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**ODESSA NATIONAL ACADEMY OF  
FOOD TECHNOLOGIES**

International Competition of  
Student Scientific Works

# **BLACK SEA SCIENCE 2018**

## **PROCEEDINGS**



April, 4, 2018  
**ODESSA, ONAFT 2018**

Ministry of Education and Science of Ukraine  
Odessa National Academy of Food Technologies

International Competition of Student Scientific Works

# **BLACK SEA SCIENCE 2018**

**Proceedings**

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## THE STRATEGY OF PROVIDING COMPETITIVENESS OF THE ENTERPRISE IN THE IT INDUSTRY

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*The article deals with the essential characteristics and significance of the company's competitive advantages in the conditions of digitalization. The features of strategy development are analyzed. the key factors of the internal and external environment were assessed. We analyzed LUXOFT Inc. ,namely, the definition of its competitive status, the assessment of its internal and external environment, the assessment of market capitalization and the predictive assessment of the growth of market capitalization and stock prices. We analyzed personnel policy as the main component of LUXOFT's development. The effectiveness of the chosen strategy and the competitiveness of this strategy for IT companies were assessed.*

*Achieving the goal has determined the need to solve the following tasks:*

- to determine the competitive advantages of the enterprise in the conditions of digitalization;*
- to describe the features of the strategy of developing the competitiveness of enterprises in IT industry;*
- to review the internal factors of development of LUXOFT;*
- to analyze the influence of external factors on development of LUXOFT;*
- to determine the competitive status of LUXOFT;*
- to evaluate the effectiveness of the competitiveness strategy of LUXOFT;*
- to prove that the personnel policy is a key factor in ensuring the competitiveness of the enterprise in the IT industry.*

*The object of the research is the strategy of ensuring the competitiveness of the enterprise in the IT industry.*

*The subject of the research is theoretical justification of formation of competitive advantages of the IT-enterprise and practical recommendations for choosing a strategy to ensure its competitiveness in the conditions of digitization.*

### Introduction

**Relevance of the topic.** Under the conditions of the fourth industrial (digital) evolution and with the rapid pace of development of information technologies it is difficult to exaggerate their need for a person in the XXI century.

One of the high-tech industries in the world economy is software development. This highly competitive and dynamic industry largely determines the overall technical and technological development of countries, regions and the world in general. Therefore, the issues of effective development of this industry become relevant for the harmonious functioning of the world economic system.

The solution to these tasks lies in the ability to build effective development strategies and to substantiate a clear and effective mechanism for creating sustainable competitive advantages for enterprises of information technologies. Development strategies and benefits should be based on the assessment and analysis of the current level of competitiveness of such enterprises, comparable with Western rivals, and the formation of their future competitive potential.

The important task nowadays is not only to find the ways how to survive under the financial and economic crisis but also to determine the right way in order to increase the competitiveness of the enterprises in general, as well as in the fast-track IT field. One of the problems solving ways is the definition of the strategy of providing competitiveness of the enterprise in the IT industry.

**Analysis of research and publications on the problem.** In the scientific literature, the issues of development of the IT sector, the competitiveness of companies in this industry, the features of its provision, taking into account the factors of the influence of the internal and external factors in the conditions of digitalization, are widely studied. Such Ukrainian and foreign scientists made a significant contribution to this study: G. Ishchenko, N. Chouprina, O. Maslak, T. Kemichadzhy, V. Novitsky, Veresne Dr. Somosi Mariann.

**The purpose of the article** is to prove the importance of choosing a strategy to ensure the competitiveness of enterprises in IT industry in the conditions of digitization based on the analysis of LUXOFT company.

Achieving the goal has determined the need to solve the following **tasks:**

– to determine the competitive advantages of the enterprise in the conditions of digitalization;

- to describe the features of the strategy of developing the competitiveness of enterprises in IT industry;
- to review the internal factors of development of LUXOFT;
- to analyze the influence of external factors on development of LUXOFT;
- to determine the competitive status of LUXOFT;
- to evaluate the effectiveness of the competitiveness strategy of LUXOFT;
- to prove that the personnel policy is a key factor in ensuring the competitiveness of the enterprise in the IT industry.

**The object of the research** is the strategy of ensuring the competitiveness of the enterprise in the IT industry.

**The subject of the research** is theoretical justification of formation of competitive advantages of the IT-enterprise and practical recommendations for choosing a strategy to ensure its competitiveness in the conditions of digitization.

**The information base of the research** is a factual material of the functioning of the IT industry, reference and information materials, materials, posted on the official web pages and published in the press, developments of ukrainian and foreign specialists.

## **1. Theoretical bases of the strategy of providing competitiveness of the enterprise in the IT field**

### ***1.1. Competitive advantages of the enterprise: characteristic and meaning in the conditions of digitalization.***

Digitalization is a necessary element of the competitive position of companies in the world market due to conditions of rapid development of globalization.

Competitive advantages are conditions that allow a company or country to produce a good or service at equal value but at a lower price or in a more desirable fashion. These conditions allow the productive entity to generate more sales or superior margins compared to its market rivals. Competitive advantages are attributed to a variety of factors including cost structure, branding, the quality of product offerings, intellectual property and customer service.

Sustainable competitive advantage refers to maintaining a favorable position over the long term, which can help boost a company's image in the marketplace, its valuation and its future earning potential [1].

The evaluation base for competitive advantages is the objectives of the enterprise and the tasks associated with them, which the enterprise is able to perform taking into account the actual conditions of the external environment and for a given quality of their performance. Structural and functional changes at the enterprise are called upon to ensure the conditions for successful activity "on purpose", to bring the basic competencies of the enterprise in line with the emerging environmental conditions. The totality of such changes and the work on change management are usually called development.

The development process is aimed at capacity building – a set of enterprise resources used to solve tasks that an enterprise is able to perform with a result acceptable to the goal-setting entity or organization. The use of potential and created competitive advantages is aimed at achieving results in accordance with the tasks set in the process of activity. In general, there are several ways to use the potential, even in a single goal. In this situation, the working environment is determined by the external environment. The enterprise has two components: development and targeted activity. The task of development can be formulated as follows: it is necessary to choose a development option in which at any given time the available potential allowed at least one way to achieve the required performance results [2], [3].

Our research on LUXOFT point five trends that could redefine competition.

1. new pressure on prices and margins;
2. competitors emerge from unexpected places;
3. winner-takes-all dynamics;
4. growing talent mismatches;
5. converging global supply and demand.

Digital technologies know no borders, and the customer's demand for a unified experience is raising pressure on global companies to standardize offerings. In B2B markets from banking to telecommunications, corporate purchasers are raising pressure on their suppliers to offer services that are standardized across borders, integrate with other offerings, and can be plugged into the purchasing companies' global business processes easily [4], [5].

For the conclusion it is vital to note that at the present stage of the development of information technology digitization is a necessary component of companies who want to take a competitive position in the world market.

### ***1.2. Features of developing a strategy to ensure the competitiveness of the enterprise in the IT industry***

The main reasons for reducing the competitiveness of enterprises are the deterioration of the quality of resources; reducing pressure from consumers; aging technologies; false goals and objectives; loss of the enterprise of rapid adaptation; weakening of internal competition; fluctuations in market conditions; reduction of competitive potential. But the most important is lack of a clear strategy [6].

The preconditions for the formation of strategies and their changes are related to the periods of development of economic relations. Each enterprise should constantly maintain its competitiveness at a high level in order to be able to systematically analyze the macro and microeconomic situation on the market, expand its competitive position, which ensures long-term economic growth of the enterprise and its high competitive status [7].

The concept of developing a strategy for increasing competitiveness is based on the theory of strategic management and reflects the conceptual apparatus in defining the concepts that characterize the strategy; composition and structure of objects and subjects; principles of strategy building; definition of the target company in the target market; market position; competitive advantages; decision criteria; achieving strategic goals. Formation of strategies for increasing the competitiveness of enterprises in a competitive environment is a process of making a managerial decision on the priority of financing of functional strategies in order to provide competitive advantages on the market.

If such an approach is used, the strategy for increasing competitiveness is determined from three points: as a way to achieve strategic goals; as a characteristic of the appointment and mission of enterprises in the market; as the chosen direction of development with the necessary resource potential for this. It is a system of successive actions of the enterprise in pursuit of their strategic goals. The components of the strategy include strategic alternatives to development, funding priorities, responsible executives. The implementation of such a strategy requires the availability of strategic alternatives, taking into account the specifics of the functioning of enterprises in the market [8].

To ensure the competitiveness of enterprises it is important to determine the mechanisms of its support at different stages of their economic development, as this is connected with the problem of the formation of their status in the conditions of strategic convergence at the stage of acceleration of integration processes. That is, when forming a strategy, it is

necessary to link the stage of economic development with the strategic type of enterprise.

The results of the implementation of the strategies and of the economy at the enterprises should become their achievement of high scientific and technical levels, the growth of production efficiency, and, consequently, business, qualitatively better levels of resource conservation and environmentalization of activities [9].

A properly selected and adequately content-rich innovation strategy as a certain strategic set of all solutions for increasing the competitiveness of the enterprise is a key to the long-term success of any enterprise, a means to ensure its competitiveness and competitiveness. So, strategy as an instrument is a complex model, as the process actually forms the principles and rules, and as a result is a certain logic of the behavior of the enterprise, which determines the directions of development on the basis of the alternative. In particular, when forming a competitive strategy, the company must take into account the following features:

- advantages and disadvantages of the company's existing strategy;
- the structure of the competitive environment;
- dynamic characteristics of the market to adapt the strategy of competition;
- the situation in the industry, size and scope of activities;
- the competitive status of the company;
- specific goals and availability of resources[10].

Regardless of the organizational or leadership model a CEO and board choose, it's important to keep in mind that digitization is a moving target. The emergent nature of digital forces means that harnessing them is a journey, not a destination – a relentless leadership experience and a rare opportunity to reposition companies for a new era of competition and growth.

## **2. Strategic analysis of the environment of LUXOFT**

### ***2.1. Formation of the internal environment profile of LUXOFT***

The company's internal environment plays an important role for the future of effective functioning. That is why it is important to analyze all internal components of the company.

LUXOFT HOLDING, INC. is a leading provider of software development services and innovative IT solutions to a global client base which was founded in March 2000 [11]. LUXOFT was selected as 2017's best outsourcing service providers – “The 2017 Global Outsourcing 100” [12].

For the analysis of the company's internal environment was used McKinsey 7S Model [13].

1. **Shared values of the company.** The values of the company are determined by the goal and the mission of the company to give the customers a tool they need to effectively manage their business, especially in today's fast moving world [11].

2. **Company's strategy.** LUXOFT implements a strategy of centered diversification: the company is strategically focused on the implementation of such a service as application software, but uses it in various industries. It has such possibility thanks to acquisitions of companies (Appendix 1) [14].

3. **Structure of the company.** LUXOFT is a foreign private issuer under SEC and NYSE rules and a "controlled company". The share structure of LUXOFT consists of two issuer's classes of common stock: Class A ordinary shares and Class B ordinary with no par value. The management structure is made up of 12 executive officers and the board of directors. The company's board structure consists of 2 committees: audit and compensation (Appendix 2).

4. **Company's system.** The company is mainly concentrated on 4 industry verticals: financial services; automotive and transport; telecom; healthcare and pharmaceuticals (Appendix 3). LUXOFT works in such industries as travel, aviation, retail, energy, technology and agriculture too. The company is presented in 19 countries and has 39 offices in three ITO geographies (Appendix 3) [11].

5. **The staff of the company.** The personnel of LUXOFT is highly qualified, in FY2017 84.7% of employees were IT professionals. LUXOFT has its own style as a multinational because it has to remain competitive and meet the increasingly diverse needs of its worldwide client base.

6. **Company's skills.** The personnel in this company is skilled for such departments: engineering and development; human resources, sales and marketing; administration; executive management. In FY2017 LUXOFT had 12,766 employees worldwide [11].

7. **Company's style.** LUXOFT has a liberal style of management. A large number of employees of the company work on outsourcing, so it is impossible to censure another style of management. Outsourcing is a promising one for companies in IT industry, as it allows to involve employees from not only highly developed countries, but also save money by using cheap labor from less developed countries.

To sum up, the company effectively operates and transforms its system into the challenges of a globalized society. The company has such key

internal factors: the mission and purpose of the company, an effective centralized diversification strategy, a comprehensive internal structure and management style. An important place is given to the staff, as success of the company depends on the employees directly. Since all components of the company have been analyzed, it is possible to maintain a successful formation of internal environment profile of LUXOFT.

### ***2.2. Assessment of the impact of key environmental factors on development of LUXOFT***

Any of successful companies do not work in isolation from their competitors as they create a competitive environment where companies can develop and realize their potential. The factors of the attractiveness of the industry, the competitive advantages and stability of the environment should be attributed to the components of the external environment.

We used such a tool of strategic analysis as PEST [15], which allowed to identify the most significant factors that will affect the company's future development (Appendix 5). Information technologies are improving year by year, conditions should be created for the usage of the Internet for the world's users. Each year more and more people use the Internet with smartphones, laptops, PC not only in personal life but also for professional demands (Appendix 6) [16].

For example, during last 11 years the coverage of 3G Internet increased for 50.0% and the coverage of 4G Internet appeared in 2010 and constituted 3.0% and expected to reach 62.0% in 2020 (Appendix 7) [17]. Due to innovations of IT industry the Internet costs are getting lower passing the time.

The world community creates external conditions for the development of the IT industry. What is more, GDP around the world is steadily increasing, rising consumers' wealth that surely should lead to growing demand. According to World Bank global GDP is expected to increase 3.0% y-o-y in 2018 [18]. However, the growth rate of the IT market is higher, with the CAGR 2014-2020 seen at 18.0% [19]. But while the GDP growth rate is slow, demand for the application software is going to rise with higher pace as it is linked to the growth rate of the IT industry. That is why we forecast LUXOFT sales based on the growth of the IT sphere.

2016-2017 fiscal year was the year of Luxoft acquisitions of such companies as IntroPro, derivIT Solutions Pte Ltd., UNAFORTIS. They have strengthened the LUXOFT position in telecommunication, financial services and healthcare. Share of telecom in general revenue in FY2016

was 5,7% and became 8,89% in FY2017. So we can say that every year Luxoft strengthens its position in the global market.

In order to assess the impact of key environmental factors on development of LUXOFT was used strategic analysis SPACE (Appendix 8).

Financial strength of the company is quite strong what is confirmed by financial stability. Luxoft has liquidity and is solvent as each year up to FY2022 is expected growth in revenue and the company in FY2017 had only short-term borrowings (633000 USD). Production costs of the company by DCF are expected to make 60% of the company's revenue in FY2019, which will be due to the completion of reorganization inside the company, after which growth in production costs will not be observed.

Industry Strength is quite strong and consists 4,1 of 6 which is which is primarily due to the growth of the IT industry, which is expected to average 18%, so the attractiveness of the IT industry is high among other industries and the stability of Luxoft's profit is ensured, what was proved in the DCF model. The amount of competitors in the industry is high so Luxoft has to make efforts to be competitive.

Environmental Stability is quite high. The influence of the state is low as scientific and technological progress moves fast and governments of countries can not regulate all relations in this area. The IT industry is attractive for investments and doesn't depend on inflation rate and the growth rate of the country's economy.

Consumers as a competitive force have a high degree of impact on the company. In FY2017 the top five clients made 54.6% of its revenue, and the top ten clients made 66.0% in the same period. However, in 2015-17 dependence from the top 5 and top 10 clients decreased, and this trend is projected until FY2019.

We can also conclude that the key factors of the environment that affect the company in the IT industry are financial potential, attractiveness of the industry, competitive advantages, stability factors of the environment.

### ***2.3. Determination of the competitive status of LUXOFT***

For this research was built a model of strategic analysis as *Porter's Five Forces* (Appendix 9) [20]. According to this analysis competitors have been recognized as a driving force.

To identify companies that are the closest competitors for LUXOFT, within the same strategic group, as well as their positions, we have built a *Strategic groups map* [21] (Appendix 10). It was constructed on two key parameters: revenue and the level of diversification. The map is a useful

tool to represent industry competition graphically, which allows to figure out how the industry is changing, or which trends can affect it.

Competition in the IT industry is extremely difficult with its rapid development – an average of 18.0% annually. The sphere of financial services is the most advanced, since all companies, regardless of belonging to a competitive group, work in this direction. Development in the field of healthcare and pharmaceutical industry is promising, that is why LUXOFT began operating in this field, but the share is still small. Thanks to the rapid development of technologies in the world, new verticals are created and companies have a wider range of development.

We had also built a BCG matrix model to determine LUXOFT's competitive position compared to competing companies belonging to one strategic group (Appendix 11) [22]. In this case, we used such parameters as market share and market growth rate. According to BCG matrix, the market leader is Cognizant (“star”) since it holds the largest share of the market and accordingly is the largest competitor for LUXOFT. The most of companies are in the stage of formation (“question marks”), but all of these are promising in view of the rapid development of the industry.

Application software is the market which is easy to enter but threats of new players are low. It takes a while to ensure that customers are interested in the products of new players in the market before they get significant impact on the market. But there are already plenty of competitors what is the biggest threat for LUXOFT.

Consequently, in comparison with their competitors, the investigated company is competitive. Now in the market it is present as a "sign of the question" that it just entered the market and is gaining momentum in its development. The threat of new players in IT markets is low, therefore, it is necessary to move in the chosen direction and continue to develop.

### **3. Efficiency of the performing strategy to enable competitiveness of the IT-company LUXOFT**

#### ***3.1. Evaluating the effectiveness of the current strategy to ensure the competitiveness of the IT-enterprise LUXOFT***

In order to assess the effectiveness of the strategy, it will be necessary to determine the capitalization of the company and the prices of the shares of this company in the future. With an increase in capitalization and in stock prices, the strategy will be effective, with decreasing will be ineffective.

To develop our LUXOFT valuation we have applied two methods: Discounted Cash Flow (DCF) and Market Multiples Method (MMM) and assigned 70% weight for DCF and 30% for MMM (Appendix 12) [23], [24].

**Discounted cash flow analysis** According to our DCF computation LUXOFT target price is 63.21 USD, that is 8.8% up to current stock market price 58.05 USD per share. We built DCF model for 5 years up based on following assumptions (Appendix 12).

In FY2018, the company's revenue expected to increase by 16.5%, what is explained by the rapid development of the information technology market and the aggressive strategic position of the company on the global market. At the same time, our revenues outlook is conditional on maintaining all top 5 LUXOFT clients that account for 54% of top line (see section 3.2 for details).

We assume that in FY2018 the COS will consist 61.5% of revenue, which is 1.5 pp up compared to FY2017 as recently acquired companies are in the process of reorganization and as a result, there is an increase in costs. In FY2019-2020, a "technological boom" in the medical and automotive sectors is expected by LUXOFT Ukraine CEO, which will result in the sharp increase in revenues: in FY2019 – 23.0%, in FY2020 – 25.0%.

According to the CEO's comments, the redistribution of highly qualified employees, which were sent to promote the company in the Asian region, will bring an increase in net income in FY2019-2020 and will allow increasing company's share in the market. Going forward, company does not plan to issue an additional number of shares which is now equal to 34 million due to the fact that existing money resources are sufficient. Since the company is increasing the volume of sales, the total number of assets and liabilities will increase by an average rate of 24.0%.

WACC [25] was calculated using CAPM method and was estimated at 9.49% in 2018. Risk free rate is determined based on 5-Year T-bills, while market return was based on S&P 500 Index returns. We calculated LUXOFT beta versus S&P 500 Index over the 5-year period. MMM: LUXOFT valuation based on comparative valuation implies company fair value of 2,118.3 USD ml, while the current capitalization of the company is 1,878.5 USD ml (Appendix 12). We estimate the company's shares are undervalued, and the upside potential based on MMM is 11.0%. Because of subjectivity of this method, we give it 30% weight. LUXOFT 2018E P/E is 18.1x, which is below the peers' median by 25.6%.

In 2019F company's P/E seen decreasing to 14.4x amid projected increase in the profitability of the company, still implying a solid 21.8% discount to peer's median and respective appreciation potential.

EV / EBITDA and EV / SALES of LUXOFT are lower than the average for similar companies. I.e., LUXOFT is currently traded at a 24.0% discount to its peers based on 2018E EV/EBITDA, and even higher 27.0% discounts for 2019F amid projected company's EBITDA growth. This indicates that the return on invested capital will increase. Overall, the analysis of the company's value using the MMM method confirms that LUXOFT is undervalued.

In Section 3.1 we analyzed the effectiveness of the chosen enterprise strategy based on the valuation of capital. We used effective methods of valuation and both methods showed us the growth of market capitalization and stock prices in the future. Based on this research, we can conclude that the chosen strategy of the enterprise is effective and competitive in the global market of IT services.

### ***3.2. Estimation of existing risks of implementation of the current strategy of the IT company LUXOFT***

The effectiveness of the chosen strategy of competitiveness of the company can be traced to the existing risks. They include business and operational [BR], market risks [MR], risks associated with the company's image and reputation [RI], financial market risks [FR]. It is necessary to divide them into sub-items. And now, in detail about each group (Appendix 13).

**[BR1] Professional staff skills.** In this aspect, professional recruitment, continuous monitoring of quality of knowledge and professional development is critical, since the future of the company depends on the employees themselves.

**[BR2] "Unsuccessful takeover".** Due to the fact that LUXOFT uses an integrated growth strategy there is a probability of "unsuccessful takeover". In order to carry out the acquisition process, the company must spend a lot of financial and labor resources as well as time.

**[BR3] Salary.** Provided labor plays a key role among company's resources, salary constitutes an important part of its cost of sales. Globally there is trend towards its growth in this industry, what may lead to a decrease in profitability.

**[BR4] Outflow of the personnel.** An important aspect is the fluidity of the staff and the possibility of their transition from one company to another, if it will offer more earnings to the employee.

**[BR5] Concentration of voting power in one's hands.** IBS group has a significant stake of LUXOFT's voting power (81.8% of total votes). As a result, there is a risk of control concentration over the company.

**[BR6] Deoffshorization and a change in tax policy** In the world there is a tendency towards deoffshorization. It started in 2014 and is gaining momentum. It forces individual states to make changes in tax policy.

**[MR1] Dependence from top five clients.** 54.6% of the company's revenue come from the top five clients, which creates high risks for the company's financial performance. These clients can choose a new supplier of IT products or simply stop their operations thereby reducing the market share of LUXOFT.

**[RI1] Information leakage.** It can affect the image of a company in the global market. New developments or know-how can be implemented by another company at the same time increasing the competition between competitors.

**[RI2] Risks associated with product quality.** With the development of social networks, the impact of this risk could also spread to other geographic areas than those originally involved; the combined effects could therefore have a significant adverse effect on LUXOFT's overall sales and results.

**[FR1] High volatility of exchange rates.** As LUXOFT operates in 19 countries of the world, the transactions take place in various currencies. Therefore, there is a risk of changes in company profits due to fluctuations in exchange rates.

**[FR2] Risk of lack of own funds.** As a result, it may be necessary to search for external investors for raising funds. But we see probability of such risk as low.

Thus we see the ranking of risks in the matrix of risks in picture 3.1. They indicate the effectiveness of the chosen strategy to ensure the competitiveness of the IT company LUXOFT, which operates in the world market. The company has some disadvantages, but each year senior managers and top managers ensure their elimination on problem areas.

### **3.3. Personnel policy as a key factor in ensuring the competitiveness of enterprise of IT industry**

According to the above analysis, one can conclude that personnel policy is a key factor in ensuring the competitiveness of the enterprise in the IT industry on the example of the analysis of LUXOFT.

As already mentioned above the company had 12,766 employees in FY2017. In the company there are generally four departments, such as

engineering and development; human resources, sales and marketing; administration; executive management (Appendix 14).

Permanent acquisition challenges make the company's management ready to provide highly skilled workers. That is why the HR department provides work in the following areas:

- recruiting and retaining sufficiently skilled professionals;
- training and supervising the personnel to maintain high standards of quality.

The company develops the talents of employees through a combination of training and mentoring programs with the involvement of senior technology professionals and industry experts. Each new employment is subject to a curriculum that covers the methodology and industry standards, technologies and tools, management and communication skills, software development processes and domain knowledge. The company has its own e-learning system through LuxTalent and E-learning library.

The company's training program provides a variety of professional competences, including disciplines rarely covered by university programs such as system analysis, system architecture, and project management.

That is why the risks associated with the personnel are identified as one of the main ones that affect the company's competitiveness in the IT industry. According to the analysis they belong to the risk group of the risk matrix «Business and operational risks»:

1) **professionalism of the personnel.** The human factor plays an important role, as errors in the work of the employees in this area are difficult to identify;

2) **outflow of the personnel.** According to the growth of employees' wages of the IT industry there is a risk of outflow of personnel to a competing company because of the offer of higher salary compared to LUXOFT.

HR policy is a key factor in ensuring the competitiveness of the enterprise in the IT industry. So the company pays considerable attention to the selection, placement, certification, re-certification of the staff, as well as training and mentoring programs for them.

### **Conclusions**

The choice of the strategy of protecting the competitiveness of the enterprise is an important task, as it depends on the future of the company. In order to determine this strategy, certain tasks were performed.

The competitive advantages of the company were determined in the conditions of digitalization, which require from the enterprise creation and preservation of a positive image in the market in the long run.

The peculiarities of the strategy of increasing competitiveness are based on the following data: achievement of the mission of enterprises in the and the chosen direction of development with the necessary resource potential. It is important to identify mechanisms of supporting the strategy at stages of economic development.

The set of internal factors influencing the company's competitiveness was determined by the McKinsey 7S model: the company's values, the strategy of centralized diversification of the company, the structure of the company, the company's work system, company's staff and the style of management.

The external factors include: political, socio-cultural, economic and technical, which were determined by Pest's analysis, as well as the pace of world GDP growth and the pace of development of the IT industry.

In Section 3.1 we analyzed the effectiveness of the chosen enterprise strategy based on the valuation of capital. We used effective methods of valuation such as DCF and MMM and they showed the growth of market capitalization and stock prices in the future. The chosen strategy is effective and competitive in the global market of IT services, as evidenced by the small number of risks that can not destroy the company in general.

It was proved the importance of personnel policy in ensuring the competitiveness of enterprises in the IT industry on the example of analysis of LUXOFT. The risks of "professionalism of the staff" and "outflow of the personnel" have been assessed and explained as one of the main issues in the analysis of enterprise activity.

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## APPENDIX 1

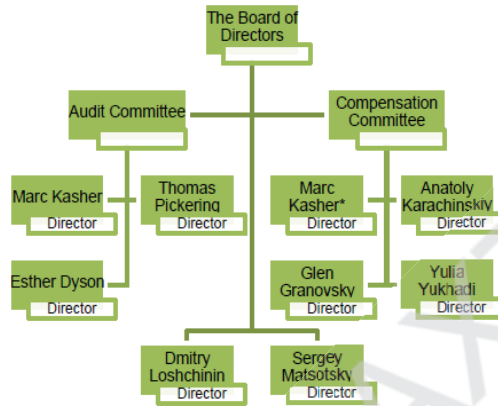
## ACQUISITIONS OF LUXOFT COMPANY

Acquisition date	Acquired company	The scope of the company	Share price of the company, USD
7th of July 2014	<b>Mecel Populus Suite</b>	a company focused on designing, developing, and deploying user interfaces for distributed embedded systems	37.33
6th of October 2014	<b>Radius Inc.</b>	a U.S.- based company focused on the growing IoT industry	36.71
18th of February 2015	<b>Excelian Limited</b>	a UK-based company focused on trading risk management software for the financial services and commodities markets	49.85
23rd of February 2016	<b>Symtvision GmbH</b>	a company focused on scheduling analysis, architecture optimization, and timing verification	51.17
18th of July 2016	<b>INSYS Group</b>	a U.S.-based consulting provider focused on IT serving a large number of blue-chip corporations	54.47
13th of September 2016	<b>Pelagicore AB</b>	a company focused on open source software platforms, services for in-vehicle infotainment, human machine interface development	52.15
1st of February 2017	<b>IntroPro</b>	an engineering consultancy with deep expertise spanning the complete lifecycle of enterprise and embedded software architecture focused on TV, Media, and Entertainment industry	58.75
23rd of March 2017	<b>derivIT Solutions Pte Ltd.</b>	a Singapore-based consulting provider of financial services-focused technology	58.60
28th of September 2017	<b>UNAFORTIS</b>	a Swiss-based company focused on wealth management in Avaloq	46.35

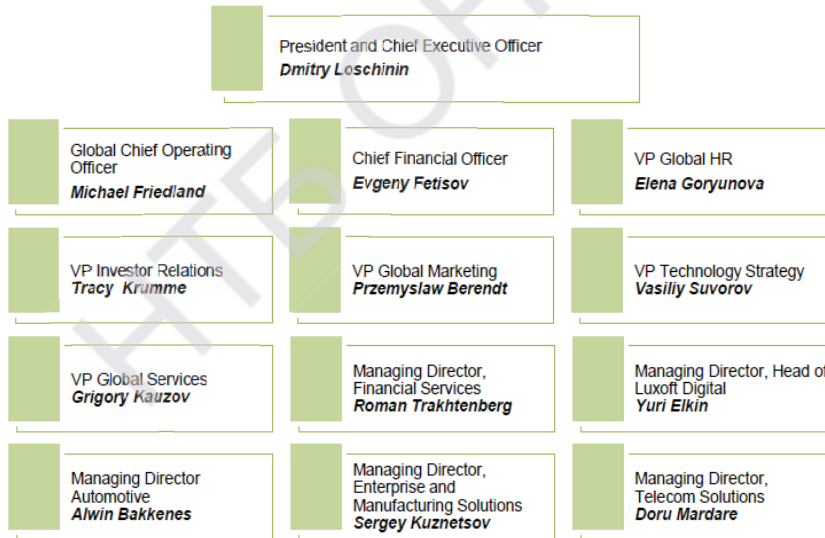
Source: LUXOFT data, team's estimations

APPENDIX 2

COMPANY'S STRUCTURE



MANAGEMENT TEAM



OUTSORSING

Source: LUXOFT data, team's estimations

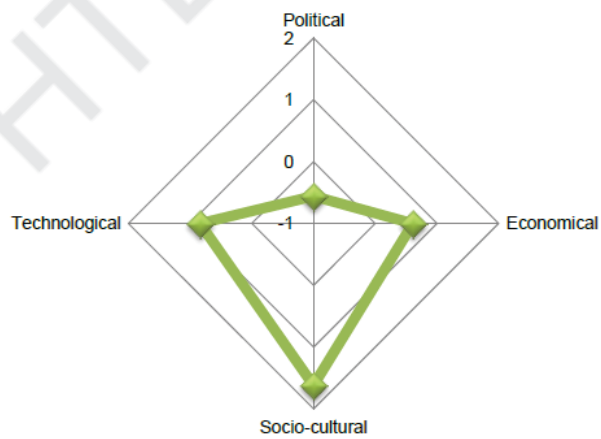
APPENDIX 3

REVENUE BY GEOGRAPHY AND LUXOFT'S OFFICES



APPENDIX 5

PEST-ANALYSIS



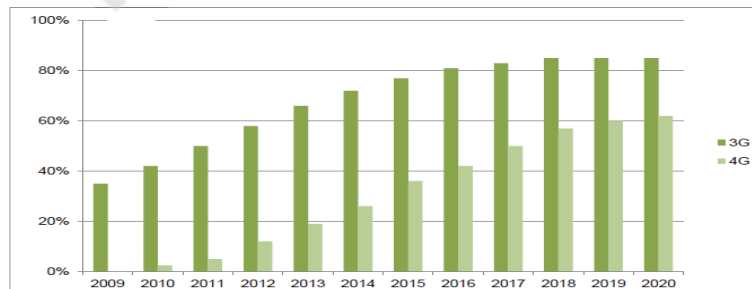
Source: team's estimations

ECONOMICS AND ADMINISTRATION

Factors	Weight	Rating	+/-	Balanced assessment	Solutions to the problem or implementation opportunities
<b>Political</b>	<b>0.10</b>			<b>- 0.56</b>	
Close business relations with a country against which international sanctions are applied.	0.02	3	-	0.06	LUXOFT positions itself as not a Russian company.
Intellectual Property Protection.	0.04	7	-	0.28	The company employs commercially reasonable methods, including confidentiality agreements with employees and consultants, to protect know-how and trade secrets.
Deterioration of economic conditions in the United States or Europe.	0.01	1	-	0.01	
Distribution of deoffshorization processes.	0.03	7	-	0.21	Moving profits to countries with lower tax rates.
<b>Economical</b>	<b>0.30</b>			<b>+ 0.61</b>	
Growth of global GDP (World bank's forecast in 2017 – 2.7%, 2018 – 2.9%, 2019 – 2.9%).	0.04	3	+	0.12	
Increase in business activity in developing countries (3.6%) and in developed countries (3.4%).	0.08	9	+	0.72	The company implements Global Upgrade Program from 2015 to expand on different markets.
An increase in currency fluctuations in Europe, namely a decrease in the value of the euro against the U.S. dollar (56.5% Luxoft sales in U.S.dollars, 28.3% in euro).	0.05	7	-	0.35	Weakening of the euro against U.S. dollar, as well as strengthening of the Russian ruble and Polish zloty relative to the U.S. dollar.
The inflation is increasing globally, that means global economy is not emerging from inflation impact (IMF's forecast in 2017 – 3.2%, 2018 – 3.2%, 2019 – 3.4%).	0.05	4	-	0.2	
Continuation of the growth trend of investment attractiveness of the information technology industry (Herald Keeper's forecast in 2017 - average in IT industry by 18%).	0.08	4	+	0.32	
<b>Socio-cultural</b>	<b>0.25</b>			<b>+ 1.62</b>	
Rising unemployment in the world.	0.01	3	+	0.03	
The level of education, as well as the standard of education in the industry LUXOFT HOLDING, INC.	0.05	7	+	0.35	The company invests in reskilling current employees.
Increasing the level of education in the field of computer science.	0.06	7	+	0.42	
Changing the nature of work, flexible work.	0.03	4	+	0.12	The personnel works on outsourcing.
Increase in average wages in IT industry (average by 3%).	0.1	7	+	0.7	Search for regions with cheap labor markets.
<b>Technological</b>	<b>0.35</b>			<b>+ 0.84</b>	
Increasing coverage of the Internet in the Asia-Pacific region.	0.10	8	+	0.8	Creation of new offices in the Asia-Pacific region to expand the client base.
Faster moral obsolescence of the main IT industry through constant introduction of new products.	0.13	8	-	1.04	
Increase of technological innovations in the field of transport (electric vehicles), medicine (artificial organs, advanced materials, biotechnology and genomics).	0.12	9	+	1.08	Creation of a new vertical healthcare and pharmaceutical.

APPENDIX 5

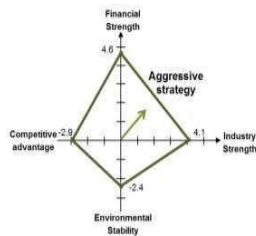
NETWORK COVERAGE IN % OF POPULATION



APPENDIX 6

SPACE MODEL

FACTORS OF FINANCIAL POTENTIAL (FS)									
Rate of return	low	0	1	2	3	4	5	6	high
Financial dependence	disbalanced	0	1	2	3	4	5	6	balanced
Liquidity	disbalanced	0	1	2	3	4	5	6	balanced
Ability to increase the level of accumulation and to attract capital from external sources	big	0	1	2	3	4	5	6	small
Return on equity (ROE)	low	0	1	2	3	4	5	6	high
Return on investment (ROI)	low	0	1	2	3	4	5	6	high
Production costs	high	0	1	2	3	4	5	6	low
Amount of debt	high	0	1	2	3	4	5	6	low
<b>Average</b>					<b>4.6</b>				
FACTORS OF THE ATTRACTIVENESS OF THE INDUSTRY (IS)									
The number and key characteristics of competitors, the level of competition	small	0	1	2	3	4	5	6	big
Overall attractiveness of the industry (among other industries)	low	0	1	2	3	4	5	6	high
Dependence of the industry development on the general market situation	low	0	1	2	3	4	5	6	high
The use of resources	ineffective	0	1	2	3	4	5	6	effective
Stability of profits and the general profit margin of the industry	high	0	1	2	3	4	5	6	low
Easy access to the market	easy	0	1	2	3	4	5	6	difficult
The stage of the "life cycle" of the industry	initial	0	1	2	3	4	5	6	final
Application of products of this industry in other sectors of the economy, etc.	low	0	1	2	3	4	5	6	high
<b>Average</b>					<b>4.1</b>				
FACTORS OF COMPETITIVE ADVANTAGE (CA)									
Dynamics of changes in the market share served by the organization	big	0	1	2	3	4	5	6	small
Level of quality (competitiveness) of products	high	0	1	2	3	4	5	6	low
Product life cycle	initial	0	1	2	3	4	5	6	final
Product replacement cycle	fixed	0	1	2	3	4	5	6	changeable
Loyalty of customers	strong	0	1	2	3	4	5	6	weak
Vertical integration	high	0	1	2	3	4	5	6	low
Structure of assortment v (taking into account the level of its profitability)	unprofitable	0	1	2	3	4	5	6	profitable
<b>Average</b>					<b>-2.9</b>				
Stability factors of the environment (ES)									
The influence of scientific and technological progress on the development of the industry	low	0	1	2	3	4	5	6	high
Inflation rate	low	0	1	2	3	4	5	6	high
Change in demand	small	0	1	2	3	4	5	6	big
The range of prices for competitive products	small	0	1	2	3	4	5	6	big
Price elasticity of demand	not flexible	0	1	2	3	4	5	6	flexible
The growth rate of the country's economy	low	0	1	2	3	4	5	6	high
The impact of capital on the development of the industry	low	0	1	2	3	4	5	6	high
Degree of influence of the state on the industry (regulation of activity)	low	0	1	2	3	4	5	6	high
Degree of dependence of the industry on labor resources	low	0	1	2	3	4	5	6	high
Degree of dependence of the industry on infrastructure development (including the development of information technology), etc.	weak	0	1	2	3	4	5	6	strong
<b>Average</b>					<b>-2.4</b>				



By analyzing SPACE was determined that LUXOFT has chosen **Aggressive Strategic Position**. These conditions are typical in an attractive industry with small ambiguity in the environment. The company gains competitive advantages that it can save and maximize through its financial potential. Threats are insignificant, it is important to concentrate on protecting interests. Mechanisms are aimed at:

- Expansion of production and sales;
- Price war with competitors;
- Development of new sectors of the market;
- Promotion of brands.

APPENDIX 7

PORTER'S FIVE FORCES MODEL

SUBSTITUTE GOODS

Parameter Rating	Commentaries	Parameter Rating		
		3	2	1
Substitute Goods	Are able to provide the same quality with lower price	Exist and own high market share	Exist, market share is low	Do not exist
			+	
<b>MARK</b>				
1		Low threat level		
2		<b>Medium threat level</b>		
3		High threat level		

INNER DIVISION COMPETITION LEVEL RATING

Parameter Rating	Commentaries	Parameter Rating		
		3	2	1
Competitors amount (players)	The higher number of players on the market the higher competition level and market share losses	High market saturation level	Medium market saturation level (3-10)	Low number of players (1-3)
		+		
Market growth rate	The lower market growth rate, the higher stable market redistribution risk	Stagnation or market decreasing	Slowing down, but increasing	High
		+		
Differentiation of the good on the market	The lower good differentiation the higher product standardization and higher risk of consumer switching between different market companies	Companies are selling standardized products	Products are standardized by key characteristics, but are different by additional benefits	Products have severe differences
		+		
Prices rising limitations	The higher ability to rise prices the higher profit loss risk due to stable costs rising	Hard price competition on market, opportunities to increase prices are absent	There is opportunity to increase prices only by covering increasing costs	There is always an opportunity to increase prices by covering increasing costs and increasing profit
		+		
<b>MARK</b>				
4		Low inner division competition level		
5-8		Medium inner division competition level		
9-12 - 9		<b>High inner division competition level</b>		

NEW PLAYERS ENTERING THREAT RATING

Parameter Rating	Commentaries	Parameter Rating		
		3	2	1
Production of good or service scale economy	The higher production volume, the lower production materials prices, the lower influence level of fixed costs on production unit	None	Only few players on market have it	Significant
		+		
Strong brands with high knowledge and loyalty level	The stronger existing brands position in division, the harder it is for new payers to enter	There are no strong players	2-3 strong players with more than 50% market share together	2-3 strong players with more than 80% market share together
		+		
Product differentiation	The higher goods and services variety, the harder it is for new players to occupy free niche	Low products variety	There are microniches	Each niche is already occupied
		+		
Division entering investment and costs level	The higher starting investment level, the harder it is to enter the division	Low (pays off in 1-3 months)	Medium (pays off in 6-12 months)	High (pays off in more than a year)
		+		
Distribution channels access	The harder it is to reach consumers, the lower division attractiveness	Access is fully opened	Access requires moderate investments	Access is closed
		+		
Government policy	Government can limit or shut division entering opportunity by using licensing, licensing resources sources access and prices regulation	There are now limiting governmental acts	State's interference is low	State is regulating whole division and establishing
		+		

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				limits
			+	
Existing players' readiness to decreasing prices	If player sare ready to lower prices in order to save the market share than there is a great new players entering barrier	Players will not decrease prices	Strong players will not decrease prices	Players are decreasing prices on entering attempts
				+
Division growth rate	The higher division growth rate, the higher amount of new players are willing to enter the market	High and increasing	Slowing down	Stagnation or dropping
<b>MARK</b>				
8	Low new players entering threat level			
9-16 - 16	Medium new players entering threat level			
17-24	High new players entering threat level			

PROVIDER MARKET POWER

Parameter Rating	Commentaries	Parameter Rating		
		3	2	1
High volume buying consumers share	If consumers are concentrated and performing purchases in big volume, then company should always perform concessionally	More than 80% of purchases is made by few clients	Moderate number of clients are holding about 50% of purchasing	Purchasing volume is divided between all clients
			+	
Substitute goods purchasing predisposition	The lower product unicity, the higher possibility consumer finding an alternative and not taking additional risks	Product is not unique, there are analogs on the market	Product is partly unique, there are differences from others	Product is totally unique, there are no analogs on the market
			+	
Price responsiveness	The higher price responsiveness, the higher possibility of consumer purchasing lower price competitive product	Consumer will always switch to lower price product	Consumer will switch due to huge price difference	Consumer is absolutely unresponsive
			+	
Consumers are not satisfied with existing products quality	Quality dissatisfaction creates hidden demand , which can be satisfied by new player or competitor	Dissatisfaction with key product characteristics	Dissatisfaction with secondary product characteristics	Absolute satisfaction with product quality
			+	
<b>MARK</b>				
4 - 4	Low consumer loss threat level			
5-8 - 8	Medium consumer loss threat level			
9-12	High consumer loss threat level			

BUSINESS THREATS BY PROVIDER

Commentaries	Parameter rating	
	2	1
The lower number of providers, the higher possibility of unreasonable prices increasing	More than 80% of purchases is made by few	Moderate number of clients are holding about 50% of

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	clients	purchasing
The higher provider resources volume limitation, the higher possibility of unreasonable prices increasing	Product is not unique, there are analogs on the market	Product is partly unique, there are differences from others +
The higher switching costs, the higher possibility of unreasonable prices increasing	Consumer will always switch to lower price product	Consumer will switch due to huge price difference +
The lower division priority for provider, the less attention and efforts is put by him, the higher unqualified work risk	Dissatisfaction with key product characteristics	Dissatisfaction with secondary product characteristics +
<b>MARK</b>		
4-4	Low influence level	
5-6	Medium influence level	
7-8	High influence level	

Competitive power by Porter	Marks	Mark from 0 to 5
Substitute Goods	2	2
Competitors	9	4
New Players	16	2
Consumers	4	3
Providers	4	1

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