

LAUNCHING EFFORTS NEEDED FOR A HIGH-TECH PRODUCT

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Abstract:

This paper aims the difficult problem of creating new product concepts in the area of high-technology and innovation. Because of scientific discoveries and impressive development of technology, many companies compete for market supremacy on the technological innovations market. In a global market, which is currently in an economic and financial crisis, consumers make a new hierarchy of priorities in terms of expenditure and consumption. Therefore, companies that create new products must be very careful about 2 aspects, so the new product may not become a failure: the products positioning on the market and the target group which they address to. This paper belongs to the marketing area by bringing into discussion theoretical concepts, by analyzing the stages crossed by a company in the process of launching a new high-tech product and crossing the abyss in the product adoption process by consumers.

Key words: high-tech product, product adoption process, launching process, product lifecycle, innovators, PC tablet

Introduction

This paper aims to approach in a theoretically and practically manner the main aspects of launching a new high-tech product. There will be analyzed one by one all the stages of the launching process of a new product, taking as example an Apple product: the iPad. Throughout the paper there will be used theoretical concepts from the marketing literature and for illustrating the examples there will be used marketing research results conducted by specialized companies and personal secondary data processing. The issue of launching a new product is particularly complex in the field of high technology products because the pace of innovation is developing very rapidly and the competition between producers is very serious.

Some innovations are short-lived, while others are able to generate new industries. In a top of the most important

innovations of the past 30 years, made by Knowledge @ Wharton magazine (www.wall-street.ro), are included many products or services using advanced technology: the Internet, laptop, mobile telephony, fiber optics, digital photo or ATM. Industries with "advanced technology" use intensively research and development and apply systematically scientific concepts and technical knowledge (ro.wikipedia.org).

Creating a new high-tech product involves considerable materials efforts, human and time efforts, and very through research and studies. The market often reacts in an unexpected way regarding the product. Finally, consumers decide if the product is a success or a failure.

For a new product to be successful, its necessity, quality and value must be recognized by the consumer, meaning to be tested, accepted and bought in a repeated way

(Florescu, Mălcomete, Pop, 2003, pp.564).

The concept of "new product" has several meanings (Pride, Ferell, 1993):

In terms of marketing, the new product is that product which is launched on the market at one moment and finds no equivalent in the existing supply;

From the consumer point of view, the new product is one that has the potential to satisfy a new need or an existing one.

From the company point of view, the new product is any product assimilated into production for the first time by the company.

There are some assumptions from which the producer is tempted to start in creating and launching a new product: a strong brand sells everything; a new product will be sold because of consumer curiosity, a high price is a guarantee of quality for the new product; a strong promotional campaign will convince a significant number of consumers to purchase the product; some consumers will be unsatisfied, so the company should not change the vision and strategy; the product can be improved over time following the users opinions.

The American company Apple is a good example of high technology products manufacturer with a strong name in the world, with effective market strategies. Apple has managed to conquer the market based on both user-friendly design, as well as strong brand.

The brand Apple offers high quality products built using an innovative technology that stores a great creativity, imagination and a specific design. The company tries products that could become benchmarks in the sector.

The transition of high-tech product from the early market to the mature market

The most dangerous point in the development of high technology markets is marked by the transition from

an early market dominated by a few visionary customers to a mature market dominated by a massive block of customers whose orientation is prevalent pragmatic. The distance between these two markets, until now ignored, is enough significant to be called a gulf, and crossing this gulf must be the main focus point of any marketing plan regarding the high technologies on long term.

Each high-tech product truly innovative starts as a fad - something apparently without market value or purpose, but with some great features which generate much enthusiasm in a group of "knowledgeable". This is an early market (Moore, 2009). Such a market has, at this moment, the Apple iPad.

iPad is a brand of a small portable computer (about 24.3 to 19 cm, 1.4 cm thick, weight 680 grams to the model "Wi-Fi") produced and sold by Apple company since April 2010. iPad has been called "a toy for media consumers - in whatever form."

The period next to the creation of early market is when the rest of world wait to see if something can be done of this product; it is "the abyss" or "gulf." If it is discovered a valuable offer that can be predictably given to a target group of customers at a reasonable price, then a new main market is made.

Consumer attitude towards the adoption of technology becomes important - whenever products are requiring a change in the current mode of behavior or a change of other products and services that they base on. Such products, sensitive to changes, are disruptive innovations. The other concept, the "continuous" innovation refers to the normal process of improving a product that does not require a change in behavior.

Apple iPad can be considered a "continuous" innovation. Its main advantages are: small size, good quality of images on screen, many possibilities for connecting to networks, long period

of independence with a single battery charge. The 3G model (more expensive) provides wireless connectivity to the Internet from any place where there are mobile-cellular network with the necessary services.

Specific attributes for the adoption process of high-tech products

The process of adopting the new product is the mental process by which a person passes from finding about the existence of an innovation to its final adoption (Lester et al. 2006, pp.445). This process involves several successive stages: identification of new products on the market, development of the interest for the new product, evaluation of the new product, selection and effective adoption.

High-tech industry needed a model which effectively copes with a new mode of product introduction. Technology is absorbed in any given community in stages corresponding to the psychological and social profiles of various segments within that community. The innovators approval is an important tool for developing a credible launching basis for approaching the early adopters. A revised version of the technology adoption process involves a space between each two psychographic groups. This distance represent the separation of the two groups - namely the extent to which any group would have difficulty accepting a new product if it is presented in the same way as to the previous group.

The real "gulf" occurs between the early adopters and the early majority. The early adopter expects to obtain a substantial advantage over the competition. By contrast, early majority wants to buy a productivity improvement for existing operations. They want a technology which enhance, not replace, the current mode in which they conduct business. The initial set of customers for

a new technological product consists primarily of innovators and early adopters. In the high technology sector, innovators are better known as "technics" or "technology enthusiasts", while early adopters are the "seers".

Typically, the first to adopt new technology are those who appreciate the technology itself. They are the first who appreciate the architecture of the new product and realize why it has a competitive advantage over comparable products already existing on the market.

Reactions generated by the launching process of a high-tech product

Differences between the perception of the concept and the new product

During the new product development there are three types of testing: the concept, the product and the market, to obtaining accurate information (Doyle and Stern, 2006). The confidence in test results increases with the transition from one test to another.

Retrevo Company conducted a study that examined the reactions of users before and after launching the iPad and the results indicated a decrease in purchase intent after the product launch. The survey was applied to a sample of 1000 people in the U.S. In a first phase of the study, 52% of respondents hadn't heard about the iPad. In the second phase of the survey, applied immediately after the launch of the iPad, the percentage of those who had never heard of this product has fallen to 18%. The third phase of the survey was carried out immediately after launch.

Figure 1 shows the modification in time of the respondents' buying intentions. As the product becomes available, customers are forming a negative opinion and do not want to buy it.

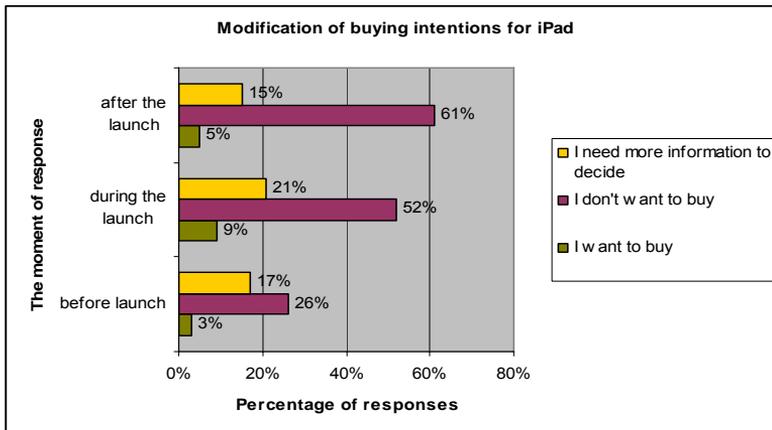


Figure 1. The modification of buying intentions for iPad in USA
Source: Own calculations

Another survey was conducted by YouGov and involved an intercultural approach, because it was applied after iPad launch in several countries: United Kingdom (on a sample of 2047 respondents), Germany (1054 respondents), USA (1000 respondents), Denmark (503 respondents) and the Middle East (Saudi Arabia, Qatar, Bahrain, Kuwait and United Arab Emirates - a total of 2252 respondents).

In Figure 2 it can be observed in what proportions was taken interest in purchasing an iPad in the concerned countries. The most interested in iPad seemed to be the Arabs, while Americans and Europeans adopted a somewhat reluctant attitude. 58% of consumers in the Middle East said they would buy an iPad; by comparison, only 17% said the same thing in Germany, 13% in the U.S. and only 7% in Denmark and Great Britain.

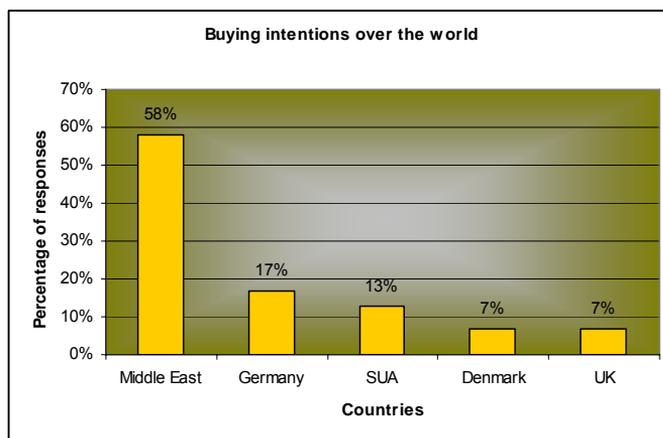


Figure 2. The expression of buying intentions in the concerned countries
Source: Own calculations

By ignorance, consumers have made a major confusion about the use of iPad and overestimated its features:

in the Middle East, 59% of consumers believed that iPad can function as a mobile phone and 59% believed that it

has a webcam. In comparison, 37% of respondents in Germany and UK, 36% U.S. and 40% of Denmark believed that the iPad can function as a mobile.

Consumers were willing to pay different prices for Apple Tablet PC. Thus, in UK, Denmark and Germany, users would be paid between 410 and 630 dollars for an iPad, while U.S. respondents were willing to pay between 300-400 dollars, and the Middle East, between 160-320 dollars.

The importance of specialists' evaluation of high-tech product

In business, technology enthusiasts are the opening door people to any new technology. They are the most interested in learning about it and they are for everyone else the people who have the power to make the first assessment. They also want to be the first to receive the new material. So, they can make very good comments very early in the design cycle.

In most cases, innovators don't have a strong position to dictate the purchasing decisions of others and they aren't a significant market. But instead, they are one extremity of the bridge, the original source of references for the product or service and a testing framework for the introduction of modifications to the product or service.

Apple has always tried to make his first priority the concept of "user experience". Thus, in March 2010, before the appearance of iPad in stores, a group of journalists from major newspapers in the U.S. have tested the new product, then wrote a review based on their opinions. Initial evaluations of the iPad were less favorable, based only on information given by the company, not by testing. Then, four days before the official launch, in the media appeared the reviews of the first users from magazines like: The Wall Street Journal, The New York Times, Chicago Sun Times, USA Today, PCMAG.com. So the iPad was called: "a pure innovation - one of the best

computers of all time", "a winner" or in contradiction "an expensive niche product that is between laptop and smartphone, but that does not meet the need either for one nor the other."

Although not intended for complicated operations, iPad is, in the view of analysts, perfect for entertaining. It is considered more suitable for home users, not for business applications.

Potential problems with high-tech product launch

The company which developed a new product must first decide when the best moment for launching it. Then the company must decide where the new product will be launched: in one city, in a region, on the national or international market. Only few companies have the capital and capacity needed to launch new products in national or international distribution (Kotler, 2004, pp.473). Product development entails certain risks. No matter how well the marketing researches are conducted, new products fail with depressing regularity. The risks that can arise are related to the market, to the technology involved or related to the strategy (Blythe, 2003, pp.156).

Production problems

Apple has announced an initial launch date worldwide in March, but then was postponed by one month (April 3) and the new date concerned only the U.S. market. No explanations were given concerning the launching postpones. According to some analysts, there was a production problem of the mobile device.

Regarding the consumer segment, the decision to postpone the first deliveries of Apple's Tablet PC outside the U.S. was a reason of displeasure for who wanted the new gadget, but turned into a business for speculators on the Internet. So-called resellers, who buy massive product opportunistic and sell them on the Internet at greatly

increased prices to customers who, for one reason or another, have no direct access to them, began to supplement the price of iPad with over 500 dollars on sites as Craigslist or eBay (source: Reuters). Speculators have oriented to customers in the United States, faced with the lack of products in stores.

The product was available in a first phase, besides the U.S., in Australia, Canada, France, Germany, Italy, Japan, Spain, Switzerland and the United Kingdom at the end of April 2010.

Then, from 19 July 2010, the iPad has become available in another nine countries: Austria, Belgium, Hong Kong, Ireland, Luxembourg, Mexico, Netherlands, New Zealand and Singapore.

Originality problems

French-Italian STMicroelectronics group holds in the European Union since 2001 the trademark "IPAD".

The name "iPad" might trigger a dispute between Apple and the Japanese group Fujitsu, which in 2003 filed an application for registration of the mark in the Patent and Trademarks Office in the United States. Fujitsu iPad is a terminal used in retail.

Shenzhen Great Loong Brother Chinese company claims that the device produced by them, P88, very similar to Apple iPad is, in fact, the original from which American company inspired. If Apple will enter the Chinese market with iPad, it will be sued by the Chinese company, since it would affect its sales.

Concerns about the choice of target market

Apple has built around its product (whether it is a MacBook, an iPod or iPhone) features and high-tech applications that provide users real experiences. iPad is an alternative positioned premium on netbooks, as the MacBook's are alternatives positioned premium to PCs. If the iBooks will be a

competitive store, it's possible that iPad becomes a competitor in e-readers.

Apple's innovation comes more from positioning than from technologies or functions of the iPad. iPad is a product of "style, elegant but not necessarily efficient, with a higher price. Those who will buy it are, on the one hand, those who rely on personal branding and differentiation and early adopters who are able and willing to embrace a new product for mobile computing.

Despite the high price, those who have an iPhone is likely to choose an iPad because they were familiar with the functionality of the IOS operating system from Apple.

In a study conducted by MyType (www.laptopnews.ro) on iPad users, was taken into account the psychographic dimensions, too. The research was conducted on a sample of 20,000 people aged between 13 and 49 years, from the United States. According to the results, the users who have an iPad are very educated, rich and sophisticated and they cherish the power and personal success much more than other people.

What counts for real is the fact that the decision to buy a tablet, a phone or other gadget is individual and stays individual.

Market adjustment to the new high-tech product

Inside the market there is always a group of innovative companies which, through creative ideas, find a use for the new products.

Conde Nast Media Group, publisher of Wired magazine, GQ, Vanity Fair, The New Yorker and Glamour, made versions that can be read on the iPad. Low cost airline Jetstar in Australia will provide customers iPad tablet loaded with music, movies, books and games. Using the tablet in flight costs \$ 10. The tablets will be found for the beginning only on domestic flights that lasts longer

than one hour and each plane will have 30 tablets.

In the Italian restaurant Il Marchesino, iPad's are used as a hi-tech menu, used by clients to see pictures of food, nutritional value, calories and other useful information relating to the served food (source: Italy-ru.). If one customer has an allergy to one of the ingredients, the menu gives it an alternative ingredient. The electronic menu is bilingual, being available in Italian and English.

The market evolution of a high-tech product

After launching the iPad, the competitors weren't long in coming to

the market. Having already a benchmark and a model, profile companies have embarked to create PC tablets with better features or lower prices. Tablets provide a balance in form and function. The integration of wireless connectivity in each tablet is a reference transformation, redefining the use of the device. Enhancements such as touch screen, energy management and storage make the tablet a complete device.

As it can be seen in table 1, in the eight months since the launch of iPad, the competition reacted and the most powerful companies launched the PC tablets.

Table 1

The PC tablets launched after iPad

PC Tablets	June	July	August	September	October
Cisco Cius	X				
Samsung Galaxy Tab			X		
Dell Streak			X		
Fujitsu LifeBook			X		
HP Slate 500					X
Toshiba Folio 100					X

Source: Own calculations

India, known for its results in high-technology area, responded in July 2010 revealing a prototype of a tablet, the cheapest in the world at this moment that cost \$ 35. The tablet, which uses solar power, is the result of the work of the Indian Institute of Technology and was designed to be the cheapest computer that can be distributed and very easy to use. It is the first part of youth education program in India using technology and the Internet.

Another prototype of PC tablet, Sahara TufTab, was designed

specifically by Tablet Kiosk for use in harsh conditions. The product face the dust, water, temperature and humidity or not very strong shocks, and is suitable for use in industry, agriculture, exploration, etc.

So far, Apple has sold 8.5 million iPads worldwide. In the first 80 days from launch, were already sold 3 million units, and at the end of third quarter of 2010, 4.5 million units were sold. In figure 3, we can see the evolution of iPad sales (in units) until this now, and the prediction for 2011.

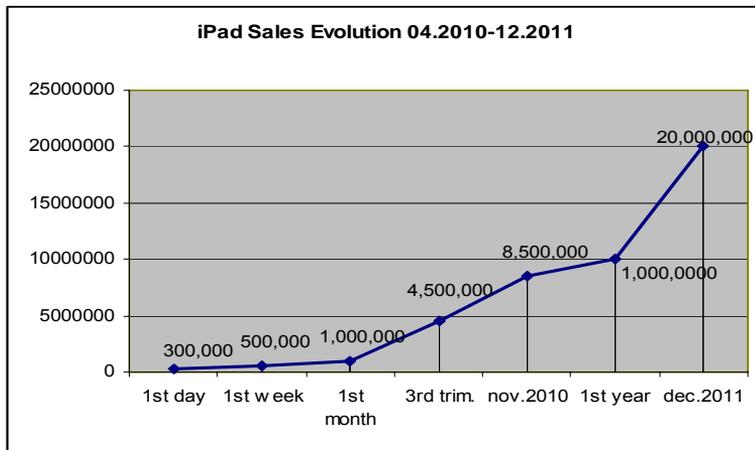


Fig.3. iPad sales evolution in the period 04.2010-12.2011
Source: Own calculations

In October 2010, VoucherCodes conducted a survey among 3000 respondents from UK in respect of "the war of PC Tablet" and the general market situation and consumer views. From the research it was found that companies that have the greatest chance to bring an iPad rival, according to respondents, are Dell and RIM. Samsung followed close, according to Figure 4.

The price represents a very important element when it comes to buy a PC tablet, especially for women. Men are interested in technical specifications and features. Moreover, in terms of price, if a competitor comes up with a cheaper PC Tablet than iPad, the market will definitely react to change: for a reduction of \$ 160, over 30% of the market will abandon the iPad.

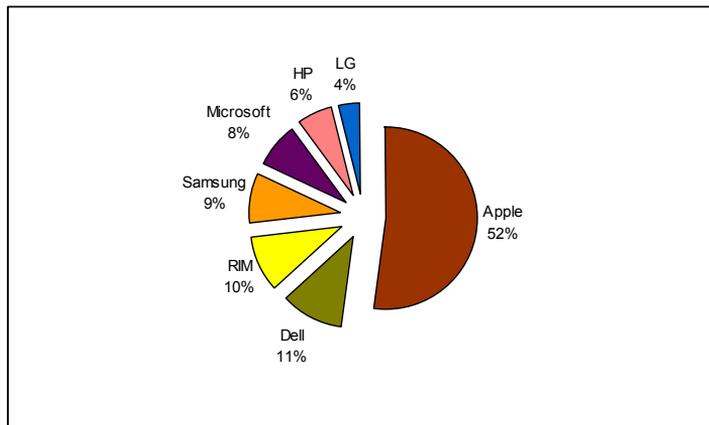


Figure 4. The most preferred brands by the consumers
Source: Own calculations

The factors that lead women to buy iPad are in order of importance: price, usability, quality, size, design, confidence in the manufacturer, the number of applications. For men, the

situation is as follows: quality, ease of use, price, design, dimensions, confidence in the manufacturer, and the number of applications.

Conclusions

The rapid changes of the technological environment, with implications in reducing the period of developing products and in shortening their life cycle is why high-tech industry companies must focus on improving and creating new products.

Companies should make efforts to create innovations developing ideas, products or technologies perceived as novelties. Leading and organizing activities related to the assimilation of high-tech products are complex processes. For the company, the main advantages of introducing a new product are: winning new customers, obtaining competitive advantage, image building, revenue growth, broadening the product mix, etc.

According to a survey realised by Strategy Analytics, iPad held in the third quarter of 2010 (July-September), 95.5% of the total market for PC Tablets. The year 2011 will show if the iPad will be receive the mature market. To prove its capabilities, iPad will also have to be included into everyday objects and be used primarily as an auxiliary tool for daily tasks: email, web browsing, text editing, sketches and notes.

To do this, Apple should make efforts to correct some issues, as: Wi-Fi connection problems and over-heating components. These would be issues that require immediate solution.

On the other hand, companies must show a permanent care for the launched products and they should improve them for resisting on the market. Being attentive to the demands

of consumers, manufacturers can transform the products on time avoiding the failure.

For example, Apple needs to come up with an improved version of the iPad. The main disadvantages of the current version are: lack of support for simultaneous execution of multiple applications, the lack of support for videos. The "Wi-Fi" model can not be used as a normal mobile phone, it doesn't have a camera or webcam. It has no screen with 16:9 ratio. It has no USB and FireWire interfaces, and no video output.

iPad is a step in Apple's growth trend in the use of mobile devices. In 2009, the only laptops that have increased sales were netbooks, and the proportion of smartphones users is growing in a market that is already intense combat, and where the use of information and the use of mobile applications followed the same ascending evolution.

Positioning iPad is between netbook and smartphone, so that the launch of the Apple gadget will not reinvent necessarily, the PC industry, but will influence the direction of development of a demand which is clearly manifested.

High-tech industry is a prolific environment for creating and launching new products. The competition on the market and the technological opportunities leads to amazing inventions and innovations. But manufacturers should not neglect the fact that their products must always bring a real benefit to consumers, so they can accept these products.

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