

Life Cycle Plan (LCP)

Women At Work

Team 14

Sr no	Name	Role
1	Srikant Madhava	Project Manager
2	Sanath Bhandary	Operational Concept Engineer
3	Rohit Kudva	Feasibility Analyst
4	Varma Maryala	Life Cycle Planner
5	Praneet Surana	Requirements Engineer
6	Dinesh Yeduguru	Software Architect
7	Nishant Jani	Prototyper
8	Brian Bousman	IIV&V

Version History

Date	Author	Version	Changes made	Rationale
09/29/14	Nishanth Jani / Phaneendra	1.0	- Original for CSCI577a; Tailored from ICSM OCD Template - Add section 3.3	- To fit CSSI577a course content - To identify team members' skills and specify their role in this project
10/13/14	Phaneendra	1.1	- Update section 3.3, and add section 1,2,3.1,3.2,4,5	- To make an introduction to life cycle planning - Define the milestones and products deliverable in the whole project, specify team members' responsibilities by phase, as well as correct some errors in section 3.3

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Introduction

1 Purpose of the LCP

The LCP helps in mapping the list of tasks and corresponding timelines. Moreover it helps in determining the available resources. At any point of time, the current status of the project can be matched against the LCP to check if the project is adhering to the schedule or not.

The LCP keeps a clear understanding between the development team and the client with respect to the deliverable and their corresponding dates.

The LCP also helps in understanding the skill-set of the entire team, both in terms of current skills and required skills.

2 Status of the LCP

The status of the LCP is currently at the Draft FC Package version number 1.0
This is the version that will be submitted to the project website for later updates.

3 Assumptions

- The duration of the project is 12 weeks in Fall 2014.
- There are seven on-campus members in the project team.
- Incremental commitment spiral model is used as a development guideline for this project.

Milestones and Products

4 Overall Strategy

The Women at work is following NDI-Intensive process because there are many Non-Development Items which can be used to deliver the core capabilities of the system.

Exploration phase

Duration: 09/14/14 – 09/29/14

Concept: Explores the current system, software requirements and life-cycle plan. In this phase the team will prioritize the capabilities, conduct investments and feasibility analysis and implement the software prototype.

Deliverables: Valuation Commitment Package, Project Reports and Plans, Weekly Effort Report and Client Interaction Report.

Milestone: Valuation Commitment Review

Strategy: One Incremental Commitment Cycle

Valuation phase

Duration: 09/29/14 – 10/14/14

Concept: Emphasize the prioritized features, study and analyze the risks. Value the project further to get ready for foundations package

Deliverables: Draft Foundations Commitment Package

Milestone: Draft Foundations Commitment Review

Strategy: One Incremental Commitment Cycle

5 Project Deliverable

1 Exploration Phase

Table 1: Artifacts Deliverables in Exploration Phase

Artifact	Due date	Format	Medium
Client Interaction Report	9/19/2014	.doc,	Soft copy
Valuation Commitment Package	09/29/2014	.doc, .pdf	Soft copy
• Operational Concept Description (OCD) Early Section			
• Life Cycle Plan (LCP) Early Section			
• Feasibility Evidence Description (FED) Early Section			
Bugzilla report	Every Saturday	Text	Bugzilla Website

Project Plan	Every Monday	.mpp,	Soft copy
Progress Report	Every Monday	.xls	Soft copy

2 Valuation Phase

Table 2:Artifacts deliverables in Valuation Phase

Artifact	Due date	Format	Medium
Draft Foundations Commitment Package: <ul style="list-style-type: none"> Operational Concept Description (OCD) Feasibility Evidence Description (FED) Life Cycle Plan (LCP) System and Software Architecture Description (SSAD) Prototype report (PRO) 	10/13/2014	.doc, .pdf	Soft copy
Evaluation of Draft Foundations Commitment Package	10/15/2014	.doc, .pdf, Bugzilla	Soft copy, Bugzilla
Response to Evaluation of Draft Foundations Commitment Package	10/17/2014	.doc, .pdf, Bugzilla	Soft copy, Bugzilla
Foundations Commitment Package: <ul style="list-style-type: none"> Operational Concept Description (OCD) Feasibility Evidence Description (FED) Life Cycle Plan (LCP) System and Software Architecture Description (SSAD) Prototype report (PRO) System and Software Requirements Definition 	10/20/2014	.doc, .pdf	Soft copy
Evaluation of Foundations Commitment Package	10/22/2013	.doc, .pdf, Bugzilla	Soft copy, Bugzilla
Response to Evaluation of Foundations Commitment Package	10/22/2013	.doc, .pdf, Bugzilla	Soft copy, Bugzilla
Bugzilla report	Every Wednesday	Text	Bugzilla Website
Project Plan	Every Wednesday	.mpp	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

Responsibilities

6 Responsibilities by Phase

Table 3: Stakeholders Responsibilities in each phase

Name/	Exploration	Valuation	Foundations	Development- Construction Iteration	Development- Transition Iteration
Name: Women At Work Role: Client	Primary Responsibility - Participate in Win-win negotiations - Briefly define scope and describe primary requirements	Primary Responsibility - Clarify ambiguous requirements and provide feedback - Identify shared vision, goal and concepts	Primary Responsibility - Provide feedback for prototypes	Primary Responsibility - Feedback regarding modules developed - Test System Usability	Primary Responsibility - Provide training for transition to new system.
Name: Srikanth Madhava Role: Project Manager / Operational Concept Engineer	Primary Responsibility - Explore the System - Plan the project and schedule - Manage Client interaction. Secondary Responsibility - Provide evaluation of work products.	Primary Responsibility - Assign work for each team member - Create detail project plan Secondary Responsibility - Define organizational and operational implications	Primary Responsibility - Record Project progress - Track efforts of individual team members Secondary Responsibility - Refine organizational and operational implications.	Primary Responsibility - Record Project progress - Modify and improve project plan -Develop the system	Primary Responsibility - Manage Client interaction and deliver final project artifacts
Name: Phaneendra Maryala Role: Life Cycle Planner / System Architect	Primary Responsibility -Plan Lifecycle Secondary Responsibility - Work with prototype to design and model the system	Primary Responsibility - Plan Lifecycle Assess Quality Management - Create and follow action items. - Setup the schedule for the project. Secondary Responsibility - Setup basic infrastructure	Primary Responsibility - Plan Lifecycle Secondary Responsibility - Elaborate System Architecture.	<responsibilities>	<responsibilities>

Name: Nishant Jani Role: Prototyper / Requirement Engineer	Primary Responsibility - Develop the initial prototype Secondary Responsibility - Search and collect the data to develop the system	Primary Responsibility - Build the prototype Secondary Responsibility - Prioritize the requirements	Primary Responsibility - Improve prototype based on client feedback - Add features to existing system Secondary Responsibility - Assess project progress	<responsibilities>	<responsibilities>
Name: Dinesh Yeduguru Role: System Architect / Prototyper	Primary Responsibility - Identify NDI's Secondary Responsibility - Co-work with	Primary Responsibility Define technology independent architecture	Primary Responsibility Define technology independent architecture	Primary Responsibility Advise how to develop the system	<responsibilities>
Name: Sanath Bhandary Role: Operational Concept Engineer / Requirement Engineer	Primary Responsibility - Conceptualize the system Secondary Responsibility - Interact with the clients.	Primary Responsibility - Analyze the existing system Secondary Responsibility - Develop operational concept	Primary Responsibility Add Features to prototype. Secondary Responsibility - Interact with client	<responsibilities>	<responsibilities>
Name: Rohit Kudva Role: Feasibility Analyst / Project Manager	Primary Responsibility - Assess Project Risk - Plan Risk Mitigation technique Secondary Responsibility -Manage Client interaction	Primary Responsibility - Provide Project Feasibility Evidence - Assess NCS components Secondary Responsibility - Modify project plans	Primary Responsibility - Assess Project Progress Secondary Responsibility -Modify and improve project plan	<responsibilities>	<responsibilities>
Name: Praneet Surana Role: Requirement Engineer / Life Cycle Planner	Primary Responsibility - Assess user requirements - Search and collect data to develop the system - Negotiate with the client to meet win-win condition Secondary Responsibility - Plan schedule	Primary Responsibility - Prioritize Requirements - Define Operational Concept - Define Project goals Secondary Responsibility - Create and follow action items.	Primary Responsibility - Assess Project Progress Secondary Responsibility - Modify Lifecycle plan		

	for project.				
Name: Bryan Bousman Role: IIV&V / Tester	Verify and validate the work products	Verify and validate the work products	Verify and validate the work products	Verify and validate the work products	Verify and validate the work products

7 Skills

Table 4: Development team member's skills

Team members	Role	Skills
Srikant Madhava	Project Manager, Operational Concept Engineer	Current Skills: + Interpersonal skills + Client interaction + Java/PHP programming experience. Required Skills: + Project planning + COCOMO II + Neon CRM + Schedule management + Project management tools like Mantis or JIRA
Sanath Bhandary	Operational Concept Engineer/ Requirement Engineer	Current Skills: +Communication and interpersonal skills + Java/ PHP programming skill. Required skills: + System analysis skills + COCOMO II + Neon CRM + UML Modelling

Rohit Kudva	Feasibility Analyst / Project Management	Current skills: + Java/PHP/ JavaScript, HTML5 programming skill. + Web Server management Required Skills: + UML Modeling + System analysis + Feasibility and risk analysis
Phaneendra Maryala	Life Cycle Planner/ Software Architect	Current Skills: + PHP/ Java/ JavaScript programming. Required Skills + Life Cycle plan delivery + Risk analysis and mitigation + Quality Management + UML Modeling
Praneet Surana	Requirement Engineer/ Life Cycle Planner	Current skills: + Communication and interpersonal skills + Client interaction + HTML5 and CSS3 programming. Required Skills: + Familiarity with tools like WINBOOK and Bugzilla + Feasibility analysis + Requirement Negotiation.
Dinesh Yeduguru	Software Architect	Current skills: + PHP, JavaScript programming experience. + Experience with WordPress CMS + Communication and interpersonal skills. Required skills: + Project Scoping + Neon CRM + REST/SOAP API + UML Modeling
Nishant Jani	Prototyper/ Requirement Engineer	Current skills: + PHP, JavaScript, HTML5, CSS3 programming experience.

		<ul style="list-style-type: none">+ Experience with prototyping tools like pencil project, google drawing.+ Client interaction Required Skill: <ul style="list-style-type: none">+ WordPress CMS+ Neon CRM+ UML Modeling
Brian Bousman	IIV&V / Tester	Current Skills: <ul style="list-style-type: none">+ Excellent communication+ Good project scoping+ Client Interaction+ Unit Testing and Quality Control Required Skills: <ul style="list-style-type: none">+ Familiarity with WinBook and Bugzilla+ Value based document review

Approach

8 Monitoring and Control

We conduct short meetings and rely on Bugzilla apart from weekly team meetings for the project monitoring. The elements by which we are monitoring are Bi-weekly Progress Report, Weekly meeting with Clients (through Winbook, Emails, Phone calls and in-person meetings when required) Commitment Review, Biweekly Project plan and Effort Report for individual contribution. We plan internally through phone calls and emails between the team members. All these are updated regularly on Bugzilla.

1 Closed Loop Feedback Control

For the purpose of effective communication between the team members we employed four effective communication tools i.e Email, Skype, Telephonic conversations and Bugzilla. As for Email, it's a asynchronous message exchange tool. As for Skype, it's a real time audio / video conferencing. As for Bugzilla, it's a bug tracking system which helps team members to keep informed with their duties in fixing bugs and shortly coming events.

2 Reviews

The reviews for the project are usually done in three steps, which are peer reviews whenever an issue or feature is completed, two or more team members review the code. Then IIV&V reviews for correctness and completeness. If he finds any defects or errors he would issue a ticket in Bugzilla to notify the team members for the responsible parts for correction of bugs. Then finally reviewed by teaching staff.

9 Methods, Tools and Facilities

Table 5: Tools to be used in the project

Tools	Usage	Provider
ICSM EPG	Better understanding of our roles as software engineers; help with documentation and other submissions	CSCI 577
Google Drawing	Provides examples for user interface and system functionality, is helpful in the development of prototype	Google
Bugzilla	Track project progress	TA
Winbook	Keep track of the information resulting from negotiations with client, win conditions and issues raised	TA
Microsoft Office	Document editing, sheets, presentations etc.	Microsoft
Visual Paradigm	Capture UML and auto generate SSAD	Visual Paradigm International
COINCOMO	Estimate the software developing cost	USC CSSE
Effort Report	Record the total weekly working hours on the project	USC CSSE
MPP	Make the project planning	Microsoft

2 Resources

In this section, we present the project effort and schedule estimation of the project using COCOMO II.

Table 6: Module lists and SLOC of each module

No.	Module Name	Brief Description	SLOC	REVL
1	Registration	Underlying structure for archive the documents on the website	300	10%
2	Feedback	Visualize the event location and youth art community	600	60%
3	On-site Checkin	Visualization of up-coming or past event highlights	300	30%
4	Blogs	Showcase all the pictures from past events	300	30%
5	Report Generation	Administration tool	1k	10%

The following is COCOMOII Scale Drivers and rationales of choosing the values.

Table 7: COCOMOII Scale Drivers

Scale Driver	Value	Rationale
PREC	Low	This is not very similar to the projects that our team had developed before
FLEX	High	The client briefly defines how the system would be; however, they are open to discussions with the development team
RESL	High	The thoroughness of the architecture and its freedom from risk is quite high because of the reliability of the existing COTS products and measures taken to avoid the future risks
TEAM	High	All stakeholders are very collaborative and have strong commitments to achieve the goals of the project

PMAT	Low	The team follows just the basic practices of the incremental model
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The following is COCOMOII Cost Drivers of each module and rationales of choosing the values.

Registration:

Table 8: COCOMOII cost drivers of Module-1 Registration

Cost Driver	Value	Rationale
RELY	Nom	This module is important, however in the vent of failure we can resort to manual measures for data entry
DATA	Low	This module is pretty much the database for the website, high data cost drive
DOCU	Nominal	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	Low	Involves basic transfer of data from online form to the neon database
RUSE	Low	It won't be reused for future products
TIME	Nominal	This module is utilized only during the process of registration
STOR	High	It will take up about 70% of the storage place we have for the entire system
PVOL	Low	Stable platform, will stay the same with major changes just once a month
ACAP	High	Team members are capable of doing these implementation
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 7 team members in CSCI577a that is suitable for our project sizing.
APEX	Nominal	The average experience of the team members for this online web-based application is about one year.
LTEX	Nominal	Most of the tools are new to our team, but it should not be too hard to pick up

PLEX	Nominal	The platform is somewhat new to our team, but it is not too hard to pick up
TOOL	High	Use of strong, mature, moderately integrated tools
SITE	Extra High	Most teammate can meet at last twice a week
SCED	Nominal	The schedule is fixed for 12 weeks in Fall

b) Feedback

Table 9: COCOMOII cost drivers of Module-2: Feedback

Cost Driver	Value	Rationale
RELY	Low	This module is only to collect feedback. One can resort to the originally used telephonic call method in the event of failure. There are no major data losses
DATA	Low	This module needs a small chunk of data as a test data set
DOCU	Nominal	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	Low	Involves basic transfer of data from online form to the neon database
RUSE	Low	It is not going to be reused for future projects.
TIME	Nominal	This module is utilized seldom
STOR	Nominal	It will take up about 10% of the storage place we have for the website
PVOL	Low	Stable enough, since the reliability of the NeonCRM is high
ACAP	High	Team members are capable of doing these implementation
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 8 team members in CSCI577a that is suitable for our project sizing.
APEX	Nominal	The average experience of the team members for this online web-based application is about one year.
LTEX	Nominal	Some of the tools are new to our team, but it should not be too hard to pick up

PLEX	Nominal	The platform is somewhat new to our team, but it is not too hard to pick up
TOOL	High	Use of strong, mature, moderately integrated tools
SITE	Extra High	Most teammate can meet at last twice a week
SCED	Nominal	The schedule is fixed for 12 weeks in Fall

c) Onsite Checkin system:

Table 10: COCOMOII tool cost drivers of Module-3: Onsite Checkin system

Cost Driver	Value	Rationale
RELY	High	This module should be available during their entire office hours
DATA	Low	This module needs a small chunk of data as a test data set
DOCU	Low	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	Low	Involves transfer of data to the onsite database
RUSE	Low	It is not going to be reused for the future projects.
TIME	High	This module stays there all the time, execution time depends on the amount of website visitors
STOR	Nominal	It will take up less than 10% of the storage space
PVOL	Low	Stable platform, will stay the same
ACAP	High	Team members are capable of doing these implementation
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 8 team members in CSCI577a that is suitable for our project sizing.
APEX	Nominal	The average experience of the team members for this onsite application is about one year.
LTEX	High	Most of the tools are known to our team
PLEX	High	The platform is somewhat known to our team

TOOL	High	Use of strong, mature, moderately integrated tools
SITE	Extra High	Most teammate can meet at last twice a week
SCED	Nominal	The schedule is fixed for 12 weeks in Fall

d) Blogs:**Table 11: COCOMOII tool cost drivers of Module-3: Blogs**

Cost Driver	Value	Rationale
RELY	Low	This module doesn't involve crucial data. Mail blasting can be used an alternative
DATA	Low	This module doesn't need a heavy test data set
DOCU	Low	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	Low	We will be using existing plugins provided by Wordpress
RUSE	Nominal	It might be reused on their future website if they decide to modify it
TIME	High	This modules time consumption will depend on the influx of users and the time they spend on blogging. So on an average this process should consume not more than 50% of the available time
STOR	Nominal	It will take up about 30% of the storage place we have for the website
PVOL	Low	Stable platform since we are using existing plugins
ACAP	High	Team members are capable of doing these implementation
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 8 team members in CSCI577a that is suitable for our project sizing.
APEX	Low	Experience with developing blogging applications is relatively low.
LTEX	Low	Most of the tools are new to our team, but it should not be too hard to pick up

PLEX	Low	The platform is somewhat new to our team, but it is not too hard to pick up
TOOL	High	Use of strong, mature, moderately integrated tools
SITE	Extra High	Most teammate can meet at last twice a week
SCED	Nominal	The schedule is fixed for 12 weeks in Fall

e) Report Generation:

Table 12: COCOMOII tool cost drivers of Module-5 Report Generation

Cost Driver	Value	Rationale
RELY	Nominal	This module is fairly important, Failure of this module will result time consuming process of report generation
DATA	Nominal	The test data is significant in size since we will be using statistics from past reports.
DOCU	Low	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	Low	Involves writing queries to the onsite database to generate reports
RUSE	Nominal	It is might be reused for the future projects.
TIME	Nominal	This module is utilize only for the purpose of generating monthly and annual reports
STOR	Nominal	The data is stored onto an online file management system
PVOL	Low	Sufficiently stable.
ACAP	High	Team members are capable of doing these implementation
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 8 team members in CSCI577a that is suitable for our project sizing.
APEX	Nominal	The average experience of the team members for this application is about one year.
LTEX	High	Most of the tools are known to our team

PLEX	Nominal	The platform is somewhat known to our team
TOOL	High	Use of strong, mature, moderately integrated tools
SITE	Extra High	Most teammate can meet at last twice a week
SCED	Nominal	The schedule is fixed for 12 weeks in Fall

The following is the estimation result of effort and schedule from COINCOMOII based on Scale Drivers and Cost Drivers discussed above.

Figure 1 COCOMO Estimation Result-1

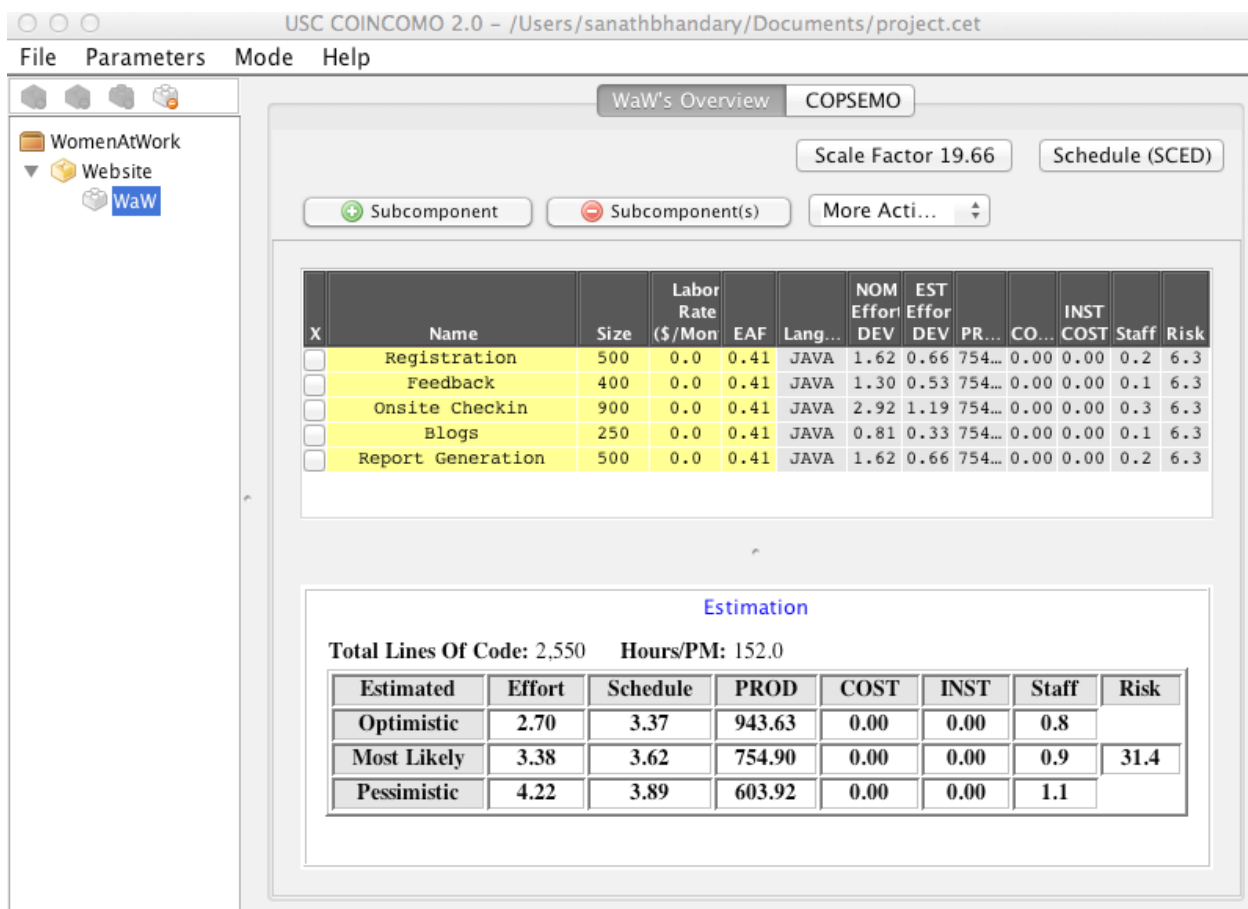


Figure 2: COCOMO Estimation Result- 2

