

# We Are Trojan (WAT) Network

## Team #1's DCR ARB

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## Acceptance Test Plan and Cases

# Team Strengths & Weaknesses

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## Strengths

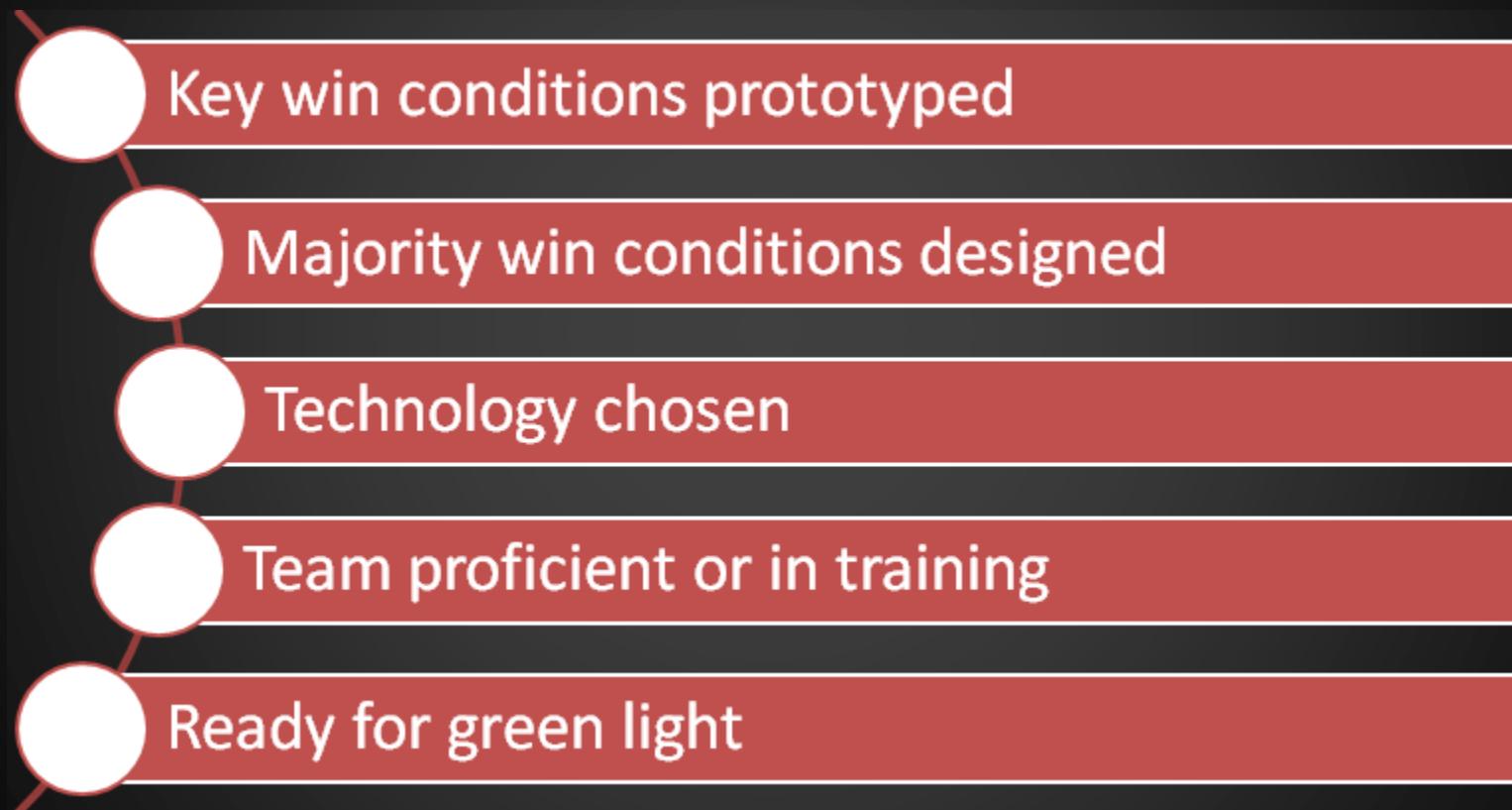
- Consistency
- Collaboration
- Camaraderie

## Weaknesses

- “Project Fade”
- Camaraderie

# Overall Project Evaluation

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# Testing Strategy and Resource

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- **PURPOSE OF TESTING:** The purpose of doing this is to identify draft acceptance test for specific win-win requirements documented in winbook. The most critical capability requirements are tested in this document.
- **TYPE OF TESTING:** Test cases are drafted from various use-cases developed for the SSAD document. Testing is focused at software level to test the key features of our system.
- **SCOPE OF TESTING:** include all the capabilities, and Test Cases table formed for most important features of WAT Point system.
- **FOCUS OF TESTING:** Testing focused on testing features of the system listed in winbook.

# Requirements Traceability Matrix

<i>Requirement ID</i>	<i>WinWin</i>	<i>Verification Type</i>	<i>Test Case ID (if applicable)</i>
CR-1: Start/Edit/Delete a thread: Users are able to start/edit/delete threads	WC_3240 WC_3241	Testing	TC01- User Role to use the thread/post functionality
CR-2: Calculate the WAT points: The system should correctly calculate three types of WAT points.	WC_3260 WC_3252	Testing	TC02- Update user WAT point information
CR-3: Like/Dislike: Users are able to like or dislike threads and posts		Inspection	
CR-4: Make a post: Users could post on the thread.	WC_3240 WC_3241	Testing	TC01- User Role to use the thread/post functionality
CR-5: Redeem the gift card: Users could use the usable points to redeem the gift card	WC_3435 WC_3245	Testing	TC03- User Role to use online redemption system

# Requirements Traceability Matrix

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CR-6 Automated useless threads/posts deletion: The system is capable of deleting the useless threads/posts		Inspection	
CR-7 Automated notification: The system is able to notify the users the number of likes/dislikes/posts on their threads and posts and recent events.		Inspection	
CR-8 Create/Edit/Delete the event: The maintainer is able to create/edit the event on the event activity board.		Inspection	
CR-9 Categorize the threads		Inspection	

# A Test Case Example

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TC-01-01 User Role to use thread/post functionality

Test Case Number	TC-01-01
Test Item	This test case test the basic features of our system where user can start/edit/delete a thread on forum and add a post for a specific thread.
Test Priority	M (Must Have)
Pre-conditions	<p>Start a thread: We need to have a forum page where there is an option to start a thread.</p> <p>Edit/Delete Thread: Once the user creates a thread, he can view the option to edit his thread or delete the thread created.</p> <p>Start a Post: User is on the forum page and is able to view the threads on forum. To make a post, select the option of adding post.</p>

# A Test Case Example

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## Post-conditions

The thread should be posted on the forum page with some basic description as when the thread was created, who created the thread.

Other users of the system should be able to view the thread on the forum.

The thread should have the option for like/dislike

The thread data should be stored in Database in correct format. the necessary Database links should be established properly

The necessary update to the forum page and the Database should be made when the either delete or edits his thread.

Start a Post:

The post created by user is visible on the forum below the specific thread.

# A Test Case Example

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## Input Specifications

Start a thread:

The user is on the forum page.

Selects the option to start a thread on forum.

Enters valid content on the text-area and clicks start the thread.

Edit:

User view his thread and selects the option to edit

Delete:

User view his thread and selects the option to delete the thread.

Make a post:

The user is on forum page

The user selects the option to make a post for a specific thread

Enter the post specific data and clicks start the post.

# A Test Case Example

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## Expected Output Specifications

Start a thread:

Thread is posted on the forum, and thread specific data is stored in Database.

Edit:

The changes made to a specific thread are visible on the forum page, and thread specific data is updated in database.

Delete:

Thread is no longer visible on forum, and the data related to that thread is deleted from the Database.

Start a post:

Post is posted on the forum, and is visible below the specific thread.

# A Test Case Example

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Pass/Fail  
Criteria

**Pass:**  
The system correctly loads the forum page  
If the data entered to be posted does not violate any rules, the system posts the thread.  
  
If user chooses to start a post, the post is posted on the forum.

**Fail:**  
User tries to click start a thread without entering any data, the thread will not be visible on forum.

# A Test Case Example

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Assumptions and Constraints	<p>Assumption: The thread data does not violate any rules</p> <p>Constraint: Connectivity between user's handheld device and server must available and properly configured</p>
Dependencies	N/A
Traceability	<p>WC_3240: As a student, I can start a thread by posting a question so that other users might answer that question with credible information.</p> <p>WC_3241: As a user, I can answer a question posted by other users.</p>



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# Operational Concept Description

# System Purpose

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## Claim:

- USC has strong connections among students and alumni (“The Trojan Family”).

## Current Situation:

- The “Trojan Family” connection is not sufficiently manifested in the student community.

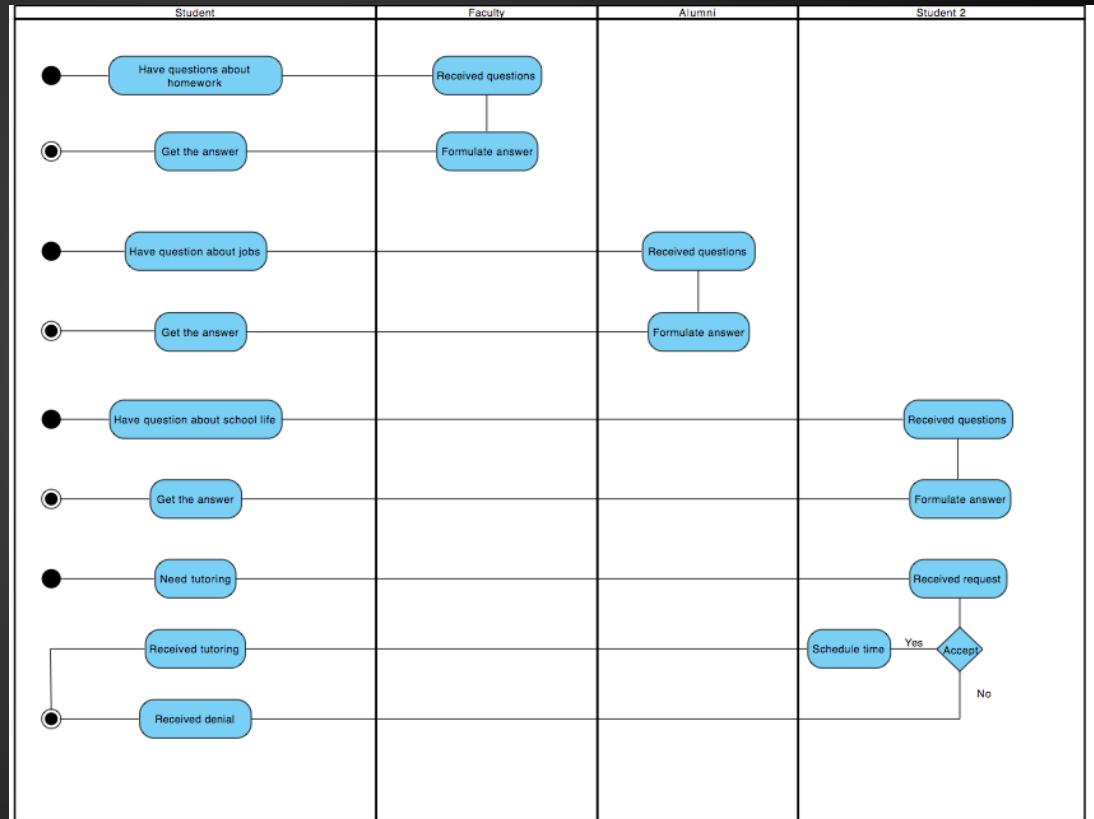
## Goals:

- Increase camaraderie between Trojans
- One-stop shop to answer any USC related queries
- Increase communications between students across schools



# Change in Current System and Deficiencies

- There isn't any change in current system since beginning of the project. Eventually Current Business Workflow is still valid.



Current Business Workflow

# Proposed New System

## The Program Model

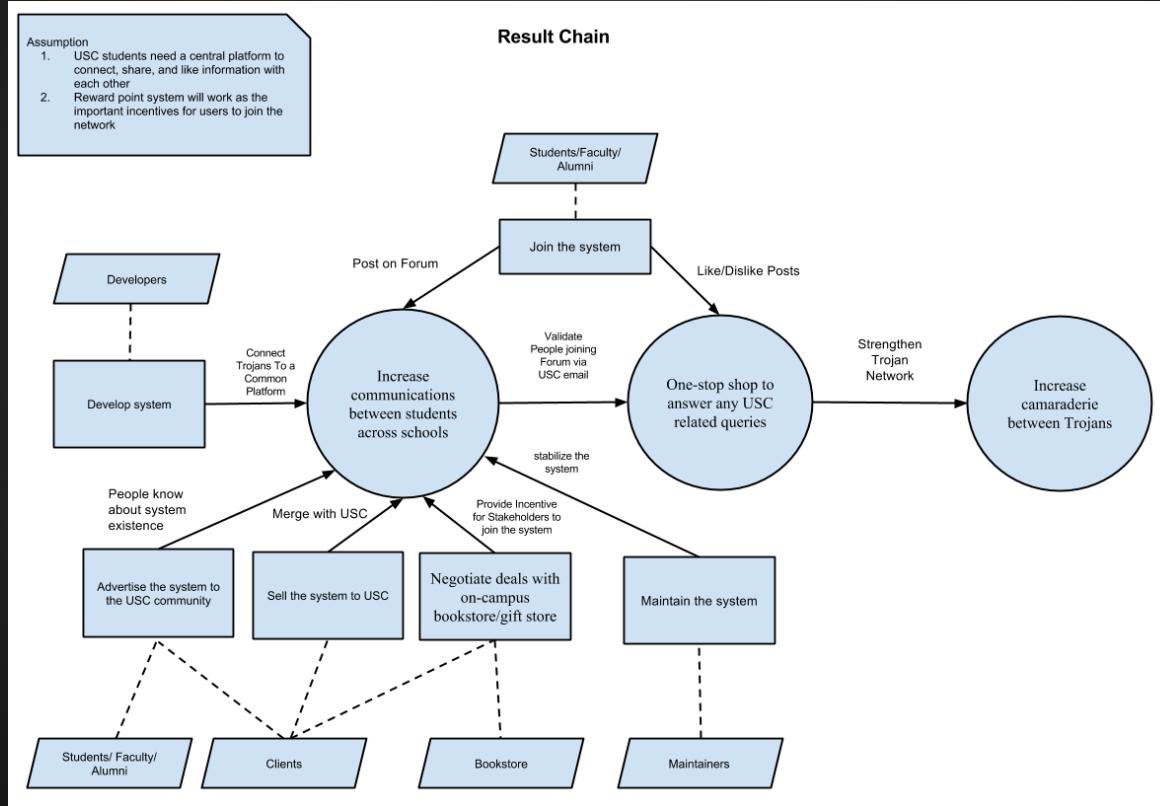
### Assumptions:

- USC students need a central platform to connect, share, and like information with each other
- Reward point system will work as the important incentives for users to join the network

Stakeholders	Initiatives	Value Propositions	Beneficiaries
<ul style="list-style-type: none"><li>- Developers</li><li>- Maintainers</li><li>- Clients</li><li>- Gift/Book Store</li></ul>	<ul style="list-style-type: none"><li>- Develop the system</li><li>- Maintain the system</li><li>- Advertise the system to USC community</li><li>- Partner with schools</li><li>- Negotiate deals with on-campus/ bookstore/gift store</li><li>- Join the system</li></ul>	<ul style="list-style-type: none"><li>- Increase camaraderie between Trojans</li><li>- One-stop shop to answer any USC related queries</li><li>- Increase communications between students across schools</li></ul>	<ul style="list-style-type: none"><li>- USC student</li><li>- USC alumni</li><li>- USC faculties</li></ul>
Cost (Cost factors)		Benefits (Key performance indicators – KPIs)	
<ul style="list-style-type: none"><li>- Development costs</li><li>- Maintenance costs</li><li>- Advertising/Marketing costs</li><li>- Web server, Web hosting, Domain</li></ul>		The number of active users in “WAT” network increases.	

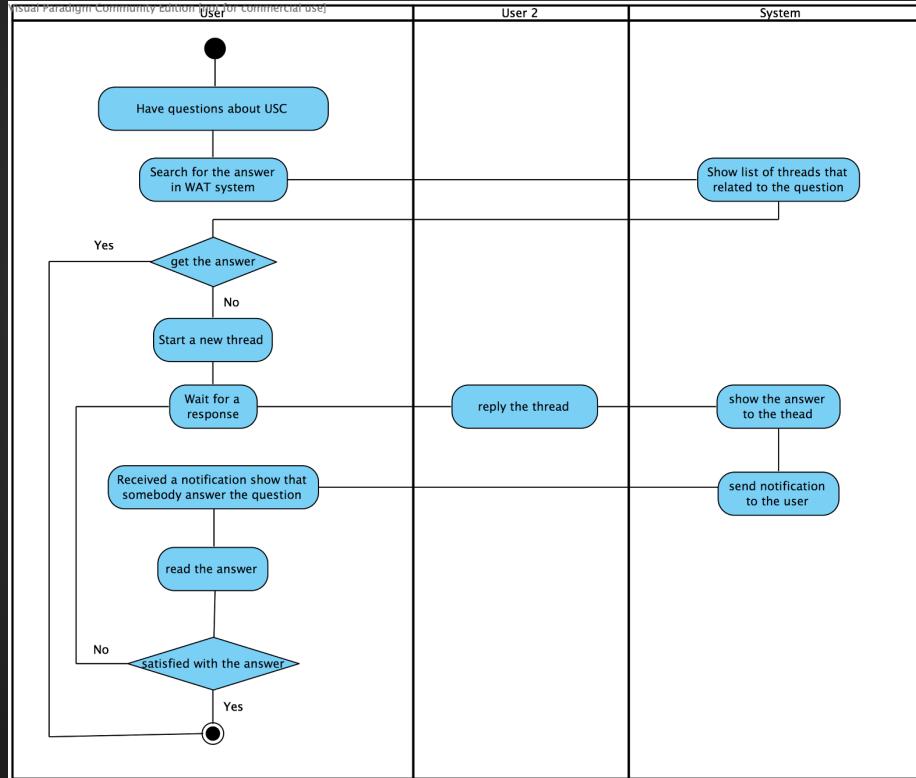
# Proposed New System

## The Benefits Chain Diagram



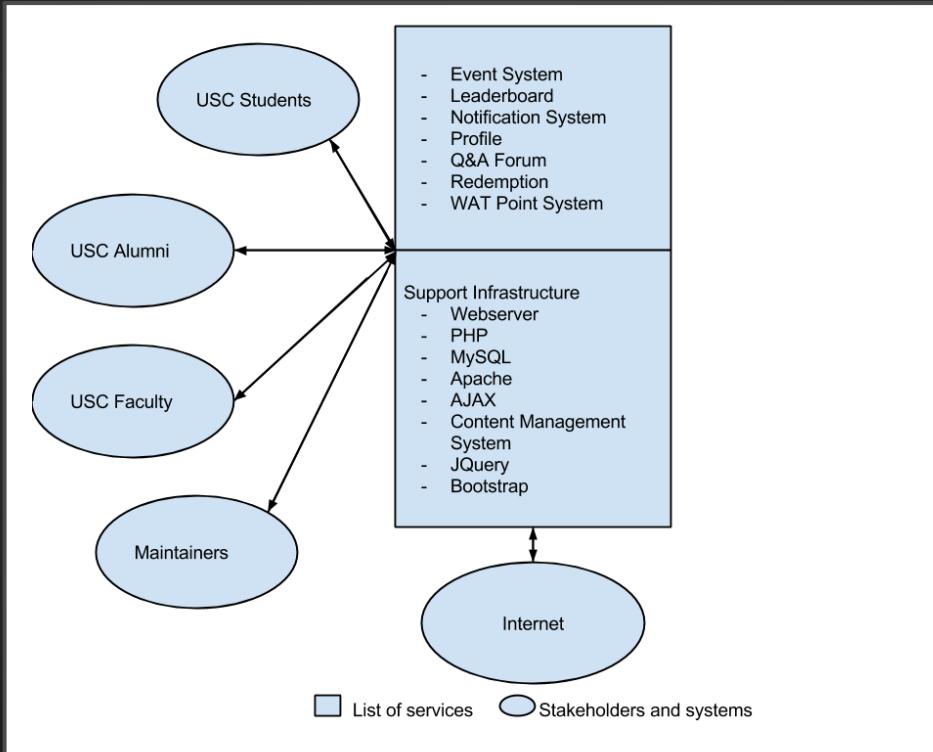
# Proposed New System

## The Proposed Business Workflow



# Proposed New System

## The System Boundary



# Desired Capabilities and Goals

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Capability Goals		Priority
OC-1	Q & A Forum	1
OC-2	WAT Point System	2
OC-3	Notification System	3
OC-4	Profile	4
OC-5	Leader Board	5
OC-6	Redemption	6
OC-7	Event System	7

# Desired Capabilities and Goals

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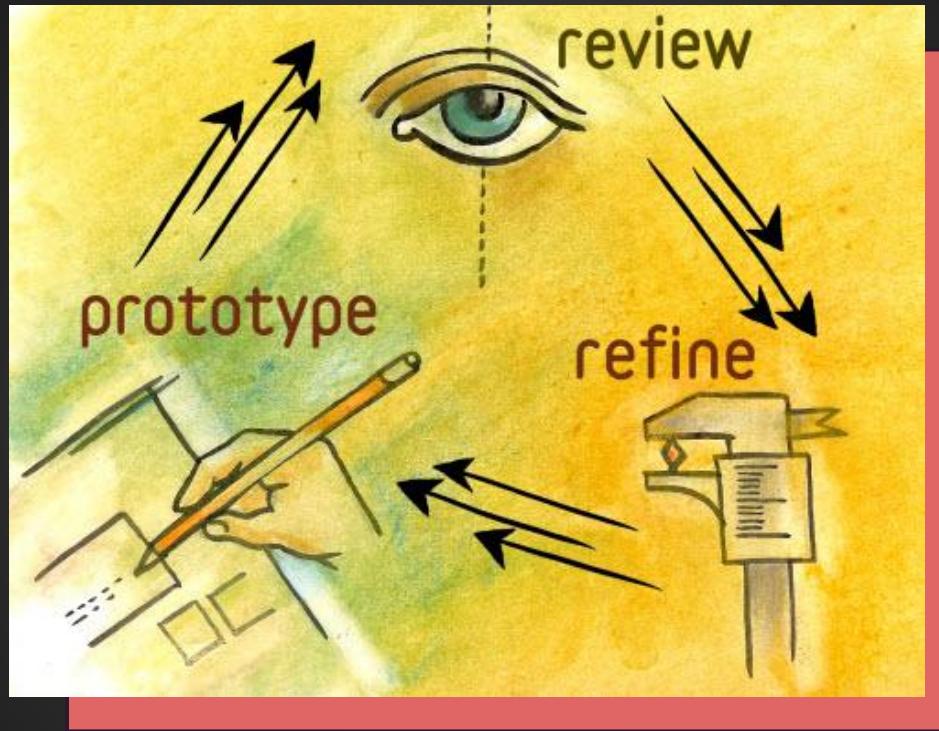
Level of Service Goals		Priority	Referred WinWin Agreements
LOS-1	The system shall be user-friendly and intuitive.	1	WC_3253
LOS-2	The system shall render correctly on mobile platforms.	2	WC_3256

# Desired Capabilities and Goals

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## Organizational Goals

- OG-1: Increase the connection among students by providing them with an easy-to-use forum.
- OG-2: Increase the credible information via like/dislike ratio.
- OG-3: Increase the speed at which the users receive answers to queries via tracking the number posts on the forum.
- OG-4: Increase USC brand via estimating the increase in the number of active users.
- OG-5: Reduce workload of USC staff to answer students question by providing an alternative way to answer the questions.

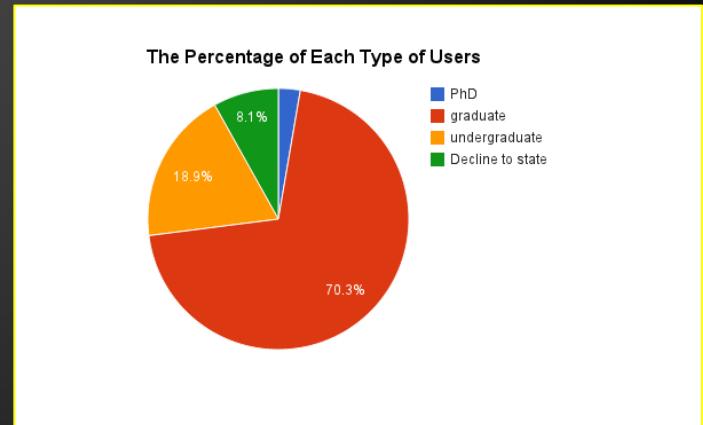
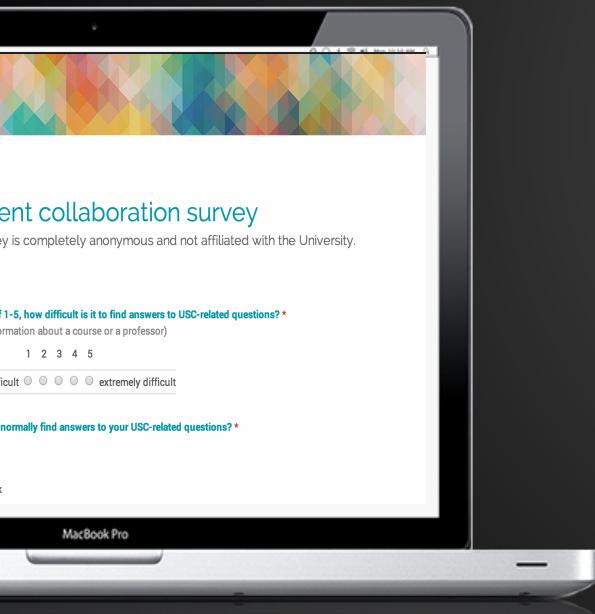


# Prototype

# Prototype #1: User Survey

## Why?

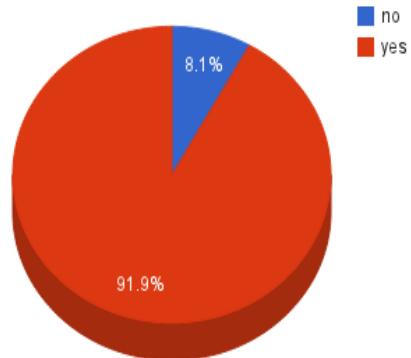
- know what users really need
- see if our expectation in the system match with that of the users
- help us to prioritize features
- need an evidence that the users would participate
- need an evidence that the system could solve user's problem



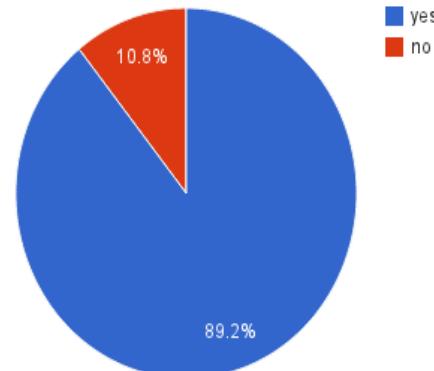
# Survey results:

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The Percentage of People who will use WAT



The Percentage of people who like Reward mechanism



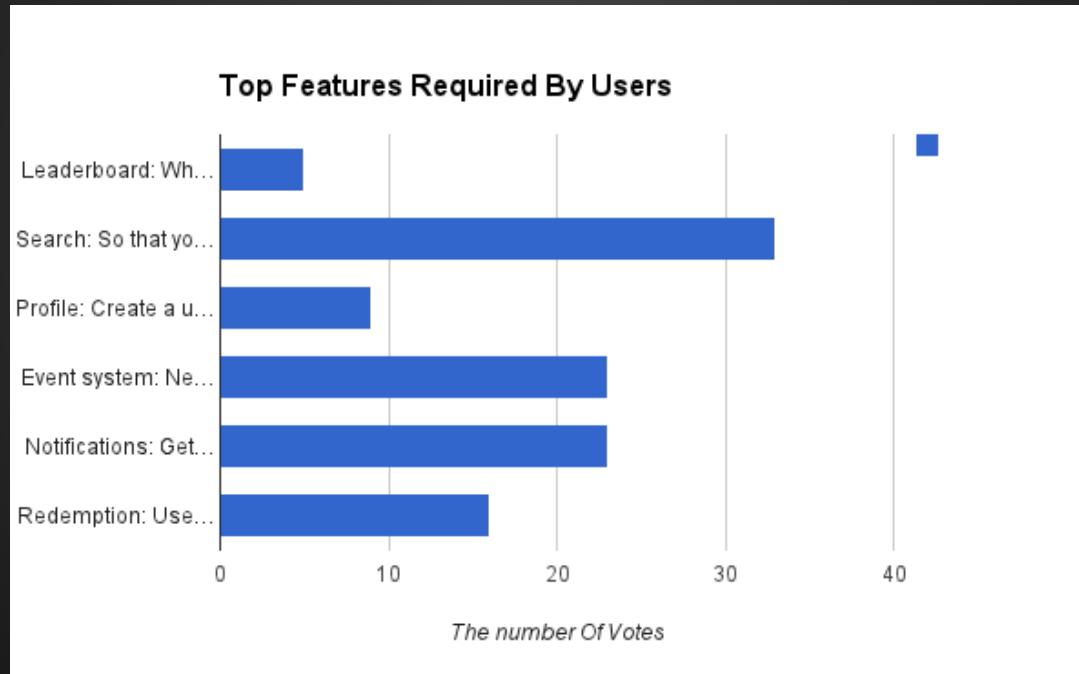
If there was a centralized forum providing credible information for Trojans, would you participate?

Would a system where you are awarded points for helping other Trojans increase your participation?

# Survey result: Feature

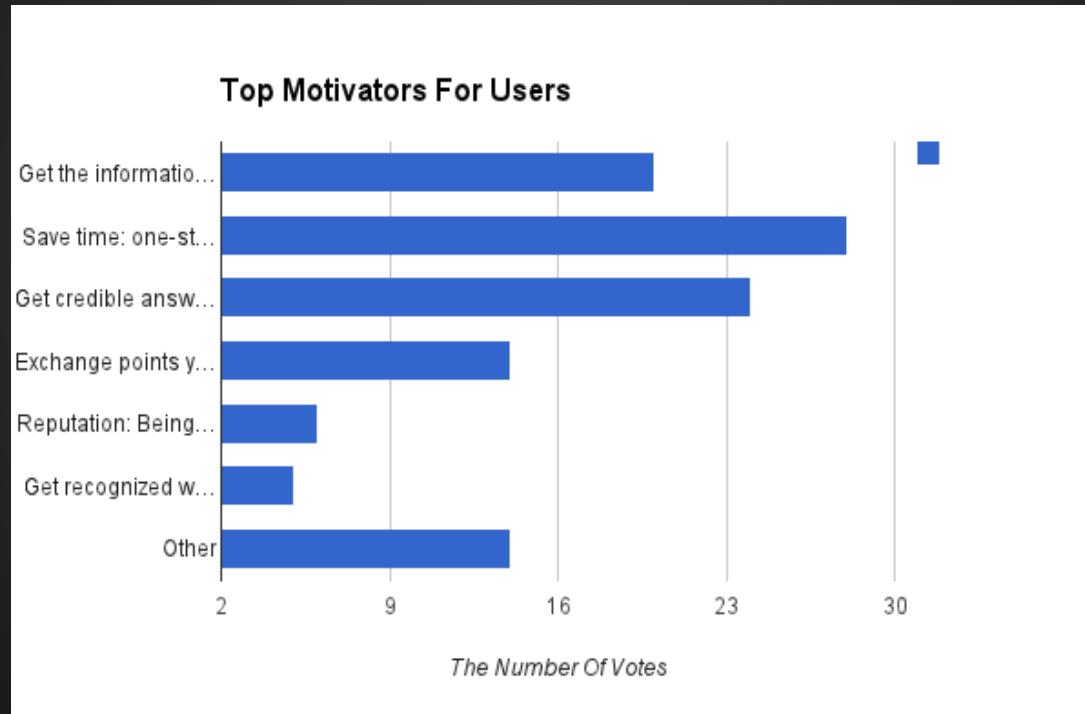
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Which three features do you find most important in such a system? \*



# Survey result: Expectation

What will be the top three motivators for you to participate in such system?

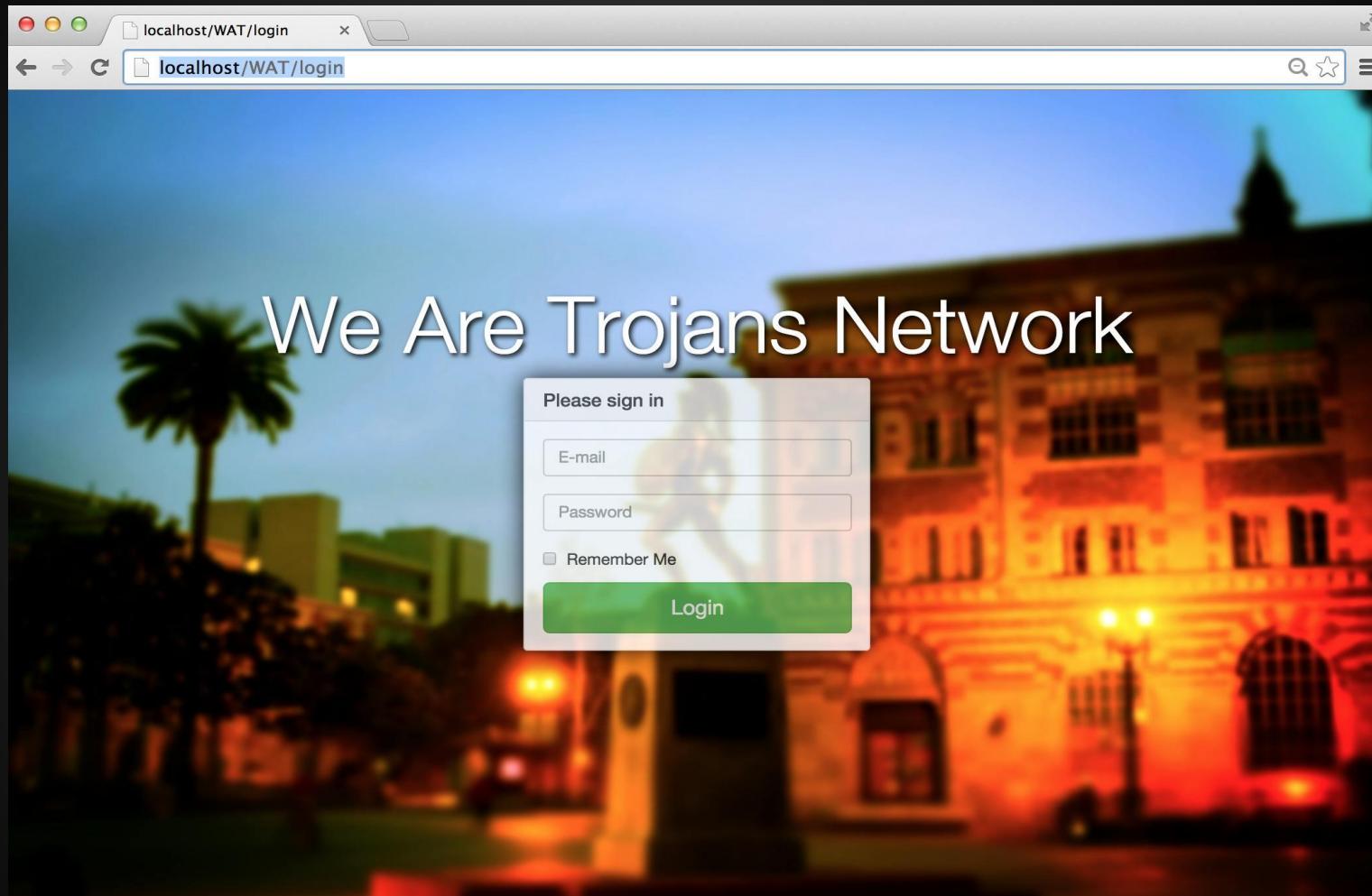


# Prototype #2: UI Mockup

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## Why?

- No concrete requirements of the UI
- Need feedback from the clients
- Need to enhance the team's understanding of the UI
- Continuation on our first initial UI prototype with real web programming language



A Web Page  
<http://wearetrojans.usc.edu>

WE ARE TROJANS

Home Forum Store Profile

Lifetime Point Semester Point Usable Point

Name

Hot Topic #1 Little details regarding topic

Hot Topic #2 Little details regarding topic

Hot Topic #3 Little details regarding topic

Hot Topic #4 Little details regarding topic

Hot Topic #5 Little details regarding topic

Hot Topic #6 Little details regarding topic

Hot Topic #7 Little details regarding topic

localhost/WAT/homepage x localhost/WAT/homepage.html

We Are Trojans Network

Welcome! Title Srisopha

Notification

1,800 600 300 Lifetime Semester Usable Point Point Point

Leaderboard

Rank	Name	Likes
223	YOU	600
1	Min Li	4,000
2	Punyawee Pakdiying	3,200
3	Saloni Priya	3,100
4	Eirik Skogstad	2,800
5	Pittawat	2,000
6	Pamornchaisirikij	1,800
	Suleyman Erten	1,800

★FEATURED

How can I reserve a room for my meeting? By Title Srisopha Nov 14 2014 200 likes 4 dislikes appointment , meeting , productivity

HOT THREAD

USC vs UCLA, Who wants to watch the game with me? I got one free ticket. By Title Srisopha Nov 17 2014 1000 likes 6 dislikes football , USCvsUCLA , freeTicket

Do I need a textbook for CSCI577a? It is really expensive

A Web Page  
<http://wearetrojans.usc.edu>

WE ARE TROJANS

**PROFILE**

Change Password



Upload Photo

Lifetime Point

Semester Point

Usable Point

**Profile Information**

Name : \*  
 Last Name : \*  
 Degree : \*  
 School : \*  
 Area : \*  
 E-mail : \*

(\*Mandatory)

Update

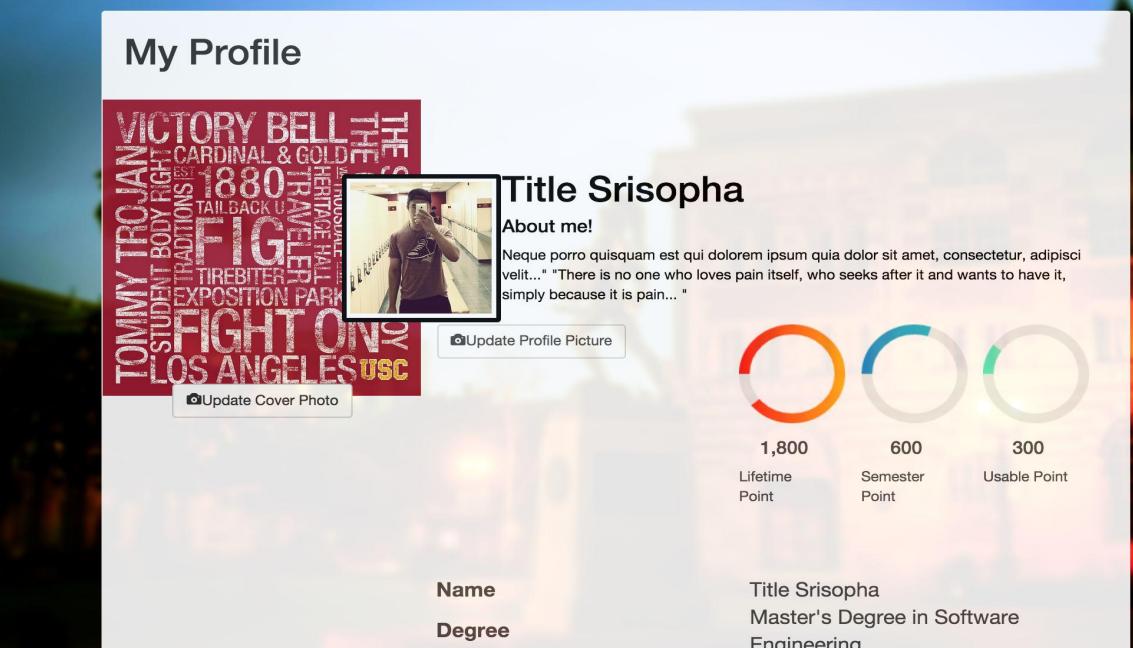
**Summary about you**

statistics teaching tool tips tool tools

localhost/WAT/profile

We Are Trojans Network

## My Profile



**Title Srisopha**

About me!

Neque porro quisquam est qui dolorem ipsum quia dolor sit amet, consectetur, adipisci velit... "There is no one who loves pain itself, who seeks after it and wants to have it, simply because it is pain..."

**1,800**  
Lifetime Point

**600**  
Semester Point

**300**  
Usable Point

**Name**  
**Degree**

Title Srisopha  
Master's Degree in Software Engineering

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A Web Page  
http://wearetrojans.usc.edu

WE ARE TROJANS

FORUM  Name

Topic: How do we register for this class?

  
100 of Likes | 3 of Dislikes | 10 of Coments

Topic: How do we register for this class?

  
100 of Likes | 3 of Dislikes | 10 of Coments

Topic: How do we register for this class?

  
100 of Likes | 3 of Dislikes | 10 of Coments

localhost/WAT/forum

localhost/WAT/forum

We Are Trojans Network

**FEATURED**

**How can I reserve a room for my meeting?**

By Title Srisopha   
Nov 14 2014 1 200 likes 1 4 dislikes appointment , meeting , productivity

**HOT THREAD**

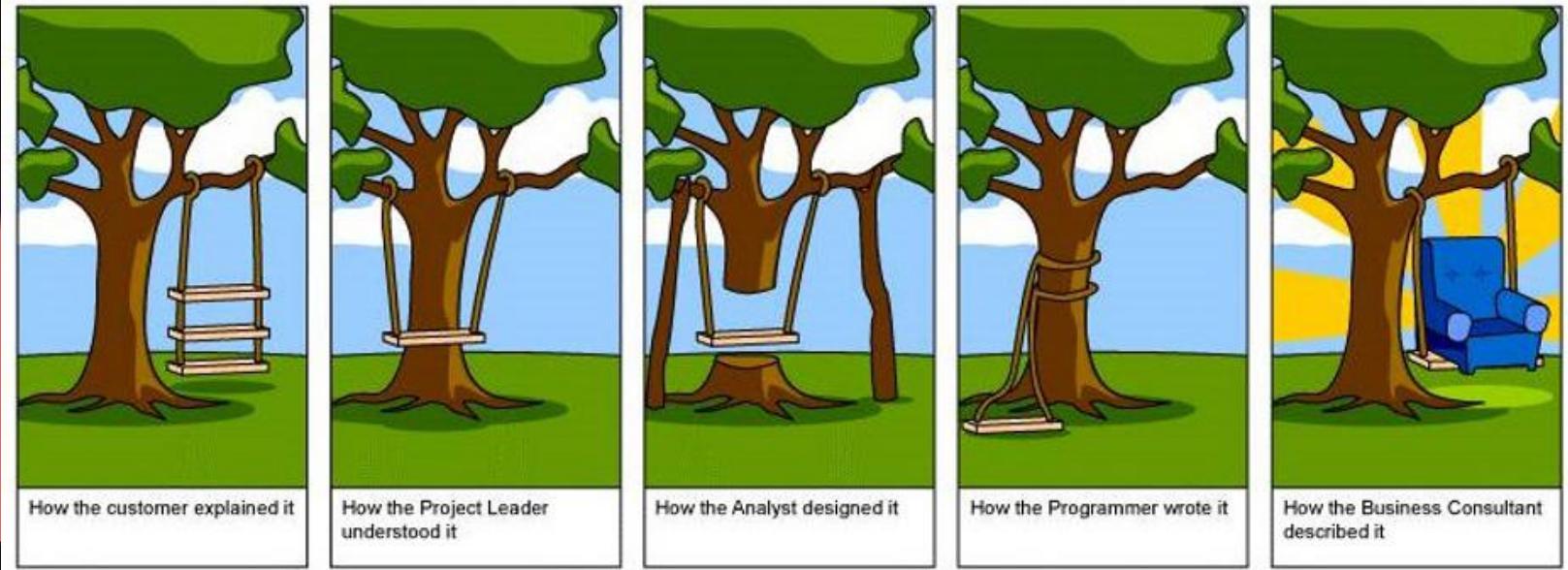
**USC vs UCLA, Who wants to watch the game with me? I got one free ticket.**

By Title Srisopha   
Nov 17 2014 1 1000 likes 1 6 dislikes football , USCvsUCLA , freeTicket

**Do I need a textbook for CSCI577a? It is really expensive**

By Title Srisopha   
Nov 13 2014 1 260 likes 1 80 dislikes course , textbook , PoorCollegeStudent

# UI DEMO



# Requirements

# Changes in Requirements

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From the feedback on UI Mockup from our client:

- WC\_3498: As a user, I can view my WAT points on each page of the user interface.
- WC\_3497: As a user, I can view the thread sorting them based on graduation year, school.
- WC\_3494: As a user, I can report inappropriate threads so that the forum will be free of inappropriate threads.

# Changes in Requirements

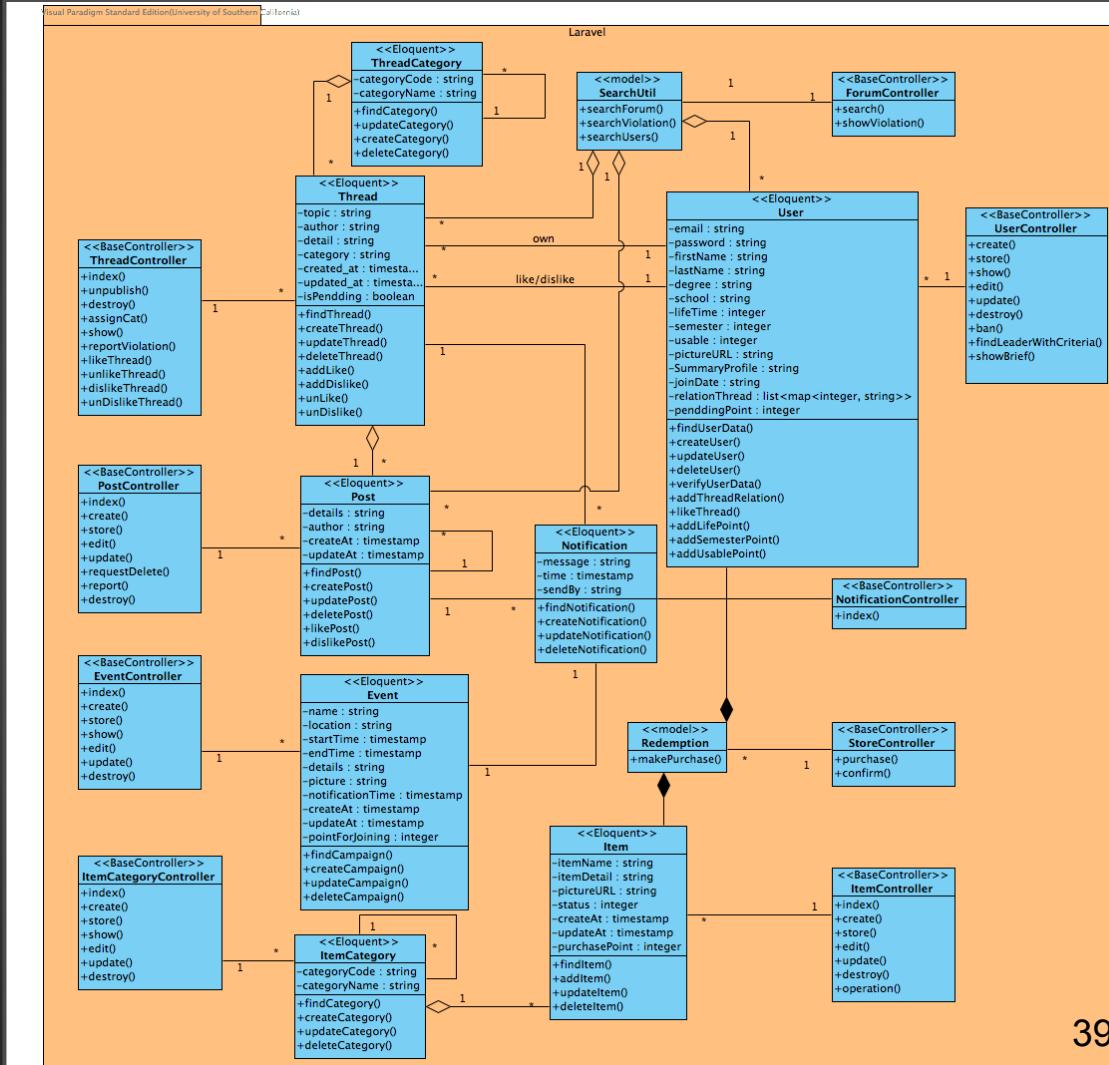
- According to following Win-Win Agreements that were successfully negotiated for the “WAT Network”, Q&A Forum has gotten the highest priority, and all changes in the requirements are under the Q&A Forum. Eventually the requirements (WC\_3494, WC\_3497, WC\_3498) has higher priority.



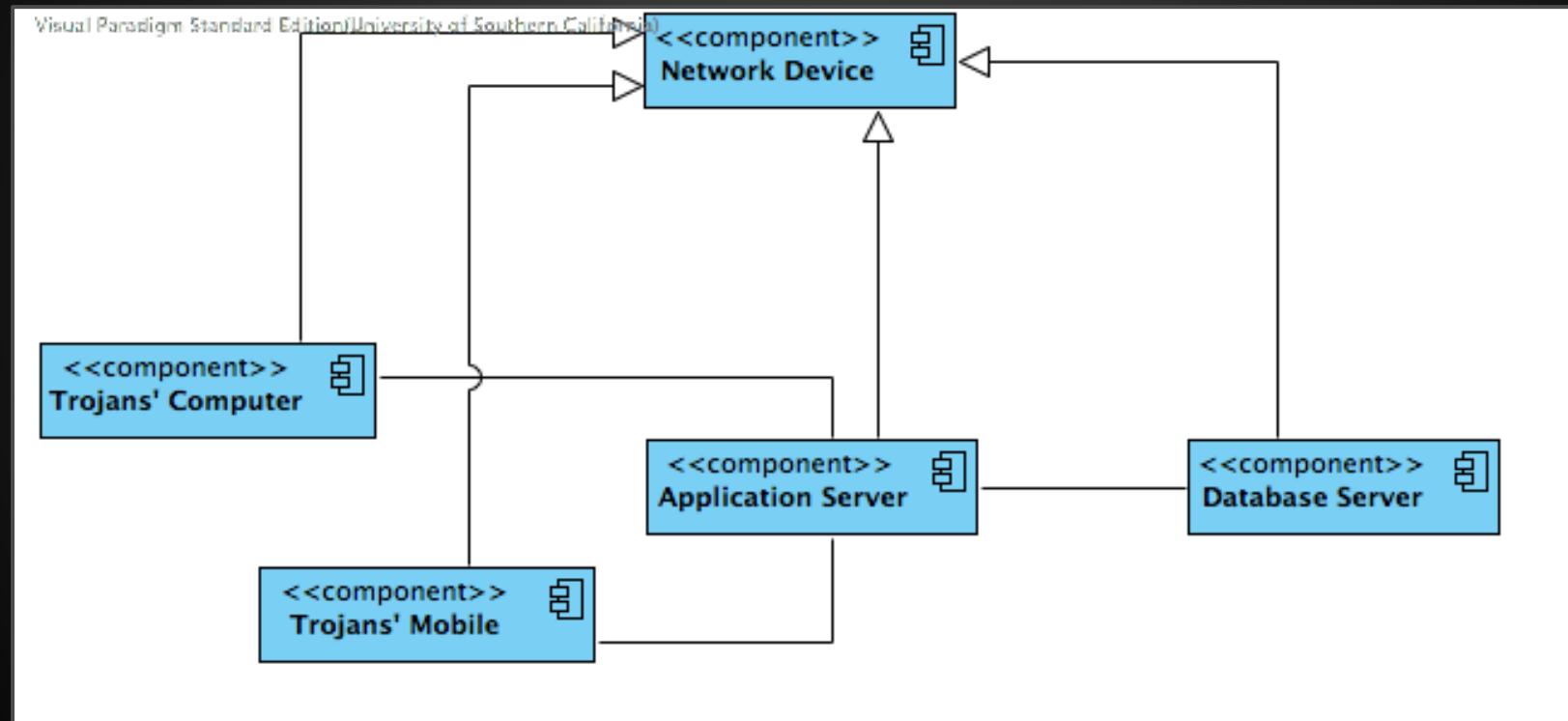


# Architecture

# Class Diagram

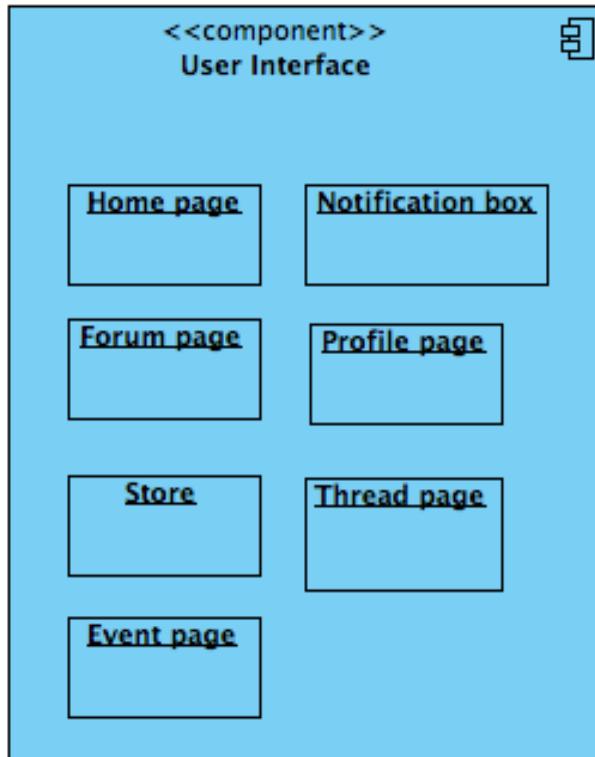


# Hardware Component Class Diagram:



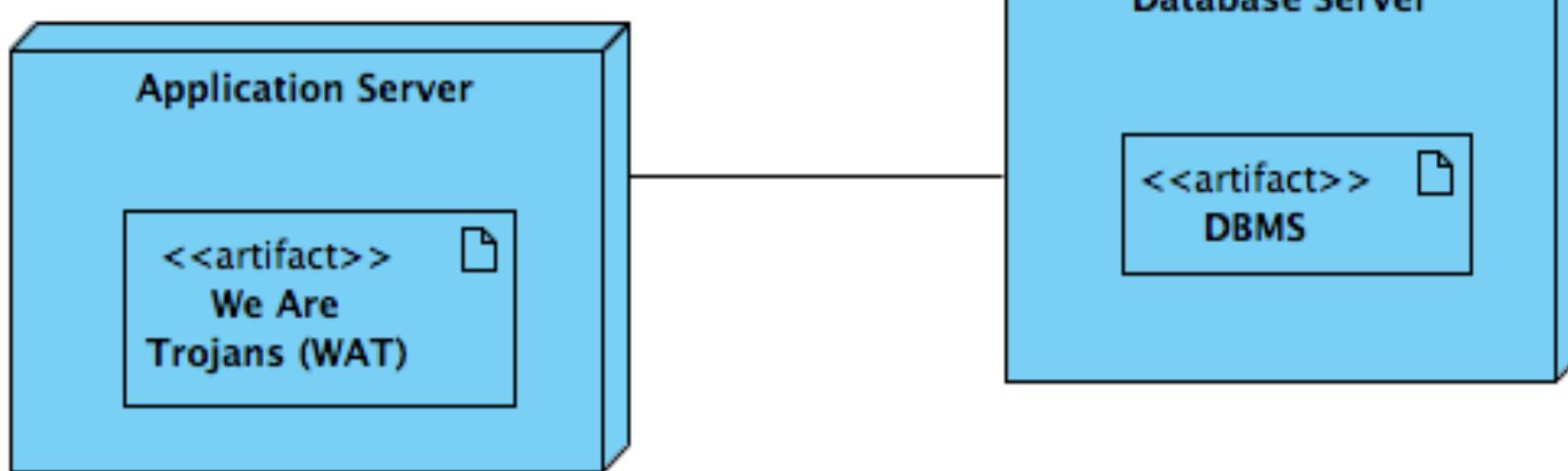
# Software Component Class Diagram:

Visual Paradigm Standard Edition(University of Southern California)



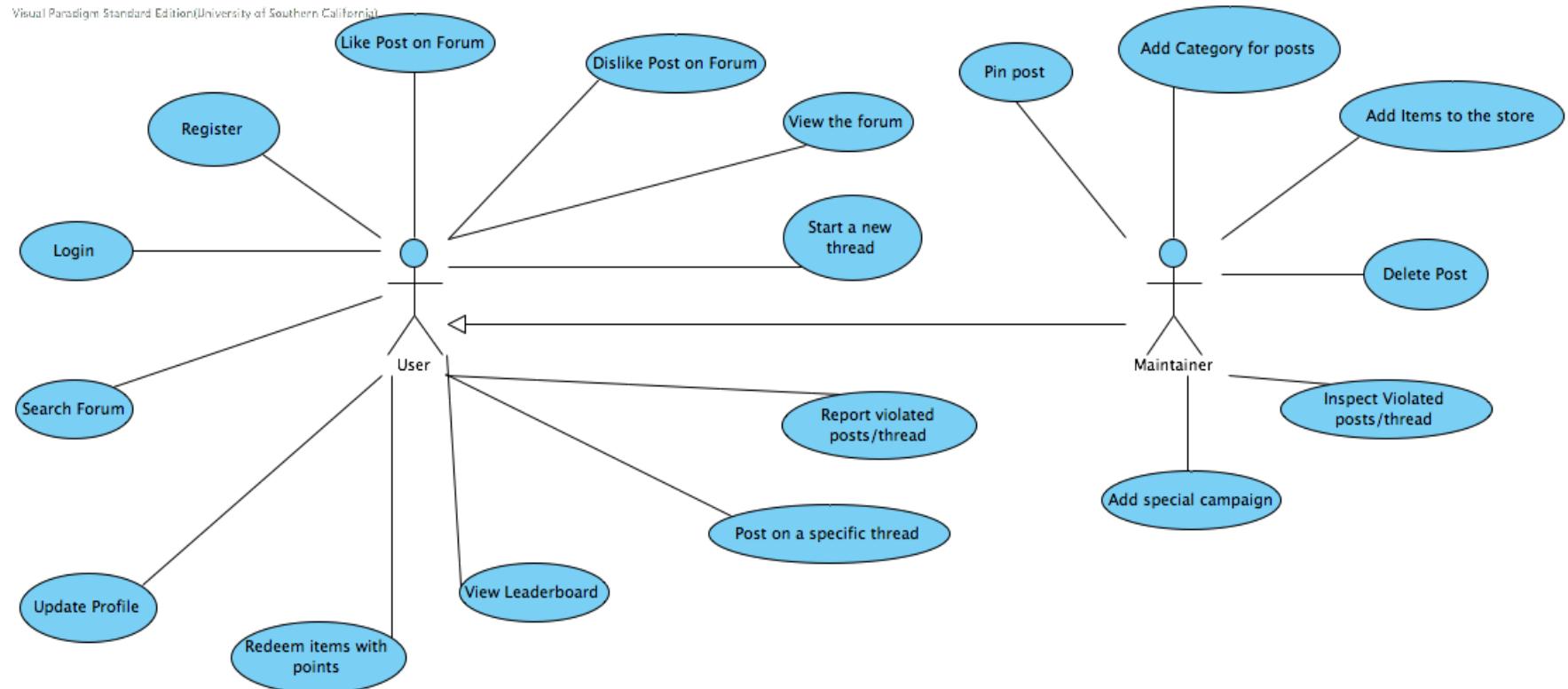
# Deployment Diagram:

Visual Paradigm Standard Edition(University of Southern California)

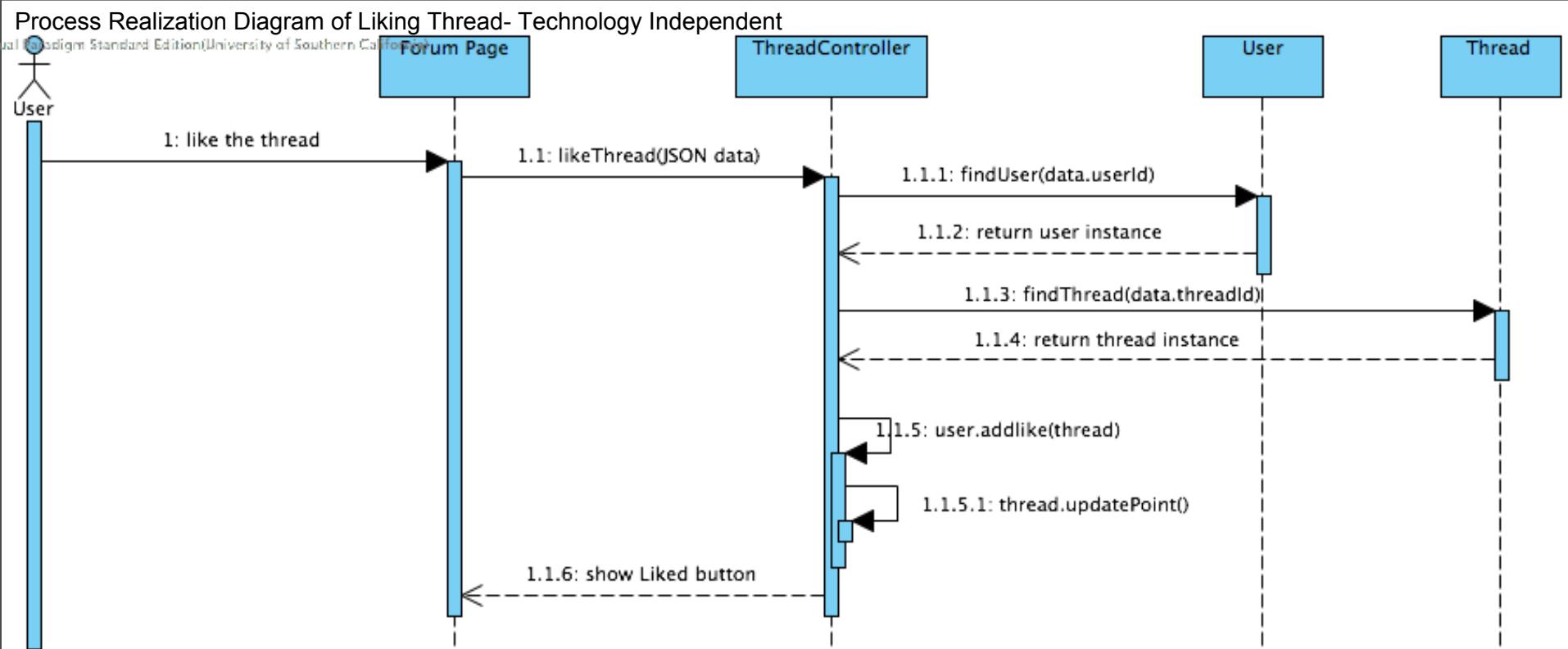


# Use-Case diagram

Visual Paradigm Standard Edition(University of Southern California)

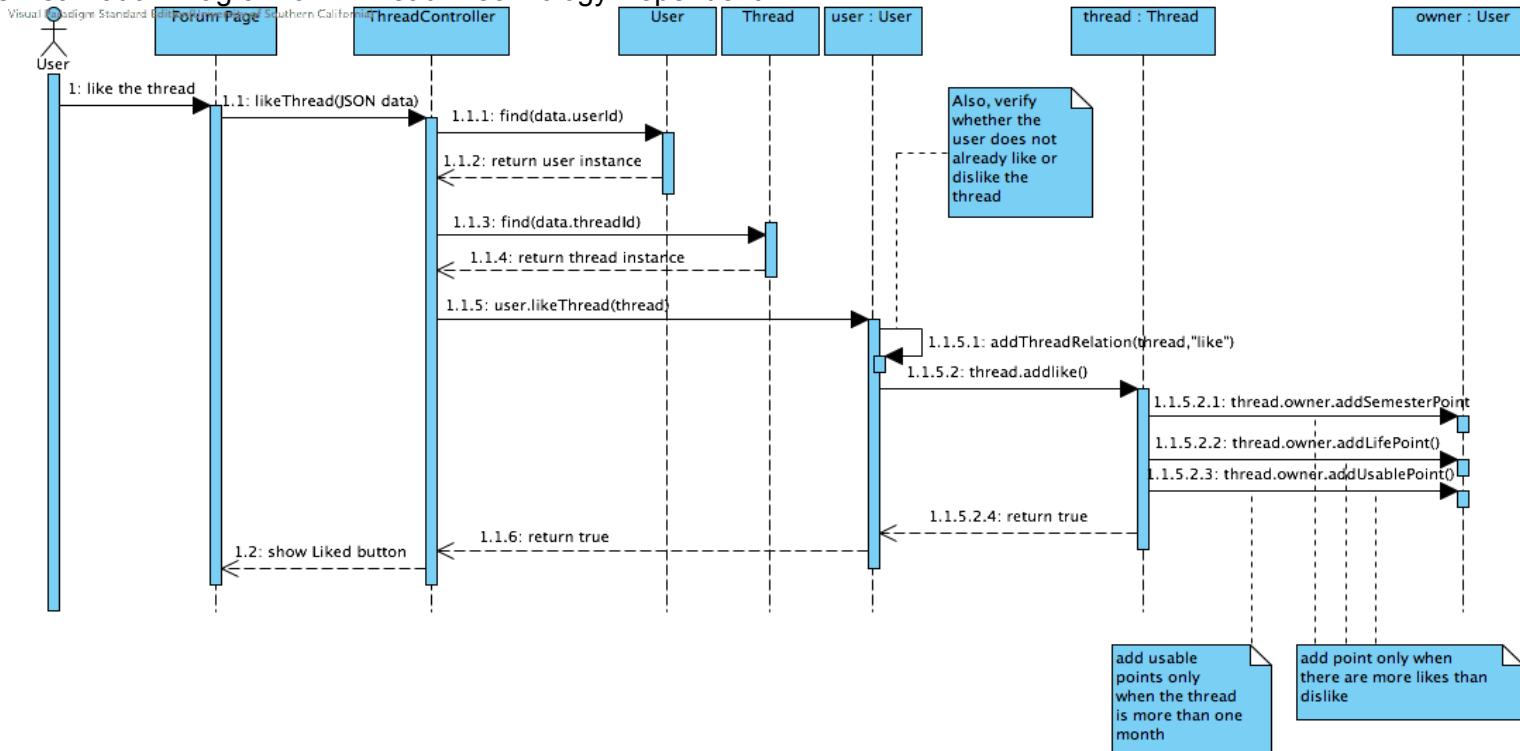


# Sequence Diagram #1



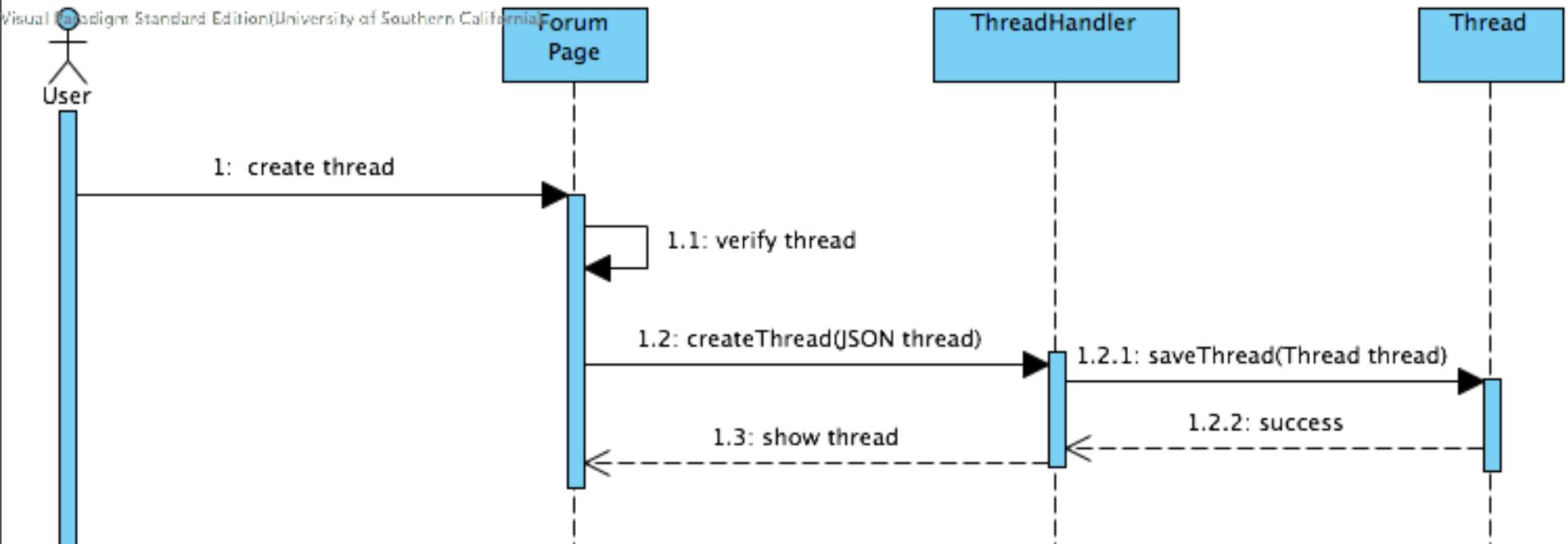
# Sequence Diagram #1.1

Process Realization Diagram of x Thread- Technology Dependent



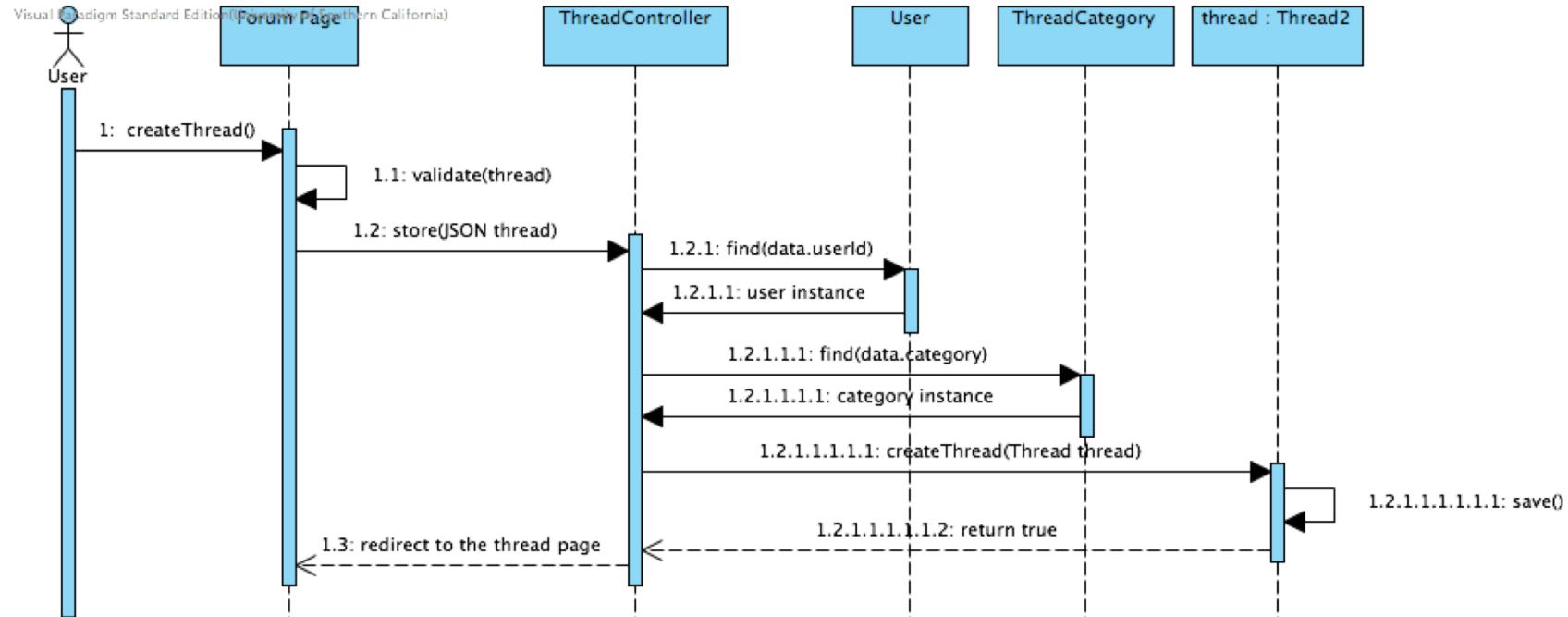
# Sequence Diagram #2

Process Realization Diagram of Creating Thread- Technology Independent



# Sequence Diagram #2.1

Process Realization Diagram of Creating Thread- Technology Dependent



# NDI/NCS COTS Selection

Table 6.1.1: Evaluation Results of Joomla CMS Attributes criteria Screen Matrix

No	W	Joomla							AVG	Total
		R1	R2	R3	R4	R5	R6	R7		
1. Cost	24	9	9	10	10	9	8	8	9	216
2. Familiarity	18	9	8	6	5	2	4	2	5.14	92.57
3. Reliability	13	7	8	8	8	7	7	2	6.71	87.29
4. Security	13	6	8	8	8	7	7	2	6.57	85.43
5. Flexibility	9	7	8	6	6	4	5	2	5.43	48.86
6. Support	9	9	9	8	8	8	7	2	7.29	65.57
7. Performance	7	7	7	7	7	7	7	2	6.29	44
8. Scalability	7	8	7	7	7	7	7	2	6.43	45
Total	100									684.71

# NDI/NCS COTS Selection

Table 6.1.2: Evaluation Results of Wordpress CMS Attributes criteria Screen Matrix

No	W	Wordpress							AVG	Total
		R1	R2	R3	R4	R5	R6	R7		
1. Cost	24	9	8	10	10	8	7	8	8.57	205.71
2. Familiarity	18	6	6	7	4	1	4	2	4.29	77.14
3. Reliability	13	7	8	7	6	6	6	2	6	78
4. Security	13	6	8	8	6	6	6	2	6	78
5. Flexibility	9	8	8	6	4	5	4	2	5.29	47.57
6. Support	9	9	8	8	6	6	6	2	6.43	57.86
7. Performance	7	7	7	6	6	6	6	2	5.86	41
8. Scalability	7	8	6	6	6	6	6	2	5.71	40
<b>Total</b>	100									625.29

# NDI/NCS COTS Selection

Table 6.1.3: Evaluation Results of Laravel Framework Attributes criteria Screen Matrix

No	W	Laravel							AVG	Total
		R1	R2	R3	R4	R5	R6	R7		
1. Cost	24	9	9	7	7	8	8	8	8	192
2. Familiarity	18	6	5	3	4	1	4	8	4.43	79.71
3. Reliability	13	9	8	7	7	6	7	8	7.43	96.57
4. Security	13	9	8	7	7	6	7	8	7.43	96.57
5. Flexibility	9	6	9	6	7	6	5	8	6.71	60.43
6. Support	9	9	7	6	6	6	6	8	6.86	61.71
7. Performance	7	7	7	7	8	6	7	8	7.14	50
8. Scalability	7	8	8	7	7	6	5	8	7	49
<b>Total</b>	100									686

# NDI/NCS COTS Selection

Table 6.1.4: Evaluation Results of Cake PHP Framework Attributes criteria Screen Matrix

No	W	Cake PHP							AVG	Total
		R1	R2	R3	R4	R5	R6	R7		
1. Cost	24	9	9	9	5	10	5	10	8.14	195.43
2. Familiarity	18	4	5	5	4	1	4	10	4.71	84.86
3. Reliability	13	9	8	6	5	6	5	10	7	91
4. Security	13	9	8	6	5	6	5	10	7	91
5. Flexibility	9	6	9	6	5	6	5	10	6.71	60.43
6. Support	9	7	8	6	4	6	3	9	6.14	55.29
7. Performance	7	8	7	6	5	6	5	10	6.71	47
8. Scalability	7	8	8	6	4	6	4	10	6.57	46
Total	100									671



## Life Cycle Plan

# Overview

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- Rebaselined Foundations Phase
  - Rebaselined DCP & ARB
- Development Phase - Construction
  - 2 Construction Cycles
  - Core Capability Drivethrough
  - Transition Readiness ARB
- Development Phase - Transition

# Effort Estimation

X	Name	Size	Labor Rate (\$/Month)	EAF	Language	NOM Effort DEV	EST Effort DEV	PROD	COST	INST COST	Staff	Risk
	Forum Module	3,210	0.0	0.57	Non-s...	10.69	6.09	52...	0.00	0.00	0.8	0.0
	Point System	1,150	0.0	0.46	Non-s...	3.83	1.77	65...	0.00	0.00	0.2	0.0
	Notificatio...	840	0.0	0.42	Non-s...	2.80	1.19	70...	0.00	0.00	0.2	0.0
	Profile Module	880	0.0	0.40	Non-s...	2.93	1.18	74...	0.00	0.00	0.2	0.0
	Store Module	525	0.0	0.37	Non-s...	1.75	0.65	81...	0.00	0.00	0.1	0.0

## Estimation

Total Lines Of Code: 6,605   Hours/PM: 152.0

Estimated	Effort	Schedule	PROD	COST	INST	Staff	Risk
Optimistic	8.70	7.20	759.29	0.00	0.00	1.2	
Most Likely	10.87	7.71	607.43	0.00	0.00	1.4	0.0
Pessimistic	13.59	8.27	485.94	0.00	0.00	1.6	

# Roles and Responsibilities

Name	Role	Construction	Transition
Eirik	Project Manager Life Cycle Planner	Manage project, record progress. Assess development iteration, LCP. Develop Transition Plan.	Manage project, record progress. Assess development iteration, LCP. Develop Support Plan.
Golf	System Architect Builder	Build software Test software	Build software Test software
Nam	Tester Builder	Create test cases Test software Build software	Test software Build software
Suleyman	Requirements Eng. Builder	Build software Test software	Test software Build software

# Roles and Responsibilities

Name	Role	Construction	Transition
Saloni	Builder	Build software Test software	Provide client training
Deni	Feasibility Analyst Builder	Build software Test software	Provide client training
Title	Prototyper Builder	Build software Test software	Provide client training
Ameer	IIV&V QFP	Validate work products	Validate work products

# Iteration Plan

Capability	Description	Priority	Iteration
OC-1	Q&A Forum	High	1
OC-2	WAT Point System	High	1
OC-3	Notification System	High	1
OC-4	Profile	Medium	1
OC-5	Leaderboard	Medium	2
OC-6	Redemption	Medium	2
OC-7	Event System	Low	2

<b>▪ Development Phase - Construction</b>	<b>60 days</b>	<b>Mon 1/26/15</b>	<b>Fri 4/17/15</b>	
<b>▪ Iteration 1 - Core Capability</b>	<b>40 days</b>	<b>Mon 1/26/15</b>	<b>Fri 3/20/15</b>	
<b>▪ Forum Module</b>	<b>30 days</b>	<b>Mon 1/26/15</b>	<b>Fri 3/6/15</b>	
User Registration	5 days	Mon 1/26/15	Fri 1/30/15	<input type="checkbox"/> Pittawat Pamorn
Start Thread, Post	10 days	Mon 2/2/15	Fri 2/13/15	<input type="checkbox"/> Min Li, <input type="checkbox"/> Kamonphop Sri
Manage Threads	5 days	Mon 2/16/15	Fri 2/20/15	<input type="checkbox"/> Kamonphop Sri
Like/Dislike	5 days	Mon 2/16/15	Fri 2/20/15	<input type="checkbox"/> Min Li, Suleyma
Search	10 days	Mon 2/23/15	Fri 3/6/15	<input type="checkbox"/> Kamonphop Sri
Point System	20 days	Mon 2/9/15	Fri 3/6/15	<input type="checkbox"/> Pittawat Pamorn
Notification Module	15 days	Mon 3/2/15	Fri 3/20/15	<input type="checkbox"/> Min Li, <input type="checkbox"/> Saloni
<b>▪ Profile Module</b>	<b>15 days</b>	<b>Mon 3/2/15</b>	<b>Fri 3/20/15</b>	
Create/Edit Profile	15 days	Mon 3/2/15	Fri 3/20/15	<input type="checkbox"/> Pittawat Pamorn
<b>▪ Iteration 2 - Full Capability</b>	<b>20 days</b>	<b>Mon 3/23/15</b>	<b>Fri 4/17/15</b>	
Leaderboard	20 days	Mon 3/23/15	Fri 4/17/15	<input type="checkbox"/> Kamonphop Sri
Event System	20 days	Mon 3/23/15	Fri 4/17/15	<input type="checkbox"/> Min Li, <input type="checkbox"/> Punya
Store Module	10 days	Mon 4/6/15	Fri 4/17/15	<input type="checkbox"/> Saloni Priya, Su
Core Capability Drivethrough	0 days	Wed 3/25/15	Wed 3/25/15	All
Transition Readiness ARB	0 days	Wed 4/8/15	Wed 4/8/15	All
<b>▪ Development Phase - Transition</b>	<b>11 days</b>	<b>Fri 4/17/15</b>	<b>Fri 5/1/15</b>	
Client training	11 days	Fri 4/17/15	Fri 5/1/15	All
Operational Commitment Review	0 days	Mon 4/27/15	Mon 4/27/15	All



## Feasibility Evidence

# Risk Assessment

Risks	Risk Exposure			Risk Mitigations
	Probability Loss	Potential Magnitude	Risk Exposure	
User may prefer existing systems with similar features because our system is new and they do not know about our system enough.	6	9	54	Make the WAT points system as an incentive to attract users over competitors. Advertise our system to USC and users. Create surveys and evaluate users' responses.
User Risk: users may not accept to use the system even if all the specification are met by the system	5	10	50	<ul style="list-style-type: none"> <li>- We conduct the survey to acquire users' feedback regarding the project.</li> <li>- We will create the user interface mock up to acquire feedback from the clients</li> </ul>
Lack of involvement by success-critical-stakeholders: Do not understand clearly enough the success-critical stakeholder positions	5	10	50	Potential users will be involved via conducting a survey and by letting them test prototypes of the user interface. Clients are involved by verifying that our work fits their expectations and by holding weekly meetings.

# Risk Assessment

Risks	Risk Exposure			Risk Mitigations
	Probability Loss	Potential Magnitude	Risk Exposure	
May not have sufficient time to create comprehensive prototypes for important parts of the system because we have many prototypes to create and almost all of them require a lot of time.	8	6	48	Prioritize the prototyping. Use minimum effort for each prototype to gain enough information to see the feature is feasible.
Undefined plan and Requirements: <ul style="list-style-type: none"><li>- The scope of the campaign functionality is not finalized.</li><li>- The requirement about the UI of the system is not finalized.</li><li>- The point system is still not verified by potential users</li><li>- The scope of the search functionality is not certain</li></ul> <p>Requirement have a tendency to change with project development.</p>	5	9	45	<ul style="list-style-type: none"><li>- Consult with the clients how campaign functionality works</li><li>- Prototyping will help us know more about point systems, search functionality, and UI</li><li>- Get the feedback of surveys for UI</li></ul>

# Business Case Analysis

Activities	Time Spent
<b>Evaluation/ Valuation/ Foundations Phases: Time invested (CS577a, 12 weeks)</b>	
Client: meeting via email, phone, and other channels (3*12*2)	72 hours
Winwin sessions [ 2 win-win session * 1 hour * 2 people]	4 hours
Architecture review boards [ 1.5 hours * 2 sessions * 2 people ]	6 hours
<b>Development and Operation Phases: Time invested (CS577b, 12 weeks)</b>	
Client: meeting via email, phone, and other channels [ 3hrs/wk * 12 weeks * 2 people]	72 hours
Architecture Review boards and Core capability Drive-through session [ 1.5*2*2]	6 hours
Deployment of system in operation phase and training	40 hours
<b>Maintenance Period (1 year) maintenance</b>	210 hours
<b>Total</b>	<b>410</b>

# Hardware and Software Cost

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Total cost = \$0

## Benefit Analysis

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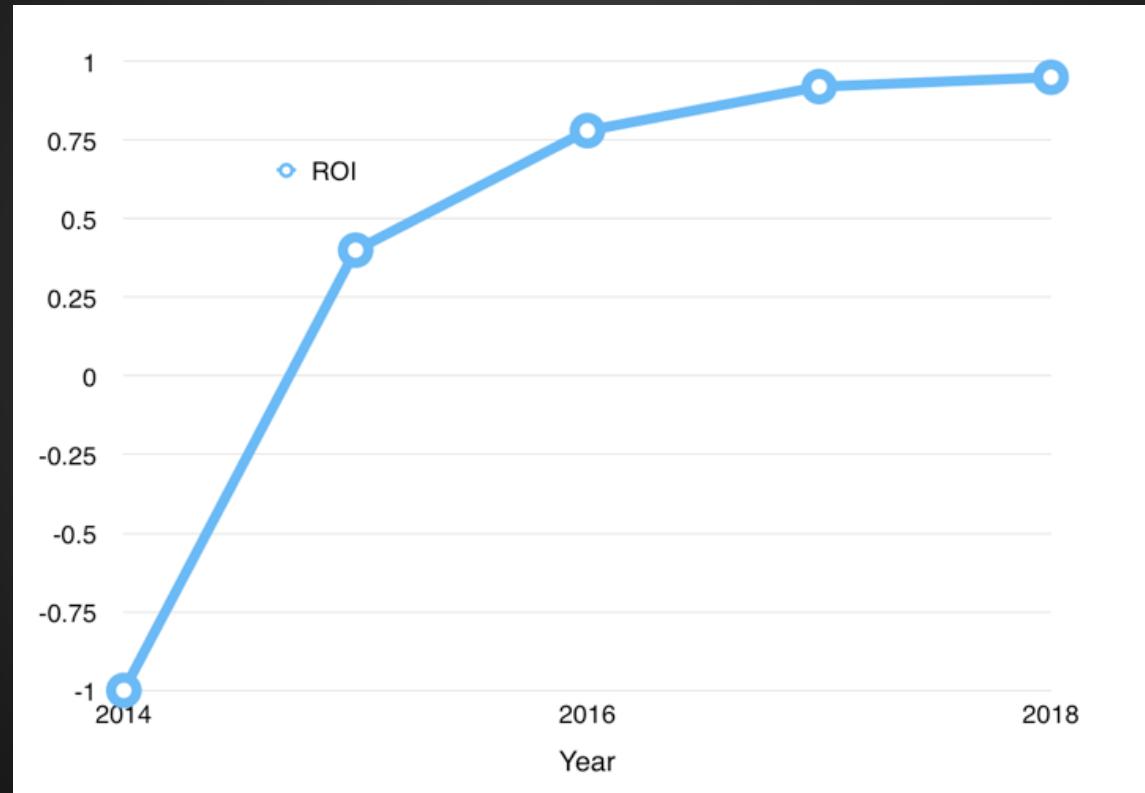
Current activities & resources used	% Reduce	Time Saved (Hours/Year)
USC Tech Support		
Student Support (8hrs * 5days = 40 hours)	25%	520
Faculty Office Hours		
Faculty Support (3hrs/week = 3 hours)	33%	52
Total		572

# ROI Analysis

Assume that maintenance cost increases 10% each year

Year	Cost	Benefit (Effort Saved)	Cumulative Cost	Cumulative Benefit	ROI
2014	200	0	200	0	-1
2015	210	572	410	572	0.40
2016	231	572	641	1144	0.78
2017	254.1	572	895.1	1716	0.92
2018	279.5	572	1174.6	2288	0.95

# ROI Analysis



# NDI/NCS Product

NDI/NCS Products	Purposes
Laravel	PHP Framework, It provide general API and tool to implement PHP web application
MySQL	DBMS To manage database
Apache	Web server
JQuery	Javascript Library, which provide simple and easy-to-use javascript API.
Bootstrap	Front-end framework that contains HTML and CSS based design template

# Capability Feasibility

## CR-1: Q&A Forum

Software/Technology used: Laravel, MySQL, JQuery

Feasibility Evidence: phphub.org and [www.tasty.lk](http://www.tasty.lk) have similar capability which can prove CR-1 is feasible. We also identified that Laravel API can connect, edit, update, delete, and retrieve information from database. JQuery can send an event to our server.

Referred use case diagram: Figure 3 in SSAD file.

## CR-2: WAT Point System

Software/Technology used: Laravel, MySQL

Feasibility Evidence: This capability feasibility has shown in our Prototype that we create algorithm to calculate WAT points.

Referred use case diagram: Figure 3 in SSAD file.

# Capability Feasibility

## CR-3: Notification System

Software/Technology used: Laravel, MySQL, Bootstrap, JQuery, PusherNotifier.js

Feasibility Evidence: Laravel can get specific information from MySQL. PusherNotifier.js can push notifications from our server. We identified from caniuse.com that web sockets (PusherNotifier.js) can use in IE, Firefox, Chrome, Safari many popular web browser.

Referred use case diagram: Figure 3 in SSAD file.

## CR-4: Profile

Software/Technology used: This is the same as CR-1

Feasibility Evidence: This is the same as CR-1. Because in essence, This capability need to connect and retrieve and update user profile data from database to show it on the user profile page.

Referred use case diagram: Figure 3 in SSAD file.

# Capability Feasibility

<b>CR-5: Leaderboard</b>	<p>Software/Technology used: Laravel, MySQL, Bootstrap, JQuery</p>
	<p>Feasibility Evidence: This is almost the same as CR-1. Except we have to sort data by users' Semester point and show on the page which can be done using Eloquent ORM that included in Laravel to sort the data.</p>
	<p>Referred use case diagram: Figure 3 in SSAD file.</p>
<b>CR-6:Redemption</b>	<p>Software/Technology used: Laravel, MySQL, Bootstrap, JQuery</p>
	<p>Feasibility Evidence: Evidence: <a href="http://www.piccologifts.co.uk">www.piccologifts.co.uk</a> and superbalist.com is examples of web that is built by Laravel that have similar capability which can prove CR-5 is feasible. Similar to CR-1, we already test related Laravel API and JQuery function that ensure this is feasible.</p>
	<p>Referred use case diagram: Figure 3 in SSAD file.</p>

# Capability Feasibility

## CR-7: Event System

Software/Technology used: This is the same as CR-1

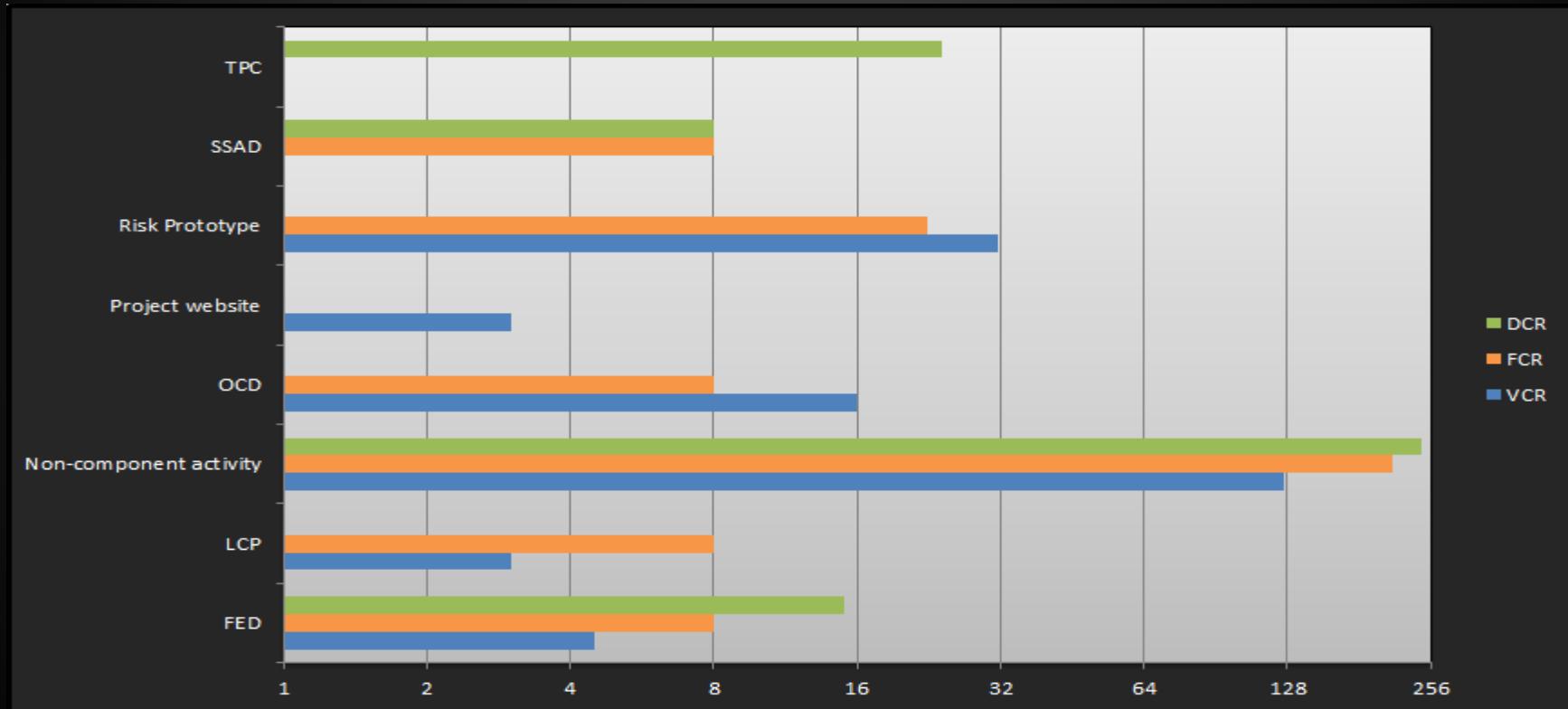
Feasibility Evidence: This is the same as CR-1 because an event is a special thread that created by a maintainer.

Referred use case diagram: Figure 3 in SSAD file.

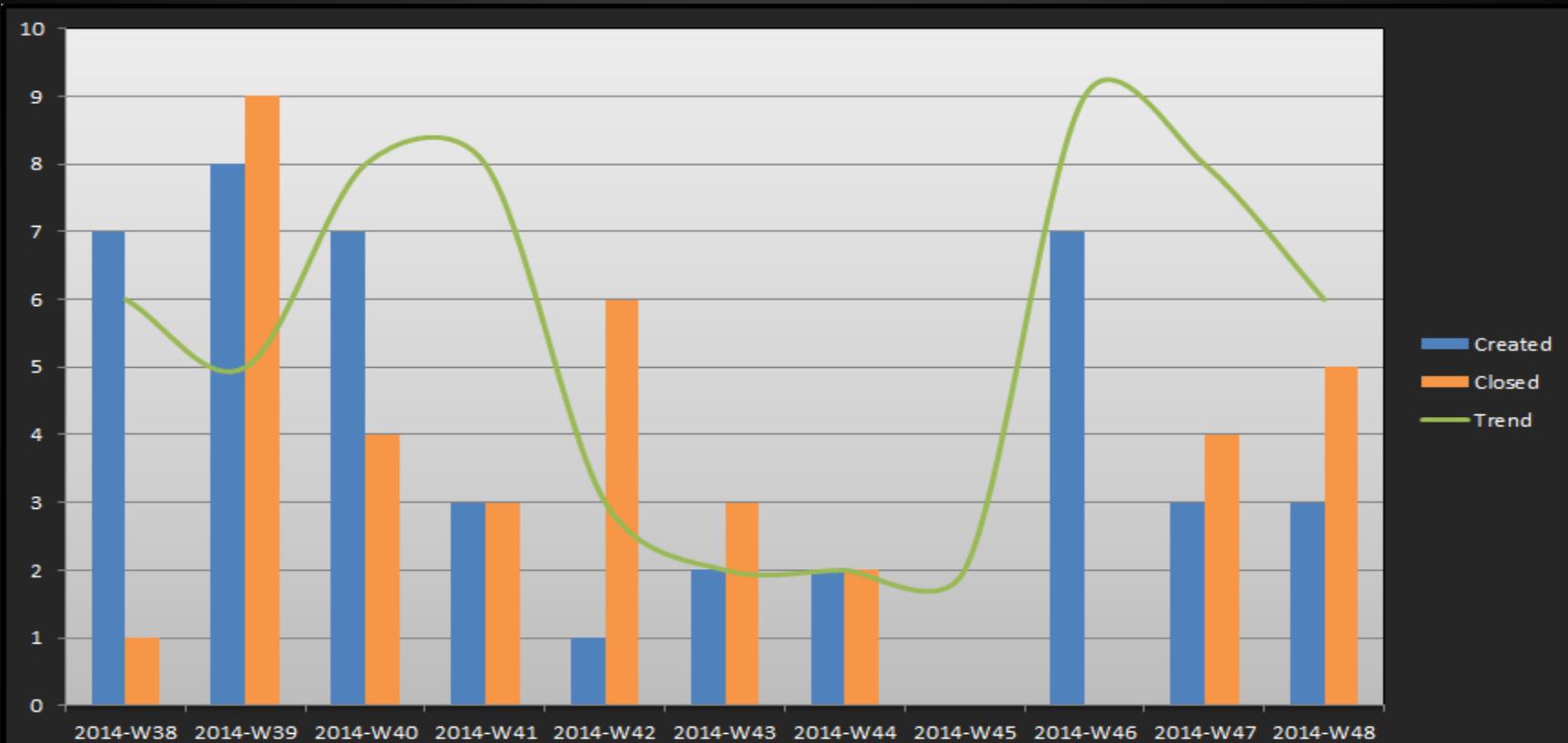


Quality Focal Point

# Group Effort by Component (Hours)



# Bugzilla Activity Trend



# Technical Debt

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Solved



- NDI (technology chosen)
- Personnel Capability (individuals training up)
- Difficult Business Concepts (prototyped)
- Hardware (development environment chosen)

Remaining



- Testing Coverage (more rainy day scenarios need tests)
- Point Redemption Storefront (not critical)
- Hardware (production environment unknown)
- New metrics geared towards development phases (aid in tracking)

# Traceability Matrix

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OCD	Requirements	WinWin	SSAD	TPC
OC-1	Post/Edit/Delete a thread: Users are able to post/edit/delete questions and answers	WC_3240, WC_3241	UC01, UC04, UC05	TC-01-01
OC-2	Calculate the WAT points: The system should correctly calculate three types of WAT Points	WC_3243, WC_3252, WC_3260, WC_3498	UC07	TC-02-01
OC-3	Like/Dislike : Users are able to like or dislike threads and comments	WC_3242, WC_3494	UC03	TC-01-01
OC-4	Make a comment: Users could comment on the post	WC_3241	UC04	TC-01-01
OC-5	Redeem the gift card: Users could use the usable points to redeem the gift card	WC_3245, WC_3435, WC_3436	UC06	TC-03-01
OC-6	Automated useless posts/comments deletion: The system is capable of deleting the useless posts/comments	WC_3259, WC_3437		
OC-7	Automated notification: The system is able to notify the users the number of like/dislike/comment and recent events	WC_3251, WC_3244, WC_3250		
OC-8	Post/Edit/Delete the event: The moderator is able to post/edit the event on the event activity board	WC_3258, WC_3259	UC09	TC-01-01
OC-9	Categorization function: The system should categorize the posts	WC_3247, WC_3477, WC_3497	UC02	

# Questions?

