

# MARKET ANALYSIS OF FITNESS EQUIPMENT DESIGNED FOR SPORTS ACTIVITIES

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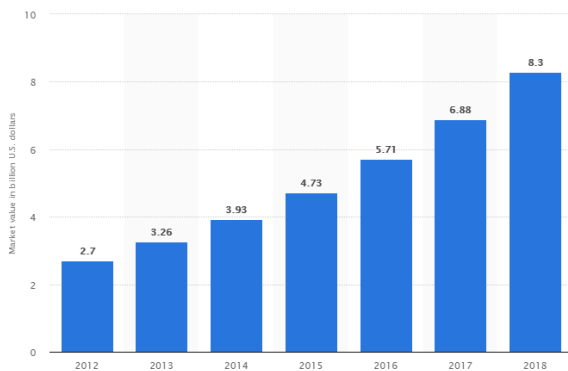
**Abstract:** Based on the evaluation of products of wearable technology and a detailed analysis of opinions on the literature, it was possible to compile the current state of the market. In the near future, by 2022, the value of the market for wearable devices is expected to continue to rise. An increase in the market value is closely related to an increase in the number of units of products sold. Wearable technologies are used more every year. Many people who use these devices believe that they will be able to improve their health and also improve their performance and fitness. However, people's demands for their quality of life are still growing and the facilities are built to meet this requirement and contribute to better human health, comfort and performance.

**Keywords:** sport, marketing, marketing communication, fitness equipment

**JEL Classification:** D8, L8, M15, M21

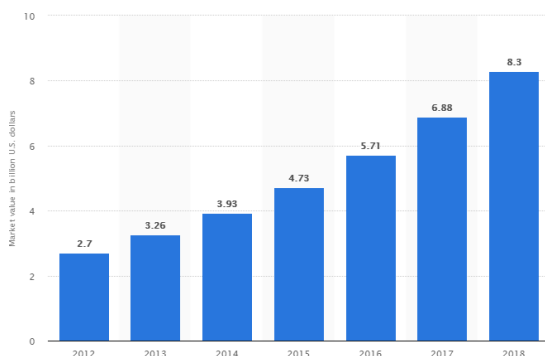
## 1. INTRODUCTION

Wearable technologies are used more every year. From 2012 to 2018, the market value of these devices tripled from \$ 2.7 billion to \$ 8.3 billion. [3]



**Figure 1** Value of the fitness equipment market  
 Source: [3]

An increase in the market value is closely related to an increase in the number of units of products sold. While only 5 million smartwatch products were sold worldwide in 2014, this number rose to 19 million in a year. In 2016, this number increased by 100% to 38 million units sold and in 2017 to 75 million. The forecast says that by the end of 2018, this number will increase to 141 million smartwatch technology products sold. [4]



**Figure 2** Fitness equipment market value in U.S. Pat.  
 Source: [4]

In the near future, by 2022, the value of the market for wearable devices is expected to continue to rise. In 2016, the share of smart watch products accounted for 21% of total sales in the area of wearable devices. By 2022, this figure is expected to increase by almost 100% from 51% to a market share of 51%. The interest of users is driven in 35% of cases mainly by the desire for a simpler life and 44% say that these devices provide them with important information. [2]

## 2. MARKETING TECHNOLOGY MARKET ANALYSIS

Based on the evaluation of the products of the wearable technology and a detailed analysis of the opinions on the literature, it was possible to compile a SWOT analysis. This analysis can be used by various institutions such as hospitals or strategy companies and also as an aid in adapting its market position.

### Strengths

The first strength of the series is innovation driven by competition. In short, this means that a number of "players" enter this market, which increases the competition and thus the need for companies to advance in this market.

The second strength is the capital potential. There are a number of willing investors, grants and other similar opportunities in the market, which are provided in order for companies to advance in this market and increase their efforts.

The third strength is the synchronization with smartphones. Almost everyone today has a smartphone. The advantage is that the wearable devices can be connected to them by means of applications, through which the person then has access to, for example, more detailed data on the average steps taken for individual days of the month and the like.

### Weaknesses

One of the main weaknesses in this market is competition. Despite the fact that competition is pushing for innovation, for many companies, high competition at start-up is a devastating factor. Before they can reach the market to sell their products, the company falls to the bottom.

The second weakness is interference. In a world where the number of different interfering signal elements is constantly increasing, the potential for loss of various types of data during transmission is also increasing.

The third very significant weakness of the market is the lack of standardization and interoperability. According to the survey, only 1 in 10 users of these technologies share their data with their healthcare professionals.

The fourth weakness in the sequence is the energy intensity of the equipment. Despite the constant reduction of components and their energy consumption, this factor is still a problem for wearable devices, which needs to be addressed in the future.

#### *Opportunities*

The first in line is the ability to monitor the safety and health of children. The devices can prevent various problems and thus prevent unjustified fears of parents. There are various possible solutions in this regard. The most interesting examples are the detection of asthma attacks, epileptic seizures, breathing problems and many other functions that can prevent many loss of life.

The second opportunity is the care of the elderly. This solution can reduce not only the cost of their medications, the length of waiting, but also the number of doctor visits required. There is also a growing interest in this age group after a quality of life and a reduction in the effect of aging.

The third in line is health monitoring. If a person has a health problem, his condition can be monitored without having to leave the house. A patient of various diseases has the opportunity to communicate his health condition using data remotely with his doctor or family.

The fourth opportunity is to strengthen the army and the law. It is not always possible for a soldier or police officer to communicate with his headquarters. His vital functions communicate his state, therefore, for him. This can also be used in mountaineering and other cases where it is possible to derive from vital functions the state in which a person is.

The fifth is sports medicine. In order for athletes to be able to take part in different competitions, they need to meet different criteria. Wearable fitness equipment must therefore monitor various vital functions in order to prevent sudden changes in health during the athlete's performance. The electrodes can massage, warm up or cool a place that requires rest, or they can help bedridden people to bleed their legs and increase muscle performance, especially in people who have undergone various types of surgery.

The sixth in a row is preventive medicine. Thus, they may include a different spectrum of functions that protect a person from situations causing health problems. One of them may be a reminder to the wearer when he is exposed to strong sunlight to use sunscreen. Or in sports, it is possible to protect athletes from various injuries by monitoring the tension in the joints when throwing or batting. Thus, many injuries would be avoided, which subsequently have to be treated with expensive surgery.

The seventh is the integration and implementation of EHR (electronic health record) solutions. Wearable technologies can help hospitals monitor the health of patients at risk. The solution already implemented at the hospital in Florida was costly, but director Ashley Simmons

praised the conveniences such as efficient staff allocation and better patient service options.

The eighth opportunity is research benefits. In science and research in the field of nutrition or health, researchers try to obtain as much data as possible to help them with their studies. These devices continuously collect the detailed data needed for different types of studies and give different signals to research subjects to use, for example, a pill and the like.

#### *Threats*

The first threat is security and privacy. Data security is always a concern when it comes to network technologies. For years, companies have been trying to figure out where the line is between data availability and confidentiality. In the past, there was a case where a hacker managed to break into a patient's insulin pump and had the opportunity to manipulate various life-threatening parameters, which he subsequently pointed out at a computer security conference. Data is a very expensive item on the market and therefore it is necessary to secure the data so that none of the hackers can access it.

The second threat is compliance with legislation. Before medical devices are placed on the market, they must meet certain conditions, the degree of compliance of which is assessed by the FDA (Food and Drug Administration). If they do not meet the conditions, they are marked with a mark that raises doubts for both doctors and patients. However, this process is very difficult to handle and so it is difficult to enter the market. Even companies such as Apple and Samsung entered the healthcare sector until 2014. It is therefore a major challenge for companies in this market to overcome legislative restrictions.

The third threat is the cost of system operations and management. It is very difficult to get these facilities if the family is in a lower salary category. Their price ranges from \$ 200-400. Thus, many people do not procure these devices until they are called to doctors or prescribed. However, managing these systems is too expensive for many hospitals due to the need for IT services.

The fourth and final threat is the challenges associated with the adoption of wearable healthcare support facilities. Doctors are afraid to put more information into patients' hands, when they are already swept away by what they are supposed to do. Some have become doctors in order to be able to help people, and the system that would be implemented by implementing this solution would be less personal and more robotic, which worries doctors. Another problem is the reluctance of patients to use the devices, or not using the devices "to the full".

#### *Evaluation of SWOT analysis*

The market is still very young and consists of elements whose purpose was to bring something to market that could help people and at the same time there would be a demand for it. Despite the cost, however, the willing entities managed to create this solution. The industry is expected to grow explosively over the next decade and gradually integrate such devices into everyone's daily lives. Privacy and security will continue to be a challenge for competent companies, but laws and restrictions can help this process. However, people's demands for their quality of life are still growing and the facilities are built to meet this requirement and

contribute to better human health, comfort and performance. [1]

### 3. CONCLUSION

One of the biggest problems for the company would be collecting data on employees from the point of view of legislation. As already addressed in the work, the question of how far it is possible to go in data collection so as not to attack human privacy is currently being addressed. First of all, the company would have to be able to implement the solution so that it does not restrict anyone's privacy. On a purely philosophical level, it would also be possible to consider whether, after implementing this solution, people would start suing society for discrimination on the grounds that their data showed that they were less physically efficient and therefore fired. Ultimately, however, we can say that the biggest problem that could arise for society after the implementation of this solution is the legislation.

For a company from wearable fitness equipment, the most important component for decision-making is the data obtained from users. Should we focus this statement on healthcare, doctors have the opportunity to obtain different types of medical records from different time periods from

these facilities. This has a benefit for the physician's ability to assess the patient's condition and thus determine the effective treatment for him, or even to anticipate the patient's arrival and thus better optimize the time schedule.

It is possible to deduce from the work what should be addressed as a priority in the future. First of all, the most important factor is to create a solution that could motivate people to take regular activity and instill this habit in them, due to the cessation of the use of these devices after a certain period of time. Most users buy such a device in the opinion that it will help them with motivation to exercise. However, the devices are effective if the person already has the given movement habits. It is therefore necessary to take a closer look at people who do not have these habits and what would force them to slowly acquire these habits until they reach a state of active lifestyle.

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