res:** Track and update system requirements, maintain diagrams for documentation **Sec.Res:** Review Jira ticket	**Pri. Res:** Validate all system features against system requirement **Sec.Res:** Review Jira ticket	**Pri. Res:** Continue validating all system features against system requirement, review documentation **Sec.Res:** Review Jira ticket
Name: Xizhao Deng **Role:** Project Manager, Life	**Pri. Res:**Establish recurring comms with	**Pri. Res:** Facilitate client interaction and	**Pri. Res:** Create and follow up action items,	**Pri. Res:** Create and follow up action items,	**Pri. Res:** Facilitate handoff to the client

Cycle Planner	client and team, set up recurring team meetings **Sec.Res:** Assign roles, make project plan	follow up after Win-win sessions, create action items, host weekly team meeting **Sec.Res:** Update project progress, assign Jira ticket to team members	conduct prototype presentation **Sec.Res:** Update project progress, plan for risk mitigation, assign Jira ticket to team members	facilitate client communicatio n, documentation **Sec.Res:** Assign Jira ticket to team members, plan for risk mitigation and identify technical debt	**Sec.Res:** Assign Jira ticket to team members, plan for risk mitigation and identify technical debt
Name: Jingzhou Hong **Role:** Requirements Engineer, Prototyper	**Pri. Res:** Implement system requirements, Participate in Win-win negotiation **Sec.Res:** Research potential technology	**Pri. Res:** Refine system requirements **Sec.Res:** Develop prototype	**Pri. Res:** Develop FED for DC package, refine system requirements **Sec.Res:** Continue working on prototype	**Pri. Res:** Verify if system requirement, win-win conditions are fully satisfied **Sec.Res:** Documentatio n	**Pri. Res:** Final Review against system requirement **Sec.Res:** Review documentation
Name: Guancheng Liu **Role:** Tester, Quality Engineer	**Pri. Res:** Participate in Win-win negotiation **Sec.Res:** Research potential technology	**Pri. Res:** Design test plans **Sec.Res:** Develop prototype	**Pri. Res:** Implement TCP/QFP for DC package **Sec.Res:** Implement backend and database	**Pri. Res:** Implement test cases, conduct software testing, fix defects **Sec.Res:** Documentatio n	**Pri. Res:** Continue software testing, conduct quality assurance review **Sec.Res:** Documentatio n
Name: Michael Russo **Role:** Prototyper, Software Architect	**Pri. Res:** Participate in Win-win negotiation, implement team website	**Pri. Res:** Develop prototype **Sec.Res:** Facilitate	**Pri. Res:** Implement slide deck for ARB presentation, implement	**Pri. Res:** Implement frontend UI, integration **Sec.Res:**	**Pri. Res:** Improve UI and UX **Sec.Res:** Documentatio

	Sec.Res: Research potential technology	designing software architecture	frontend UI **Sec.Res:** Documentation, refine software architect	Documentation	n
Name: Shenghao Tang **Role:** Feasibility Analyst, System Architect	**Pri. Res:** Participate in Win-win negotiation, implement system architecture, conduct feasibility analysis **Sec.Res:** Research potential technology	**Pri. Res:** Analyze and prioritize capabilities to prototype **Sec.Res:** Facilitate designing system architecture	**Pri. Res:** Develop prototype **Sec.Res:** Implement FED for DC package	**Pri. Res:** Develop backend, integration **Sec.Res:** Documentation	**Pri. Res:** Integration, fix defects **Sec.Res:** Documentation
Name: Fan Zhang **Role:** Software Architect, Project Manager	**Pri. Res:** Participate in Win-win negotiation, implement software architecture **Sec.Res:** Research potential technology	**Pri. Res:** Design software architect **Sec.Res:** Facilitate project management and planning	**Pri. Res:** Implement TCP/QFP for DC package **Sec.Res:** making ARB presentation slide deck	**Pri. Res:** Implement backend, integration **Sec.Res:** Documentation	**Pri. Res:** Integration, fix defects **Sec.Res:** Documentation
Name: Yiming Zhang **Role:** System Architect, Prototyper	**Pri. Res:** Participate in Win-win negotiation, design system architecture **Sec.Res:** Research potential	**Pri. Res:** Design the system architecture **Sec.Res:** Implement prototype for prototype presentation	**Pri. Res:** Implement PRO for DC package **Sec.Res:** Implement frontend UI prototype	**Pri. Res:** Implement frontend UI **Sec.Res:** Documentation	**Pri. Res:** Integration, fix defects **Sec.Res:** Documentation

	technology				
Name: Linda Suen **Role:** Client	**Pri. Res:** Explain the project deliverables, discuss the Win-win conditions, review use cases, attend client meeting	**Pri. Res:** Define system requirements, review initial prototypes, attend client meeting	**Pri. Res:** Review ARB deliverables, attend client meeting	**Pri. Res:** Review progress, attend client meeting	**Pri. Res:** Review documentation , assist the handoff

Table 5: Stakeholders' Responsibilities in each phase

3.3 Skills

Team members	**Role**	**Skills**
Joshua Bendig	IIV&V, Requirements Engineer	**Current Skill:** Java, Python, embedded development, software testing, technical writing, UML diagram **Required Skill:** Web development, React
Xizhao Deng	Project Manager, Life Cycle Planner	**Current Skill:** Python, C, C++, embedded development, technical writing, MS Project **Required Skill:** Web development, React, high level program management
Jingzhou Hong	Requirements Engineer, Prototyper	**Current Skill:** Python, HTML, web development, database, Javascript **Required Skill:** technical writing
Guancheng Liu	Tester, Quality Engineer	**Current Skill:** Python, database, MongoDB, Java, React **Required Skill:** Software Testing, Crucible

Michael Russo	Prototyper, Software Architect	**Current Skill:** Flask, React, Node.JS, AWS, MongoDB, UML diagram, HTML, CSS, UI design, mLab, Swagger UI **Required Skill:** Crucible
Shenghao Tang	Feasibility Analyst, System Architect	**Current Skill:** Python, MongoDB, UML diagram, React **Required Skill:** Technical writing
Fan Zhang	Software Architect, Project Manager	**Current Skill:** Flask, MongoDB, AWS, React **Required Skill:** High level development
Yiming Zhang	System Architect, Prototyper	**Current Skill:** Flask, React, Node.JS, AWS, MongoDB, UML diagram, HTML, CSS, UI design, Material, AWS **Required Skill:** Technical writing

Table 6: Team skill table

4. Approach

4.1 Monitoring and Control

We monitor and control our project by the following approach:

- Project Plan: constantly update project plan (for the next 2 weeks or further ahead) in MS project and make sure the team stick to the plans.
- Bi-weekly Progress Report: Track the progress of the project, list third-party components, and SLOC
- Bi-weekly Risk and Defect Report: Analyze top risks, defects, and come up with mitigation plan
- Bi-weekly Technical Debt Report: Identify technical debt, their lifespan, and mitigation plan
- Jira: track issue, log work, assign tasks
- Win book: catch requirements and priority, maintain design consistency
- Weekly Team Meeting: update the team with plans, report progress, issues, concerns, and come up with mitigation plan
- Client Meeting: maintain responsive communication with the client for progress, issues, and concerns

4.1.1 Closed Loop Feedback Control

- Slack: The dev team created group chat in Slack to discuss project, check progress, and talk to the client.
- Google Drive: Share files and documents among the team and the client
- Github: For version control repo hosting, and issue tracking
- Jira: Assign tasks to team member, check progress, and log work.
- Skype: Host team meetings

4.1.2 Reviews

- Peer Review: cross review code increments, and documentations
- Client Review: frequent client review over use cases, win-win conditions, and progress
- ARB: scheduled on 10/17 to go over architecture review and DC package
- CCD and TRR: TBD

4.2 Methods, Tools and Facilities

Tools	Usage	Provider
Github	Source Code Version Control	Github
MagicDraw	UML diagram / workflow making	No Magic
Skype	Team meeting hosting	Microsoft
Slack	Team group chat	Slack Tech
Winbook	Win condition capture and priority identification	CS577A
COCOMO II	Software cost estimation	CS577A
MS Project	Project plan and life cycle planning	USC
Jira	Log work effort, assign task	USC

Table 7: Tool table

5. Resources

Below is the required information in order to estimate the software cost:

- Estimated CSCI577a Effort : 8 team members at 18 hrs/week for 12 weeks
- Total estimated effort: 18 hrs/week x 8 members x 12 weeks = 1728 hours
- Budget information: reasonable spendings will be reimbursed by client
- Project duration: 12 weeks
- Component modules in your development project: User/team Module, Content Module, Goal Module, Authentication Module
- Programming language used: Javascript, Python, HTML, CSS

Scale Driver	Value	Rationale
Precedentedness	Nominal	No existing system available but the new system will mimic current workflow being practiced. Certain level of reference does exist
Development Flexibility	Nominal	Client expects the system to mimic current workflow with small tweaks and improvement
Architecture / risk resolution	Nominal	Most risks can be mitigated by more client interaction and dev team time investment
Team cohesion	Very High	Team communication and interaction occur in a responsive and timely manner
Process maturity	Nominal	Team is comfortable and consistent with ICSM guidelines

Table 8: COCOMOII Scale Driver

Cost Driver	Value	Rationale
RELY	High	Authentication is required for the system to be successful
DATA	Nominal	The user information data size is fairly low, but it may grow based on team size scaling
DOCU	Nominal	Documentation will be required for user guidance and maintenance purpose
CPLX	Nominal	Authentication can be implemented by utilizing off-the-shelf framework and tools
RUSE	Low	Authentication will be purposely build for this system, no plan for reuse at the moment

TIME	Nominal	Authentication will be executed at the beginning and the end of the user session. It does not consume significant execution time resource
STOR	Nominal	User information does not utilize significant amount of storage
PVOL	Low	The cloud service which the web app utilizes is expected to be stable for majority of the time
ACAP	Nominal	The analyst personnel has nominal experience, both academically and industrially, for the task of requirement implementation and design implementation
PCAP	High	The developers have related academic and work experience and are determined to be highly capable
PCON	Very High	The staff turnover rate of the dev team is low within this semester
APEX	High	Developers have moderate to rich experience with web application development
LTEX	High	Developers are comfortable with the technologies chosen for this project
PLEX	Nominal	Developers have moderate experience with the cloud service for hosting the web app and database
TOOL	Nominal	Moderate integration may be necessary for the chosen technologies
SITE	Extra High	The team has very responsive and interactive communication/workflow between on-campus and remote members

Table 9: COCOMOII Cost Driver - Authentication Module

Cost Driver	Value	Rationale
RELY	High	Content is required for the system to be successful
DATA	High	The content data size is high considering amount of content generated in a unit period of time

DOCU	Nominal	Documentation will be required for user guidance and maintenance purpose
CPLX	High	The subsystem needs to be built from scratch
RUSE	Low	Content will be purposely build for this system, no plan for reuse at the moment
TIME	Very High	Content operations take significant execution time in client's workflow
STOR	High	Content utilizes significant amount of storage
PVOL	Low	The cloud service which the web app utilizes is expected to be stable for majority of the time
ACAP	Nominal	The analyst personnel has nominal experience, both academically and industrially, for the task of requirement implementation and design implementation
PCAP	High	The developers have related academic and work experience and are determined to be highly capable
PCON	Very High	The staff turnover rate of the dev team is low within this semester
APEX	High	Developers have moderate to rich experience with web application development
LTEX	High	Developers are comfortable with the technologies chosen for this project
PLEX	Nominal	Developers have moderate experience with the cloud service for hosting the web app and database
TOOL	Nominal	Moderate integration may be necessary for the chosen technologies
SITE	Extra High	The team has very responsive and interactive communication/workflow between on-campus and remote members

Table 10: COCOMOII Cost Driver - Content Module

Cost Driver	Value	Rationale
RELY	High	Goal is required for the system to be successful
DATA	Nominal	The goal data size is moderate considering amount of goal generated in a unit period of time
DOCU	Nominal	Documentation will be required for user guidance and maintenance purpose
CPLX	Nominal	The subsystem needs to be built from scratch with moderate complexity
RUSE	Low	Goal will be purposely build for this system, no plan for reuse at the moment
TIME	High	Goal operations take significant execution time in client's workflow
STOR	High	Goal utilizes significant amount of storage
PVOL	Low	The cloud service which the web app utilizes is expected to be stable for majority of the time
ACAP	Nominal	The analyst personnel has nominal experience, both academically and industrially, for the task of requirement implementation and design implementation
PCAP	High	The developers have related academic and work experience and are determined to be highly capable
PCON	Very High	The staff turnover rate of the dev team is low within this semester
APEX	High	Developers have moderate to rich experience with web application development
LTEX	High	Developers are comfortable with the technologies chosen for this project
PLEX	Nominal	Developers have moderate experience with the cloud service for hosting the web app and database

TOOL	Nominal	Moderate integration may be necessary for the chosen technologies
SITE	Extra High	The team has very responsive and interactive communication/workflow between on-campus and remote members

Table 11: COCOMOII Cost Driver - Goal Module

Cost Driver	Value	Rationale
RELY	High	Team/User management is required for the system to be successful
DATA	Nominal	The team/user data size is moderate considering the current team size and potential growth in team size in the future
DOCU	Nominal	Documentation will be required for user guidance and maintenance purpose
CPLX	Nominal	The subsystem needs to be built from scratch
RUSE	Low	Team/user management will be purposely build for this system, no plan for reuse at the moment
TIME	High	Team/user management operations take significant execution time in client's workflow
STOR	High	Team/user data utilizes significant amount of storage
PVOL	Low	The cloud service which the web app utilizes is expected to be stable for majority of the time
ACAP	Nominal	The analyst personnel has nominal experience, both academically and industrially, for the task of requirement implementation and design implementation
PCAP	High	The developers have related academic and work experience and are determined to be highly capable
PCON	Very High	The staff turnover rate of the dev team is low within this semester

APEX	High	Developers have moderate to rich experience with web application development
LTEX	High	Developers are comfortable with the technologies chosen for this project
PLEX	Nominal	Developers have moderate experience with the cloud service for hosting the web app and database
TOOL	Nominal	Moderate integration may be necessary for the chosen technologies
SITE	Extra High	The team has very responsive and interactive communication/workflow between on-campus and remote members

Table 12: COCOMOII Cost Driver - Team/User Module

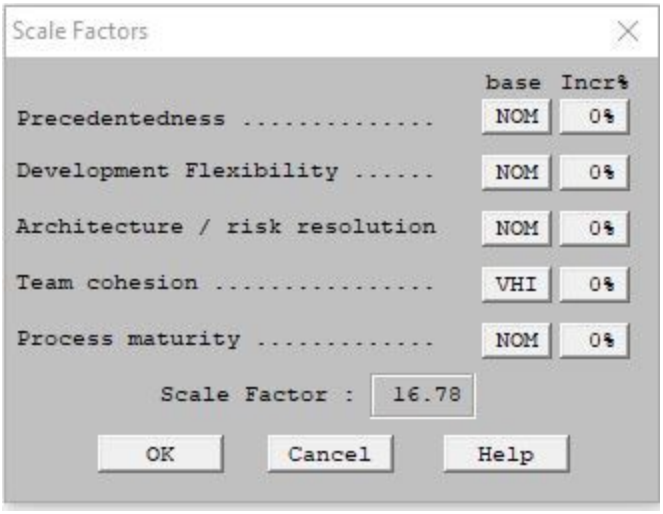


Figure 1: COCOMOII Scale Factor screenshot

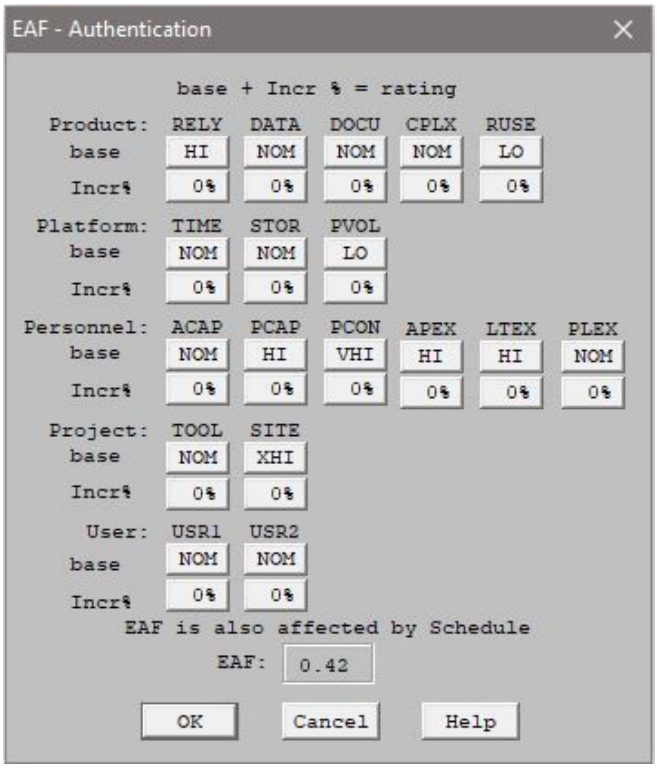


Figure 2: COCOMOII Cost Driver Authentication Module screenshot

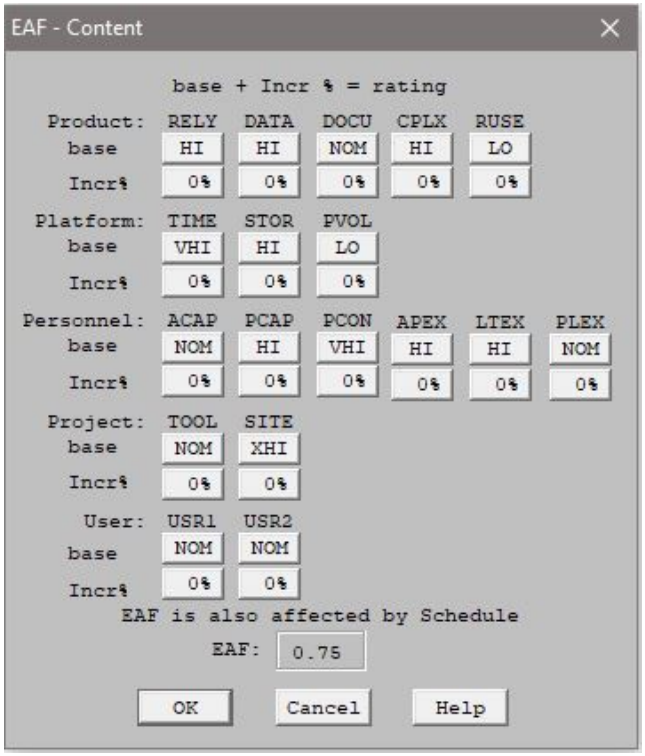


Figure 3: COCOMOII Cost Driver Content Module screenshot

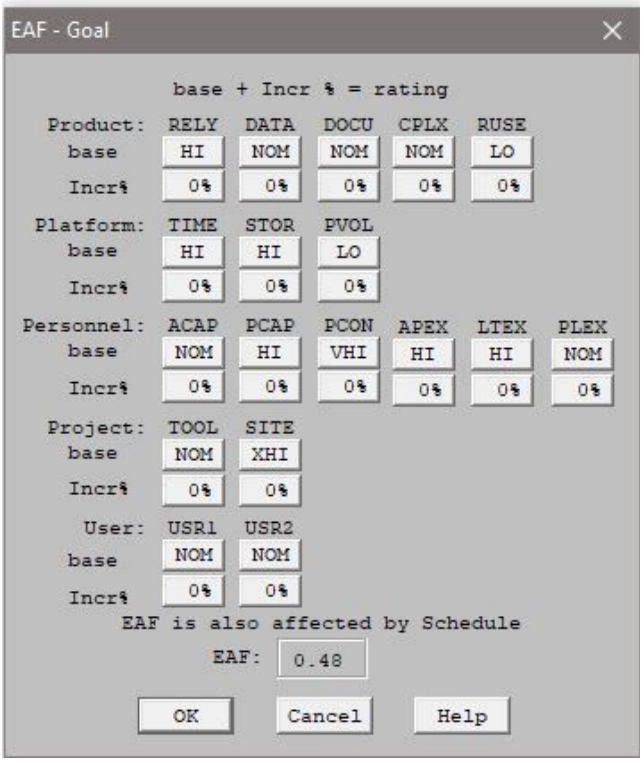


Figure 4: COCOMOII Cost Driver Goal Module screenshot

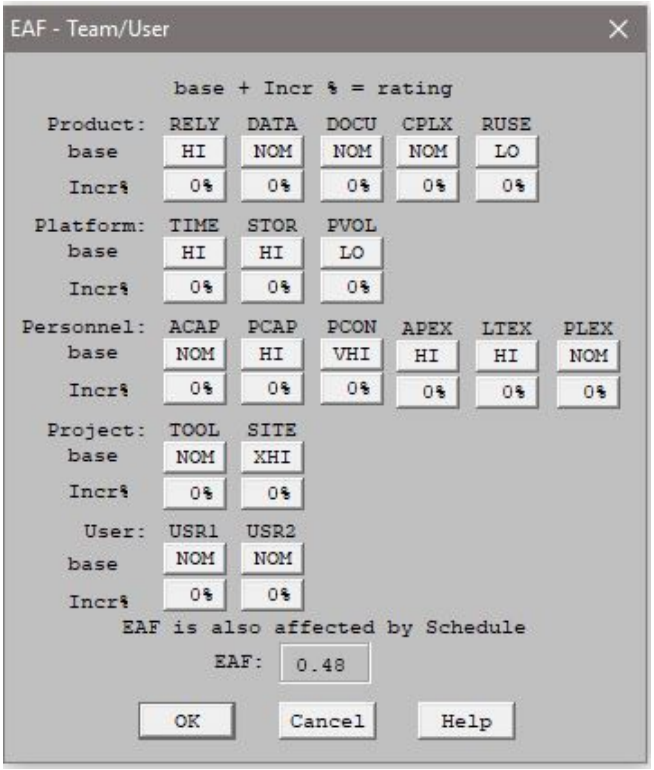
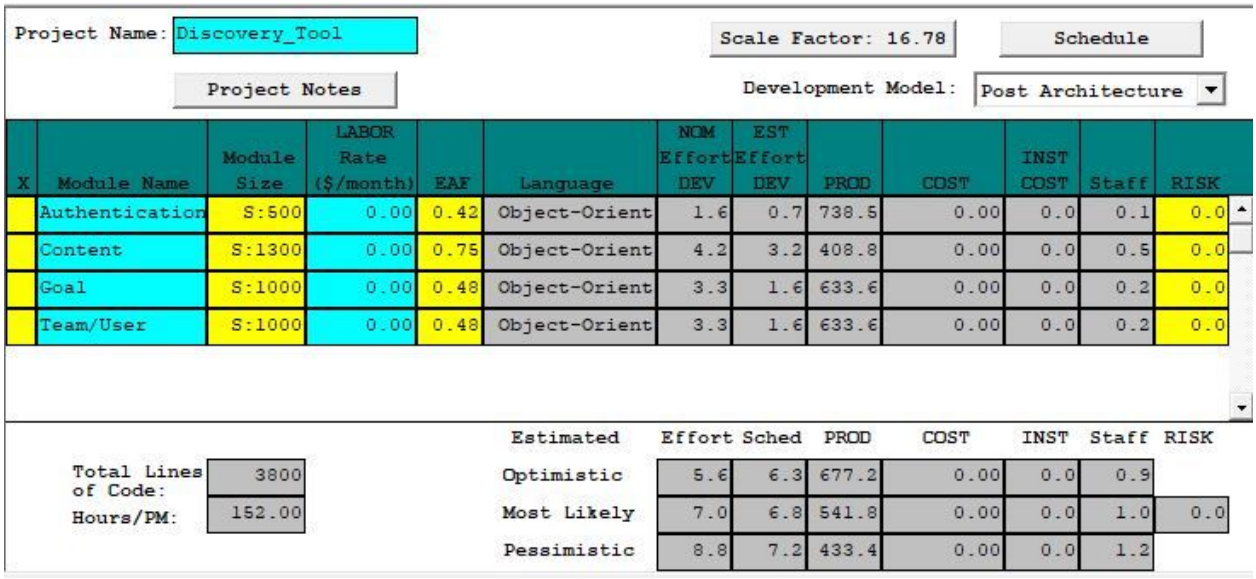


Figure 5: COCOMOII Cost Driver Team/User Module screenshot



Project Name: Discovery_Tool | Scale Factor: 16.78 | Schedule | Project Notes | Development Model: Post Architecture

X	Module Name	Module Size	LABOR Rate ($/month)	EAF	Language	NOM Effort DEV	EST Effort DEV	PROD	COST	INST COST	Staff	RISK
	Authentication	S:500	0.00	0.42	Object-Orient	1.6	0.7	738.5	0.00	0.0	0.1	0.0
	Content	S:1300	0.00	0.75	Object-Orient	4.2	3.2	408.8	0.00	0.0	0.5	0.0
	Goal	S:1000	0.00	0.48	Object-Orient	3.3	1.6	633.6	0.00	0.0	0.2	0.0
	Team/User	S:1000	0.00	0.48	Object-Orient	3.3	1.6	633.6	0.00	0.0	0.2	0.0

Total Lines of Code: 3800
Hours/PM: 152.00

Estimated	Effort	Sched	PROD	COST	INST	Staff	RISK
Optimistic	5.6	6.3	677.2	0.00	0.0	0.9	
Most Likely	7.0	6.8	541.8	0.00	0.0	1.0	0.0
Pessimistic	8.8	7.2	433.4	0.00	0.0	1.2	

Figure 6: COCOMOII Result screenshot

Result Analysis:
Total estimated line of code: 3800

Estimated Most-likely effort by COCOMII: 7.0 person-month
Effort per person: 18 hours/week

Total time available:
Monthly team efforts: 18 hr/(person-week) * 8 members * 4 weeks = 576 hr/month

Time required as per COCOMOII:
Total time: 7.0 person-month * 152 hr/person-month / 576 hr/month = 1.8 months
Interpretation: According to the above calculation, the project development phase is estimated by COCOMOII to take 1.8 months starting from 10/23/18 to complete, which is inline with our estimation based on the assumption of 8 members working 18 hours per week for 12 weeks from 9/3/18.

6. Iteration Plan

6.1 Plan

This section aims to accomplish features in the system requirement in two project iterations, and to describe the detailed plan for each project iteration. The team will prioritize implementing the mission critical features. If time allows, the team will also implement lower prioritized features. The first iteration is to prototype sub systems, then complete and integrate the entire backend and frontend system simultaneously. However, this first iteration will only focus on implementing and testing the high priority features.. The second iteration is to implement and test low priority features based on time allowance,

then conduct more thorough software regression testing, deployment of the system, gain feedback from the client, implement documentation, and fix any defects.

6.1.1 Capabilities to be implemented

ID	Capability	Description	Priority	Iteration
UC-1	Register for account	User can create a new account profile	high	1
UC-2	Login	User logs into the system with a username and password	high	1
UC-3	View current month target and progress	Content writer can view the total number of titles needed for this month. The desired verticals and number of titles needed by each vertical, titles approved so far. Assignee of each vertical. Vertical assigned to this writer. Titles assigned/worked/approved to this writer.	high	1
UC-4	View approved titles	A content writer can view all the title created by him/her that were approved for content production	high	1
UC-5	View past month targets	Content writer can view targets made in past months	high	1
UC-6	View future month targets	Content writer can view targets set for future months	high	1
UC-7	Receive notifications	A content writer can receive notifications as a piece of content moves through the various stages of development (approved, rejected, parked, unassigned, assigned and untitled, titled, approved for publishing, parked for publishing)	low	2
UC-8	Send message	A content writer can send a message to a specific user	low	2
UC-9	Receive message	A content writer can receive message from other users	low	2
UC-10	View content success rates by	A content writer can track his/her own success rate by the draft to	low	2

	draft to title conversion ratio	approved title conversion ratio		
UC-11	Logout	Content writer logs out of the system and ends their current session	high	1
UC-12	Create a draft	content writer can create a new draft and add details, notes, and tags	high	1
UC-13	Edit a draft	content writer can modify a draft	high	1
UC-14	Delete a draft	content writer can remove a draft	high	1
UC-15	View a draft	content writer can view a draft's details: draft ID, creator, type, vertical, description, time created, last time modified, URL, buy-side network, tags	high	1
UC-16	Pitch a draft	When a content writer thinks this draft is ready, he/she can click the "pitch it" button to publish this draft to the global pitch list. This draft is then removed from this draft board.	high	1
UC-17	View a pitch	Content writer can click on a pitch in the list to view its details: pitch ID, creator, type, vertical, description,time created,last time modified, URL, buy-side network, tags, status(new, approved, rejected, parked), upvote number	high	1
UC-18	Upvote a pitch	Content writer can click on the upvote button to upvote a pitch they like	low	2
UC-19	Filter pitches by criteria	A content writer can filter pitches by criteria such as status, creator etc	low	2
UC-20	Sort pitches by upvote	A content writer can change the view of the board locally by sorting pitches in order of upvotes to identify promising pitches via crowdsourcing	low	2
UC-21	Export global pitch board	A content writer can export the master pitch list into a spreadsheet	high	1

UC-22	Edit a title	Content writer can make an eye-catching title for this title instance, the status of the title will change from “assigned and untitled” to “titled”	high	1
UC-23	View a title	Content writer can click on a title in the list to view its details: title ID, creator, assignee, type, vertical, description, time created, last time modified, URL, buy-side network, tags, status	high	1
UC-24	Filter titles by criteria	A content writer can filter titles by criteria such as status, creator etc	low	2
UC-25	Export local title board	A content writer can export the local title board list into a spreadsheet	high	1
UC-26	View current month target and progress	Admin can view the target number of titles needed for this month and progress(number of approved / still needed). The desired verticals, number of titles needed by each vertical, assignee of each vertical, progress of each vertical (titles approved / needed)	high	1
UC-27	View past month targets	Admin can view targets made in past months	high	1
UC-28	View future month targets	Admin can view targets set for future months	high	1
UC-29	Receive notifications	Admin can receive notifications as a piece of content moves through the various stages of development (approved, rejected, parked, unassigned, assigned and untitled, titled, approved for publishing, parked for publishing)	low	2
UC-30	Send message	Admin can send a message to a specific user	low	2
UC-31	Receive message	Admin writer can receive message from other users	low	2

UC-32	Logout	Admin logs out of the system and ends their current session	high	1
UC-33	View a pitch	Admin can click on a pitch in the list to view its details: pitch ID, creator, type, vertical, description,time created,last time modified, URL, buy-side network, tags, status(new, approved, rejected, parked), upvote number	high	1
UC-34	Approve/reject a pitch	Admin can click on a pitch, change its status to approved or rejected. If two admin has different opinions, the status of the pitch is changed to “parked”	high	1
UC-35	Filter pitches by criteria	Admin can filter pitches by criteria such as status, creator etc	low	2
UC-36	Sort pitches by upvote	Admin can change the view of the board locally by sorting pitches in order of upvotes to identify promising pitches via crowdsourcing	low	2
UC-37	Export global pitch board	Admin can export the master pitch list into a spreadsheet	high	1
UC-38	View a title	Admin can click on a title in the list to view its details: title ID, creator, assignee, type, vertical, description, time created, last time modified, URL, buy-side network, tags, status	high	1
UC-39	Assign a title to content writer	Admin can change the assignee of a title to a specific content writer. By default, the assignee is blank and status of the title is “unassigned and untitled”. Once assigned a writer, the status changes to “assigned”	high	1
UC-40	Approve a title	One admin needs to approve a title for production. Status changes from “titled” to “approved”. If a title is reviewed but not approved, the status changes to “parked”	high	1
UC-41	Filter titles by	Admin can filter titles by criteria	low	2

	criteria	such as status, creator etc		
UC-42	Export global title list	Admin can export the global title board list into a spreadsheet	high	1
UC-43	View a team member details	Admin can click on a team member and view his/her information: member name, account type(writer, admin), number of draft pitched, number of titles assigned, number of titles approved, assigned vertical, number of title needed by that vertical, success rate, contact info	high	1
UC-44	Change a team member's type	Admin can change a team member's type between admin and writer	high	1
UC-45	Set target verticals for current month	Admin can set a list of verticals desired for current month	high	1
UC-46	Set target verticals for future months	Admin can set a list of verticals desired for future months	high	1
UC-47	Set target number of titles needed for each vertical	Admin can set the number of titles needed for each vertical, then the numbers will be summed up to be the total number of titles needed by that month	high	1
UC-48	Assign vertical to content writers	Admin can assign a content writer to a vertical	high	1

Table 13: Construction iteration capabilities to be implemented

6.1.2 Capabilities to be tested

ID	Capability	Description	Priority	Iteration
UC-1	Register for account	User can create a new account profile	high	1
UC-2	Login	User logs into the system with a username and password	high	1
UC-3	View current month target and progress	Content writer can view the total number of titles needed for this month. The desired verticals and number of titles needed by each	high	1

		vertical, titles approved so far. Assignee of each vertical. Vertical assigned to this writer. Titles assigned/worked/approved to this writer.		
UC-4	View approved titles	A content writer can view all the title created by him/her that were approved for content production	high	1
UC-5	View past month targets	Content writer can view targets made in past months	high	1
UC-6	View future month targets	Content writer can view targets set for future months	high	1
UC-7	Receive notifications	A content writer can receive notifications as a piece of content moves through the various stages of development (approved, rejected, parked, unassigned, assigned and untitled, titled, approved for publishing, parked for publishing)	low	2
UC-8	Send message	A content writer can send a message to a specific user	low	2
UC-9	Receive message	A content writer can receive message from other users	low	2
UC-10	View content success rates by draft to title conversion ratio	A content writer can track his/her own success rate by the draft to approved title conversion ratio	low	2
UC-11	Logout	Content writer logs out of the system and ends their current session	high	1
UC-12	Create a draft	content writer can create a new draft and add details, notes, and tags	high	1
UC-13	Edit a draft	content writer can modify a draft	high	1
UC-14	Delete a draft	content writer can remove a draft	high	1
UC-15	View a draft	content writer can view a draft's details: draft ID, creator, type, vertical, description, time created,	high	1

		last time modified, URL, buy-side network, tags		
UC-16	Pitch a draft	When a content writer thinks this draft is ready, he/she can click the “pitch it” button to publish this draft to the global pitch list. This draft is then removed from this draft board.	high	1
UC-17	View a pitch	Content writer can click on a pitch in the list to view its details: pitch ID, creator, type, vertical, description,time created,last time modified, URL, buy-side network, tags, status(new, approved, rejected, parked), upvote number	high	1
UC-18	Upvote a pitch	Content writer can click on the upvote button to upvote a pitch they like	low	2
UC-19	Filter pitches by criteria	A content writer can filter pitches by criteria such as status, creator etc	low	2
UC-20	Sort pitches by upvote	A content writer can change the view of the board locally by sorting pitches in order of upvotes to identify promising pitches via crowdsourcing	low	2
UC-21	Export global pitch board	A content writer can export the master pitch list into a spreadsheet	high	1
UC-22	Edit a title	Content writer can make an eye-catching title for this title instance, the status of the title will change from “assigned and untitled” to “titled”	high	1
UC-23	View a title	Content writer can click on a title in the list to view its details: title ID, creator, assignee, type, vertical, description, time created, last time modified, URL, buy-side network, tags, status	high	1
UC-24	Filter titles by criteria	A content writer can filter titles by criteria such as status, creator etc	low	2

UC-25	Export local title board	A content writer can export the local title board list into a spreadsheet	high	1
UC-26	View current month target and progress	Admin can view the target number of titles needed for this month and progress(number of approved / still needed). The desired verticals, number of titles needed by each vertical, assignee of each vertical, progress of each vertical (titles approved / needed)	high	1
UC-27	View past month targets	Admin can view targets made in past months	high	1
UC-28	View future month targets	Admin can view targets set for future months	high	1
UC-29	Receive notifications	Admin can receive notifications as a piece of content moves through the various stages of development (approved, rejected, parked, unassigned, assigned and untitled, titled, approved for publishing, parked for publishing)	low	2
UC-30	Send message	Admin can send a message to a specific user	low	2
UC-31	Receive message	Admin writer can receive message from other users	low	2
UC-32	Logout	Admin logs out of the system and ends their current session	high	1
UC-33	View a pitch	Admin can click on a pitch in the list to view its details: pitch ID, creator, type, vertical, description,time created,last time modified, URL, buy-side network, tags, status(new, approved, rejected, parked), upvote number	high	1
UC-34	Approve/reject a pitch	Admin can click on a pitch, change its status to approved or rejected. If two admin has different opinions, the status of the pitch is changed to “parked”	high	1

UC-35	Filter pitches by criteria	Admin can filter pitches by criteria such as status, creator etc	low	2
UC-36	Sort pitches by upvote	Admin can change the view of the board locally by sorting pitches in order of upvotes to identify promising pitches via crowdsourcing	low	2
UC-37	Export global pitch board	Admin can export the master pitch list into a spreadsheet	high	1
UC-38	View a title	Admin can click on a title in the list to view its details: title ID, creator, assignee, type, vertical, description, time created, last time modified, URL, buy-side network, tags, status	high	1
UC-39	Assign a title to content writer	Admin can change the assignee of a title to a specific content writer. By default, the assignee is blank and status of the title is “unassigned and untitled”. Once assigned a writer, the status changes to “assigned”	high	1
UC-40	Approve a title	One admin needs to approve a title for production. Status changes from “titled” to “approved”. If a title is reviewed but not approved, the status changes to “parked”	high	1
UC-41	Filter titles by criteria	Admin can filter titles by criteria such as status, creator etc	low	2
UC-42	Export global title list	Admin can export the global title board list into a spreadsheet	high	1
UC-43	View a team member details	Admin can click on a team member and view his/her information: member name, account type(writer, admin), number of draft pitched, number of titles assigned, number of titles approved, assigned vertical, number of title needed by that vertical, success rate, contact info	high	1
UC-44	Change a team member’s type	Admin can change a team member’s type between admin and writer	high	1

UC-45	Set target verticals for current month	Admin can set a list of verticals desired for current month	high	1
UC-46	Set target verticals for future months	Admin can set a list of verticals desired for future months	high	1
UC-47	Set target number of titles needed for each vertical	Admin can set the number of titles needed for each vertical, then the numbers will be summed up to be the total number of titles needed by that month	high	1
UC-48	Assign vertical to content writers	Admin can assign a content writer to a vertical	high	1

Table 14: Construction iteration capabilities to be tested

6.1.3 Capabilities not to be tested

Every capability listed above will be fully tested by the end of the second iteration.

6.1.4 CCD Preparation Plans

The clients and users that will involve in the CCD are:

- Linda Suen: client side representative
- Content writer: client side user
- Content admin: client side user
- Maintainer: client side developer to maintain the system after handoff

The action items for the CCD preparation are:

- Develop all the core capabilities
- Ensure regression test is completed and all defects are fixed
- Draft user manual
- Develop use cases and scenarios to provide user context-setting
- Prepare stakeholder interaction via dev team dry runs
- Develop feedback survey for stakeholders who will be attending CCD
- Develop CCD risk management plan

6.2 Iteration Assessment << TBD after CCD >>

6.2.1 Capabilities Implemented, Tested, and Results

<< Describes, in brief, the capabilities that were implemented and the test results. The capabilities implemented and tested do not necessarily need to match the ones listed in section 6.1 because some capabilities may have been pushed to the next iteration. >>

ID	Capability	Test Case	Test Results	If fail, why?
< ID >	< Capability >	< TC-XX >	Pass/Fail	< comments >
…				

Table 15: Capabilities implemented, tested, and results

6.2.2 Core Capabilities Drive-Through Results

<< Briefly summarize the feedback you received from your client(s). You need to be specific enough to cover the critical capabilities or scenarios that were discussed, demoed, or shown. Your descriptions MUST, but not limited to, cover the following areas:

- Positive feedbacks
- Improvements needed/suggested
- Changes to-be considered (Reprioritized capabilities, requirements, GUI, etc.)
- Risks (New risks introduced, risks mitigated, etc.)

Note: Make sure to be specific to the capabilities shown/demonstrated/driven-through.
Simply stating that the clients liked the capabilities is not sufficient. >>

6.3 Adherence to Plan << TBD after CCD >>

<< Describe how well the iteration ran according to plan. Was it on budget and on time? Is there any uncertainty in the Software Development Status? Provide some insight to avoid mistakes for future iterations. >>