

CARBON SCHOLAR:

BUSINESS PLAN

By

PAUL JONATHAN MALLERY

A Thesis Submitted to The Honors College

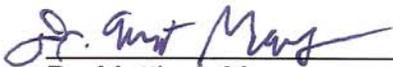
In Partial Fulfillment of the Bachelors degree
With Honors in

Entrepreneurship, Finance

THE UNIVERSITY OF ARIZONA

M A Y 2 0 1 1

Approved by:



Dr. Matthew Mars

McGuire Center for Entrepreneurship

STATEMENT BY AUTHOR

This thesis has been submitted in partial fulfillment of requirements for a degree at The University of Arizona and is deposited in the University Library to be made available to borrowers under rules of the Library.

Signed: Paul J. Malley

**The University of Arizona Electronic Theses and Dissertations
Reproduction and Distribution Rights Form**

| | |
|---|---|
| Name (Last, First, Middle) <p style="text-align: center; font-size: 1.2em; margin: 0;">Paul Jonathan Mallery</p> | |
| Degree title (eg BA, BS, BSE, BSB, BFA): | |
| Honors area (eg Molecular and Cellular Biology, English, Studio Art): <u>Entrepreneurship</u> | |
| Date thesis submitted to Honors College: | |
| Title of Honors thesis: | |
| :The University of Arizona Library Release | <p>I hereby grant to the University of Arizona Library the nonexclusive worldwide right to reproduce and distribute my dissertation or thesis and abstract (herein, the "licensed materials"), in whole or in part, in any and all media of distribution and in any format in existence now or developed in the future. I represent and warrant to the University of Arizona that the licensed materials are my original work, that I am the sole owner of all rights in and to the licensed materials, and that none of the licensed materials infringe or violate the rights of others. I further represent that I have obtained all necessary rights to permit the University of Arizona Library to reproduce and distribute any nonpublic third party software necessary to access, display, run or print my dissertation or thesis. I acknowledge that University of Arizona Library may elect not to distribute my dissertation or thesis in digital format if, in its reasonable judgment, it believes all such rights have not been secured.</p> <p>Signed: <u>Paul J. Mallery</u></p> <p>Date: <u>4/4/11</u></p> |

Statement of Contribution

My Role: Finance Manager, Carbon Scholar

Throughout the school year in the McGuire Center for Entrepreneurship, I was in charge of the financials for Carbon Scholar; this included completing all of the research for drafting the financials, communicating with investors what funds are needed, and demonstrating how our business venture will create a return on investment for outside shareholders. In order to properly complete my duties, I researched the expected prices for the following items: future carbon offset prices, marketing expenses, travel expenses, operating expenses, salaries, rent, utilities, legal expenses, website development, and the list goes on.

Through completing this process, I was able to complete income statements, balance sheets, and statement of cash flows for low, medium, and high demand case scenarios. I was also able to derive what our firms exit value would be at the end of five years of operations. While walking investors through this information, I was able to explain to them how the \$100,000 external investment that we are seeking would achieve a return on investment of 30x. Please see the venture valuation methods and the financial statements provided in the business plan.

Due to the fact that the financials eventually played a role in every presentation we were completing, I played a part in all of the presentations throughout the year. However, my contribution was not limited to just the financials; I was able to play a large role in primary and secondary marketing research as well. This enabled me to learn the business from all aspects and keep up regular communication with University of Arizona faculty members, including Dr. Joe Abraham, the Director of Sustainability. Throughout the entrepreneurship classes, meetings with mentors, meetings with our mock law firm, tradeshow, and competitions, I worked hard to contribute as much as possible to my team and to the program. I am very appreciative of all that the McGuire Center for Entrepreneurship enabled me to do this year!



CARBON SCHOLAR

Investments for a Cleaner Tomorrow

Carbon Scholar Business Plan

CAUTION: This Business Plan contains forward-looking statements that involve risks and uncertainties and opinions and beliefs of management. Any statements (including statements to the effect that we “believe”, “expect”, “anticipate”, “plan”, “are of the opinion” and similar expressions) that are not statements relating to historical matters should be considered forward-looking statements and should not be relied upon as factual or certain. The financial forecasts are based upon certain assumptions we are making and not historic operating results. Actual results may differ materially from the results discussed in the forward-looking statements as a result of numerous important risk factors. These assumptions are subject to uncertainties inherent in the forecasts and there will usually be differences between the forecasted and actual results because events and circumstances frequently do not occur as expected and those differences may be material.

Business Summary

The United States makes up less than 1% of a \$118 billion market that is expected to grow 68% by 2013.¹ How can that be? Over 35 nations around the world have signed the Kyoto Protocol, which imposes mandatory limits on emissions of carbon dioxide and other greenhouse gases. The United States is not one of the participants. As a nation, we have yet to make a concerted effort to fight global warming.

According to Professor Anders Levermann of the Physics Institute at the Potsdam University, 2010 was the hottest year ever measured since the recordings began 130 years ago.² This trend cannot go unnoticed by the United States much longer. Goldman Sachs predicts U.S. regulation of carbon emissions will be enacted within the next four years, creating an explosion in the U.S. market for carbon offsets.³

What is a Carbon Offset?

A carbon offset is a transferable certificate representing the reduction of one metric ton of carbon dioxide emissions, the principal cause of global warming. Although complex in practice, carbon offsets are fairly simple in theory. When a project is developed that truly reduces carbon dioxide emissions, every ton of emissions reduced results in the creation of one carbon offset. Project developers can then sell these offsets to entities that wish to reduce their carbon footprint. There are hundreds of different types of carbon reduction projects. For example, a wind farm generates clean energy, which reduces carbon emissions from coal-burning power plants. Though fighting climate change starts with conservation, most carbon footprints⁴ cannot be completely eliminated without the use of carbon offsets.

The Carbon Scholar Approach

Carbon Scholar will establish a portfolio of environmental projects for universities that generate carbon offsets. As a project developer, the venture will be responsible for the design, scope and implementation of the offset projects. Carbon Scholar will then verify these offsets under the strictest voluntary standards. Once verified, customers will have the opportunity to claim these offsets as a reduction for their own emissions or allow the fund to act as a broker and sell their offset percentage at a profit.

¹ QMS Partners. *Carbon Emissions Trading Markets Worldwide*. Rep. Rockville: SBI, 2009. *Business, Marketing and Economics*. Web. 10 Oct. 2010.

² Godoy, Julio. "CLIMATE CHANGE: Driving Straight Into Catastrophe - IPS Ipsnews.net." *IPS Inter Press Service*. Web. 24 Jan. 2011. <<http://ipsnews.net/news.asp?idnews=54210>>.

³ Newcombe, Ken. *The Carbon Markets: Trends, Perspectives and U.S. Outlook*. Rep. Goldman Sachs, 2008. Print.

⁴ Definition: The total set of greenhouse gas emissions caused by an organization, event, product, or person. "Carbon Footprinting." *Carbon Trust Home*. Web. 28 Jan. 2011. <<http://www.carbontrust.co.uk/cut-carbon-reduce-costs/calculate/carbon-footprinting/pages/carbon-footprinting.aspx>>.

The Management Team

As University of Arizona students, Carbon Scholar has been fortunate to find people on-campus that are equally passionate for sustainability and more than willing to help make it into a viable business opportunity. The management team has worked closely with the Dr. Joe Abraham, the Director of Sustainability at the University of Arizona. Through this relationship, the venture has gained key insights on how the use of carbon offsets will fit into a university's plan to reduce its carbon footprint. Carbon Scholar has the advantage of getting an inside look at sustainability at a large university and the current solutions offered to universities to reduce these carbon emissions. Below you will find a small biography for each team member and the value each brings to Carbon Scholar. Full resumes for each member of the management team are available in Appendix G.

Michael Drobny, General Manager



Michael is an accounting and entrepreneurship major at the University of Arizona with honors. Michael has had previous experience at a large public accounting firm, as well as entrepreneurial experience, where he and another student started a tutoring service on-campus. He is responsible for the overall structure of the business.

Jordan Schupan, Marketing Manager



Jordan recently launched a college based marketing company, which is proving him with experience to meet the marketing expectations of Carbon Scholar. He is a marketing and entrepreneurship major at the University of Arizona. Jordan's focus pertains to the direct sales of investment packages to universities through unique marketing and sales strategies.

Paul Mallery, Finance Manager



Paul is a finance and entrepreneurship major at the University of Arizona with honors and the financial visionary for Carbon Scholar. He utilizes his education and past experience working at Vanguard to produce the company's financial statements and budget.

Cadogan Price, Operations Manager

A marketing and entrepreneurship major at the University of Arizona, Cadogan brings order to the day-to-day operations and also participates heavily in marketing and sales for the company. His experience includes fundraising and helping to manage a \$250,000 budget for the U of A's Lacrosse Team as a captain.

*Advisors***Dr. Joe Abraham**

As the Sustainability Coordinator for the University of Arizona, Dr. Abraham understands the key decision drivers that university officials must consider when making an investment in carbon offsets. Through his background in environmental consulting, he has developed an extensive network of influential experts in this industry. This has helped Carbon Scholar gain credibility and proper understanding of sustainability at universities.

Emre Toker

Emre Toker has launched, successfully built, and ultimately sold multiple ventures in the medical device industry. His experience has been invaluable to the development of Carbon Scholar. The management team's energy and passion is well balanced by Mr. Toker's wealth of startup experience from both an operational and fiscal standpoint.

Customer Problem & Opportunity

Carbon Scholar customer problems may be summarized as follows:

1. Carbon Scholar customers will be universities and colleges who have recognized a need for ongoing sustainability programs. There are 677 universities that have signed an agreement to focus efforts on improving their environmental impact, but these customers are facing tough times right now due to the current economic climate. Many universities, such as the University of Arizona, face shrinking budgets and are working with state legislatures in order to maximize the impact of each dollar spent. There have been significant cutbacks already and states are left with no option but to continue tightening the budget at all levels, which affects universities and colleges.

2. Given the current economic climate and budget cutbacks, universities and colleges are facing the difficult task of finding affordable sustainability solutions. The University of Arizona currently maintains its Office of Sustainability by charging a \$24 fee per student, which is reflected in their tuition; Northern Arizona University charges \$5 per student. These institutions realize the need for the use of carbon offsets in order to reach carbon neutrality, but simply lack the funds to actually develop a full-scale carbon offset producing project. On average, a carbon offset project can cost over \$250,000 to build, which is currently an investment universities are not willing to commit to. Aside from the financial constraint, universities may lack the knowledge and time to design, construct, and operate such a project and coordinate among universities for jointly funded projects. From speaking with administrators at the University of Arizona, it is clear that the university is dedicating their resources, first and foremost, to the advancement of education. There is also the burden of verifying the carbon offsets once they are produced by the project.

The Value of Carbon Offsets

When universities evaluate their options for sustainability, they have many options, which include the following:

-  All-new campus construction can be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.
-  An energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products
-  Encourage the use of public transportation for all faculty, staff, students, and visitors to the institution.
-  Participate in a recycling program.
-  Purchase or produce the institution's electricity from renewable sources.

The question now becomes, what is the benefit of using carbon offsets as opposed to these other environmentally friendly options?

-  The opportunity to lower the cost of compliance – The generation and purchase of carbon offsets enables universities to reduce their carbon emissions without disrupting their infrastructure. There are premium costs associated with purchasing environmentally friendly materials and products for university purposes. The University has established a policy of building all-new campus facilities to the LEED standard but that does not apply to older buildings. ENERGY STAR certified products are often sold at a premium due to this certification, that when buying in bulk as Universities do, can become extremely costly. Also, it is highly unlikely that all faculty, staff, students, and visitors will pledge

to use public transportation, especially in a place like Tucson where the only means of public transportation is the bus system. Though the University does put a high priority on recycling, especially at sporting events, this does not have a significant effect on their emissions.

- 🌍 The opportunity to buy low and sell high – Today, the United States functions as a voluntary market for carbon offsets, which means there is no regulations in place that prohibit an entity from emitting abnormally high levels of carbon dioxide. The price of a carbon offset will significantly increase in a regulated environment. If a university acts before legislation is passed, it can accumulate offsets at a price approximately \$10 lower than predicted regulatory levels. Investing in projects in this pre-compliance market puts universities at the forefront of the marketplace upon regulation. As a large stakeholder, the universities will act not only as buyers in the market but also receive a high ROI upon selling their reserve offsets.
- 🌍 The opportunity to create alternative value – The development, implementation, and operation of local carbon offset projects can generate economic benefit in the community by creating jobs. Large projects are not only capital intensive but extremely labor intensive and will help stimulate local economies. Furthermore, these projects help to eliminate harmful greenhouse gasses that otherwise would be emitted into the atmosphere and continue to advance the effects of global warming. This topic will be covered later in the business plan under the Alternative Value section.

Product/Service

Carbon Scholar will make investing in carbon offset projects highly accessible and affordable for universities and colleges by pooling resources from institutions across the country. The venture will create a fund that collects investments from institutions across the country. The capital collected will go toward carbon offset projects. These projects include renewable energy, methane collection, and proper land-use. As the fund grows, the portfolio of environmental projects will grow and diversify to obtain the greatest amount of offsets. Carbon Scholar will oversee the development and management of the carbon offset projects. Once the offsets are produced, the venture will verify and register the carbon offsets against the strictest standards in the voluntary market. Universities will then have a choice, they can either claim the offsets to lower their own carbon footprint or sell them on the voluntary market for a financial return. If the university claims the offsets, those offsets are retired and cannot be used for any other purpose. If the university intends to sell the offsets, the venture will have the exclusive right to broker a deal with a buyer. In summary, Carbon Scholar has two core responsibilities: First, as a project developer, and secondly as a brokerage. As a brokerage, the firm is legally certified to

sell the universities and colleges' rights to the carbon offset projects, creating an opportunity for a return on investment for the schools.

Methane Collection System – The First Project

At startup, the venture will focus on developing one specific type of project: a methane collection and combustion system at a landfill. Landfill gas is formed as a natural byproduct of the decomposition of waste in landfills. Typically, this gas is composed of approximately 50% methane. Landfill gas is released from six months to two years after waste is placed in the landfill. Methane is a potent greenhouse gas, with 23 times the global warming potential of carbon dioxide. In 2007, methane emitted from landfills accounted for 133 million tons of CO₂e (carbon dioxide equivalent) in the U.S., or 2.2% of total annual greenhouse gas emissions.

The installation of a methane collection and combustion system at a 40-acre landfill costs \$250,000.⁵ Methane is collected through a series of pipes fed into the landfill at various depths. It is not uncommon for water to be added to the landfill, especially in dry areas, to accelerate the decomposition and emission process. The pipes are connected to a flare system atop the landfill, which burns off the emissions, reducing the impact of the greenhouse gases that would otherwise escape naturally. With a system in place, the project, which does not interfere with normal operations of the landfill, can produce up to 50,000 carbon offsets per year.⁶

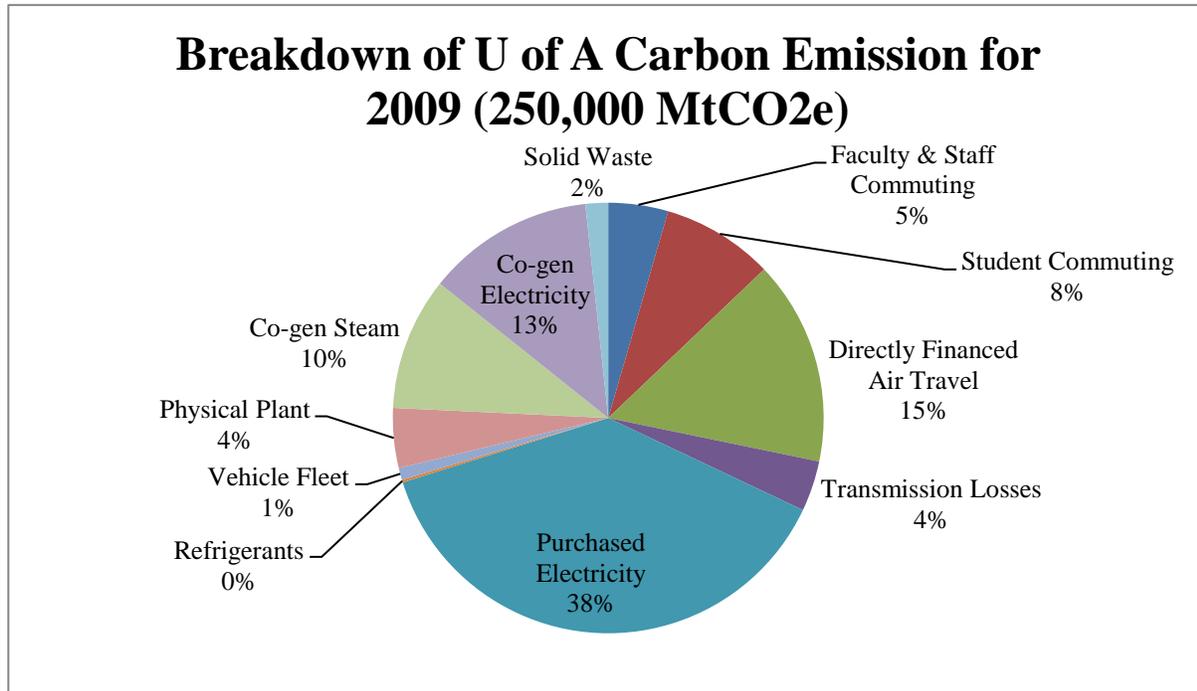
Target Market & Market Validation

The American College & University Presidents' Climate Commitment (ACUPCC) is an effort to address global climate issues by a network of colleges and universities that have made a commitment to eliminate net greenhouse gas emissions. Its mission is to “accelerate progress towards climate neutrality and sustainability by empowering the higher education sector to educate students, create solutions, and provide leadership-by-example for the rest of society.” The ACUPCC provides a framework and support to its participants to implement plans to pursue carbon neutrality. By signing the commitment, the institutions have agreed to: complete an emissions inventory, set a target date and milestones for becoming carbon neutral, take immediate steps to reduce greenhouse gas emissions, integrate sustainability into the curriculum as part of the educational experience, and make an action plan that is publically available. A copy of the full text can be found in Appendix B. To date, 677 colleges and universities from across the U.S. have signed the ACUPCC and will act as Carbon Scholar's target market.

⁵ Delhotel, Casey. *Report on the Methane Sub-Model for the US EPA National MARKAL Model*. Rep. International Resources Group, Dec. 2004. Web. <http://www.epa.gov/methane/pdfs/sub-model_data_report.pdf>.

⁶ Delhotel, Casey. *Report on the Methane Sub-Model for the US EPA National MARKAL Model*. Rep. International Resources Group, Dec. 2004. Web. <http://www.epa.gov/methane/pdfs/sub-model_data_report.pdf>.

In 2009, the University of Arizona produced and emitted more than 250,000 metric tons of carbon dioxide equivalent (MtCO₂e)⁷, the breakdown can be seen below:



As a member of the ACUPCC, it is the University's responsibility to significantly decrease this trend. Dr. Joe Abraham, Sustainability Coordinator at the University of Arizona, handles this issue first hand. He has been instrumental in adapting Carbon Scholar into what it is today. The University intends to do everything it can on-campus to limit its carbon emissions but Dr. Abraham argues that without carbon offsets, carbon neutrality would be impossible. Offsets provide universities with a flexible way to reduce emissions without affecting any infrastructure. Sustainability coordinators from around the country have expressed that they do not simply want to buy offsets, rather they want to become providers. The capital intensive nature of providing carbon offsets through an environmental project is not attractive to cash strapped institutions. Carbon Scholar allows these universities to make a smaller investment that will not only offset their emissions but could potentially offer a high financial return. This return could be reinvested into further environmental projects, or into the universities themselves, thus lowering tuition or raising the level of education.

Goldman Sachs, Inc. believes that there will continue to be increased regulatory activity around carbon; the U.S. is part of the pre-compliance stage of the overall carbon market. Their research shows compelling scientific evidence regarding climate change. Governments around

⁷ Abraham, Joe. "UA Carbon Offset Services Venture Concept." University of Arizona, Tucson. Lecture.

the world are responding by adopting new legislation, and support for climate legislation in the U.S. is growing across regions and the political spectrum. There were more than seven bills introduced to the 110th Congress concerning this issue, Lieberman-Warner was the strongest. This bill included instituting a cap-and-trade system and utilizing carbon offsets.

The pre-compliance market consists of buyers that expect to be regulated under upcoming legislation. Their incentive to buy offsets is driven by the reduced costs. Furthermore, entities regulated in the future will most likely look to domestic offsets before purchasing internationally. Goldman Sachs firmly believes the U.S. will adopt a federal regulatory program between 2012-2015.⁸ Factors that could accelerate this forecast include a technological breakthrough, a major natural catastrophe, or a new international agreement. Goldman Sachs has made significant investments in regard to carbon offsets, including purchasing a 5% stake in Blue Source, a major competitor in the industry. Most recently, the Goldman Sachs invested \$12 million in purchasing carbon offsets. Today, the price for a carbon offset in the voluntary market is approximately \$5, whereas in the European Union, a compliance market, the price is approximately 15 Euros, or around \$20. An MIT analysis (chart below) of future offset prices shows that by 2015 a ton of CO₂e could range anywhere from \$18-\$53 under varying types of regulation in the United States.⁹

Future Prices of Carbon Offsets (\$/tCO₂e)

Various Levels of Regulation:

Case A: Immediate cap at 2008 emission levels

Case B: Diminishing Cap to 50% of 1990 levels by 2050

Case C: Diminishing Cap to 20% of 1990 levels by 2050

| Year | Case A | Case B | Case C |
|------|--------|--------|--------|
| 2015 | \$18 | \$41 | \$53 |
| 2020 | \$22 | \$50 | \$65 |
| 2025 | \$26 | \$61 | \$79 |

Industry

⁸ QMS Partners. *Carbon Emissions Trading Markets Worldwide*. Rep. Rockville: SBI, 2009. *Business, Marketing and Economics*. Web. 10 Oct. 2010.

⁹ Report No.146, April 2007, MIT Joint Program on the Science and Policy of Global Change

Carbon emissions have been traded, in one form or another, since 1990. Due to increased interest and research into global warming, greenhouse gas levels have become a hot button issue in recent years. This has facilitated a tremendous amount of growth in carbon emissions trading. The value of the global carbon market has increased from \$727 million in 2004 to \$118 billion in 2008.¹⁰ Two unique segments can define the carbon market: the compliance market and the voluntary market.

The compliance market is made up of those countries that instituted government regulation of carbon emissions, as required by their participation in the Kyoto Protocol. The protocol established binding targets for 37 nations to limit or reduce greenhouse gas emissions. Carbon offsets are traded in the compliance market in order to meet established carbon emissions limits through a cap and trade system. The European Union Emissions Trading System is the most active cap and trade system today, accounting for 68% of the global carbon market trading volume and 81% in value terms.¹¹ In 2008, trading activity in this market group accounted for 99% of the overall carbon market.

For the purposes of this venture, analysis of the voluntary market is extremely important since the United States falls into this category. The voluntary carbon market includes carbon offset trades that are not required by regulation. The U.S. has not yet ratified the Kyoto Protocol and the federal government does not currently regulate greenhouse gas emissions required under the protocol. Among the factors driving demand for offsets in the voluntary market are increasing corporate social responsibility, marketing efforts to highlight environmental responsibility, and pre-compliance efforts investing in carbon offsets with the intention of retiring or selling them in the future. The voluntary participation by U.S. corporations currently makes up 80% of the demand in the voluntary carbon market. Trades made in the voluntary market were valued at \$728 million and represented carbon emissions reductions of 127 MtCO₂e. The voluntary market accounted for 1% of the global market for carbon. However, given the recent downturn in the global economy and the significant decline in the prices of carbon units traded, the value of the voluntary carbon market decreased to \$387 million in 2009 and represented carbon emissions reductions of 94 MtCO₂e.¹² A graph of these trends can be found in Appendix A. Prices in the carbon markets are expected to recover post-2009. Bolstered

¹⁰ QMS Partners. *Carbon Emissions Trading Markets Worldwide*. Rep. Rockville: SBI, 2009. *Business, Marketing and Economics*. Web. 10 Oct. 2010.

¹¹ QMS Partners. *Carbon Emissions Trading Markets Worldwide*. Rep. Rockville: SBI, 2009. *Business, Marketing and Economics*. Web. 10 Oct. 2010.

¹² QMS Partners. *Carbon Emissions Trading Markets Worldwide*. Rep. Rockville: SBI, 2009. *Business, Marketing and Economics*. Web. 10 Oct. 2010.

by continued growth in volume, the global carbon market value is projected to grow by 68% per year from under \$84 billion in 2009 to \$669 billion in 2013.¹³

The global carbon market is made up of suppliers, intermediaries, buyers, and industry services. The suppliers are most often project developers that either sell the offsets they produce directly to the buyers or to intermediaries. The intermediary sector consists of exchanges, brokers, aggregators, and financiers. Carbon Scholar will act between these two segments as a project developer, utilize financing from universities, and broker deals to buyers. In the compliance market, the buyers consist of governments, public entities, private sector firms, and individuals, while the voluntary market is mostly made up of private sector firms and individuals. Firms that specialize in Verification Services and Consulting Services dominate the industry services component. This is extremely important because verifying the offsets once they are produced is a major function of the venture. Furthermore, the overall lack of knowledge on this topic puts Consulting Services in demand for buyers looking to enter the market. Discussion concerning the potential for a federal cap-and-trade system can be found in Appendix C.

Competitors

Carbon Scholar is distinguishable from competitors in the voluntary marketplace because the venture is segmenting the market to specifically focus on the carbon offset needs of universities and colleges. Furthermore, allowing the customer to own the rights to the offset is an innovative strategy that is currently not being utilized by competitors. Below you will find a description of three competitors in the industry that most closely represent Carbon Scholar's core competencies:

Blue Source offers the leading portfolio of green house gas emission reductions, is a leading developer of carbon capture and storage (CCS) systems, and the first and largest source of project investment capital dedicated to CCS and methane management. The company has the experience and relationships to create a diverse array of projects, and through their strategic investment partnership with Och-Ziff Capital Management Group, *Blue Source* has the largest commitment of funding for new emissions reduction project, including a partnership with Google. The company has contracts to sequester over 300 million tons of carbon emission reduction offsets through the year 2019.

EcoSecurities Group is a leading company in the business of sourcing, developing and trading emission reduction credits. *EcoSecurities* structures and guides greenhouse gas emission reduction projects from beginning to end, working with both project developers and buyers of emission reduction credits. As a project developer, *EcoSecurities* contracts with the owners of assets that have the potential to create emission reductions, to finance,

¹³ QMS Partners. *Carbon Emissions Trading Markets Worldwide*. Rep. Rockville: SBI, 2009. *Business, Marketing and Economics*. Web. 10 Oct. 2010.

build and operate projects. The company will acquire over 118 million carbon credits through 2012. The company believes their unique strength lies in their transaction experience and their unrivalled size and diversity of their project portfolio.

Terrapass enables businesses and individuals to fund clean energy and carbon reduction projects. Customers purchase a “Terrapass,” at various levels of investment, which goes directly towards funding carbon offsetting projects. Their website provides carbon calculators for individuals and businesses to calculate their carbon emissions, even down to a specific event like a wedding, and purchase a “Terrapass” for that exact amount. Their corporate clients include Enterprise, Expedia, and Ford Motor Company. As of 2009, the company had over 3 million tons of carbon dioxide equivalent for sale to retail and wholesale customers. *Terrapass* has grown significantly in a short amount of time and is certainly an up-and-coming player in the U.S. market.

Carbon Scholar will utilize strategies from both *Blue Source* and *EcoSecurities Group* in building a successful project portfolio and securing capital investment from the customer base. The venture will differentiate itself by allowing universities to choose between using their investment to offset their own emissions and/or selling the offset to a third party. Universities have not been approached in this manner before. From conversations with Dr. Abraham, it is apparent that consulting and brokerage firms who provide carbon offsets simply would like universities to act as buyers and not sellers. In the current environment of budget tightening and constrained resources, Carbon Scholar will allow universities to do both. This provides universities the opportunity to see a ROI upon the brokerage of their offsets. *Terrapass* launched as part of a project at the Wharton School of Business at the University of Pennsylvania. Their business model differs from most firms because the customer receives a card or a “Terrapass” in return for their investment to offset specific emissions. The company does not operate in a specific market and could become a direct competitor. Like the two competitors mentioned above, *Terrapass* is not interested in giving the customer an option of whether to claim the reduction or sell the offsets. The customer calculates their emissions, purchases a “Terrapass,” and that investment goes towards building a project. Once offsets are created, they are then retired by the company in the name of each of the purchasers who contributed to the project.

Competitive Advantages & Core Competencies

There are three key features in the operations of the carbon offset fund that define Carbon Scholar’s competitive advantage. The first aspect is focused on the monetary inputs for the fund. The second is based on the return on those investments, and the third is that Carbon Scholar offers the most ethical and highest standards of carbon offset verification.

Universities and colleges have the opportunity to invest in carbon offset projects in various monetary increments. Through conversations with Dr. Abraham, it is reasonable that universities would be willing to invest \$25,000 to be part of such a fund. This ability for a

university or college to invest small-scale capital is the foundation for Carbon Scholar's initial competitive advantage. The first project the fund will invest in will be a methane collection system at a landfill. The estimated cost of capital for a 40-acre methane collection carbon offset project is \$250,000. Carbon Scholar's first competitive advantage is that the fund allows universities and colleges to pool their smaller investments together for the development of a project. Ten universities each investing \$25,000 can pool their monetary investments together to see the construction of methane collection system at a landfill. Currently, a university can only own the rights to a carbon offset project if they invest in the upfront costs themselves. For example, without the use of Carbon Scholar's services, the University of Arizona will have to invest \$250,000 dollars to own the rights to the carbon offset.

Carbon Scholar's second competitive advantage is derived from the potentially high return on investment the fund could offer. Each university invested in the fund has the ownership rights to the carbon offsets created depending on their contribution to the fund. For the scenario above, a university would own 10% of the offsets created. The rights to a carbon offset project can either be retained by a university to help them reach carbon neutrality or can be sold on the carbon market for a return on investment. Prior to the development of Carbon Scholar, universities and colleges could only purchase carbon offsets from providers. These offsets would go toward the institution's carbon footprint and then be retired. Until the establishment of Carbon Scholar, there is not an available opportunity for return on investment. At the current market price of \$5, the university will be able to make back their initial investment within a year. In a regulatory environment, these universities and colleges could see a tremendous return on investment, as the price for a carbon offset will reach unforeseen levels.

The third competitive advantage is that Carbon Scholar offers the most ethical and highest standards of carbon offset verification. Carbon Scholar supports specific carbon offset standards, which assure transparency and quality in the creation, quantification, and verification of offset projects. These standards require that offsets be real, permanent, quantifiable, never double-counted or double-sold, and independently verified. Carbon Scholar will utilize the Voluntary Carbon Standard (VCS) to verify all produced offsets of their project portfolio. The VCS is a global benchmark standard for project-based, voluntary, greenhouse gas emission reductions and removals. The Climate Group, the International Emissions Trading Association, the World Business Council for Sustainable Development, and a range of business, government and non-government organizations developed VCS. Projects qualify for VCS after being validated against the standard's requirements by an accredited third-party. Being accredited by the VCS is important to Carbon Scholar's customers because in today's carbon market carbon offsets are being double counted or double sold.

Strategies

Marketing

Carbon Scholar's strategic marketing plan directly stems from its core competency, the ability to network with universities. The focus of both marketing and sales will be building customer relationships. Carbon Scholar prides itself on its ability to form personal relationships with customers in order to fully understand their needs, rather than act as a dispassionate brokerage. As part of the strategic marketing plan, the firm will develop company pamphlets, presentation materials, and written background information about the carbon offset market that will create confidence and understanding of the needs and wants of the investors. Each informational package will be specifically tailored to the individual client.

Currently, in the carbon offset market one major issue is a lack of market transparency. Carbon Scholar plans on directly dealing with this issue through the use of a website, www.carbonscholar.com. Carbon Scholar will create transparency in the market place by offering an assortment of journal articles and current information about carbon offset practices globally. This will include carbon offset pricing, carbon offset project implementation, and carbon offset return on investment. One focus will be presenting information about current carbon offset practices in Europe, a compliance market. On this website Carbon Scholar will also have the opportunity to market the venture concept and publicize information about investment opportunities. Carbon Scholar plans on sharing live footage of their project portfolio through carbonscholar.com. Each university that invests in the carbon offset fund will have a secure login and password. Once logged in, a university will be able to obtain documents tailored to them, monitor their investment, and communicate with Carbon Scholar. Since Carbon Scholar is a green company, Carbon Scholar plans on limiting the use of paper. Subsequently, all documents will be available through the website.

The focus of Carbon Scholar marketing plan is to build a network of universities pursuing carbon offsets and who seek the opportunity to be providers of carbon offsets. The carbon offset projects that the funds invest in will create offsets for many years. This enables Carbon Scholar to emphasize the return on investment that investors will receive over a projected timeline. As universities and colleges invest in the carbon offset fund, Carbon Scholar will diversify their project portfolio and invest in projects that demand greater cost of capital, such as additional landfills, wind farms, and land use projects. After capturing the Southwest market, the firm plans to further pursue universities that signed the American College and University President's Climate Commitment in the western region of the country, followed by universities in the Midwest region, and then the clients east of the Mississippi River. We will target both the endowment funds and also the auxiliary units of universities, including athletic departments and residence life.

Sales

Carbon Scholar direct sales technique is asking the right questions to close in on more prospects. These questions will be focused on the current efforts of a university and their projected timeline of how and when they will reach carbon neutrality. Carbon Scholar will utilize direct mail. Carbon Scholar will mail a brochure and a letter with a return address and stamp to each sustainability coordinator whose university is a member of the ACUPPC. On the company website, Carbon Scholar will also use direct response. A page on the website, www.carbonscholar.com, will enable a prospect to identify themselves and asked to be contacted by Carbon Scholar.

Carbon Scholar's sale techniques will include a unique presentation for each university providing their administrators with valuable information on the current state of the U.S. carbon offset market, Carbon Scholar's competitive advantages, and a preliminary offset investment program tailored to the needs of the particular institution.

Key presentation selling points include:

-  Provide clear definition of a carbon offset
-  Successful examples of carbon offset projects in the U.S and Canada
-  Exponential ROI from selling carbon offsets generated by carbon offset projects
-  Ability to claim offsets or sell them for ROI
-  Leveraging positive public relations from investing in green projects

Carbon Scholar will be present at tradeshow to showcase our project portfolio and green services, as well as examine recent market trends and opportunities. Specific tradeshow offer Carbon Scholar the opportunity to meet customers who are willing to purchase verified carbon offsets from universities at market price. This customer could be a commercial business or an individual that seeks to minimize their carbon footprint. By supplying this customer base to invested universities in the carbon offset fund, Carbon Scholar is able to attain the return on investment that the company proposed to universities in the sales pitch.

Through a presentation to the ACUPPC, Carbon Scholar plans on reaching an agreement about a partnership. The advocacy of the ACUPPC should be beneficial by helping Carbon Scholar reach a larger university customer base. It is possible that with the support of the ACUPPC, universities will seek out and contact Carbon Scholar versus Carbon Scholar initiating contact with universities and attempting to sell them on the venture concept.

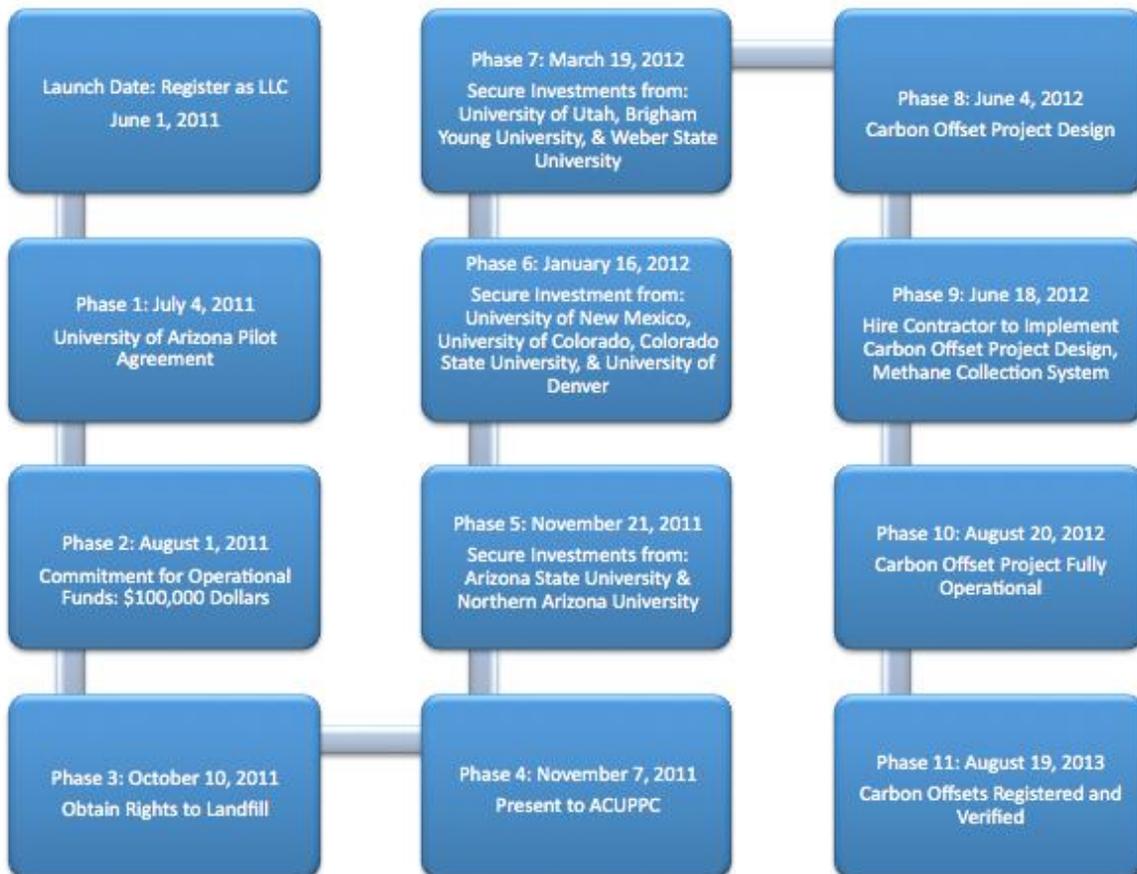
Initially, all four founders of Carbon Scholar will be part of the sales team. Each sales representative will be responsible for generating new leads and servicing accounts. Carbon Scholar's sales team will use multiple channels of communication to generate new leads. During the year, there are many conventions and conferences that specifically deal with the carbon offset

market, including Green Fleet’s Conference and Ramsar Conference. Also, the EPA Green Power Partnership hosts webinars on a regular basis that explore a wide range of green energy topics. Carbon Scholar will take part of these webinars and present our sales and marketing pitch over this forum. Carbon Scholar plans to commit 10-15% of our revenue to the marketing communications to keep information timely and make sure the firm is active in maintaining current relationships and building new partnerships.

Operations

Initially, Carbon Scholar operations will be maintained from the McGuire Center for Entrepreneurship located at 1130 E. Helen, Tucson, Arizona 85719. At the headquarters, the management team will develop and organize the marketing and sales material, operate the company website, and have open lines of communication with customers. Carbon Scholar customers are universities, therefore the sales team will be meeting at the administrative buildings of universities to present the sales pitch. Carbon Scholar plans to move from this location within the first few months of operation. It will be necessary for the venture to seek out office space in Tucson, Arizona that is affordable and most appropriate for operations.

Operations Timeline



Securing Investments from Universities

Through a pilot program with the University of Arizona, Carbon Scholar will partake in its first carbon offset project and develop credibility. Carbon Scholar chose the University of Arizona because it is a member of the ACUPCC and cannot reach carbon neutrality without a green portfolio that includes carbon offsets. The pilot program is a beta test with the university to develop the appropriate sales and marketing material to reach our niche market—universities. Carbon Scholar's effort with the University of Arizona will be rewarded with a letter of intent from the university. The University of Arizona's letter of intent will state that if Carbon Scholar can secure nine other investments of \$25,000 dollars, the University of Arizona will be the first to invest in the fund. The first \$250,000 raised will be used to implement Carbon Scholar's first carbon offset project, a landfill methane collection system. By having a letter of intent from the University of Arizona, Carbon Scholar will have a reference and credibility when seeking investments from other universities.

Carbon Scholar's first initiative, utilizing the letter of intent, will be to secure investments from Arizona State University and Northern Arizona University. The sustainability coordinators at the University of Arizona, Arizona State University and Northern Arizona University have open communication lines. Carbon Scholar plans to leverage Joe Abraham, sustainability coordinator at the University of Arizona, as a reference to obtain \$25,000 dollar investments from Arizona State University and Northern Arizona University. Carbon Scholar next approach will be to reach out to universities of the four corner states. First, the University of New Mexico, then University of Colorado, Colorado State University, University of Denver, and then University of Utah, Brigham Young University, and Weber State University. Carbon Scholar chose these universities based on the benchmark of a minimum student body of 12,000 students. Universities with a minimum of 12,000 students are large enough that they cannot reach carbon neutrality without the use of carbon offsets. If Carbon Scholar is able to secure ten investments of \$25,000 then \$250,000 will be available in the fund to implement a landfill methane collection system. The rights to these carbon offsets will be split proportionally to the investments by the universities of the four corner states. If Carbon Scholar is unable to secure ten investments from these universities, Carbon Scholar will pursue universities in California with a minimum of 12,000 students. The first three California universities on Carbon Scholar's list are University of Southern California, University of California Berkeley, and University of California Los Angeles.

The initial sales goals of Carbon Scholar in year one is to raise \$250,000 in total from 10-20 university or college investments to fund the first carbon offset project, landfill methane collection. Carbon Scholar aims to establish relationships with Southwest and West Coast Universities to build a network of possible funding sources for our carbon offset fund in this year. During year one Carbon Scholar will direct its marketing and sales strategies to contact and pursue forty universities and colleges. Carbon Scholar's tactics to fulfill these first year goals are

to have sales representatives to attend a minimum of fifteen industry trade shows, devote two days per week to prospecting and qualifying university and college leads, and develop a reliable customer relationship management system. Each founding member of Carbon Scholar will be responsible for weekly sales call reports and must send surveys and other valuable information on a monthly basis. This feedback can offer Carbon Scholar an understanding of university and colleges' current perspectives of the carbon offset market.

Business Model

Carbon Scholar will have two revenue streams, a fund management fee and a brokerage fee. The fund management fee will be a 1.25% quarterly fee, which is a competitive rate that has been chosen after researching competitor carbon offset firms in the European market and investment firms within the United States. This management fee will help cover our expenses associated with sales and marketing, lawyers, software engineers, marketing research, supplies, lobbying, consulting, and rent and utilities. If a University decides to sell their offsets rather than claim them, they can do so through our carbon offset brokerage at a 7.5% fee. Once again, this commission is similar to our competitors in the European market.

Financials

Carbon Scholar forecasted a medium demand scenario to complete the financial model, which uses figures based on the current voluntary market (unregulated market) and the anticipation building up for the passage of regulations. It is important to note that, if regulation were to pass, the figures in this scenario could increase 300%. In medium demand, Carbon Scholar will secure 10 university investments prior to starting the fund, 3 a month in Year 1, 6 a month in Year 2, 9 a month in Year 3, 13 a month in Year 4, and 19 a month in Year 5. Moreover, the venture estimated that the average investment per transaction in Years 1-5 would be \$25,000, \$30,000, \$35,000, \$40,000 and \$45,000 respectively. In respect to the brokerage sales, we estimated that each carbon offset project would cost \$250,000 and would generate 50,000 offsets. As technologies become more efficient and our processes become more advanced, the projects will eventually be generating 150,000 carbon offsets by year 5. The offsets could be sold for \$5, \$6, \$7, \$8, and \$9 in Years 1-5 respectively. We expect to see an increase in price due to the increased anticipation of carbon regulation passing and a heightened need to use carbon offsets to improve universities' images as well. The aforementioned carbon offset prices are conservative estimates due to the fact that, if regulation passes, the United States, as a larger market, may have carbon offset prices higher than the \$15 carbon offsets in the European market.

The model assumes that about 75% of the offsets generated for our clients would be sold through the brokerage arm at a 7.5% fee. These estimates are consistent throughout the five years

of projections. There are not cost of goods sold in the fund’s model due to the fact that the expense of the projects is on our fund’s balance sheet rather than our company’s balance sheet, and our only costs are those associated with running and marketing the fund as a company.

Yearly Forecasts

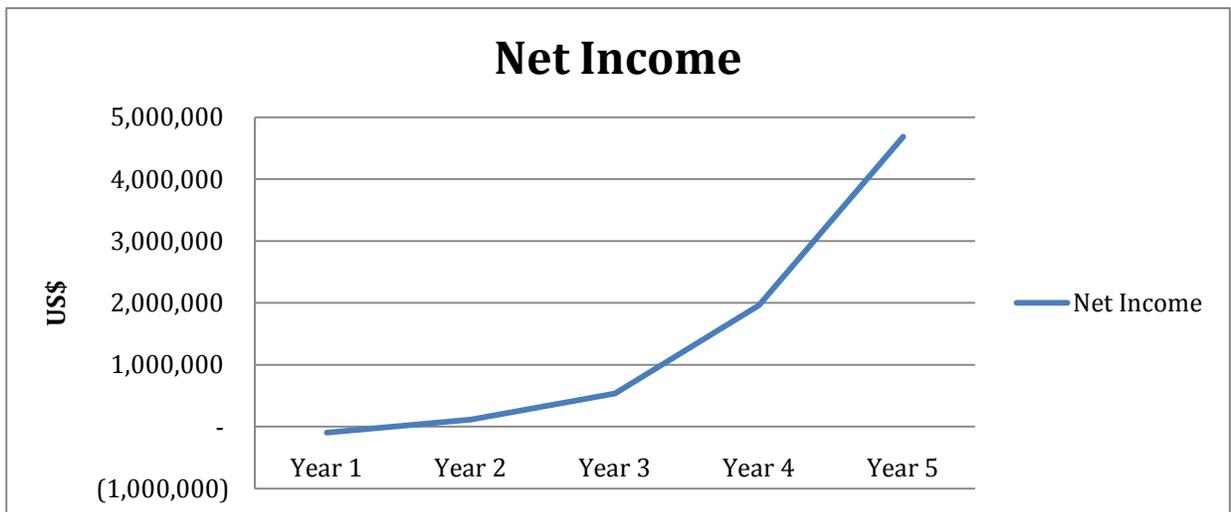
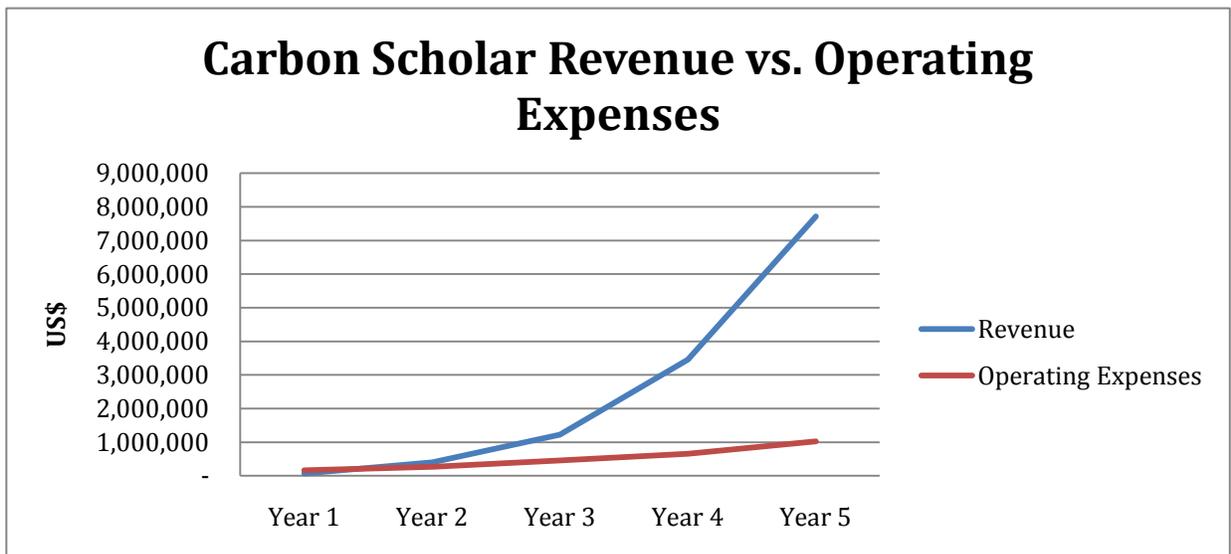
| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---------------------------------|----------|----------|----------|----------|----------|
| Total School Investments | 43 | 72 | 108 | 156 | 228 |
| Average Investment | \$25,000 | \$30,000 | \$35,000 | \$40,000 | \$45,000 |
| Carbon Offset Price | 4 | 5 | 5 | 6 | 6 |
| Projects (As Year End) | 4 | 9 | 15 | 25 | 41 |

Projected Income Statement

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|-------------------------------|--------|---------|-----------|-----------|-----------|
| SALES | 70,700 | 396,000 | 1,226,000 | 3,461,000 | 7,720,000 |
| OPERATING EXPENSES | | | | | |
| Salaries and wages | 60,000 | 94,000 | 170,000 | 198,000 | 220,000 |
| Payroll taxes | 4,590 | 7,191 | 13,005 | 15,147 | 16,830 |
| Employee benefits | 6,900 | 10,810 | 19,550 | 22,770 | 25,300 |
| Depreciation | 3,274 | 3,571 | 3,571 | 3,571 | 3,571 |
| Additional Operating Expenses | | | | | |
| Sales and Mktg Expenses | 18,000 | 84,000 | 162,000 | 324,000 | 648,000 |
| Lawyer Fees | 12,000 | 12,000 | 24,000 | 24,000 | 36,000 |
| Software Engineer | 5,000 | - | - | - | - |
| Rent Expense | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 |
| Market Research | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 |
| Supplies Expense | 6,000 | 9,000 | 12,000 | 15,000 | 18,000 |
| Utilities Expense | 12,000 | 15,000 | 18,000 | 21,000 | 24,000 |
| Consultants | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 |

| | | | | | |
|---------------------------------|----------|---------|-----------|-----------|-------------|
| TOTAL OPERATING EXPENSES | 163,800 | 271,600 | 458,100 | 659,500 | 1,027,700 |
| EBIT | (93,000) | 124,500 | 767,900 | 2,801,500 | 6,692,400 |
| DISTRIBUTION FOR TAXES | - | (9,427) | (230,373) | (840,452) | (2,007,712) |
| NET PROFIT (LOSS) | (93,100) | 124,400 | 767,900 | 2,801,600 | 6,692,300 |

Income Statement taken from medium demand Financial Model



Operating Expenses

Please note that the expenses incurred through the carbon offset projects (landfill methane gas capture and flare systems) are not on our income statement as they are expenses incurred by the fund and not the company. Salaries and wages include founders' annual salaries, along two administrative assistants and a secretary in the future. This model also uses a 7.65% payroll tax and employee benefits of 11.5% base salary. Additional operating expenses include sales and marketing expenses (which include traveling to our clients), lawyer fees, software engineer fees, rent expense, lobbying, market research, supplies expense, utilities expense, and consultants.

Net Profit (Loss)

Carbon Scholar is forecasted to have its first profitable month in month 12 of operations. As a result, Year 2 is our first profitable year with an EBITDA of about \$128,000. Our current financial estimates have taken a conservative stance on market prices for carbon offsets (ranging from \$4-\$6 per offset), and we have projected that we will have 72 new investments in Year 2. These investments can come from clients that are previously invested in the fund and would like to invest further or from new clients. In order to break even in Year 2, the firm must achieve 15 investments for the year, meaning that we have a low hurdle point that we must achieve in order to become profitable.

Risk Analysis

Market Risks

Given that the current U.S carbon offset market is voluntary, universities and colleges may find that reaching carbon neutrality is no longer a priority. In that case, Carbon Scholar would need to reevaluate its target market. Moreover, the current demand for carbon offsets is based off of corporations, universities, and individuals' desire to improve the environment, meaning that demand may fluctuate heavily.

Regulatory Risks

If there are no significant changes in political policy concerning regulation, voluntary market prices could drop significantly, eliminating the potential return on investments to universities. This scenario would affect all firms in the voluntary market. On the other hand, if legislation is passed in the United States that regulates carbon emissions and institutes a cap and trade system, Carbon Scholar and its clients would be in a strong position to take advantage of the financial gains stemming from an increase in carbon offset prices.

Legal Risks

In order to have fully verified carbon offsets that are not double counted, Carbon Scholar must be ahead of the curve in terms of the legality issues of carbon offsets. If further carbon emission regulations are passed, then the legal requirements of our firm will increase heavily. If any of the fund's carbon offsets come from illegitimate sources, the costs stemming from litigation will have an effect on our cash flows.

Intellectual Property Risks

Carbon Scholar is limited in its intellectual property capabilities. It is important to form relationships with universities and secure the exclusive rights to manage and broker their investments.

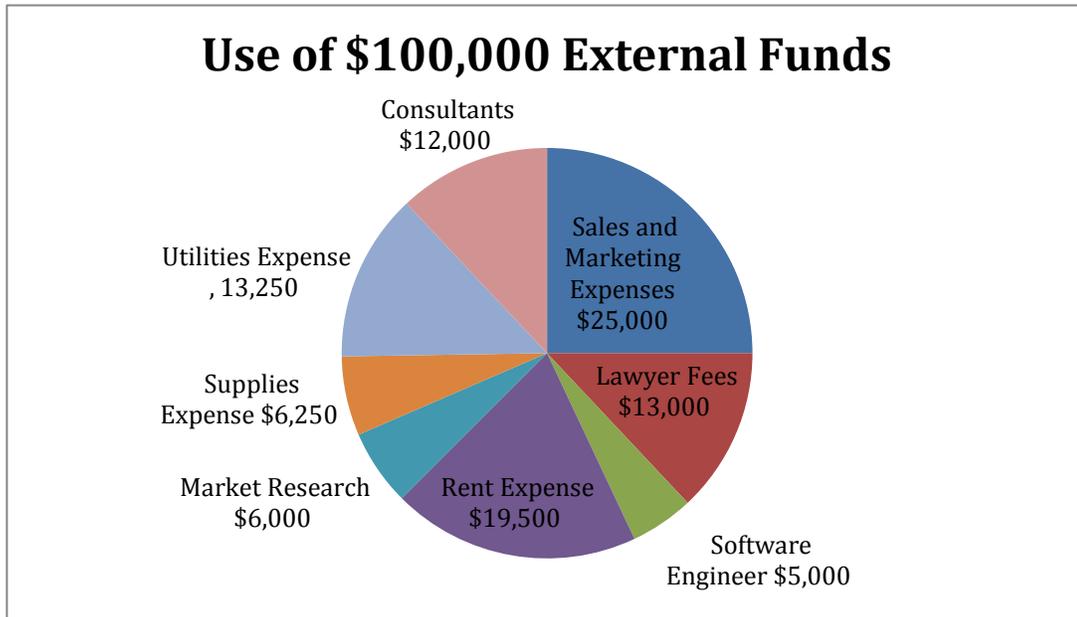
Technology Risks

The technology associated with landfill methane gas capture systems is expensive. If carbon emission regulations are put place, the cost of installing a landfill methane gas capture and flare system can double due to the increased demand for the technology. Our firm will need to account for this in our increased revenue streams resulting from the new carbon offset prices.

Funding, Use of Funds and Resource Proposal

Carbon Scholar is seeking \$100,000 in external investment and has secured \$80,000 in founders' investments, which will already be factored into the firm's value at the time of external investment. The firm will not need further investment in Years 1-5. Averaging the valuation estimates from the First Chicago and Venture Capital methods, the venture has derived that Carbon Scholars' Year 5 value will be \$48 million, and the firm's current post-money valuation is \$1.2 million. Accordingly, the external investor will have 6.25% equity share in Carbon Scholar.

The \$100,000 in external investment will be used by our 13th month of operation, at which time our cash flows will begin to cover the firm's expenses. Please note that salaries will not be paid for by the external investment. Allocation of the \$100,000 in external invested capital will be allocated as follows:



Alternative Value

Primary Non-Commercial Benefit

The most prevalent alternate value is quite easy to discern: a reduction of global carbon emissions will enable a better quality of life in the future. One carbon offset represents the reduction of one metric ton of carbon dioxide or its equivalent in other greenhouse gases. Carbon dioxide is one of the primary greenhouse gases emitted into the atmosphere, which has been linked, along with other greenhouse gases, to global warming. Current climate change impacts include rising temperatures and changing precipitation patterns that are resulting in higher sea levels, longer droughts, increased flooding, more wildfires, and less water availability. Future impacts expected from unabated climate change include more extreme sea-level increases, longer heat waves, unhealthy air quality, and more unpredictable water availability. These impacts will affect a wide range of people, ecosystems, and economic sectors, including electricity generation, health care, agriculture, and tourism. By creating carbon offset projects, the venture is helping to reduce the harmful effects of global warming.

Secondary Non-Commercial Benefits

The secondary non-commercial benefits from this venture include the conservation of forests and regional economic development through job creation. Not only does deforestation contribute approximately 20-25% to the overall carbon emissions, it also destroys ecosystems. By discouraging this trend and promoting forestry as a useful offset, the venture is helping to preserve the habitat of many endangered species and other wildlife.

There is great potential for economic benefit in providing carbon offsets from local providers. For example, if the University of Arizona employed a company in the state of Arizona to provide their carbon offsets, jobs would be created. Utilizing the state's greatest natural resource, solar panels could be installed throughout Tucson that would directly offset carbon emitted by the University. Arizonans could do all the manufacturing, installation, and maintenance of these panels. The state would benefit via increased tax revenue from these individuals gaining employment and having higher taxable income.

Table of Contents: Appendices

Appendix A: Transaction Volume Growth for the Voluntary Carbon Market.....25

Appendix B: Text of the American College and University Presidents’ Climate Commitment...26

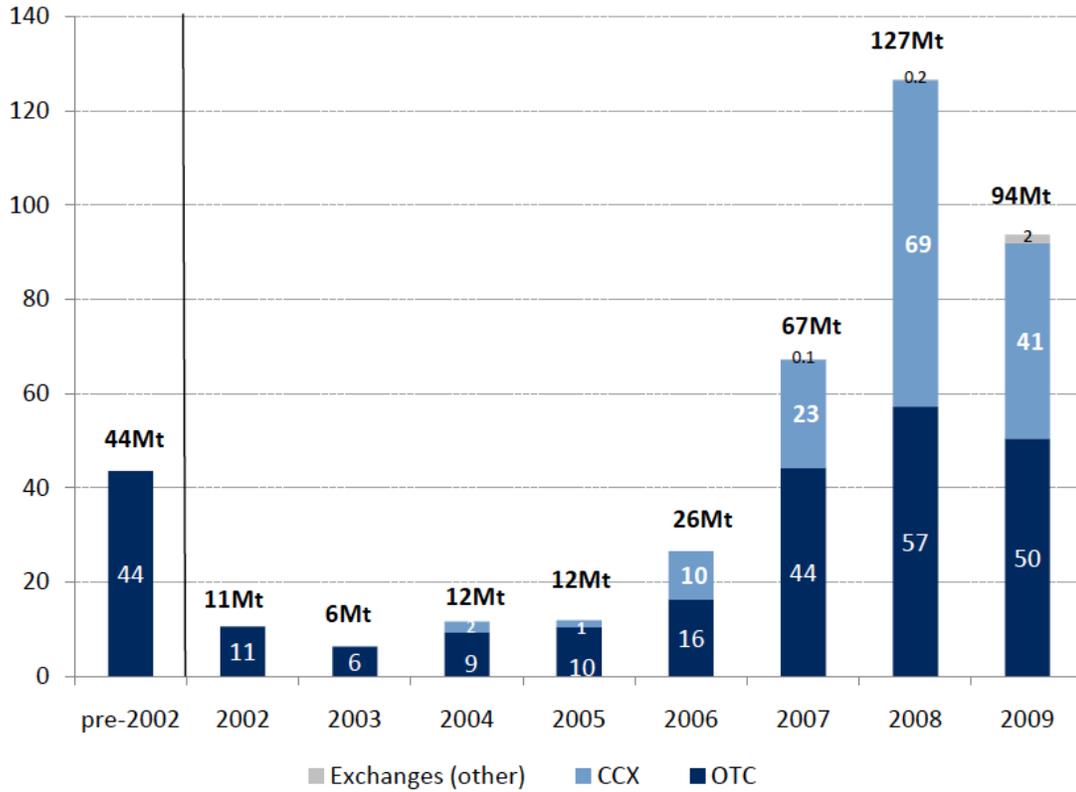
Appendix C: The Potential for a Federal Cap-and-Trade System.....28

Appendix D: Financials from Financial Plan + Relevant Calculations.....29

Appendix G: Management Team Resumes.....37

Appendix A: Transaction Volume Growth for the Voluntary Carbon Markets

Figure 1: Transaction Volume Growth for the Voluntary Carbon Markets



Source: Ecosystem Marketplace, Bloomberg New Energy Finance.
 Note: CCX bilateral trades included in the OTC volume.

Appendix B: Text of the American College and University Presidents' Climate Commitment

We, the undersigned presidents and chancellors of colleges and universities, are deeply concerned about the unprecedented scale and speed of global warming and its potential for large-scale, adverse health, social, economic and ecological effects. We recognize the scientific consensus that global warming is real and is largely being caused by humans. We further recognize the need to reduce the global emission of greenhouse gases by 80% by mid-century at the latest, in order to avert the worst impacts of global warming and to reestablish the more stable climatic conditions that have made human progress over the last 10,000 years possible.

While we understand that there might be short-term challenges associated with this effort, we believe that there will be great short-, medium-, and long-term economic, health, social and environmental benefits, including achieving energy independence for the U.S. as quickly as possible.

We believe colleges and universities must exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. Campuses that address the climate challenge by reducing global warming emissions and by integrating sustainability into their curriculum will better serve their students and meet their social mandate to help create a thriving, ethical and civil society. These colleges and universities will be providing students with the knowledge and skills needed to address the critical, systemic challenges faced by the world in this new century and enable them to benefit from the economic opportunities that will arise as a result of solutions they develop.

We further believe that colleges and universities that exert leadership in addressing climate change will stabilize and reduce their long-term energy costs, attract excellent students and faculty, attract new sources of funding, and increase the support of alumni and local communities. Accordingly, we commit our institutions to taking the following steps in pursuit of climate neutrality.

1. Initiate the development of a comprehensive plan to achieve climate neutrality as soon as possible.
 - a. Within two months of signing this document, create institutional structures to guide the development and implementation of the plan.
 - b. Within one year of signing this document, complete a comprehensive inventory of all greenhouse gas emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter.
 - c. Within two years of signing this document, develop an institutional action plan for becoming climate neutral, which will include:
 - i. A target date for achieving climate neutrality as soon as possible.
 - ii. Interim targets for goals and actions that will lead to climate neutrality.

- iii. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
 - iv. Actions to expand research or other efforts necessary to achieve climate neutrality.
 - v. Mechanisms for tracking progress on goals and actions.
2. Initiate two or more of the following tangible actions to reduce greenhouse gases while the more comprehensive plan is being developed.
 - a. Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.
 - b. Adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist.
 - c. Establish a policy of offsetting all greenhouse gas emissions generated by air travel paid for by our institution.
 - d. Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution.
 - e. Within one year of signing this document, begin purchasing or producing at least 15% of our institution's electricity consumption from renewable sources.
 - f. Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution's endowment is invested.
 - g. Participate in the Waste Minimization component of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste.
 3. Make the action plan, inventory, and periodic progress reports publicly available by providing them to the Association for the Advancement of Sustainability in Higher Education (AASHE) for posting and dissemination.

In recognition of the need to build support for this effort among college and university administrations across America, we will encourage other presidents to join this effort and become signatories to this commitment.

Signed,

The Signatories of the American College & University
Presidents Climate Commitment

Appendix C: The Potential for a Federal Cap-and-Trade System

In his most recent State of the Union address, President Barack Obama stated “I know that there are those who disagree with the overwhelming scientific evidence on climate change. But here's the thing, even if you doubt the evidence, providing incentives for energy-efficiency and clean energy are the right thing to do for our future , because the nation that leads the clean energy economy will be the nation that leads the global economy. And America must be that nation.” It seems that the federal government will make a significant effort to curb environmental policies and enact legislation to stand alongside the rest of the world in the first against climate change. No matter the motivation behind the President’s words, a bill that makes clean energy profitable would greatly impact Carbon Scholar and help the U.S. carbon market reach global expectations. A new comprehensive clean energy bill and framework for a cap-and-trade system, will most likely be designed around the progress of the Western Climate Initiative.

The Western Climate Initiative (WCI) is a coalition of seven U.S. states and four Canadian provinces working together to identify, evaluate, and implement policies to address climate change at a regional level. Established in 2007, the WCI is a comprehensive effort to reduce GHG pollution, spur growth in new green technologies, help build a strong clean-energy economy, and reduce dependence on oil. The WCI lists four critical motivational factors that have brought them to action:

-  The impacts of climate change already being experienced in the region
-  The forecast of far more significant adverse climate change impacts if we do not act now
-  The economic costs of inaction
-  The economic opportunities associated with a green economy

Through a regional cap-and-trade program and complementary policies, the WCI goal is to reduce emissions of the pollution that causes global warming to 15 percent below 2005 levels by 2020. Total emissions from capped sectors are projected to be 7,999 million metric tons of carbon dioxide equivalents from 2012 to 2020. A chart from the WCI is shown below, graphing the source of emission reductions under a cap (Note: carbon offsets make up the largest portion).

Appendix D: Financials from Financial Plan + Relevant Calculations

Venture Valuation Calculations

| Venture Valuation | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | | |
|--|-------------------|--------------------|----------------------|-----------------------|--------------------------|------------|------------|
| Expected Cash Flow | 1,047,528.75 | 2,060,467.99 | 4,581,441.81 | 9,688,158.03 | 50,923,098.88 | | |
| Cash Flow Variance | 53,372,550,625.00 | 262,261,799,542.21 | 2,437,285,955,190.69 | 19,369,823,666,059.00 | 1,087,831,795,930,270.00 | | |
| Cash Flow Standard Deviation | 231,025.00 | 512,115.03 | 1,561,180.95 | 4,401,116.18 | 32,982,295.19 | | |
| Risk-Free Rate | 0.04 | 0.08 | 0.12 | 0.12 | 0.22 | | |
| Market Rate | 0.13 | 0.28 | 0.44 | 0.63 | 0.84 | | |
| Market Risk Premium | 0.09 | 0.20 | 0.32 | 0.51 | 0.63 | | |
| Variance of Market Returns | 0.04 | 0.08 | 0.12 | 0.16 | 0.20 | | |
| Standard Deviation of Market Returns | 0.20 | 0.28 | 0.35 | 0.40 | 0.45 | | |
| Correlation of Firm Cash Flows with Market Returns | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | | |
| Comparable Firm Beta | 0.29 | 0.29 | 0.29 | 0.29 | 0.29 | | |
| CEQ-PV of Cash Flows | 987,246.63 | 1,839,622.11 | 3,827,568.30 | 7,623,393.95 | 34,267,823.99 | | |
| RADR - PV of Cash Flows | 982,580.20 | 1,810,227.56 | 3,772,308.12 | 7,619,327.70 | 36,421,692.67 | | |
| VC Method - High Demand Cash Flow | 1,163,041 | 2,316,526 | 6,159,590 | 15,365,372 | 32,362,919 | | |
| VC Method - PV of Cash Flow at 40% rate | 593,388.39 | 1,181,900.77 | 3,142,647.98 | 7,839,475.52 | 16,511,693.59 | | |
| VC Method - PV of Cash Flow at 60% rate | 454,312.99 | 904,892.78 | 2,406,089.86 | 6,002,098.45 | 12,641,765.41 | | |
| | | | | | | | |
| Beta = .29 | | | | | | | |
| Avg Mkt Value of Equity/EBITDA = 3.5 | | | | | | | |
| | | | | | | | |
| Cash Flows | Probability | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | EBITDA |
| Success | 0.3 | 1,163,041 | 2,316,526 | 6,159,590 | 15,365,372 | 32,362,919 | 16,581,211 |
| Expected | 0.5 | 1,163,041 | 2,316,526 | 4,789,855 | 9,036,982 | 17,468,125 | 9,960,076 |
| Failure | 0.2 | 585,479 | 1,036,238 | 1,693,188 | 2,800,277 | 4,832,423 | 2,709,074 |

Step by Step Explanation:

The expected cash flow [E(CF)] for each year was calculated by multiplying the probability of success [P_S], expected [P_E], and failure [P_F] with their associated success [CF_S], expected [CF_E], and failure [CF_F] cash flows.

The standard deviation of cash flows was calculated using the following equation:

$$\sigma_{CF} = \sqrt{P_S(CF_S - E(CF))^2 + P_E(CF_E - E(CF))^2 + P_F(CF_F - E(CF))^2}$$

The risk-free rate for Year 1 was assumed to be 4%. Each of the subsequent years (n) risk-free rate were found using the following equation:

$$r_f = (1 + .04)^n - 1$$

The market rate for Year 1 was assumed to be 13%. Each of the subsequent years (n) risk-free rate were found using the following equation:

$$r_m = (1 + .13)^n - 1$$

The market risk premium was calculated by subtracting the risk-free rate from the market rate each year.

The variance of market returns was assumed to be 4% in Year 1. Each of the subsequent years was calculating by adding 4%.

The standard deviation of market returns [σ_m] was found by simply square rooting the variance of market returns each year.

The correlation between the cash flows of the firm and market returns [C_t] is assumed to be 20% across all 5 years.

The comparable firm beta [β] was assumed to be the beta of Ecology & Environment, Inc.: .29.

To find the CEQ-PV of cash flows each year the following equation was used:

$$C_t - \frac{P(C_t, r_m) \sigma_{C_t} (r_m - r_f)}{r_m} \\ = \frac{C_t - \frac{P(C_t, r_m) \sigma_{C_t} (r_m - r_f)}{r_m}}{1 + r_f}$$

To find the RADR-PV of cash flows each year the following equation was used:

$$= \frac{E(CF)}{1 + r_f + \beta(r_m - r_f)}$$

To find the VC Method-PV of Cash flow at 40%, the high demand cash flows were plugged into the following equation:

$$= \frac{Year\ 1\ CF}{(1.4)} + \frac{Year\ 2\ CF}{(1.4)^2} + \frac{Year\ 3\ CF}{(1.4)^3} + \frac{Year\ 4\ CF}{(1.4)^4} + \frac{Year\ 5\ CF}{(1.4)^5}$$

Note: Year 5 CF includes continuing value

To find the VC Method-PV of Cash flow at 60%, the high demand cash flows were plugged into the following equation:

$$= \frac{Year\ 1\ CF}{(1.6)} + \frac{Year\ 2\ CF}{(1.6)^2} + \frac{Year\ 3\ CF}{(1.6)^3} + \frac{Year\ 4\ CF}{(1.6)^4} + \frac{Year\ 5\ CF}{(1.6)^5}$$

Note: Year 5 CF includes continuing value

Summary Statements for High Demand Case

Balance Sheet

| | Year Ending | 1 May-12 | 2 May-13 | 3 May-14 | 4 May-15 | 5 May-16 |
|---|----------------|------------------|------------------|------------------|-------------------|-------------------|
| Projected Balance Sheets (\$s) | | | | | | |
| ASSETS | | | | | | |
| Current Assets | | | | | | |
| Cash | | 1,163,041 | 3,479,567 | 9,639,157 | 25,004,529 | 57,367,448 |
| Accounts Receivable | | - | - | - | - | - |
| Inventory | | - | - | - | - | - |
| Other | | - | - | - | - | - |
| Total Current Assets | | 1,163,041 | 3,479,567 | 9,639,157 | 25,004,529 | 57,367,448 |
| Property and Equipment | | 12,500 | 12,500 | 17,500 | 17,500 | 22,500 |
| (less accumulated depreciation) | | (3,274) | (6,845) | (10,417) | (13,988) | (17,560) |
| Net Property and Equipment | | 9,226 | 5,655 | 7,083 | 3,512 | 4,940 |
| Other Assets | | - | - | - | - | - |
| TOTAL ASSETS | | 1,172,267 | 3,485,222 | 9,646,240 | 25,008,041 | 57,372,389 |
| LIABILITIES AND MEMBERS' CAPITAL | | | | | | |
| Liabilities | | | | | | |
| Current Liabilities | | | | | | |
| Accounts Payable | | - | - | - | - | - |
| Other Current Payables | | 1,075,000 | 3,235,000 | 8,275,000 | 19,795,000 | 40,315,000 |
| Pre-Existing Debt | | - | - | - | - | - |
| Current Portion of L-T Debt | | - | - | (240,000) | (240,000) | (240,000) |
| Total Current Liabilities | | 1,075,000 | 3,235,000 | 8,035,000 | 19,555,000 | 40,075,000 |
| Long-Term Debt | | - | - | 440,000 | 680,000 | 920,000 |
| Total Liabilities | | 1,075,000 | 3,235,000 | 8,475,000 | 20,235,000 | 40,995,000 |
| Members' Capital | | | | | | |
| Members' Paid-In Capital | | 180,000 | 180,000 | 180,000 | 180,000 | 180,000 |
| Undistributed Members' Earnings | | (82,733) | 70,222 | 991,240 | 4,693,041 | 16,297,389 |
| Less: Members' Interest Repurch | | - | - | - | (100,000) | (100,000) |
| Total Members' Capital | | 97,267 | 250,222 | 1,171,240 | 4,773,041 | 16,377,389 |
| TOTAL LIABILITIES AND MEMBERS' CAPITAL | | 1,172,267 | 3,485,222 | 9,646,240 | 25,008,041 | 57,372,389 |
| BALANCE CHECK | | - | - | - | - | - |

Income Statement

| Projected Income Statements (\$s) | | | | | | |
|-----------------------------------|-----------------|----------------|------------------|------------------|-------------------|--|
| SALES | | | | | | |
| Gross Sales | 81,031 | 454,621 | 1,773,868 | 5,947,775 | 17,605,341 | |
| Returns and Allowances | - | - | - | - | - | |
| NET SALES | 81,031 | 454,621 | 1,773,868 | 5,947,775 | 17,605,341 | |
| COST OF SALES | | | | | | |
| Materials | - | - | - | - | - | |
| Labor (Inc Taxes & Benefits) | - | - | - | - | - | |
| Other | - | - | - | - | - | |
| TOTAL COST OF SALES | - | - | - | - | - | |
| GROSS MARGIN | 81,031 | 454,621 | 1,773,868 | 5,947,775 | 17,605,341 | |
| OPERATING EXPENSES | | | | | | |
| Salaries and wages | 60,000 | 94,000 | 170,000 | 198,000 | 220,000 | |
| Payroll taxes | 4,590 | 7,191 | 13,005 | 15,147 | 16,830 | |
| Employee benefits | 6,900 | 10,810 | 19,550 | 22,770 | 25,300 | |
| Depreciation | 3,274 | 3,571 | 3,571 | 3,571 | 3,571 | |
| Bad debt expense | - | - | - | - | - | |
| Additional Operating Expenses | 89,000 | 156,000 | 252,000 | 420,000 | 762,000 | |
| TOTAL OPERATING EXPENSES | 163,764 | 271,572 | 458,127 | 659,488 | 1,027,701 | |
| OPERATING PROFIT (LOSS) | | | | | | |
| BEFORE INTEREST AND TAXES | (82,733) | 183,049 | 1,315,741 | 5,288,287 | 16,577,640 | |
| INTEREST EXPENSE | | | | | | |
| | - | - | - | - | - | |
| PROFIT (LOSS) BEFORE TAXES | (82,733) | 183,049 | 1,315,741 | 5,288,287 | 16,577,640 | |
| DISTRIBUTION FOR TAXES | | | | | | |
| | - | (30,095) | (394,722) | (1,586,486) | (4,973,292) | |
| NET PROFIT (LOSS) | (82,733) | 152,954 | 921,019 | 3,701,801 | 11,604,348 | |
| EBITDA | (79,459) | 186,620 | 1,319,312 | 5,291,858 | 16,581,211 | |

Statement of Cash Flows

| Year Ending | 1 May-12 | 2 May-13 | 3 May-14 | 4 May-15 | 5 May-16 |
|--|------------------|------------------|------------------|-------------------|-------------------|
| Projected Cash Flows (\$s) | | | | | |
| CASH FLOWS FROM OPERATIONS | | | | | |
| Net income | (82,733) | 152,954 | 921,019 | 3,701,801 | 11,604,348 |
| Adjustments to reconcile net income to cash flows from operations | | | | | |
| Depreciation | 3,274 | 3,571 | 3,571 | 3,571 | 3,571 |
| Changes in certain assets and liabilities | | | | | |
| Accounts receivable | - | - | - | - | - |
| Inventory | - | - | - | - | - |
| Other current assets | - | - | - | - | - |
| Accounts payable | - | - | - | - | - |
| Other current payables | 1,075,000 | 2,160,000 | 5,040,000 | 11,520,000 | 20,520,000 |
| Pre-existing debt | - | - | - | - | - |
| TOTAL CASH FLOWS FROM OPERATIONS | 995,541 | 2,316,526 | 5,964,590 | 15,225,372 | 32,127,919 |
| CASH FLOWS FROM INVESTING ACTIVITIES | | | | | |
| Purchase of equipment | (12,500) | - | (5,000) | - | (5,000) |
| Other Assets | - | - | - | - | - |
| TOTAL CASH FLOWS FROM INVESTING ACTIVITIES | (12,500) | - | (5,000) | - | (5,000) |
| CASH FLOW BEFORE FINANCING | 983,041 | 2,316,526 | 5,959,590 | 15,225,372 | 32,122,919 |
| CASH FLOWS FROM FINANCING ACTIVITIES | | | | | |
| Borrowing of long-term debt | - | - | (20,000) | - | - |
| Repayment of long-term debt | - | - | 220,000 | 240,000 | 240,000 |
| CASH FLOW BEFORE MEMBERS' CONTRIBUTIONS | 983,041 | 2,316,526 | 6,159,590 | 15,465,372 | 32,362,919 |
| Members' Capital Contributions | 180,000 | - | - | - | - |
| Members' Interest Repurchased | - | - | - | (100,000) | - |
| TOTAL CASH FLOWS FROM FINANCING ACTIVITIES | 180,000 | - | 200,000 | 140,000 | 240,000 |
| NET CASH FLOWS | 1,163,041 | 2,316,526 | 6,159,590 | 15,365,372 | 32,362,919 |
| CASH, BEGINNING OF PERIOD | - | 1,163,041 | 3,479,567 | 9,639,157 | 25,004,529 |
| CASH, END OF PERIOD | 1,163,041 | 3,479,567 | 9,639,157 | 25,004,529 | 57,367,448 |

Summary Statements for Low Demand Case

Balance Sheet

| | Year Ending | 1 May-12 | 2 May-13 | 3 May-14 | 4 May-15 | 5 May-16 |
|---|----------------|----------------|------------------|------------------|------------------|-------------------|
| Projected Balance Sheets (\$s) | | | | | | |
| ASSETS | | | | | | |
| Current Assets | | | | | | |
| Cash | | 585,479 | 1,621,717 | 3,314,904 | 6,115,181 | 10,947,605 |
| Accounts Receivable | | - | - | - | - | - |
| Inventory | | - | - | - | - | - |
| Other | | - | - | - | - | - |
| Total Current Assets | | 585,479 | 1,621,717 | 3,314,904 | 6,115,181 | 10,947,605 |
| Property and Equipment | | 12,500 | 12,500 | 17,500 | 17,500 | 22,500 |
| (less accumulated depreciation) | | (3,274) | (6,845) | (10,417) | (13,988) | (17,560) |
| Net Property and Equipment | | 9,226 | 5,655 | 7,083 | 3,512 | 4,940 |
| Other Assets | | - | - | - | - | - |
| TOTAL ASSETS | | 594,705 | 1,627,371 | 3,321,988 | 6,118,693 | 10,952,545 |
| LIABILITIES AND MEMBERS' CAPITAL | | | | | | |
| Liabilities | | | | | | |
| Current Liabilities | | | | | | |
| Accounts Payable | | - | - | - | - | - |
| Other Current Payables | | 525,000 | 1,605,000 | 2,865,000 | 4,785,000 | 7,485,000 |
| Pre-Existing Debt | | - | - | - | - | - |
| Current Portion of L-T Debt | | - | - | (240,000) | (240,000) | (240,000) |
| Total Current Liabilities | | 525,000 | 1,605,000 | 2,625,000 | 4,545,000 | 7,245,000 |
| Long-Term Debt | | - | - | 440,000 | 680,000 | 920,000 |
| Total Liabilities | | 525,000 | 1,605,000 | 3,065,000 | 5,225,000 | 8,165,000 |
| Members' Capital | | | | | | |
| Members' Paid-In Capital | | 180,000 | 180,000 | 180,000 | 180,000 | 180,000 |
| Undistributed Members' Earnings | | (110,295) | (157,629) | 76,988 | 813,693 | 2,707,545 |
| Less: Members' Interest Repurch | | - | - | - | (100,000) | (100,000) |
| Total Members' Capital | | 69,705 | 22,371 | 256,988 | 893,693 | 2,787,545 |
| TOTAL LIABILITIES AND MEMBERS' CAPITAL | | 594,705 | 1,627,371 | 3,321,988 | 6,118,693 | 10,952,545 |
| BALANCE CHECK | | - | - | - | - | - |

Income Statement

| Year Ending | 1 May-12 | 2 May-13 | 3 May-14 | 4 May-15 | 5 May-16 |
|--|------------------|-----------------|-----------------|------------------|------------------|
| Projected Income Statements (\$s) | | | | | |
| SALES | | | | | |
| Gross Sales | 53,469 | 224,239 | 725,738 | 1,711,925 | 3,733,204 |
| Returns and Allowances | - | - | - | - | - |
| NET SALES | 53,469 | 224,239 | 725,738 | 1,711,925 | 3,733,204 |
| COST OF SALES | | | | | |
| Materials | - | - | - | - | - |
| Labor (Inc Taxes & Benefits) | - | - | - | - | - |
| Other | - | - | - | - | - |
| TOTAL COST OF SALES | - | - | - | - | - |
| GROSS MARGIN | 53,469 | 224,239 | 725,738 | 1,711,925 | 3,733,204 |
| OPERATING EXPENSES | | | | | |
| Salaries and wages | 60,000 | 94,000 | 170,000 | 198,000 | 220,000 |
| Payroll taxes | 4,590 | 7,191 | 13,005 | 15,147 | 16,830 |
| Employee benefits | 6,900 | 10,810 | 19,550 | 22,770 | 25,300 |
| Depreciation | 3,274 | 3,571 | 3,571 | 3,571 | 3,571 |
| Bad debt expense | - | - | - | - | - |
| Additional Operating Expenses | 89,000 | 156,000 | 252,000 | 420,000 | 762,000 |
| TOTAL OPERATING EXPENSES | 163,764 | 271,572 | 458,127 | 659,488 | 1,027,701 |
| OPERATING PROFIT (LOSS) BEFORE INTEREST AND TAXES | (110,295) | (47,333) | 267,611 | 1,052,437 | 2,705,503 |
| INTEREST EXPENSE | - | - | - | - | - |
| PROFIT (LOSS) BEFORE TAXES | (110,295) | (47,333) | 267,611 | 1,052,437 | 2,705,503 |
| DISTRIBUTION FOR TAXES | - | - | (32,995) | (315,731) | (811,651) |
| NET PROFIT (LOSS) | (110,295) | (47,333) | 234,616 | 736,706 | 1,893,852 |
| EBITDA | (107,021) | (43,762) | 271,182 | 1,056,008 | 2,709,074 |

Statement of Cash Flows

| Projected Cash Flows (\$s) | | | | | |
|---|-----------------|------------------|------------------|------------------|-------------------|
| CASH FLOWS FROM OPERATIONS | | | | | |
| Net income | (110,295) | (47,333) | 234,616 | 736,706 | 1,893,852 |
| Adjustments to reconcile net income to cash flows from operations | | | | | |
| Depreciation | 3,274 | 3,571 | 3,571 | 3,571 | 3,571 |
| Changes in certain assets and liabilities | | | | | |
| Accounts receivable | - | - | - | - | - |
| Inventory | - | - | - | - | - |
| Other current assets | - | - | - | - | - |
| Accounts payable | - | - | - | - | - |
| Other current payables | 525,000 | 1,080,000 | 1,260,000 | 1,920,000 | 2,700,000 |
| Pre-existing debt | - | - | - | - | - |
| TOTAL CASH FLOWS FROM OPERATIONS | 417,979 | 1,036,238 | 1,498,188 | 2,660,277 | 4,597,423 |
| CASH FLOWS FROM INVESTING ACTIVITIES | | | | | |
| Purchase of equipment | (12,500) | - | (5,000) | - | (5,000) |
| Other Assets | - | - | - | - | - |
| TOTAL CASH FLOWS FROM INVESTING ACTIVITIES | (12,500) | - | (5,000) | - | (5,000) |
| CASH FLOW BEFORE FINANCING | 405,479 | 1,036,238 | 1,493,188 | 2,660,277 | 4,592,423 |
| CASH FLOWS FROM FINANCING ACTIVITIES | | | | | |
| Borrowing of long-term debt | - | - | (20,000) | - | - |
| Repayment of long-term debt | - | - | 220,000 | 240,000 | 240,000 |
| CASH FLOW BEFORE MEMBERS' CONTRIBUTIONS | 405,479 | 1,036,238 | 1,693,188 | 2,900,277 | 4,832,423 |
| Members' Capital Contributions | 180,000 | - | - | - | - |
| Members' Interest Repurchased | - | - | - | (100,000) | - |
| TOTAL CASH FLOWS FROM FINANCING ACTIVITIES | 180,000 | - | 200,000 | 140,000 | 240,000 |
| NET CASH FLOWS | 585,479 | 1,036,238 | 1,693,188 | 2,800,277 | 4,832,423 |
| CASH, BEGINNING OF PERIOD | - | 585,479 | 1,621,717 | 3,314,904 | 6,115,181 |
| CASH, END OF PERIOD | 585,479 | 1,621,717 | 3,314,904 | 6,115,181 | 10,947,605 |

Appendix G: Management Team Resumes

Michael R. Drobny

mdrobny@email.arizona.edu • 484.868.3456 • 1728 N. Santa Rita Dr, Tucson, AZ 85719 • 118 Bayhill Dr, Blue Bell, PA 19422

Education

The University of Arizona, Honors | Eller College of Management - Tucson, AZ

Bachelor of Science in Business Administration: Accounting and Entrepreneurship

Current GPA: 3.77

Expected Graduation Date: May 2011

Professional Work Experience

EisnerAmper | Jenkintown, PA

June 2010 - August 2010

Audit Intern

- Responsible for auditing select areas of a client balance sheet and income statement for Not-for-Profit and Employee Benefit engagements
- Prepared analytic reviews based on client's trial balance
- Applied generally accepted auditing standards (GAAS) ensuring internal controls are functionally adequate
- Provided administrative support to the audit and tax groups. Uploaded and maintained work papers using Microsoft Excel and Accounting software.

EasyATutoring | Tucson, AZ

January 2010-

Present

Tutor

- Founded tutoring service to educate students in the fundamentals of lower-level accounting classes including test preparation and homework help
- Marketed services to the Accounting department and Greeklife at the University of Arizona to maintain a healthy client base throughout the semester

Stumar Investigations | Norristown, PA

June-August 2007-2009

Investigator

- Assisted Anti-Counterfeiting Supervisor and Law enforcement in execution of warrants and Cease and Desist letters
- Purchased undercover buys under auspices of Law Enforcement
- Administrative tasks included conducting background investigations, drafting reports, photographing and cataloging seized evidence

Minority Whip Congressman Eric Cantor (VA) | Washington D.C

June 2006-August 2006

Intern

- Provided tours of the Capitol Building to constituents and visiting guests

- Informed constituents of legislature on the docket and the Congressman's stance on current issues

College & Community Leadership Activities

Alpha Epsilon Pi, Upsilon Alpha Chapter | Tucson, AZ

President

Spring 2010

Vice President

Fall 2008-2009

- Lead Chapter of over 150 members, Head of Executive Board of 9 members
- Re-established both Alumni and Philanthropic programming
- Elevated chapter standing from Probationary status to Chapter of Achievement

CATPAC (AIPAC) | Tucson, AZ

Campus Advocacy Coordinator

Spring 2009-Present

- Planned on-campus events to promote the US-Israel relationship
- Attended AIPAC's Saban Summer Leadership Conference in July 2009

Electronic Arts Sports | Tucson, AZ

Campus Intern

Fall 2009-Spring 2010

- Marketed new releases of EA games on-campus by utilizing posters, t-shirts, and copies of games
- Aided the Campus Representative in planning and running events on-campus

Skills

Proficient in Windows XP, Vista, and 7, Microsoft Office Suite 2003 and 2007, Excellent Research Skills

PAUL MALLERY
 pjml188@email.arizona.edu

EDUCATION

The University of Arizona, Eller College of Management Tucson, Arizona
 Bachelor of Science in Business Administration, May 2011
 Majors: Finance and Entrepreneurship with Honors
 Finance/Business GPA: 4.0
 Cumulative GPA: 3.8

EXPERIENCE

06/10- 08/10
 Scottsdale, Arizona

The Vanguard Group

Financial Advisor Services Sales Intern

- Assisted the group in supporting the industry’s financial advisors with Vanguard ETFs
- Analyzed over 36,000 Independent Broker/Dealers to determine their alignment with ETFs
- Implemented an internal client survey between Retail Services and Retail Resolution

05/10- Present
 Arizona

McGuire Center for Entrepreneurship Tucson,

Ranked 2nd in the Nation

- Construct financial forecasts for first five years of proposed team venture concept/new project
- Conduct primary and secondary market research for new project implementation
- Present potential concept to angel investor groups, such as the Desert Angels

08/09-05/10
 Arizona

CPD Properties Investment Group Tucson,

Project Manager

- Evaluate costs/benefits of purchasing residential investment properties
- Maintain strong communications between executives and contractors on current \$492,000 portfolio
- Visualize potential renovations of our properties that are in best interest of our shareholders

05/09-08/09

Freeport-McMoRan Copper & Gold Inc. Phoenix, Arizona

Treasury Department Intern

- Aided the Treasurer in weekly analysis of outstanding corporate bonds
- Examined the company’s hedging strategies against commodity, currency, and interest rate risks
- Outlined terms and conditions for a \$170 million public equity offering for the Finance Book

05/09-05/09

Deloitte Phoenix, Arizona

External Auditing Externship

- Shadowed auditors on two Phoenix-based clients, Petsmart and Mesa Air
- Enhanced business communication skills through networking with the Deloitte partners
- Completed the program with outstanding remarks and received a 2010 internship offer

ACTIVITIES

- Portfolio Management Class, \$1M of UA Foundation Money, 08/10-Present
- VP of Finance- Alpha Kappa Psi Professional Business Fraternity, 05/10 – Present
- Investment Committee – Alpha Kappa Psi Professional Business Fraternity
- Chief Justice of Standards Board Committee – Pi Kappa Phi Fraternity; 09/08 – Present
- PUSH America Philanthropy; 08/07-Present

AWARDS

- Dean’s List with Distinction – Spring 2008, Fall 2008, Spring 2010
- Horatio Alger Society National Scholarship – 05/07
- T.W. Lewis Foundation Scholarship – 05/07

SKILLS

- In-Depth Work Experience on Bloomberg Terminals
- Proficient in Windows XP and Microsoft

Jordan David Schupan
schupan@email.arizona.edu
 1406 East Seneca St.
 Tucson, Arizona 85719
 (269) 760-2617

EXPERIENCE:

- | | | |
|----------------|--|---------------|
| 07/10- Present | <p>Cactus Menus Inc. <i>Founder</i></p> <ul style="list-style-type: none"> • Manage Restaurant Clients • Implement Marketing Campaign • Sell Advertising | Tucson, AZ |
| 06/08- 08/08 | <p>Trebuchet Financial <i>Options Trader</i></p> <ul style="list-style-type: none"> • Traded equity options utilizing four exchanges • Facilitated key market information to top traders • Helped train other interns in various trading techniques | Chicago, IL |
| 07/07- 08/07 | <p>Schupan and Sons Inc.</p> <p><i>Green Marketing Coordinator</i></p> <ul style="list-style-type: none"> • Designed and implemented a green marketing campaign • Developed a database of energy conservation figures for our customers • Created a cover letter and certificate of achievement for our customers using the compiled list of energy conservation figures | Kalamazoo, MI |
| 05/07- 06/07 | <p>Gettel Automotive <i>Intern</i></p> <ul style="list-style-type: none"> • Completed sales training class • Analyzed and participated in the new and used car sales process • Greeted service customers and registered their vehicles into our system • Assisted in reorganizing the parts department inventory • Participated in weekly sales figures meeting with Management | Sarasota, FL |

ACTIVITIES:

- Athlete- Captain of the University of Arizona Hockey Team; August 2007- 2011
- President of Cactus Menus Inc

EDUCATION:

The University of Arizona Tucson, AZ
 Bachelor of Science in Business Administration May 2011
 Major: Marketing and Entrepreneurship

AWARDS:

- Arizona Daily Wildcat Athlete of the week, October 29, 2008 and October 10, 2007
- Captain and MVP – Arizona Icecats; 2009-2011
- Arizona Excellence Award, academic scholarship; August 2007 - Present

SKILLS:

- Proficient in Microsoft Excel, Word, and PowerPoint
- Trading- Analyze market data and trade equities

Cadogan Justin Price

Cadoganp@gmail.com

Career Objective:

Pursuing a position which entails customer interaction where my achievements, skills, strategic thinking, and leadership abilities will enable me to make a visible and immediate contribution to an organization and their go to market objectives.

Academic Success:

- ❖ Pursuing Degree in Marketing and Entrepreneurship
- ❖ Cumulative GPA: 3.495
- ❖ Academic Scholarship from the University of Arizona
- ❖ National Honors Society Member
- ❖ Dean's List: 2008
- ❖ Dean's List Honorable Mention: 2009
- ❖ Anticipated Graduation: May 2011

Business Owner:

The Athlete Arena, LLC DBA Kapooz- "Network Today. Dominate Tomorrow."

A website designed for sports social networking and online recruiting (November 2009-Present)

- ❖ Developed business plan that obtained \$12,000 in seed capital
- ❖ Currently launching business model to the public, increased customer base by 65% in year one
- ❖ Introduction: Fall 2010

International Professional Experience:

Saborea Spain (June 2010-August 2010)

- ❖ Developed communication plan for Saborea Spain to penetrate United States market and increase revenue by 13% in first year of commerce
- ❖ Designed interactive exposition booth for Belgium House, increased traffic by 27%
- ❖ Devised tailored gastronomy and athletic events to meet the needs of 12 corporate customers

Professional Experience:

Abercrombie and Fitch (January 2006- April 2007)

- ❖ Worked as a notable salesperson, floor model, and inventory manager

Relevant Marketing Agency (September 2008 & April 2009)

- ❖ Ranked #1 by Havaianas for \$2,100 sales of merchandise and their successful exhibit, Color Wars
- ❖ Promoted Victoria Secret through a PINK exhibit, sold record high for April \$6,000

HCP (October 2009- Present)

- ❖ Planned and marketed concerts and registered events

Gilt Groupe (February 2010- May 2010)

- ❖ Completed on campus event with \$2,000 budget and encouraged sign ups for Gilt Man. Of 900 new members, 385 completed a purchase (43% sale closing ratio)
- ❖ Created and maintained presence of Gilt Man to student body via social networks, sweepstakes, & events.

Athletics:

Member of University of Arizona Lacrosse

- ❖ Captain- Elected by coaches and teammates
- Chairman of University of Arizona Lacrosse Fundraising*
- ❖ Developed and managed fundraising of \$150,000 to support the team (set up as a non-profit organization)
 - ❖ Managed alumni relationships and secured corporate and individual sponsorships
 - ❖ All day to day financial management of the team was managed through my office

Fraternal Involvement:

Kappa Sigma

- ❖ Participated in events such as philanthropy and fraternity intramurals (flag football and soccer)

Sigma Alpha Lambda

- ❖ Devoted my efforts to workshops, conferences, and other events that prepared me to become a future business leader of America

Phi Eta Sigma

- ❖ Assisted in giving back to our community through food drives for the homeless and fundraising events for Ronald McDonald house

Community Service:

30+ Plus Hours of Community Service

- ❖ Coach for two different 8-year-old girls soccer programs

Skills:

- ❖ Survival Level Spanish
- ❖ Fundamentals of SPSS
- ❖ Experience with Microsoft Access

Life Experiences:

- ❖ Lived with Inuit family for 7 days in Iqaluit, Canada
- ❖ Traveled to all 50 states and extensively through Canada
- ❖ Lived in Barcelona, Spain for 2 months
- ❖ Completed "The West Coast Trail" on Vancouver Island, British Columbia (Renown as one of the best and most difficult backpacking trails in the world)

Management Team
Michael Drobny – General Manager
Paul Mallery – Finance Manager
Cadogan Price – Operations Manager
Jordan Schupan – Marketing Manager



Contact
1130 E. Helen St, Tucson, AZ 85719
www.carbonscholar.com
teameugene@wiggiomail.com

Investments for a Cleaner Tomorrow

A carbon offset is a transferable certificate representing the reduction of one metric ton of carbon dioxide emissions, the principal cause of global warming. When an environmental project reduces carbon dioxide emissions, every ton of carbon dioxide reduced results in the creation of one carbon offset. For example, a wind farm generates clean energy, which reduces carbon emissions from coal-burning power plants. In order to finance its operations, a wind farm can sell these reductions in the form of carbon offsets.

A Sustainability Problem

The costs associated with a typical carbon offset project are at least \$250,000, rendering it highly unlikely that a single university has the necessary funds to invest in a project by itself. This deters universities from participating in such projects and thus, falling short of their sustainability goals.

The CARBON SCHOLAR Approach

Carbon Scholar will create value by establishing a portfolio of environmental projects that generate carbon offsets. Universities will invest in the fund, giving these institutions the initial right to the carbon offsets. The venture will be responsible for the design and implementation plan for each offset project. When the offsets are verified to the strictest voluntary standard, the institutions will have the opportunity to claim these offsets as a reduction for their own emissions or allow the fund to act as a broker and sell their offset percentage.

The Commitment

We will target the 677 U.S. universities and colleges that have signed the American College and University President's Climate Commitment (ACUPCC), which is an agreement to voluntarily reach net zero carbon emissions, a task that cannot be reached without the use of carbon offsets.

An Emerging Market

Due to recent natural disasters interest in global warming and the effect of greenhouse gas levels has increased significantly. While the global carbon market is valued at \$118 billion and is projected to grow 68% by 2013, the U.S. market in 2009 was valued at only \$387 million due to the fact that there are no carbon emissions regulations in this country. The largest player in the voluntary carbon offset industry is *Blue Source*, which recently partnered with Google. The company offers the leading portfolio of emission reduction projects and is the leading developer of carbon capture and methane management systems.

Our Advantage

-  Carbon Scholar's portfolio will focus solely on the sustainability needs of universities and colleges.
-  The universities will hold the rights to the offsets, allowing them to see a high ROI upon regulation in the United States.
-  As leaders in the community, universities will look to work with the most reliable and transparent provider of carbon offsets in the voluntary market.
-  By investing in sustainable projects, universities are helping to reduce the harmful effects of global warming but also promoting a better self image.

Business Model

Universities and Colleges invested in the fund will be charged a management fee of 1.25% quarterly. When generated offsets are sold, a brokerage fee of 7.5% is charged. Both fees are competitively priced.

Summary Financials

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|--------------|-----------|-----------|-------------|-------------|-------------|
| Revenue | \$70,700 | \$396,000 | \$1,226,000 | \$3,461,000 | \$7,720,000 |
| Expenditures | \$163,800 | \$271,600 | \$458,100 | \$659,500 | \$1,027,700 |
| Net Income | -\$93,100 | \$124,400 | \$767,900 | \$2,801,500 | \$6,692,300 |

Table of Contents

| | | |
|--------------|--|-----------|
| I. | Business Summary | 1 |
| II. | Customer, Problem, & Opportunity..... | 3 |
| III. | Product/ Service..... | 5 |
| IV. | Target Market & Market Validation..... | 6 |
| V. | Competitors..... | 10 |
| VI. | Competitive Advantage & Core Competencies | 11 |
| VII. | Marketing Strategy | 13 |
| VIII. | Sales Strategy | 14 |
| IX. | Operations Strategy | 15 |
| X. | Business Model | 17 |
| XI. | Financials | 17 |
| XII. | Alternative Value | 22 |
| XIII. | Appendices | 24 |



Honors Assignment: Spring 2011
Tucson Innovation Group

Eytan Ben-Yeoshua
Darren Thompson
Paul Mallery

Introduction

New ideas, innovative solutions and entrepreneurship are a vital part to the American economy. While successful businesses are able to create new jobs and a vibrant economic impact there are many new ideas that go untapped and businesses that essentially fail.

According to the Small Business Administration over half of small businesses fail within the first five years. The number one reason why these companies fail is because of lack of experience.

This is where our community based business plan development model, Tucson Innovation Group, will come into play. Tucson Innovation Group will provide IP owners and other individual's with new business ideas the necessary tools to enhance their ability to launch the venture successfully. We will work to pair Business development models do exist in a variety of forms, but our model will add some unique benefits to IP owners.

Current Options

Currently, IP owners have several options in the small business development industry. Among the most popular options include the local branches and the national resources of the U.S.

Small Business Administration and a variety of consulting firms. Both these options have provided IP owners with support and resources in launching their businesses, but they have weaknesses and limits.

SBA Programs

The government funded, U.S. SBA, provides a plethora of resources through their online presence with information on starting and managing a business, loan and grant assistance, laws

and regulations, contracting information and counseling and training options. They also offer local offices where individuals can receive free counseling and advice in these areas. While U.S. SBA does provide a number of important and helpful resources it does have problems. The U.S. SBA is a government funded organization so its existence and presence is unpredictable, employees of the organization do not have a vested interest in the idea development or the success of the small businesses and the U.S. SBA does not help IP owners get connected to individuals in the industry and community of interest.

Consulting Firms

The other main option for IP owners that need assistance in launching a business is Consulting Firms. Hundreds of consulting firms exist to help businesses become established and to help established small businesses grow. While many of these firms are effective and helpful their high costs deter IP owners from utilizing their resources. Unfortunately, these high costs also lead IP owners to inferior consulting firms such as Invent Help. These companies have a major lack of idea evaluation and selection of ventures and do not provide assistance beyond the licensing requirements. Fortunately, Tucson Innovation Group will build upon these current option's weaknesses to provide an effective model for IP owners.

Our Solution

The purpose of Tucson Innovation Group is to pair IP owner and new idea generators with talented, experienced individuals in our Southern Arizona community in order to launch local, sustainable, scalable and innovative businesses. Our model will include having a consistent

decision-making committee in charge of the overall operations of our organization. This committee will provide stability to the organization's decision making process. Our model consists of a competitive selection process where IP owners may have the opportunity to pitch their ideas to community entrepreneurs and industry experts. From those ideas selected, the IP owners will have the opportunity to decide on what involvement level they would like to have in the business. Additionally, we are providing a strong incentive program for experienced community member's involvement in these businesses.

Benefits

Our model's main advantage is providing selectivity of business ideas. We are focused on launching scalable businesses, not small-scale businesses. We are requiring companies to be based in the Southern Arizona area. This provides an economic benefit to the community as these businesses grow. The utilization of community member's talents is truly an untapped resource we are focused on implementing into our model. Lastly and most importantly, Tucson Innovation Group is engaging in launching businesses. We provide resources, pair teams and work to ensure the success of the selected business ideas. In order to be successful with this model we must focusing on selecting a strong team of individuals involved.

Individuals Involved

Board of Directors

Tucson Innovation Group will be lead by a Board of Directors. This team will consist of seven individuals that have succeeded as entrepreneurs in the Tucson area. The seven directors will

be consistent members of the organization, and they will be in charge of selecting the entrepreneurs involved in the organization and will also be approving the negotiation terms that are set with each venture.

Entrepreneurs

The entrepreneurs that they chose to be in the venture selection team will be accomplished men and women that successfully complete an application process. The entrepreneurs will listen to the IP Owners' pitches, and they will vote on the pitches, while also determining which members will work with each venture. Upon accepting a pitch, they will construct the negotiation terms to be approved by the Board of Directors and agreed upon with the IP Owners. This group of entrepreneurs may change with the addition of members approved by the Board of Directors.

Consultants/Employees

Tucson Innovation group will also have consultants that will initially meet with the IP Owners. These consultants will help the IP Owners develop their complete pitch to be presented to the entrepreneurs.

Interns

Finally, Tucson Innovation Group will have a group of interns in order to help with administrative duties. These interns will consist of second semester or graduated members of the McGuire Entrepreneurship Program.

IP Requirements

As mentioned previously, Tucson Innovation Group will work toward engaging in ventures that are scalable, and as a result, will strive toward working with IP Owners that have at least IP pending when contacting the organization. This will assure that the Tucson Innovation Group will be attracting ideas with the highest standards. While working with the consultants in the pitch process, the IP owners will also meet with patent attorneys if needed. These attorneys will be employed on a contractual basis, and their services will be utilized if the IP owners need further protection. Once the venture is deemed IP pending, the completed pitch can be presented to the entrepreneurs regardless of whether or not the IP owner is working with the attorneys in achieving further legal protection.

IP Owner Involvement

Once a venture pitch is accepted by the entrepreneurs, the negotiation terms will include a level of involvement on behalf of the IP owner. If an IP owner has no further involvement in the development of the venture, Tucson Innovation Group will pay the IP owner an upfront fee for their idea, fully giving the group the rights to the idea and the ability to transfer the rights to other participating entrepreneurs in the future. However, if the IP owner would like to have some involvement, he or she may be a salaried employee with potential equity stake in the venture. On the other hand, however, if they would like to be fully involved in the development process, they will be given an equity share in the venture.

Incentives for Participants

Tucson Innovation Group will have several major benefits both on the organizational level and to Tucson as a community. As an organization, the entrepreneurs will have the opportunity to have an equity share in the ventures that they work on. Unlike the other business development options, this means that the entrepreneurs have an incentive to devote as much attention as possible to their work, assuring that the IP owners receive the highest standard of service. Furthermore, Tucson Innovation group will provide entrepreneurial experience for the consultants and interns involved, providing them with the tools to one day give back to the community. As for Tucson and as previously mentioned, the ventures must be based in Tucson, meaning that the organization will stimulate the local economy with more jobs and attract more people and positive attention to the city. Moreover, since the entrepreneurs, consultants, interns, and IP owners will be exposing themselves to new industries and new people that they may have not worked with before, Tucson Innovation Group will build new relationships and strengthen their ties within the community.

Selection Process

Interested IP owners will submit an application to the program. This will allow our consultants to learn about the applicant's concept before a meeting is arranged. The IP owner will then meet with a consultant and IP attorney. This screening meeting will provide consultants an opportunity to further assess the viability of the inventor's concept. The IP attorney will also be able to examine the IP implications of the concept. For example, if it will be difficult to obtain

the rights to existing technology, this will have a significant effect on the possible acceptance of a concept.

Following the screening meeting, the accepted inventors will go through a 2-4 week process of developing their concept. During this process, the IP owners, with help from program employees, will prepare to pitch their concept to the selection committee. These pitches will occur once a month and the committee, made up of select entrepreneurs, will have one week to select the concepts they want to pursue. At this point the interested entrepreneurs will begin to negotiate the terms of ownership with the inventors. They will then submit the terms with the board of directors for approval. This final step will help to ensure that the agreements made will be fair for both the IP owners and entrepreneurs. Once the deals are approved by the board, the entrepreneurs will be able to begin working on the concepts.

Assumptions

In order for our organization to succeed, it is important for our assumptions to be valid. The following assumptions are those that we have identified as key to the organization's success.

Initial Funding

We will need to be able to access initial funding in order to get the organization off the ground.

We will request financial investment from the board of directors. We expect these founding members to agree to this investment in order to promote economic growth within the community.

Experienced Partners

It is vital that we find quality entrepreneurs to participate in the organization. Their quality will directly affect the success of the ventures created in the organization. While we welcome anyone willing to aid the organization, we will limit this group to business leaders who have successfully launched a start-up venture.

Assignment of Concepts

Since our organization is meant to partner IP owners with experienced entrepreneurs, these inventors must be willing to give up a significant share of ownership. The entrepreneurs will work tirelessly toward launching these ventures and will require equity as founding members of these new businesses.

A Sustainable Organization

The companies started under the organization will be expected to give back to the group by giving a minimal equity share of the company to the organization. This will allow it to continue its operations and assist future start-ups. We have developed this system to help the organization become sustainable, removing dependence on outside investments and donations.

In order to test the validity of these main assumptions, we have developed questions to ask entrepreneurs and participants in the SBDC program. The responses we receive will give us the insight necessary to examine our assumptions and make any necessary changes to our concept.

Summary

The Tucson Innovation Group will serve as an additional resource for people interested in starting a business. By pairing IP owners with experienced entrepreneurs, the organization will help raise the chance of successful ventures. With the implementation of this organization, we will be able to further promote innovation in the community and enhance Tucson's entrepreneurial environment.