Life Cycle Plan (LCP)

Sharethetraining.com

Team 11

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Dongxue Wang - *Prototyper*

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Patrick Horng - *IIV&V*

10/20/2014

Version History

Date	Author	Version	Changes made	Rationale
09/27/14	Team11	1.0	• Update Section 1.1 – 3.3	• Initial draft of the Life Cycle Plan; To be included in the VC Package.
10/20/14	Team11	2.0	• Update cost estimation • Update responsibilities	• FC Package.

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1. Introduction

1.1 Purpose of the LCP

LCP help tp define every step in the whole process of system development. It record every associated activities from the initial to the final delivery.

1.2 Status of LCP

This is the initial version of LCP. The status of LCP is currently at exploration phase

1.3 Assumptions

- The duration of the project is 12 weeks(Fall 2014)
- There are six on-campus students and a DEN student(IIV&V) in the project team
- There will be winwin negotiation weekly between the team and clients
- ICSM is being used to guide this project

2. Milestones and Products

2.1 Overall Strategy

The system of sharethetraining.com will be developed by strictly following ICSM. The project is to provide a business course sharing website for trainers and professionals. Users of the website will include the professionals who take courses, trainers who provide courses and administer who manage the website.

Exploration phase

Duration: 09/12/14- 09/28/14

Concept:. In this phase, collecting and analyzing client's requirements is the priority. By win-win negotiation, fully understand client's expectation, and build a project plan based on it.

Deliverables: Valuation Commitment Package

Milestone: Valuation Commitment Review

Strategy: One Incremental Commitment Cycle

Valuation phase

Duration: 09/29/14- 10/15/14

Concept:. In this phase, the team had a win-win negotiation session to identify the win conditions, analyze the detailed requirements, evaluate the risks and prioritize the requirements. After the needs of the clients were clarified and confirmed, certain requirements with comparatively high risks were chosen to be prototyped, in order to control the risks. The prototype included basic UI design and a demo of the payment gateway.

Deliverables: Draft Foundations Commitment Package, Project Effort Reports, Progress Reports, Prototype Report, System and Software Architecture Description

Milestone: Valuation Commitment Review

Strategy: Incremental Commitment Cycles for Architected Agile, Meetings, Prototypes

Foundations phase

Duration: 10/16/14- 10/31/14

Concept: In this phase, the team will assess the project status. The changes in requirements will be analyzed, and corresponding adjustments will be made. COTS will be assessed and development software architecture will be designed. Besides, actual functional prototypes will be built.

Deliverables: Draft Foundation Commitment Package, Bi-weekly Project Report and Plan

Milestone: Development Commitment Review

Strategy: Incremental Commitment Cycles for Architected Agile, Meetings, Prototypes

Development phase – Construction Iteration

Duration: 11/1/14- 11/28/14

Concept: In this phase, a detailed project plan is created. Architectural design of the system will be used to guide the development process. Development team will implement the system based on the previous prototype. Regular meetings will be held to assess the current risks. Test team will test the current project and core capability drive-through will be performed at the end of this phase.

Deliverables: Development Commitment Package

Milestone: Transition Readiness Review

Strategy: Incremental Commitment Cycles for Architected Agile, Development, Tests, Integrations

Development phase – Transition Iteration

Duration: 11/29/13- 12/5/13

Concept: By this phase, the complete and developed system should be ready. Training will be provided. Development team will provide a training plan, and document a detailed user manual. And the functioning software system will be transitioned.

Deliverables: Development Commitment Package

Milestone: Operational Commitment Review

Strategy: Incremental Commitment Cycles for Architected Agile, Training

2.2 Project Deliverables

2.2.1 Exploration Phase

Table 1 Artifacts Deliverable in Exploration Phase

Artifact	Due date	Format	Medium
Client Interaction Report	09/19/2014	.doc, .pdf	Soft copy
Valuation Commitment Package: • Life Cycle Plan (LCP) Early Section • Feasibility Evidence Description (FED) Early Section	09/29/2013	.doc, .pdf	Soft copy
Bugzilla report	Every Monday	Text	Bugzilla Website
Project Plan	Bi- weekly	.mpp	Soft copy
Progress Report	Bi - weekly	.xls	Soft copy

2.2.2 Valuation Phase

Table 2 Artifacts Deliverable in Valuation Phase

Artifact	Due date	Format	Medium
Draft Foundation Commitment Package	10/13/2014	.doc, .pdf	Soft copy

• Operational Concept Description (OCD) • Prototype • Structured System analysis and Design • Life Cycle Plan (LCP) • Feasibility Evidence Description (FED)			
Progress Report	Bi-weekly Wednesday	.xls	Soft copy
Project Plan	Bi-weekly Wednesday	.mpp, .pdf	Soft copy
Risk Analysis	Bi-weekly Wednesday	Text	Part of Progress Report

2.2.3 Foundation Phase

Table 3 Artifact Deliverable in Foundation Phase

Artifact	Due date	Format	Medium
Operational Concept Description	10/20/2014	.doc, .pdf	Soft copy
Life Cycle Plan	10/20/2014	.doc, .pdf	Soft copy
System and Software Architecture Description	10/20/2014	.doc, .pdf	Soft copy
Feasibility Evidence	10/20/2014	.doc, .pdf	Soft copy
Prototype Report	10/20/2014	.pptx	Soft copy
Quality Plan	10/15/2014	ARB	Presentation
Traceability Matrix	10/15/2014	ARB	Presentation
Test Plan and Test cases	10/15/2014	.doc,.pdf	Soft copy
Project Plan	Bi-weekly Wednesday	.mpp	Soft copy
Progress Report	Bi-weekly Wednesday	.xlsx	Soft copy
Project Effort	Every Monday	Text	Bugzilla website

3. Responsibilities

3.1 Project-specific stakeholder's responsibilities

3.2 Responsibilities by Phase

Table 4 Stakeholder's Responsibilities in each phase

Team Member / Role	Primary / Secondary Responsibility				
	Exploration	**Valuation**	**Foundations**	**Development-** Construction Iteration	**Development-** Transition Iteration
Name: Xiaoting Cai	**Primary Responsibility** Manage project Take part in requirement analyze **Secondary Responsibility** Design Life Cycle Plan	**Primary Responsibility** Manage project Plan prototype Interact with client **Secondary Responsibility** Update Life Cycle Plan	**Primary Responsibility** Assign specific task to every teammate Technical support for development **Secondary Responsibility** Manage client interaction	**Primary Responsibility** Developing the system . Take care of the user management part **Secondary Responsibility** Manage client interaction	**Primary Responsibility** Test the system-black box Train the maintainer **Secondary Responsibility** Manage client interaction
Name: Shubham Gaurs	**Primary Responsibility** Analyze Requirement **Secondary Responsibility** Design Life Cycle Plan	**Primary Responsibility** Analyze Requirement Analyze Use case **Secondary Responsibility** update Life Cycle Plan	**Primary Responsibility** Analyze the change of requirement Plan test cases **Secondary Responsibility** Interact with client	**Primary Responsibility** Test the system Test case report **Secondary Responsibility** Interact with client	**Primary Responsibility** Test the system **Secondary Responsibility** Interact with client
Junfeng Wu	**Primary Responsibility** Design system Architecture **Secondary Responsibility** Acquire NDI	**Primary Responsibility** Design system Architecture **Secondary Responsibility** Test the feasibility of certain API	**Primary Responsibility** Functional Prototype development **Secondary Responsibility** Assess operational concept	**Primary Responsibility** Developing the system . Take care of Course design **Secondary Responsibility** Assess operational concept	**Primary Responsibility** Train maintainer. **Secondary Responsibility** Fix bugs
Yi Ding	**Primary Responsibility** Develop prototype	**Primary Responsibility** Create mock-ups for the system	**Primary Responsibility** Develop prototype	**Primary Responsibility** Track bugzilla, maintain team	**Primary Responsibility** Develop prototype

	Secondary Responsibility Process minutes of meeting	**Secondary Responsibility** Prototype report	**Secondary Responsibility** Process minutes of meeting	website **Secondary Responsibility** Development commitment package	**Secondary Responsibility** Process minutes of meeting
Dongxue Wang	**Primary Responsibility** Identify project risks **Secondary Responsibility** Design UI	**Primary Responsibility** Learn Bootstrap, tailor the UI template **Secondary Responsibility** Risk analysis	**Primary Responsibility** Tailor the web template Show UI demo to client **Secondary Responsibility** Client interaction	**Primary Responsibility** Developing the system . Take care of UI design **Secondary Responsibility** Client interaction	**Primary Responsibility** Tailor the web template Show UI demo to client **Secondary Responsibility** Client interaction
Chao Lin	**Primary Responsibility** Design system Architecture **Secondary Responsibility** Acquire NDI	**Primary Responsibility** Analyze system architecture **Secondary Responsibility** System and software architecture design	**Primary Responsibility** Functional Prototype development **Secondary Responsibility** Assess operational concept	**Primary Responsibility** Developing the system . Take care of js in the system **Secondary Responsibility** Assess operational concept	**Primary Responsibility** Maintain the web server **Secondary Responsibility** Fix bugs
Patrick Horng	**Primary Responsibility** Identify project risks **Secondary Responsibility** Report bugs	**Primary Responsibility** Identify project risks VII&V	**Primary Responsibility** Identify project risks VII&V	**Primary Responsibility** Identify project risks VII&V	**Primary Responsibility** Identify project risks VII&V
Stacy Swaite	**Primary Responsibility** Providing requirements in winwin session **Secondary Responsibility** Providing necessary materials for the system	**Primary Responsibility** Interact with the team weekly. Give the team feedback about the prototype **Secondary Responsibility** Providing necessary materials for the system	**Primary Responsibility** Interact with the team weekly. Give the team feedback about the prototype **Secondary Responsibility** Providing necessary materials for the system	**Primary Responsibility** Interact with the team weekly. Give the team feedback about the system **Secondary Responsibility** Providing necessary materials for the system	**Primary Responsibility** Trained by the team. System transition

3.3 Skills

Table 5 team member's skill

Team members	Role	Skills
Xiaoting Cai	Project Manager, Life Cycle Planner	**Current skills:** - Languages: JAVA, RUBY - Ruby on Rails - SSH2 - Web development - Database design **Required skills:** - Play framework - H2 databse - Bugzilla
Chao Lin	Operational Concept Enginner, Software Architect	**Current skills:** - Language: Javascript, HTML, C/C++ - Agile development experience - Communication Skills **Required skills:** - bootstrap
Dongxue Wang	Prototyper	**Current skills:** - Language: C++,C#,JAVA - OpenCV,openGL, openNI - Web and mobile phone UI design - Web security test **Required skills:** - Balsamiq - Bootstrap
Junfeng Wu	Operational Concept Engineer, Software Architect	**Current skills:** - Java, Javascript, HTML/CSS - Web development - UML **Required skills:** - Architecture Design - Play framework - H2 Database - Bugzilla

		- Win book
Yi Ding	Feasibility Analyst	**Current skills:** - Language: C,C++,C# - SQL Server Database **Required skills:** - COCOMO II - Balsamiq
Shubham Gaurs	Requirement Engineer, Life Cycle Planner	**Current skills:** - Language: JAVA,PHO,XML,Javascript - JIRA, Hybris-HMC - Security Testing - Functional Test - Bugzilla **Required skills:** COCOMO II ICSM
Patrick Horng	IIV&V	**Current skills:** - Nvidia's Bug Report System(NvBugs) -Teamwork/Communication - Microsoft Office **Required skills:** - Bugzilla - Verify and validate work products

4. Approach

4.1 Monitoring and Control

- Bi-weekly Progress Report
- Bi-weekly Project Plan
- Weekly team meeting
- Weekly meeting with clients
- Bugzilla
- Commitment Review
- Git to manage the version of our project

4.1.1 Closed Loop Feedback Control

We have created a google group to share materials with each other. We hold a weekly team meeting to discuss what we did and what we should do. Moreover, we keep touch with our client twice a week, by email, call, and so on. And we also use Bugzilla to record every task and every bug we have met. Then we discuss to figure it out.

4.1.2 Reviews

We have weekly meeting with clients to report what we have done and what need improving and changing, and receive her feedback by displaying certain demos.

Bi-weekly project plan and project report are also good reviews.

4.2 Methods, Tools and Facilities

Table 6 methods, Tools and Facilities

Tools	Usage	Provider
Eclipse	IDE for developing the system	Open source
GitHub	Tool for version control	Open source
Mysql Database	Database for the system	MySQL
Bugzilla	Report and Track every task or bug	USC license
Coincomo	Cost estimation	USC license
Powerdesigner	Tools for UML	SAP
Balsamic	Tools for prototyping	Open Source

Figure 1: COCOMOII Cost Drivers for Scale Factor

5. Resources

- Estimated CSCI577a Effort : 7 team members at 8 hrs/week for 12 weeks
- Total estimated effort – 672 hrs
- Budget information – $1000
- Project duration – 12 weeks
- Component modules in your development project
    1. User Management
    2. Course Management
    3. Review Management
    4. Order Management
- Programming language used : JAVA

Table 7 COCOMOII Subcomponents

No.	Module Name	Brief Description	SLOC	REVL
1	User Management	Login, registration, profile update and management	2500	5%
2	Course Management	Course CRUD, Course Arrangement	2500	5%
3	Review Management	Course-attendees rate course and trainer	500	5%
4	Order Management	Payment gateway, order info track	500	5%

Table 8 COINCOMOII Scale Factor

Scale Driver	Value	Rationale
PREC	HI	Some teammates have done similar course system before. And there are a lot of open sources online
FLEX	HI	There are constraint for payment gateway and server. Other parts are flexible
RESL	NOM	The architecture design is not clear enough since requirement may change over time. Number of critical risks 2-4
TEAM	HI	Communication is flexible and we cooperate well
PMAT	NOM	CMM Level = 2

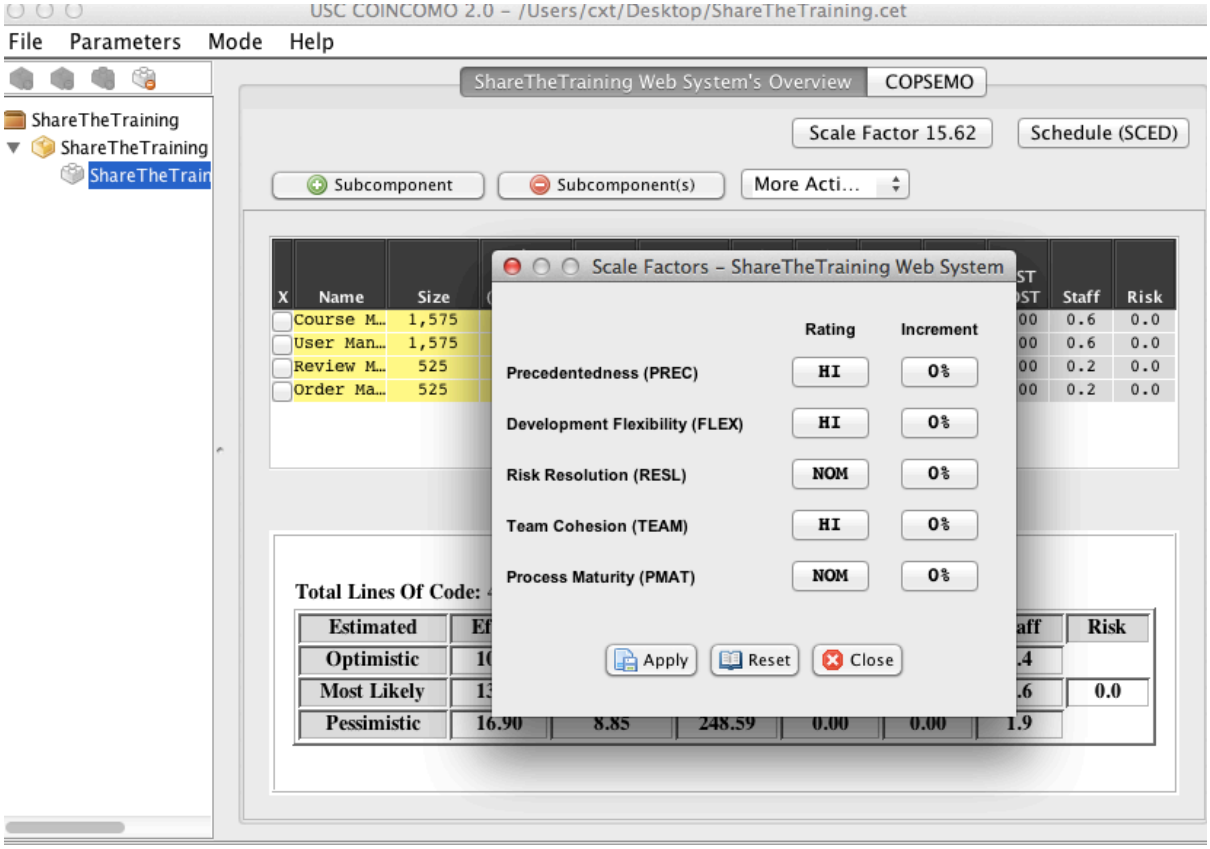

Figure 1: scale factor

Table 9 COCOMOII Cost Driver for Course Management

Cost Driver	Value	Rationale
RELY	NOM	The project is relatively reliable. Failure will result in moderate financial loss of client. Easily Recoverable losses
DATA	LOW	The system does't include a lot of data
DOCU	NOM	Right-sized to life-cycle needs
CPLX	LOW	The system include front-stage and back-stage. It also should compatible with certain interfaces
RUSE	NOM	The project may be reused in the future
TIME	NOM	<50% use of available execution time
STOR	HIGH	The course may need space to store demo video in the future. 70% use of available storage
PVOL	NOM	The selected platforms used in the system is stable. Major:6 mo.;Minor: 2wk
ACAP	NOM	The analysts is capable to analyze, design the system, 55th percentile
PCAP	LOW	A lot of teammates lack developing experience in real world,

		35th percentile
PCON	VERY HIGH	All the teammate will finish this project together. No one will leave
APEX	LOW	Most of team members are inexperienced in system development. 6 months
LTEX	NOM	Intermediate programming language and tool experience. 1 year
PLEX	NOM	Intermediate platform experience. 1 year
TOOL	NOM	Basic life cycle tool, moderately integrated. Coincomo
SITE	HIGH	All team members are classmates, we also create google group for discussion and info sharing
SCED	NOM	The schedule is relatively reasonable and it is little possible for stretch-out or acceleration.

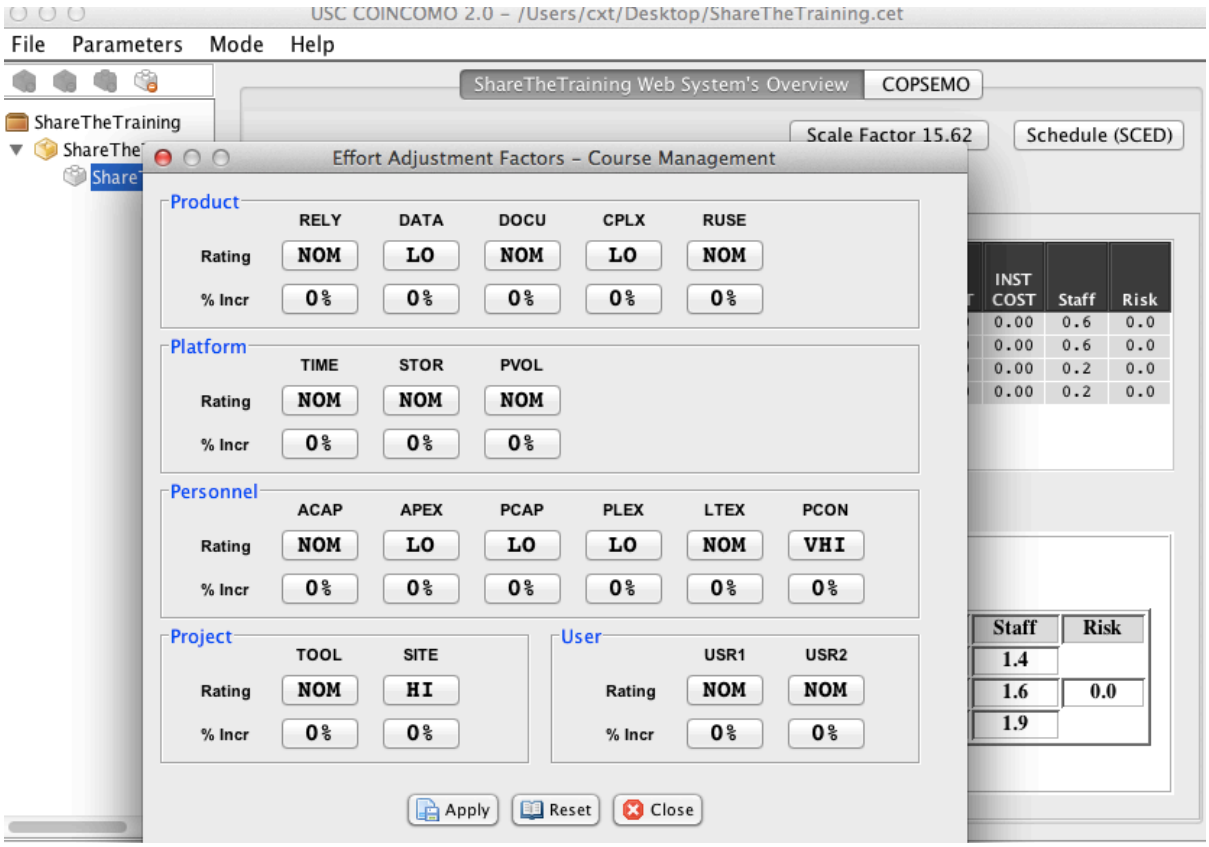

Figure 2: EAF of Course Management

Table 10 COCOMOII Cost Driver for User Management

Cost Driver	Value	Rationale
RELY	NOM	The project is relatively reliable. Failure will result in moderate financial loss of client. Easily Recoverable losses
DATA	LOW	The system does't include a lot of data
DOCU	LOW	Right-sized to life-cycle needs
CPLX	LOW	The system include front-stage and back-stage. It also should compatible with certain interfaces
RUSE	NOM	The project may be reused in the future
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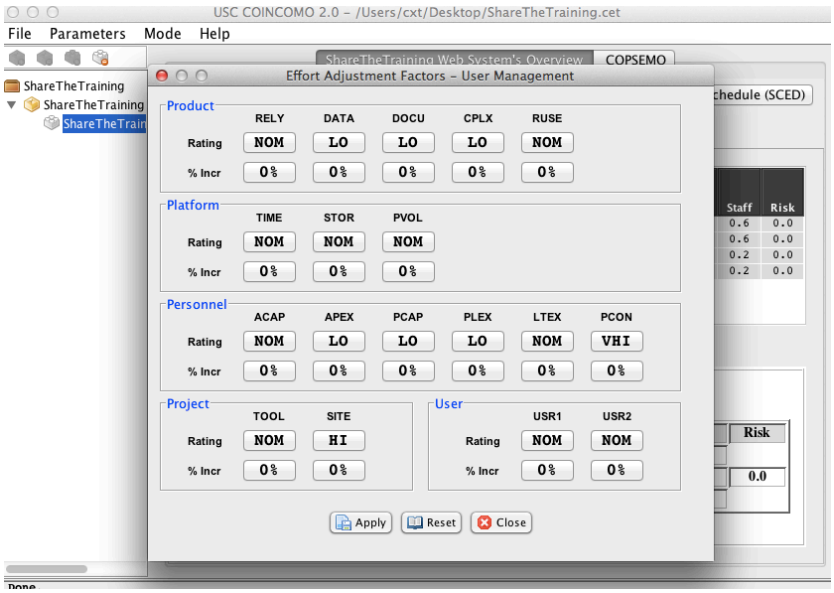

Figure 3: EAF of User Management

Table 11 COCOMOII Cost Driver for Review Management

Cost Driver	Value	Rationale
RELY	NOM	The project is relatively reliable. Failure will result in moderate financial loss of client. Easily Recoverable losses
DATA	LOW	The system does't include a lot of data
DOCU	NOM	Right-sized to life-cycle needs
CPLX	LOW	The system include front-stage and back-stage. It also should compatible with certain interfaces
RUSE	NOM	The project may be reused in the future
TIME	NOM	<50% use of available execution time
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ACAP	NOM	The analysts is capable to analyze, design the system, 55th percentile
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PCON	VERY HIGH	All the teammate will finish this project together. No one will leave
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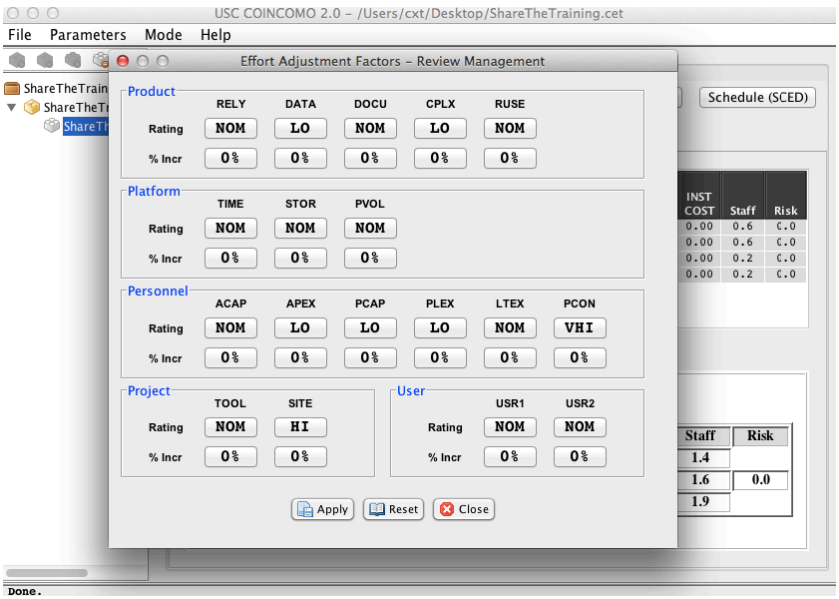

Figure 4: EAF of Review Management

Table 12 COCOMOII Cost Driver for Order Management

Cost Driver	Value	Rationale
RELY	NOM	The project is relatively reliable. Failure will result in moderate financial loss of client. Easily Recoverable losses
DATA	LOW	The system does't include a lot of data
DOCU	NOM	Right-sized to life-cycle needs
CPLX	LOW	The system include front-stage and back-stage. It also should compatible with certain interfaces
RUSE	NOM	The project may be reused in the future
TIME	NOM	<50% use of available execution time
STOR	HIGH	The course may need space to store demo video in the future. 70% use of available storage
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SITE	HIGH	All team members are classmates, we also create google group for discussion and info sharing
SCED	NOM	The schedule is relatively reasonable and it is little possible for stretch-out or acceleration.

Figure 5: EAF of Order Management

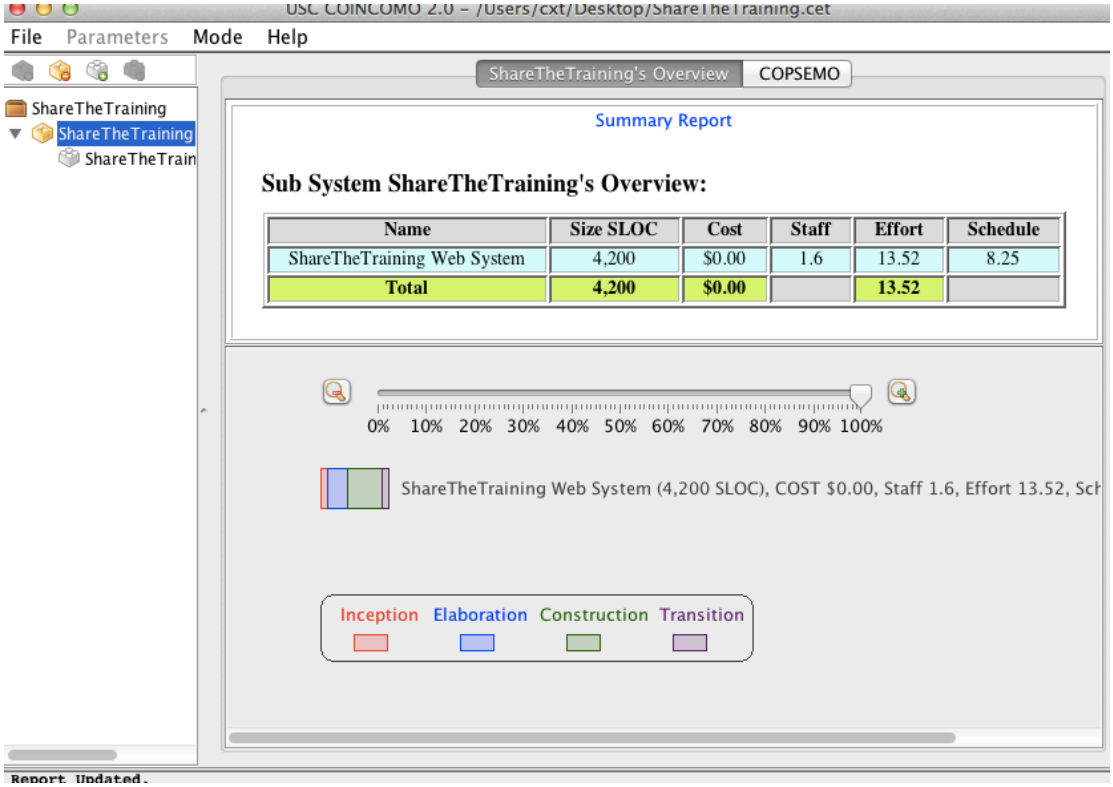

Figure 6: overall cost estimation

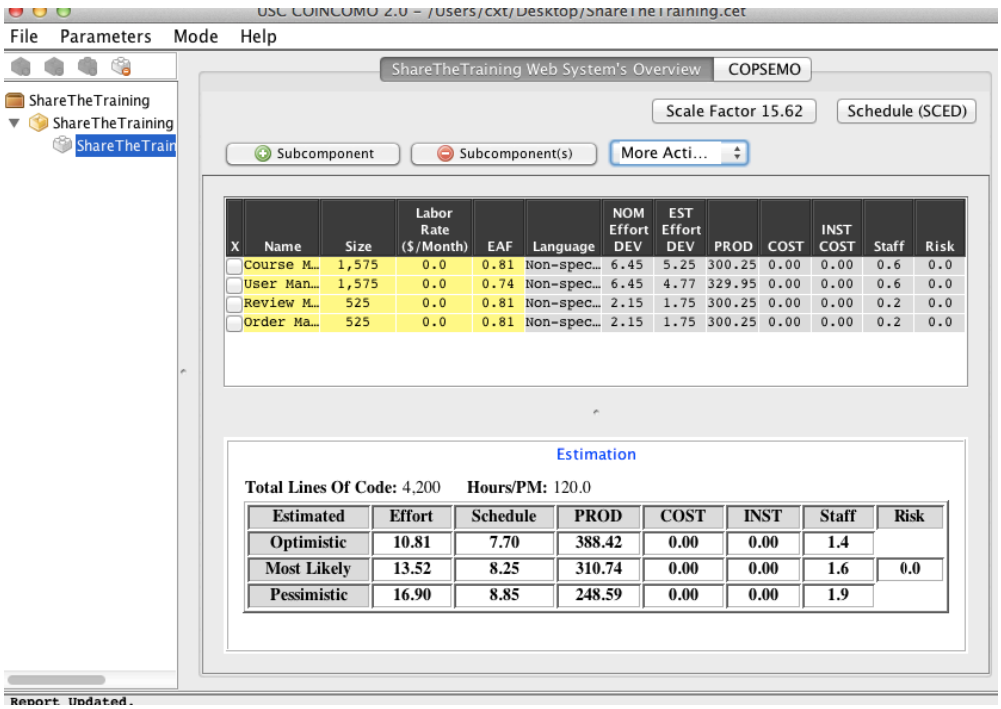

Figure 7: overall specific cost estimation