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SUCCESSFUL PRODUCT LAUNCH IN COMPANY X:  
A STUDY IN PRACTICE

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# SUCCESSFUL PRODUCT LAUNCH IN COMPANY X: A STUDY IN PRACTICE

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The purpose of this thesis was to study processes of a product launch in a company that markets and sells computer displays worldwide. A new product that has not yet entered the stage of mass-production at the time of the thesis writing, was chosen for this study. Because of the product's unique features and absence of direct competitors, it creates a new market niche. However, it has not been without challenges for the company.

The author has set a goal to learn from this example, analyze product and marketing decisions that have been made and define a framework for a successful product launch in future.

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# 1 INTRODUCTION

## 1.1 Case Company

In 2005, one of the largest multinational manufacturers of monitors and LCD TV's with headquarters in Hong Kong, acquired rights to manufacture monitors under a well-known brand. The manufacturer has five factories in China, two in Brazil, one in Poland and one in Russia and sells its products worldwide. In 2008, the two companies reached a brand-licensing agreement for IT displays and public signage. As a result of the agreement, a marketing company X was founded in 2009. The company is headquartered in Amsterdam and has exclusive rights to market and sell monitors.

Company X operates in Europe, CIS, MEA and African markets. Through its network of local sales teams it works with all major IT distributors and resellers. The company's design and development center is located in Taiwan.

## 1.2 Methodology

The author decided to use the viewpoint of an active observer mainly because of working practice for the case company. Primary qualitative and secondary quantitative data sources will be used to answer the main research question: "What are the factors that influence product launch in consumer electronics market?"

The following problems will also be discussed:

- What are the strategic and tactical decisions the company has to make to launch a product and why?
- How will the market environment affect success of the product?
- How will the product be positioned on the market?

Quantitative data will be collected using previous case studies that analyze product launch success rate. Company profiles, scientific papers, whitepapers and independent research studies will be critically analyzed to search for non-biased data. Inter-

views and questionnaires with company employees will be conducted to get an “insider’s view” on the problem and learn from their experience.

The thesis will examine a set of research questions using case study and action research approaches. Case study approach is particularly useful when answering questions like “why?”, “how”, “what?” It is a strategy which involves investigation of a contemporary phenomenon using multiple sources of evidence. The researcher has little control over events. (Yin 2009, 8-11)

## 2 QUANTUM DOT TECHNOLOGY

### 2.1 QD Vision

Founded in 2004, QD Vision has raised more than \$75 million in financing from top-tier venture capital firms and is headquartered in Lexington, Massachusetts. The company has announced plans to expand their sales and marketing departments, they forecast a rapid expansion of this technology. Color IQ technology is targeted mostly at TV’s, monitors, smartphones and other mobile displays. The company is partnering up with major LED display manufacturers to achieve 100% of NTSC color and since 2013, over one million Color IQ optic materials have been shipped. Products with Color IQ technology are available in China, Japan and Europe. (Website of QD Vision)

QD Vision is collaborating with the case company to produce the first of its kind quantum dot (further QD) computer monitor.

Only semiconductors made from heavy metals are suitable for producing QDs. Cadmium is restricted in Europe and is managed by the EU Commission, as even small quantities are harmful to human health. To use it, companies have to apply for an exemption granted by the EU Commission. (European Commission 2015)

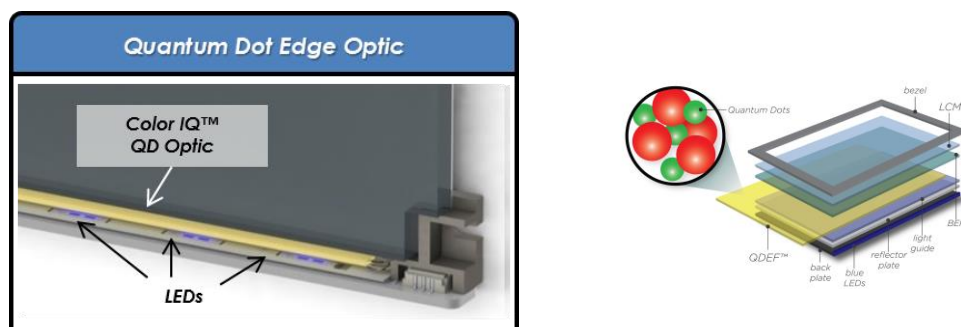
QD Vision claims that cadmium is the only material that can achieve the highest energy efficiency, color quality and are the most reliable. (Coe-Sullivan 2012, 5-6) The benefit of it is that while using cadmium more, overall content of it in the world will be reduced and QD-based displays have lower power consumption. The recent EU decision has strengthened QD Vision's position on the market and allowed to research and produce QD's without any prohibitions until 30 June 2018. (European Commission 2015)

## 2.2 Quantum Dots

Quantum dots have been discovered simultaneously in the US and Russia almost 30 years ago and until recently, were used mostly in domain of solid state physics. However, the situation has changed with the new, less expensive ways of production. Colloidal QDs have wider applications and are available for a broad range of markets. (BCC Research 2014) While nanotechnology is being used in a variety of commercial applications such as biology and biomedicine; computing and memory; electronics and displays; optoelectronic devices and LEDs; lighting and lasers, a continued R&D is required to further commercialize any new technology. (National Nanotechnology Initiative 2014, 25-28)

There are 2 ways of applying QDs on a screen. They can be edge-lit with no local dimming called edge-optic, which are mounted just above the LEDs behind the bezel. This way a long, slim glass tube filled with QDs matrix is mounted next to a plastic light-guide plate. The second way is to use a QD enhancement film (QDEF) and mount them just above the backlight. (Zhenyue Luo, Yuan Chen 2013, 9)

Figure 2: Edge-lit QD optic compared to Backlit enhancement film



The technology promises to offer something better and much cheaper than OLED (Organic Light-Emitting Diode), which requires a lot of investment in research and production. While there have been releases mostly in China, Japan and Korea, many European vendors are testing the market too. (Optics.org)

### 2.3 Principles of Work

Quantum Dots are light-emitting nanocrystals that absorb high-energy light of one wavelength and convert it to another. High energy blue light is emitted that goes through red and green QDs, as a result, we can see pure red, green and blue colors. QDs are produced from different heavy materials such as Cadmium Selenite, Cadmium Sulphite, Cadmium Telluride, Indium Arsenide, and Silicon. (Zhenyue & Chen 2013, 10)

QDs offer more freedom because the wavelengths and emission intensity can be fine-tuned during production of QDEF by changing the size of these nanoparticles. Current methods of production can offer more flexibility with adjusting the size and shape of QDs. (Steckel & Colby 2013, 44)

### 2.4 Strategic Advantages

It is possible to create displays and monitors that approach limits of human perception, however, producers don't maximize display properties due to sustainability, cost, and other limitations. Therefore, there are choices to be made to achieve the best combination of display characteristics. Nowadays, LCD displays are ubiquitous in our daily lives. It is becoming apparent that LCD technology is reaching its limits as there are hardly any new advancements. Such factors as viewing angle, contrast ratio, power consumption and resolution, have been improved to an acceptable level. (Zhenyue & Chen 2013, 3)

Displays with quantum dots portray the following advantages: they have lower price due to the low cost of Quantum Dot enhancement film, color gamut is wider than on standard LCD panels; they are easy to manufacture with no need to change factory

equipment, they consume for up to 50% less power. (Derlofske, Benoit, Lathrop & Lamb 2014, 1-4)

## 2.5 Implementation

QD technology can be implemented on all monitor sizes, no matter how small or big. QD film can simply replace the current diffuser film in an LCD panel, while other components remain in place. Another important change needed is the replacement of white LEDs with blue LEDs. (Derlofske, Benoit, Lathrop & Lamb 2014, 2)

It doesn't affect resolution and doesn't require any additional resources like a separate graphics card. It can be applied to all line ups, from Gaming to Value line and to Professional line. However, monitors with QD need clear positioning, therefore, it is not advisable to apply it to all product lines.

To position the QD monitors properly, two more models will be released by the company X by the end of 2016. After the new line-up has been implemented, it will be clear how well consumers accept it. Product management is going to decide what are the best technical specifications for the product and in which consumer segments it will be launched.

## 3 MARKET RESEARCH

In today's competitive environment, new product launches become more and more important. Consumers tend to adopt new products faster, therefore making their lifecycle shorter, which in turn forces companies to innovate at a faster rate. New product launches (NPL), bring the biggest proportion of revenues and profits and that number is rising every year. (Nielsen Report 2015)



### 3.1 Quantum Dot Market

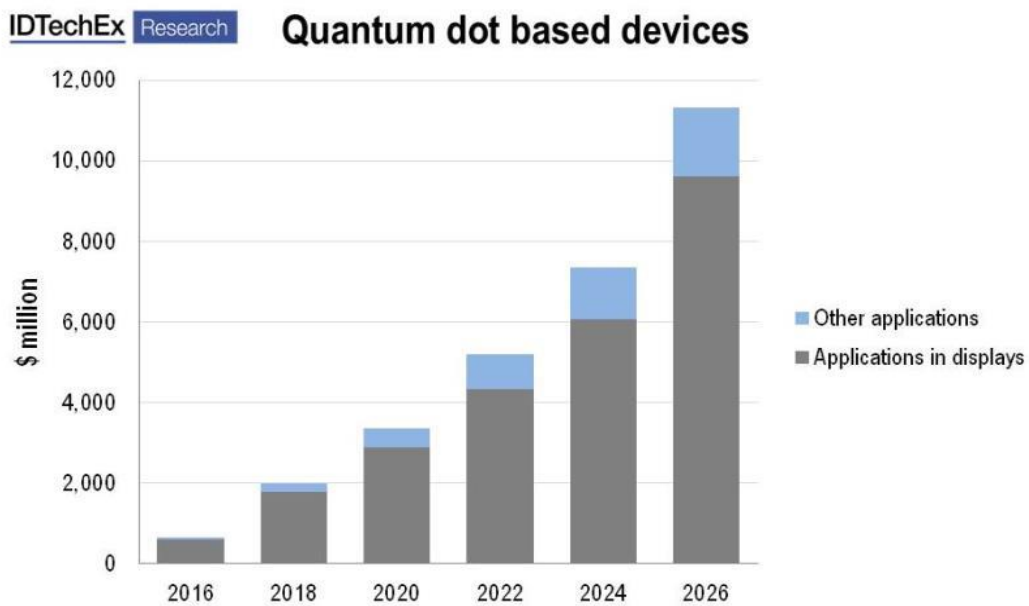
According to Jennifer Colegrove, from Touch Display Research, QD market for displays and lightning will grow from \$2 billion in 2016 to more than \$10 billion by 2025. This statement is based on market analysis that profiled over 60 companies working on QD materials and components. Meanwhile, analysts forecast the revenue of the global quantum dots market to grow at a CAGR of 113.9% in terms of revenue during the period 2014-2019. (Colegrove 2015)

According to BCC Research, the global market for QDs was estimated to generate \$121 million in revenues in 2013. This market is expected to reach about \$1.1 billion in 2016 and about \$3.1 billion by 2018, at a compound annual growth rate (CAGR) of 90.8% for the five-year period, 2013 to 2018. (BCC Research 2014)

IDTechEx forecasts that QDs will enable a market for devices and components worth over \$11bn by 2026.

$$\text{CAGR (Compound annual growth rate)} = \left( \frac{\text{Ending Value}}{\text{Beginning Value}} \right)^{\left( \frac{1}{N.\text{of years}} \right)} - 1$$

Figure 3: Market forecast for QD devices and components (IDTechEx)



Since 2013, companies are developing TVs with QDs. For example, Samsung is producing QD based 4K TV's instead of more expensive in development OLED TV's.

Introduction of the new technology is expected to produce more revenue for the market. These companies sell the technology under different names. For example, Sony has Triluminos TVs, Samsung - SUHD, LG - ColorPrime, TCL - Color IQ, and Company X - Quantum Dot technology.

TCL, in cooperation with QD Vision, announced that its new 4K UHD TV can achieve full color spectrum comparable to OLED TVs by using quantum dot technology. Which will also allow them to produce TVs at one third of a cost compared to OLED (optics.org).

Sony was the first company that implemented this technology in 2013 in multiple flat screen TVs. LCD TVs will always remain more price competitive as they offer higher resolution, contrast ratio and colors, making it more difficult for OLED TV's to justify their premium price (optics.org).

Apple has published four patents applications in the US Patent and Trademark Office in 2014, indicating that Apple is conducting in-depth research in QD display field. Each patent indicate that we might see the technology at work in the near future. The company claims that without the QD film, Retina displays will produce accurate blue colors but fall short on green and red. (AppleInsider.com)

LG's strategy is to lead the global OLED market. Second, LG wants to expand their presence in the 4K TV's market with Quantum Dot technology and ramp up its R&D investments, sales, product planning and marketing in this area. (optics.org)

Whitepapers and press-releases of the main competitors were studied to identify potential new entrants. Right now there are no direct competitors of the case company. Above mentioned companies have not announced any plans about implementing QD technology in display monitors until now.

### 3.2 Quantum Dot Manufacturers

There are multiple manufacturers of QD film. The most prominent of them are: Nanoco Group, Nanosys in collaboration with 3M and AU Optronics, Ocean Nano-Tech, QD Laser, QD Vision, Quantum Materials, Nano Axis, Nn-Labs, Samsung, Sigma-Aldrich, Siva Power and Voxtel.

Nanosys has partnered with 3M and it makes both cadmium-based and cadmium-free QDs. Other companies like Amazon and Asus have cooperated with them to produce notebooks and smartphones with QD displays. Samsung licenses the manufacturing of cadmium-free TV's. Nanosys is also working with Hisense, TLC and Panasonic. (nanosysinc.com)

Nanoco uses a different material for producing QDs, cadmium-free. Dow Electronic Materials has signed a licensing contract with Nanoco, a UK based Research Company, to produce and sell their QD that are cadmium free. Their plant is in Cheonan, Korea. Nanoco is going to produce them for LG in 2015. (Nanoco Group PLC 2015)

### 3.3 5 Forces Analysis

One of the questions the author posed was “**How will the market environment affect success of the product?**” To analyze forces that determine the long-term attractiveness of a certain market or market segment, Michael Porter developed a Five Forces framework. It evaluates industry competitors, potential entrants, substitutes, buyers, and suppliers. Organizations use it to help them make a qualitative evaluation of their position in the beginning of a product development process. (Kotler & Keller 2011, 232) The threats these forces pose are as follows:

#### 3.3.1 Threat of Competition

A segment is unattractive, if there are numerous existing competitors. There are factors that influence intensity of competition among producers of monitors such as a

large number of firms, low differentiation, high fixed costs and slow market growth. Companies will compete even harder when their revenues are declining.

Situation for the case company is as follows: there are no direct competitors of a QD Monitor yet, but several large companies are applying the technology in the TV sector. There are existing color-critical displays on the market that provide slightly better picture quality but for a much higher price.

### 3.3.2 Threat of New Entrants

The most attractive segment is one in which entry barriers are high and exit barriers are low. Very few new firms can enter and when they perform poorly, they can easily exit. (Kotler & Keller 2011, 232)

As an early-entrant, company X has to invest more resources in market research, promotion, and it is at a higher risk because of a more-difficult-to-calculate market response. It also cannot patent the technology it is going to use – it doesn't have proprietary rights. Companies that are going to follow the case company, are more likely to benefit from a resolved uncertainty about product acceptance and also wider recognition of it.

Barriers of entry are low for existing market players. Costs include slight modifications to manufacturing processes, education of factory employees, promotional expenses and an agreement with a quantum dot producing company.

### 3.3.3 Threat of End Users Growing Bargaining Power

The more buyers can influence price, integration and concentration, the less attractive a market segment becomes. Their power grows when products are less differentiated, switching costs are low or it represents most of their costs. (Kotler & Keller 2011, 232)

As for the case company, customers can make tradeoffs when similar alternatives are available and if they are not loyal to the brand. Technically savvy customers can also play a role here. They may carefully compare the product against those of the competitors and decide for themselves what kind of color-enhancement technology they need.

#### 3.3.4 Threat of Suppliers Growing Bargaining Power

Suppliers of raw materials, components and services for a product and their bargaining power can affect company's business strategy. They are powerful when they are concentrated or organized, when there are few substitutes and when the supplied product is an important input. (Kotler & Keller 2011, 232)

Currently, the QD technology is not well-known to end consumers and is available to manufacturers at a low price. Following the success of it on the market, QD Vision can dictate prices and availability. However, as mentioned earlier in paragraph 3.2, it is not the only supplier. Hypothetically, QD Vision can enter an agreement with other suppliers to increase price which would not affect their volume of sales. Most developed countries have extensive anti-trust laws that prohibit such activities and suppliers are strictly monitored. As of now, growing supplier power is not a serious threat for the company.

#### 3.3.5 Threat of Substitute Products

A segment is unattractive when there are actual or potential substitutes for the product. Substitutes place a limit on prices and on profits. (Kotler & Keller 2011, 232). These products satisfy a certain need but can be from different segments. The high price of alternative products that offer a similar solution poses a low threat to the case product. However, when there are rival products on the market, company X has to use differentiation strategy because buyers are likely to substitute this type of products.

## 4 PRODUCT LAUNCH

### 4.1 Objectives

Consumer product manufacturers are under constant pressure to meet last year's revenues and operating efficiency. Changes in consumer demographics, saturated markets and the fact that products are based on last year's technology which makes their life-cycles shorter, forces companies to innovate at even faster rate (Bayus B. 1998, 772). Consumer demand for monitors is decreasing worldwide, leading to a drop of 6% compared to the last year (1H2014 compared to 1H2015); currencies are unstable and cannot keep up with strengthening US Dollar, which leads to additional losses. Despite the fact that demand in Europe is steadily decreasing, average selling price rose last year due to increasing preference for bigger screens and advances features.

In order to become a market leader for the company X, clear objectives must be put in place. First of all, focus on the most rapidly growing market segments, which means high resolution, QHD and UHD panels. In those categories, it is better to select high margin monitors in lines like Gaming, Curved and Design.

It is always good to remember that introduction of new monitors is as important as the reduction of models that do not fit into the market anymore. It helps to significantly reduce costs such as warehousing and logistics, and direct resources on the most important flagship models. Size mix optimization and SKU (stock-keeping unit) reduction helps to always stay up-to-date with market trends.

Company X has to improve ways how it positions itself and its products on the market. Customers should not have any doubts about the quality and reliability of the monitors. For example, every time the company introduces innovative products on the market, there are factors that prevent a smooth and successful launch. It leads to availabilities being delayed, faulty test units, and issues with software as well as hardware and final product being different from the expected. Underlying factors are not always clear, however, the author supposes it is caused by one of the manufacturing sites in China. Cultural differences, distance and communication barriers prevent

the headquarters in Amsterdam to clearly see what is causing the problem. Gaining a control over uncertainty in the manufacturing process will reduce the cost and time of production.

Another important aspect, is to optimize time-to-launch and time-to-market. The study shows that almost 70% of all organizations want to improve capacity planning and resource management. It is advised to use what-if analysis on capacity plans to minimize risks. (Planview Inc. 2013). Company X has to optimize these factors especially for flagship models.

#### 4.2 Managing Uncertainty

A failure of companies to be flexible in making strategic choices in the face of decline, can have severe implications. There is no way to avoid uncertainty, therefore, it has to be dealt with. One of the possible dilemmas that almost every company faces is the question how to manage day-to-day activities and become more efficient and how to become more creative at the same time? Being efficient, minimizing costs and having routine processes under control is vital for everyday activities. Without it, costs would grow tremendously. On the other hand, there is a need to invest in future growth and improvements in product development, for example. There has to be a room for "slack" and extra costs. A company has to be efficient and reduce costs and at the same time; meanwhile providing resources and "slack" for creativity. (Sharfman M. & Dean J. 1997, 199-201)

Launching new products is one of the most risky aspects of a business. There are many ways how it can go wrong and many of them can be avoided with a thorough preparation. Companies are very focused on designing and signing new license deals for manufacturing new products that they are ill-prepared for putting them on a market. The most common reasons for not achieving success on the market are incorrect or misinterpreted market research; wrong estimates of market size; high development costs; poor market positioning, advertising, or price. (Hultink, Hart, Robben & Griffin 1999a, 153, 169-170)

### 4.3 Effects of a Launch Place on a Takeoff

The literature related to forecasting can be classified into micro-studies of adoption and macro-studies about global effects of technology diffusion like the work of van Everdingen, Fok and Stremersch in 2008. They examined global spill-over effects of foreign product introductions and takeoffs on a certain country's time-to-takeoff. Sales data on eight, high-tech consumer durables in 55 countries in total was used for this study. The authors find out that knowing the results of a takeoff in one country, it is possible to predict the outcome in another. Researchers have been increasingly interested in modelling takeoffs, which refers to an increase in sales after an initial slow start. Tellis, Stremersch and Yin (2003, 205) found out that a big difference in the time-to-takeoff exists among West European countries, which is explained by differences in culture, rather than economy.

For managers, these results can provide useful insights. For example, the most innovative regions are West Europe and North America, followed by Central and East Europe. Inside these regions, time-to-takeoff differs too, for example, for Switzerland it is 1.5 years on average compared to 5.67 years in Belgium. The study helps in identifying "fast" and "slow" countries and it is better to launch a new product in a most innovative country. An ideal country for a take-off would be not only fast in adopting a new technology, but also the one that has the most influence on other more susceptible countries. (Everdingen, Fok & Stremersch 2008, 34-37)

Figure 4: Time-to-takeoff per region

	Number of cases	Number of right-censored cases	Expected time-to-takeoff *
West Europe	86	2	3.58
North America	17	0	3.54
Central and East Europe	61	9	5.25
Africa and Middle East	21	4	5.60
South America	38	3	6.10
Australasia	85	13	6.66
Total	308	31	5.21

\* The expected time-to-takeoff is calculated using a simplified version of the model.  
Source: Modeling Global Spill-Over of New Product Takeoff



Even though Switzerland and UK have a fast times to takeoff, they rank low on having an influence on other countries (ranked 18<sup>th</sup> and 14<sup>th</sup> in their position). However, the Netherlands, along with Belgium and Germany show the highest foreign clout. These three countries have the highest import and export ratios in the Western Europe and are central both politically and economically.

Country characteristics were examined as main drivers of time to takeoff and four main country dimensions were found. First, economy affects affordability of a new product and also international trade and other economic factors affect spill-over effects. Secondly, country's culture which influences innovativeness and social connections of people. Thirdly, demographics that affect the ease of acceptance of new products. Finally, geographic location has an effect on cross country spill-over patterns. (Everdingen, Fok & Stremersch 2008, 4-6)

#### 4.4 Forecasting

It is hard to imagine a business area in which forecasts are not taken into account. Successful introduction of new products into the market is essential for the long-term success. (Kotler & Keller 2011, 567-573) Managers should have good estimates about how market will respond to different variable of a marketing mix without actually having any sales data. When strategic factors are being considered, managers need to forecast actions and reaction of competitors, suppliers, distributors, governments. These results form a forecast for a market share. Knowing market share it is possible to determine sales forecast. (Armstrong & Brodie 1999, 8-9)

All methodologies can be categorized in 3 broad ranges:

- What people have done (ex. Time series analysis, regression analysis)
- What people say: (ex. Surveys, questionnaires)
- What people do (ex. Testing marketing, reaction tests)

Forecasting at the company X is done using a combination of methods: feedback from the market, sales force forecast and experience with other technologies. The

first method is based on judgement, it implies that managers should receive feedback on the accuracy of their forecasts. It should be frequent and reliable. Second method is based on the sales forecast directly, without taking into account strategic factors. 93 % of the companies indicated that sales forecast was the most critical or a very important aspect of their company's success. (Armstrong & Brodie 1999, 1)

The third method relies on the previous experience with similar products. The case company has extensive experience with launching products into previously unexplored market segments and dealing with high levels of uncertainty.

#### 4.4.1 New Product Forecast Characteristics

- Strategically important to the business
- Extremely uncertain future demand patterns
- Very unstable demand
- Little or no demand history
- Demand highly influenced by numerous macro (external) factors
- Sometimes done a few years before the product is even launched
- More suited for qualitative techniques
- Significant impact on the long run profitability of the product
- In majority of the cases, it is performed by the Marketing department

B2B firms tend to depend on Qualitative forecasts more than the B2C firms. B2B firms have a longer forecasting horizon of 34 months compared to the B2C firms, where it takes 18 months. (Singh 2006)

#### 4.5 Strategy

Numerous research about product launch strategies shows that prior to commercialization, the process of developing a unique value proposition of a product in relation to the target market, is central to managerial thinking. To understand how decisions about the product launch are made, we have to focus on the details of the decision content.

New product development (NPD) became a central focus of companies in 1990s, when changing business environment and advances in technology placed the need for companies to invest in R&D more and more. Competitive advantages that NPD provides for companies, have driven much research into NPD success or failure. Successful launches have common factors, such as understanding of user needs, developing a superior product to satisfy those needs and an effective communication with a customer on how these needs are to be met. (Brown & Eisenhardt 1995, 348)

#### 4.6 Launch Decisions

In the next chapters one of the research questions will be answered: **“What are the strategic and tactical decisions the company has to make to launch a product and why?”**

Textbooks and research papers offer a checklist for a successful launch that include: 1. Unique value proposition, 2. Market segmentation, 3. Defining target audience, 4. Use of critical path analysis. It is important to understand how different decision emphases affect the success of the new product launch. Therefore, 2 categories of a launch strategy exist: strategic and tactical or marketing mix decision. (Hultink, Hart, Robben & Griffin 1999a, 154-155)

Strategic decisions are formed based on an overall company’s strategy and are implemented even before the actual development of a product. These decisions support overall firm’s strategy and set strict parameters within which a new product has to be developed. (Hultink, Hart, Robben & Griffin 1999b, 7-8)

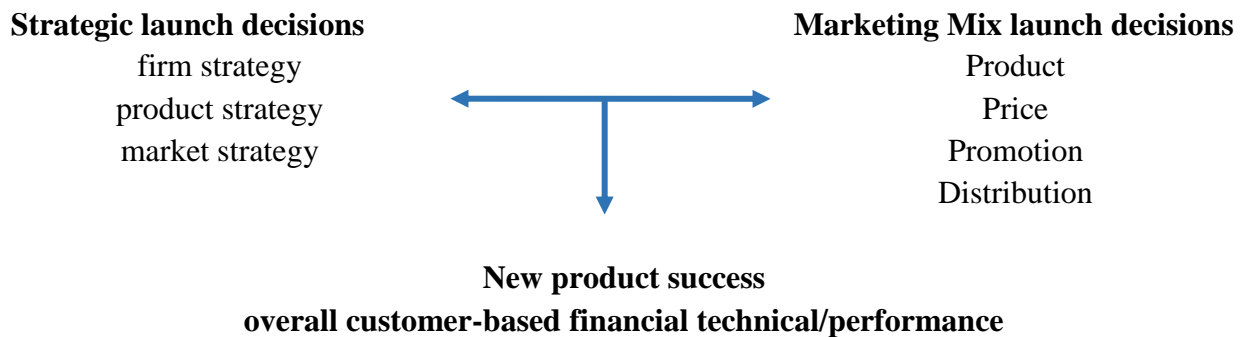
Tactical decisions often align with strategic and are easier to change. They cover all the elements of a marketing mix such as level of investment, nature of services offered, location and ways of distribution and a price. (Hultink, Hart, Robben & Griffin 1999b, 7-9)

Figure 5: Strategic and tactical launch variables

<i>Strategic launch variables</i>	<i>Tactical launch variables</i>
<p><b>Firm strategy</b></p> <ul style="list-style-type: none"> <li>Innovation strategy</li> <li>Degree of forward and backward integration</li> <li>Size of production scale entry</li> </ul> <p><b>Product strategy</b></p> <ul style="list-style-type: none"> <li>Product innovativeness</li> <li>product newness</li> </ul> <p><b>Market strategy</b></p> <ul style="list-style-type: none"> <li>Breadth of segments served</li> <li>Stage of the product on its PLC</li> <li>Target market growth</li> <li>Number of competitors</li> </ul>	<p><b>Product</b></p> <ul style="list-style-type: none"> <li>Breadth of the product line</li> <li>Direct manufacturing costs</li> <li>Services</li> </ul> <p><b>Price</b></p> <ul style="list-style-type: none"> <li>Pricing strategy: skim or penetrate?</li> </ul> <p><b>Promotion &amp; Advertising</b></p> <p><b>Distribution</b></p> <ul style="list-style-type: none"> <li>Distribution intensity</li> <li>Sales force effort</li> </ul>

The combination of strategic and tactical decisions is more likely to result in a successful launch, as the above mentioned strategies should be mutually reinforcing.

Figure 6: New Product Success factors (Hultink, Hart, Robben & Griffin 1999a, 158)



#### 4.6.1 Strategic Decisions

When defining firm strategy, two key organizational drivers are: being innovative and technology-driven. However, in B2C market activities such as aggressive marketing and promotion can play a bigger role than technology.

In B2B market products have to be as close to what is offered by competition as possible. In B2B market being innovative while not being a market leader often means

losing market share. In B2C market, however, innovativeness is short-lived as consumer market is saturated with new technologies.

Market decisions involve a variety of factors that have to be taken into account. Cooper (1984) discovered that hi-tech consumer goods achieved success when were launched in fast growing markets with high potential and a few competitors. Yoon and Lilien (1985) showed that new industrial products were more successful in their first year after launch where the number of competitors is small and the level of competition low. Moreover, those products were focused on a niche market.

#### 4.6.2 Marketing Mix Launch Decisions

These decisions include branding, amount of product versions to be introduced and spin-offs of existing products under the same brand name.

Consumer goods companies use penetration or skimming strategy in pricing. Both strategies are used with the same probability of 20%. Skimming pattern is to launch a product 16% above market price and subsequently increase it relative to the market price. Penetration pattern is to set a price 18% below market price and then lower it. (Spann, Fischer & Tellis 2015). However, there is almost no research to show how these decisions affect the following performance.

Consumer products are mostly advertised by mass media. Plus, is quite hard to introduce innovations when the company is not a market leader. It is much easier to follow companies with bigger promotional budget, they create trends in consumer behavior.

Distribution channels for the product will be e-tail and re-tail.

A study conducted by researchers that involved 208 introductions has shown that achieving success in one dimension, for example, return on investment, doesn't guarantee the success in customer acceptance. In total, there are three factors of suc-

cess, namely customer-determined success, financial performance, product-level success. (Hultink, Hart, Robben & Griffin 1999a, 170-171)

#### 4.7 Success Factors of a Launch Strategy

Different combinations of strategic factors exist. Some result in good combinations, some lead to failure. Out of 208 launches, 4 different strategies were determined:

##### **Strategy 1**

Number of studies cases in this category was 56, the overall success rate was the lowest among all strategies – 34%. Companies in this group launched products in a market with high number of competitors and their differentiation was by a new brand name. Products offer a high customer advantage and are more innovative, however, promotional expenditure is very low and product advantages are not clearly communicated. Plus, positioning is not very clear because of the high number of competitors and longer lifecycle time make them late entrants. (Hultink, Hart, Robben & Griffin 1999a, 166)

##### **Strategy 2**

There were 32 products studied and this cluster has the highest success rate of 88%. No direct competition, high promotional expenditures and a quick cycle time of 1-3 years result in a successful combination of factors. Unlike companies with the Strategy 1, this group is driven not only by technology but also by market and is targeting a niche market instead of a mass market. (Hultink, Hart, Robben & Griffin 1999a, 166-168)

##### **Strategy 3**

47 products in this cluster have the second high rate of success – 68%. They offer relatively low advantage but for a more affordable price and target specific target group. As an example, consumer electronics fall into this category and the main benefit they offer is a low price. (Hultink, Hart, Robben & Griffin 1999a, 168)

## Strategy 4

It appears to be the most common strategy to launch products – 73 launches out of 208. It has the success factor of 58%. Products in this category are mass marketed, have a low advantage and most often are an improved version of an existing line up. The tactical factors are the use of a company name, intensive distribution, equal promotional expenditure and a low price. Low advantage they offer might disappoint customers in a long-term and the use of the company name as a shield may backfire. (Hultink, Hart, Robben & Griffin 1999a, 168-169)

### 4.8 Launch Decisions of the QD Monitor

In this section, the author is going to describe tactical and strategic decisions that the company is going to implement to make the product a success. Every product manager studies the situation carefully before making any decisions and acts to the best of his abilities. Only later, these choices prove to be right or wrong.

The full matrix can be found in the appendix 8.3. It has been filled in with the help of the product manager.

Figure 7: The Case Product Compared to the Most Successful Strategy N. 2

<b>Strategic Launch Decisions</b>		
<b>Product</b>	Innovativeness	More Innovative
	NPD cycle time	>3 years
	Product advantage	High
<b>Market</b>	targeting strategy	Mass
	Number of competitors	None
<b>Firm</b>	Driver of NPD	Technology
	Innovation strategy	Innovator
<b>Marketing Mix Launch Decisions</b>		
<b>Product</b>	Branding strategy	Extension
<b>Distribution</b>	Distribution intensity	Intensive
<b>Promotion</b>	Promotion expenditure	Same
<b>Price</b>	Pricing strategy	Skimming

Before the launch of the QD monitor, it has been agreed that its main advantage is the color precision and that quality is the most important for the end user. It offers a high product advantage in terms of color gamut, price-performance ratio, energy consumption and manufacturing process needs only slight adjustments. It is utilizing the latest technology that other companies have been utilizing since 2013 but have never used in computer monitors. The fact of it creates low entry barriers for the competitors.

NPD cycle time of the product is long, more than 3 years. This number is based on the previous managerial experience. It is justifiable by the products innovativeness and complexity. Plus, the factory needs to adapt its resources and workforce to it. The connection between NPD time and its quality has not been found yet. However, it does mean that the time-to-takeoff is going to be longer.

### **How will the product be positioned on the market?**

Developing pricing strategy, ways of promotion and channels of distributions is difficult without knowing the product well first. Marketers engage in product differentiation to distinguish their product or service offer from competitors. It is crucial to ask the following questions:

- What is the product value proposition?
- Why does the market need this product?
- What is the single most important USP?
- Where is the product going to be sold?
- Who is the target end-consumer?
- Who is leading in this category?
- How can we differentiate?



Figure 8: Marketing Mix

<b>Product</b>	<b>Price</b>
<p>Full color gamut, delivers 50% more color than traditional LED's (100% NTSC color, 99% RGB color)</p> <p>Energy efficient. Uses 25% less energy than most color-critical displays</p>	<p>Affordable product compared to similar technologies only a fraction of most color-critical technologies</p> <p>Skimming pricing strategy</p>
<b>Place</b>	<b>Promotion</b>
<p>E-Tail</p> <p>Retail</p>	<p>Advertising through product tests, reviews and international events</p> <p>Coverage through media and press channels</p> <p>Very limited promotional budget compared to competitors</p>

## 5 RECOMMENDATIONS

### **Stronger focus on the consumer advantages**

Compared to the most successful strategy discussed in the previous chapter, QD monitor is targeted towards mass rather than niche market. It is advisable though, to target a specific group of customers with a clear message instead. Technology is the main driver of this product, however, end-user advantages are high. Technology driven products must be combined with a strong focus on a consumer.

### **Accurate sales forecasts from every country manager**

Virtually every manager tries to forecast to the best of his ability, experience and judgment. The problem arises when, for example, country managers don't realize the importance of a careful planning and therefore, an organization as a whole cannot make accurate predictions.

### **Increase promotional budget**

Company X is a rather small company with low promotional budget and is in a market with high volume and low margins, and therefore there are no budgets like in other industries or companies.

### **Consider actions of competitors and react quickly**

It is a matter of time until competitors start manufacturing their versions of QD monitor screens and before it happens, the case company has to establish a strong foothold in the market.

### **Provide timely and reliable information about the product**

When a new product is announced, there is no room for delays. In case of the first QD monitor, news were distributed long before it was known for sure when the monitor is going to be available. Multiple delays resulted in reviewer dissatisfaction and loss of interest. One of the objectives should be to find the right time to announce a new product – not too early and not too late.

### **Proper positioning of at least two more QD monitors**

What the next step would be? The first 27” monitor with QD technology is going to be launched in February 2016 and the following one or two models will be launched the same year. Product management will have to choose the best and the most saturated market segment for them. The ideal conditions would be to combine higher resolution panels, for example 4K monitors, with the fastest growing segment like shown on the Figure 9.

The full table with market share data can be found in the appendix 8.4

Figure 9: The most saturated segments of the market. (2015, Q3 results)

<b>Screen Size</b>	<b>Company X</b>	<b>Market</b>
18.5"	16.00%	3.60%
21.5"	7.50%	20.80%
23"	3.40%	11.50%
23.6"	9.70%	6.60%
24"(16:09)	5.60%	13.30%
27"	6.80%	8.10%

**Launch in a country that is fast in adopting new technologies and has the most influence on other more susceptible countries**

The new product will be launched in multiple countries simultaneously and the press has already shown a significant interest in it. Foreign introduction of a product is a sign of high expectations and acceptance. Consumers can be easier convinced to purchase it, if the takeoff has been successful abroad. Moreover, foreign availability of the product will generate cross-country word-of-mouth among consumers.

## 6 CONCLUSION

Product launch is influenced by a wide variety of factors and behaviors. It becomes even more uncertain when a company steps into a new market segment or launches a technology that has never been used before in similar products. Author's goal was to observe launch processes, study potential threats and shortcomings.

Monitor market is saturated with products and market analysis shows that product life-cycles are becoming shorter, innovation is short-lived and consumer demand is in decline. Entry barriers for competitors are relatively low if they decide to implement the same technology. Only minor adjustments in manufacturing process are required and they will benefit from a resolved uncertainty about product acceptance. It should be remembered that technology-driven products should be combined with a strong focus on the consumer, clear product positioning and differentiation strategy in order to be successful.

As a result of this study, the company X can have a better idea about further improvements in terms of strategic decisions, product positioning, internal control and market forces that influence product success.

As an observer and an employee of the company, the author might not have a clear idea about the end-user perception of the product. Later, when the product is available to customers it is recommended to collect their feedback and improve upon it.

## 7 REFERENCES

Armstrong J. S. & Brodie R. J. 1999. Forecasting for Marketing. Quantitative Methods in Marketing, 2nd ed. London: International Thomson Business Press

Bayus B. 1998. An Analysis of Product Lifetimes in a Technologically Dynamic Industry. Vol. 44, No. 6. 763-775. Management Science. Referred: 30.01.2016 <https://web.b.ebscohost.com>

BCC Research. 2014. Quantum Dots: Global Market Growth and Future Commercial Prospects. Referred: 30.01.2016 <http://www.bccresearch.com>

Brown L. S. & Eisenhardt K. M. 1995. Product Development: Past Research, Present Findings, and Future Directions. Academy of Management, Vol. 20, No. 2. 343-378. Referred: 30.01.2016 <http://www.jstor.org>

Campbell M. 2014. Apple intensifies research into quantum dot-enhanced displays. Referred: 30.01.2016 <http://appleinsider.com>

Coe-Sullivan S. 2012. Request for a Renewal of Exemption 39. Referred: 30.01.2016 <http://rohs.exemptions.oeko.info>

Colegrove J. 2015. Touch Display research. Referred: 30.01.2016 <http://touchdisplayresearch.com>

Cooper R. 1984. How new product strategies impact on performance. Journal of Product Innovation Management. Volume 1, No. 1. 5-18. Referred: 30.01.2016 <http://www.stage-gate.net>

Derlofske J., Benoit G., Lathrop A. & Lamb D. 2014. Quantum Dot Enhancement of Color for LCD Systems Referred: 30.01.2016 <http://solutions.3m.com>

Everdingen Y., Fok D. & Stremersch S. 2008. Modeling Global Spill-Over of New Product Takeoff. *Journal of Marketing Research*. Vol. 46. 637–652 Referred: 30.01.2016 <https://web.b.ebscohost.com>

Henderson R. M. & Clark K. B. 1990. Architectural innovation: the reconfiguration of existing product technologies and the failure of established firms. *Administrative Science Quarterly*, 35, 9–30. Referred: 30.01.2016 <https://web.b.ebscohost.com>

Hultink E.J., Hart S.J., Robben S.J. & Griffin A.J. 1999a. New consumer product launch: strategies and performance. New York: Elsevier Science Inc. 153-174

Hultink E.J., Hart S.J., Robben S.J. & Griffin A.J. 1999b. Launch Decisions and New Product Success: An Empirical Comparison of Consumer and Industrial Products. New York: Elsevier Science Inc.

Kotler, P. & Keller K. L. 2011. *Marketing Management*. 14th ed. New Jersey: Prentice Hall

Leonard-Barton D.A. 1992. Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal*. N 13. 111-125. Referred: 30.01.2016 <http://www.jstor.org>

Luan Y. & Sudhir K. 2010. Forecasting Marketing-Mix Responsiveness for New Products. *Journal of Marketing Research*. Vol. 47. 444–457 Referred: 30.01.2016 <https://web.b.ebscohost.com>

Mullins L. 2011. *Essentials of Organizational Behaviour*. UK: Pearson. 3rd ed. 41-76  
National Science and Technology Council Committee on Technology. 2014. National Nanotechnology Initiative, Strategic plan. Referred: 30.01.2016 [www.nano.gov](http://www.nano.gov)

Nielsen. 2015. *Global New Product Innovation Report June 2015*. Referred: 30.01.2016 <http://www.nielsen.com>

Planview Inc. 2013. How to improve time to market with existing resources. Conducted by Appleseed Partners and OpenSky Research. Referred: 30.01.2016 <http://www.frostftp.com/IE/Events/pds/plaview/Planview-RMCP.pdf>

Robson C. 2002. Real World Research. A Resource for Social Scientists and Practitioner-Researchers. 2nd ed. UK: Blackwell

Sarker S. & Khan M. 2013. Classical and neoclassical approaches of management: An overview. 14:6. Journal of Business and Management. Referred: 30.01.2016 <http://www.iosrjournals.org>

Sharfman M. & Dean J. 1997. Flexibility in strategic decision making: informational and ideological perspectives. Journal of Management Studies 34:2. 191-217. UK: Blackwell

Singh M. 2006. New Product Forecasting. Referred: 30.01.2016 <http://mirror.mit-ocw.sbu.ac.ir/courses>

Spann M., Fischer M. & Tellis J. G. 2015. Skimming or Penetration? Strategic Dynamic Pricing for New Products. 34:2. 235-249. Marketing Science. USA: INFORMS

Steckel J. S., Colby R., Liu W., Hutchinson K., Breen C., Ritter J. & Coe-Sullivan S. 2013. Quantum dot manufacturing requirements for the high volume LCD market. SID Symposium Digest of Technical Papers. V.44 No. 1. 943-945

Tellis J.G., Stremersch S. & Yin E. 2003. The International Takeoff of New Products: The Role of Economics, Culture, and Country Innovativeness. Marketing Science. Vol. 22, No. 2. 188–208. Referred: 30.01.2016 <https://web.b.ebscohost.com>

Website of Nanosys. Referred: 30.01.2016 <http://www.nanosysinc.com>

Website of Nanotechnologies.com Referred: 30.01.2016

<http://www.nanocotechnologies.com>

Website of Optics.org. Referred: 30.01.2016. <http://optics.org>

Website of QD Vision. Referred: 30.01.2016 <http://coloriq.com>

Website of SAP. New Product Development and Introduction. Referred: 30.01.2016 <http://fm.sap.com>

Website of the European Commission. Referred: 30.01.2016

<http://ec.europa.eu/transparency>

Website of the United States Patent and trademark office. Referred: 30.01.2016

<http://appft.uspto.gov>

Yin R. 2009. Case Study Research: Design and Methods. Vol. 5. USA: Sage Inc.

Yoon E. & Lilien G. 1985. New industrial product performance: the effect of market characteristics and strategy. Journal of Product Innovation Management Vol. 2 No. 3. 134–44. Referred: 30.01.2016 <http://onlinelibrary.wiley.com>

Zhenyue L., Yuan C. & Shin-Tson W. 2013. Wide color gamut LCD with a quantum dot backlight. Vol. 21, No. 22. Optical Society of America. USA: Optics Express

## 8 APPENDICES

### 8.1 Sales Training

During the sales training a lot of facts were given and explained in a simple and structured way. It suggested how to answer inquiries from potential customers and how to differentiate QD Vision's technology from competitors. Current market situation was described shortly and it was mentioned that only 3-4 companies make TV displays with QD while the company X is the only company that produces computer monitors with QD. The product is targeted towards prosumers who value precision in post-production of videos and images; accuracy in movie streaming, gaming and designing. For example, in post-production visual contents get cut and jammed. While actual cameras can capture higher color gamut, displays cannot properly show them. Therefore, the product emphasizes the benefits of a color accurate monitor.

Concerns about the use of heavy metals in production was addressed too. European Commission decides on whether to allow or ban the use of cadmium in monitors and TV screens.

Sales trainings such as this, are crucial for keeping product managers and sales people well-informed about new technologies they are selling. Moreover, they build confidence in the products and provide justification for new product launches.

### 8.2 Questionnaire

Firstly, a table with multiple choice questions about tactical and strategic decisions was filled in with the help of a B2C product manager. Secondly, an informal interview was conducted and questions were as follows:



1. Do you think that the combination of these factors is going to be successful and why [talking about the product launch decisions table]?
2. Which factors need improvement?
3. How will the decision about introducing the QD technology into a broader range of products is going to be made?
4. What kind of techniques do you use for forecasting (especially for new technologies)?
5. What kind of metrics and measurements do you use for tracking success?

### 8.3 Matrix with multiple choice questions

Figure 10: Decision Matrix

<b>Strategic Launch Decisions</b>		
<b>Product</b>	Innovativeness	more/equal/less
	NPD cycle time	<1 year/1-3 years/ >3 years
	Product advantage	low/medium/high
<b>Market</b>	targeting strategy	niche/selective/mass
	Number of competitors	none/1-3/>4
<b>Firm</b>	Driver of NPD	market/mix/technology
	Innovation strategy	innovator/fast imitator/cost minimizer
<b>Marketing Mix Launch Decisions</b>		
<b>Product</b>	Branding strategy	new brand/extension/company
<b>Distribution</b>	Distribution intensity	intensive/selective/exclusive
<b>Promotion</b>	Promotion expenditure	higher/equal/lower
<b>Price</b>	Pricing strategy	skimming/penetration/other

## 8.4 Market Share by Size and Brand

Figure 11: Size Mix of Western Europe for Q3, 2015 (CONTEXT Report)

Screen Size	Com-pany X	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	Market
LCD_<14	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
LCD_14	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	39,5%	0,0%	60,5%	0,0%
LCD_15	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	6,6%	49,7%	0,0%	0,1%
LCD_15W	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%	0,0%	0,0%	0,0%	0,1%
LCD_17	8,1%	4,0%	0,0%	1,0%	0,0%	3,4%	22,4%	0,9%	10,6%	13,2%	14,7%	4,6%	1,2%
LCD_18.5	16,0%	12,7%	5,2%	3,4%	1,8%	1,5%	9,6%	15,5%	4,1%	4,4%	0,0%	0,2%	3,6%
LCD_19	3,6%	2,6%	6,6%	6,9%	1,1%	1,6%	3,8%	0,4%	20,0%	19,8%	6,7%	2,9%	4,2%
LCD_19.5	7,0%	13,0%	0,0%	8,3%	3,3%	1,1%	19,0%	3,5%	22,7%	4,6%	0,0%	4,3%	3,3%
LCD_19W	7,9%	0,0%	0,0%	0,0%	0,0%	0,0%	49,9%	5,7%	0,0%	0,0%	0,0%	35,9%	0,8%
LCD_20	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
LCD_20.7	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	99,3%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
LCD_20W	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	1,1%	4,6%	79,4%	14,9%	0,0%	1,8%
LCD_21	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,1%
LCD_21.5	7,5%	8,3%	9,9%	9,1%	2,6%	6,5%	11,2%	6,9%	5,1%	14,8%	6,0%	3,4%	20,8%
LCD_22	4,4%	2,6%	11,8%	13,7%	0,2%	1,2%	11,5%	0,4%	15,0%	0,0%	2,3%	13,2%	7,6%
LCD_23	3,4%	2,8%	3,1%	2,4%	0,3%	1,5%	1,0%	4,4%	18,8%	45,2%	1,4%	8,4%	11,5%
LCD_23.6	9,7%	5,3%	25,3%	5,8%	5,5%	0,0%	6,5%	17,5%	0,0%	0,0%	6,7%	5,7%	6,6%
LCD_23.8	1,5%	1,1%	0,0%	20,6%	0,0%	0,9%	5,1%	0,0%	60,6%	0,0%	0,3%	0,0%	3,9%
LCD_24_16:09	5,6%	5,5%	12,8%	1,6%	0,1%	22,7%	30,5%	0,0%	0,0%	0,0%	10,6%	0,0%	13,3%
LCD_24_16:10	1,9%	0,3%	7,1%	0,0%	0,0%	0,2%	0,0%	6,3%	30,3%	33,8%	0,0%	6,0%	9,9%
LCD_25	0,3%	1,2%	0,0%	10,0%	0,0%	0,0%	4,8%	3,5%	80,2%	0,0%	0,0%	0,0%	0,8%
LCD_26	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	86,2%	0,0%	0,0%
LCD_27	6,8%	4,0%	18,8%	5,4%	0,1%	7,1%	11,2%	12,8%	10,8%	6,7%	5,3%	0,0%	8,1%
LCD_28	4,9%	5,5%	23,1%	0,0%	4,5%	4,7%	8,4%	19,8%	10,7%	0,0%	10,5%	4,7%	0,7%
LCD_29	0,0%	0,0%	8,8%	47,9%	0,0%	0,0%	0,3%	7,4%	24,0%	0,0%	0,0%	0,6%	0,4%
LCD_30	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	37,2%	34,7%	7,2%	1,2%	0,1%
LCD_31.5	0,0%	0,0%	11,8%	80,5%	0,0%	0,0%	0,0%	0,0%	3,4%	0,0%	0,0%	0,0%	0,4%
LCD_32	17,2%	3,1%	19,6%	0,0%	0,0%	26,2%	9,4%	16,5%	0,0%	8,1%	0,0%	0,0%	0,1%
LCD_34	1,3%	1,4%	10,2%	45,8%	0,0%	0,0%	9,5%	0,0%	30,5%	1,3%	0,0%	0,0%	0,4%
LCD_35	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
LCD_40	100,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,1%
Market Share %	5,7%	4,8%	9,7%	6,6%	1,2%	5,5%	10,9%	5,8%	13,6%	15,0%	4,7%	4,3%	100,0%

Context research center combines the latest data from sales agents and distributors to create a clear picture of market development. In the above table, the data from the 3<sup>rd</sup> quarter of 2015 is organized in way that highlights brand domination in certain screen sizes. The rightmost column ‘Market’ shows what *percentage of total sales* that certain screen size category occupies out of all units sold. The most concentrated

size segments are marked in **Bold**. Each number in the main field represents the *percentage of a row* (note that not all competitors are shown in the table, only the main ones were selected). Market leaders in screen sizes are market green.