PULSE OXIMETER DISPLAY SYSTEM

Business Plan

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1 Executive Summary
Pulse Oximeter Display System (PODS) LLC

Company Leadership
Nick McKee (CEO)
Taylor DeHaan (CTO)
Ben Wohl (COO)
Scott Block

Company Brief
This company’s purpose is to provide an easy to wear pulse oximeter that can be worn by pilots. This pulse oximeter will have a display to give warnings when a pilot reaches a critical oxygen level. This product aims to reduce the risk of hypoxia in aviation.

Problem addressed
This company looks to address the problem of hypoxia for pilots flying unpressurized airplanes.

Market
The primary market for this product is private pilots who fly unpressurized planes. The secondary market is pilots in general. A third market that is being considered is general users that may be in need of a comfortable pulse oximeter system. This may include people suffering from CLPD.

Key Strategies
This company aims to create a reliable product that will be quick to market. The company will be transparent about what is going into the product so that people will be able to trust that it is of the highest quality.

Managerial and technical experience of key members
The managers of this company are all Engineers of the Electrical and Computer concentration. They all study at Calvin College in Grand Rapids, Michigan. In addition to engineering experience they all have experience in business operations and management. More information on the members of this team can be found in Section 11 of this report.
Financials

PODS LLC plans to be financially stable after the first year of operation and will pay off their initial startup loan in six years.
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2 Vision and Mission Statement
PODS vision is to create a product that can replace existing pulse oximeters in private airplanes with something that is comfortable and easy to wear. We want out product to be sophisticated yet simple enough for it to be useful. We want safety for everyone riding in a plane to be the driving force behind our company.

3 Industry Profile and Overview

3.1 Industry background and overview
The first device to measure blood oxygen saturation was developed by Karl Matthes in 1935. This device was much more crude and invasive than the simple finger devices on the market today. With a focus on ergonomics and comfort, the pulse oximeters currently in use are easy to use and very accurate. The PODS Company will focus on a smaller design and better ergonomics while keeping the accuracy of the reading as important as before. A more intuitive display system is also a major focus.

3.2 Major Customer Groups

3.2.1 Aviation
The initial purpose of PODS was to sell the design or products to airline companies that were in need of a better oximeter display system. The simplicity and ease of using our product would make the older pulse oximeters obsolete. The design is geared more towards, but not limited to, the private pilots sector of aviation.

3.2.2 Military
Similar to the private pilots, the air force may be able to use the product in the same manner. There would need to be some high end adjustments as well as higher quality control for these applications, but they are a possible consumer of the product.

3.2.3 Medical
The design of the PODS pulse oximeter could prove to be more beneficial to the everyday hospital patient. The smaller device would cause less discomfort than the bulky finger ones used today, as well as giving more important information to the nurses and doctors. Once again, the need for a high-end product would put some pressure on the quality control of the devices sold to the medical field.
3.2.4 Emergency Response Units
The smaller design as well as the wireless display will prove to be much simpler for medical teams in ambulances to use. Quicker and easier is the whole goal of these units, so the PODS product will be a clear advantage.

3.3 Significant Trends
The current forms of pulse oximeters are fairly bulky but do their job. The data is accurate and the device is non-obtrusive, but still is not as streamlined as it could be. There has not been too much advancement recently in terms of innovation with this product, but PODS hopes to change that.

3.4 Growth Rate
The trend of sales and use has been steadily increasing since the year 2011 where over 700 million USD was made. The outsourcing of most manufacturing of the devices to China has made the device much cheaper, which has increased the number of units sold by a fair margin. The hope is to continue this trend with some new innovations and technology in the PODS pulse oximeter.

3.5 Barriers to Entry and Exit
The largest barrier to entry is breaking into the market with all of the major companies already manufacturing the oximeters at such a large magnitude. Getting the product onto the market will be most difficult, but the introduction of new innovations may prove to be the ticket into this market. Once the product is on the market, it should not be difficult in making a name for PODS. The fairly large start-up cost for manufacturing the product may be a barrier, but if the product gains some momentum early on, this should prove to be surmountable.

3.6 Key Success Factors in the Industry
The biggest key to success in this industry will be innovation. With new technology on top of an older working concept, the sky is the limit for how innovative the design can be. Once PODS is able to break into the market, keeping the technology new and fresh will be important to keep the product on top.

3.7 Outlook for the Future
With the market already saturated with the current technology of oximeters, PODS will have to prove that the new innovations will make its design relevant and more advanced. The company believes it will be able to design a technologically superior oximeter, but the entry to the market will prove to be the biggest hurdle.
4 Business Strategy

4.1 Desired image and position in market
We want to be viewed as a company that is trying to make private aviation safer for everyone involved. We will accomplish this by designing a product that pilots can put their trust in and that is very transparent in the way that it works and how it is designed. We desire to be leaders in this market. We rely on being quick to market so that we can gain a large portion of the market before we have any competition.

4.2 Company goals and objectives

4.2.1 Operational
The operational goal of this company is to build a safe and reliable product with currently available technology.

4.2.2 Financial
A financial goal for this company is to produce the product using a sustainable business model. The company would also like to make a profit and be able to donate some of our profit back to the community.

4.3 SWOT analysis

4.3.1 Strengths
A strength of the company is the uniqueness of the product. There is not really anything like our product currently on the market so we have an opportunity to meet a need. Another strength of this company is that we will most likely be able to expand our target market. The project was designed for the use of pilots but will also be available for other applications.

4.3.2 Weaknesses
One of the weakness of this product is that people may not see the need for it. To combat this we will put a large amount of resources into developing a marketing plan and advertising campaign. Another weakness of the company is that we must start from scratch we do not have the advantage of being a larger company that could use the production and manufacturing resources that are already available.

4.3.3 Opportunities
There is a large opportunity for this company to grow quickly due to the uniqueness of this product. As of yet, there is no product out on the market that meets pilots needs in the same way that this product does. If
this product is demonstrated to be reliable and to improve the safety of pilots there will be large opportunities to meet the needs of customers.

4.3.4 Threats
A large threat is having another company beat us to market with a similar product. This will be addressed by getting our product to market as quickly as possible and trying to gain a large chunk of the market. There is also the risk of larger companies coming into the market with similar products and under cutting our price.

4.4 Competitive strategy

4.4.1 Cost leadership
We hope to be very competitive in our pricing. We would like our product to be of the highest quality but not have unnecessary feature that would drive the price up.

4.4.2 Differentiation
The major focus for this company in terms of differentiation is speed to market. We need to try to be the first product of this type to reach market in order to gain a large portion of the market. Another way that we will be different is that our product will be comfortable to wear. We do not want our product to inhibit a pilot’s motion in any way. This will make the customers more likely to actually use the product more than once.

5 Company Products and Services
The company’s main product will be a pulse oxygen monitoring system for use in the private aviation industry and consumer oximeter market.

5.1 Description

5.1.1 Product Features
The PODS product will design a much smaller and more ergonomic measuring device as well as a wireless display system. The product will fit on one's finger in such a way that it will not impede on any movement of the operators hand. The display system will be used to read out any of the measurements as well as acting as a warning system for if any levels drop below a given threshold. The warnings are to be both audible and visual.
5.1.2 Warranties and Guarantees
PODS will provide a limited time warranty to all customers. This will cover both the oximeter device and optional display system. The digital application will be provided free of charge with the purchase of one of the products. Any product malfunction will be covered in a full product replacement and repair or compensation depending on the circumstance.

5.1.3 Uniqueness
The technology that makes the PODS oximeter unique is the extremely ergonomic and simple design along with the wireless display. The display being wireless allows for the measurement device to be much smaller and less restricting on the user. The also allows for easy placement of the digital readouts and better audio and visual warnings for the consumer. This also allows for other innovations on both the display and the actual oximeter device itself.

5.2 Patent or trademark protection
PODS will look into securing a Patent on any new technology that we develop. We will also have to be careful not to infringe upon other patents.

5.3 Future product or service offerings
After the release of our current product we will look to expand the target market. We also hope to continue to develop new features for our product that will allow for a wider target market.

6 Marketing Strategy

6.1 Target market
The primary market that we are targeting is the safety device market of private aviation. Additionally, we are also targeting a portion of the consumer oximeter market where an oximeter that can be worn at all times without becoming uncomfortable or limiting normal use of hands would provide superior value.

6.1.1 Problem to be solved or benefit to be offered
We seek to solve the problem of pilots suffering from hypoxia during flights due to a lack of blood oxygen saturation monitoring. We seek to achieve this goal by designing a comfortable to wear and easy to use pulse oximeter that provides a warning system for dangerous oxygen saturations. In addition to this, our product will also be unique when compared to other consumer oximeters as it will be designed to be constantly worn without being uncomfortable.
6.1.2 Demographic profile
The demographic that we are looking to target are private pilots who fly non-pressurized airplanes. Another demographic that we are targeting are charter aviation companies that charter non-pressurized aircraft. Pilots flying pressurized airplanes are not at high risk to hypoxia but we hope to market to them on the basis of pressurization failures and that it will generally improve their safety. In addition to these primary demographics, we are also targeting people who want an oximeter that can be worn at all times without interfering with any aspects of day-to-day life. One such market includes people suffering from Chronic Obstructive Pulmonary Disease (COPD).

6.1.3 Other significant customer characteristics
As aviation is a very expensive hobby and safety devices are defined by their ability to ensure safety, providing superior value through things like wear ability and ability to provide low oxygen saturation warnings can combat the cost of the device.

6.2 Customers' motivation to buy
Customers will be motivated to buy our product as it will be the only comfortable to wear pulse oximeter that does not interfere with the user's use of their hands on the market. This feature along with an easy to read display and advance warning system will make our product stand out from others and thus provide a superior value.

6.3 Market size and trends
The market is not incredibly large. It is estimated that there are 617,128 certified pilots in the United States.1 “…the market for pulse oximeters in the U.S., Asia Pacific and Europe is expected to grow to over $1.3 billion by 2020. This market includes a range of monitors and sensors including bedside, handheld and fingertip monitors; disposable and reusable sensors. Market growth can be attributed to cost savings of reprocessed disposable sensors and the lower price point of consumer pulse oximeters that are selling well through retail.”2

6.4 Advertising and promotion
Due to the target market of PODS not including the standard consumer, TV advertisements and other social media options would not be the best route. Direct contact with airlines will be one of the main forms of communication. Placing ads in other professional publications such as the IEEE magazine will

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1 (Pilot certification in the United States, n.d.)
2 (Research, 2014)
allow specific end users to see just what our technology is about. Any other companies that could benefit from the products such as medical companies could also be informed through posting in their own professional publications.

Along with the paper advertising, the company will have a professionally managed website to promote all the technology and products. It will cover all available products and technologies, links to our marketing and sales departments, as well as links to company reviews. The more the company can spread by word-of-mouth, the greater the benefits as a whole.

**6.4.1 Message**
In order to best market our pulse oximeter system we will focus on two main factors; first the safety that comes from wearing the oximeter, and second the practicality of the design.

**6.4.2 Media**
The target market for this project is a very specific group of people so we plan to market to them mainly through the use of magazine and internet ads. We will focuses are efforts on AOPA Pilot Magazine, Flying Magazine, and Plane & Pilot Magazine.

**6.4.3 Budget**
PODS is planning on devoting $10,000 to marketing in the first year.

**6.5 Pricing**

**6.5.1 Desired image in market**
We want our product to be affordable but our number one concern is to make sure that our product is constructed with high quality parts. We want our brand to be something that can be trusted in the private aviation industry. We also understand that aviation in general is a very expensive hobby and that pilots will be willing to spend the money on a device that will offer them an added level of safety.

**6.5.2 Comparison against competitors' prices**
Most blood oxygen monitoring systems that include an external display are in the range of $1,000 to $3,000. Most of these machines have more capabilities beyond blood oxygen monitoring. With our price point of $500 we will be much cheaper than similar medical systems.

**6.5.3 Discount policy**
We will offer a discount policy for any company that buys ten or more devices. We will reduce the price by a set amount in hopes of incentivizing larger piloting companies to buy our product.
6.5.4 **Gross profit margin % anticipated**
With the price point set at $500 we anticipate a gross profit margin of 11%, 19% and, 23% for the first three years of the business.

6.6 **Distribution strategy - Channels of distribution**
PODS will mainly sell its product through online distributors. We hope to employee at least one sales person in the next few years whose job it will be to sell packages of our products to larger firms. The warehouse will be located in the Midwest with easy access to most areas of the United States.

6.7 **G Test market results**
No G Test market were performed for this company.

7 **Location Layout**
The company will be based in Zeeland, Michigan. As a manufacturing and design based company PODS will need to have access to warehouse space. When comparing the cost of renting versus buying it was determined that renting is the better option. Industrial building space is being sold for about $50 dollars per square foot while it is being rented for $3.10 per square foot. When renting the lease must be for at least 36 months.

8 **Competitive Analysis**

8.1 **Existing competitors**
**Covidien:** Recently acquired by Medtronic, they are a global healthcare products company and manufacturer. Covidien was identified by iData Research as battling for the top spot in the global market for pulse oximeters. Their focus is primarily on oximeters for medical uses such as homecare.

**Masimo:** Masimo is a manufacturer of patient monitoring products and is primarily known for their pulse oximeters. In 2012, they were the number one seller of oximeters to hospitals and was identified as battling for the top spot in the global market for pulse oximeters. While their primary focus is on oximeters for hospitals, they recently released an oximeter that plugs into smart phones and is targeted for aviation and sports uses.

8.1.1 **Strengths**
The majority of our competitors are large corporations with revenues in the hundreds of millions to even billions and have sizeable portfolios of oximeters. They are also trusted and established brands with huge market shares.
8.1.2 Weaknesses
Our competitors offer general oximeters for a large range of applications, but are not designed for pilots. This will allow us to specialize our product to fit a specific market niche. Additionally, none of our competitors offer oximeters specifically designed to be comfortable to wear for extended periods of times which is a feature who need to monitor their blood oxygen saturation at all times (i.e. COPD) demand. Another weakness of our competitors is their size because they are so large it is hard for them to change the direction of their companies very quickly.

9 Potential competitors
1. Concord Health Supply
2. SantamedicalTM
3. Nonin Medical

9.1 Impact on the business if they enter
Many of these companies have products similar to ours that are used as pulse oximeters for sports and personal use. These companies have more experience marketing to pilots and also have brand names that are known and respected in the industry. They each hold a large part of the market and would be hard to compete with if they came out with a product similar to ours.

10 Description of Management Team

10.1 Key Managers
Nick McKee (Chief Executive Officer): Nick is an electrical/computer engineering concentration from Arlington Heights, Illinois. He has also been a four-year member of the Calvin College Cross Country team and also of the Calvin College Track and Field Team. He has experience working as a controls engineer intern. He has been assigned the task of researching business components of the project.

Taylor DeHaan (Chief Technology Officer): Taylor is a senior electrical/computer engineering student from Excelsior, Minnesota. Taylor has interned for Seagate Technology in Bloomington, Minnesota over the summer of 2013 and again in Longmont, Colorado over the summer of 2014. He is currently continuing his work from the past summer in a part-time intern position and has accepted a permanent role in the Advanced Storage Development team at Seagate starting the summer of 2015. Taylor’s role in team consists of lead research, system design, and team webmaster.

Benjamin Wohl (Chief Operating Officer): Benjamin is an electrical/computer engineering concentration student from Canton, Michigan. He is a four-year starter and captain of the Calvin College
baseball team. He has been assigned the task of researching the display unit as well as developing team posters and presentations throughout the course of the project.

Scott Block: Scott is an electrical/computer engineering concentration student from Grand Rapids, Michigan. The past 8 years of his life have been spent serving in the military with two overseas tours to Iraq and Afghanistan. Scott was tasked with researching the microcontroller and editing the team’s work.

10.2 Future additions to management team
Chief Financial Officer (CFO): PODS is looking for an individual with experience in accounting as a Certified Public Accountant (CPA) and with extensive education and at least an MBA. This individual will be responsible for the financials of the company and the overall financial risks.

Market Research Analyst: PODS is looking for an individual with experience in business marketing that will be able to help us organize and optimize our marketing strategy.

VP of Sales: PODS is seeking an individual with extensive experience in the patient monitoring industry to oversee the company’s sales, pricing, and marketing teams.

11 Operations

11.1 Legal form of ownership
This company will plan to be a limited liability company (LLC). The one main advantage to this form is the protection from personal liability for business decisions and actions. If the company incurs any debt along the way, the company’s members are safe in terms of their personal assets. This doesn’t mean that the members are shielded from other acts of injustice in the workplace. The two other positives of an LLC is the sharing of profits as the members see fit as well as much less record-keeping compared to other forms of organization.
11.2 Company structure

![Company Structure Diagram]

*Figure 1. Company Structure*

11.3 Decision making authority
Each officer will have authority over each of their assigned teams in their department. All final department decisions will be made by the chief officers. The final decisions of the company will ultimately rest in the hands of the President, having the final decision making authority.

11.4 Significant compensation and benefits packages
As the PODS company is on the smaller side, the amount of compensation and benefits will be smaller compared to the larger corporations. A 401K plan will be given to each employee, as well as some employee stock ownership plans. Employees will also benefit from a total of two weeks paid vacation and a few allotted sick days.

11.5 Description of Production
We hope to do the majority of production by hand. We will use skilled laborers to manufacture the major parts of our product. We will have one machine line that will build the housing for the wrist component.

11.5.1 Raw materials
The Raw electrical materials will be obtained in bulk from DigiKey and Raspberry pi. The other parts will be obtained as necessary.

11.5.2 Costs
Key item costs for the product are described in Table 1 in the appendix section.
11.5.3 Key supply chain components
The major key to the supply chain is being able to obtain all of the components. After the components are obtained they will be assembled on site.

11.6 Facilities
The PODS Company will be based out of West Michigan. The company will need to rent manufacturing space if outsourcing is not possible. The design based portion will be able to work in a smaller office space, which is more economically feasible. Expansion is a possibility for this company and its location would allow many options in terms of location and facilities.

12 Financial Forecasts
The financial forecast for PODS LLC is detailed in the appendix section. This statement of income and statement of cash flow details the predicted company finances for the first three years of operations. This includes items such as break even analysis, ratio analysis, debt repayment schedule, and a repayment schedule.

12.1 Key Assumptions
The financial forecast modeled in this report includes several key assumptions about the way that this business will function. The first assumption that was made was that the company would grow at an average rate of 20 percent annually. Most small businesses grow very quickly in their first three years with a slight taper into the fourth year as the company stabilizes its selling point. The second assumption that was made was that sales would be evenly distributed throughout the year. This assumption does not fit with what an actual business model would look like but for ease of calculations this assumption was used. Another assumption that was used was that all inventory will be sold in the same year that it is produced. Once again this assumption was used to simplify calculations.

It is assumed that PODS LLC will be able to obtain a start-up loan for $1,845,000. In addition to the 50,000 that the owners are investing will be enough to start the company. It is assumed that PODS LLC will successfully manufacture and sell 5000, 6000 and, 7200 units in the first three years respectively. This assumption shows an increase in sales through our first three years on the market.

12.2 Financial statements
A Pro-Forma Income Statement and Cash Flow Statement were used to analyze the financial feasibility of PODS LLC. They are described in the following sections of the report with the tables provided in the appendix.
12.2.1 Income statement
At a price point of $500 per unit the company has a net income after tax of $289,530 in the first year. In the second and third year the company has net income after tax of $611,793 and $862,018 respectively.

12.2.2 Balance sheet
A balance sheet is not included due to the fact that all inventory is used each year and all good produced are sold. The assets of the company can be reduced to available cash. The company debt is simply the bank debt at 10% interest rate while the equity is the original $50,000 invested in the company by the owners.

12.2.3 Cash flow statement
From the cash flow statement PODS has decided to only reinvest what is needed for working capital and to use the remaining profits to pay off company debt. This will help the company to reach its goal of paying off its bank debt in six years.

12.2.4 Break-even analysis
At the ideal price point for our product 3,265 units need to be sold in the first year to break even. This equates to 1,632,104 dollars of sales. After the first year the number of units that need to be sold to break even decreases due to the high startup design cost of the company. The break even sales volumes for year two and three are $1,168,284 and $1,070,851, respectively.

12.2.5 Ratio analysis
The ratio analysis is detailed in the appendix section of this report. From this it can be seen that the profit margin for the first three years of the company’s life are 11%, 19% and, 23% respectively. This shows that we be able to pay off bank debt and cover expensive that the company may encounter.

13 Loan or Investment Proposal
In order for PODS LLC to be successful we must begin production as soon as possible. This will make the startup costly but will hopefully gain us a large share of the market before our competitors can react.

13.1 Amount requested
PODS LLC is requesting an initial loan of $1,000,000. The owners of PODS LLC have invested $50,000 to show our intentions of making this business work. The owners hope that you see the potential benefits of investing in this company. We believe that PODS LLC will be a profitable business within the first three years of sales and we will have your investment returned to you within the first six years.
13.2 Purpose and uses of funds
The loan funds will be used to rent our manufacturing facility for the first year. It will also be used to start up production and pay for the salaries of our employees.

13.3 Repayment Schedule
PODS LLC plans to pay off the loan as quickly as possible. We hope to be able to pay off 20% of the loan each year starting in the second year of operation. The interest for the loan will be paid of in the sixth year of operation.

13.4 Timetable for implementing plan and launching the business
The current plan is to start operations for PODS LLC in the summer of 2015. This will give us time to finalize our plans and to achieve the necessary funding to begin operations. With this start date we hope to begin to see profit in the summer of 2016.
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Combined.html
### Table 1. Parts and Materials Cost Breakdown

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Electrical Components</strong></td>
<td></td>
</tr>
<tr>
<td>ADC</td>
<td>8.73</td>
</tr>
<tr>
<td>Light Diode (x2)</td>
<td>5.36</td>
</tr>
<tr>
<td>LED (*2)</td>
<td>2.12</td>
</tr>
<tr>
<td>Wi-Fi chip</td>
<td>10</td>
</tr>
<tr>
<td>Raspberry pi B+</td>
<td>35.56</td>
</tr>
<tr>
<td>Raspberry pi B+ Display</td>
<td>29.68</td>
</tr>
<tr>
<td>Wire</td>
<td>1</td>
</tr>
<tr>
<td><strong>Mechanical Components</strong></td>
<td></td>
</tr>
<tr>
<td>Case</td>
<td>5.19</td>
</tr>
<tr>
<td>Wrist band materials</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>92.45</td>
</tr>
</tbody>
</table>
### Table 2. Income Sheet

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales revenue</strong></td>
<td>2,500,000</td>
<td>3,000,000</td>
<td>3,600,000</td>
</tr>
<tr>
<td><strong>Variable Cost of Goods Sold</strong></td>
<td>1,000,000</td>
<td>1,200,000</td>
<td>1,400,000</td>
</tr>
<tr>
<td><strong>Fixed Cost of Goods Sold</strong></td>
<td>169,750</td>
<td>169,750</td>
<td>169,750</td>
</tr>
<tr>
<td><strong>Depreciation</strong></td>
<td>71,450</td>
<td>129,595</td>
<td>102,553</td>
</tr>
<tr>
<td><strong>Gross Margin</strong></td>
<td>1,258,800</td>
<td>1,500,655</td>
<td>1,927,697</td>
</tr>
<tr>
<td><strong>Variable Operating Costs</strong></td>
<td>110,000</td>
<td>130,000</td>
<td>155,000</td>
</tr>
<tr>
<td><strong>Fixed Operating Costs</strong></td>
<td>616,250</td>
<td>256,000</td>
<td>256,000</td>
</tr>
<tr>
<td><strong>Operating Income</strong></td>
<td>532,550</td>
<td>1,114,655</td>
<td>1,516,697</td>
</tr>
<tr>
<td><strong>Interest Expense</strong></td>
<td>92,250</td>
<td>166,050</td>
<td>129,150</td>
</tr>
<tr>
<td><strong>Income Before Tax</strong></td>
<td>440,300</td>
<td>948,605</td>
<td>1,387,547</td>
</tr>
<tr>
<td><strong>Income tax (40%)</strong></td>
<td>176,120</td>
<td>379,442</td>
<td>555,019</td>
</tr>
<tr>
<td><strong>Net Income After Tax</strong></td>
<td>264,180</td>
<td>569,163</td>
<td>832,528</td>
</tr>
</tbody>
</table>

### Table 3. Statement of Cash Flow

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beginning Cash Balance</strong></td>
<td>-</td>
<td>1,730,630</td>
<td>2,010,388</td>
</tr>
<tr>
<td><strong>Net Income After Tax</strong></td>
<td>264,180</td>
<td>569,163</td>
<td>832,528</td>
</tr>
<tr>
<td><strong>Depreciation expense</strong></td>
<td>71,450</td>
<td>129,595</td>
<td>102,553</td>
</tr>
<tr>
<td><strong>Invested Capital (Equity)</strong></td>
<td>50,000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Increase (decrease) in borrowed funds</strong></td>
<td>1,845,000</td>
<td>(369,000)</td>
<td>(369,000)</td>
</tr>
<tr>
<td><strong>Equipment Purchases</strong></td>
<td>(500,000)</td>
<td>(50,000)</td>
<td>(20,000)</td>
</tr>
<tr>
<td><strong>Ending Cash Balance</strong></td>
<td>1,730,630</td>
<td>2,010,388</td>
<td>2,556,469</td>
</tr>
</tbody>
</table>
### Table 4. Break Even Analysis

**PODS**

**Break - Even Analysis**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales revenue</strong></td>
<td>2,500,000</td>
<td>3,000,000</td>
<td>3,600,000</td>
</tr>
<tr>
<td><strong>Less: Variable Costs:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variable Cost of Goods Sold</td>
<td>1,000,000</td>
<td>1,200,000</td>
<td>1,400,000</td>
</tr>
<tr>
<td>Variable Operating Costs</td>
<td>110,000</td>
<td>130,000</td>
<td>155,000</td>
</tr>
<tr>
<td><strong>Total Variable Costs</strong></td>
<td>1,110,000</td>
<td>1,330,000</td>
<td>1,555,000</td>
</tr>
<tr>
<td><strong>Contribution Margin</strong></td>
<td>1,390,000</td>
<td>1,670,000</td>
<td>2,045,000</td>
</tr>
<tr>
<td><strong>Less: Fixed Costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed Cost of Goods Sold</td>
<td>169,750</td>
<td>169,750</td>
<td>169,750</td>
</tr>
<tr>
<td>Fixed Operating Costs</td>
<td>616,250</td>
<td>256,000</td>
<td>256,000</td>
</tr>
<tr>
<td>Depreciation</td>
<td>71,450</td>
<td>129,595</td>
<td>102,553</td>
</tr>
<tr>
<td>Interest Expense</td>
<td>92,250</td>
<td>166,050</td>
<td>129,150</td>
</tr>
<tr>
<td><strong>Total Fixed Costs</strong></td>
<td>949,700</td>
<td>721,395</td>
<td>657,453</td>
</tr>
<tr>
<td><strong>Income Before Tax</strong></td>
<td>440,300</td>
<td>948,605</td>
<td>1,387,547</td>
</tr>
</tbody>
</table>
### Table 5. Ratio Analysis

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Fixed Costs</strong></td>
<td>949,700</td>
<td>721,395</td>
<td>657,453</td>
</tr>
<tr>
<td><strong>Contribution Margin %</strong></td>
<td>56%</td>
<td>56%</td>
<td>57%</td>
</tr>
<tr>
<td><strong>Break Even Sales Volume</strong></td>
<td>1,708,094</td>
<td>1,295,919</td>
<td>1,157,374</td>
</tr>
<tr>
<td><strong>Break Even Sales Unit Volume</strong></td>
<td>3,416.19</td>
<td>2,591.84</td>
<td>2,314.75</td>
</tr>
<tr>
<td><strong>Equipment Purchases</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Purchases Year 1</td>
<td>500,000</td>
<td>71,450</td>
<td>122,450</td>
</tr>
<tr>
<td>Equipment Purchases Year 2</td>
<td>50,000</td>
<td>7,145</td>
<td>12,245</td>
</tr>
<tr>
<td>Equipment Purchases Year 3</td>
<td>20,000</td>
<td></td>
<td>2,858</td>
</tr>
<tr>
<td><strong>MACRS Rates (7-year recovery period)</strong></td>
<td>0.1429</td>
<td>0.2449</td>
<td>0.1749</td>
</tr>
<tr>
<td><strong>Interest Expense:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual interest rate on debt</td>
<td>10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average debt balance</strong></td>
<td>922,500</td>
<td>1,660,500</td>
<td>1,291,500</td>
</tr>
<tr>
<td><strong>Interest expense</strong></td>
<td>92,250</td>
<td>166,050</td>
<td>129,150</td>
</tr>
<tr>
<td><strong>Ratio Analysis</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross Margin of Revenue</td>
<td>0.76</td>
<td>0.59</td>
<td>0.55</td>
</tr>
<tr>
<td>Profit Margin</td>
<td>0.11</td>
<td>0.19</td>
<td>0.23</td>
</tr>
<tr>
<td>Net Asset Turnover</td>
<td>2.89</td>
<td>1.60</td>
<td>1.58</td>
</tr>
<tr>
<td>Debt to Equity Ratio</td>
<td>37</td>
<td>0.63</td>
<td>1.19</td>
</tr>
</tbody>
</table>