CARBON SCHOLAR:

INVESTMENTS FOR A CLEANER TOMORROW

By

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Community-Based Business Plan Development Model

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Current Tucson Business Environment

Tucson, Arizona has become nationally recognized for its growing entrepreneurial culture. The Desert Southwest has one of the nation’s fastest growing populations as more and more people move here to enjoy the temperate weather and active, outdoor lifestyles. Many successful professionals retire to the valley and become connected in the new venture community. The University of Arizona continues to develop some of the nation’s brightest young entrepreneurs, engineers, doctors, and scientists. Companies such as Raytheon, IBM, Ventana Medical Systems, and University Medical Center all sponsor and engage in research and entrepreneurial programs throughout the city. The city’s large network of angel investors and venture capitalists from groups such as the Desert Angels and Solstice Capital makes Tucson an ideal launching site for innovative research and ventures.

In 2005, Entrepreneur Magazine ranked Arizona the #1 Hot U.S. State for Entrepreneurs. In May of the same year, Forbes magazine named Tucson #22 among the nation’s 200 largest cities in its list of Best Places for Business and Career. More recently, Fast Company magazine highlighted Tucson as a city to watch as a “start-up hub”. These accolades, along with the consistently high rankings assigned to the university’s McGuire Center for Entrepreneurship, further confirm Tucson’s current and future entrepreneurial potential.

Our Community-Based Business Plan Development Model

InnovateTucson is a comprehensive web-based business plan development program. The online portal will enable local intellectual property (IP) owners to easily upload their idea to a private and secure network, which can be accessed by some of the most talented business minds in Tucson. If the idea should pass the approval process, the IP owner will be connected with angel investors, consultants, lawyers, and other resources that will develop, research, and write
an investable 20-page business plan. Their log-in information will enable them to track the
development of their business plan and access additional resources such as Finding Investment
Groups, Creating the Perfect Pitch, and Managing Funding Requests.

The Approval Process

The process starts when the IP owner creates a profile. The profile will include contact
information, a detailed description of the idea, and any materials related to the IP (patent
application, research, etc.). Before submitting their profile, the IP owner will be prompted to
read and sign a disclosure, which states that the IP presented in the profile will remain the
property of the submitter and “name” will not share the information contained in the profile with
outside sources. The profile will be released to the network upon the IP owner paying a $250
deposit for our services. If the idea is not accepted, half the deposit will be returned to the IP
owner. Within a week of completing the profile, the IP owner will be notified whether their idea
has been accepted or declined by InnovateTucson.

There are many ways we will determine which ideas to accept and which ideas to
reject. We will conduct three analyses to determine which venture ideas/intellectual property to
accept. We will conduct these three analyses in house, using our team of experts, to determine
the viability of the various ideas. The analyses we will focus on include:

Feasibility analysis - we will conduct a feasibility analysis in order to determine the
strengths and weaknesses of the proposed venture idea. We will look at the current
opportunities and threats posed to the venture idea and determine whether it has the
potential to be successful. The two main criteria we will focus on include the cost
required to start up the venture and the value that could potentially be attained. We will
look at the historical background of the intellectual property owner to determine what their past successes and failures have been. In addition, InnovateTucson will conduct financial forecasting to determine long-term growth of the various ventures.

*Market analysis* - in addition, we will conduct a market analysis in order to investigate the potential activities surrounding the venture idea. We will forecast inventory, purchasing, expansion, and promotional activities in order to determine whether there is a market for this venture. InnovateTucson is going to focus primarily on the Tucson community and determine whether the business will be successful in the Tucson market. We will conduct basic market research to see what sort of market, if any, exists within Tucson.

*Economic analysis* - Finally, we will conduct an economic analysis in order to determine the opportunity costs of resources associated with the venture idea. This analysis will measure, in monetary terms, the private and social costs and benefits associated with the idea. In addition, we will look at the economic benefits this project has on the Tucson community and economy.

In the end, if the idea passes through all three analyses and it is determined the idea is viable, and then we will proceed with the application process and accept the idea to be reviewed and completed. The venture idea/intellectual property must pass through all three-review processes in order to be considered.

Upon approval, there are two service options available to a qualified IP owner. The first option is for the IP owners who want to take on the responsibility of writing the business plan on their own. InnovateTucson will offer a monthly subscription-based membership to this individual, which includes:
Three weekend workshops covering the structure of the business plan, how to market the business plan, and where to look for investment.

Full access to the website including the research databases (paid for by InnovateTucson), the writing tools normally accessible to staff and interns, and networking through the InnovateTucson directory of Tucson-based business development professionals.

Assistance from industry experts, lawyers, and angel investors can be paid for on an as-needed-basis to address issues that may arise.

For this membership, the IP owner will give up 5% equity in their future business opportunity and pay a monthly fee of $250. The second option is much more comprehensive and therefore, requires a bigger sacrifice of equity to InnovateTucson. Most IP owners do not have the time or resources to put together a business plan. For these people, which will be a majority of the client base, InnovateTucson will research and draft the business plan from start to finish. This option will cost the IP owner 20% of their equity on top of the $250 paid during the approval process. IP owners will receive all the benefits of the first option plus a development team to write a 20-page investable business plan. A detailed description of the second option is outlined in the subsequent sections.

Stage 1 – Assigning a Development Team

When an idea is accepted, a development team is assembled from the mentor network. These individuals will have experience in the IP industry and work closely both with each other and the IP owner to generate the business plan. Each week the IP owner will have the opportunity log into the website and see the progress made on their business plan in read-only format. There will also be opportunities for the IP owner to be in direct contact with the team via Skype and email offered within the secure frame of the website. The development team will
consist of three interns, a lawyer, an industry expert, a small business consultant, and an angel investor. The three interns will be students or graduates of the McGuire Center for Entrepreneurship at the University of Arizona. The industry expert and small business consultant will be at the disposable of the interns to answer questions that arise while drafting the business plan. Once the business plan is drafted, the lawyer will be responsible for evaluating the legal risk and addressing legal concerns associated with the venture. The angel investors will then comment on each draft of the business plan and discuss the changes that need to be made with the rest of the team.

While some of these individuals will be full-time employees within the development center, others such as the industry experts, lawyers, financial experts, consultants, and scientists/engineers, will be contracted out for their specific purposes. Depending on the characteristics of the venture idea or intellectual property, we will pose to the IP owner the services we offer and determine whether they want to; for example, hire a lawyer or scientist to further their idea. The IP owner will incur any costs associated with the use of those individuals and their expertise. InnovateTucson will offer the IP owners the contact information of experts in various industries who may be of assistance to a new start up.

Furthermore, we will work directly with the McGuire Entrepreneurship Center in order to bring on board student interns. We will offer students an opportunity to gain college credit while helping to provide a service to IP owners in the Tucson community. This internship will give students a chance to learn about new venture development, business plan writing, and the opportunity to network with Tucson business leaders.
Stage 2 – Research and Drafting

When the interns first begin work on a new business plan, it will be necessary to review the research conducted by the approval team and further validate their preliminary conclusions. Additional analysis and research such as field interviews, surveys, and online market research becomes the responsibility of the interns. Much like a student can access market research databases through the University of Arizona library website, when an intern is logged into InnovateTucson they will be granted access to numerous resources without incurring large fees. Their research will not be without direction or parameters.

The website will function as an all-in-one workspace. The interns will be responsible for drafting the 20-page business plan and forecasting financial statements to be included in the plan. For legal reasons, all work will be completed within the confines of the website and never saved on individual computers. Instead of uploading entire documents, interns will be working on each section of the business plan separately in a text box, much like filling out an online form. The intern will be prompted with criteria, in the form of questions to be answered, that must be completed for each section. When one of those criteria is fulfilled, the drafter will check it off to allow the other viewers to see their progress and prevent double work. There will be a suggested word count for each section along with customary Microsoft Word functions such as spell check and formatting tabs. When each section is completely filled out, the document is submitted for review.

Stage 3 – The Review Process

Prior to being released to anyone, even the IP owner, each section is edited for grammatical errors and sentence structure by staff members with backgrounds in English and
literature. When this process is complete, the IP owner will have one week to review the written work and approve the overall direction of the plan. Any discrepancies between the IP owner’s vision and the interns will be resolved at this time. The lawyer assigned to the team will then fill out a Legal Assessment of the potential business. This will include assessing the legal risks, proposing how the entity shall be structured, filing additional intellectual property, and drafting a disclosure for the business plan. The assessment will be attached to the draft of the business plan accessible by the angel investor.

Finally, the angel investor will review the entire document. The angel investor will suggest changes to be made to individual sections of the plan and offer advice to for the rest of the team to follow in drafting the other versions. A time will be set for a video conference involving the entire team to discuss the changes that need to be made and make sure everyone is on the same page. It is up to the angel investor to share knowledge of past experiences and expertise to make sure at the end of the process the business plan is ready for investment. The interns will then go back and address the issues that were raised throughout the review, drafting a second and then a final version of the plan. A similar review process will take place after the second draft, while the final version will be assembled as if it were to be presented to an investor. The final business plan will be accessible to the IP owner to be printed and bound as they wish.

Additional Services

Once the IP owner has proceeded through our application process and possesses a full-fledged business plan, we will then offer additional services to help them be successful. Some of these services include finding investment groups such as Angel Investors and Venture Capitalists, helping them create the perfect pitch, and manage their funding requests.
Upon completion of the business plan we will put them in contact with the Desert Angels group in Tucson as well as venture capitalists in the area. In addition, we will create, in-house, a well-developed PowerPoint presentation that can be used when pitching to these investors. Also, InnovateTucson will manage any monetary requests investors pose to the IP owner. For example, if an angel investor wants to invest $100,000 in the IP owner’s business, we will then take that request and determine the best course of action for the IP owner.

**Incentives for Group Members**

InnovateTucson relies heavily upon the experience and commitment of its directors, employees, and contributors. Anyone qualified to work with our organization is likely capable of making a decent amount of money chasing their own dreams and developing their own ideas. We must convince them of the benefits of working with us. In order to attract the highest quality people for our team we will provide high value incentives – both tangible and sometimes intangible (exposure, networking, investment and research opportunities, etc.).

First, InnovateTucson will employ several part-time staff members. Some of these employees will contribute mostly on the organizational side of the business, responsible for much of the daily support tasks, while others will be more specialized. The specialized employees will be angel investors and local business experts with extensive entrepreneurial backgrounds, familiarity and networks within the Tucson business community, and the ability to commit nearly 20 hours per week to the overall leadership of the firm. These part-time employees will be compensated with salaries that are funded by the revenue of our fee-based business services. The angel investors we have on staff will also be a part of a larger group of angel investors who will be assigned to serve as mentors to venture development teams. These angel investors will be encouraged to charge a consulting rate for the services they provide the
client and will also benefit from the early stage exposure privileges they have to the ventures developing in the Tucson community. InnovateTucson will have a directory of attorneys and other specialized professionals who have offered to work with our clients. We will connect our clients with these professionals asking only that they pay back 5% of their billings from our clients to our firm as a compensation for our referrals. We will increase their client base and revenues and they will also be helping to serve the economic development of their community.

Lastly, InnovateTucson will hire several interns to aid in the early stages of research and business plan development. These interns will be top entrepreneurship, finance, marketing, and communications students from the University of Arizona. In return for their work, they will receive invaluable exposure to some of the community’s most influential professionals, numerous networking opportunities, and the right to claim their experience on their resumes.

InnovateTucson will also develop a not-for-profit arm to its model that is responsible for overseeing the firm’s investment fund. A ten-member board will manage all monies returned on the equity held by InnovateTucson in all of its successfully launched ventures. These board members will not receive any payment, yet they will find value in the elite membership to which they belong. Tucson has a relatively small, yet powerful, business network, and among these circles, the desire to sit on such an elite board will be sufficient to fill it with the best business men and women in Tucson.
Business Summary

The United States makes up less than 1% of a $118 billion market that is expected to grow 68% by 2013. 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. 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.

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 footprints 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.

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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 though 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 C02e (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. 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.

*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.

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In 2009, the University of Arizona produced and emitted more than 250,000 metric tons of carbon dioxide equivalent (MtCO2e), 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

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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. 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.

### 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**

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<thead>
<tr>
<th>Year</th>
<th>Case A</th>
<th>Case B</th>
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**Industry**

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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. 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. 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. A graph of these trends can be found in Appendix A. Prices in the carbon markets are expected to recover post-2009. Bolstered

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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:

\textit{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, \textit{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.

\textit{EcoSecurities Group} is a leading company in the business of sourcing, developing and trading emission reduction credits. \textit{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, \textit{EcoSecurities} contracts with the owners of assets that have the potential to create emission reductions, to finance,
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 Scholars 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 tradeshows to showcase our project portfolio and green services, as well as examine recent market trends and opportunities. Specific tradeshows 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**

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</tr>
</thead>
<tbody>
<tr>
<td>University of Arizona Pilot Agreement</td>
<td>Commitment for Operational Funds: $100,000 Dollars</td>
<td>Obtain Rights to Landfill</td>
<td>Present to ACUPPC</td>
<td>Secure Investments from: University of Utah, Brigham Young University, &amp; Weber State University</td>
<td>Secure Investment from: University of New Mexico, University of Colorado, Colorado State University, &amp; University of Denver</td>
<td>Carbon Offset Project Design</td>
<td>Carbon Offset Project Design</td>
<td>Hire Contractor to implement Carbon Offset Project Design, Methane Collection System</td>
<td>Carbon Offset Project Fully Operational</td>
<td>Carbon Offsets Registered and Verified</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<tbody>
<tr>
<td>Total School Investments</td>
<td>43</td>
<td>72</td>
<td>108</td>
<td>156</td>
<td>228</td>
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<tr>
<td>Average Investment</td>
<td>$25,000</td>
<td>$30,000</td>
<td>$35,000</td>
<td>$40,000</td>
<td>$45,000</td>
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<tr>
<td>Carbon Offset Price</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Projects (As Year End)</td>
<td>4</td>
<td>9</td>
<td>15</td>
<td>25</td>
<td>41</td>
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</table>

### Projected Income Statement

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SALES</strong></td>
<td>70,700</td>
<td>396,000</td>
<td>1,226,000</td>
<td>3,461,000</td>
<td>7,720,000</td>
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<tr>
<td><strong>OPERATING EXPENSES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Salaries and wages</td>
<td>60,000</td>
<td>94,000</td>
<td>170,000</td>
<td>198,000</td>
<td>220,000</td>
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<tr>
<td>Payroll taxes</td>
<td>4,590</td>
<td>7,191</td>
<td>13,005</td>
<td>15,147</td>
<td>16,830</td>
</tr>
<tr>
<td>Employee benefits</td>
<td>6,900</td>
<td>10,810</td>
<td>19,550</td>
<td>22,770</td>
<td>25,300</td>
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<tr>
<td>Depreciation</td>
<td>3,274</td>
<td>3,571</td>
<td>3,571</td>
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<tr>
<td>Additional Operating Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales and Mktg Expenses</td>
<td>18,000</td>
<td>84,000</td>
<td>162,000</td>
<td>324,000</td>
<td>648,000</td>
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<td>Lawyer Fees</td>
<td>12,000</td>
<td>12,000</td>
<td>24,000</td>
<td>24,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Software Engineer</td>
<td>5,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Rent Expense</td>
<td>18,000</td>
<td>18,000</td>
<td>18,000</td>
<td>18,000</td>
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<tr>
<td>Market Research</td>
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<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
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<tr>
<td>Supplies Expense</td>
<td>6,000</td>
<td>9,000</td>
<td>12,000</td>
<td>15,000</td>
<td>18,000</td>
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<tr>
<td>Utilities Expense</td>
<td>12,000</td>
<td>15,000</td>
<td>18,000</td>
<td>21,000</td>
<td>24,000</td>
</tr>
<tr>
<td>Consultants</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td>TOTAL OPERATING EXPENSES</td>
<td>163,800</td>
<td>271,600</td>
<td>458,100</td>
<td>659,500</td>
<td>1,027,700</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------</td>
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<td>---------</td>
<td>---------</td>
<td>-----------</td>
</tr>
<tr>
<td>EBIT</td>
<td>(93,000)</td>
<td>124,500</td>
<td>767,900</td>
<td>2,801,500</td>
<td>6,692,400</td>
</tr>
<tr>
<td>DISTRIBUTION FOR TAXES</td>
<td>-</td>
<td>(9,427)</td>
<td>(230,373)</td>
<td>(840,452)</td>
<td>(2,007,712)</td>
</tr>
<tr>
<td>NET PROFIT (LOSS)</td>
<td>(93,100)</td>
<td>124,400</td>
<td>767,900</td>
<td>2,801,600</td>
<td>6,692,300</td>
</tr>
</tbody>
</table>

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.
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Appendix A: Transaction Volume Growth for the Voluntary Carbon Markets

Figure 1: Transaction Volume Growth for the Voluntary Carbon Markets

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

<table>
<thead>
<tr>
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<td>3,827,568.30</td>
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<td>4,789,855</td>
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<tr>
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<td>0.63</td>
<td>0.63</td>
<td>0.63</td>
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<td>6,002,098.45</td>
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<tr>
<td>5</td>
<td>50,923,098.88</td>
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<td>0.84</td>
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<td>17,468,125</td>
<td>16,511,693.59</td>
<td>12,641,765.41</td>
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</tbody>
</table>

Step by Step Explanation:

The expected cash flow \[E(CF)\] for each year was calculated by multiplying the probability of success \[P_S\], expected \[E(CF)\], 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:

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

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 \( \sigma_m \) 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 \( \beta \) 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:

\[
C_t = \frac{P(C_t, r_m) \sigma_{ct} (r_m - r_f)}{r_m} \cdot \frac{1}{1 + r_f}
\]

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

<table>
<thead>
<tr>
<th>Year Ending</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>May-12</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>May-13</td>
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<tr>
<td>May-14</td>
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<tr>
<td>May-15</td>
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<tr>
<td>May-16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Projected Balance Sheets ($s)

#### ASSETS

- **Current Assets**
  - Cash: 1,163,041
  - Accounts Receivable: -
  - Inventory: -
  - Other: -
  - **Total Current Assets**: 1,163,041

- **Property and Equipment**
  - (less accumulated depreciation): (3,274)
  - **Net Property and Equipment**: 9,226

- **Other Assets**: -

- **TOTAL ASSETS**: 1,172,267

#### LIABILITIES AND MEMBERS’ CAPITAL

#### Liabilities

- **Current Liabilities**
  - Accounts Payable: -
  - Other Current Payables: 1,076,000
  - Pre-Existing Debt: -
  - Current Portion of L-T Debt: -
  - **Total Current Liabilities**: 1,076,000

- **Long Term Debt**: -

- **Total Liabilities**: 1,076,000

- **Members’ Capital**
  - Members’ Paid-In Capital: 100,000
  - Undistributed Members’ Earnings (Loss): (82,733)
  - Less: Members’ Interest Repurch: -
  - **Total Members’ Capital**: 97,267

- **TOTAL LIABILITIES AND MEMBERS’ CAPITAL**: 1,172,267

### BALANCE CHECK

- -
- -
- -
- -
- -
### Income Statement

#### Projected Income Statements ($s)

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<th></th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
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<td><strong>SALES</strong></td>
<td></td>
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</tr>
<tr>
<td>Gross Sales</td>
<td>81,031</td>
<td>454,621</td>
<td>1,773,868</td>
<td>5,947,775</td>
<td>17,605,341</td>
</tr>
<tr>
<td>Returns and Allowances</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>NET SALES</strong></td>
<td>81,031</td>
<td>454,621</td>
<td>1,773,868</td>
<td>5,947,775</td>
<td>17,605,341</td>
</tr>
<tr>
<td><strong>COST OF SALES</strong></td>
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<td>Materials</td>
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<tr>
<td>Labor (Inc Taxes &amp; Benefits)</td>
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<td>Other</td>
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<td><strong>TOTAL COST OF SALES</strong></td>
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<td>-</td>
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<tr>
<td><strong>GROSS MARGIN</strong></td>
<td>81,031</td>
<td>454,621</td>
<td>1,773,868</td>
<td>5,947,775</td>
<td>17,605,341</td>
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<tr>
<td><strong>OPERATING EXPENSES</strong></td>
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<td>Salaries and wages</td>
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<td>94,000</td>
<td>170,000</td>
<td>196,000</td>
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<td>7,191</td>
<td>13,005</td>
<td>15,147</td>
<td>18,830</td>
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<td>Employee benefits</td>
<td>6,960</td>
<td>10,910</td>
<td>19,550</td>
<td>22,770</td>
<td>25,300</td>
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<td>Depreciation</td>
<td>3,274</td>
<td>3,571</td>
<td>3,571</td>
<td>3,571</td>
<td>3,571</td>
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<td>Bad debt expense</td>
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<td>Additional Operating Expenses</td>
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<td>150,000</td>
<td>252,000</td>
<td>420,000</td>
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<td><strong>OPERATING PROFIT (LOSS)</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Before Interest and Taxes</td>
<td>(82,733)</td>
<td>183,049</td>
<td>1,315,741</td>
<td>5,288,287</td>
<td>16,577,640</td>
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<td>-</td>
<td>-</td>
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<td><strong>PROFIT (LOSS) BEFORE TAXES</strong></td>
<td>(82,733)</td>
<td>183,049</td>
<td>1,315,741</td>
<td>5,288,287</td>
<td>16,577,640</td>
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<td>(394,722)</td>
<td>(1,586,486)</td>
<td>(4,973,292)</td>
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<td><strong>NET PROFIT (LOSS)</strong></td>
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<td>3,701,601</td>
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<tr>
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## Statement of Cash Flows

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<td>May-13</td>
<td>May-14</td>
<td>May-15</td>
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<td><strong>CASH FLOWS FROM OPERATIONS</strong></td>
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<tr>
<td>Net income</td>
<td>(82,733)</td>
<td>152,954</td>
<td>921,019</td>
<td>3,701,001</td>
<td>11,604,348</td>
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<td>Adjustments to reconcile net income to cash flows from operations</td>
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<td>Depreciation</td>
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<td><strong>TOTAL CASH FLOWS FROM OPERATIONS</strong></td>
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<td>5,984,590</td>
<td>15,225,372</td>
<td>32,127,919</td>
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<td><strong>CASH FLOWS FROM INVESTING ACTIVITIES</strong></td>
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<td></td>
</tr>
<tr>
<td>Purchase of equipment</td>
<td>(12,500)</td>
<td>-</td>
<td>(5,000)</td>
<td>-</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Other Assets</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL CASH FLOWS FROM INVESTING ACTIVITIES</strong></td>
<td>(12,500)</td>
<td>-</td>
<td>(5,000)</td>
<td>-</td>
<td>(5,000)</td>
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<tr>
<td><strong>CASH FLOW BEFORE FINANCING</strong></td>
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<td>2,316,526</td>
<td>5,989,590</td>
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<td><strong>CASH FLOWS FROM FINANCING ACTIVITIES</strong></td>
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</tr>
<tr>
<td>Borrowing of long-term debt</td>
<td>-</td>
<td>-</td>
<td>(20,000)</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Repayment of long-term debt</td>
<td>-</td>
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<td>220,000</td>
<td>240,000</td>
<td>240,000</td>
</tr>
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<td><strong>CASH FLOW BEFORE MEMBERS’ CONTRIBUTIONS</strong></td>
<td>964,041</td>
<td>2,316,526</td>
<td>6,159,590</td>
<td>15,460,372</td>
<td>32,362,919</td>
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<td>Members’ Capital Contributions</td>
<td>180,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Members’ Interest Repurchased</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(100,000)</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL CASH FLOWS FROM FINANCING ACTIVITIES</strong></td>
<td>180,000</td>
<td>-</td>
<td>220,000</td>
<td>140,000</td>
<td>240,000</td>
</tr>
<tr>
<td><strong>NET CASH FLOWS</strong></td>
<td>1,163,041</td>
<td>2,316,526</td>
<td>6,159,590</td>
<td>15,365,372</td>
<td>32,362,919</td>
</tr>
<tr>
<td><strong>CASH, BEGINNING OF PERIOD</strong></td>
<td>-</td>
<td>1,163,041</td>
<td>3,479,567</td>
<td>9,639,157</td>
<td>25,004,529</td>
</tr>
<tr>
<td><strong>CASH, END OF PERIOD</strong></td>
<td>1,163,041</td>
<td>3,479,567</td>
<td>9,639,157</td>
<td>25,004,529</td>
<td>57,367,448</td>
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</table>
Summary Statements for Low Demand Case

Balance Sheet

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<tr>
<th>Year Ending</th>
<th>May-12</th>
<th>May-13</th>
<th>May-14</th>
<th>May-15</th>
<th>May-16</th>
</tr>
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<tbody>
<tr>
<td><strong>Projected Balance Sheets ($s)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ASSETS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Assets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>586,479</td>
<td>1,621,717</td>
<td>3,314,904</td>
<td>6,115,181</td>
<td>10,947,605</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Inventory</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>586,479</td>
<td>1,621,717</td>
<td>3,314,904</td>
<td>6,115,181</td>
<td>10,947,605</td>
</tr>
<tr>
<td>Property and Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less: accumulated depreciation</td>
<td>(5,274)</td>
<td>(6,845)</td>
<td>(10,417)</td>
<td>(13,988)</td>
<td>(17,583)</td>
</tr>
<tr>
<td><strong>Net Property and Equipment</strong></td>
<td>12,500</td>
<td>12,500</td>
<td>17,500</td>
<td>17,500</td>
<td>22,500</td>
</tr>
<tr>
<td>Other Assets</td>
<td>9,226</td>
<td>5,656</td>
<td>7,083</td>
<td>3,612</td>
<td>4,940</td>
</tr>
<tr>
<td><strong>Total ASSETS</strong></td>
<td>594,705</td>
<td>1,627,371</td>
<td>3,321,988</td>
<td>6,118,693</td>
<td>10,952,645</td>
</tr>
<tr>
<td><strong>LIABILITIES AND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MEMBERS’ CAPITAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Liabilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts Payable</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other Current Payables</td>
<td>525,000</td>
<td>1,605,000</td>
<td>2,665,000</td>
<td>4,765,000</td>
<td>7,465,000</td>
</tr>
<tr>
<td>Pre-Existing Debt</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>525,000</td>
<td>1,605,000</td>
<td>2,665,000</td>
<td>4,765,000</td>
<td>7,465,000</td>
</tr>
<tr>
<td>Long-Term Debt</td>
<td>-</td>
<td>-</td>
<td>440,000</td>
<td>660,000</td>
<td>820,000</td>
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<tr>
<td><strong>Total Liabilities</strong></td>
<td>525,000</td>
<td>1,605,000</td>
<td>3,105,000</td>
<td>5,225,000</td>
<td>8,185,000</td>
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<tr>
<td>Members’ Capital</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Members’ Paid-In Capital</td>
<td>100,000</td>
<td>100,000</td>
<td>100,000</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Undistributed Members’ Earnings</td>
<td>(110,205)</td>
<td>(157,629)</td>
<td>76,888</td>
<td>813,693</td>
<td>2,707,545</td>
</tr>
<tr>
<td>Loss: Members’ Interest Repurchase</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>(100,000)</td>
<td>(100,000)</td>
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<tr>
<td><strong>Total Members’ Capital</strong></td>
<td>69,795</td>
<td>22,371</td>
<td>256,988</td>
<td>893,693</td>
<td>2,787,545</td>
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<tr>
<td><strong>TOTAL LIABILITIES AND</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MEMBERS’ CAPITAL</strong></td>
<td>594,705</td>
<td>1,627,371</td>
<td>3,321,988</td>
<td>6,118,693</td>
<td>10,952,645</td>
</tr>
<tr>
<td><strong>BALANCE CHECK</strong></td>
<td>-</td>
<td>-</td>
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## Income Statement

### Projected Income Statements ($s)

<table>
<thead>
<tr>
<th>Year Ending</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td></td>
<td>May-12</td>
<td>May-13</td>
<td>May-14</td>
<td>May-15</td>
<td>May-16</td>
</tr>
<tr>
<td><strong>SALES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Sales</td>
<td>53,469</td>
<td>224,239</td>
<td>725,738</td>
<td>1,711,925</td>
<td>3,733,204</td>
</tr>
<tr>
<td>Returns and Allowances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NET SALES</strong></td>
<td>53,469</td>
<td>224,239</td>
<td>725,738</td>
<td>1,711,925</td>
<td>3,733,204</td>
</tr>
<tr>
<td><strong>COST OF SALES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Labor (Inc Taxes &amp; Benefits)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
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<tr>
<td><strong>TOTAL COST OF SALES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GROSS MARGIN</strong></td>
<td>53,469</td>
<td>224,239</td>
<td>725,738</td>
<td>1,711,925</td>
<td>3,733,204</td>
</tr>
<tr>
<td><strong>OPERATING EXPENSES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries and wages</td>
<td>60,000</td>
<td>94,000</td>
<td>170,000</td>
<td>198,000</td>
<td>220,000</td>
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<tr>
<td>Payroll taxes</td>
<td>4,590</td>
<td>7,191</td>
<td>13,006</td>
<td>15,147</td>
<td>16,830</td>
</tr>
<tr>
<td>Employee benefits</td>
<td>6,900</td>
<td>10,010</td>
<td>19,500</td>
<td>22,770</td>
<td>25,300</td>
</tr>
<tr>
<td>Depreciation</td>
<td>3,274</td>
<td>3,571</td>
<td>3,571</td>
<td>3,571</td>
<td>3,571</td>
</tr>
<tr>
<td>Bad debt expense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional Operating Expenses</td>
<td>89,000</td>
<td>156,000</td>
<td>252,000</td>
<td>420,000</td>
<td>762,000</td>
</tr>
<tr>
<td><strong>TOTAL OPERATING EXPENSES</strong></td>
<td>163,764</td>
<td>271,572</td>
<td>459,127</td>
<td>669,488</td>
<td>1,027,701</td>
</tr>
<tr>
<td><strong>OPERATING PROFIT (LOSS)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEFORE INTEREST AND TAXES</td>
<td>(110,295)</td>
<td>(47,333)</td>
<td>267,611</td>
<td>1,062,437</td>
<td>2,705,603</td>
</tr>
<tr>
<td>INTEREST EXPENSE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROFIT (LOSS) BEFORE TAXES</td>
<td>(110,295)</td>
<td>(47,333)</td>
<td>267,611</td>
<td>1,062,437</td>
<td>2,705,603</td>
</tr>
<tr>
<td>DISTRIBUTION FOR TAXES</td>
<td></td>
<td></td>
<td>(32,995)</td>
<td>(315,731)</td>
<td>(911,651)</td>
</tr>
<tr>
<td><strong>NET PROFIT (LOSS)</strong></td>
<td>(110,295)</td>
<td>(47,333)</td>
<td>234,616</td>
<td>746,706</td>
<td>1,803,852</td>
</tr>
<tr>
<td>EBITDA</td>
<td>(107,021)</td>
<td>(43,762)</td>
<td>271,182</td>
<td>1,066,088</td>
<td>2,709,074</td>
</tr>
</tbody>
</table>
### Statement of Cash Flows

**Projected Cash Flows ($s)**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CASH FLOWS FROM OPERATIONS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net income</td>
<td>(110,295)</td>
<td>(47,333)</td>
<td>234,616</td>
<td>736,706</td>
<td>1,983,852</td>
</tr>
<tr>
<td>Adjustments to reconcile net income</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to cash flows from operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>3,274</td>
<td>3,571</td>
<td>3,571</td>
<td>3,571</td>
<td>3,571</td>
</tr>
<tr>
<td>Changes in certain assets and liabilities</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Inventory</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other current assets</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other current payables</td>
<td>526,000</td>
<td>1,080,000</td>
<td>1,260,000</td>
<td>1,920,000</td>
<td>2,700,000</td>
</tr>
<tr>
<td>Pre-existing debt</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>TOTAL CASH FLOWS FROM OPERATIONS</strong></td>
<td>417,979</td>
<td>1,036,236</td>
<td>1,498,188</td>
<td>2,660,277</td>
<td>4,597,423</td>
</tr>
</tbody>
</table>

| **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 | 1,036,236 | 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 | 1,036,236 | 1,693,188 | 2,900,277 | 4,932,423 |
| 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 | 1,036,236 | 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 | 10,947,685 |
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

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**

**Vice President**

- 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

Spring 2010

Fall 2008-2009

**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
pjml1188@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
The Vanguard Group  Scottsdale, Arizona
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
McGuire Center for Entrepreneurship  Tucson, Arizona
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
CPD Properties Investment Group  Tucson, Arizona
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
EXPERIENCE:

07/10- Present  
**Cactus Menus Inc.**  
*Founder*  
Tucson, AZ  
- Manage Restaurant Clients  
- Implement Marketing Campaign  
- Sell Advertising

06/08- 08/08  
**Trebuchet Financial**  
*Options Trader*  
Chicago, IL  
- Traded equity options utilizing four exchanges  
- Facilitated key market information to top traders  
- Helped train other interns in various trading techniques

07/07- 08/07  
**Schupan and Sons Inc.**  
*Kalamazoo, MI*  
*Green Marketing Coordinator*  
- 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

05/07- 06/07  
**Gettel Automotive**  
*Sarasota, FL*  
*Intern*  
- 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

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
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

Relevent 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

Frateral 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)
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

<table>
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<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<tbody>
<tr>
<td>Revenue</td>
<td>$70,700</td>
<td>$396,000</td>
<td>$1,226,000</td>
<td>$3,461,000</td>
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<td>Expenditures</td>
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<tr>
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<td>$124,400</td>
<td>$767,900</td>
<td>$2,801,500</td>
<td>$6,692,300</td>
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</tbody>
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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.
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Contribution to Group Project: Carbon Scholar

Team Members: Michael Drobny, Paul Mallery, Cadogan Price, and Jordan Schupan

As part of the McGuire Center for Entrepreneurship, we are asked to form a team and establish a viable business venture. Each member of the team is given a formal role and responsibilities to undertake throughout the course of the year. I was the General Manager of our venture, while Paul was the Finance Manager, Cadogan was the Operations Manager, and Jordan was the Sales Manager. My responsibilities included organizing team meetings, setting up mentor meetings, drafting multiple sections of the business plan, and ultimately being the one responsible for the deliverables of the team.

Each member of the team needed to contribute to various assignments throughout the fall and spring semesters. I coordinated the team member’s schedules to find an adequate time for us to meet. If a group member could not attend a meeting, it was my responsibility to fill them in on what they had missed. As General Manager, I was the liaison between the mentors in the program and our team. I regularly received emails from our mentor that I passed on to the rest of the team as well as responded to with the information requested. If we did not complete assignments to the standards of our mentor and needed to perform extra work, it was my responsibility to make sure it was completed in a timely manner. I took it upon myself to bear the biggest burden when it came to the business plan. As a team, we divided up the outline we were provided by the center evenly, but I took the responsibility of making the entire document flow and editing the work of my other teammates. My group put a lot of trust in me and I took the project extremely seriously because I knew other teams in the program were working just as hard. We decided as group that only Paul and I would speak during our final 3-minute presentation in the Year-End Showcase. After a year of working diligently on this project, I received great satisfaction from the fact our idea was very unique and we saved our best presentation for last.
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: ___________________________