

Ms. Lindsey M. Schulze

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Mile-Ager the Mileage Tracker to Measure Wear of Shoes to Prevent Injuries

Physical/Engineering/Computer/Mathematical

Business Plan

Elevator Pitch: Everyone knows a runner of some sort, and in that case they probably also know someone that has been injured. Mile-Agers will save the body using the GPS technology inserted into the shoes to judge the wear on shoes and keep the user updated for when it is time to get new shoes.

Part 2. Executive Summary:

An investment of \$150,000 is needed to start the unique product of the Mile-Ager to hit the market and help people track the wear and usage of their shoes to help prevent injury and over wear of their shoes. With the expensive startup costs, money is not expected to be made until the third financial year; however, the third financial year is expected to have 1446% return. There is nothing like Mile-Agers out on the current market which will track the wear and usage of your shoes through GPS and calculations and feed it back to the consumer to know when it is time for a new pair.

Part 3. Problem Summary and Proposed Solution:

For runners, shoes can be a lifesaver and a demise. Proper shoes can alleviate pain, but if they are over worn, they can lead to injury. To solve this problem of keeping track of the mileage of the shoes and prevent injury, a device is needed to track the mileage. Current devices to track mileage include complicated apps and GPS tracking that only track workouts and mileage of each workout, not the shoe's mileage as a whole. A device is needed to protect and prevent injuries of the approximately 42 million runners in America.

Part 4. Summarize the STEM Concepts and Principles Underlying the Overall Plan:

This mileage tracker will be composed of a flexible computer chip equipped with GPS tracking to log the mileage of a pair of shoes. The small flexible chip will be placed under the insole of the shoe in the form of a small sticker. Each tracker will be registered with the owner when they log in to our website with their code and create an account to monitor the usage of their shoe. The GPS tracker works by converting the kinetic energy applied to the pressure of the ball of the foot into an electric pulse to ping to the GPS to track the location and mileage. The GPS tracker will send the information to the account which can be accessed by logging in or after registering. Notifications can be sent to the shoe owner through text or email according to

their personal settings. Owners can personalize settings to get notifications every 10, 20, 50 or 100 miles and get warnings when the shoes are reaching the end of their lifespan, which may lead injury.

To bring this idea to fruition, development in the conversion of the kinetic footstep energy to the electrical energy will have to be furthered to a macro level. This idea and technology is already being used by Pavegen- a company that creates tiles that converts footsteps into energy to electrical energy which can be used to run the buildings in which they are used. However, these tiles' large size is mostly due to the fact that they hold batteries to help store the energy, but with the mileage tracker, the energy will not be stored and will be directly used to ping the location to the GPS. This exponentially cuts down on the size of the convertor and the technology needed to make this work. This product is based on the use of our current technology and energy converter that is hardly futuristic.

Section 5: Commercialization Assessment of the Overall Plan

Problem, pain point or market opportunity:

Many injuries can be caused by the over usage of shoes. According to the American Academy of Physical Medicine and Rehabilitation, 70 percent of runners out of the 42 million will become injured, and the four of the top five injuries--iliotibial band syndrome, shin splints, achilles tendinitis, heel spurs--can be caused by over usage of shoes. Each type of shoe has a lifespan according to the miles run in them. This product is targeted to all runners as a tool to monitor the shoes to prevent injury. It can also be used to gather information to give feedback to customers on the life of the shoe; additionally, companies can use it as a way to advertise the quality of their products.

Proposed solution:

The solution to the problem is simple: produce a simple and easy-to-use device to be inserted and kept with the shoe to track the mileage, preventing injuries by the use of precaution and proper tracking. It will allow the information about the mileage on the

customer's shoes to be read with easy personal access on our website to keep the user updated. It will track wear of the shoe rather than the activity of the person each day.

Target customers and intended users:

The target customers for this product would be anybody that invests in running shoes for exercise whether it would be walker or runner. In the U.S., there are approximately 52.3 million runners according to statista.com that the Mile-Agers could be marketed toward. Also, the information gathered can be used to give to companies about the quality and the longevity of their products. And with a target price of under 10 dollars, this is meant to fit into anyone's budget, so anyone can track the mileage of their shoes and help prevent injuries.

Competitors:

For this specific type of product, there are no relative competitors. Products that would hardly compare would be FitBit, Nike Trainer and all other health trackers; however, all of these track activity through the whole day, but cannot be used to make a judgement of the wear of the customer's shoes. MILE-Agers are a one-of-a-kind product that can offer a unique experience to our customers and can be widely used by many.

Customer value proposition & competitive advantage:

The MILE-Agers have a low price point which will be much more cost efficient than expensive fitness trackers. MILE-Agers are an accessory that can be picked up by customers when they purchase a new pair of shoes, and they can begin easily using within 5 minutes, unlike the fitness tracker which can take a great deal of time to set up and get started.

Principal revenue streams expected:

The Mile-Agers are a product that everyone can use, but the advertising will be geared toward the large market of runners and walkers that need to keep track of the wear of their shoes. In order to advertise towards this market, Mile-Agers will be sold online, in running stores and at vendor tables at running events. For the first year, sales are expected to be low; however, after our product has gained attention, the Mile-Agers sales will increase exponentially. The first quarter low sales are expected, but as quarter two and three approach, sales are expected to increase as more runners and walkers become active due to the warmer, more favorable weather.

Principal startup and operating costs expected to be incurred:

Mile-Agers have many components that will be an expensive one time cost. A machine will need to be made to assemble and package the product; these machines can range from the simpler \$10,000 machines to the more complex machines of \$25,000. The machine for the Mile-Agers will cost in the \$25,000 range since it will be assembling the self sufficient energy pinger and the chips that hold the personal code for tracking. This complex machine will completely create the entire product, creating a low cost for the work force. The parts of the Mile-Agers will be low cost with the exception of the energy convertor. The flexible microchip needed can be printed at a low cost, due to the development of everyday printers being able to print chips with special conductive ink. Due to the complexity of the product using satellites and the web, patents will be expensive, reaching upwards of \$15,000. With the large start up costs, money is projected not to be made until the third year of business; however, the third year is projected to have a 1446.4% return, making up for the losses of the first two years.

Part 6. Business and Financial Proof of Concept:

Marketing, sales and pricing strategies to bring your product or service to market:

Mile-Agers are a technology-based product meant to be an accessory for shoes. We will spend 7% of gross sales on advertising. This advertising cost is to continually have customers come back for our product and get the word out to future customers. The goal is to sell approximately 22,500 Mile-Agers in the first year for \$5 each, creating gross sales of \$112,500 and an advertising budget of \$7,875 for the year or \$656.25 each month. For the low price of \$5, many people will want to buy these to track their mileage, and Mile-Agers will be a separate league.

Mile-Agers will be advertised and marketed near the cash registers by the impulse buys, but it will also found with the shoes. One marketing technique for the Mile-Ager will be to donate some of our product as door prizes in marathons, half-marathons and 5ks across the country, hitting the target market of runners and walkers everywhere. It will be sold online and in running stores. There will also be advertising vendors' stands at the marathons and

half-marathons. Keeping the product costs low, and selling it at a low price will ensure the increased sales in future years and make it very difficult for competitors to surface, since there are no current competitors. We will have the one of a machine to make the Mile-Agers. We anticipate a profit margin of approximately 45.4% once we reach the third year of sales

Discussion about your operational plans for developing and making your product or service into a tangible commercial venture:

To fulfill the idea to complete fruition and actually get started will take approximately two years to develop the technology. The process to start up the Mile-Agers business will take time and patience; however, once it starts, it has great potential. To bring this idea to be operational, testing and patents must be filed to get the product to work properly. We then need to turn the calculations into easy to read measurements for customers through the website. This means we would need to purchase a domain for our users to register and locate the information of the Mile-Agers. Our personalized machine that will create the product from start to finish will keep cost low by eliminating the human labor in the work process. However, offices will be needed for operations workers, so renting space to fit the machine and a couple offices will be the most efficient. The workers needed will include a web designer(keeps website intact and running), accountant(keeps finances correct and handles sales)and logistic/product manager(deals with marketing and packaging). These workers will keep the business successful and running. Total, the workers will be paid \$163,267 in salaries. Shipping costs will be low due to main sales being done online and that the product can fit in an envelope and sent through the mail at a very low cost.

Significant risks and uncertainties you expect to face in bringing your venture to market:

Though the product of Mile-Agers is not a need, it is a tool that can be used by many to help prevent injury and keep track of the usage and wear of shoes. Mile-Agers can be produced and delivered at reasonable and low costs and to out source would insufficient. The money invested through secured loans to give full protection to our investors to protect their money. All government regulations will be met in the patent process, and labels claiming that we are not liable for ignoring warnings or for the calculations being skewed.

Amount and type of investment expected to be required to bring your idea to market:

An investment total of \$150,000 in loans will be needed get Mile-Agers started and selling. Patent and legal documents must be filed along with the developments of the technology. Space must be rented for the machine, along with the machines, including the product maker, computer and the satellite technology, which is all included in the investment. These are the main startup costs that make up the majority of the investment.

A three year financial projection that confirms the financial feasibility of bringing our venture to market on a sustainable basis:

Mile-Agers- Shoe Tracker Financial Projections For the First Four Quarters and First Three Years	Totals For				Revised 2016		
	Quarter 1	Quarter 2	Quarter 3	Quarter 4	First Year	Year 2	Year 3
Sales and revenues	\$2,500	\$30,000	\$40,000	\$40,000	\$112,500	\$210,000	\$620,000
Costs and expenses:							
Cost of sales	\$375	\$4,500	\$6,000	\$6,000	\$16,875	\$31,500	\$93,000
Selling, marketing and advertising costs	\$175	\$2,100	\$2,800	\$2,800	\$7,875	\$7,875	\$7,875
Space and occupancy costs	\$17,625	\$17,625	\$17,625	\$17,625	\$70,500	\$70,500	\$70,500
Management and administrative costs	\$40,817	\$40,817	\$40,817	\$40,817	\$163,267	\$163,267	\$163,267
Other costs	\$1,000	\$1,000	\$1,000	\$1,000	\$4,000	\$4,000	\$4,000
Total costs and expenses	\$59,992	\$66,042	\$68,242	\$68,242	\$262,517	\$277,142	\$338,642
Pre-tax cash profit (loss)	(\$57,492)	(\$36,042)	(\$28,242)	(\$28,242)	(\$150,017)	(\$67,142)	\$281,358
Investment required to start your business:							
Working capital: Operating cash					Year 1	Year 2	Year 3
Accounts receivable					\$695	\$ 857.00	\$ 1,320.00
Inventory					\$432	\$ 432.00	\$ 432.00
Other current assets					\$500	\$ 4,300.00	\$ 10,400.00
Office equipment					\$7,000	\$ 3,000.00	\$ 2,000.00
Warehouse & manufacturing equipment					\$3,000	\$ 200.00	\$ 300.00
Building or leasehold improvement costs					\$30,000	\$ 400.00	\$ 500.00
Cost of developing prototype products					\$0	\$ 600.00	\$ 1,500.00
Legal, patent or other organizational costs					\$200	\$ -	\$ -
Initial start-up losses that must be funded					\$15,000	\$ 3,000.00	\$ 3,000.00
Other investment costs					\$35	\$ -	\$ -
Projected total investment					\$250	\$ -	\$ -
Projected return on investment (Profit/Investment)					\$57,112	\$ 12,789.00	\$ 19,452.00
					-262.7%	-525.0%	1446.4%

Part 7. Acknowledgements:

Thank you to Mitchell Schulze for his influential ideas to help better and further the idea of the Mile-Ager, Mark Schulze for giving me an idea on the estimate for the specialized machine, Andy Miller for explaining the mechanic basics of my idea to me, Donna Rindler for helping with the financials, Mr. Garman for proof-reading this and Moeller Doors for helping with the estimations.

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