



One Medicalogy Pre-Launching Strategy of New Maternity Belts with Anti-Radiation Feature Using Lean Startup Methodology

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ABSTRACT: This paper will discuss pre-launch strategy taken by One Medicalogy, a startup company specializing in maternity apparels. The strategy will follow lean startup methodology that will guide One Medicalogy to start, build, develop, conduct and maintain its business in the field of anti-radiation maternity belts.

A maternity belt is a belt or a corset used to support the lower portion of the belly and back of pregnant women. An anti-radiation maternity belt is a modified maternity belt by embedding an additional anti-radiation layer on the inside part of the belt. The extra layer will protect the fetus growing in the belly of the mother from harmful non-ionizing RF-EMF radiation. The source of the radiation is usually electronic devices and gadgets such as personal computers or laptops as well as smartphones. One Medicalogy is committed to design, develop, produce and introduce the belts to the market.

Pre-launch strategy will be employed in introducing the belt to the market. This strategy includes conducting market tests by testing the product with potential customers and performing rigorous efforts with them to ensure communication during product design and development by first determining the target market, ensuring that product features line up perfectly with customer needs.

A lean startup methodology will also be used to assist One Medicalogy in introducing the belts quickly and successfully to market. In essence, lean startup methodology is a method that focus business efforts in speedy creation of product prototypes by first conducting and testing target market analysis. Feedbacks resulted from prototype try-outs and interviews involving potential customers will be employed quickly to create finished products. In addition, these feedbacks will also reveal the strength of the newly created products against that of the competitors. Using this method, One Medicalogy can reduce the risk of bad product performance.

KEYWORDS: Anti-radiation elektromagnetik, Lean startup, Maternity belt.

INTRODUCTION

1.1 Background

One doctor is concerned about the rise in ADHD, also known as a hyperactive behavior disorder, and hopes to develop a product that would help to lower the prevalence of the condition. One of the repercussions of electromagnetic radiation waves released by electronic devices is the rise in ADHD. The body can suffer significant negative consequences from electromagnetic radiation released by technological equipment. According to data from the Central Statistics Agency, the population growth using cell phones in 2020 reached 62.84 percent, increasing from 2016 to 2020 the growth in internet use in households. The percentage of homes using computers rose to 18.83 percent in 2020. Between 2016 and 2020, there was an increase in the number of people utilizing the internet. as shown by the rising percentage of the population using the internet, which increased from 25.37 percent in 2016 to 53.73 percent in 2020 [1]. The electromagnetic radiation that can radiate from devices like smartphones, kitchen appliances, computers, and TVs has the potential to have harmful consequences on the body over time, including skin conditions, delayed fetal development, and cancer.

There were over 400,000 unintended pregnancies during the pandemic, and according to data from the Indonesia Health Profile, pregnant women made up about 5,221,784 people in 2020. These trends can be observed in the development of ever-more advanced technologies and the annual rise in pregnancy rates during the pandemic. Additionally, anti-radiation maternity belts were one of the first products chosen because they were one of the first products chosen and since during a pandemic like this, the growth rate of pregnant women increased by 7.07 percent [3]. Anti-electromagnetic radiation maternity belts make it possible to avoid electromagnetic radiation exposure, which can cause hyperactive behavior disorder (ADHD), which first appears between the ages of 5 and 7 [3]. Because there are still few producers of this kind of clothing in Indonesia, it is required to utilize a prototype to



persuade customers or the target market that anti-electromagnetic radiation maternity belt items can prevent behavioral disorders (ADHD) that manifest between the ages of 5-7 years. Input for review, together with the prototype, will be received, enabling the product to be in line with the needs and wishes of the market. A prototype is necessary to ascertain whether the product and the market are compatible prior to launch. Finding customer feedback that may be used as a model or lesson during the validation process will aid in the product's eventual market and public acceptance. and one medical company will be more sustainable.

A guide for doing a market and product validation will be provided by lean startups [4]. There will be a thing called a "maternity belt." In essence, the Lean-Startup methodology focuses on creating prototypes quickly with the goal of analyzing target market assumptions. The results of the market survey will be considered while evaluating the product's manufacturing procedure. The Lean-Startup process can assess prototype products as quickly as possible to ascertain how customer feedback is received. In addition to receiving feedback, it's critical to comprehend the advantages One Medical's items have over those of rivals, the correct target market, and the products that would be most effective there. With the aid of this plan and customer input, the startup's and the product's risk will be decreased. According to the lean startup approach, One Medical uses this technique to create an anti-electromagnetic radiation maternity belt in order to satisfy market expectations, which must be verified between the hypothesis and the reality.

1.2 Company Profile

In 2021, One Medical started to take shape. One Medical is a pioneering wearable anti-radiation start-up company that is ranked first in the health industry. One Medical asserts that health should come first. One Medical's tagline is "Be More Healthier." The key takeaway is that maintaining your health requires becoming even healthier.

From 2019 to 2022, a medical company conducted research for research and development of anti-radiation raw materials in order to create an anti-electromagnetic radiation maternity belt for electronic equipment. The condition known as attention deficit hyperactivity disorder (ADHD), which first appears between the ages of 5-7, can be exacerbated by electromagnetic radiation from electronic devices. The anti-electromagnetic radiation maternity belt was designed to be as comfortable and light as feasible to use every day. In addition to the pregnant belt that blocks electromagnetic radiation, One Medical will also create garments with stronger anti-radiation levels, like x-ray radiation. X-ray radiation has a very high radiation exposure value when it is continuously and directly exposed to the body. Medical experts and support personnel usually wear anti-radiation aprons during heart ring surgery, which necessitates a live x-ray to watch the heart ring's progress.

1.3 Business Issue

There will be an increase in the issues related to young children's hyperactivity in 2020. In the United States, 6.1 million children, or 9.4% of the population, had ADHD in 2016, according to the CDC (Center for Disease Control and Prevention, 2020). Boys are more likely to have ADHD (84.3%) than girls (15.7%). (ADHD Institute, 2021) [5]. One of the causes of ADHD is electromagnetic radiation (hyperactivity disorder of behavior). The radiation may impede the fetus's growth, which could lead to behavioral issues that manifest in toddlers between the ages of 5-7 [6]. A medical company developed a pregnant belt that shields electromagnetic radiation in response to these problems in an effort to reduce the likelihood of behavioral disorders.

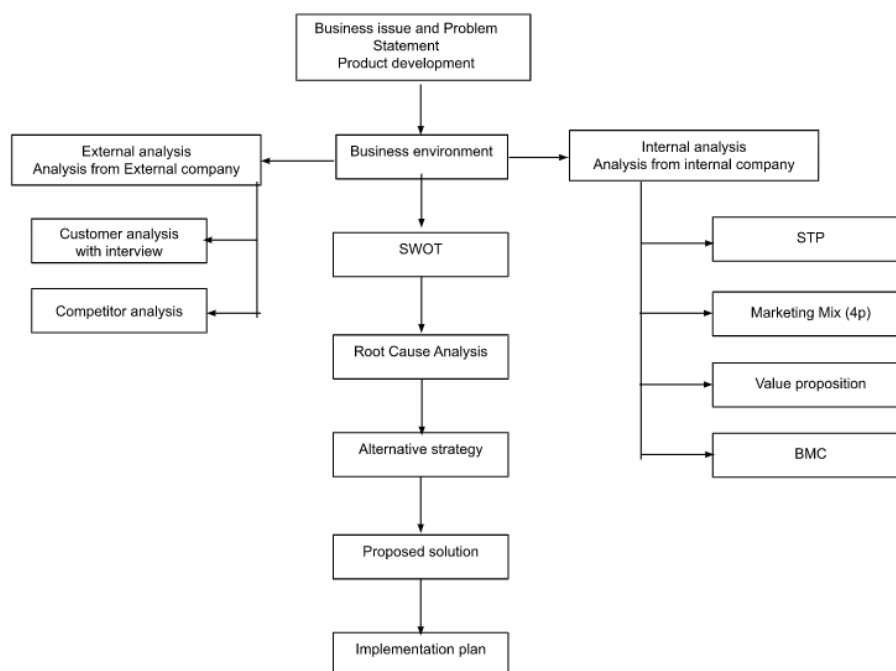
Because this anti-electromagnetic radiation maternity belt is still a relatively new product, One Medical will have difficulty entering the target market. It is necessary to introduce anti-electromagnetic radiation maternity belt items in order to raise awareness among the target market. In order to ascertain whether this anti-electromagnetic radiation maternity belt will satisfy consumer needs and wants, one medical company needs to validate the market for it. In order to successfully compete against rivals and reduce the probability that its anti-radiation maternity belt products will fail owing to a lack of market synchronization, one medical company requires market validation.

One strategy to assist the lean startup approach and produce results from product compatibility with the market while minimizing the high risk when the product does not match the market is to use an anti-electromagnetic radiation product prototype. The lean startup methodology is anticipated to make the anti-electromagnetic radiation pregnancy belt product more resilient in the product sales process in the future. Studying comparisons between one medical brand and other goods that employ the STP, UVP, and 4Ps marketing mix will assist you in more easily and successfully competing with both domestic and international competition.

2. METHOD

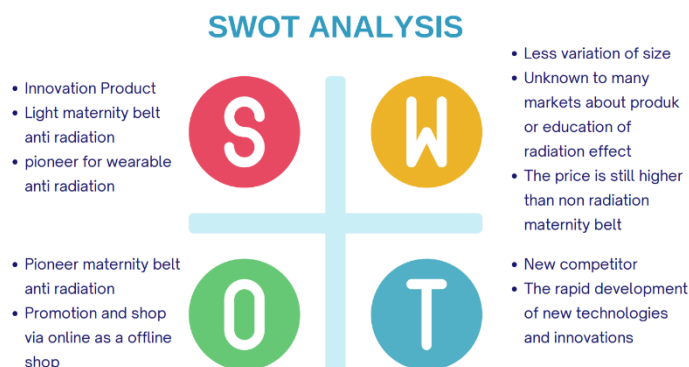
2.1 Conceptual framework

You can study conditions and scenarios using the framework below to integrate internal and external analyses and as a result identify the business environment. internal analysis using the marketing mix, STP, and UVP For external analysis, consumer and competitor analyses are also used. Given how the consumer is perceived in the interview survey responses, the analysis' conclusions are significant. The results are related to the root cause and provide further information about the underlying issue. The analysis is used to develop a SWOT from a single medical hypothesis. It will be easier to offer alternative techniques and advise product strategies based on these findings. In the end, the author uses a recommended an implementation plan is created based on the schedule for implementing the solution using a product strategy based on consumer choice to attack the problem from its source.



2.1.1 Business environment analysis

The first step is to observe the internal and external factors that affect the company's business processes. Internal analysis is done to determine the current situation industry and its surroundings. No presumptions should be made when analyzing the internal environment. One Medicalogy has defined a persona with the following traits: working mothers and women, doctors and college lectures who continually using electronic devices and gadgets such personal computer or laptops and smartphone for internal analysis of segmentation and external analysis for interview. And SWOT analysis is conducted to understand the character of One



Medicalogy. Analysis of Strength, Weakness, Opportunity and Threat is important to identify what trait needs developing and which traits needs repairing to be able to compete and maintain a strong presence in the market.

3. RESULT AND DISCUSSION

3.1 Business Sollution

The prototype of the anti-radiation maternity belt has an extra layer on the abdomen to shield the fetus from electromagnetic radiation produced by modern equipment. An anti-radiation fabric layer created by sewing together one of the inner sides of the inner fabric with a composition made of silver thread. In order to block electromagnetic radiation from penetrating, the anti-radiation fabric should be facing out. One of the other sides should be facing in so that it can make touch with the stomach skin. Here is a photo of the belly boost underwear and pregnancy belt's anti-radiation fabric.



After being wrapped in the anti-radiation fabric, the pregnancy belt product was tested for radiation exposure. Like in the technical drawing below, the anti-radiation layer is situated inside the maternity underwear belt. The radiation tester records a radiation number of zero when a prototype anti-radiation maternity belt is worn rather than the radiation number that was released at 410 n/vn. The anti-radiation maternity belt can therefore efficiently prevent the radiation emitted.



3.2 Alternative solution

Following the SWOT analysis completed in the previous chapter, the corporation can come up with a number of other product strategies based on consumer preferences as potential business solutions. The TOWS matrix can also be created using the SWOT component [6]. To solve a business issue in the medical industry, TOWS matrix is used to assist organizations in determining the best product strategy based on consumer preferences and understanding them. This section describes alternative tactics.



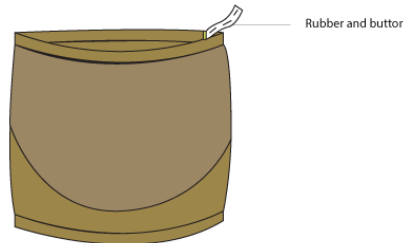
<p>Internal</p> <p>Eksternal</p>	<p>Strength</p> <p>1. Anti-radiation apparel products 2. The product design is thin and light so that it can be used anytime 3. Product innovation</p>	<p>Weakness</p> <p>1. Lack of size variation 2. The selling price is still expensive 3. Lack of education about the effects of radiation and maternity belt products</p>
<p>Opportunity</p> <p>1. Being a pioneer in Indonesia 2. Online sales feel offline</p>	<p>SO</p> <p>Internal SO 1: The next product development includes anti-radiation apparel for babies and children (S1,S2,S3,O1)</p> <p>External SO 2: Promotion using online shopping experience such as offline (S1,S2,S3,O2)</p>	<p>WO</p> <p>Internal WO 1: Develop color and style variations of the same type (W1,O1,O2)</p> <p>External (W3,W2,W4,O2) WO 2: Education through online platforms and collaboration with online clinics (Halodoc etc.) WO 3: Notify the increase in ADHD WO 4: Interaction between customers and products to determine demand and also introduce anti-radiation maternity belt products</p>
<p>Threat</p> <p>1. The emergence of similar competitors 2. Decreased customer interest 3. The development of innovation is so fast</p>	<p>ST</p> <p>Internal ST 1: Still a new product by ensuring protection for the fetus (S1,S2,S3,T1,T2)</p> <p>External ST 2: Update with technology and markets to ensure an efficient production process so that it is not easy to sample (S3,S1,S2,T1,T3)</p>	<p>WT</p> <p>Internal (W1,W2,W3,W4,T3,T1,T2) WT 1: Provide two kinds of technology material anti radiasi yaitu carbon dan silver WT 2: Simplified product line or play in quantity WT 3: Optimizing the online store WT 4: Advertisement dengan create video, content, picture dengan sosial media</p> <p>External (W3,T2) WT 2: Optimizing user experience in online shopping</p>

3.2 Proposed solution

3.2.1 Product

1. **WT 1 Should provide two kinds of anti-radiation materials that is carbon and silver.**
2. **ST 1 The anti-radiation layer will protect the fetus but the belts are new product unknown to the market.**
3. **SO 1 The next product line is to develop apparel for babies, toddlers and young children.**
4. **WO 1 To add style and color variations for both belly boost and integrated underwear maternity product lines.**

Since the material used in making anti-radiation maternity belts is thinner and lighter than that of the regular maternity belt, customers are happy because they can still wear a fashionable clothing over the belts they are wearing. They are not feeling a significant weight difference when they are wearing the belts. the customers also like the idea of adding new styles with different functionalities. Unfortunately, the prototypes are too small for one of the respondents so that definitely size variation will added accordingly. The following design and size will be added to answer the needs of the respondents. One Medicalogy will provide two different sizes, S/M and L/XL. Furthermore, the belly boost design will add rubber linings as well as two buttons, one at the top portion and another at bottom. If need adjusting one need to straighten or loosened by rubber lining and secure the new adjustment by locking the rubber to the buttons. In this way, one belly boost can be used flexibly during the pregnancy. On below, the picture of anti -radiation maternity belt with flexibility rubber.



3.2.2 Pricing

1. **WT 3 To streamline product creation and use two different anti-radiation technologies. Product quantity generation can also affect pricing.**

One medicalogy requires projecting production prices. Due to the current production price is still high so it affects the selling price. Based on the results of interviews with customers and competitor analysis, price is one of the considerations. To find out an effective way to reduce the selling price, that is by comparing the quantities of 1 pcs, 100 pcs and 1000 pcs.

3.2.3 Place

1. **WT 2 Improving customer experience while shopping only so as to create the environment of close to that of traditional stores.**

Creating online store with optimal user experience.

Almost all respondents who made an offline purchase felt that it was a better experience than making an online purchase. By immediately viewing, touching, and trying on a maternity belt, respondents can decide whether or not it is right for them. Online transactions, however, must be adhered to because to the epidemic. Given that exposure to the corona while pregnant is dangerous. Although there are numerous online stores that sell pregnancy belts, respondents feel that the information provided by the company is still insufficient, therefore they are still hesitant to make a purchase. To give customers the impression that they are buying in-person, one medical specialty must develop an online platform.

3.2.4 Promotion

1. **WT 2 interaction between customers and products to determine demand and also introduce anti-radiation maternity belt products**
2. **WO 2 Promotion using the online shopping experience is the same as the offline shopping experience.**
3. **Creating online store with optimal user experience.**

The advantage of traditional offline stores is that the customer can select the products by viewing, touching, and try them on before the customer purchase the products. Hence these traditional offline experiences need to be migrated to the online stores.

4. CONCLUSION

4.1 Designing Anti-Radiation Maternity Belts.

Designing is an idea framework that discusses concept design of a product. Based on the background and theoretical basis described earlier, the design themes in creating anti-radiation maternity belts are as follows:

1. To assist in reducing the risks of non-ionizing RF-EMF radiation by adding an anti-radiation layer in certain part of the regular maternity belt.
2. To assist in preventing disruptions caused by the RF-EMF radiation to the growth of the fetus that will cause ADHD disorder in later stage of its growth. The symptoms of the ADHD disorder can be seen between the age of five to seven years old.
3. To assist in designing products in accordance with customer wants and needs

The process of producing anti-radiation maternity belts starts with designing two types of belts such as belly boost and underwear types. Rigorous design process is conducted to provide a clear picture regarding the fabric and material choice, sizes, sewing techniques and other accessories to conform with the original product design concept of a comfortable, easy to wear maternity belts that provide the fetus within the belly of pregnant women excellent protection from harmful non-ionizing RF-EMF radiation.



4.2 Prototype

Having decide to design, develop and produce anti-radiation maternity belts, prototypes of the belts are created to test them to potential customers. Feedbacks from the respondents indicate that the belly boost type of maternity belt caught their attentions because of the easiness and comfort provided by the belly boost. One Medicalogy concludes the following in starting and developing its business.

4.3 Product Development

Having created the prototypes of the anti-radiation maternity belts, the belts will be developed as follows.

1. Two anti-radiation technologies will be used such as carbon yarn and silver yarn. Carbon yarn is a cheaper alternative to silver yarn. Using the carbon in developing the products will cut production cost to half as price for carbon is one half that of silver. The result is two different products that will have two different price structures.
2. Based on the price projections in previous chapter, the more the quantity, the cheaper the price. This will affect selling prices. Further price reduction can be obtained through the selection of material used, packaging and distribution types.

4.4 Marketing (cost and benefit)

One Medicalogy will use the Internet E-Commerce and social media platforms such as Instagram, Youtube and Tiktok. Several possible marketing and promotion efforts are live interaction between product and customers, providing education regarding the dangers of the radiation, providing enough information on features, functionalities and benefits of anti-radiation maternity belt product lines. Anti-radiation maternity belts offered by One Medicalogy will protects the fetus from harmful non-ionizing RF-EMF radiation. They will further prevents the generation of ADHD disorders at a later stage of its growth. ADHD symptoms usually appear in young children aged five to seven years old.

4.5 Implementation Plan Timeline

No.	Proposed Timeline	Action plan	Aug				Sept				Oct				November			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Validasi prototype produk belly boost and underwear maternity belt	Interview with 10 responden customer potential																
	Learning phase collection 1	Result interview analysis																
	production product for more variants of size MVP	Design product																
		Buy material for new product																
		Produce new varian size																
	Photoshoot	Making a content and models																
		Prototype produk																

4.7 Resource and Budgeting Required**4.7.1 Table cost production for 1 maternity belt anti radiation elektromagnetic**

Category	Price IDR	Qty	Total	Description
Material anti radiation	750.000/meter	0.5meter	325.000	/Meters
Material anti radiation	100.000/meter	0.75 meter	75.000	/Meters
maternity belt fabric	50.000	1	50.000	/Pcs
sewinng	15.000	1	15.000	/Pcs
Delivery material anti radiasi	900.000	0.5	450.000	/Meters
Total produksi			Rp915.000	

4.7.2 Table cost production for 100 pcs maternity belt anti radiation elektromagnetic

Category	Price	Qty	Total	Description
Material anti radiation	550.000/meter	50 meter	27.500.000	/Meters
maternity belt fabric	95.000/meter	0.75 meter	7.125.000	/Meters
sewinng	45.000	100	4.500.000	/Pcs
Packing	13.500	100	1.350.000	/Pcs
Delivery material anti radiation	5.000.000	/100 pcs	5.000.000	/Meters
Total			Rp45.475.000	

4.7.3 Table cost production for 1000 pcs maternity belt anti radiation elektromagnetic

No	Category	Price IDR	Qty	Total	Description
1.	Material anti radiation	350.000/meter	500 meter	175.000.000	/Meters
2.	maternity belt fabric	80.000/meter	0.75 meter	60.000.000	/Meters
3.	sewinng	30.000	1000	30.000.000	/Pcs
4.	Packing	9.000	1000	9.000.000	/Pcs
5.	Delivery material anti radiation	8.000.000	1000	8.000.000	/Meters
Total				Rp282.000.000	



4.7.4 Table cost promotion total one quarter

No	Action plan	Duration	Budget (IDR)	Total (IDR)	Description
1.	Video, photo dan content detail produk	16 weeks	250.000	4.000.000	16 weeks x 250.000
2.	Giveaway	7 times	100.000	700.000	7 times of 16 weeks
3.	E-commerce ads	3 times	50.000	150.000	3 times of 16 weeks
4.	Workshop	4 times	250.000	1.000.000	4 times of 16 weeks
5.	Instagram ads	16 weeks	1.400.000	5.600.000	Every week of 16 weeks
6.	Facebook ads	16 weeks	1.250.000	5.000.000	Every week of 16 weeks
Total				16.450.000	Total 16 weeks

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