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DIGITAL TRANSFORMATION FOR MARKET ACQUISITION

Abstract. *The world has become quite digital and interacted, nowadays. The speed of data generation is accelerating, and it is estimated that 90% of the world's data has been produced in the last two years. 212 billion things – from cars to electrical equipment – will be linked to the Internet and there will be more than 8 billion mobile users in the world, by 2020. And more than half of workloads are processed in the cloud and that amount will only grow in the predictable future. It is needed to react quickly to market signals and cooperate not only with clients, but also with suppliers and third-party logistics providers. The technology such as the Internet of Things and social networks is required to be utilized frequently, to get closer to customers. As the Internet of Things and Big Data turned out to be available to any business, the processes are dramatically simplified to achieve efficiency.*

Keywords: *Internet, digital economy, clouds, data, information.*

Аннотация. *В настоящее время мир стал довольно цифровым и взаимодействующим. Скорость генерации данных ускоряется, и, по оценкам, за последние два года 90% мировых данных были получены. 212 миллиардов вещей – от автомобилей до электрооборудования – будут связаны с Интернетом, и к 2020 году в мире будет более 8 миллиардов мобильных пользователей. Более половины рабочих нагрузок обрабатываются в облаке, и это количество будет только расти в предсказуемом будущем. Необходимо быстро реагировать на сигналы рынка и сотрудничать не только с клиентами, но и с поставщиками и сторонними поставщиками логистических услуг. Технологии, такие как Интернет вещей и социальные сети, должны часто использоваться, чтобы быть ближе к клиентам. Поскольку Интернет вещей и больших данных оказался доступным для любого бизнеса, процессы значительно упрощены для достижения эффективности.*

Ключевые слова: *Интернет, цифровая экономика, облака, данные, информация.*

Introduction. Companies require to adapt to the altering business structures and IT costs are driven by the requirement to see business developments. Managers need Information Technologies to be focused on economic results, continuous improvement, and innovation. Digital transformation can be accepted as the speeding up of business activities, methods, competencies and

opportunities of digital technologies, so digital transformation can be considered as business transformation. Sometimes it is preferred to use the term digital business transformation instead. The marketers have been made to focus their efforts on building long-term initializations instead of short-term via online platform. The whole world has converted a Global community which is interconnected just by a click of mouse. Mobile Marketing, where customers can access consumable products with the usage of smartphones has become prevalent as well. The mobile applications have started to benefit the markets more as customers spending maximum time on their smart phones. By understanding customers' desires through customer-check in tools like Facebook, Instagram etc. the brands now control and manipulate customers' actions.

The impact of digital transformation on modern economy. Digitization is going to reshape the world economy. Business and societies are converted into interrelated form in real time, leading to a new digital economy. That is more cooperative, intellectual, reactive and competent with a dramatic increase in efficiency and economic value. The digital economy is going to renovate our living and working conditions. And it will realize it in a very short time period, which is fundamentally smaller than any major economic revolution in history. Networks connecting individuals, groups, and organizations have emerged in last few years. Initially, personal networks like Facebook and LinkedIn were evolved, and later business networks started to evolve. The Internet of Things made these networks even more connected it resulted in a new digital economy where everything is becoming digitized. Besides, a lot of other examples are in businesses nowadays. The world's largest taxi company Uber owns no taxi and it is transforming into an urban logistics company with hundred thousands of drivers. The largest accommodation provider Airbnb owns no real estate and the largest e-commerce company Alibaba owns no inventory. The world's largest movie provider Netflix owns no cinema and the world's largest book distributor Amazon has not its own books. All these examples prove that huge transformation has already started and is modifying the whole industry. In this proactive state, an organization begins to transition into a real-time enterprise. This transformation will continue to renovate the business processes into more competitive environments. And it will modify how we design, plan, realize, distribute and activate our products and services. Companies must serve their customers in a diverse way, and they must partner and collaborate with suppliers continuously without any stops. And company assets must be maximized and maintained. The key factor in realization of abovementioned issues is a digitized data thread across the lifecycle of your products, from de-

sign to end product. In other words, product realization should be done considering the role of costumer centricity. Previously, customer centricity has been accepted demand-driven, but for nowadays it has evolved into market-driven with the help of connected, and effective customers. Today, clients are very informed, linked and can get tweets, statuses, feedbacks and comments for goods that they are planning to purchase. Today, it is important to perceive all forms of demand from both structured and unstructured sources. More and more channels are evolving to serve customers, and this brings with it more complexity for the supply chains that support them. Therefore, we need to think like clients and bring what they require and how they want to see it. It means omni- channel fulfillment is required for satisfaction of omni-channel sales. Customers want to deliver on the same day the products that they bought online. That's why there is a necessity for demand to be thought differently. It is very difficult to compete with aggregated demand, because it is investigated in a very detailed level. The other factor is about personalized merchandises. And in this case customer centricity can go beyond and clients want to purchase things precisely designed for them. Today, individualized services and commodities are widespread, and anyone can shape his/her own automobile, individualize his/her own parfum etc. Therefore, individualization has become a shared characteristic for most companies. It could be seen in different products in the market starting from T-shirt to cell phone. As producers try to keep up with the requirement of individualized commodities and follow the fluctuating demand market, they are searching for quickness, to a producer with a lot size of 1. They are founding smart goods that are Internet-of-Things- enabled. The Internet of Things and Industry 4.0 are modifying traditional commerce models by joining clients, goods, and assets. 3D printing is another sample of a modern technology that can take the personalization of goods closer to the end customers. The sharing economy is another part of this structure. Meeting these challenging clients takes a cooperative determination from numerous partners across the commercial network. There is also capability of joining all the smart machines and assets to one network. Commercial systems aid producers to achieve the required visions into client desires, providers' actions and agreement producers' performance and apparatus utilization. This not only guarantees high value and standards, but also improved demand for sustainability is met. The transparency process progresses partnership, deciding and responding to moving buyer and commercial demands. Resource scarcity is another significant part of digitization process which should not be ignored, and any sustainable organization should be aware of the resource scarcity of labor and natural resources. Digital transformation is modifying the jobs and

functions of most of professions today and they need to control Big Data, both structured and unstructured, now available from clients, linked assets, social media, the Internet of Things etc. This fact triggers the requirement for data scientists who can analyze and utilize this abundant information in real time. To control progressively changing demand, we are also seeing a huge rise in the use of reliant labor. Simultaneously, where and how labor is utilized is evolving. Another element is the scarcity of raw materials and the decreasing natural resources, like water. Basically, it is a matter of sustainability and how-to controlling world natural resources. 21st century companies try to progress their operation and services in order to achieve more profit. In order to achieve this energy and environmental resources are as important as financial and human resources. In other words, four diverse points of view are required to be arranged based on company priorities and tasks. Customer centricity is highly applicable to consumer-oriented and retail companies which are already entirely demand driven. Personalized goods are prevalent in discrete manufacturing and engineering companies which try to achieve M2M connectivity and the Internet of Things in the context of manufacturing and the challenge of the lot size of 1. The sharing economy includes transportation, logistics service providers, and wholesalers. and to bring all of these together business processes and analytics in real time must be smarter, faster, and simpler.

Sharing Economy. Sharing economies initially come from the buyer area and they define peer-to-peer-based sharing of access to goods, services and data and all of this is done via networks. Historical one-to-one communication, in other words, e-mail is very simple, but social media is very complicated and influential. In social media, connection is not made with just one person, but rather with network of friends and if any information is published, and others can respond to it immediately. There is tremendous difference between two of them, companies embracing advantages of the digital networks benefit the harvest of them. We can give examples of websites as AliExpress, Trendyol etc. which have transformed modern business and connected network of retailers to network of consumers. And all of these cannot be realized without the power of data.

Resource Scarcity. Resource scarcity is reality a controversial topic because individuals tend to whether highly overrate or highly underrate the risk of resource scarcity. Some people believe that resources are not as scarce, and they give the example of peak oil was expected to run out just a few years away. Therefore, these people believe that energy alternatives are always

worked on and such scarcity information is intended to be used by political and economic agendas. On the other hand, others accept that resources are scarce and are getting much scarcer. Conferring to United Nations statistics, by 2050, there will be over 9 billion citizens in the world and as living standards continue to increase in developing countries, this reasonably must result in deficiencies. Researchers overestimating resource scarcity believe that it is very difficult to cope with it, so it can present chances for smart businesses. The capability to adjust rapidly is an economic advantage, as is investigating possible situations and preparing for them. The digital economy is delivering transformational ways to acclimatize to scarce resources. Three different types of challenges can be seen. Therefore, talent acquisition, which is recruiting talent, experienced professional employee is not a new problem, but fluctuations in the labor force are making it tougher. This situation stems from the high rate of staff turnover among experienced professionals and at the same time career expectations are shifting among youngsters. Old-style supply chain management services are not sufficient to run a digitized supply chain and instead of manual planning processes, nowadays huge amounts of data – Big Data is now accessible from new sources, knowledgeable clients, Internet of Things and social media. Simultaneously, labor utilization process is being modified. To give an example, we see augmented reality services optimizing the workforce are becoming prevalent in warehouses and robotics slowly replaces human workforce.

According to the statistics of United Nations, the world will require 30% more water, 50% more food and 40% more energy and by 2030. Progress in developing countries is empowering the demand for final products and at the same time access to raw materials, such as minerals, oil and even water are becoming more controlled and progressively firmer to gain as claim surpasses stream. Furthermore, society's prospects alter regarding acceptable way of doing business. Defining what is allowed and what is fair has historically been dictated by governments via rules, but the rise of social media and the power of the Internet has changed the balance away from governments to mass opinion. Enterprises with complex supply chains are considering problems that formerly they could just ignore. After catastrophes, in textile factories, of Bangladesh, international brands that had been outsourcing from there, faced significant damage to their profits. Society as whole and social media users did not agree that these global brands were not accountable for the misconduct of the firm that run the factory. Today, it is not easy anymore to say: "We have no information", or "we aren't culprit". Sustainability is going to have a significant role in business operations with respect to environmental and social

responsibility. Corporate social responsibility is very curial as businesses are judged by its clients, its stockholders, its staff, and even citizens. Therefore, companies that accepting and adapting to this issue will be more effective in the digital transformation. Supply chain interruptions are another important supply chain risk. Imagine the Internet of Things providing data that can detect and alert to conditions that might threaten your supply chain. To clarify, during any natural catastrophe, a supply chain network model complete with directly recognize which provider could be at risk and find new alternative bases of source.

Individualized Products. Individualized products have significant role in digital transformation and some of the key elements of individualized goods contains the platform, personalization, Industry 4.0, lot size of one, and digital inventory. Individualization: As clients are becoming more well-informed and demanding, they want to achieve a unique, personalized purchaser practice. They not only need to order a product whichever they want, be it in a store, online, or via their smartphone, they also try to get it modified to their specific desires. Currently, clients are expecting the customer experience to be customizable and personalized services and goods are prevalent in most of the places. Shorted product lifecycles and faster innovation cycles are accumulating pressure on manufacturers to rise the time to market by improving the hand over from design to manufacturing. Companies try to optimize the return on speculation before the next innovation tendency or new troublesome technology makes their present goods useless. Relationship with allies to drive elastic, open and active innovation development is critical. And customer input is required to be built into the process of recognition and answer to movements in the market. Smarter products are widespread according to new business models. Businesses are implanting sensors in their goods and, and are involving more and more in technology, hiring computer engineers and programmers, and reconsidering the worth brought by their goods. For example, plants running utility workshops utilize smarter sensors fixed onto the compressor to minimize unscheduled machine downtime throughout IoT-enabled predictive and preventive maintenance. Quicker innovation cycles demanding the digital handover and bidirectional association of engineering design data for consumption by industry is driving associated production. Modern industries have been revolutionized with the usage of 3D printing over the past few years. As producers try to control with the requirement for individualized products and go with the changing demand market, they are searching for the quickness of a producer of a lot size of 1. We can give the example of Harley-Davidson com-

pany. They have completely remodified their York, plant to produce all machinery and logistics devices to have sensors and location awareness. The lead time to produce customized motorbikes have been reduced from a 21-day cycle to six hours by the company. Therefore, it is not possible to see two exactly same bikes in sequence. More than 1500 formation selections exist for each model and for each line can produce one motorcycle in 1.5 minutes. Industry 4.0 and Internet of Things are altering traditional business models by connecting humans, goods, and services. Nowadays, companies also begin to understand the full potential of the interlock between physical and digital resources and Internet of Things. To clarify, automobile producers allow consumers to configure an automobile online with the selections, colors, and arrangements they want. Coca-Cola has presented the Coca-Cola Freestyle, a touchscreen soda fountain that allows clients to individualize their coke with more than 100 diverse mixtures. Besides, Nike has announced NIKE-ID where costumer can personalize his/her own shoes, bags, backpacks, etc.

Customer Centricity. Customer centricity along with individualized products, resource scarcity and the sharing economy is one of main pillars. The global markets have had geographically and demographically shifts in last years. In the first part of 21st century, nearly doubling of the middle class was witnessed. And this development is taking place basically in the emerging markets. In other words, EY company predicts that 3 billion people are expected to enter the middle class that by 2030, which main part will be in the emerging markets. Besides, it is assumed around 225 million people in Asia can already count themselves as middle class. All these mentioned facts intensifies the demand for products as well as stretching the logistics networks that must satisfy this demand. Additionally, demographic challenges should not be forgotten. The 21st century buyer is always connected and doesn't act without searching the Internet. The millennial generation has developed as a major demand driver with access to vast amount of information about goods and trends via social media. And the Generation Z teenager, will suppose everything to be accessible by means of smart phones. The way that companies are conducting business are being changed by these dynamics. In order to seize a customer's attention, producers are steadily in search of new ways. Any person is able to buy over various channels at any time on any device as a buyer. To clarify, it is possible to buy from home via a PC or mobile device while laying over sofa. Any person is able to achieve messages from phone as walking on the street and witnessing new offers and promotions for clients. Moreover, webrooming which is checking out a product online and

buying it in the store has become prevalent. Customer centricity has always been taken as demand-driven, but with associated, knowledgeable and pre-disposed clients, demand-driven has changed into market-driven. Historical estimates, instructions and even point-of-sales data are not the only sources of data to trigger renewal processes. We not only need a sales forecast, but we sometimes need a weather forecast or a traffic forecast, which can help predict surges or drops in demand in specific regions. Today not only sales orders but also market reports and sentiment analysis to see trending has become necessity. Consumer giving order online, expects to deliver it on the same day, or at least the next day. Therefore, the need becomes to think about demand differently. It is not possible to cope with aggregated demand easily, so detailed level to service a channel, a market center is needed. Visibility and instantaneous information gathering is significant, and the concept of a Supply Chain Control Tower provides end-to-end visibility. Traditional supply chain processes where a planning consumes 4 to 6 hours are not adequate, so information in real time environment to enable simulation of different scenarios is required. Complexity is introduced by omni-channel sales and the speed required to fulfill the demand, the distribution network to support the omni- channel approach is critical. Abundant structured and unstructured customer-demand data is required to be seized and manipulated to progress more innovative business models. It is widely accepted that only 42% of companies say they recognize how to utilize the data available to them. In other words, demand planning in today's fast-paced, fast growing and quickly changing economy is not an easy job. In today's digital economy, digital demand signals which is unstructured data from customers via social media and mobile devices is essential to be apprehended. Spontaneous deliveries are the standard, stores are allowing clients to purchase via Internet and pick up at the adjacent store. Major retailers have brought the online business to the store, and the store business to online sales and consequently, changing the logistics process to send orders from anyplace. As same-day delivery setups turn out to be the standard, it is required to reconsider distribution networks. Forward-looking companies are already utilizing telematics and Internet-of-Things signals from automobiles to improve and redirect distributions to push up the transport operations. Customer centric processes are formed by connecting orders, forecasts, point of sales, and social data to apprehend both short-term and long-term demand. Connecting this data with R&D, manufacturing and supply chain processes allow the design, production, and delivery of the most lucrative solution and facilities to the consumer and optimizes customer satisfaction.

Conclusion. To make a conclusion, optimizing business technology and operations via digital technology results trade growth and decrease in cost per transaction. New technologies generate abilities that can support a company obtain and retain clients whereas at the same time decreasing sales cost. Digitalization enhances companies with the ability to associate data from all client communications and previously unstructured bases into a beneficial, actionable format to improve customer experiences and costs. The main issue of digital transformation is using technology to improve the client skill. New technology allows trades to comprehend more adaptive and alert models based on client parameters that were not possible to discover in the past. Connection of enterprise-wide systems and technologies make simpler and universalizes the customer practice, irrespective of when, where, or how they interrelate with each other.

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