

# Life Cycle Plan (LCP)

Lose4Good.org Database Driven Socially Connected Website

## Team 08

Team Member Name	Primary Role	Secondary Role
Ali Alotaibi	Requirements Engineer	System Architect
Ankit Kalwar	Operational Concept Engineer	Project Manager
Arul Samuel	System Architect	Requirements Engineer
Manas Jog	Prototyper	Requirements Engineer
Monil Ashok Parikh	Quality Focal Point	System Architect
Omkar Yerunkar	Project Manager	Feasibility Analyst
Shalini Srinivas	Feasibility Analyst	Life cycle planner

12/09/2013

# Version History

Date	Author	Version	Changes made	Rationale
09/26/13	SS	1.0	Roles and Detailed skillset of the team members	Initial draft for Lose4Good project as a part of VC Package
10/13/13	OY,MP	2.0	LCP document	Draft for Lose4Good project as a part of FC Package
10/22/13	OY	2.1	COCOMO Estimation	Final draft for Lose4Good project as a part of FC Package
11/26/13	OY	3.0	Iteration Plan	Initial draft for Draft DC Package
12/09/13	OY	3.1	Iteration Plan	Final Draft for Draft DC Package

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# 1. Introduction

## 1.1 Purpose of the LCP

The purpose of LCP is to provide with the basic plan related to steps associated with the activities and working of the team for the software development process. LCP provides the detailed description of the management of the project in concise and precise manner.

## 1.2 Status of the LCP

The status of the LCP is currently at the Foundation Package version number 3.0. This is the version that will be delivered to the client. No major changes are being done as we are developing the same from the scratch and are in the valuation phase.

## 1.3 Assumptions

- The duration of the project is 24 weeks, which are 12 weeks in fall 2013 and 12 weeks in spring 2014.
- The development team consists of 7 members wherein 4 members will continue with the project for 24 weeks and rest 3 are unsure for last 12 weeks. Most probably we will get proper replacements based on the skill set for the rest 3 members during the working of the project for the remaining 12 weeks.
- ICSM- Electronic Process Guide provided on the course website is being used as a set of guidelines to assist the development of the software process.

## 2. Milestones and Products

### 2.1 Overall Strategy

Lose4Good.org is following Architected Agile process because there are Non-Development Items or Web services which make less than 30% of the most of the core capabilities.

#### Exploration phase

**Duration:** 09/11/13- 09/27/13

**Concept:** In this phase the team identifies the project operational concept, system and software requirement, system and software architecture, and life-cycle plan. These phases prioritize the capabilities, conduct investment and feasibility analysis, and implement the software prototype.

**Deliverables:** Valuation Commitment Package, Client Interaction Report, Bi-weekly Project Plan and Report, Weekly Effort Report.

**Milestone:** Valuation Commitment Review

**Strategy:** One Incremental Commitment Cycle

#### Valuation phase

**Duration:** 09/28/13- 10/16/13

**Concept:** In this phase the team identifies the objectives, constraints and priorities, develop operational concept, perform win-win negotiations, prototyping, and explore alternatives thus providing project feasibility evidence. Also the team assesses and develops plans to mitigate risks, plan and manage project, verify and validate products using defect tracking system and define quality and configuration policy.

**Deliverables:** Foundation Commitment Package, Bi-weekly Project Report and Plan, Weekly Effort Report.

**Milestone:** Foundation Commitment Review

**Strategy:** One Incremental Commitment Cycle

#### Foundation phase

**Duration:** 10/19/13- 12/02/13

**Concept:** In this phase the team assesses the project status, plan and manage project, develops the prototype and manage the quality of the project.

**Deliverables:** Draft Development Commitment Package, Bi-weekly Project Report and Plan, Weekly Effort Report.

**Milestone:** Development Commitment Review

**Strategy:** One Incremental Commitment Cycle

### **Re-Baselined Foundation phase**

**Duration:** 01/13/14- 02/10/14

**Concept:** In this phase the development team will rebaseline the project status and prepare for development phase. Also test plans will be put forward along with the detailed project plan.

**Deliverables:** Draft Re-Baselined Development Commitment Package, Bi-weekly Project Report and Plan, Weekly Effort Report.

**Milestone:** Re-Baselined Development Commitment Review

**Strategy:** One Incremental Commitment Cycle



## 2.2 Project Deliverables

### 2.2.1 Exploration Phase

**Table 1. Artifacts Deliverables in Exploration Phase**

<b>Artifact</b>	<b>Due date</b>	<b>Format</b>	<b>Medium</b>
Client Interaction Report	09/20/2013	.doc, .pdf	Soft copy
Valuation Commitment Package <ul style="list-style-type: none"> <li>• Operational Concept Description (OCD) Early Section</li> <li>• Life Cycle Plan (LCP) Early Section</li> <li>• Feasibility Evidence Description (FED) Early Section</li> </ul>	09/27/2013	.doc, .pdf	Soft copy
Microsoft Project Plan	Bi-weekly Monday	.mpp, .pdf	Soft copy
Progress Report	Bi-weekly Monday	.xls	Soft copy
Risk Analysis	Bi-weekly Monday	Text	Part of Progress Report

### 2.2.2 Valuation Phase

**Table 2. Artifact deliverable in Valuation Phase**

<b>Artifact</b>	<b>Due date</b>	<b>Format</b>	<b>Medium</b>
Foundation Commitment Package <ul style="list-style-type: none"> <li>• Operational Concept Description (OCD)</li> <li>• Life Cycle Plan (LCP)</li> <li>• Feasibility Evidence Description (FED)</li> <li>• System and Software Requirements Definition(SSRD)</li> <li>• Prototype Report(PRO)</li> </ul>	10/16/2013	.doc,.pdf	Soft copy
Microsoft Project Plan	Bi-weekly Monday	.mpp,.pdf	Soft copy
Progress Report	Bi-weekly Monday	.xls	Soft copy
Effort Report	Every Monday	Text	ER system
Risk Analysis	Bi-weekly Monday	Text	Part of Progress Report

## 2.2.3 Foundation Phase

**Table 3. Artifacts Deliverables in Foundation Phase**

<b>Artifact</b>	<b>Due date</b>	<b>Format</b>	<b>Medium</b>
Development Commitment Package <ul style="list-style-type: none"> <li>• Operational Concept Description (OCD)</li> <li>• Life Cycle Plan (LCP)</li> <li>• Feasibility Evidence Description (FED)</li> <li>• System and Software Requirements Definition(SSRD)</li> <li>• Test Plan and Cases (TPC)</li> <li>• Transition Plan (TP)</li> </ul>	12/02/2013	.doc, .pdf	Soft copy
Microsoft Project Plan	Bi-weekly Monday	.mpp, .pdf	Soft copy
Progress Report	Bi-weekly Monday	.xls	Soft copy
Risk Analysis	Bi-weekly Monday	Text	Part of Progress Report
Effort Report	Every Monday	Text	ER system

## 2.2.4 Re-Baselined Foundation Phase

**Table 4. Artifacts Deliverables in Re-Baselined Foundation Phase**

<b>Artifact</b>	<b>Due date</b>	<b>Format</b>	<b>Medium</b>
Draft Re-Baselined Development Commitment Package	01/10/2014	.doc, .pdf	Soft copy
Microsoft Project Plan	Bi-weekly Monday	.mpp, .pdf	Soft copy
Progress Report	Bi-weekly Monday	.xls	Soft copy
Risk Analysis	Bi-weekly Monday	Text	Part of Progress Report
Effort Report	Every Monday	Text	ER system

## 3. Responsibilities

### 3.1 Project-specific stakeholder's responsibilities

The client is Mr. Paul Charron, Senior Manager at 20th Century Fox. The users of the system are all the weight losers, their relatives i.e. personal sponsors, business organizations i.e. business sponsors and the charity organizations. Mr. Paul Charron is the project-specific stakeholder. Since the system has to be developed from the scratch, Mr. Charron is providing us with the detailed requirements of the system and also his specific requirements for the Version 1.0 of the system.

### 3.2 Responsibilities by Phase

The primary and secondary roles of each team member are summarized below. These roles are categorized based on the primary role and secondary roles that are being took up by the team members.

**Table 5. Stakeholder's Responsibilities in each phase**

Team Member / Role	Primary / Secondary Responsibility				
	Exploration	Valuation	Foundations	Development-Construction Iteration	Development-Transition Iteration
<b>Omkar Yerunkar</b> <b>Primary:</b> Project Manager <b>Secondary:</b> Feasibility Analyst.	<b>Primary Responsibility</b> - Plan the project -Analyze Proposed System.	<b>Primary Responsibility</b> -Record Bi-weekly project progress -Detailed project plan. -Co-ordinate team meetings	<b>Primary Responsibility</b> -Record Bi-weekly project progress -Detailed project plan -Planning, Monitoring and Control.	<b>Primary Responsibility</b> -Record Bi-weekly project progress -Detailed project plan -Planning, Monitoring and Control. - Part of the implementation team(Coding) - System, unit, integration testing	<b>Primary Responsibility</b> -Record Bi-weekly project progress -Detailed project plan -Planning, Monitoring and Control. - Part of the implementation team(Coding) - Launch the system with proper transition plan
	<b>Secondary Responsibility</b> -Identify risks -Manage Bugzilla Repository	<b>Secondary Responsibility</b> -Manage Bugzilla Repository	<b>Secondary Responsibility</b> -Manage Bugzilla repository -Acquire	<b>Secondary Responsibility</b> -Manage Bugzilla repository -Identify most	<b>Secondary Responsibility</b> -Manage Bugzilla repository

		<ul style="list-style-type: none"> <li>-Assess and evaluate NDI/NCS components.</li> <li>-Assess and plan to mitigate risks.</li> <li>-Access feasibility evidence.</li> </ul>	<ul style="list-style-type: none"> <li>NDI/NCS components.</li> <li>-Identify most appropriate process.</li> <li>-Provide conclusions and recommendations.</li> <li>-Provide feasibility evidence for architected agile project</li> </ul>	appropriate process.	-Identify most appropriate process.
<b>Ankit Kalwar</b> <b>Primary:</b> Operational Concept Engineer <b>Secondary:</b> Project Manager	<b>Primary Responsibility</b> -System Conceptualization -Assess operational Concept. -Identify Shared Vision  <b>Secondary Responsibility</b> -Interact with Client -Manage Bugzilla repository	<b>Primary Responsibility</b> -Establish new operational concept. -Explore alternatives. -Analyze Current System.  <b>Secondary Responsibility</b> -Develop operational concept -Manage Bugzilla repository	<b>Primary Responsibility</b> -System Conceptualization   <b>Secondary Responsibility</b> -Interact with Client -Manage Bugzilla repository	NA	NA
<b>Arul Rajkumar</b> <b>Primary:</b> System Architect. <b>Secondary:</b> Requirements Engineer	<b>Primary Responsibility</b> -Analyze Proposed System. -Provide system architecture -Provide feasibility evidence for Architected Agile  <b>Secondary Responsibility</b> -Facilitate win-win negotiations	<b>Primary Responsibility</b> -Analyze Proposed System. -Provide system architecture -Provide feasibility evidence for Architected Agile -Assess Proposed System.  <b>Secondary Responsibility</b> -Tailoring win conditions	<b>Primary Responsibility</b> -Analyze Proposed System. -Provide system architecture -Provide feasibility evidence for Architected Agile -Assess Proposed System.  <b>Secondary Responsibility</b> -Tailoring win conditions	<b>Primary Responsibility</b> -Analyze Proposed System. -Assess Proposed System. - Part of the implementation team(Coding) - System, unit, integration testing  <b>Secondary Responsibility</b> -Tailoring user requirements	<b>Primary Responsibility</b> -Analyze Proposed System. -Assess Proposed System. - Part of the implementation team(Coding) - Launch the system with proper transition plan  <b>Secondary Responsibility</b> -Support Maintainer, User, Client
<b>Manas Jog</b>	<b>Primary</b>	<b>Primary</b>	<b>Primary</b>	<b>NA</b>	<b>NA</b>

<b>Primary:</b> Prototyper <b>Secondary:</b> Requirements Engineer.	<b>Responsibility</b> -Analyze and prioritize capabilities to prototype. -Update website  <b>Secondary Responsibility</b> -Facilitate win-win negotiations	<b>Responsibility</b> -Assess prototype components. -Update website  <b>Secondary Responsibility</b> -Capture MMF's. -Score Win-Win condition. -Establish New Operational Concept	<b>Responsibility</b> -Develop prototype. -Establish new operation concept. -Prepare development components. -Tailor Components. -Update website  <b>Secondary Responsibility</b> -Capture progress of Win-Win condition.		
<b>Monil Parikh</b> <b>Primary:</b> System Architect <b>Secondary:</b> Quality focal Point	<b>Primary Responsibility</b> -Analyze Proposed System. -Provide system architecture -Provide feasibility evidence for Architected Agile  <b>Secondary responsibility</b> -Assess quality of the proposed system	<b>Primary Responsibility</b> -Analyze Proposed System. -Provide system architecture -Provide feasibility evidence for Architected Agile -Assess Proposed System.  <b>Secondary Responsibility</b> -Assess Quality management strategy.	<b>Primary Responsibility</b> -Analyze Proposed System. -Provide system architecture -Provide feasibility evidence for Architected Agile -Assess Proposed System.  <b>Secondary Responsibility</b> -Identify configuration management. -Identify quality management strategy. -Construct Traceability Matrix.	NA	NA

<b>Shalini Srinivas</b> <b>Primary:</b> Feasibility Analyst  <b>Secondary:</b> IV & V, Life cycle planner.	<b>Primary Responsibility</b> -Analyze Proposed System. -Identify risks  <b>Secondary Responsibility</b> -Identify milestones and products	<b>Primary Responsibility</b> -Analyze business case. -Assess and plan to mitigate risks. -Assess feasibility evidence. -Explore alternatives.  <b>Secondary Responsibility</b> -Assess development Iteration. -Assign roles and responsibilities. -Estimate effort, cost and schedule using tools like COCOMO-II	<b>Primary Responsibility</b> -Identify most appropriate process. -Provide conclusions and recommendations. -Provide feasibility evidence for architected agile project .  <b>Secondary Responsibility</b> -Verify and validate work products. -Identify Milestones and products. -Identify LC management approach. -Develop support & transition plan. -Detailed project plan. _ identify development iteration. -Provide process feasibility evidence.	NA	NA
Name: <b>Ali</b> <b>Primary:</b> Requirements Engineer. <b>Secondary:</b> System Architect	<b>Primary Responsibility</b> -Analyze Current/Proposed System.  <b>Secondary Responsibility</b> -Provide system architecture	<b>Primary Responsibility</b> -Capture MMF's. -Score Win-Win condition. -Establish New Operational Concept  <b>Secondary Responsibility</b> --Assess and evaluate NDI	<b>Primary Responsibility</b> -Capture progress of Win-Win condition.  <b>Secondary Responsibility</b> -Assess System Architecture.	<b>Primary Responsibility</b> -Analyze Proposed System. -Assess Proposed System. - Part of the implementation team(Coding) - System, unit, integration testing  <b>Secondary Responsibility</b> -Tailoring user requirements	<b>Primary Responsibility</b> -Analyze Proposed System. -Assess Proposed System. - Part of the implementation team(Coding) - Launch the system with proper transition plan <b>Secondary Responsibility</b> -Support Maintainer, User,

	-Provide feasibility evidence for Architected Agile	components. -Assess NDI interoperability -Provide feasibility evidence of NDI components. -Provide feasibility evidence for architecture agile project.	-Define technology dependent architecture. -Specify Architecture styles, patterns and framework.		Client
Name: <b>Paul Charron (Client)</b>	-Specify the requirements of the system - win-win negotiations	-Tailor requirements based on the win-win negotiations -Define shortfalls	-Provide feedback based on the prototype -Define prototype shortfalls -Define desired system and the requirements to achieve it -Provide changed requirements	-Provide feedback based on the current system --Provide changed requirements	-Provide feedback based on the current system --Provide changed requirements -Receive training for new system, provide training to the users

### 3.3 Skills

**Table 6. Skills of the team members**

<b>Team member</b>	<b>Role</b>	<b>Skills</b>
Ali Alotaibi (577a, 577b)	Requirements Engineer Architect Implementer	UML, Design Patterns, Risk Assessment, Critical thinking, Java, MySQL
Ankit Kalwar (577a)	Operational Concept Engineer Project Manager	Analysis and Assessment of operational concept, Project management, Win-Win Negotiation, PHP, MySQL, Java
Arul Samuel (577a, 577b)	Architect Requirement Engineer Implementer	UML, Design Patterns, Python, MySQL, AJAX, JavaScript, RSA
Manas Jog (577a)	Prototyper Requirements Engineer	Python, MySQL, AJAX, JavaScript, RSA, HTML5
Monil Parikh (577a, 577b)	Architect Quality Focal Point Implementer	UML, Design Patterns, UML, Design Patterns, Python
Omkar Yerunkar (577a, 577b)	Project Manager Feasibility Analyst Implementer	Project management, Win-Win Negotiation, COCOMO, Feasibility and Risk Analysis, MySQL, Java
Shalini Srinivas (577a)	Feasibility Analyst Life Cycle Planner IV&V	Feasibility and Risk Analysis, Project Coordination, Cost and Benefit Analysis, MS Project, COCOMO, Python



**Table 7. Future Skills**

<b>Team member</b>	<b>Role</b>	<b>Skills (required)</b>
Future team member (577b)	Implementer	Python-Django, MySQL, JavaScript
Future team member (577b)	Tester	Unit testing, integration testing, coding and debugging skills , Python- Django, JavaScript
Future team member (Client side at the end of semester)	Maintainer	Python- Django ,MySQL, Administrative skills, Critical thinking, debugging skills

## **4. Approach**

### **4.1 Monitoring and Control**

The following will be the tools and documentation used by Team 08 for monitoring and control of the project:

- Progress Report- Bi-weeks progress that keeps a track of risks and COTS used.
- Project Plan-Keeps a track of deadlines, stakeholders and documentation briefing each section of the project.
- Bugzilla System- Used for defect tracking. Also used to keep track of the artifacts being worked on and to assign tasks and activities to the team members.
- Effort Report- Documentation representing the effort taken in minutes by each member.

#### **4.1.1 Closed Loop Feedback Control**

The project manager and IIV & V member processes all the documents to the Dropbox folder before submission. The documents are shared in dropbox so that it provides access of all the documents to any of the team member if he wants to review any document.

#### **4.1.2 Reviews**

- Bugzilla System
- Weekly stakeholder meetings
- Unplanned individual reviews
- IIV&V reviews
- Effort Report

## 4.2 Methods, Tools and Facilities

**Table 8. Methods, Tools and Facilities**

<b>Tools</b>	<b>Usage</b>	<b>Provider</b>
MS Project	Assesses and mitigates risks in the system development life cycle	USC License
Balsamiq	Provides examples for user interface and system functionality, is helpful in the development of prototype	Balsamiq Studios
Pyscripter	Creates a framework and distribution system for reusable Python components	Open source
Visual Paradigm	UML case tool used for modeling UML diagrams	USC License
COINCOMO	Estimation of cost and effort	USC License
Bugzilla	Assigning tasks and activities to the team members	USC License
Team Viewer	To undertake weekly meetings	Team viewer GmbH
Curl	Directly performing HTTP transaction for testing purpose	Open Source
Microsoft Word	Used for documenting deliverables (LCP, FED, PRO, SSAD, OCD)	Microsoft

## 5. Resources

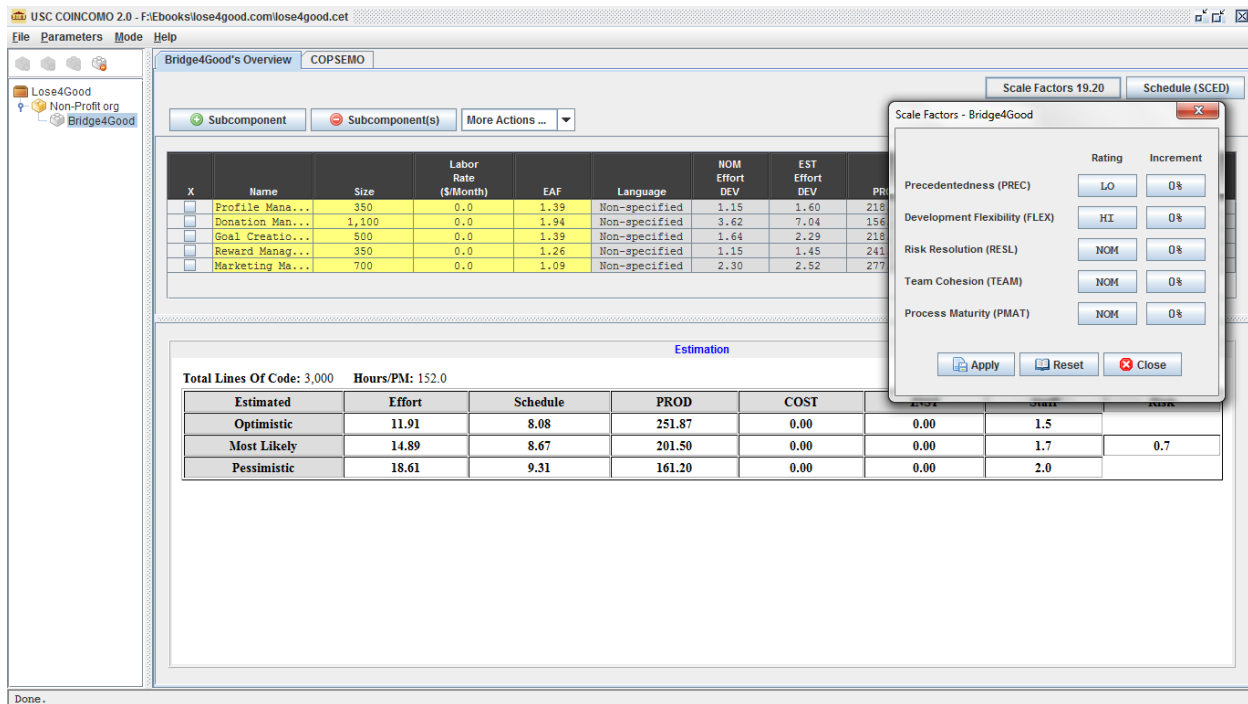
- Estimated CSCI577a Effort : 7 team members at 12 hrs/week for 12 weeks
- Total 577a estimated effort: 1008 hours
- Budget information-\$3000
- Project duration-24 weeks( Fall 2013)
- Component modules:-
  1. Profile Management
  2. Donation Management
  3. Goal Creation & Tracking Management
  4. Marketing Management
  5. Reward Management
- Programming language used: Python, JavaScript, HTML5

**Table 9. Module lists and SLOC of each module**

No.	Module Name	Brief Description	SLOC	REVL
1	Profile Management	Enables user to create profile and manage it.	350	0%
2	Donation management	Involves transaction between sponsors and charity via PayPal	1100	0%
3	Goal Creation And Tracking	Enables user to track his/her goals on a weekly basis.	500	0%
4	Reward Management (Evolutionary)	Enables user to take benefits of the assigned rewards after completion of goals.	350	0%
5	Marketing Management (Evolutionary)	Enables sponsors to advertise through lose4good.org	700	0%

**Table 10. COCOMOII Scale Driver**

Scale Driver	Value	Rationale
PREC	LO	The system is being built from the scratch and the team members haven't done any similar kind of project before.
FLEX	HI	The client has the idea and the some general goals and Requirements and open for suggestions. Interface and schedule flexibility.
RESL	NOM	Considerable level of uncertainty with 3 critical risk items.
TEAM	NOM	Basically co-operative interactions, basic consistency and little experience in working as a team.
PMAT	NOM	ICSM guidelines and principles followed.

**Figure 1. Scale Factors**

**Table 11. COCOMOII Cost Driver for Profile Management**

<b>Cost Driver</b>	<b>Value</b>	<b>Rationale</b>
RELY	LO	Failure will lead to losses which will be easily recoverable.
DATA	NOM	Database will be required to store user information. $10 \leq D/P < 100$
CPLX	NOM	Simple use of widget set, simple nesting, status checking, complex queries.
RUSE	NOM	The client is planning to reuse the module often in very similar system applications. i.e. across project
DOCU	NOM	Right-sized documentation required.
TIME	NOM	The system consumes nominal time and the required resources.
STOR	HI	Requires a large amount of storage for increasing no. of users profiles.
PVOL	LO	Major change needs to be done in 12 months for developing new application of the project.
ACAP	NOM	Analysts have basic knowledge and nominal experience.
PCAP	LO	Many members have low experience.
PCON	VLO	All the team members will not be available throughout the project.
APEX	LO	All the team members have less application experience.
PLEX	LO	All the team members have less platform experience.
LTEX	NOM	Intermediate programming language and tool experience.
TOOL	NOM	Moderately integrated tools being used.
SITE	HI	The client and members are in the same city.

Figure 1. Profile management

USC COINCOMO 2.0 - F:\Ebooks\lose4good.com\lose4good.cet

File Parameters Mode Help

Bridge4Good's Overview COPSEMO

Scale Factors 19.20 Schedule (SCED)

Subcomponent Subcomponent(s) More Actions ...

X	Name	Size	Labor Rate (\$/Month)	EAF	Language
<input checked="" type="checkbox"/>	Profile Mana...	350	0.0	1.39	Non-specified
<input checked="" type="checkbox"/>	Donation Man...	1,100	0.0	1.94	Non-specified
<input checked="" type="checkbox"/>	Goal Creatio...	500	0.0	1.39	Non-specified
<input checked="" type="checkbox"/>	Reward Manag...	350	0.0	1.26	Non-specified
<input checked="" type="checkbox"/>	Marketing Ma...	700	0.0	1.09	Non-specified

Total Lines Of Code: 3,000 Hours/PM: 152.0

Estimated	Effort	Schedule	PROD
Optimistic	11.91	8.08	251.87
Most Likely	14.89	8.67	201.50
Pessimistic	18.61	9.31	161.20

Done.

Effort Adjustment Factors - Profile Management

Product

	RELY	DATA	DOCU	CPLX	RUSE
Rating	LO	NOM	NOM	NOM	NOM
% Incr	0%	0%	0%	0%	0%

Platform

	TIME	STOR	PVOL
Rating	NOM	HI	LO
% Incr	0%	0%	0%

Personnel

	ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating	NOM	LO	LO	LO	NOM	VLO
% Incr	0%	0%	0%	0%	0%	0%

Project

	TOOL	SITE
Rating	NOM	HI
% Incr	0%	0%

User

	USR1	USR2
Rating	NOM	NOM
% Incr	0%	0%

Apply Reset Close

**Table 12. COCOMOII Cost Driver for Donation Management**

<b>Cost Driver</b>	<b>Value</b>	<b>Rationale</b>
RELY	HI	Failure will lead to high financial loss involving payment transactions.
DATA	NOM	Database will be required to store user transaction information. $10 \leq D/P \leq 100$
CPLX	HI	Highly nested structured programming required, interpolation, I/O operations at physical level, triggers for data stream and widget extension.
RUSE	NOM	The client is planning to reuse the module often in very similar system applications. i.e. across project
DOCU	NOM	Right-sized documentation required.
TIME	NOM	The system module will consume nominal time and the required resources.
STOR	HI	Requires a large amount of storage for increasing no. of transaction of user profiles.
PVOL	LO	Major change needs to be done in 12 months for developing new application of the project.
ACAP	NOM	Analysts have basic knowledge and nominal experience.
PCAP	LO	Many members have low experience.
PCON	VLO	All the team members will not be available throughout the project.
APEX	LO	All the team members have less application experience.
PLEX	LO	All the team members have less platform experience.
LTEX	NOM	Intermediate programming language and tool experience.
TOOL	NOM	Moderately integrated tools being used.
SITE	HI	The client and members are in the same city.



Figure 2. Donation management

USC COMCOMO 2.0 - F:\Ebooks\lose4good.com\lose4good.cet

File Parameters Mode Help

Bridge4Good's Overview COPSEMO

Scale Factors 19.20 Schedule (SCED)

Subcomponent Subcomponent(s) More Actions ...

X	Name	Size	Labor Rate (\$/Month)	EAF	Language
<input type="checkbox"/>	Profile Mana...	350	0.0	1.39	Non-specified
<input type="checkbox"/>	Donation Man...	1,100	0.0	1.94	Non-specified
<input type="checkbox"/>	Goal Creatio...	500	0.0	1.39	Non-specified
<input type="checkbox"/>	Reward Manag...	350	0.0	1.26	Non-specified
<input type="checkbox"/>	Marketing Ma...	700	0.0	1.09	Non-specified

Estimated

Total Lines Of Code: 3,000 Hours/PM: 152.0

	Estimated	Effort	Schedule	PROD
Optimistic		11.91	8.08	251.87
Most Likely		14.89	8.67	201.50
Pessimistic		18.61	9.31	161.20

Done.

Page: 21 of 27 Words: 3,413 English (United States)

100%

Effort Adjustment Factors - Donation Management

Product

	RELY	DATA	DOCU	CPLX	RUSE
Rating	HI	NOM	NOM	HI	NOM
% Incr	0%	0%	0%	0%	0%

Platform

	TIME	STOR	PVOL
Rating	NOM	HI	LO
% Incr	0%	0%	0%

Personnel

	ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating	NOM	LO	LO	LO	NOM	VLO
% Incr	0%	0%	0%	0%	0%	0%

Project

	TOOL	SITE
Rating	NOM	HI
% Incr	0%	0%

User

	USR1	USR2
Rating	NOM	NOM
% Incr	0%	0%

Apply Reset Close

**Table 13. COCOMOII Cost Driver for Goal Creation and Tracking Management**

<b>Cost Driver</b>	<b>Value</b>	<b>Rationale</b>
RELY	LO	Failure will lead to losses which will be easily recoverable.
DATA	NOM	Database will be required to store user information. $10 \leq D/P \leq 100$
CPLX	NOM	Status checking , error processing, callbacks and message passing done with basic matrix operations.
RUSE	NOM	The client is planning to reuse the module often in very similar system applications. i.e. across project
DOCU	NOM	Right-sized documentation required.
TIME	NOM	The system consumes nominal time and the required resources.
STOR	HI	Requires a large amount of storage for goal creation and tracking which is associated with user profile.
PVOL	LO	Major change needs to be done in 12 months for developing new application of the project.
ACAP	NOM	Analysts have basic knowledge and nominal experience.
PCAP	LO	Many members have low experience.
PCON	VLO	All the team members will not be available throughout the project.
APEX	LO	All the team members have less application experience.
PLEX	LO	All the team members have less platform experience.
LTEX	NOM	Intermediate programming language and tool experience.
TOOL	NOM	Moderately integrated tools being used.
SITE	HI	The client and members are in the same city.

Figure 3. Goal Creation and Tracking Management

USC COINCOMO 2.0 - F:\Ebooks\lose4good.com\lose4good.cet

File Parameters Mode Help

Bridge4Good's Overview COPSEMO

Scale Factors 19.20 Schedule (SCED)

Subcomponent Subcomponent(s) More Actions ...

X	Name	Size	Labor Rate (\$/Month)	EF	Language
<input type="checkbox"/>	Profile Mana...	350	0.0	1.39	Non-specified
<input type="checkbox"/>	Donation Man...	1,100	0.0	1.94	Non-specified
<input type="checkbox"/>	Goal Creatio...	500	0.0	1.39	Non-specified
<input type="checkbox"/>	Reward Manag...	350	0.0	1.26	Non-specified
<input type="checkbox"/>	Marketing Ma...	700	0.0	1.09	Non-specified

Total Lines Of Code: 3,000 Hours/PM: 152.0

Estimated	Effort	Schedule	PROD
Optimistic	11.91	8.08	251.87
Most Likely	14.89	8.67	201.50
Pessimistic	18.61	9.31	161.20

Done.

Page: 2 of 2 Words: 0 English (India) 93%

Effort Adjustment Factors - Goal Creation and Tracking

**Product**

RELY	DATA	DOCU	CPLX	RUSE
Rating: LO	NOM	NOM	NOM	NOM
% Incr: 0%	0%	0%	0%	0%

**Platform**

TIME	STOR	PVOL
Rating: NOM	HI	LO
% Incr: 0%	0%	0%

**Personnel**

ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating: NOM	LO	LO	LO	NOM	VLO
% Incr: 0%	0%	0%	0%	0%	0%

**Project**

TOOL	SITE
Rating: NOM	HI
% Incr: 0%	0%

**User**

USR1	USR2
Rating: NOM	NOM
% Incr: 0%	0%

Apply Reset Close

**Table 14. COCOMO II Cost Driver for Reward Management**

<b>Cost Driver</b>	<b>Value</b>	<b>Rationale</b>
RELY	LO	Failure will lead to losses which will be easily recoverable.
DATA	NOM	Database will be required to store charity, user and sponsor information. $10 \leq D/P \leq 100$
CPLX	NOM	Message passing, simple nesting required.
RUSE	LO	This module will hardly be used for another application.
DOCU	NOM	Right-sized documentation required.
TIME	NOM	The system consumes nominal time and the required resources.
STOR	NOM	Requires a moderate amount of storage for reward managing associated with the no. of sponsors and charities.
PVOL	LO	Major change needs to be done in 12 months for developing new application of the project.
ACAP	NOM	Analysts have basic knowledge and nominal experience.
PCAP	LO	Many members have low experience.
PCON	VLO	All the team members will not be available throughout the project.
APEX	LO	All the team members have less application experience.
PLEX	LO	All the team members have less platform experience.
LTEX	NOM	Intermediate programming language and tool experience.
TOOL	NOM	Moderately integrated tools being used.
SITE	HI	The client and members are in the same city.

Figure 4. Reward Management

The screenshot displays the USC COINCOMO 2.0 software interface. The main window, titled "Bridge4Good's Overview", shows a table of subcomponents and a summary table. A dialog box titled "Effort Adjustment Factors - Reward Management" is open, allowing for the adjustment of effort factors for various categories.

**Bridge4Good's Overview Table:**

X	Name	Size	Labor Rate (\$/Month)	EAF	Language
<input type="checkbox"/>	Profile Mana...	350	0.0	1.39	Non-specified
<input type="checkbox"/>	Donation Man...	1,100	0.0	1.94	Non-specified
<input type="checkbox"/>	Goal Creatio...	500	0.0	1.39	Non-specified
<input type="checkbox"/>	Reward Manag...	350	0.0	1.26	Non-specified
<input type="checkbox"/>	Marketing Ma...	700	0.0	1.09	Non-specified

**Summary Table:**

Estimated	Effort	Schedule	PROD
Optimistic	11.91	8.08	251.87
Most Likely	14.89	8.67	201.50
Pessimistic	18.61	9.31	161.20

**Effort Adjustment Factors - Reward Management Dialog:**

**Product:**

	RELY	DATA	DOCU	CPLX	RUSE
Rating	LO	NOM	NOM	NOM	LO
% Incr	0%	0%	0%	0%	0%

**Platform:**

	TIME	STOR	PVOL
Rating	NOM	NOM	LO
% Incr	0%	0%	0%

**Personnel:**

	ACAP	APEX	PCAP	PLEX	LTEX	PCOW
Rating	NOM	LO	LO	LO	NOM	VLO
% Incr	0%	0%	0%	0%	0%	0%

**Project:**

	TOOL	SITE
Rating	NOM	HI
% Incr	0%	0%

**User:**

	USR1	USR2
Rating	NOM	NOM
% Incr	0%	0%

Buttons: Apply, Reset, Close

**Table 15. COCOMO II Cost Driver for Marketing Management**

<b>Cost Driver</b>	<b>Value</b>	<b>Rationale</b>
RELY	LO	Failure will lead to losses associated with advertisements which will be easily recoverable.
DATA	NOM	$10 \leq D/P \leq 100$
CPLX	LO	Use of simple GUI builders and moderate level expressions being used for the module.
RUSE	LO	This module will hardly be used in another applications.
DOCU	NOM	Right-sized documentation required.
TIME	NOM	The system consumes nominal time and the required resources.
STOR	NOM	Requires a moderate amount of storage for reward managing associated with the sponsors.
PVOL	LO	Major change needs to be done in 12 months for developing new application of the project.
ACAP	NOM	Analysts have basic knowledge and nominal experience.
PCAP	LO	Many members have low experience.
PCON	VLO	All the team members will not be available throughout the project.
APEX	LO	All the team members have less application experience.
PLEX	LO	All the team members have less platform experience.
LTEX	NOM	Intermediate programming language and tool experience.
TOOL	NOM	Moderately integrated tools being used.
SITE	HI	The client and members are in the same city.

Figure 5. Marketing Management

USC COINCOMO 2.0 - F:\Ebooks\lose4good.com\lose4good.cet

File Parameters Mode Help

Bridge4Good's Overview COPSEMO

Scale Factors 19.20 Schedule (SCED)

Subcomponent Subcomponent(s) More Actions ...

X	Name	Size	Labor Rate (\$/Month)	EAF	Language
<input type="checkbox"/>	Profile Mana...	350	0.0	1.39	Non-specified
<input type="checkbox"/>	Donation Man...	1,100	0.0	1.94	Non-specified
<input type="checkbox"/>	Goal Creatio...	500	0.0	1.39	Non-specified
<input type="checkbox"/>	Reward Manag...	350	0.0	1.26	Non-specified
<input type="checkbox"/>	Marketing Ma...	700	0.0	1.09	Non-specified

Total Lines Of Code: 3,000 Hours/PM: 152.0

Estimated	Effort	Schedule	PROD
Optimistic	11.91	8.08	251.87
Most Likely	14.89	8.67	201.50
Pessimistic	18.61	9.31	161.20

Done.

Page: 27 of 28 Words: 3,421 English (United States)

100%

Effort Adjustment Factors - Marketing Management

**Product**

RELY	DATA	DOCU	CPLX	RUSE
Rating: LO	NOM	NOM	LO	LO
% Incr: 0%	0%	0%	0%	0%

**Platform**

TIME	STOR	PVOL
Rating: NOM	NOM	LO
% Incr: 0%	0%	0%

**Personnel**

ACAP	APEX	PCAP	PLEX	LTEX	PCOM
Rating: NOM	LO	LO	LO	NOM	VLO
% Incr: 0%	0%	0%	0%	0%	0%

**Project**

TOOL	SITE
Rating: NOM	HI
% Incr: 0%	0%

**User**

USR1	USR2
Rating: NOM	NOM
% Incr: 0%	0%

Apply Reset Close

Figure 6. Result

The screenshot displays the USC COINCOMO 2.0 software interface. The main window shows the 'Bridge4Good's Overview' tab with a 'COPSEMO' subcomponent selected. A table lists subcomponents with their respective sizes, labor rates, EAF values, and estimated effort. Below this, an 'Estimation' section provides a summary of the project's effort and schedule across different scenarios.

X	Name	Size	Labor Rate (\$/Month)	EAF	Language	NOM Effort DEV	EST Effort DEV	PROD	COST	INST COST	Staff	Risk
<input type="checkbox"/>	Profile Mana...	350	0.0	1.39	Non-specified	1.15	1.60	218.73	0.00	0.00	0.2	0.0
<input type="checkbox"/>	Donation Man...	1,100	0.0	1.94	Non-specified	3.62	7.04	156.35	0.00	0.00	0.8	0.7
<input type="checkbox"/>	Goal Creatio...	500	0.0	1.39	Non-specified	1.64	2.29	218.73	0.00	0.00	0.3	0.0
<input type="checkbox"/>	Reward Manag...	350	0.0	1.26	Non-specified	1.15	1.45	241.75	0.00	0.00	0.2	0.0
<input type="checkbox"/>	Marketing Ma...	700	0.0	1.09	Non-specified	2.30	2.52	277.87	0.00	0.00	0.3	0.0

Estimation							
Total Lines Of Code: 3,000    Hours/PM: 152.0							
Estimated	Effort	Schedule	PROD	COST	INST	Staff	Risk
Optimistic	11.91	8.08	251.87	0.00	0.00	1.5	
Most Likely	14.89	8.67	201.50	0.00	0.00	1.7	0.7
Pessimistic	18.61	9.31	161.20	0.00	0.00	2.0	

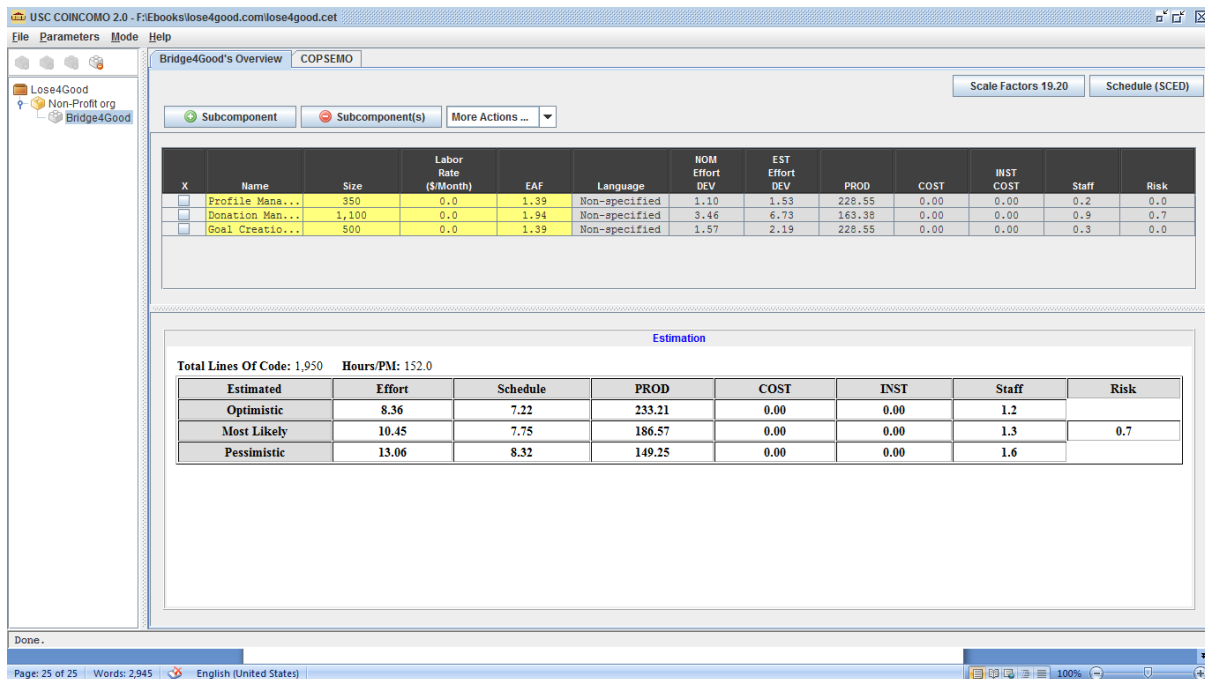
The form of schedule our project uses is the Independent Variable (SAIV) strategy; 24-week schedule drives development of a set of top priority core capabilities. Therefore, the estimates show the effort required for the project.

According to COCOMO II Estimates for CSCI577, one team member effort = 1.67 COCOMO II person months. The pessimistic effort from the COCOMO estimation above is 18.61, so the total team members need for this project =  $18.61/1.67 = 11.14$

Hence we decided to implement the core modules required for the project. i.e. Profile, Donation and Goal Creation And Tracking Management modules. Their estimation is given as follows:



Figure 7. Core Module Estimation Result



According to COCOMO II Estimates for CSCI577, one team member effort = 1.67 COCOMO II person months. The most likely effort from the COCOMO estimation above is 10.45, so the total team members need for this project =  $10.45 / 1.67 = 6.25$

Thus it is possible for us to complete the core feature implementation in 24 weeks.

## 6. Iteration Plan

### 6.1 Plan

The first iteration of the development process focuses on creation of the profile management, donation management and goal creation and tracking management modules to a large extent. This will allow the user to use the website in order to create profile, update it and its related functionalities along with partly resolved donation and goal creation and tracking management module functionalities. The Re-Baselined Development Commitment Review and the Core Capability Drivethrough are the milestones which will be addressed during this iteration.

#### 6.1.1 Capabilities to be implemented

**Table 16. Construction iteration capabilities to be implemented**

ID	Capability	Description	Priority Level	Iteration
OC-1	Login using Facebook	Login through facebook would be achieved.	Must Have	1
OC-2	Delete Goal	Goal would be deleted if there is no sponsor.	Must Have	2
OC-3	Track Goal	All details of the weight loser will be tracked.	Would Like	2
OC-4	Monitor Payment	Payments to the charity will be done after verification.	Must Have	2
OC-5	Achieve Goal	Completion of a goal.	Would Like	1
OC-6	Create Goal	Creation of a new goal.	Must Have	1
OC-7	Respond to a sponsorship request	Accept payment from sponsor with specific details.	Must Have	1
OC-8	Invite Sponsor	Invitation to the sponsor will be sent through email.	Would Like	1
OC-9	Add Charity Organization	Adding a charity from existing list or a new one.	Would Like	1
OC-10	Update Weight	Update weight and publish benchmark.	Must Have	1
OC-11	Login	Login via email address and password.	Must Have	1
OC-12	Register	User will be registered by assigning him an account with his credentials.	Must Have	1

## 6.1.2 Capabilities to be tested

ID	Capability	Description	Priority Level	Iteration
OC-1	Login using Facebook	Login through facebook would be achieved.	Must Have	1
OC-5	Achieve Goal	Completion of a goal.	Would Like	1
OC-6	Create Goal	Creation of a new goal.	Must Have	1
OC-7	Respond to a sponsorship request	Accept payment from sponsor with specific details.	Must Have	1
OC-8	Invite Sponsor	Invitation to the sponsor will be sent through email.	Would Like	1
OC-9	Add Charity Organization	Adding a charity from existing list or a new one.	Would Like	1
OC-10	Update Weight	Update weight and publish benchmark.	Must Have	1
OC-11	Login	Login via email address and password.	Must Have	1
OC-12	Register	User will be registered by assigning him an account with his credentials.	Must Have	1

## 6.1.3 Capabilities not to be tested

ID	Capability	Description
OC-2	Delete Goal	Delete Goal is independent and hence can be done in next iteration.
OC-3	Track Goal	Focus is on high value items and hence pushed to next iteration
OC-4	Monitor Payment	Payment process is involved and will require some processing from this iteration.