

Operational Concept Description (OCD)

TIPSURE

Team 09

Aayushi Birla:	Prototyper
David Brenn-Cogen:	Operational Concept Engineer
Raymond Feng:	Life Cycle Planner
Linkun Li:	Feasibility Analyst
Tej Trivedi:	System Architect
Jonathan Tuse:	Project Manager
Nirupama Vaidyanathan:	Requirements Engineer

Version History

Date	Author	Version	Changes made	Rationale
------	--------	---------	--------------	-----------

Version Date: 12/1/14

09/15/14	NV, JT	1.0	· First Draft	
09/30/14	DB-C, NV	2.0	· Benefits chain, ER diagram, program model	· Consistency among all documents and win conditions
10/18/14	DB-C	2.1	- Benefits chain, ER diagram, program model, business workflow	- Responding to critiques made on Draft Commitment
12/1/14	DB-C, AB	3.0	-Capability Goals, Program Model, System Boundary Model, Business Workflow	- Responding to critiques and feedback given for the FCP Package

Table of Contents

[Operational Concept Description \(OCD\)](#)

[Version History](#)

[Table of Contents](#)

[Table of Tables](#)

[Table of Figures](#)

[1. Introduction](#)

Version Date: 12/1/14

1.1	Purpose of the OCD
1.2	Status of the OCD
2.	Shared Vision
2.1	Benefits Chain
2.2	System Capability Description
2.3	System Boundary and Environment
3.	System Transformation
3.1	Information on Current System
3.1.1	Infrastructure
3.1.2	Artifacts
3.1.3	Current Business Workflow
3.2	System Objectives, Constraints and Priorities
3.2.1	Capability Goals
3.2.3	Organizational Goals
3.2.4	Constraints
3.2.5	Relation to Current System
3.3	Proposed New Operational Concept
3.3.1	Element Relationship Diagram
3.3.2	Business Workflows
3.4	Organizational and Operational Implications
3.4.1	Organizational Transformations
3.4.2	Operational Transformations

Table of Tables

Table 1:	The Program Model	2
Table 2:	Level of Service Goals	7
Table 3:	Relation to Current System	8

Table of Figures

Figure 1:	Benefits Chain Diagram of TipSure	3
Figure 2:	System Boundary and Environment Diagram of TipSure	5
Figure 3:	Element Relationship Diagram	
Figure 4:	Business Workflow Diagram TipSure	11

1. Introduction

1.1 Purpose of the OCD

“This document provides, in detail, the shared visions and goals of the stakeholders of TipSure.” The success-critical stakeholders of the project are Stacy, as the owner of TipSure; developers

2. Shared Vision

Assumptions			
Tipping is required			
People want access through mobile			
People want the information at remote places			
Tipping info presented is correct			
The validation of business information is correct			
Business owners want to add their information on TipSure			
There is an effective method to verify that the comments are from legitimate users			
The COTS products are functioning properly			
Stakeholders(Who)	Initiatives(What)	Value Propositions(Why)	Beneficiaries (Whom)
1. Developers	1.Develop a System	1.To remove the awkwardness for the user and business user of who, when and how much to pay	1.Business Owners
2. TipSure	2.Grow the database of TipSure Information	2. Enable users to look for quick access to the data for a specific business destination using geolocation	2.Users
3. Business owners, Users	3.Marketing	3. Enable users to provide tipping feedback at individual businesses	3. TipSure
	-Users	4. Generate revenue	
	-Business owners		
	4.Solicit Sponsors		
Costs		Benefits	
1.Costs of COTS products depending on the traffic on TipSure		1.Users will have the tipping info they need	
		2.Business owners can give appropriate tipping information	

Table 1: The Program Model

2.1 Benefits Chain

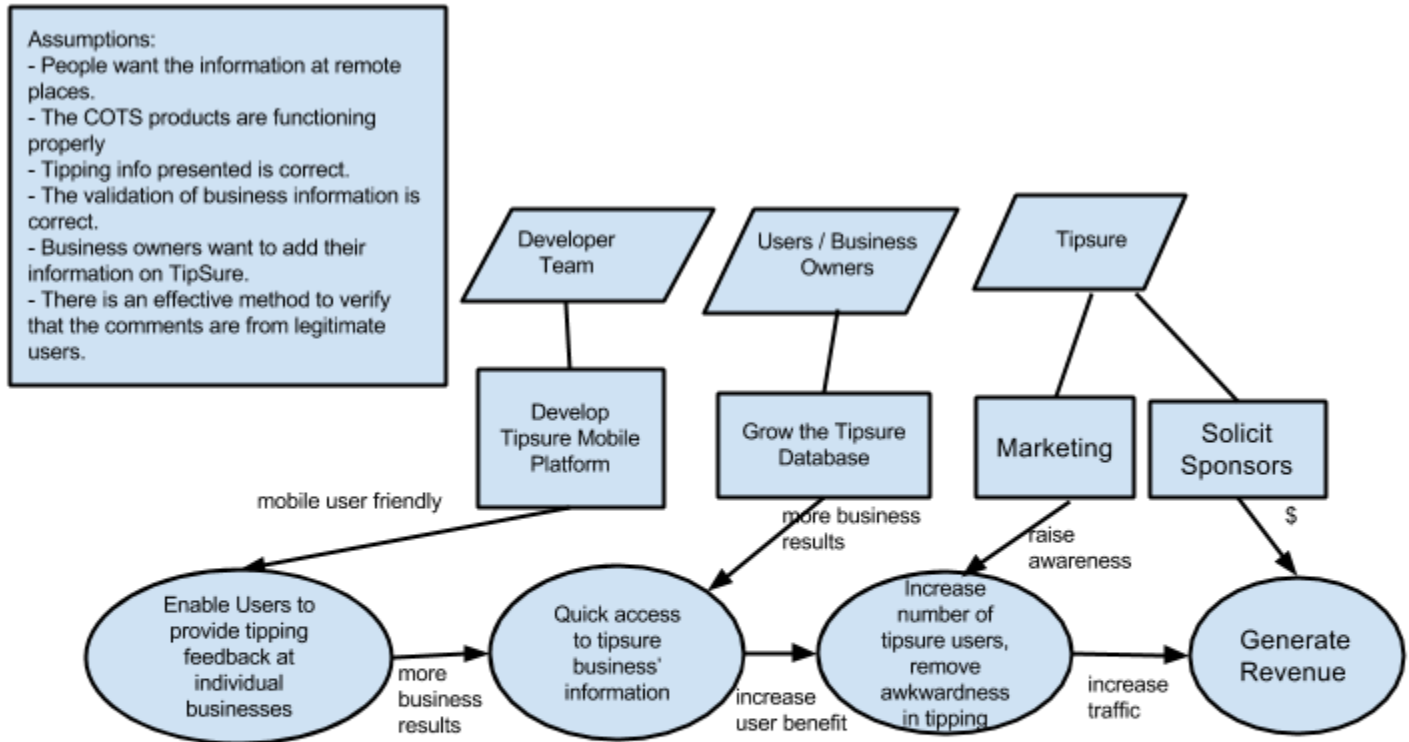


Figure 1: Benefits Chain Diagram of TipSure

2.2 System Capability Description

This project will bring the already existing site of Tipsure.com to a mobile platform. Tipsure.com provides users with information about how much to tip providers of various services in different parts of the world. Furthermore, this information is validated not only by other users, but also by the businesses providing the services. Some of the features included in Tipsure.com are searching and geolocation services (in order to find nearby businesses), user and business owner feedback, travel guides, and the ability to add new businesses to provide business-specific tipping information.

Already in place for Tipsure.com is a responsive website, which means the site adapts to the screen size of the device the user is accessing it from. However, the client (who is also the founder of Tipsure.com) is not entirely satisfied with the user experience delivered by the responsive website while accessing the site from a mobile device (see the results benefit chain above for a list of the improvements needed in order to satisfy the requirements of the client). In order to deliver these improvements, the development team has elected to create a web app, which will deliver a smoother user experience, be able to handle all the features currently implemented on the responsive website, and is feasible in terms of the time constraints of the project.

The web application developed during this project will largely enhance the existing functionality of Tipsure.com when the site is accessed from a mobile device. In many cases, the users of the system will access the app on-the-go, not while at a desktop. Therefore, usability of the system on a mobile platform is key to the success of the project and is success-critical for the client.

No other service on the web provides tipping information like Tipsure.com; its already-large amount of data on existing businesses, as well as the large number of features related to acquiring tipping information set it apart from any would-be competitors. Other companies, such as Yelp, offer a great deal of business related information, but none offer tipping information like Tipsure.com.

2.3 System Boundary and Environment

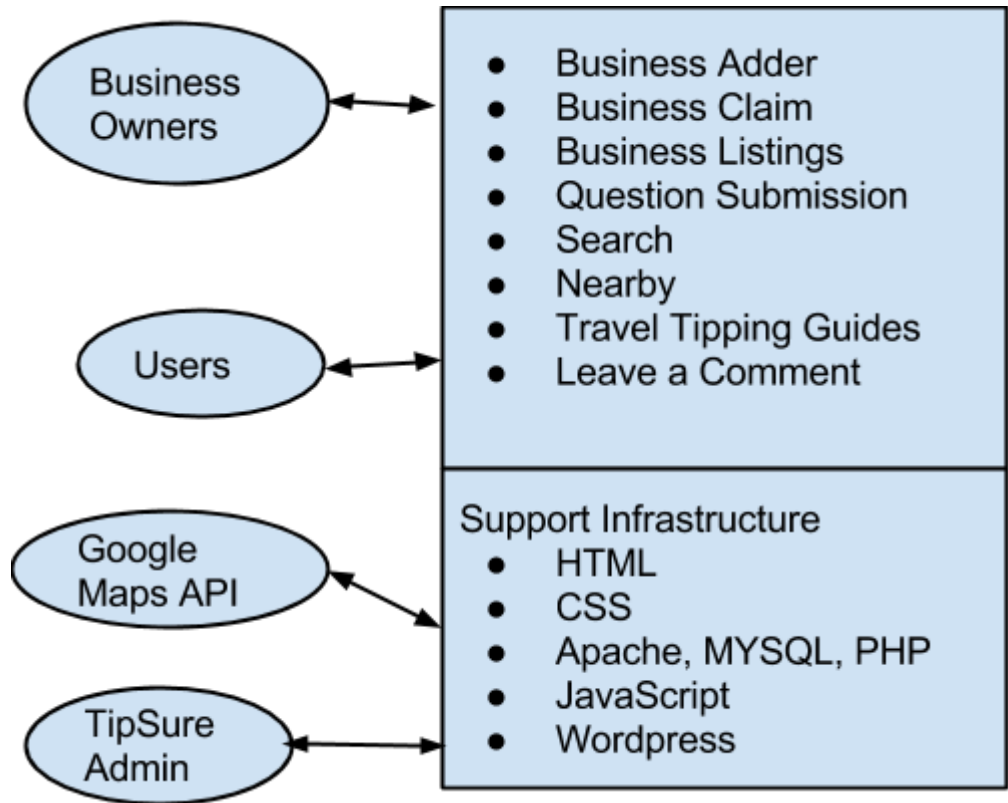


Figure 2: System Boundary and Environment Diagram of TipSure

3. System Transformation

3.1 Information on Current System

3.1.1 Infrastructure

As mentioned in the System Capability Description, Tipsure.com already exists as a responsive website. The site is hosted by SiteGround.com and utilizes Wordpress as a content management system. The current hosting package utilized by the site includes 20GB of storage and up to 25k monthly visitors. The package can be upgraded at any time should more storage be needed, or more than 25k visitors start visiting the site per month. It was built and is maintained by the client/founder of the site, through the use of various plugins and Wordpress Templates. In the coming weeks, the development team will modify existing plugins and templates, as well as create new ones, in order to meet the specifications for the new mobile site as laid out by the client.

3.1.2 Artifacts

- Location identification and search - Users currently search for businesses around their geolocation. When TipSure has tipping information on these local businesses, it is displayed to the user. This system is already implemented on the responsive site, but has some errors that render it very ineffective and occasionally unusable.
- Database/Lookup system - Users are able to search the database for businesses via geolocation, TipSure number (a unique identifier for each business), as well as by city and address. Businesses and the site administrators are also able to edit listings and the database information accordingly, based on their access rights (i.e. a businesses are not allowed to edit their competitor's information).
- Comment system - Users can comment on each business/listings and subsequently have the wider public read these comments. Currently this system is implemented, but the security and permissions setup is not entirely functional, thus the client has requested us to look into this as well.
- Social media sharing - Users can share a business listing via a link to social media.

3.1.3 Current Business Workflow

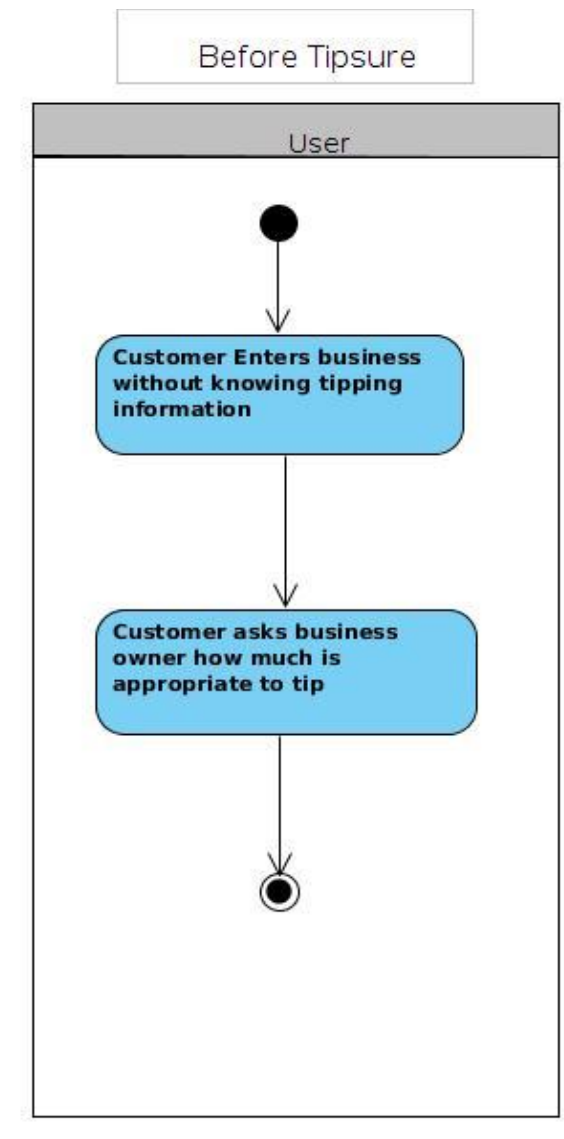


Figure 3: Business Workflow Diagram

3.2 System Objectives, Constraints and Priorities

3.2.1 Capability Goals

Capability Goals	Priority Level, 10=highest
OC-1 Access Content on Mobile Platform: View business listings and travel tipping guides	10.00
OC-2 Search: e.g. Search by Tipsure ID, Nearby Search	8
OC-3 Maintain Business Information: Claim businesses, add comments at each business, add business, ask a question	8

3.2.2 Level of Service Goals

Table 2: Service Goals

Service Goal	Acceptable Value
Reduce Loading Time* *tested on GTmetrix	5-10 seconds

3.2.3 Organizational Goals

- **OG-1:** Increase the site profitability by increasing traffic to the site and allowing for advertisements
- **OG-2:** Provide a rewarding user experience by reducing the awkwardness of tipping in any given business transaction
- **OG-3:** Provide a rewarding user experience by improving site usability on mobile devices and increasing the amount of important information through user and business comments

3.2.4 Constraints

- **CO-1: Existing Database:** The system should integrate with the existing TipSure database.
- **CO-2: Google API:** The system should use the Google Maps API.
- **CO-3: Budget:** The maximum budget is \$500.
- **CO-4: Hosting Provider:** The system should be deployed on TipSure's current hosting provider.

3.2.5 Relation to Current System

Table 3: Relation to Current System

Capabilities	Current System	New System
Roles and Responsibilities	<ul style="list-style-type: none">• Administrator: Approve bussiness claims, approve user comments, answer questions, update travel guides• User: Utilize Tipsure services via the website to find tipping information, add comments, and add businesses• Businesses: Give feedback, claim businesses	Identical
User Interactions	Users and (business owners) navigate to the site for Tipsure.com via a web browser, whether on a desktop or on a mobile device	On a mobile device, users will click an icon on their device screen, which will open a browser and automatically navigate to the site
Infrastructure	Responsive website, hosted remotely	A newly-designed web app designed to feel more like a native application, hosted by the same hosting provider
Stakeholder Essentials and Amenities	<ul style="list-style-type: none">• Administrator: Maintains control of information on the site• Users: Ability to search for and access Tipsure information and services• Businesses: Ability claim businesses and provide feedback	Aesthetic and usability Improvement for the users and business owners
Future Capabilities	Less-than-desirable user experience on a mobile device	A more seamless user experience from a mobile device

3.3 Proposed New Operational Concept

The focus of this project is to develop new web pages for a web app that will create a better user experience when navigating through the site. Currently many of the key features that must be a part of the new system are already in place on the responsive website, but the user interface of the site has bugs and is not as seamless as the client would like; the proposal is therefore to basically redo the site for a better mobile device experience, and allow users on-the-go to effectively use Tipsure.com services.

There are also components of the site that are not yet fully functional, and one such area will create a new operational capability for the apps users; a search of the database for a Tipsure-implemented business ID (unique to each business identified by Tipsure) has yet to be fully developed. This feature will allow users to identify a business they know by this unique number, which they can then use to search the database on the site for the business in question.

3.3.1 Element Relationship Diagram

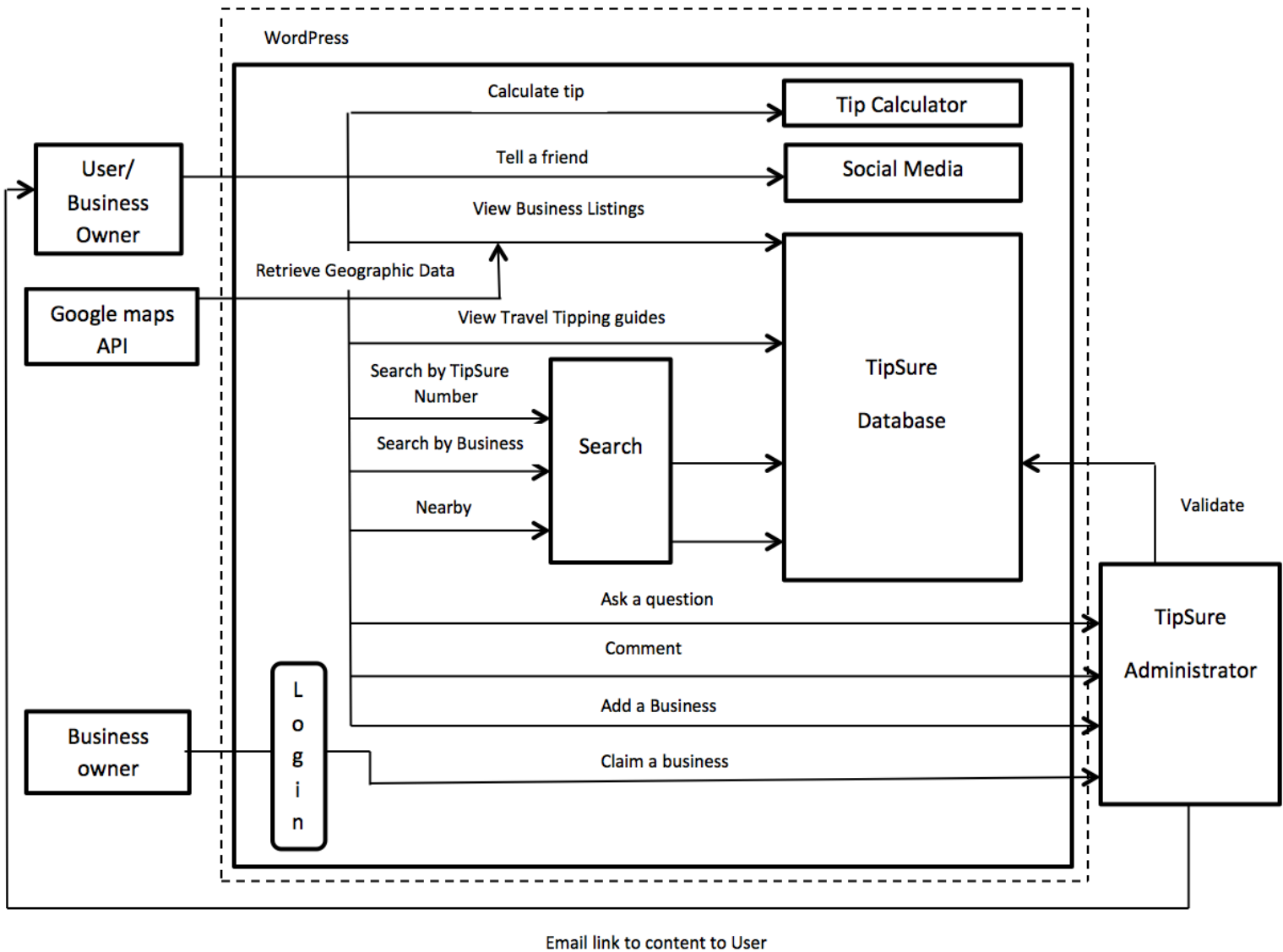
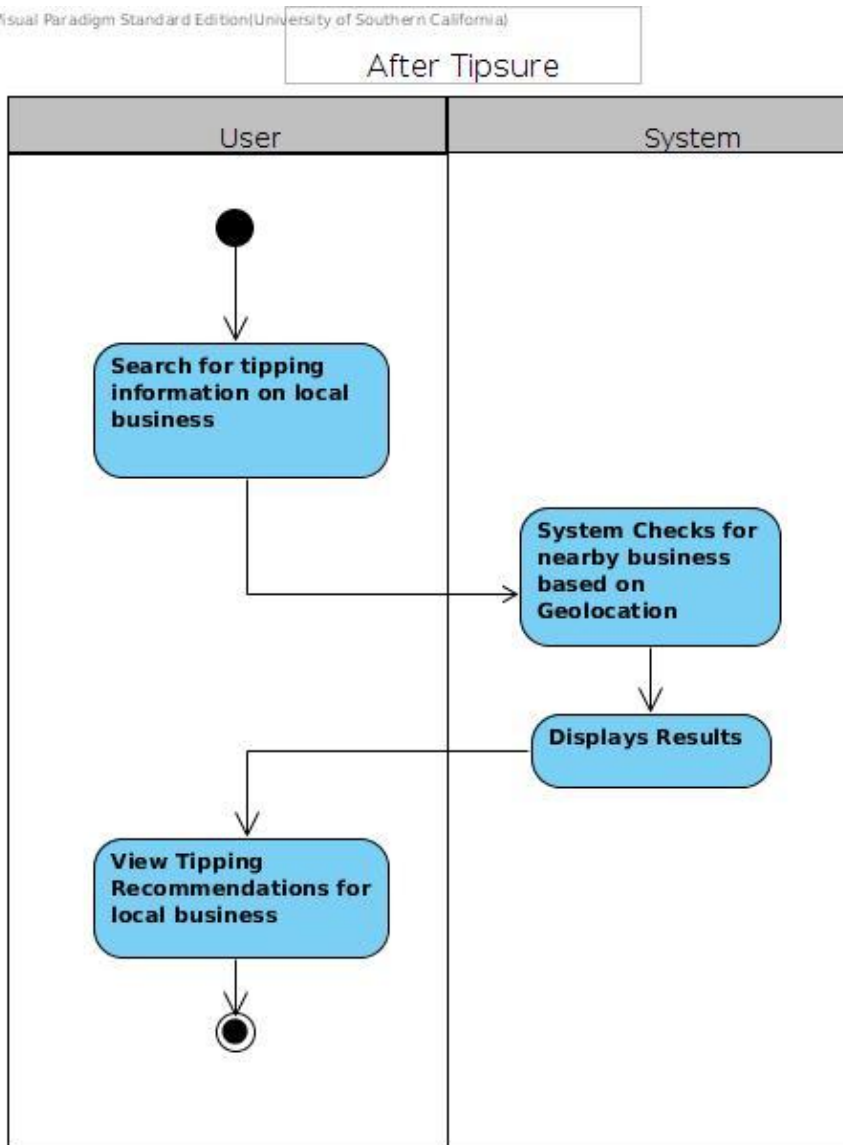


Figure 4: Element Relationship Diagram of TipSure app

(NDI-intensive project)

3.3.2 Business Workflows

Visual Paradigm Standard Edition(University of Southern California)



3.4 Organizational and Operational Implications

3.4.1 Organizational Transformations

From the administrators standpoint, the new mobile site being developed for this project will operate in precisely the same as the already-existing responsive website does; The project, from a high-level view, is simply the addition of a new set of web pages with a specific design in mind that must implement the existing sites functionality and complete some partially implemented features; the partially implemented feature of searching by Tipsure ID that will give the user a new operational capability (discussed in section 3.3) will not present new organizational changes, as it has been implemented from the administrative standpoint (sticker design, printing, distribution, etc.) since before this project began.

3.4.2 Operational Transformations

Most of the features requested by the client for the new mobile version of Tipsure.com are already implemented through the responsive version of the site. Our approach of building a web app to implement the new mobile site allows us to migrate the vast majority of this functionality to the new version of the site. For example, the database, travel guides, and back end functionality providing the comment system, business claim system, and ask-a-question service can be recycled and used in the new site.

However, the one area in which operational transformation does come into play is that of the user experience. Users will access the new mobile site on a mobile device in a way similar to the use of a native app; an icon on the device screen will be tapped, and navigation to the site will be automatically performed. Fortunately, this change requires little adaptation by the users, and no adaptation by the administrator/client/business owners (except for the fact that business owners will be able to interact with the site in the same new way that other users do). As previously mentioned, however, while the operational change for the user will require little work and little to no learning curve, it will provide a large boost in usability and aesthetics.