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## **APPLICATION OF AUGMENTED REALITY IN BELARUSIAN BUSINESS**

### **Introduction**

H. A. Wallace, the 33rd Vice President of the United States, declared that ‘the only way to achieve lasting sustainability of life is to keep moving forward and developing’. Development is a progress. Over the past decades, technological progress has brought humanity to a new model of existence,

which has greatly eased our way of life. Nowadays, the only thing people need is to point their smartphone to the building or an object in order for their 3D copy, thanks to AR, to appear on the screen of their gadget. So, what Augmented Reality really is? Augmented reality (AR) is a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view [1]. Augmented Reality is related to our embodiment, kinesthesia, movement, and transition in space. But although Augmented Reality technologies offer advantages such as liberating individuals from their normative and traditional use of spaces to develop instead deeper and more personalized ways to attain their environment [2]. With AR apps a 3D view can help your business' customers in different ways. For instance, it can improve the quality of their decision-making and increase the velocity of making those decisions.

### **The purpose of the study**

It is not a secret that nowadays our world is developing rapidly. Every year it is noticeable that various discoveries and inventions are made by scientists in absolutely different spheres. The goal is to follow the technological development and keep the pace with modern countries and the most successful organizations. That's why the purpose of the work is to explain why augmented reality is of a huge importance nowadays and to show how the successful examples of AR usage in the world-wide business can be applied by Belarusian companies. It is obligatory to determine is it worth it to implant AR into people's lives and what will be the result.

### **Relevance**

In 2016 Facebook has acquired the company – the developer of the Belarusian application for online applications MSQRD [3]. This software became a real breakthrough in the field of ICT (Information and Communication Technologies). Belarusian developers created a new style of communication that was unknown among ordinary people. Facebook was one of the first world companies to adopt this technology for business purpose. A lot of well-known and successful companies such as IKEA, Converse, Lacoste, MTV and New Your Times wanted to seize the opportunity that was made by augmented reality [4]. They followed the example of Facebook and started using AR in their business. All of them achieved a great success. For example, the Converse AR enabled Shoe Sampler app, it allows users to simply point a phone or tablet at their feet from home, and instantly see how different models and colors of shoes might look on their feet. This experience had brought a great attention of buyers thereby increasing the company's income. Having analyzed cases of AR usage in developed countries, we decided that it would be a great idea to introduce augmented reality apps into Belarusian business in order to expand and spread it. It is understandable that Belarus in the ranking of developed countries doesn't occupy leading positions, but this doesn't mean that this country cannot use the latest technologies in business, education, medicine along with the rest. Developing technologies is one of the most relevant events of this century. Therefore, we want to suggest the ways of introducing AR into the Belarusian business, so that it can compete with companies from foreign developed countries.

### **Methodology and results**

For the research the secondary data analysis and questionnaire were used. By this means, we find out, that 86 % of people are sure that augmented reality can help companies and businesses to achieve the success (fig. 1). But, only 7 % have ever noticed the use of augmented reality in our country (fig. 2).

Therefore, we decided to suggest some ways and examples about how to implement augmented reality in Belarusian business in order to improve it.

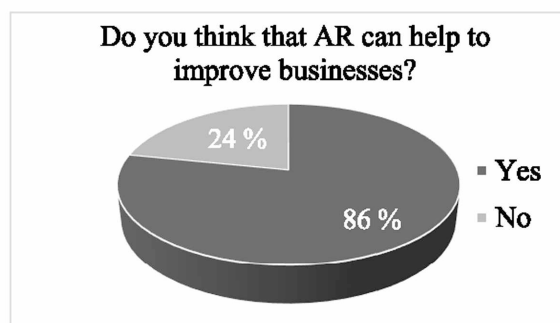


Fig. 1. Opinion about the benefits of AR in business the use

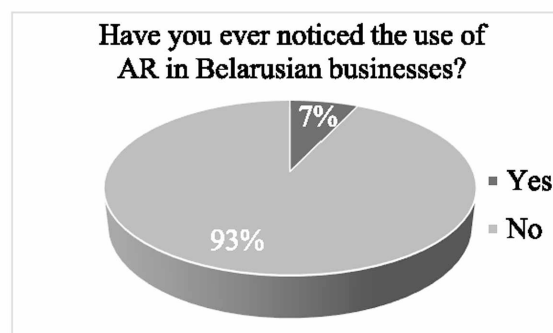


Fig. 2. The number of people noticing of AR in Belarus

According to Kobe Bryant, a great American athlete, 'Sports are such a great teacher. I think of everything they have taught me: discipline, humility and the ability to solve problems'. It is obvious from the early childhood that professional sport is about winning, losing and fighting. Considering fans and spectators, the main idea of sport is to bring happiness and joy for simple people through delivering a wide range of emotions, but many of us don't think about the basics of sport. Why does actually professional *sport* exist? There should be a deeper and more complex reason for the existence of mass sport culture, than simply delivering positive emotions, and this primary reason is money. Sport undoubtedly is about money. Sport clubs and teams are created in order to maximize their profits, each sport organization aims at enhancing its popularity, increasing the audience and therefore attracting more investors, which means profit. Thus sport is about really powerful business, that operates huge amounts of money and in countries like Belarus sport industry has an influence on the economic image of the whole country. How can the sport industry be improved with the help of augmented reality?

Firstly, it should be clarified what sports segment is one of the most important and profitable? TV-broadcasts. TV evidently brings a lot of money, because it is practically impossible to imagine sport games without TV-broadcasts. Our Belarusian sport television, unfortunately, is not as powerful as foreign competitors, our sport channels are not of a great quality. With the help of modern technologies and basing on American (NHL) and Russian (KHL) experience and expertise in the field of using augmented reality in broadcasting, we have a great opportunity to improve the quality of our national broadcasting sport channels and expand their audience.

As for *cosmetics*, AR can significantly help girls in choosing any cosmetic product. Tint of cosmetics such as lipstick and concealer on the face may differ from the tint that people see in tubes in stores. Therefore, many girls are disappointed in their choice and sometimes put the blame on firms. That's why, AR can be recommended to leading Belarusian cosmetics brands to use the software in order to avoid conflict with customers which was described above. How will it look like? A girl comes to the store, puts the phone on the lipstick or concealer she is interested in and the program shows how this or that tool will look on her face. Thus the application helps the girls not to be disappointed with their choice, speed up the decision-making process and also companies will gain the most popularity thereby increasing profits.

Also, when bringing the camera of the phone to any part of the face a tutorial on the correct application of cosmetics will appear. Likewise, useful tips about the rapid application of cosmetics on the face will appear. Furthermore, it is possible to try a new makeup without skin damage. This application will greatly facilitate the life of many girls, and saves their time.

What concerns *clothes and footwear* AR can also save a lot of our time. Who likes to stand in queues? Some people spend even whole days in shopping centers and in most cases, and most part of

time is spent on queues. Surely, everyone had a similar situation when you liked only one thing and you would like to wear it and see how it looks on you, but because of the huge queues you either didn't buy this thing, or just bought without wearing it? Now, let's suppose how the AR application will speed up the shopping process. All what is needed is to point the camera of the phone at the item of clothing/shoes/accessories a person likes and he/she can see how this item looks at you. The same application will help to choose the most suitable clothes for person's body shape, hair and skin color, based on the structure of legs / feet will help to choose the most comfortable shoes. If pointing the camera at eyes, the application can show which shape of glasses fits a person's face. The better the customer understands how the product will look on him in reality, the greater the likelihood that he will make a suitable choice, and the less – that he will refuse to buy.

Belarusian business makes a small step in developing AR apps. For example, there is an application "Wanna Kicks" which allows people to try on sneakers in the virtual space and facilitates the choice of purchase [5]. Moreover, the application manages to track the user's movement or camera rotation. A person can walk and watch how do the sneakers sit on person's feet, but still the software has some inconvenience in using which need to be corrected. Consequently, in the Republic of Belarus, the use of augmented reality is promising, but still underdeveloped sphere.

### **Conclusion**

To summarize, augmented reality has enormous potential in business, which is still to be uncovered. With the current adoption of mobile technologies and the recent advances in hardware, AR is becoming more accessible and broadly used. What are the benefits of using augmented reality? Firstly, it simplifies many things which are familiar to consumers. Secondly, it saves time, people can just "try on" virtual objects to the real environment, without leaving home. Thirdly, AR gives information here and now, which means that a person doesn't require special skills and knowledge for viewing it. Besides, AR gives the ability to show something that cannot be presented in the usual ways. Finally, the technology allows to change colors and textures of an object through application interface [6]. Based on the analysis of the application of augmented reality by such giants in business sphere as Facebook, Lacoste and IKEA it is easy to realize the importance of this technology. Facebook is the largest investor in AR, and because Facebook is also extremely popular, many are opportune to have a go at AR through the use of the Facebook social media platform [7]. That proves the easiness and necessity of introducing this technology in the field of Belarusian ICT. Belarusian business should implement the experience and expertise of foreign partners and competitors in order to attract customers and therefore maximize profit. There are several examples of applying AR technology by Belarusian organizations, but unfortunately it is not enough to satisfy the demand of people that expect some innovations in the marketing strategies of different companies. Augmented reality creates great opportunities for all the business spheres and is an effective tool for elaborating new marketing strategies.

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