



MARKET RESEARCH FOR NEW PRODUCT DEVELOPMENT

Case - Emfit Ltd

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Abstract <p>This Bachelor thesis was created for the purpose of giving Emit Ltd a better understanding of entering the US market with their new product idea. Emfit Ltd is a Finnish technology company that designs, manufactures, and distributes a wide range of sensor related products.</p> <p>This research is intended to give them insight to the road traffic data collection equipment market in the US. Do to the fact Emfit Ltd has little knowledge of the industry and market place, I was asked to perform a market study. The main focus of the study will detail the use of piezoelectric road sensors used in the United States, which is a similar product that Emit Ltd is in consideration of manufacturing.</p> <p>A majority of the research collected was by secondary research; it was collected through a variety of internet sites, online publications, US government statistics, and previously published surveys of the US Department of Transportation. Other research was conducted by questionnaire forms and phone calls to those whom closely work with these types of devices.</p> <p>This research can be used by Emfit Ltd to gain an understanding of future customers and their needs, competing product, product usage, product manufacturers, vendors, and distributors, product specifications needed to enter the US market, and more.</p>		
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1 NEW PRODUCT DEVELOPMENT RESEARCH-CASE EMFIT LTD

The purpose of this thesis is to give Emfit Ltd a better understanding of road traffic data collection equipment in the US market. Emfit Ltd is a sensor based technology company located in Vaajakoski, Finland, whom I am writing this thesis for. Emfit Ltd wishes to explore the possibility of creating a road traffic sensor as one of its new products for the US market.

This thesis will contain the theory of new product development, entering new markets, and market research along with my market research report that was created for Emfit Ltd. (see Appendix 1). I was able to take into consideration the said theoretical concepts and apply them to the research problems created by Emfit and myself for this particular project. With this research Emfit Ltd will have will gain the needed information to make a preliminary decision on weather to continue with this new product idea.

2 THEORETICAL FRAME WORK

The theoretical knowledge describe in this thesis is line with the market research report created for Emfit Ltd. I believe these ideas to be the most important tools for relating the practicality of my report along with the supporting theory to justify the actions taken for completing my research.

2.1 NEW PRODUCT DEVELOPMENT

Companies need to develop new products or improve existing ones if they wish to be successful in the future. When companies refuse to change the likelihood of seeing sales decline as well as competitors pass them by is

much greater. The process for new product development, or NPD, is important for many small companies so they can continue to grow and stay competitive.

During NPD products will go through eight stages and eventually will need to be replaced or updated. By applying these stages companies can get a firm grasp on what is needed in order to have success when creating new products. These stages are listed at Learnmarketing.net and are discussed in brief below. (LearnMarketing.net, 2008)

Stage 1: Idea generation

New product ideas must be created from somewhere. Where do organizations get their ideas for NPD? Some sources for new product can include the following:

- Within the company, i.e. employees
- Competitors.
- Customers
- Distributors, Supplies and others.

Stage 2: Idea Screening

These is where organizations will look closer at the ideas generated in Stage 1 and find ideas that are possible as well as removing poor or improbable ideas. It is important to take a thorough look because accepting improbable ideas can cost the company many resources.

Stage 3: Concept Development and Testing

When the organization believes they have discovered a possible product they should take the idea to the target audiences and ask some questions to gain a better understanding on how it will be viewed. The organization should ask questions such as. What do they think about the idea? Will it be practical and feasible? Will it offer the benefit that the organisation hopes it will? Or have they overlooked certain issues? This will help companies to clarify weather they have a good idea or not.

Stage 4: Marketing Strategy and Development

In this stage the organization will prepare a written marketing strategy to layout how the new product idea will be launched in the market. The proposed marketing strategy will consist of the organizations marketing mix strategy of the product, the segmentation, targeting and positioning strategy sales and profits that are expected.

Stage 5: Business Analysis

Will this new product be a good idea in the long run? So far the idea is possible and the strategy is feasible, but now it is time to look deeper into the cash flow the product could generate, what the cost will be, how much market shares the product may achieve and the expected life of the product.

Stage 6: Product Development

As we can see from the above steps it takes a long time before the organization can consider producing a prototype of the product. It can be costly to go through all the testing desired. This is why the steps listed previously are important and must always be considered first. Now the prototype can be presented to the target audience to see if there are any changes need to be made.

Stage 7: Test Marketing

Test marketing means testing the product within a specific area or segment. The product will be launched within a particular region so the marketing mix strategy can be monitored and if needed, be modified before national launch.

Stage 8: Commercialization

If the test marketing stage has been successful then the product is ready for launch. Some factors need to be taken into consideration before a product is launched. These factors include timing, how the product will be launched, where the product will be launched, will there be a national roll out or will it be region by region? (LearnMarketing.net, 2008)

In the example of our case company Emfit Ltd, we can see they are still in the early stages of new product development. They will need to understand more about the industry and market for their new product well before trying to manufacture the first prototype. It is a big decision to create a new product and enter a new market if you do not understand that market first.

2.2 ENTERING NEW MARKETS

Entering new markets is an important concept to understand, especially for Emfit who trying to do that. The ideas found here are at a high level of importance for Emfit as they choose weather to continue with the possible market entry process.

2.2.1 Decision Process for Entering New Markets

Mark Smock, President of Business Buyer Directory, explains a systematic analysis of 14 critical market segment attributes that should be considered before a company decides to enter a new market with an existing or new product. It is very import to take these attributes into account because attempting to enter a new market can take up valuable resources and time of the company. It will also have an impact on the future direction of the company. The costs of making a wrong decision could be devastating to companies so it is wise to study in depth the market before hand. (Smock, M.2006)

Mr. Smock lists his “14 Critical Market Segment Attributes” as follows.

1. The number of products/ services required to effectively compete
 - Ideally the more “full service” you can be, the greater your chances of success.
 - Most customers prefer complete solutions. If you do not provide this, they will have little reason to switch suppliers.

2. Capital required to effectively compete
 - Take into consideration all of your costs to enter a new market before you assume your revenues.
 - Sales projections are typically too high and cost estimates too low in new business ventures
3. Long term sales potential
 - New advances in technology make it harder to retain customers. In many markets customer needs are constantly changing.
4. Relative Profitability
 - Is return on investment greater via a new product or pursuing another market?
 - It usually cost more to pursue new customers in new markets than to grow profits from existing customers in existing markets.
5. Ease of product distribution
 - New markets are often best penetrated with non-traditional distribution/ sales representation.
 - Does this potential market “fit” with your current distribution structures?
6. Post sale service requirements
 - Product/ service information demands of new market customers can require more and new forms of post sale customer service.
 - Technical support for state-of-the-art product/ service offerings can be in limited supply and very costly, difficult to staff.
7. Degree of customer loyalty
 - Every market has a changing degree of customer loyalty depending on number and quality of competitive product/ service offerings.
 - Do key targeted users within the new market buy on product/service value or well-established relationships with existing suppliers?

8. Time required to get into the market
 - Product/ service “life cycles” in some industries last only a couple of months.
 - Your company may need to develop, test, certify and fill distribution channels in a short amount of time if it is a short life cycle product/ service.
9. Anticipated competitive response
 - New market entrants will face new competitive marketing tactics when entering new markets. Established suppliers will try and retain their existing market share.
 - Will the existing pricing levels remain once you have entered the market?
 - How will market pricing degradation affect your margins and ROI?
10. Number of viable competitors
 - If there are only a few number of competitors participating within the targeted market, it may justify your market entry.
 - Sometimes it is less expensive to acquire an existing, resource limited, market participant than try to take market share with a new approach.
11. Ability to maintain a technical advantage
 - Can you protect your technology within the time frame required to cover your new market entry investment?
 - Maintaining technical advantages requires quality, technical talent. If your current technical staff is over burdened or limited you will have more challenges when trying to compete.
12. Fit with existing company resources
 - Can your company handle the financial, emotional and physical changes required to effectively compete in the new market?
 - New markets often require new, certainly more, talent and personnel.

13. Fit with established customer perceptions
 - How will your existing customers be affected by your pursuit of a new market and new customer base, will they get less attention?
 - It is needed to define and evaluate your existing customer's perceptions of all your major strategic moves.
14. Financial status of key targeted customers and market share mix
 - Are key targeted customers financially stable?
 - Is there a diverse mix of new market participant market shares?

Mr. Smock (2006) also states "The justification of entry into a new market segment involves effectively identifying viable competitors, relevant target market attributes, competitor and key customer market shares while correctly defining your company's current financial, technical and human resources." (Op. cit. 2006) With the results from my market research report Emfit Ltd will be able to look closer at some of these attributes and be able to answer the questions more effectively.

The 14 market attributes check list is more of a thought process than something you can measure. It is a good way to come to an initial "pass or fail" decision on whether to proceed with market entry efforts or strategies. At the current stages Emfit Ltd is at with its product development this will be an important tool.

2.2.2 Growing Your Sales in New Markets

Many companies consider expanding their sales into new geographic markets. This can provide an excellent opportunity to extend existing customer bases and increase revenue. However, it can be very difficult for many companies to be successful when taking their new or existing products abroad. There are several obstacles to success when entering new geographic markets, including little or no market knowledge, language

barriers, and no established presence or regional client references.
(English, D.2002)

In an article written in *The Journal of New England Technology*, David English states “When entering new markets, there are two alternatives as it relates to your sales organization: Build it from the ground up or outsource it to a third party. Regardless of your choice, make sure you are focused on developing qualified sales and marketing leads, while creating brand awareness as well”. (Op. cit.2002)

It is important for companies to find a good outsourcing partner to provide valuable assistance when penetrating new markets. An outsourcing partner will be more efficient and effective at getting you product to market because they may have much needed expertise in the industry and a wide network across industry sectors and geographic locations. This may be a better option than to build your sales organization from the ground up

It is also true that significant amount of financial and human resources is needed to begin sales abroad or start a marketing campaign, including valuable and insightful market research. In the article by David English (2002) he continues to explain “success factors” that need consideration when attempting to enter new geographic markets.

Success factors for entering new markets are as follows:

1. Prior experience

Do you have a background in the new market that you are targeting? An internal sales candidate or outsourcing firm should have a history of implementing successful campaigns in that market. They should also be able to offer client references and case studies that prove they have had successful campaigns. It is important that organizations ask to see these

credentials and choose a partner with a good track record in generating leads for a particular market sector or type of product.

2. Multilingual staff

Language barriers and cultural differences can make it difficult for a company to develop a relationship with an overseas client. No amount of training can compete with real-life experience; it is wise to hire native speakers with extensive sales experience from different countries when possible.

This is a valuable resource when it comes to understanding the cultural norms of different countries and overcoming communications challenges you may be faced with. Companies should ensure that their sales force has the necessary language capabilities to deliver their message, generate product or brand awareness, and conduct high-level business negotiations with potential prospects.

3. Local market knowledge

Experience is important to the success of any campaign. Poor positioning, unclear campaign objectives, and limited cultural understanding can all slow down or damage the progress of an international sales or direct marketing campaign. It is important to assess the demand for your particular product or service and whether there are many competitors in this particular market space.

4. Industry knowledge

It is also important that your sales team have an understanding of the industry in which your business competes, they should hold a strong awareness of the products and services your company offers.

Businesses that decide to extend their geographical reach should think carefully about the process. The tips mentioned above should help any organization to maximize the effectiveness of such a project. (Op. cit.2002)

2.3 MARKETING RESEARCH

To give an understanding of how and why I choose to conduct my research the way I did I have include this section on marketing research. This section gives insight to research process and why it is important. The section on market analysis is also needed to describe my thought process before and during the creation of the market research report for Emfit Ltd.

2.3.1 Importance of Marketing Research

Research is the process of gathering information to learn about something that is not fully known, but also is used for making important decisions. If the research is done well it can gives good insight to what is going on in the market or what might occur in the future. It could may give options or lead to the discovery of new products or even entering new markets.

According to KnowThis.com “Marketing research can be viewed as the foundation of marketing. Just as a well-built house requires a strong foundation to remain sturdy, marketing decisions need the support of research in order to be viewed favorably by customers and to stand up to competition and other external pressures.” (KnowThis.com 2008)

When talking about marketing research it is important not to confuse it with market research. Market research is research into a specified market. It is not as wide of a concept as marketing research is. Marketing research is much broader. It includes market research, and much more. The American Marketing Association defines marketing research as:

"Marketing research is the function that links the consumer, customer, and public to the marketer through information - information used to identify and define marketing opportunities and

problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the methods for collecting information, manages and implements the data collection process, analyzes, and communicates the findings and their implications." (Marketing Teacher.com 2008)

When attempting to gather marketing research you must go through a series of steps that are found in the marketing research process. The first step is to define your problem. This should be about the information you need. Once you develop the problem of your research, it then becomes the focus point of the process.

After the problem is defined you must plan how you collect the data you need. There are two main sources of data, which are secondary and primary sources. Secondary research, or desktop research, is data that has already been collected for another purpose. Primary research is needs to be made from scratch. It can be created in a unique way that is constructed to fit your research problem. The third step in the research process is selecting the sampling method; some examples you can use are random samples, stratified samples, cluster samples. In the fourth step we must decide how we will analyze the data collected. You will need to know the degree of accuracy desired for your results before this can happen. Sometimes this may require complicated software.

Now that the decisions involving data have been made you can set the timeframe needed along with your budget. The sixth step is go back to the person requesting the research and make sure you agree on the focus and problem of the research. Once this is done you can start collecting the data, which is step number seven. Step eight requires you to analyze the data. After you have analyzed it, check it for errors. It is common to find small errors but these can have major effects on the accuracy and

interpretation of the results. The final step is to write the report. This should give an answer to the original problem. It is important that you keep in mind the focus of the problem throughout the research process. By doing this it will keep you on the right path and assist you when you have questions concerning what is to be done next. (Marketing Teacher.com 2008)

2.3.2 Market Analysis

Market analysis is used to determine how attractive a market is and to understand possible opportunities and threats a company has compared to its own strengths and weaknesses. When conducting a market analysis you should consider these ideas as important dimensions to your research; market size, market growth rate, market profitability, industry cost structure, distribution channels, market trends, and key success factors. Each of these will be important for Emfit's consideration of new product development. These dimensions are explained briefly below. (Op. cit. 2008)

Market size

This can be determined by current sales and potential sales of the product are expanded or weakening in the future. It is not always possible find all existing market size data but there are a variety of sources available including; government data, trade associations, customer surveys, and the financial data from major players currently serving the market.

Market Growth

One way to examine or predict market growth is to study past data. This will give you a starting point or a frame of reference that you can use to compare to other growth drivers both present and future. Growth drivers such as demographic information and sales growth of competing products can give you a wider perspective than just simply using past data. Another tool is to study the past adoption rate of a competing product. Eventually

the product will reach the maturity or decline phase. Some ways of indicating this decline phase are price pressure caused by competition, a decrease in brand loyalty, the entrance of substitute products, market saturation, and a lack of future growth drivers.

Industry Cost Structure

This will be valuable in finding key success factors and help to determine where value might be added to give your product or service the needed cost advantage to compete in the market place. Cost advantage can be created both by value added activities in the value chain or by differentiating the product in line with your core competencies better than the competition does.

Distribution Channel

There are a few aspects in the distribution system that can be related to market research. The existing distribution channels can be a link to how direct they are to the customer. Emerging trends and channels can be developed or used; this can give a company a competitive advantage. The channel power structure is also an important aspect to consider because it may have a direct impact on capturing better cost margins.

Market Trends

Having an understanding of possible changes in the market can give insight into both new opportunities and possible threats. There are several trends in industry dependent some of them include changes in price sensitivity, demand for variety, and the need for support or service with the product.

Key Success Factors

These are the elements needed by firms to reach its marketing objectives. These factors can change over time during the product life cycle stages. Some common examples are access to important resources, achieving economies of scale, access to distribution channels, and technology progress. (Op. cit. 2008)

3 FOCUS OF PRACTICAL RESEARCH REPORT

As stated in the introduction Emfit Ltd has an interest in manufacturing piezoelectric road sensors for traffic data collection purposes. Prior to this thesis Emfit Ltd had very limited knowledge of the road traffic data collection equipment industry. In order to gain an understanding of the market and the industry I was asked to create a market research report (as part of my thesis). The aim of this report is give support to the company by give the information needed to make preliminary decisions prior to manufacturing the product.

The process began by discussing with the Heiki Räisänen, CEO of Emit Ltd, the important information he need to make a decision on weather or not to consider manufacturing this devise for the US market. The research problem started out very vague but after some time we were able to narrow the focus of this research into smaller questions (or problems). This initial research report will attempt to answer the following questions.

1. Background of road traffic data collection.
2. Who are the customers? How often do the buy, at what price?
3. Who are the possible competitors?
4. Competing products? Types of devises and how/why they are used.

5. Cost comparisons between similar products?
6. Who are the suppliers, vendors, and other manufacturers?
7. What issues are dealing with technology and specification lists?
8. What are the future trends for the industry and for this specific type of device?

The research report can be found in Appendix I, it will be kept separate from the main thesis because it is now private information that belongs to Emfit Ltd.

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APPENDICES

Appendix 1. Road Traffic Data Collection Equipment:

-EMFIT MARKET RESEARCH REPORT

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