

Individual Product Pitch

Students Name: Yiming Zhong

Course Name: MGIA01

Principles of International Marketing

Submission Date: Feb. 15th, 2022

Instructor Name: Professor Tarun Dewan

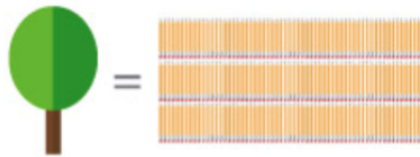
Executive Summary:

My product, InfiniPen, is a combination product of inkless pencil and capacitive pen integrated with the technology of unique exclusive ideas. The 2 in 1 design collects the abilities of both products which allow InfiniPen to write on physical paper and electronic devices. Meanwhile, the creation of the product reduces wood consumption to protect our environment and mitigate the emission of CO² indirectly. Therefore, a positive cycle has formed. The product will revolutionize the daily demand of people nowadays because of its daily suitability, product practicability, and financial feasibility.



Need Statement:

Environmental pollution is always one of the most significant concerns. Excessive wood consumption will cause a detrimental impact on the environment by fastening deforestation, which directly influences our human life by producing lower quality air, reducing biodiversity (including the abiotic environment), and destroying the recreation cycle. Meanwhile, my idea is derived from the real-life issues with our stationeries. I have observed frequent stationery losses in daily life, especially of pencils, the most common ones. The traditional pencils, made out of wood, are massively produced and carelessly misplaced, listed to be the top three most commonly lost items. Speaking from experience, I have experienced the product of Apple Pencil, which may be the most impeccable pencil on functioning and appearance; however, there are limitations when switching devices to Android and other mobile OSes, or physical paper. Considering these two major issues — alarming in global and personal — I decided to come up with a product that mitigates the environmental burdens on excessive wood consumption and fulfills the demand for the most ideal pencil.



One tree will make approximately
170,000 pencils.



About **82,000 TREES**

are cut per year to produce pencils.



Technical Details:

InfiniPen will cycle through three stages: inkless pencil tip, capacitive pen, and combination machining.

Inkless pencil tip: The principle of the inkless pencil tip is based on physical abrasion on paper, similar to traditional pencils. However, traditional pencils utilize graphite, the crystalline form of carbon as the solid core materials to leave a mark on. Unlike those, the “graphite” for inkless pencils is portioned differently with silver, lead, and tin through which consumes incredibly slow.

Hence, such the right portion can maximize the longevity in use and adjust the color degree and hue of the pencil. The tip can potentially be made in tip-shaped tin foil under high temperatures, so there are both technical and safety considerations. Since the inkless pencil is already an existing product, I will only involve the core technique of the craftsmanship of manufacturing the pencil tips.

Capacitive pen: a capacitive touch screen uses an electrostatic field that registers contact when the field is distorted by a conductor. It is also an existing product with skilled craftsmanship for years. In a more concrete term, a capacitive pen functions exactly like a finger by making screen contact via electrostatic field disruption.

Combination machining: although both products that I am referring to are existing products, the combination is unprecedentedly new as product development. Using the capacitive pen body as the media of the entity, I am planning to open the bottom of the body to enable the tip to twist in. The tip will be the original inkless pencil tip as it will be screwed in the capacitive pen body as a notch through machining in the factory. There are automatic pen refill machines, but luckily, my product will be easier to assemble as only combining the two materials, considering I have a valuable idea.

Unique Value:

InfiniPen is currently the only pen that has an almost infinite using cycle with infinite possibilities as accessing to different platforms. Although the atmosphere circulates gases to protect the earth, we can take action to avoid the atmosphere tiring out. By using InfiniPen products, consumers choose to be eco-friendly because the pencil tip, a combination of silver, lead, and tin, lasts a 20-year usage under normal pencil consumption. Meanwhile, there are infinite possibilities in different platforms, which are electronic and physical accesses; InfiniPen has been designated to shuttle conveniently without switching tools to avoid item losses.

InfiniPen, with no need for frequent replacements, will be uniquely valuable to today's society

and environment. The features of InfiniPen include accessibility, sustainability, safe, and economically friendly. To conclude, InfiniPen will concurrently resolve people's concerns about the environment and inconvenience and satisfy market demands.

I will use the ERRC grid, providing thoughts on the production elements from four criteria: "eliminating", "reducing", "raising", and "creating".

<u>Eliminate</u> Wastage of resources	<u>Raise</u> Awareness for the environment Access to convenience
<u>Reduce</u> Wood consumption Greenhouse gas emissions Pollution	<u>Create</u> 100% longer service life of pen An environmental-consciousness culture

Through guiding over the four criteria, I believe my product has perfectly resolved the initial concern people raised in daily basis. In the meantime, the product adds to consumer awareness on the environmental issues to consume an eco-friendly product and to promote an eco-friendly business.

Cost Expense:

Unit Variable Cost

The total manufacturing cost of one unit of InfiniPen is budgeted at approximately \$30. The value of materials, the ready-made capacitive pen, is around \$20 on Amazon, and the inkless pencil tip solely is selling for \$2.5 according to the e-commerce chain of Chinese Taobao. In addition, I have contacted a pencil production factory in Suzhou, China, to find out if it would be possible to have mass production on my product. The answer was positive and the price charged for the combination machining per unit is \$5 initially, however it would certainly decrease due to the economies of scale: the larger scales of production are manufactured, the

fewer input costs will incur. The total value of \$5 has included the production costs by screwing the inkless pencil tip as a notch into the capacitive pen.

Fixed Cost

If the product will be launched officially, I plan to own an electronic store on Taobao, the online shopping platform with the largest customer base. To be a contract seller on Taobao, I have to register with a one-time fee of \$60 to open the store based on the exchange rate of 5 from CAD to CNY (200 yuan). The registration fee will not be accounted for as the market expands in time and size.

Pricing Strategy:

Considering the cost for one unit is approximately \$30, I decided to set the price at \$39.99 at first. As a result, I will have a profit of \$9.99 and a gross margin of 25%. By adding on the fixed cost, I realized the extremely low standard for my business to go breakeven, which is at 6 units ($\$60/(\$39.99-\$30)=6$), which does not fall into the market rationality. Therefore, I would like to adjust the pricing to \$30.99 by offering a much lower price to consumers under the premise of it can be a mass production instead of limiting in batch production. In a more concrete term, the business can be more profitable in the long term by increasing the quantity and reducing the unit price. Ideally, the combined machining per unit will cost lower than \$3, resulting in the break-even point being 21 units ($\$60/(\$30.99-\$28)=21$). However, the break-even point should be higher in reality since there are other possible factors or obstacles, not possible to predict and calculate, such as buffer stocks.

Market Analysis:

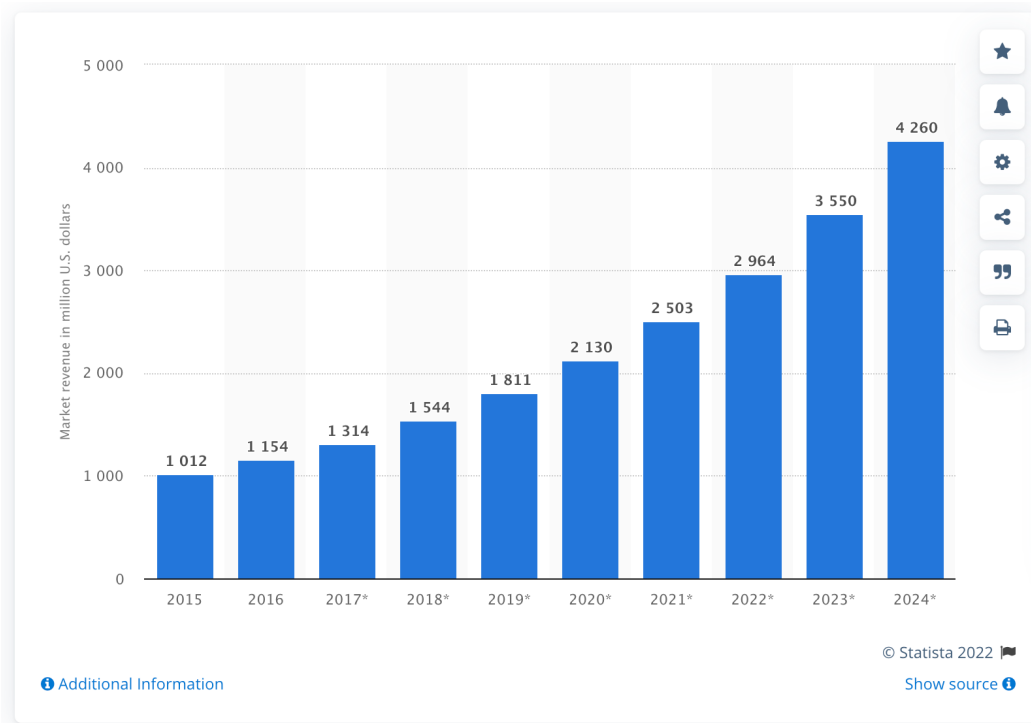
Rationally speaking, it is necessary to employ historical data for future prediction in the market. Therefore, I will use the TAM, SAM, and SOM (total available market, serviceable available market, and serviceable obtainable market) market evaluations to briefly analyze the market.

TAM: the total available market would be people all over the world who are interested in the

product and its features. Any of them can be potential investors if agreeing with my claimed statements and share the same situation.

SAM: the serviceable available market consists of designers, office workers, teachers, and students, the group seeking convenience and environmental improvement. The graph beneath demonstrated how data analysts foresee the digital pen market. Although there is no similar product like mine, the target group of the digital pen will be ideally similar. The digital pen market size was valued at \$1,154 (in millions USD) in 2016, with a predicted compound annual growth rate of 23.38% in the next five years after 2016. According to the graph, the predicted market revenue in 2021, which is five years after 2016 with the survey data, has reached \$2,504 (in millions USD). The market size by revenue has doubled in five years: $(2504-1154)/1154 \times 100\% = 116.9\%$. With an average annual market growth rate of 23.4%. The growth rate has demonstrated the stability of the existing target audience and the likelihood of increasing consumers, which all leads to conclude that the product of InfiniPen is quite promising.

SOM: SOM stands for the serviceable obtainable market, for me, it is where I have to think about how much market share to aim for after launching. Realistically analyzing my target audience, I believe it is fair to say that my audience are environmentalists, people who are interested in trying out new products, and middle-class businesspeople, but they will have one thing in common, they should often raise concerns on wood consumption and loss on common items. Despite the existence of big names of smart pens, I project to capture 0.1% of the digital pen market with corresponding to \$4 (in millions USD) of sales revenue in three years, which is equivalent to selling 130,000 units of my products with a profit of around \$250,000. Although my plan was to establish an electronic store on the Chinese e-commerce platform, I can also open an eBay account to transact B2C service to consumers to help me reach those statistical goals and expand in the long term.



Economic Sustainability:

Overall, my market analysis and cost calculations demonstrate that the business will become profitable and sustainable. The next three years follow a three-phase plan for InfiniPen, outlining its development to market expansion.


Phase I - Funding (2022): I plan to start to launch my product this summer when I travel back to China. I will have to order the ready-made parts and have factories contacted to be ready. Furthermore, before this summer, I plan to build my network on those who can offer more insights in detail to my product and marketing, so I will be able to have a smooth start launching.

Phase II - Product Development (2023): The product will be prototyped, evaluated, and iterated several times until production and functional standards are met. Ideally, I estimate to sell around 4,000, which is 10% of my total goal, by the end of 2022.

Phase III - Marketing and Iteration (2024): I plan on further reaching out to our

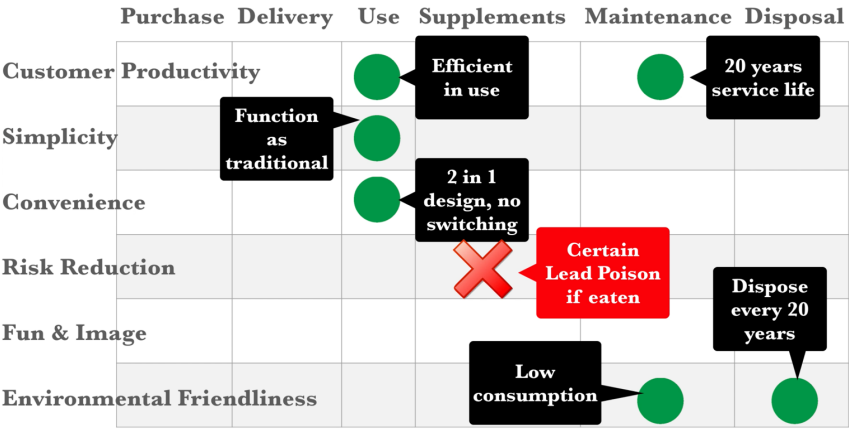
consumer base by making marketing a priority. With the daily accessible feature of InfiniPen, people tend to need this more and more. So the demand for my product will soar as the market exists and initial prototypes are mature. Through this year 2024, I plan to meet the sales of 40,000, to fulfill our goal of completing 0.1% of the market.

Market Expansion: This comes to challenge the products under many big names if not sponsored by them. The loyalty of customers to certain brands cannot be underestimated, but the price range could be reasonable for everyone, even the Apple supporters or Samsung supporters, to purchase. Therefore, I will use the analysis of the buyer utility map to demonstrate the multiple advantages of InfiniPen in a more direct approach.

	Dixon Pencil	Capacitive Pen	Standard Inkless	Apple Pencil	InifiniPen 
Price	\$0.1	\$19.99	\$9.99	\$99 or \$129	\$39.99/ \$30.99
Length of use	Within 40,000 words	Years	20 years	Forever with charging	20 years
Paper plastic wood	Paper only	None surfaces	All surfaces	None surfaces	All surfaces
Clarity	Good	Good	Poor	Good	Good
Drop Resistance	Poor	Good	Poor	Good	Good
Touch Screen Compatibility	No	Good	No	Good	Good
Environment Friendliness	No	Poor	Good	Good	Good

Beneath is the buyer utility map. The green spots demonstrate the outstanding features that InfiniPen obtains in marketing. The X-mark in red is the only risk I could think of because the material must not edible and be away from infants. The row of the x-axis evaluates the process when producing and using by buyers, and the column of the y-axis evaluates the product itself from social, technological, economic, environmental, and ethical aspects. In conclusion, it is a map of evaluating STEEPLE factors while prioritizing consumer experience.

Buyer Utility Map



Reference:

Published by Statista Research Department, & 14, F. (2022, February 14). *Global Digital Pen Market Size 2025-2024*. Statista. Retrieved February 15, 2022, from <https://www.statista.com/statistics/947367/worldwide-digital-pen-market-revenue/>