THE PROCESS OF OPENING AND OPERATING A DRAFTING AND RENDERING FIRM

UC Davis Landscape Architecture
Senior Project 2010
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THE PROCESS OF OPENING AND OPERAT- ING A DRAFTING AND RENDERING FIRM

A SENIOR PROJECT PRESENTED TO THE FACULTY OF
THE DEPARTMENT OF LANDSCAPE ARCHITECTURE
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IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR
THE DEGREE OF BACHELOR OF SCIENCE OF
LANDSCAPE ARCHITECTURE
ACCEPTED AND APPROVED BY:

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Byron McCulley, Faculty Committee Member

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Skip Mezger, Committee Member

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Cathy Wei, Committee Member

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Mark Francis, Senior Project Advisor

ABSTRACT

As the nation gradually recovers from the worst economic recession since the Great Depression, there is a sense of frustration in the air for students and recent graduates of the landscape architecture program as many have yet to acquire job offers.

Instead of looking for openings in the landscape firms, this senior project presents the alternative method of being employed, and that is self employment. The senior project report will describe the procedures to open a small business in the format of a business plan. It will also entail the process of conducting a market research, and describe the key successes and failures of operating this business.

Opening a company requires high tolerance for risks and failures, yet the rewards for not only personal growth but professional leadership make this an attractive option for my post graduation commitment.

DEDICATION

To **MOM** thank you for your love and sacrifices throughout my academic endeavors. You are my motivation to succeed in life.

To **FRIENDS** and **FAMILY**, thank you for the patience, guidance and support along the way.

It is now the time for me to contribute to my loved ones and to the community.

ACKNOWLEDGEMENTS

Thank you, my committee members, for your help throughout the Senior Project and beyond.

Byron McCulley – for teaching me the technical skills of the landscape architecture profession and equipping me with the vocabularies to communicate efficiently with professionals.

Skip Mezger – for showing me the life of a landscape architect and for giving me the confidence and courage to succeed in life.

Cathy Wei – for introducing me to industry standard software and for committing to the business partnership.

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Zebu: a type of domestic cattle originating in South Asia. They are characterized by a fatty hump on their shoulders, drooping ears and a large dewlap.(SEE FIGURE 1) They are used primarily as drafting animal in agricultural fields, and rendering of their fat into stable, value-added materials in food processing fields. In a way, every employee at Zebu Design is a drafting animal.
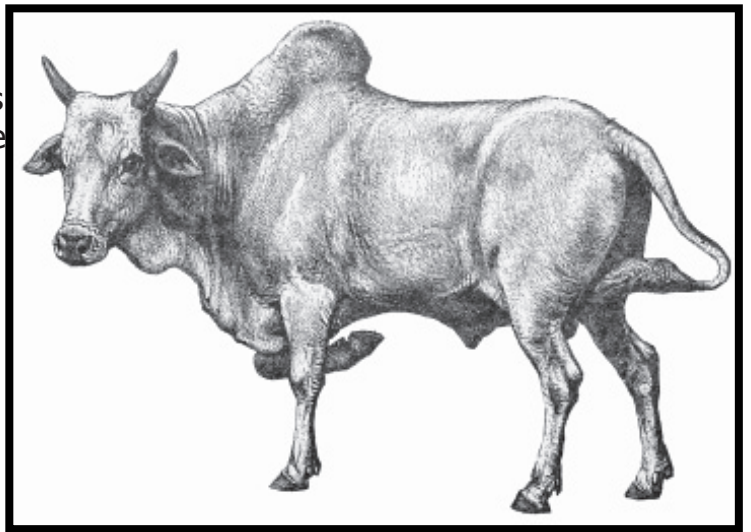
Drafting: also known as technical drafting, is the academic discipline of creating standardized technical drawings by architects, interior designers, drafters, design engineers, and related professionals. Standards and conventions for layout, line thickness, text size, symbols, view projections, descriptive geometry, dimensioning, and notation are used to create drawings that are ideally interpreted in only one way. Today, the mechanics of the drafting task have largely been automated and accelerated through the use of Computer Aided Design systems (SEE FIGURE 2).

Rendering: is the process of generating an image from a model, by means of computer programs. It would contain geometry, viewpoint, texture, lighting, and shading information(SEE FIGURE 3).

Business Plan: is a formal statement of a set of business goals, the reasons why they are believed attainable, and the plan for reaching those goals. It may also contain background information about the organization or team attempting to reach those goals. In order to increase the success rate of Zebu Design, a thoroughly articulated business plan is needed.

FIGURE 1.1. DRAWING OF ZEBU

FIGURE 1.2. TECHNICAL DRAFTING

FIGURE 1.3. HIGH-END COMPUTER RENDERING

INTRODUCTION

Although the future is unpredictable, many can agree that the near future will not be a good period to be in or right out of school. California is facing one of the worst budget crisis with tuition continue to be on the rise. Recent graduates will be heavily burdened with debt while companies are unable to hire new employees. In a recent survey conducted by the American Society of Landscape Architects (ASLA), out of 150 landscape architecture firms nationwide, 6% are hiring for entry-level jobs (worldlandscapearchitect 2010). At the same time, unemployment continues to be on the rise. The graduating class of the new decade will face tougher competitions demanding lower wages for fewer available positions.

Rather than pondering over the negatives, there is no better time than now to utilize the downturn to start my own business. Zebu Design, a service-based business, that will focus on drafting plans and details for landscape design or contractor firms, as well as providing supporting images and 3-D renderings. The idea is to utilize the lack of financial ability to hire full-time entry level drafters in landscape architecture firms as a selling point. This company will be a subcontractor for other companies.

Not everyone has the motivation or the entrepreneurial spirit to start this process. The lack of time and financial support creates great challenges even for those with the mental capability to start. This chapter describes the overview of the company to give a complete illustration of the founder's inspiration, the purpose of the company and the services provided by the company.

> *Do you plan on hiring any employees in the second quarter of 2010? (multiple answers)*
>
> *Yes, we'll be hiring an experienced landscape architect – 4.9%*
> *Yes, we'll be hiring an entry level landscape architect – 6.8%*
> *Yes, we'll be hiring an intern – 6.1%*
> *Yes, we'll be hiring support staff – 3.6%*
> *Yes, we'll be hiring other design/architecture/ engineering staff – 5.1%*
> *Yes, we'll be hiring other staff – 3.0%*
> *No, we're not currently hiring – 78.4%*
>
> *Source: ASLA Quarterly Survey, April 2010*

FIGURE 1.4 ASLA QUARTERLY SURVEY DATA

Company Overview

Whether it is intentional or not, any action performed by an individual has a purpose. The more ambiguous an action is, the great purpose it is required to perform that action. The action of opening a firm did not and could not start over night. It is a process of hours of communicating with current business owners, days of decision making, weeks of researching, and months of planning. For me, it was a combination of multiple events that inspired me to pursuit this path. The inspirations will be different for everyone. The bottom line is, it takes some inspirations, motivations, or purposes in life to do anything great in life. The follow events inspired me to open a business:

Lesson from Skip:

One day at the office, I sat down with Skip Mezger, my supervisor at UC Davis Grounds Division, and we discussed about my plans after graduation. He told me he started out in the private sector working for traditional landscape architecture firms, and now he works for the university, the public sector. To illustrate his point, the diagrams show a simplistic approach to career choosing with time and money as the two factors. The X axis represents time while the Y axis represents the amount of money one will make. The wavy line (figure. 1.40represents a career working in the private sector, while the upward sloping straight line represents a career working for the public sector. Skip said no matter how well one performs, there is always the possibility of getting laid off due the economic recessions, simply because companies are not getting new projects. On the other hand, public sector is a much more stable job market, projects tend to take a few years to complete so there is always work to be done. During economic growth periods, when private sectors are booming
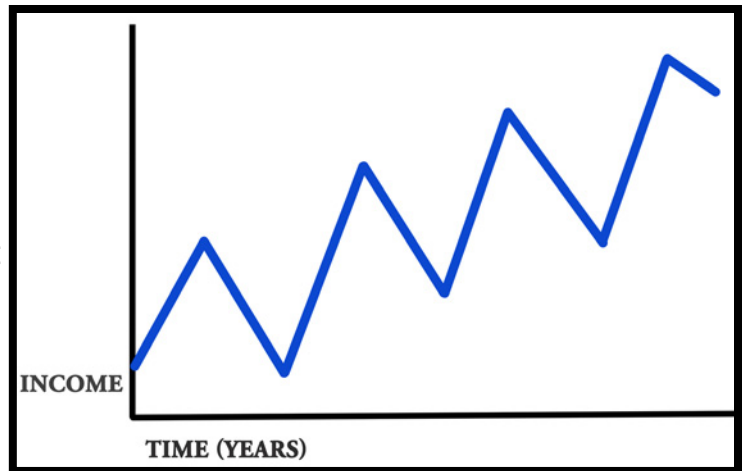
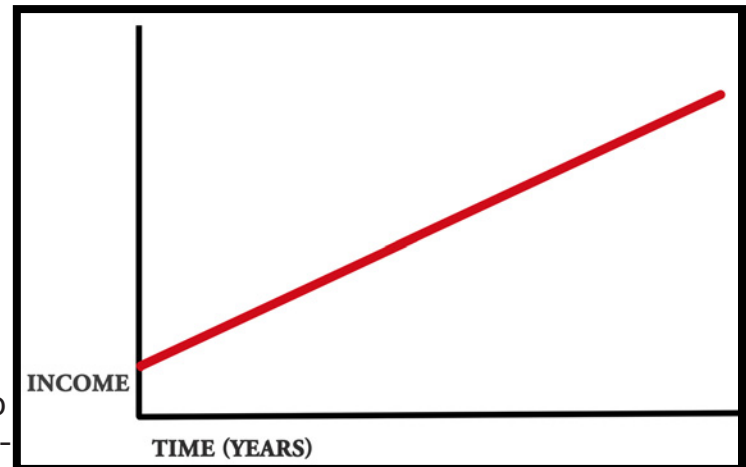

FIGURE 1.5 PRIVATE COMPANY INCOME CHART
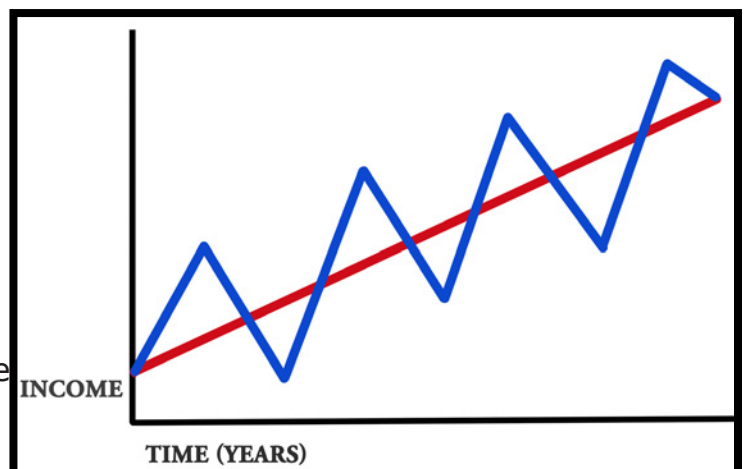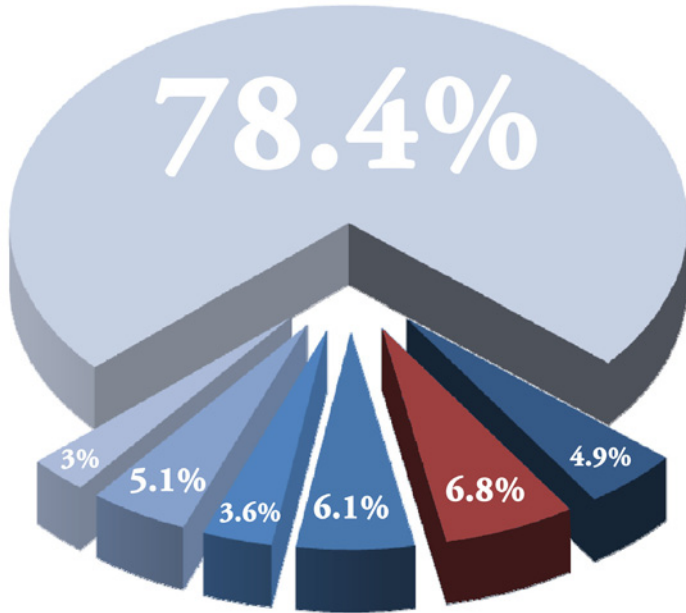

FIGURE 1.6 PUBLIC COMPANY DIAGRAM

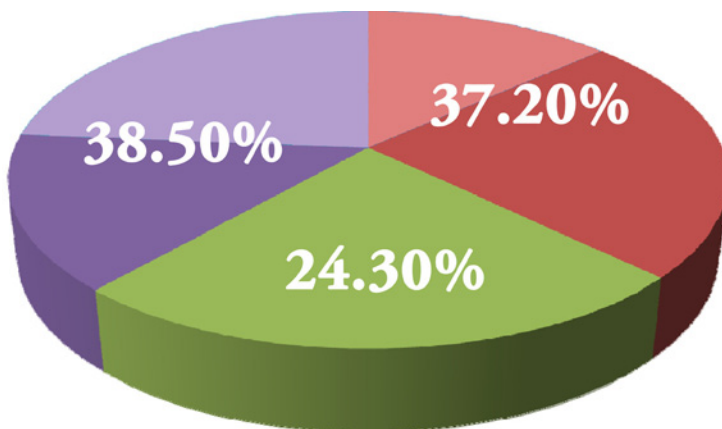*FIGURE 1.7 COMPARISON OF PIRVATE/PUBLIC*

4.90% hiring an experienced landscape architect
6.80% hiring an entry level landscape architect
6.10% hiring an intern
3.60% hiring support staff
5.10% hiring other design/arch/engineer staff
3.00% hiring other staff
78.40% not currently hiring

13.30%   Significantly higher
23.90%   Slightly higher
24.30%   About the same
14.80%   Slightly lower
23.70%   Significantly lower

with projects, the public sector will not be making as much money as the private. Although my conversation with Skip did not spark my interest to be self employed, he did made me aware of the different possibilities and how the economy effects these career paths.

A Depressed Job Market:

A few weeks before the start of the Senior Project, I looked on ASLA web site for senior project ideas and inspirations. I stumbled across the ASLA quarterly survey. To my surprise, the data from the report came out very shocking. At the time, only 3% of the landscape architecture firms are hiring for entry level positions out of 150 firms surveyed, compared with the March 2010 data of 6.8%. Back then, that's about 5 openings throughout the United States with job openings. When there are about 40 students graduating from the landscape architecture program at UC Davis alone, I knew we will all be facing tremendous competition for jobs. I have heard horror stories about job hunting, but never thought it would be a nightmare. I knew at that moment, looking for employment would be difficult. I started thinking outside of the box for other opportunities. Since, most entry level positions will be starting out doing basic drafting work in CAD, why not be an independent contractor and do the work for others. On one hand, I could be improving my skills as a CAD drafter. On the other hand, I will be gaining real world experience working on real projects. The ASLA survey report inspired me to start thinking about working for myself, but I don't want to work by myself. So, I started asking around to see if my idea would be a possibility in the near future.

Talking with Byon

I approached Byron McCulley, my instructor for construction drafting, about my idea. He told me about a past student of his who is now the owner of a small business that specializes in landscape construction drafting. I was surprised to hear that my idea is not only possible, but is proven to have succeeded since 1993. The main difference, Byron said, is that my idea involves only myself working as an individual probably, while his business has a professional appearance, with an actual office and experienced staffs. My idea will have a difficult time acquiring the similar clients as his business, and it will be difficult to compete with him (if there is any competition at all) as he already has years of established credibility and client base. After further research for potential competition, the result illustrated numerous drafting and rendering firms in the bay area. What differentiates these firms from my business is that most of them are focusing on drafting of architecture, engineering, and structure. Rarely have I seen a similar business who provides 3-D modeling, photo realistic renderings, and landscape drafting. Byron showed me that my idea can be a reality, and I am inspired to achieve the same level of success as his previous student.

FIGURE 1.8 WILKSCO LOGO

FIGURE 1.9 EXISTING CONDITIONS LOGO

FIGURE 1.10 DF DRAFTING LOGO

FIGURE 1.11 GRAPHIC REPRODUCTION LOGO

The company is founded on one simple idea, to help the landscape professionals with technical assistance. As a recent graduate of the landscape architecture program, I am equipped with the knowledge of the latest technology and software. Many employers hire recent graduates not for their design abilities, but for their knowledge about recent trends and ideas which can be new to the working atmosphere of the firm. Yet with the economic recession, companies are unable to do so. In fact, many entry level landscape designers are being laid off because the company simply cannot support the staff. Unfortunately, the project managers and principles cannot efficiently allocate their time to complete the work left by entry level positions. Their designated salaries are over priced for them to be doing drafting work. The lack of production level positions will hurt the company in the long run.

At Zebu Design, we hope to relieve the companies' financial burdens by helping them with drafting and rendering services. During tough economic times, rather than hiring a full time drafting employee which consist of many overhead costs such as benefits, these firms can hire Zebu Design on a project by project basis. Since we will
Even during economic growth periods where projects are abundant. Entry level drafters could be overwhelm with longer hours. These employees while creating additional costs for paying overtime. Any additional services should be assigned to Zebu Design which would not only be a financially smart decision, but employees will be able to get a break as well.

As independent contractors, we are paid by results rather than hourly wages, that means we will complete the projects in a timely manner with company standard qual-
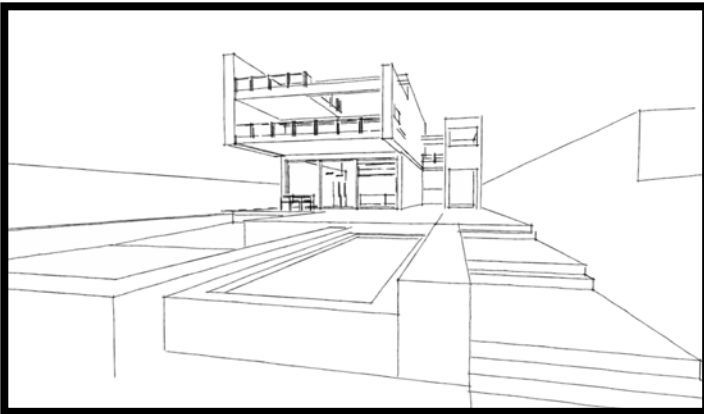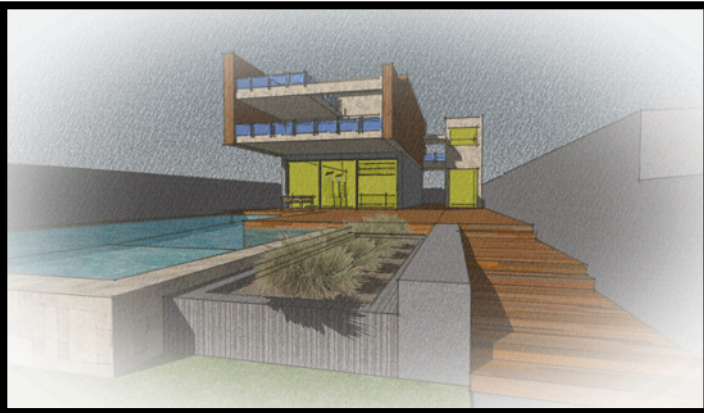
FIGURE 1.12 GRAPHIC PHASE 1

FIGURE 1.13 GRAPHIC PHASE 2

ity. We strongly recommend hiring independent contractors like Zebu Design for all production level services simply because that is the feasible decision. We understand the importance of independent contractors and that is why Zebu Design will not hire any employees. On the other hand, we will be hiring independent contractors to assist us with our clients' projects. Since they will be paid based on their performance and the quality of their work, only the top performers will be assigned additional projects in the long run. The work completed by these independent contractors will be submitted to the founders of Zebu Design. With years of experience drafting and rendering in the landscape architecture profession, the founders of Zebu Design will supervise the final product to ensure quality which equals or exceeds the quality done by our clients' in house drafters.
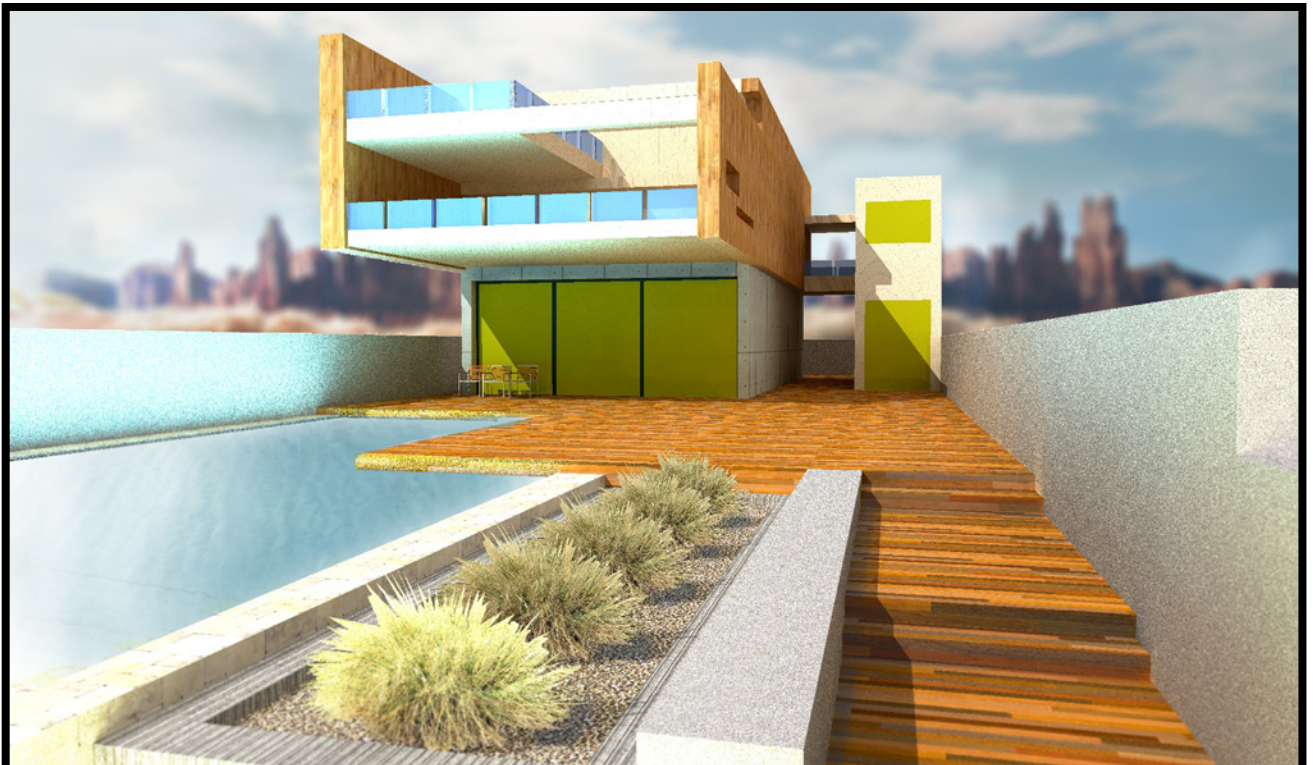
FIGURE 1.14 GRAPHIC FINAL PHASE

Zebu Design is a business partnership between Steven Zhang and Cathy Wei.

Steven has been working in the landscape architecture office at UC Davis Grounds Division for the 2009-2010 school year. He has developed his business management skills through a minor in Economics, member of Junior Investor and Entrepreneur Club at UC Davis while acquiring his real estate salesperson license.

Cathy has a masters degree in landscape architecture from Harvard Graduate School of Design and has years of practical experience in the profession. She is currently a project manager at HLA Group, a landscape architecture firm in Sacramento.

Phylissa is the web designer for Zebu Design. She is an independent contractor working on a project to project basis. She graduated from UC Davis in June 2010 with a BA in Graphic Design. She worked as the graphic designer for UC Davis Student Union.

Aaron is the animation and video effect specialist for Zebu Design. He is an independent contractor working on a project to project basis. He is a student at UC San Diego studying Visual Media Production. He has years of real world experience with Adobe After Effect and Premier. He worked as an interned for ESPN's video production team.

FIGURE 1.15 ADDITIONAL GRAPHICS

Building the Company

The success of a company starts with branding. Branding method includes the creating a business name, logo, and slogan. By branding a business, a personality is associated with it, therefore the brand will associate a business with clients of similar interest and personality. In addition, a name that is memorable will be easier to advertise and to refer to than a name that is difficult to memorize.

Many joined partnerships or corporations uses abbreviations of the founders' names as the business name. An example of such would be SWA group, SWA is an abbreviation for Sasaki Walker Associates. Founded by Hideo Sasaki and Peter Walker, SWA is a much shorter and more professional brand than if the firm was named Sasaki and Walker partnership.

Another example of branding method is to use combinations of adjectives and nouns to describe the products or services of the firm. A good example of that is a pool contractor company in Davis called Paradise Pools. The name gives a clear statement of their services and therefore targeting a specific group of clients, the people who wants a wonderful pool.

The third method is to use symbolism to associate the meaning of the word with the products or services of a business. An example of that is a residential landscape design company in Sacramento called Luciole Design. According to their web site, "Luciole" means "firefly" in French, something that brings magic to gardens, does better in healthy ecosystems, and is a pretty high tech insect. After meeting with the founders of Luciole Design, I understand they are French, and their designs are very ecologically sensitive with the usage of very up to

FIGURE 2.0 SWA LOGO

FIGURE 2.1 PARADISE POOLS LOGO

FIGURE 2.3 LUCIOLE DESIGN LOGO

date technologies and methods to create these sustainable gardens; just like their description of a luciole.

When creating a firm's name, there are many factors that must take into account.

1. Technological opportunities and re-strains.

With the current trend of internet marketing and advertisement, many clients are moving away from yellow books and onto the world wide web. It is crucial to acquire a web site name that is still available yet matches the branding needs.

2. Keeping the needs of the client in mind.

Whether it is a landscape construction business or construction drafting business, the firm's potential client should be identified to create a brand that matches their interest.

3. Brand Awareness

Brand awareness refers to clients' ability to recognize the brand and the products or services associated with the brand. It also triggers the clients' satisfactory memory associated with the brand. It is essential to create a brand awareness within the client through a meaningful, simple and direct brand.

The name Zebu Design was created using the method of symbolism. Zebu, by definition, is an ox that is used as a drafting animal in the agricultural fields. The idea is to connect the symbolism of agricultural drafting with technical construction drafting. Zebu Design is a name that is simple, direct, and once you know the definition of a zebu, meaningful as well.

Logo Design

Finding the right name is only half the battle, to further enhance the brand awareness process, a logo is essential. The process of designing the logo is different for every designer. The following is a list of procedures that help me create the logo.

1. Background Research

For Zebu Design, I looked through design books, magazines and the internet for design ideas as well as anything related to zebu, ox, design, drafting or computer rendering.

2. Identify a theme

Since the branding method is a symbolic approach, the logo should consistently reflect that symbolic element. Color palette sets a mood for the business. A de-saturated green shows a subtle and non aggressive mood which matches well with the personality of Zebu Design.

3. Preliminary Design

This is the time consuming process where ideas are flushed onto paper. Some sketches are further developed and refined while others are purely for brainstorm purposes. Top three designs (SEE FIGURE) are further developed with potential to be the logo.

4. Feedbacks and Improvements

It is critical to show the preliminary designs to peers for assessment. Any feedbacks are taken into account for the final development. It might be also helpful to speak with graphic designers to understand the current trends in logo designs and color selections.
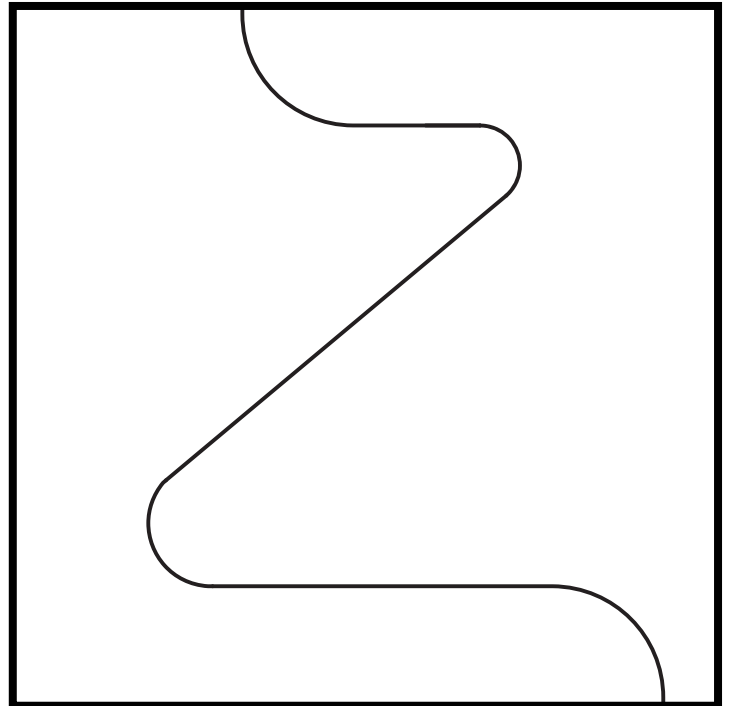

FIGURE 2.4 LOGO DESIGN PHASE 1

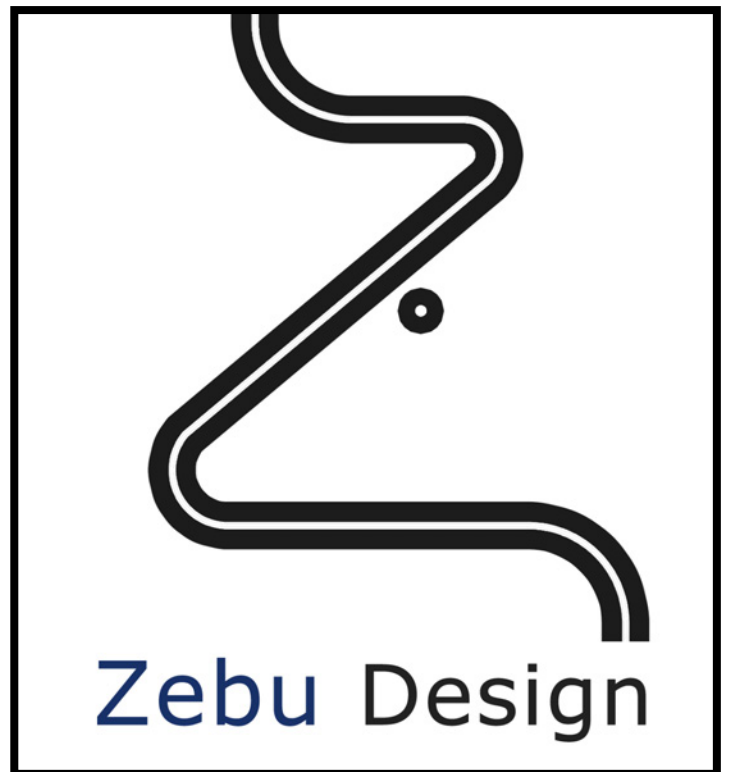*FIGURE 2.5 LOGO DESIGN PHASE 2*

The final logo for Zebu Design illustrates a letter Z which stands for zebu. Along with the dot, the creatively shaped Z shapes the contour lines of a zebu's head with the dot as an eye.

FIGURE 2.6 LOGO DESIGN FINAL

Web Site Design

Taking advantage of this cheap and efficient online marketing strategy, many businesses have developed creative and informative web sites to more effectively attract clients. Unlike traditional advertisement, there is no cost of printing out advertisement since everything is accessible online. Everyone is slowly moving away from yellow books and directories, since all the information can be accessed so readily online. A simple search on Google search engine can display result in seconds. In this 21 century, we have adapted to instant gratification with the modern technology. To follow with the current trend, Zebu Design is allocating majority of its time designing the web site rather than designing fliers or printouts for the purpose of marketing.

According to "introduction to Web Design", there are 5 main steps to creating a web site. Step 1: Determine Purpose and Goals
Step 2: Design and Develop a Web Site
Step 3: Evaluate and Test a Web Site
Step 4: Implement a Web Site
Step 5: Maintain the Site

Step 1: Determine Purpose and Goals
The purpose and goal as described earlier is to effectively market the services Zebu Design provides. The goal is to allow the user of the web site instantly access the services we provide, the projects we have done, and methods of contacting us for further information. It is important, in this step, to understand who the primary targeted audience will be and what kind of hardware/software are the site's visitors likely to be using. The reason is because we want to create an attractive web site for these visitors that might not be so attractive to other types of visitors. This type of visitors might have a

FIGURE 2.7 BUSINESS CARD FRONT

FIGURE 2.8 BUSINESS CARD BACK

different type of computer hardware or software which might not be compatible with the information being presented on the web site.

Step 2: Design and Develop a Web Site

Once we have determined our web site's purpose, we can start drawing up diagrams to illustrate the architecture of the site. In this design phase, it is important to determine what the web pages will look like, as well as how they will interact with each other. 3 key factors that must be addressed: 1 determine how hyper links will help the visitor navigate through our web site, 2. Determine the content that will appear on each page. 3. Determine the physical appearance of the web site's pages.

Step 3. Evaluate and Test a Web Site

When we evaluate the web site, we confirm that the completed site meets our intended purpose and goals. Then, we test the site to make sure that everything works and displays correctly. To do so, we make sure all hyper links work correctly, and use various browsers and different computers (Mac and Windows) to view the site.

Step 4. Implement a Web Site

After a site has been evaluated and tested, it is ready to be implemented, or published. To do so, it is required to register the domain name with a web site hosting server, and upload the designed files to the hosting server.

Step 5. Maintain the Site

Once the web site is published on the hosting server, we must keep it current and functioning properly. Maintaining the site requires adding, deleting and updating content and pages, while continue checking to make sure all links work properly. Hosting server requires a fee which must be paid to avoid cancellation of the web site access.

HOME   ABOUT   WORK   BLOG   CONTACT

ZebuDesign

We are Zebu Design
We believe in simplicity and its provocation for beautiful design, providing drafting and rendering services for landscape designers.

FEATURED PROJECT

RECENT WORKS

NEWS

New Clientle
May 12, 2010

We just happened to sign with Corbel Industries for the next five months.

Welcome to the New Age
May 12, 2010

We've been busy with client offerings as well as many other prospective projects! Be sure to tune in for more news on upcoming designs!

Welcome to the New Age
May 12, 2010

We've been busy with client offerings as well as many other prospective projects! Be sure to tune in for more news on upcoming designs!

CONTACT US

Welcome to the New Age
May 12, 2010

We've been busy with client offerings as well as many other prospective projects! Be sure to tune in for more news on upcoming designs!

ZebuDesign   *We believe in simplicity and its provocation for beautiful design, providing drafting and rendering services for landscape designers.*   Copyright 2010 - 2020
Designed by blah blah blah
Yaddadada fjldsjafdsfd

FIGURE 2.9 WEB DESIGN PRELIMINARY

According to Robert Kiyosaki, there are five levels to a successful business: Product, Legal, Systems, Communications, Cash Flow. Each category needs to be satisfied by someone who has expertise in that field of work.

Product category is the item or services that is provided to the client in exchange for a payment. For Zebu Design, this means hiring drafter with experience with construction drafting and 3-D modelling.
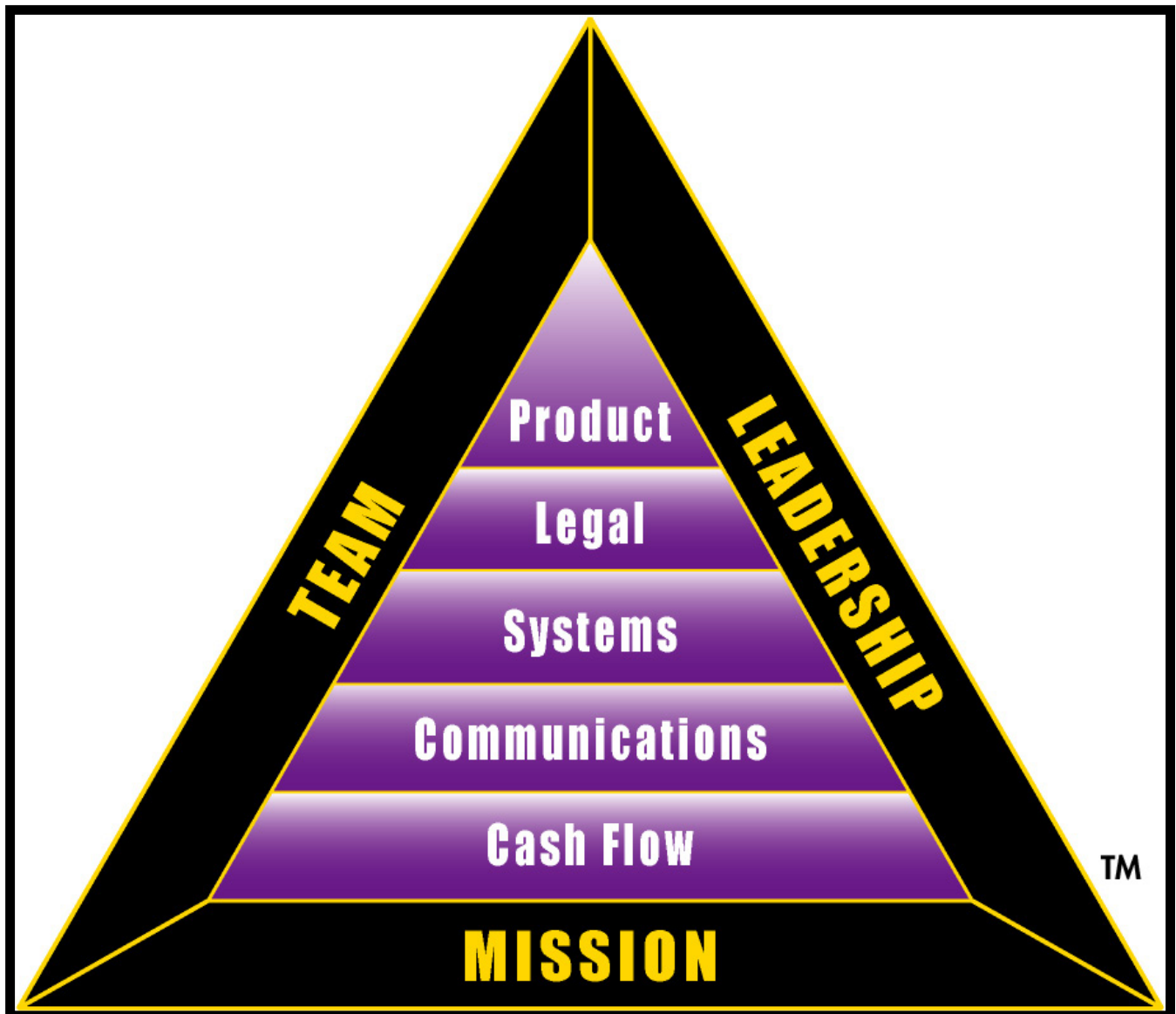

FIGURE 2.9 ROBERT KIYOSAKI'S BUSINESS STRUCTURE DIAGRAM

Legal category is having an attorney who has the necessary documents for contracts and transactions for legal purposes. Although hiring an attorney would be the safest method in the long run in case of lawsuits, it can be very costly during the beginning stage of the business development.

System category is the establishment of business system or structure to keep the business functioning, such as a guide of performing services, and for invoicing and collecting payments for those services. This is normally handled by the president or manager of a business. In the case of Zebu Design, this category will be managed by the business partners.

Communication category is to maintain a good reputation and a good relationship with clients, and market the business to create new clients. Ideally, an outgoing graphic designer with marketing experience is suitable for this position.

Cash Flow category means to understand the time frame between paying costs and collecting revenues, and to monitor the net cash flow of the business to make sure we are generating a positive cash flow to stay in business. This position can be satisfied with a detail oriented accountant.

Each category should have a specialist to manage it on a daily basis. Due to the lack of financial ability, Zebu Design cannot afford to start out with high employment costs. As an entrepreneur, it is important to understand the 5 categories in general to be able to start and operate the business to reduce the cost.

7 out of 10 new employer firms survive at least two years, and about half survive five years. A business closes down when it fails to satisfy any one of the categories. According to Robert Kiyosaki in his book "Before You Quit Your Job", this pyramid demonstrates a successful business structure, with product as the smallest portion of the business structure and the cash flow as the largest portion. It doesn't mean the product or service provided by the business is not important to the success of the business, in fact a demanding product or service is crucial to the success of the business. However the cash flow is much more important as the information must be constantly monitored. Any negative cash flow even in a one month period can jeopardize the future wellbeing of the business.

Research

As mentioned in the previous chapter, an entrepreneur needs to understand the 5 categories to successfully open and operate a business. The research process of the senior project is very important for me to gather the data to understand the 5 categories.

The research is divided into two parts, the first part is an online survey of the Landscape Architecture Class of 2008 and Class of 2009. The alumni survey asks the participants many in-depth and personal questions about the current job hunting experience. This survey helps me understand the Product/Service category, by looking at the talent pool

The second part of the search is a survey of randomly selected firms ranging from Sacramento to bay area. The survey tries to cover a wide range of diversity amongst the landscape architecture profession, and will explore the current job market as well as an in-depth look at their individual business model and business structure.

Due to some very personal questions asked during the survey, many alumnus have turned down the survey completely. There are 15 participants who went through the survey questions completely and was able to contribute to the finding. The questions are listed below:

1.   Are you currently employed.

   a.   If yes
      i.   Which company and what position:
      ii.   What is your monthly income (estimate):

   b.   If no
      i.   Are you actively looking?
      ii.   What is your desired monthly income (estimate):

2.   Have you utilized your landscape architecture experiences outside of classes, please describe:

3.   Have you utilized any campus resources after you graduated, i.e. Internship and Career Center, Job Board on lda.ucdavis.edu, Career Fair.

4.   Rate yourself based on your proficiency of the following program with 1 as least proficient and 5 as most proficient

   a.   AutoCAD-

   b.   Photoshop-

   c.   Sketchup-

   d.   InDesign-

   e.   DreamWeaver-

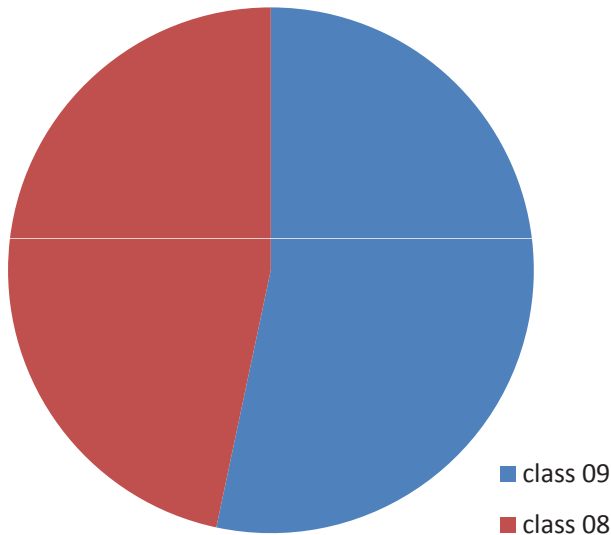   f.   Flash-

   g.   Revit-

FIGURE 3.0 TOTAL ALUMNI PARTICIPATIONS
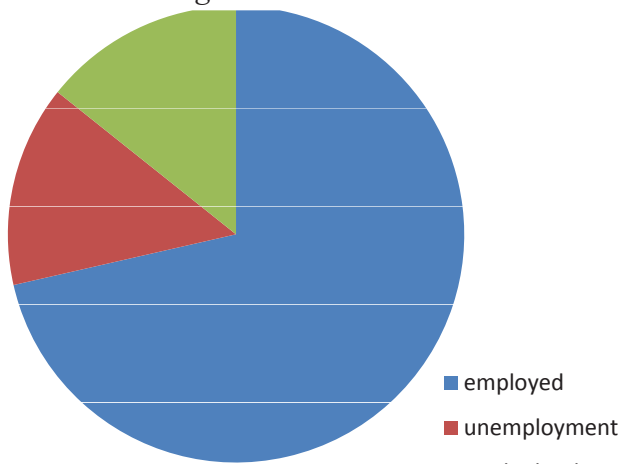Source ASLA.org

- class 09
- class 08

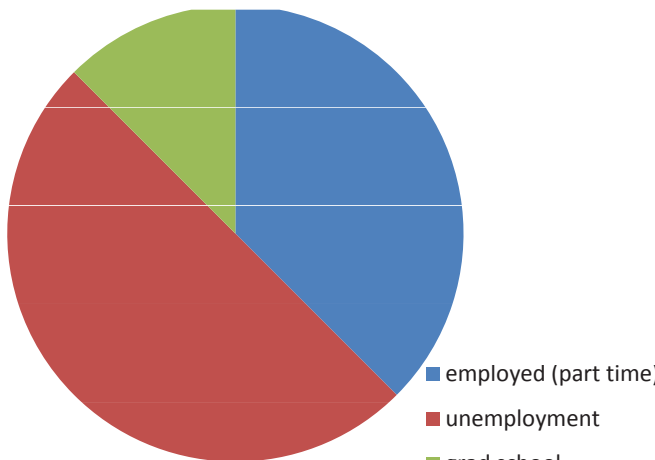FIGURE 3.1 DATA FROM 2008 ALUMNUS
Source ASLA.org

- employed
- unemployment
- grad school

FIGURE 3.2 DATA FROM 2009 ALUMNUS
Source ASLA.org

- employed (part time)
- unemployment
- grad school

The survey result provided by the 15 participates are very valuable to my research. Out of the 15 participants, 8 are alumnus graduated from 2009 and 7 are graduated from 2008. The result not only provides data as to how is currently employed and unemployed, but how much are they willing to work for and what type of skills they provide. This data will help me better understand the product/service category as I plan to hire drafting and rendering people to work as independent contractors. I will be able to use this data as a guide to evaluate the applicants' skills and how much their hourly wages should be.

Surprisingly, out of the 8 participants from class of 09, no one has a full time position. 3 of the 8 are working part time at doing horticultural related or working at nurseries. 4 out of the 8 are currently unemployed and actively searching for jobs while doing freelance work on the side to generate some income. 1 out of the 8 is currently in graduate school study related field. The desired salary for these 8 participants range from 2400 to 4300 per month for full time position with an average hourly wages between 15 to 26 dollars per hour.

Out of the 7 participants graduated from the class of 2008, the numbers are a little bit more optimistic. 5 out of the 7 are currently working, 1 is still unemployed, and 1 is currently in graduate school getting a related degree. Out of the 5 employed participants, 4 of them are working full time at a landscape architecture or related firm. The desired monthly full time salary for these 7 participants range from 2600 to 4500 with an average hourly wages between 16 to 28 dollars per hour.

This data shows how competitive the work

force is right now. There are still alumnus graduated 2 years ago who are still struggling for employment. Along with the unemployed alumnus from the class of 09, new graduates from the class of 2010 will be competing with these unemployed individuals for possibly any job openings in the landscape architecture or related fields. The salary will be lower since there will be an abundant supply of applicants to choose from.

Furthermore, there is likely to be an experience gap between those who are employed and those who continues to be unemployed. The employed will continue to build up their technical knowledge and networking skills while the unemployed continues to fall behind. One of the technical question asks to rate the participants' software knowledge. The result shows that people who are employed tends to rate their technical skills higher than those who are unemployed. It is unclear as to the cause for the higher rating due to higher knowledge or higher confidence level.

This data also provides assessment as to how much fee Zebu Design needs to charge the clients in order to cover its overhead cost of hiring individual drafters. The fee per hour is most likely to be between 30 dollars per hour to 35 dollars per hour for the drafting and/or rendering services. Since the majority of the fee will go to the drafter, the remaining will be enough to cover other costs such as marketing and advertisement fees, business registration fees and possibly any leftover can be salary for the management. Understanding this data provides Zebu Design the information to better access the five categories mentioned earlier to successfully open and operate the business.

FIGURE 3.3 VALLEY CREST LOGO

FIGURE 3.4 ROBERT LAROCCA LOGO

FIGURE 3.5 HLA GROUP LOGO

FIGURE 3.6 QUADRIGA LOGO

FIGURE 3.7 VERDE DESIGN LOGO

Out of the 100 companies I contacted, I was able to interview 8 of the companies. These firms represent a wide range of professional services. Each is very unique from the other firms, and each have their own special niche in the market. Here is a closer look at each firm I interviewed:

ValleyCrest Landscape Companies:
Landscape service firm that covers landscape design, landscape construction and landscape maintenance.

Robert LaRocca & Associates:
An award winning landscape architectural and environmental planning firm specializing in urban design.

HLA Group:
Sacramento based firm with international projects.

Quadriga, Inc.
Sacramento based firm specializing in commercial projects in the local area.

Luciole Design, Inc.
Landscape architecture office specializes in residential design of the Sacramento area.

Wilksco
Consulting firm specializes in production support and irrigation design services

Verde Design, Inc.
Landscape architecture, civil engineering, and construction management specializing in recreation and athletic facilities.

Rick Lopez Landscapes
Landscape contractor specializing in residential landscape maintenance, while providing landscape design services

It take a lot of courage, some sales skills, and a little luck to be able to set up an appointment with an established firm. I have tried different methods of cold calling, email messages, and even networking through events. The easiest method to get an appointment is through networking, a face to face encounter with the company's manager has always led me to an interview. Cold calls are the hardest way to get an appointment. People have mistaken me as a salesperson even though I specifically told them this is for a research project. Larger companies tend to have receptionist who would transfer my call to a manager's voice mail, while smaller firms would go directly to the voice mail. For those who did pick up the phone, many declined due to the lack of time, and possibly interest. The questions for the interview are listed below:

How are you utilizing your landscape architecture degree in your firm?

How many employees do you have? What are their professional and educational backgrounds?

What computer program or software does your firm use?

Please rate the importance of the following software
(On a scale of 1-5, 1 being the least utilized and 5 being the most utilized):
AutoCAD   Arc GIS
Illustrator   InDesign
Photoshop   Revit
SketchUp   Vectorworks

How is your firm operating during this economic recession? Any marketing strategies?

What is the market demand for your service?

Who are you clients? What is the scope of service?

Please describe a typical day in the office.

The survey result provided the by 7 landscape architecture and related firms provide me with valuable information. Since the data is confidential, any finding from the data gathered will be associated with any one specific company.

Never before have I realized the importance of cash flow until I spoke with some of the business owners or managers. Especially for small businesses, keeping the cost low with smart advertisement and outsourcing when needed are key to maintaining a healthy cash flow. To further reduce cost, some small businesses also utilize their homes as an office space to lower the cost of leasing an office space. Those who are maintaining an upscale professional office space are suffering at times like this when projects are slow. The overhead costs forced these larger companies to lower costs in the easiest way possible, that is to cut the hours and wages of their employee. Some even laid off employees to reduce the cost on employment benefits. Even when projects arise, these laid off workers will be brought back temporarily before they are laid off again when the projects are completed. Due to the economic fragility, these employees are working as independent contractors

The technical question asking about the usage of different software is designed to research the current trends of the industry standard software. Zebu Design's software must match or exceed the industry standard to stay competitive. The survey gives me a sense of what software is being used and which ones are not. Since the initial cost of starting the company is mainly the software licensing cost, understanding which software we could exclude is crucial to achieve a positive cash flow early on. From the data, AutoCAD, Adobe Photoshop, and SketchUp are

amongst the highly rated software. The cost of the licensing range from a few hundred to over a thousand per software per computer.

The question asking about marketing strategy helps me better understand the communication category. Previously, many of the businesses have their established clients, yet none of them are providing any leads now. Many companies are having to market their businesses which was never a key agenda prior to the economic downturn. Some have redesign the branding of the business, others have participated in charrettes or community projects, and some even reached beyond their niche services to try and secure more leads. Many have been writing proposals for the same projects which would never have occurred a few years ago when projects were abundant. It is unanimous that active marketing and networking is key to the business survival.

Out of the 7 very diverse firms, some are doing better than others. When commercial construction in Sacramento nearly halted, how many years of experience a company has becomes less important than how much fee this company charges for its services. The companies that stay active and busy are the companies with lower fees. This business structure makes sense in times like this. If fee charged for services is expensive, clients might not even sign a contract in the first place, compare to making enough money to cover the costs. Breaking even is still a lot better than losing money.

Lastly, none of the firms are formed under a general business partnership like Zebu Design. Mainly because these design and construction firms need to be corporations to be qualified for business insurance.

Client Project

As of the publication of this document, Zebu Design has completed a project for a client. The task is to produce a 3-D model for a residential project that the client is working on. The client is a landscape designer in the bay area who works closely with a residential landscape construction and maintenance business. The client wants us to build a model of a single family home based on a few pictures he took of the house and of the roof lines. The idea is to use this model to do a few plant designs that varies based on the complication of the design and prices of construction. The model along with a few renderings of the perspective views of our client's design will help him sell his design better. He hopes the perspectives will better persuade his client to upgrade to the more complicated design.

The files will be transfered using a new technology on the market, rather than the traditional emailing of files or uploading through Files Transfer Protocol (FTP) sites. This new method of transfer is by using a program called "DropBox". DropBox allows its users to transfer files seemlessly from one computer to the other. It also creates a backup storage on their website similar to a FTP site. The only thing needed to transfer the files is to download the dropbox program onto the computers that needs to transfer files.The simply drag the files from one computer into the DropBox file, and it is instantly accessible by the other computer anywhere in the world. This method of transfer makes it easy for my clients to send and recieve files, and has proven to bring me a more satisfactory client.
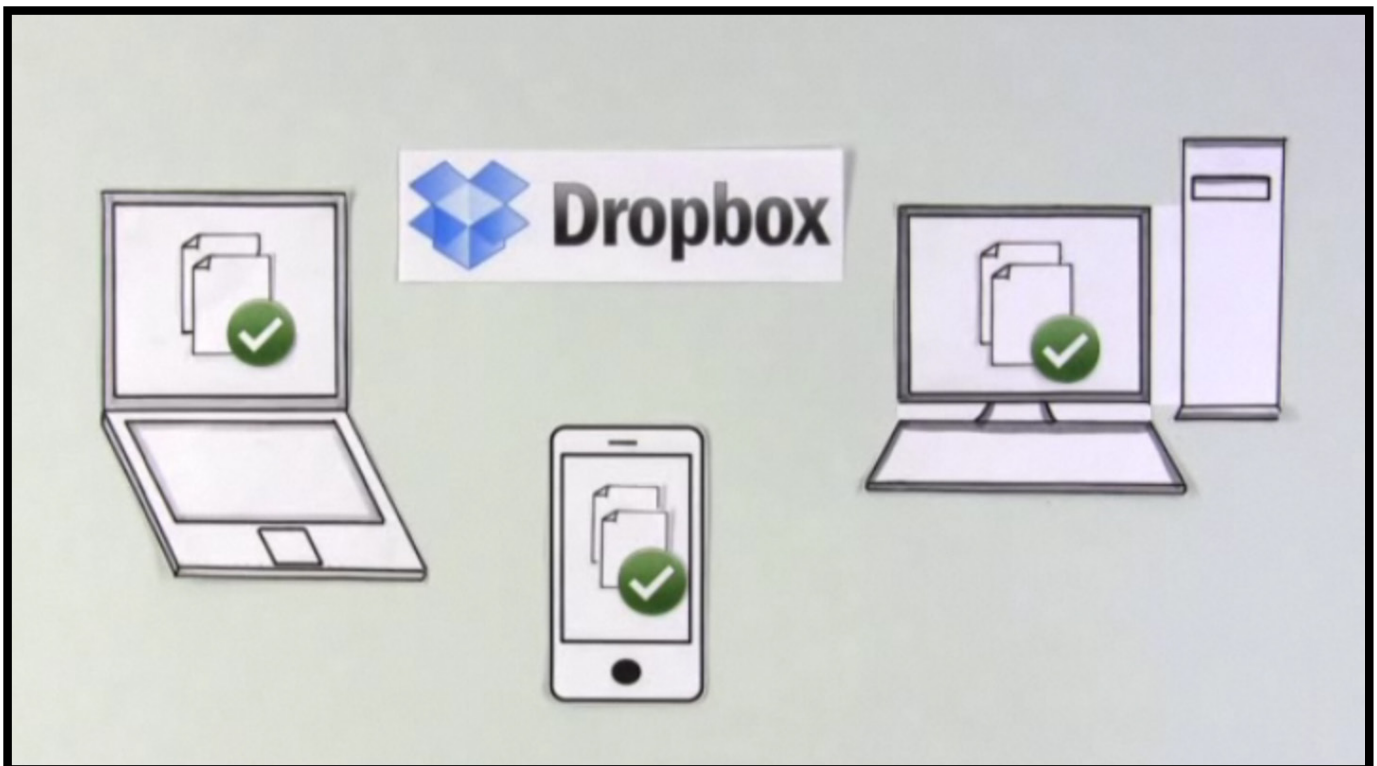

FIGURE 4.0 DROPBOX TRANSFER DIAGRAM

FIGURE 4.1 CLIENT'S PROJECT PHOTO 1

FIGURE 4.2 CLIENT'S PROJECT PHOTO 2

FIGURE 4.3 CLIENT'S PROJECT PHOTO 3

FIGURE 4.4 CLIENT'S PROJECT PHOTO 4

FIGURE 4.4 CLIENT'S PROJECT PHOTO 5

The service fee is $30 per hour. Clients' tend to prefer a one time fixed project fee rather than a hourly rate. I estimated a total of 5 hours to complete this project and charged a feeof $150. In reality, the project took 6 hours to complete, which equates to $25 per hour. As more projects are being completed, we will be better at estimating hours of completion and give the clients a more accurate estimate.

Furthermore, after the market research phase, it seems like the current demand for our services remains strong in the residential sector. Especially working with independent landscape architects or designers, or directly with landscape contractors. On the other hand, it is difficult for mid-size to large firms to outsource projects to us.

FIGURE 4.5 RENDERED MODEL 1

FIGURE 4.6 RENDERED MODEL 2

FIGURE 4.7 RENDERED MODEL 3

FIGURE 4.8 RENDERED MODEL 4

FIGURE 4.9 RENDERED MODEL 5

Conclusion

Over the last 4 years of eduction in landscape architecture, we've learned a lot more than just design, sustainabilty, ecology or construction. Whether consciously or not, we have learned to be very business oriented. Every individual has developed their own niche in the classes just like how companies find niche within the market. Some are better at hand rendering, other can do some amazing computer renderings, while some might remember every plant species learned in horticulture class. The bottom line is we have developed a friendly competition amongst the class and we must learn to better market ourselves, our designs, and manage our time to stay competitive in the major, or face the consequences of getting dropped out. Dropping out of the major in the real world means bankruptcy. Every graduating senior shows potential to be a successful entrepreneur in the real world. We all have to start thinking outside of the box. This economic recession has forced me to take a good hard look at traditional methods of hiring; the methods Skip had told me about. When companies are hiring, I would no doubt have applied and joined one of the landscape architecture companies. Yet, it is times like this that I must force myself to be creative and work around the traditional employment system. Not only am I learning the necessary skills to be an entry level drafter, I am also marketing myself by speaking with employers and learning about the business side of the profession.

Henry Ford, an entrepreneur and founder of Ford Motors, was asked by a reporter what would happen if he lost everything he gained throughout his lifetime. Ford replied "I made my fortune when I had nothing to start with, by myself and my own ideas. Let other people do the same thing. If I lose everything in the collapse of our financial structure, I

will start in at the beginning and build it up again." Henry Ford (February 11, 1934). By understanding the five categories, Product, Legal, Systems, Communications, and Cash Flow, everyone would have the necessary skills and confidence to start from scratch and build an empire. The key is to have the right knowledge, the right team to support you, but most importantly an entrepreneurial spirit.

Sometimes having the right mind set is not enough. There is going to be the risk of failure. Out of the estimated 29.6 million small businesses in the United States, Seven out of 10 new employer firms survive at least two years, and about half survive five years (www.score.org). Majority of the people does not approach self employment because they fear the risk of failure. This is why farmers are the best business people. They understand the risk associated with a bad year, such as natural disasters such as flood or drought or man-made disasters such as fire, yet these professionals continues to be farmers sometimes for generations. Furthermore, there is a harvesting season whether it is a good year or not. But what do farmers do when they are not harvesting? They plan. They evaluate the past and current conditions to predict the near future outcomes, and they plan for the harvests to come. Although no income is generated during the "planning season", the reward from the harvest season is well worth the wait. Opening and operating a business is just like running a farm, although the "harvest" might not be seasonal, and "planning season" might take a few years, the reward that comes with this opportunity is well worth it.

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