

Life Cycle Plan (LCP)

LA Commons upgrade of website

Team 1

| Name | Primary Role | Secondary Role |
|----------------------|-----------------------|-----------------------|
| Hualong Zu | Project Manager | Prototyper |
| Qihua Wu | Life Cycle Planner | Oper-Concept Engineer |
| Taizhi Li | Requirements Engineer | Life Cycle Planner |
| Huaiqi Wang | Prototyper | Requirements Engineer |
| Tianyi Luo | Feasibility Analyst | System Architect |
| Yueheng Li | System Architect | Oper-Concept Engineer |
| Steiniger, Herman, L | IIV & V | Quality Focal Point |

12/09/2013

Version History

| Date | Author | Version | Changes made | Rationale |
|------------|---------------------|---------|---|----------------------------|
| 09/25/2013 | Qihua Wu, Taizhi Li | 1.0 | Moving to google doc | To cooperate with the team |
| 10/10/2013 | Qihua Wu | 2.0 | Section 1-3 | Draft VC package |
| 10/11/2013 | Qihua Wu, Taizhi Li | 2.1 | Section 4-5 | Draft VC package |
| 10/13/2013 | Taizhi Li | 2.1 | Clean up Section 1-4 | Draft VC package |
| 10/15/2013 | Qihua Wu, Taizhi Li | 2.1 | Finalize Section 1-5 | Draft VC package |
| 10/16/2013 | Qihua Wu, Taizhi Li | 2.2 | Cleanup and minor update | Draft VC package |
| 10/18/2013 | Qihua Wu, Taizhi Li | 2.3 | Minor fixing | Changes for ARB |
| 10/21/2013 | Qihua Wu, Taizhi Li | 2.4 | Fix after ARB feedback | VC package |
| 11/27/2013 | Qihua Wu | 2.5 | Draft for final ARB | Changes for Final ARB |
| 12/01/2013 | Qihua Wu | 2.6 | Changes related to OCD changes | For Final ARB |
| 12/02/2013 | Qihua Wu | 3.0 | Minor fixes coordinating to other documents | For Final ARB |
| 12/06/2013 | Qihua Wu | 3.1 | Update after ARB | For FD package |
| 12/09/2013 | Qihua Wu | 3.2 | Finalize FD package | For FD package |

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1. Introduction

1.1. Purpose of the LCP

The LCP helps in identifying tasks and their corresponding timelines. It also gives us an understanding about the resources available for the project. 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.

1.2. Status of the LCP

The status of the LCP is currently at the Draft FD Package version number 3.2

This is the version that will be submitted to the project website for later updates. The major changes are finalizing for FD package

2. Milestones and Products

Exploration phase

Duration: 09/12/13- 9/27/13

Concept: During this phase, the team sets up several meetings to understand the LA Commons; set up the program model and benefit chain; identify project operational concept, life cycle plan, and system and software boundary; understand all success-critical stakeholders, team members' skills; and identifies risks and mitigation plan for each risk.

Deliverables: Valuation Commitment Package

Milestone: Valuation Commitment Review

Strategy: One Incremental Commitment Cycle

Valuation phase

Duration: 09/28/13- 10/23/13

Concept: During this phase, the team performs WinWin negotiation with client, prioritizes win conditions; make prototypes of upgrading LA Commons website; continues developing operational concepts; provides the feasibility evidence; assesses and plans to mitigate risks; plans and manages the projects.

Deliverables: Foundations Commitment Package

Milestone: Foundations Commitment Review

Strategy: WinWin negotiation, functional prototype development

Foundations phase

Duration: 10/24/13- 12/09/13

Concept: During this phase, we will mainly develop the system architecture by defining the tech-dependent and tech-independent architecture and specify the architecture styles, patterns and frameworks; manage project quality and prototyping.

Deliverables: Development Commitment Package

Milestone: Development Commitment Review

Strategy: Construct traceability matrix, functional prototype development

Re-baselined Foundations phase

Duration: 01/13/14- 02/15/14

Concept: Since some team members will not continue 577b in the spring semester and there will be some new students joining us, the communications are needed between new members and old members. Meanwhile, the team will re-baseline the project status.

Deliverables: Foundations Commitment Package

Milestone: Foundations Commitment Review

Strategy: Update previous documents based on the changes of the project

Development (construction iteration) phase

Duration: 2/16/14 - 4/18/14

Concept: During this phase, our team will mainly focus on accomplishing the implementation of Neighborhood and Project Page Module, Interactive Map Module, Gallery Module, Social Networking Sharing Module by coding the project and improve the layout of LA Commons website.

Deliverables: Operation commitment package, Upgraded Working System

Milestone: Core capability Drivethrough, Transition Readiness Review

Strategy: Team member collaborates with each other during coding process.

Development (transition iteration) phase

Duration: 4/21/14 - 4/28/14

Concept: During this phase, our team will be mainly concern about the transition of the project, which is to train other people to maintain, control and use it.

Deliverables: Transition Package, Operation Commitment Package, User Manual

Milestone: Operation Commitment Review

Strategy: Training

Operation phase

Duration: 4/29/14 - 5/5/14

Concept: During this phase, our team will focus on the webiste operation, and provide the support to the client and the maintainer.

Deliverables: Client evaluation form, all support documents

Strategy: Support

3.Responsibilities

3.1 Responsibilities by Phase

Table 1: Client's responsibilities

| | |
|--|---|
| Name: Heather Hoggan | |
| Role: Client | |
| Exploration | Identify project details |
| Valuation | Assess project risks |
| Foundations | Discuss with team about available resource |
| Development- Construction Iteration | Follow up implementation and give feedback |
| Development- Transition Iteration | Check milestone and analysis work product Receive training and arrange training sessions to the LA Commons employees |

Table 2: Developers' responsibilities

| | |
|------------------------------|--|
| Name: Hualong Zu | |
| Role: Project Manager | |
| Exploration | 1) Explore the system 2) Make detailed project plan on next phase |
| Valuation | 1) Assign work for each team member 2) Make detailed project plan on next phase |
| Foundations | 1) Record progress report 2) Make detailed project plan on next phase |

| | |
|--|---|
| Development- Construction Iteration | 1) Organize WinWin condition requirement 2) Make detailed project plan on next phase 3) Participate in implementing different modules (implementer in 577b) |
| Development- Transition Iteration | 1) Assign work for each team member 2) Hardware preparation |

| | |
|---------------------------------|---|
| Name: Qihua Wu | |
| Role: Life Cycle Planner | |
| Exploration | Explore the system |
| Valuation | 1) Identify project risk 2) Setup schedule |
| Foundations | Further plan the project and setup milestones |

| | |
|--|--|
| Name: Huaiqi Wang | |
| Role: Prototyper | |
| Exploration | Specify architectural styles, patterns and frameworks |
| Valuation | Analyze NDI interoperability |
| Foundations | Develop prototype |
| Development- Construction Iteration | Participate in implementing different modules (implementer in 577b) |
| Development- Transition Iteration | 1) Software preparation 2) Conduct training sessions for the client (implementer in 577b) |

| |
|------------------------|
| Name: Taizhi Li |
|------------------------|

| | |
|------------------------------------|--|
| Role: Requirements Engineer | |
| Exploration | Develop requirements definition |
| Valuation | Assess requirements definition |
| Foundations | Iterate with the client for better understanding of the requirements |

| | |
|--|--|
| Name: Tianyi Luo | |
| Role: Feasibility Analyst | |
| Exploration | Assess and plan to mitigate risks |
| Valuation | Assess feasibility evidence |
| Foundations | <ol style="list-style-type: none"> 1) Describe feasibility evidence 2) Assess feasibility evidence 3) Define System and Software requirements |
| Development- Construction Iteration | Participate in implementing different modules (implementer in 577b) |
| Development- Transition Iteration | <ol style="list-style-type: none"> 1) Conduct training sessions for the client (trainer in 577b) |

| | |
|-------------------------------|--|
| Name: Yueheng Li | |
| Role: System Architect | |
| Exploration | Specify architecture styles, patterns and frameworks |
| Valuation | Define technology-(in)dependent architecture |
| Foundations | Define technology-(in)dependent architecture |

| |
|-----------------------------------|
| Name: Steiniger, Herman, L |
|-----------------------------------|

| | |
|----------------------|-----------------------------------|
| Role: IIV & V | |
| Exploration | Verify and validate work products |
| Valuation | Verify and validate work products |
| Foundations | Verify and validate work products |

| | |
|--|--|
| Name: 577b Recruited Team Member1 | |
| Role: General Developer + Tester | |
| Foundation re-baseline | Explore the system and get familiar with Wordpress |
| Development- Construction Iteration | Participate in testing different modules (tester in 577b) |
| Development- Transition Iteration | Participate in testing different modules Conduct training sessions for the client (trainer in 577b) |

| | |
|--|---|
| Name: 577 Team Member 2 | |
| Role: General Developer + Trainer | |
| Foundation re-baseline | Explore the system and get familiar with Wordpress |
| Development- Construction Iteration | Participate in developing different modules (developer in 577b) |
| Development- Transition Iteration | Conduct training sessions for the client (trainer in 577b) |

3.2 Skills

| Team members | Role | Skills |
|--------------|---|--|
| Qihua Wu | Life Cycle Planner Oper-Concept Engineer | <p>Current skills:</p> <p>Good planning skills</p> <p>Risk Analysis</p> <p>Good analysis capabilities</p> <p>Languages: Java, XML, SQL, HTML</p> <p>Teamwork and coordination</p> <p>Required skills:</p> <p>Project and activity planning</p> <p>COCOMO II</p> <p>Visio</p> <p>Microsoft Project Plan</p> <p>Languages: Java, JavaScript, HTML, CSS, XML</p> <p>Word Press</p> |
| Taizhi Li | Requirements Engineer Life Cycle Planner | <p>Current skills:</p> <p>Good capabilities of goals setting and alignment</p> <p>Languages: Java, XML, SQL, HTML</p> <p>Additional: Android, database design</p> <p>Clear and concise communication</p> <p>Good teamwork and coordination</p> <p>Required skills:</p> <ul style="list-style-type: none"> - Good project and activity skills - UML - COCOMO II - Winbook - Word Press |

| | | |
|------------|---|---|
| Hualong Zu | Project Manager Prototyper | <p>Current Skills:</p> <p>Good leadership</p> <p>Time management</p> <p>Great communication skills with clients</p> <p>Good analysis capabilities</p> <p>Tools: Eclipse</p> <p>Languages:</p> <p>JAVA, HTML, JavaScript</p> <p>Required Skills:</p> <ul style="list-style-type: none"> - Monitoring and controlling execution of project - Good time and people management, - JAVA, HTML, JavaScript - Word Press |
| Yueheng Li | System Architect Oper-Concept Engineer | <p>Current Skills:</p> <p>Tools: Eclipse, GNU</p> <p>Languages:</p> <p>JAVA, HTML, JavaScript</p> <p>Clear and concise communication</p> <p>Required Skills:</p> <ul style="list-style-type: none"> - Good communication skills - Good teamwork and coordination - UML - Word Press |
| Tianyi Luo | Feasibility Analyst System Architect | <p>Current Skills:</p> <p>Teamwork, Java, C#, PHP, CSS, HTML, JavaScript</p> <p>Required Skills:</p> <ul style="list-style-type: none"> - Project plan - Risk analysis - Feasibility analysis - Word Press |

| | | |
|-----------------------|-------------------------------------|--|
| Huaiqi Wang | Prototyper Requirements Engineer | Current Skills: Java, C, HTML, Android SDK & SSH frame. Required Skills: UML. Prototyping tools, COCOMOII, Word Press, HTML |
| Steiniger, Herman, L. | IIV & V Quality Focal Point | Current Skills: JAVA, HTML, JavaScript Required Skills: Software engineering requirements, architectures, quality management, configuration management, Bugzilla, Winbook Word Press |

Continuing 577b Team:

| | | |
|-------------|--|---|
| Hualong Zu | Project manager, Developer | Required Skills: Communication skills, Bugzilla, Word Press, Winbook, Facebook API, WordPress plugins |
| Tianyi Luo | Feasibility analyst/system architect, developer | Required Skills: Communication skills, Bugzilla, Word Press, Winbook, Facebook API, WordPress plugins |
| Huaiqi Wang | Operational concept, developer | Required Skills: Communication skills, Bugzilla, Word Press, Winbook, Facebook API, |

| | | |
|---------------------------------|-------------------------------------|---|
| | | WordPress plugins |
| 577b Team member 1(New recruit) | Life cycle planner/ developer | Required Skills: Communication skills, Bugzilla, Word Press, Winbook, Facebook API, WordPress plugins |
| 577b Team member 2(New recruit) | Tester / IV&V / Quality Focal Point | Required Skills: Communication skills, Documentation skills Bugzilla, Word Press, Winbook |

4.Approach

4.1. Monitoring and Control

In order to monitor the progress of our project, we are relying heavily on Bugzilla and prompt short meeting in addition to weekly team meetings. The planning was being done internally via email or phone calls. Those are updated on Bugzilla as well. We are also using Effort Report (ER) to keep track of the individual contribution.

The major way we communicate with the client is through Winbook. Occasional phone call and in-person meetings are conducted upon requests.

4.1.1. Closed Loop Feedback Control

Our team relies heavily on emails to share information with the members. We made two Google group, one for internal communication between us students, and another one where we have the clients too. This makes communication easy and reliable .

Every time someone uploads a document to the website or completes some assigned work, he would notify the team by email. Dropbox and Google Drive are also used to share the artifacts between teammates besides the project website. This keeps everyone up-to-date with the recent activities and progress of the individual components of the project.

4.1.2. Reviews

We are using four types of review to control our project:

- Group assessment of difficulties
- IIV & V evaluations
- TA feedback
- ARB

IIV & V evaluations and TA feedback are provided by Kenda (DEN) and the TAs. We provide group assessment of difficulties as a team, when someone has difficulties in doing part of our project. We usually meet once a week, and assess the difficulties encountered by each one of us during last week. We either solve the problem on the spot, or provide group feedback to help fix the problem. Finally, the ARB provided by TAs and professors gives us an opportunity to get review by all of the professors, TAs and clients.

4.2. Methods, Tools and Facilities

| Tools | Usage | Provider |
|---------------------------|---|-------------------------------|
| AXURE | Provides examples for user interface and system functionality, is helpful in the development of prototype | Axure |
| ICSM EPG | Better understanding of our roles as software engineers; help with documentation and other submissions | CSCI 577 |
| WordPress | Host website along with user interface for easy updates | BlueHost |
| Bugzilla | Track project progress | TA |
| Winbook | Keep track of the information resulting from negotiations with client, win conditions and issues raised | TA |
| Microsoft Visio | Documents OCD workflow | Microsoft |
| 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 |
| Microsoft Project | Make the project planning | Microsoft |
| Various WordPress plugins | Essential components for development | Different providers |

5.Resources

We present the project effort and schedule estimation of the project using COCOMO II. The following conditions were used to estimate the cost of our project, LA Commons Upgrade of Website.

- Estimated CSCI577a Effort: 7 team members at 10 hrs./week for 12 weeks
- Estimated CSCI577b Effort: 5 team members at 10 hrs./week for 12 weeks
- Total estimated effort:

- Budget information: This project has no budget for our development efforts. However, the client must provide some necessary equipment for development and testing, e.g. Blue Host service. Blue Host (web hosting) \$120/year This website requires to pay for its web hosting Domain name \$16.4/year This website requires to pay for its domain name each year.

- Project duration: 24 weeks
- Component modules in your development project:
 - Neighborhood and Project page Module
 - Interactive Map Module
 - Gallery Module
 - Cosmetic changes Module
 - Social network sharing Module
- Programming language used: HTML/CSS, PHP

Table 3: COCOMOII Scale Driver

| Scale Driver | Value | Rationale |
|--------------|---------|--|
| PREC | Nominal | This is not very similar to the projects that our team had developed before |
| FLEX | Nominal | 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 Bluehost WordPress is quite stable. |
| TEAM | High | All stakeholders are very collaborative and have strong commitments to achieve the goals of the project |
| PMAT | High | The whole team is quite agile, CMMI level 3 |

The following is module listed in the system and its estimated size with Source Lines of Code (SLOC)

Table 4: Module lists and SLOC of each module

| No. | Module Name | Brief Description | SLOC | REVL |
|-----|-------------------------------|--|------|------|
| 1 | Neighborhood and Project page | Prioritize feature for showcasing Community Art projects | 400 | 3% |
| 2 | Interactive Map | Visualize the event location and community art | 400 | 60% |
| 3 | Gallery | Showcase all the pictures from past events | 300 | 10% |
| 4 | Cosmetic Changes | Visualization of up-coming or past event highlights | 350 | 50% |
| 5 | Social Network sharing | Administration tool | 300 | 50% |

The following is COCOMOII Cost Drivers of each module and rationales of choosing the values.

Table 5: COCOMOII Cost Drivers of Module 1 - Neighborhood and Project page module

| Cost Driver | Value | Rationale |
|-------------|---------|---|
| RELY | High | This module is extremely important because the website is relying on that feature to brand itself |
| DATA | Nominal | This module is is not data intensive, nominal data cost drive |
| DOCU | Nominal | Because the development process follows ICSM, the document for life-cycle needs is normal. |
| CPLX | Low | It would be generated by the Bluehost WordPress, not very hard to do so. |
| RUSE | High | It is going to be reused for the future projects. |
| TIME | Nominal | This module stays there all the time, execution time depends on the amount of website visitors |

| | | |
|------|---------|---|
| STOR | Nominal | We have unlimited storage space for the website. |
| PVOL | High | Very stable, the 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 | Low | We have 7 team members in CSCI577a that is suitable for our project sizing. But only half of the teams are leaving for 577B |
| APEX | Nominal | The average experience of the team members for this online web-based application is about one year. |
| LTEX | Low | Most of the tools are new to our team. |
| PLEX | Low | The platform is new to our team. |
| TOOL | Nominal | Use of strong, mature, moderately integrated tools |
| SITE | High | Most teammate can meet at last twice a week |
| SCED | Nominal | The schedule is fixed for 12 weeks in Fall plus 12 weeks in spring |

Table 6: COCOMOII Cost Drivers of Module 2- Interactive Map module

| Cost Driver | Value | Rationale |
|-------------|---------|--|
| RELY | Nominal | This module is for ease of user interaction with the website |
| DATA | Nominal | This module is is not data intensive, nominal data cost drive |
| DOCU | Nominal | Because the development process follows ICSM, the document for life-cycle needs is normal. |
| CPLX | Nominal | It would be generated by the Bluehost WordPress, not very hard to do so. Also need to use Google map API |
| RUSE | High | It is going to be reused for the future projects. |
| TIME | Nominal | This module stays there all the time, execution time depends on the amount of website visitors |

| | | |
|------|---------|---|
| STOR | Nominal | We have unlimited storage space for the website. |
| PVOL | High | Very stable, the 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 | Low | We have 7 team members in CSCI577a that is suitable for our project sizing. But only half of the teams are leaving for 577B |
| APEX | Nominal | The average experience of the team members for this online web-based application is about one year. |
| LTEX | Low | Most of the tools are new to our team. |
| PLEX | Low | The platform is new to our team. |
| TOOL | Nominal | Use of strong, mature, moderately integrated tools |
| SITE | High | Most teammate can meet at last twice a week |
| SCED | Nominal | The schedule is fixed for 12 weeks in Fall plus 12 weeks in spring |

Table 7: COCOMOII Cost Drivers of Module 3 - Gallery module

| Cost Driver | Value | Rationale |
|--------------------|--------------|--|
| RELY | Nominal | This module is for better showcase the past event |
| DATA | Nominal | This module is is not data intensive, nominal data cost drive |
| DOCU | Nominal | Because the development process follows ICSM, the document for life-cycle needs is normal. |
| CPLX | Nominal | It would be generated by the Bluehost WordPress, not very hard to do so. |
| RUSE | High | It is going to be reused for the future projects. |
| TIME | Nominal | This module stays there all the time, execution time depends on the amount of website visitors |

| | | |
|------|---------|---|
| STOR | Nominal | We have unlimited storage space for the website. |
| PVOL | High | Very stable, the 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 | Low | We have 7 team members in CSCI577a that is suitable for our project sizing. But only half of the teams are leaving for 577B |
| APEX | Nominal | The average experience of the team members for this online web-based application is about one year. |
| LTEX | Low | Most of the tools are new to our team. |
| PLEX | Low | The platform is new to our team. |
| TOOL | Nominal | Use of strong, mature, moderately integrated tools |
| SITE | High | Most teammate can meet at last twice a week |
| SCED | Nominal | The schedule is fixed for 12 weeks in Fall plus 12 weeks in spring |

Table 8: COCOMOII Cost Drivers of Module 4 - Cosmetic changes module

| Cost Driver | Value | Rationale |
|--------------------|--------------|--|
| RELY | Nominal | This module is for cosmetic reason |
| DATA | Nominal | This module is is not data intensive, nominal data cost drive |
| DOCU | Nominal | Because the development process follows ICSM, the document for life-cycle needs is normal. |
| CPLX | Low | It would be generated by the Bluehost WordPress, not very hard to do so. |
| RUSE | High | It is going to be reused for the future projects. |
| TIME | Nominal | This module stays there all the time, execution time depends on the amount of website visitors |

| | | |
|------|---------|---|
| STOR | Nominal | We have unlimited storage space for the website. |
| PVOL | High | Very stable, the 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 | Low | We have 7 team members in CSCI577a that is suitable for our project sizing. But only half of the teams are leaving for 577B |
| APEX | Nominal | The average experience of the team members for this online web-based application is about one year. |
| LTEX | Low | Most of the tools are new to our team. |
| PLEX | Low | The platform is new to our team. |
| TOOL | Nominal | Use of strong, mature, moderately integrated tools |
| SITE | High | Most teammate can meet at last twice a week |
| SCED | Nominal | The schedule is fixed for 12 weeks in Fall plus 12 weeks in spring |

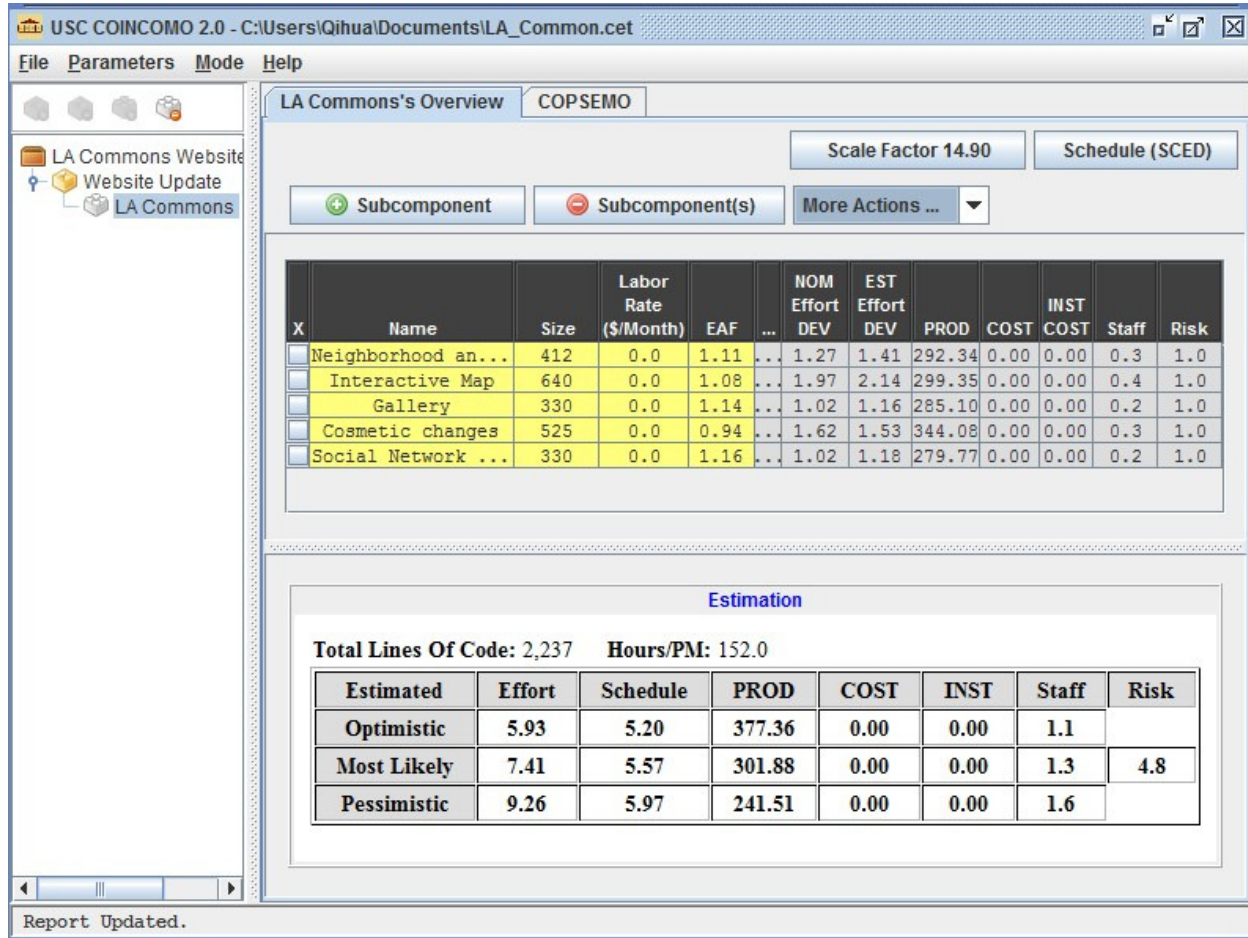
Table 9: COCOMOII Cost Drivers of Module 5- Social network sharing module

| Cost Driver | Value | Rationale |
|--------------------|--------------|--|
| RELY | Nominal | This module is for better branding the website |
| DATA | Nominal | This module is is not data intensive, nominal data cost drive |
| DOCU | Nominal | Because the development process follows ICSM, the document for life-cycle needs is normal. |
| CPLX | Nominal | It would be generated by the Bluehost WordPress, not very hard to do so. Also need to use Facebook API |
| RUSE | High | It is going to be reused for the future projects. |
| TIME | Nominal | This module stays there all the time, execution time depends on the amount of website visitors |

| | | |
|------|---------|---|
| STOR | Nominal | We have unlimited storage space for the website. |
| PVOL | High | Very stable, the 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 | Low | We have 7 team members in CSCI577a that is suitable for our project sizing. But only half of the teams are leaving for 577B |
| 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 not new to our team. |
| PLEX | Nominal | The platform is not new to our team. |
| TOOL | Nominal | Use of strong, mature, moderately integrated tools |
| SITE | High | Most teammate can meet at last twice a week |
| SCED | Nominal | The schedule is fixed for 12 weeks in Fall plus 12 weeks in spring |

The following is the result from COCOMOII estimation based on Scale Drivers and Cost Drivers discussed above.

Figure 1: COCOMO Estimation Result



The screenshot shows the USC COINCOMO 2.0 application window. The title bar indicates the file path: C:\Users\Qihua\Documents\LA_Common.cet. The menu bar includes File, Parameters, Mode, and Help. On the left, a project tree shows 'LA Commons Website' expanded, with sub-items 'Website Update' and 'LA Commons'. The main window displays a 'Summary Report' for 'LA Commons Website Upgrade's Overview'. The report includes a table with the following data:

| Name | Size SLOC | Cost | Staff | Effort | Schedule |
|--------------------------------|--------------|---------------|-------|-------------|----------|
| Website Update | 2,237 | \$0.00 | 1.4 | 8.30 | 5.77 |
| Total | 2,237 | \$0.00 | | 8.30 | |

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.

Assume 10 hours/week of dedicated effort per person

Assume a total of 20 weeks for development phase; the final two weeks are for product transition into operations.

Assume 152/hours/person-month for COCOMO estimates

According to COCOMO II Estimates for CSCI577 and above assumptions, one team member effort = $10 \times 20 / 152 / 0.72 = 1.8$ COCOMO II person months. The most likely effort from the COCOMO estimation above is 8.3, so the total team members need for this project = $8.3 / 1.8 = 4.61$

Since, we have 7 people for 577A and estimated 5 developer for 577B, from this effort estimation; we shall have enough time to finish the project.

6. Iteration Plan

6.1 Plan

The first iteration of the development process concentrates on getting the basic website structure up and running on team member's local machines. This structure will later be modified according to the inputs from the client.

During this iteration, the team would proceed with setting up Wordpress environment using XAMPP for hosting local server. Team members are assigned different modules to implement during this phase. Top three prioritized module is assigned to all members individually or in pairs.

This iteration covers the DC Package and the Development – Construction Iteration milestones.

In the second iteration, we plan to get the assigned module complete and go back to the client for feedback. Certain artifacts like project descriptions, interactive map background design are not available until late February. Integration with social media which was a lower priority item was also put into this iteration. Along with the above, any bugs and improvements on the functionalities from the first iteration were implemented in this iteration.

This iteration spanned the Development – Transition Iteration milestone.

6.1.1 Capabilities to be implemented

We plan to implement the following capabilities in the upcoming iteration.

Note that we are doing the most prioritized modules in Iteration 1. However, the interactive map is a high priority item in Winbook, we didn't have the designs from our graphics designer until the second iteration so it is a must have item in the second iteration.

Table 10: Construction iteration capabilities to be implemented

| ID | Capability | Description | Priority | Iteration |
|----|---|--|------------------|-----------|
| 1 | OC-2 Community Arts project page | Community Arts project page includes all the project information. And these project pages should be connected to the Community Arts page. Corresponding user cases: UC04,UC7,UC08,UC10 Corresponding requirements: WC_2561,WC_2817,WC_2817,WC_2558,WC_2562,WC_2558 | HIGH (Must Have) | 1 |
| 2 | OC-3 Neighborhood | Add Community Arts project area in the neighborhood page to link this | HIGH (Must Have) | 1 |

| | | | | |
|---|------------------------------------|---|-------------------|---|
| | Page Upgrade | neighborhood page to the related Community Arts project pages. Corresponding user cases: UC06,UC10 Corresponding requirements:WC_2557,WC_2697,WC_2558 | | |
| 3 | OC-5 Gallery of art works | We will be using the Gallery plugins provided by WordPress to implement it. Corresponding user cases: UC01, UC11 Corresponding requirements: WC_2557,WC_2558 | HIGH (Must Have) | 1 |
| 4 | OC-1 Interactive Map | Interactive map for better navigation. Corresponding user cases: UC02 Corresponding requirements: WC_2700 | Low(Could Have) | 2 |
| 5 | OC-4 Social Network Share Function | The website is able to post feeds and allow users to follow on Facebook, Twitter etc. Corresponding user cases:UC03 , UC9 Corresponding requirements: WC_2563,WC_2556 | MED (Should Have) | 2 |

6.1.2 Capabilities to be tested

Out of the capabilities we intend to develop in this iteration, we plan to test the following.

Table 11: Construction iteration capabilities to be tested

| ID | Capability | Description | Priority | Iteration |
|----|----------------------------------|--|------------------|-----------|
| 1 | OC-2 Community Arts project page | Community Arts project page includes all the project information. And these project pages should be connected to the Community Arts page. Corresponding user cases: UC04,UC7,UC08,UC10 Corresponding requirements: WC_2561,WC_2817,WC_2817,WC_2558,WC_2562,WC_2558 | HIGH (Must Have) | 1 |
| 2 | OC-3 Neighborhood Page Upgrade | Add Community Arts project area in the neighborhood page to link this neighborhood page to the related Community Arts project pages. Corresponding user cases: UC06,UC10 Corresponding | HIGH (Must Have) | 1 |

| | | | | |
|---|------------------------------------|--|-------------------|---|
| | | requirements:WC_2557,WC_2697,WC_2558 | | |
| 3 | OC-5 Gallery of art works | We will be using the Gallery plugins provided by WordPress to implement it. Corresponding user cases: UC01, UC11 Corresponding requirements: WC_2557,WC_2558 | HIGH (Must Have) | 1 |
| 4 | OC-1 Interactive Map | Interactive map for better navigation. Corresponding user cases: UC02 Corresponding requirements: WC_2700 | Low(Could Have) | 2 |
| 5 | OC-4 Social Network Share Function | The website is able to post feeds and allow users to follow on Facebook, Twitter etc. Corresponding user cases:UC03 , UC9 Corresponding requirements: WC_2563,WC_2556 | MED (Should Have) | 2 |

6.1.3 Capabilities not to be tested

In the first and second iteration, all the capabilities will be tested at the end of each iteration.