

California State University Monterey Bay



School of Computing & Design

CST 401 Capstone Proposal

Bolsa Analytical Lab

The project of a website for Analytical Lab business

By

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Abstract

The issue of not having an actual website is very important for a business, especially for growing business. Due to this, Bolsa Lab missed huge potential customers. Therefore, I intend to build and design a functional website for Bolsa Lab in order to help the customers quickly and easily find out more about the Bolsa business and the products and services they have to offer. In today's business climate the web is replacing the traditional telephone yellow pages as a source for customer needed services and goods. It is now faster and easier to find and contact businesses with much more information than ever before in human history. Almost every business type can benefit from a web site with easy access. Therefore the goal was to produce a website for Bolsa that would convey the information about its services offered as the original site was developed in 2008 and could not be accessed from a computer only a cell phone. Bolsa needed an upgrade.

Executive Summary

The project proposal of Bolsa Lab web design introduces the design services for the website (<http://www.bolsa-lab.com>). This project proposal will highlight many aspects of web designing and Bolsa Lab business benefits of increased web traffic, new customers, increase sales and higher profits. This document sets out the functions and features offered by the website design to cater for i) Spread of the project results to the effectively publish online ii) help Bolsa lab company and help the business increasing

sales and profit through their products or services online iii) reach the target audience to the website.

The current website is not yet functional. With the absence of effective internet information, the company is losing a big target audience who are to become potential customers and visitors which will lead to potential sales. The web designer will use coding and design software abilities and high-level technical skills to provide the client with a comprehensive solution including gathering the initial information, designing and developing the website and usability testing. The project will consist of steps: a)Problem Description, b)Solution, c)Deliverables, d)Testing and Evaluation, e)Budget and f)Schedule/Timeline.

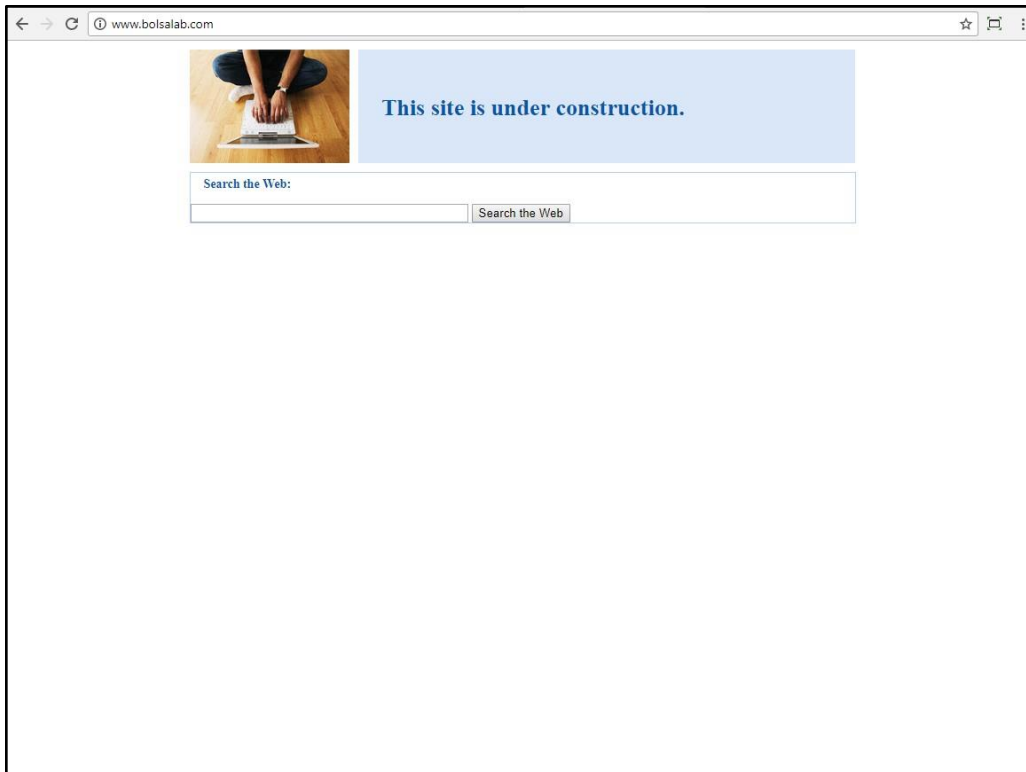
Upon the completion of the project the deliverables will be provided with Home page, About page, three child pages of the company's services, Contact page, Sign-in/Sign-up page, Financial/payment page and the unique Logo for the company. With the total estimated budget of 225 hours of web design the costs and other expenses for a total is \$26,993.00. This web design project will be at no cost for its planning, design and implementation by the designer. However, the client is responsible for the web hosting and platform fees along with the photographs and content. I am proceeding as though this is a commercial job which allows me to offer the same high-class web design services at no cost.

As this is a for profit business the most desired outcome is increased sales and profit. The entire site will be built as a marketing tool with selection of services and test made simple and quickly. The site will be designed to attract and commit new customer groups and individuals. Customers will also be able to schedule sampling and order

supplies. Long term contracts for periodic sampling will be provided online with online signature and commitment documents. The company will continue its local business with services to quickly sample, test and report the findings. It wants to keep this personal touch and have customers return for repeat business. Bolsa's competition are large, national and institutional companies that are impersonal and cumbersome. Bolsa must keep its personal service and quick response business practices which will be enhanced through the web site.

Project Description

Bolsa Analytical Lab is a business that provides chemical and microbiological testing services of water, soil, and food. Located in Hollister, California it has had this business for 24 years. Currently the company has only the mobile version of their service information. On the internet, they have the domain name, but when you type it into the address bar of the browser, the page displays the text message of "This site is under construction."



This project to create a new website for Bolsa will bring the lab modern marketing and advertising to increase customer base and help with the management of the company in scheduling, chain of custody, reporting and contracts.

Problem description

With lack of the effective online presence, they are missing the huge percent of the population that could be the real customers and they also have lost the opportunities to build the reputation and brand recognition. The current phone application just provides a phone number, address and an email function. There are few photographs but the application does not provide enough information for any real decision making by a potential customer nor does it give the broad spectrum of analytical testing for soil, water and products.

Target audience

Bolsa Analytical Lab targets its marketing to the clients who are homeowners with the wells in their house property, small business, water utilities, water departments of city, state and county governments, farm owners, and who are located locally and the entire San Francisco bay area. California's largest business by far is agriculture. With new advances in precision farming soil and water testing is critical to optimize production and even crop selection. Animal farming requires analytical services to ensure feed and product quality. With the drought conditions in the area the optimal use of resources including water is essential. The liability to businesses, farms and governments has increased dramatically so water and product quality are essential.

Environmental scan or review of projects solving similar problems



The business provides food nutrition evaluations, analysis, accurate reports, food safety consulting and soil/water analysis.

Environmental impact studies and assessments are commonplace for new ventures and facilities.

The "organic" certification requires testing which Bolsa can perform for herbicides and pesticides.

Municipal waste and potable water testing and verification are now standard with heavy fines and even jail time for penalties.

Solution Description

Project description

The project includes several stages:

1. gathering initial information
 - a. Define customer base
 - b. Survey customers and potential customers
 - c. Analyze competition
 - d. Thorough review of current and near future web alternatives
 - e. Determine which tests to feature and promote
 - f. Conduct stakeholder meetings at critical decision points
2. Design the web site
 - a. Select format, layout, colors, fonts and backgrounds
 - b. Determine what existing photographs and charts to use and get new as needed
 - c. Make decisions on the use of videos and their use
 - d. Integrate customer base and their history into the site
 - e. Determine what tracking requirements are needed
 - f. Map intuitive site requirements
 - g. Define tools required and or desired
 - h. Determine which and what financial, payment and invoice services to use
3. Develop and build the website
 - a. Make the decision and which web building tools to use, Adobe Muse, Dreamweaver.

- b. Build the home page
- c. Build the main menu headings and pages
- d. Integrate customer base
- e. Create contact page
- f. Provide services for the different types of product testing
- g. Create scheduling and sampling protocols
- h. Insert 3rd party financial capabilities for payments, invoicing, receipts and procurement

4. Usability Testing

- a. Stakeholder review
- b. Heuristic review
- c. Peer review
- d. Internal website trials
- e. Post to the internet
- f. Incorporate customer and user comments

Project goals

As this is a for profit business the most desired outcome is increased sales and profit. The entire site will be built as a marketing tool with selection of services and test made simple and quickly. One of the biggest problems with this business is the time lag to collect fees. The prompt payment discount, long term contracts and online payment option will shorten the cash flow cycle. In addition, tools will be built in for the business

to collect sales data and show it graphically. Also, customer lists with contact, address, email and phone numbers will be created.

In addition the site will be designed to attract and commit new customer groups and individuals. Customers will also be able to schedule sampling and order supplies. Long term contracts for periodic sampling will be online with online signature and commitment documents.

The one advantage that this company wishes to continue is that it is a local business with services to quickly sample, test and report the findings. It wants to keep this personal touch and have customers return for repeat business.

Project solutions and problem

They really need an effective and powerful website to grow and expand their market and extend the local reach for larger customer base. I will create a website to help them improve, growth, sales and visibility for their business. The web site needs to be a complete and functioning tool for pricing, sales, billing, payments, and contracts. It needs to provide enough information on the sales and services for the customer to make buying decisions and payments during a one-time visit.

Bolsa's competition are large, national and institutional companies that are impersonal and cumbersome. Bolsa must keep its personal service and quick response business practices. In addition chain of custody issues are becoming more important as liability and public awareness are increasing. Chain of custody tools will be embedded in the website with all documentation readily available.

Most small businesses have cash flow concerns. Automatic customer billing and receipt features are necessary and essential. They should include automatic invoicing, direct payment through cards and bank accounts and strong accounting/audit tools.

Methodology

Implementation Plan

Implementation plan needs to be a flexible and yet very detailed plan and has and will include the following:

1. Research to select which company to work with: I made the decision to work with a local Hollister company within five miles of my home. I obtained a list of the local businesses and then went online to see the quality and usability of their existing web sites or even if they had one. Several businesses were targeted and using Google Maps I created a route to call and see which would be interested in working with me and to get a new or improved website. Several businesses were visited and one of the five I called on was interested. Bolsa Analytical Laboratory located in the Hollister industrial park north of Hollister by the airport. In discussions with the owner the company did have a website but it was “under construction” so it could not be accessed. However Bolsa did have a five page cell phone application but it was not what the owner wanted. Being a small business they did not have the resources in people to rebuild a modern website. The “under construction” site was developed 10 years earlier and was no longer functioning.
2. Stakeholder meetings were held for three Friday afternoons in September. The owner provided a rough outline of the website he wanted in the first meeting:
 - a. He first wanted a simple intuitive site with no animation

- b. Second he needed a home page to grab the viewer and get their immediate attention and to invite additional exploring
- c. Third he wanted to expand the testing services that the company provided and that it should include water, soil, product and air quality capabilities.
- d. Fourth he requested that forms and contracts should be included that could be completed, signed and submitted online.
- e. And fifth there should be a good financial function where billing and payments could be made upon ordering.

In the second meeting basic homepage design mockups were presented and the owner liked one that was from a WordPress template. It was a very simple yet colorful design with larger buttons for selecting the type of testing the customer wanted. It was also agreed to that a customer database should be included offline with “about” and “contact” pages.

In the third meeting he provided additional photographs, forms and additional text with the understanding that more text will be required later. Also he suggested that videos be included showing how to collect, package and ship samples and to include a catalogue of supplies such as sample bottles, shipping containers and miscellaneous things such as gloves and labels.

Based upon these three meetings I created a Letter/Memo of Understanding from the client which has been submitted (Appendix b) and have proceeded to create the formal proposal for review and signature by all parties.

Resources

- a. I will use Adobe softwares Illustrator to create the company's logo, Photoshop to edit the photos and Muse to design this website
- b. The owner agreed to pay all of the costs associated with the domain, financial tie in, WordPress basic design and any other out of package financial requirements.
- c. I am the only source of actual design and build labor with an estimated 225 hours for two semesters.
- d. The owner and an employee will provide review and decision time at each build and test phase based upon my recommendations.

Expertise

In addition to the web design capabilities I have gained in class and I have also taken some programming classes including: C++, Python, PHP and JavaScript. In addition I am working a part time job providing development and maintenance of a San Jose company's web site where I am fixing errors, replacing old photos of product, modifying product pricing and implementing some Magento e-commerce capabilities for ordering and tracking.

Changes in the Project

According to the plan, I made some changes for the project. I began using WordPress but changed to Adobe Muse to create this website as I am familiar and experienced using design functions of the Adobe Muse application. I also changed to PayPal for the payment system instead of WooCommerce, the eCommerce platform built for WordPress. I selected a basic design but after providing the customer with

several preliminary home page designs he changed to a different layout and color scheme which became the completed published design.

Description of Project Deliverables

The following is a list of the deliverables that will be needed to provide a functioning website:

1. Home page with domain registered. The home page must be attention grabbing and effective
2. About page describing company, its brief history, what it does and the why customers should choose Bolsa for its analysis needs
3. Three child pages will be listed and described with plenty of photos and proper dialogue.
 - a. Water testing page is the first child page from one of the icons of the home page. It talks about how to conduct the water testing services.
 - b. Soil Treatment page is the second child page from one of the icons of the home page. It talks about how to conduct the soil testing services.
 - c. Food Check page is the third child page from one of the icons of the home page. It talks about how to conduct the food testing services.
4. Contact page with the standard phone, email, US mail and street address for mailing and overnight shipping.
5. Sign in/Sign up page will provide sample bottles and containers, tools, and shipping packaging. This section will include shopping cart, pricing, shipping links to

FedEx and UPS and payment options. For example; Bolsa employees will take samples on site. The heading and pages to be provided for each type of test, examples include; water-bacteria, chemicals, and minerals, soil-for the same tests, food-for contaminants and processing conformation. This section will also have video showing how to take and keep samples uncontaminated. Pricing will need to be included.

6. Financial/payment page will include online payment options, prompt pay discounts, long term contracts for reduced pricing and the ability to use and change sale, special tests and programs

7. Logo and footer will be designed in order to establish professional marketing brand for the company. And on the footer it will provide the basic contact information and create social media accounts that link to to the website.

Budget

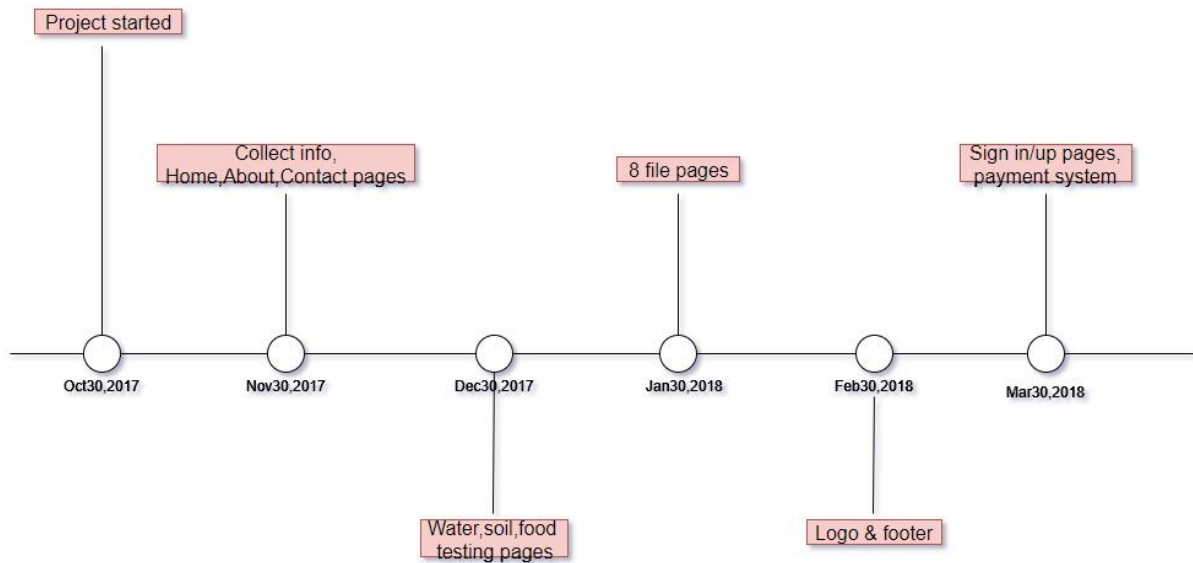
The total project hours are estimated to be 185 by the designer and another 40 by the stakeholder. Both the designer and the stakeholders hours are priced at \$50.00 and summed together in the budget. The total labor price \$11,250.00 based upon the \$50.00 an hour which includes \$30.00 hourly wage plus another \$20.00 for the benefits and costs of, insurance, overhead, sick leave, G&A(General and Administrative Expense), profit and taxes. The next assumption is that the designer is an internal full time employee. The budget is prepared as though this project were an actual business project and not a school requirement.

Expense	Hypothetical	Actual
Softwares	\$499.00	\$499.00
WordPress	\$199.00	\$199.00
Domain Name	\$12.00	\$12.00
Office Rent & Utilities	\$13,500.00	\$0.00
Phone & Internet	\$1,350.00	\$450.00
Labor	\$11,250.00	\$0.00
Travel & Misc.	\$183.00	\$183.00
Total	\$26,993.00	\$1,343.00

The costs associated with domain registration and links is \$12 per year which will be an annual fee after completion. It also includes the annual fee of \$199 for the WordPress server or other license for the use of the basic structure. The cost of the financial transaction link is \$500.00 set up and then 5% thereafter of each transaction. The budget also includes the purchase of the Adobe Cloud Suite, office rent and utilities, phone and internet costs with travel and miscellaneous (supplies and miscellaneous expenses (paper, ink, office supplies) in the amount of \$183.00.

The total hypothetical budget is \$26,993.00 which is in line with current costs for a detailed ecommerce website based upon research completed. The actual budget is the costs the designer and stakeholder are going to pay at a total of \$1,343.00.

Timeline



Evaluation

Review and testing will be conducted by CSUMB faculty, fellow students, and the stakeholders. The reviews and evaluations will include, faculty overview, peer review, heuristic and functional tests. Proposal review will be conducted by fellow students first, with faculty and advisors to follow. Proposal changes will be made and approved then stakeholder signature obtained.

Functional testing

Functional testing will be conducted at introduction of each page and button are added to the design. I will perform this review with the owner also using the page and/or function. At the completion of the design a complete functional test will be conducted by

myself, my academic professor Kevin Cahill and peer from class. This tests will include the following:

- a. Domain access by Microsoft and Apple computer platforms
- b. Proper loading of the home page and each additional page
- c. All buttons, map and move the user as required including the back button from every page
- d. All PDF forms load completely and are downloadable
- e. All links must be functional with return features
- f. Financial function and link working correctly
- g. Customer database properly loading

Usability Testing

- a. Logic test to determine if intuitive features are working and incorporated. This test will be performed as each new page or feature is added by the designer
- b. Functionality of the flow of the site to be tested as each new page or feature is added including domain access and link to third party financial and database functions.
- c. Forms Testing as each form is added ensure that the form can be downloaded, completed with signature and can be submitted electronically
- d. Heuristic test is to be performed by at least two people at the major milestones of; 1) all pages and buttons complete, 2) links to financial complete and functional including data base 3) when all forms and contracts are loaded, completed and can be uploaded, 4) Just prior to posting the finished web site to the domain.

- e. Full functional test after any changes from previous tests or stakeholders meetings. This test is to performed after it has been posted and is on the web.
- f. After being posted and used if any errors or bugs are detected to test the site completely to ensure changes in one area =do not affect any other function or page

Evaluation

Evaluation plan is to determine that the website meets the stakeholders and school requirements. The evaluation is to be conducted by third party in addition to the designer and stakeholder and will be performed at the following milestones:

- a. Completion of the pages and all buttons and links
- b. When the financial section is complete to ensure that the customer database will load and store transactions, that the invoicing function works, that payments can be made directly and safely through the site
- c. All forms are completed to ensure that the forms can be completed, signed and sent within the structure of the site
- d. Before the final heuristic test after the site is completed
- e. After any changes do to final testing
- f. After the web site is posted in the domain for public use

Risk analysis

In building a true e-commerce web site the greatest risk is always the protection of financial information such as credit/debit cards, account numbers and credit history. That is why a third party extremely secure financial services provider will be used. To

insure the protection of privacy issues such as credit and employee information the customer database will be incorporated into the same financial services requirements provided by the third party provider.

Another risk is that the site must be designed so that it is not too expensive to maintain and keep running once loaded and started. The financial risks to the company include maintenance fees, domain fees and simple changes to be made by existing employees and not a expensive web developer.

Collaborate Statement

Through the process of designing this website I had to collaborate with the business owner, classmates and a local businessman. I obtained my past designing experience with classmates and the creation of my own art website and two designed for others. I collaborated with other classmates, the owner of the business and a local experienced businessman, David Loveless. Mr. Loveless was insistent on the eCommerce functions and the ability to receive money from credit cards and banks for the website. I also got valuable feedback from Professor Kevin Cahill and extensive help from many web sources and online classes. I must give credit with the business owner for his extensive participation in the design.

Final Documentation

The Company Logo

