

SPORT AND WELLNESS

Sector focus



Sports gadgets

2023



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Summary



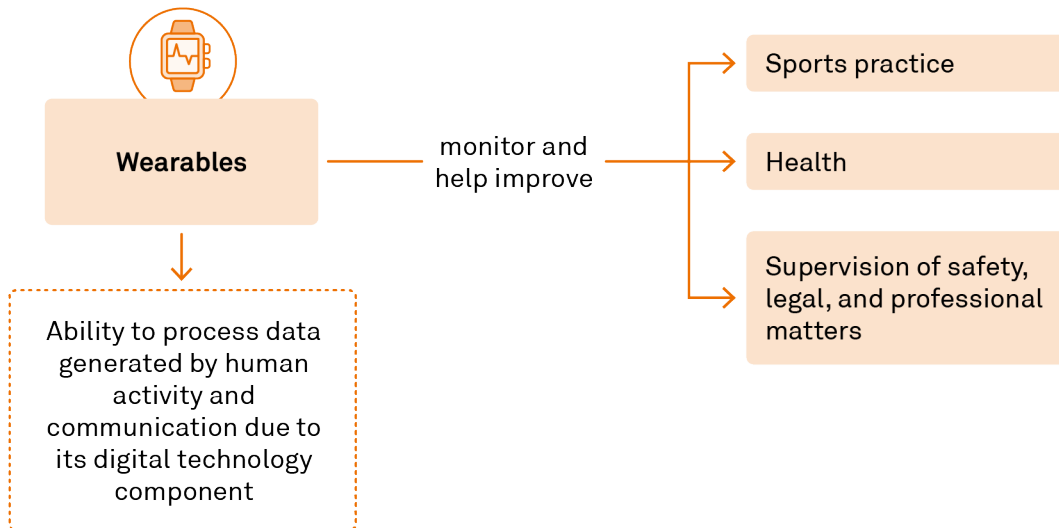
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What are sports gadgets, and why do we love them?

Sports gadgets are devices that usually combine a mechanical part with a digital part and are used in physical activity to improve health and sports performance. These gadgets are often portable (also called wearables), that is, people wear them attached to their bodies, clothing or equipment.

Wearable technology spans a wide spectrum of usability, including smart watches, physical activity trackers and smart jewellery, among others. Wearables work differently depending on the category they belong to, and may be designed to measure and improve elements such as health, sports activity and entertainment. The technology of wearables mainly works by incorporating **microprocessors**, **batteries** and **Internet connectivity** so that the data collected can be synchronised with other electronic devices, such as mobile devices or laptops. They also contain integrated sensors that track body movements, provide biometric identification and help with location tracking. In sports practice, wearables are often attached to sportswear fabric or sports equipment. Wearable devices, linked with technologies such as **GPS** or **Bluetooth**, provide real-time data that can be analysed using connected electronic devices such as laptops. In addition to tracking sports performance, wearables also collect data and metrics about a person's health status.



Figure 1. What are sports gadgets?

Source: Prepared by the authors

There are different **causes** that explain the emergence and strong growth of sports gadgets. The main ones are the following:

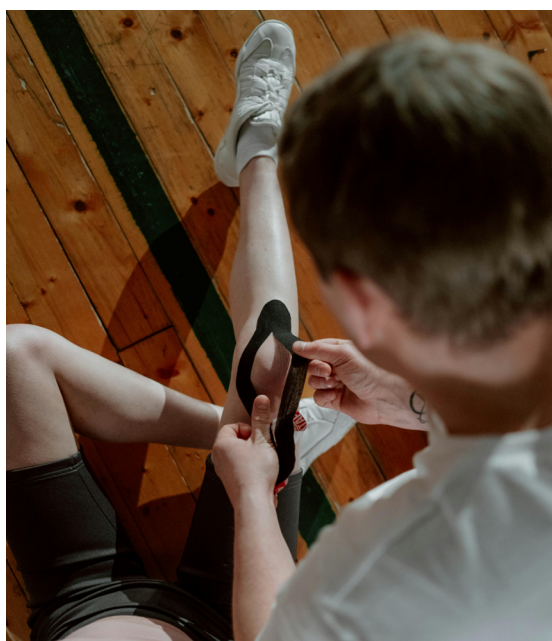
- The extensive practice of sports activity throughout society.
- The spreading of sports in the media.
- The widespread awareness of the health benefits of sports practice.
- The industry provides goods and services that favour the use of sports gadgets, such as advice, medical services and physical preparation.

Trends in sports gadgets

Modern sports technology, particularly wearables, has revolutionised the way we approach sports practice. Technological advances bring **greater precision in exercises, improved performance and more safety measures**. Thanks to sports gadgets, athletes can control their progress more accurately and identify areas they need to work on to achieve their maximum potential. In addition, sports gadgets provide **advanced analytical tools** that help trainers analyse performance, identify weaknesses and design strategies to improve the athlete's overall performance.

Sports gadgets are perhaps the most sophisticated result of the application of digital technology to sports practice, which has brought different advantages for both professional and non-professional practice, among which the following stand out:

- **Greater performance of professional and amateur athletes.** Technological advances have brought great change and progress in professional competitions, as performance limits may be challenged. In addition to ensuring the show by improving the results of athletes, they have also contributed to improving safety. In the market there are sports gadgets with which you can control and assess physical, technical and tactical training in real time. Another benefit for sports, both top-level competition and amateur practice, has been control in trademark registration.
- **Prevention and recovery of injuries.** Wearables help minimise the risk of injuries, since the exercises programmed, as well as its rhythm and intensity, are already defined by the athlete's performance information and are adjusted to their physical characteristics. The same applies when it comes to shortening recovery times in case of injury: the scheduled exercises will operate with new parameters adjusted to the injury, so recovery times can be shortened. The technification of sports gadgets has allowed their application in areas such as physiotherapy, physical conditioning and rehabilitation.

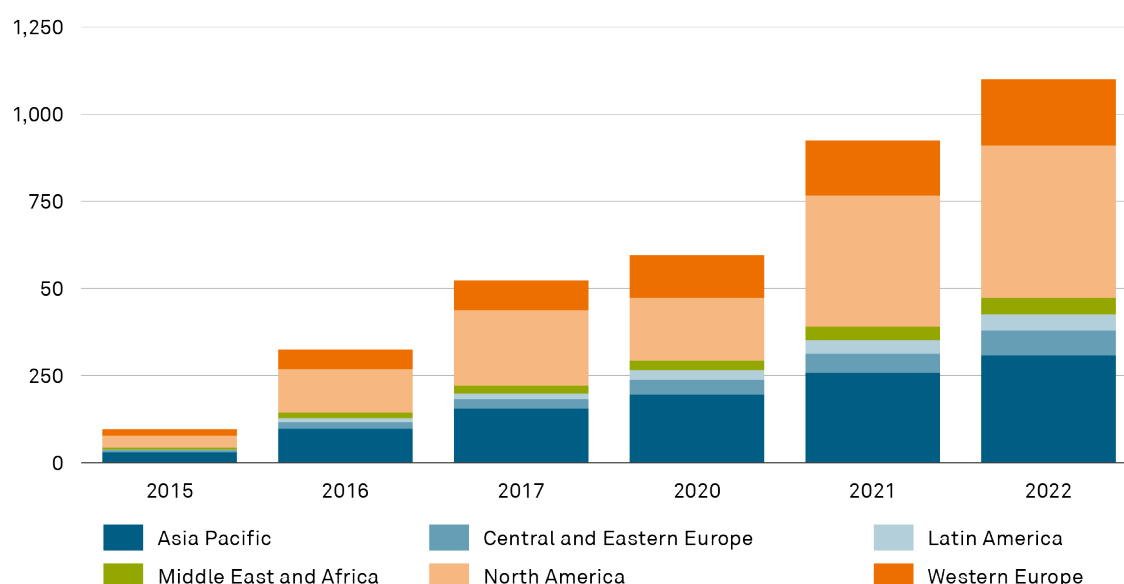


- **Innovative fabrics and materials.** Sports gadgets also influence the design of accessories, materials and elements for sports practice. This is the case of smart fabrics for the practice of sports activities, which have the ability to capture and react to the stimuli of the environment, whether mechanical, thermal, chemical, magnetic, electrical or cardiovascular, always with the aim of improving the performance and safety of the athlete.

Needless to say, all sports gadgets can be complemented with **mobile phone applications** that monitor sports performance or practice and allow you to exploit results, analyse data and prepare new routines. However, the basis of sports gadgets are always sensors, which capture and offer vital information about the performance of a sportsperson, even during competitions. Variables such as speed, distance travelled and acceleration of an athlete can be followed in real time using RFID chips or GPS trackers sewn on their equipment. Coaches use these data to make important decisions during the game. For example, in a team sport such as basketball or football, if the coach sees that a player has been very active in the game, he can consider making a switch. After the game, the coach, the athlete and even the media use the data to analyse the results.

The forecasts made by market-prospective companies show that **sports practice will increase in the long term**, due to factors such as the need for personal autonomy in the ageing process. At the same time, launching more technology-intensive gadgets to the market, which will make sports products and practices more personalised, will also grow. This trend will lead to the creation of **more employment in positions of design, marketing and monitoring of sports gadgets**. According to Market&Markets, the global sports technology market will grow from 21.9 billion dollars in 2022 to 41.8 billion dollars in 2027; it is expected to grow to an annual average of 13.8% between 2022 and 2027.

Figure 2. Number of connected wearable devices worldwide, 2015-2022 (in millions)



Source: Prepared by the authors based on data from Mbicycle.

Impact of sports gadgets on professional profiles

The increase in the market of sports gadgets and the related digital technology makes it difficult to predict what social use will finally be made of them and, therefore, what the new demands of professional profiles required by companies will be. However, according to the sources consulted, it seems clear that the **development of new products**, **online sales** (the main marketing channel for an already experienced audience in the digital environment) and the **advice in the use of sports gadgets** will clearly affect professional profiles already defined in the labour market, among which the following should be mentioned:



Developer of sports gadgets: it is a position in sports gadgets companies, halfway between research and innovation. Their main function is to put new portable devices on the market for sports, or to expand the benefits of existing ones. During the innovation and development process, they work on solutions that allow us to obtain useful information from data derived from sports practice to optimise their experience.

Their skills and knowledge revolve around **systems development** (software), **circuit design**, **microcontroller programming**, **application development** and **network security**. They work in close coordination with the design of new materials and hardware, as well as in the exploitation of statistical data. Engineering of electrical installations also stands out, which includes Internet of Things technology. Complementarily, the sports gadget developer requires data analysis and vulnerability analysis skills, to collect and extrapolate data to improve applications and security, as well as to inform executives and investors. Expertise is required to collect data based on recently connected data points, together with the development of algorithms to improve machine learning, so that connected machines can learn from each other.





Online salesperson: Online salespeople may specialise in the sale of sports gadgets, given that in the market there are companies specialised in the online sale of articles linked to specific sectors.

The online salesperson **manages the work of the team** of experts in interactivity and usability, web designers, programmers, etc., who develop the specific sales web portal for the distribution of sports gadgets. They also **manage purchases from suppliers** and **online sales to end customers**, prepare catalogues, perform web maintenance of the sales channel, set prices and supervise the delivery process, as well as after-sales services. They **define the processes of interaction**, service and customer care to achieve a satisfactory shopping experience and also **design business strategies** to optimise income: sales, advertising, subscriptions, etc., based on the knowledge that they have of the technological solutions applied to sports gadgets. Finally, they develop loyalty strategies: promotions, membership cards, cross-selling strategies, etc.

It should be said that in terms of market prospects, beyond creating new jobs from scratch, sports gadgets will force us to **redefine some skills** of professional profiles linked to sport. They will need to develop transversal abilities linked to the knowledge of these gadgets and the skills to make the most of their benefits, as well as commercial skills for the purchase and sale process. Another task will be advising people and teams on which sports gadgets are the most suitable for each case, for which professionals in this field should know in detail the latest technological developments available. At the same time, they need to know how to apply them in sports practice and in training programs. Some of these professional profiles that will have to redefine their skills will be **professional and amateur coaches** and **sports therapy** or **sports psychology professionals**.

A focus on sports gadgets

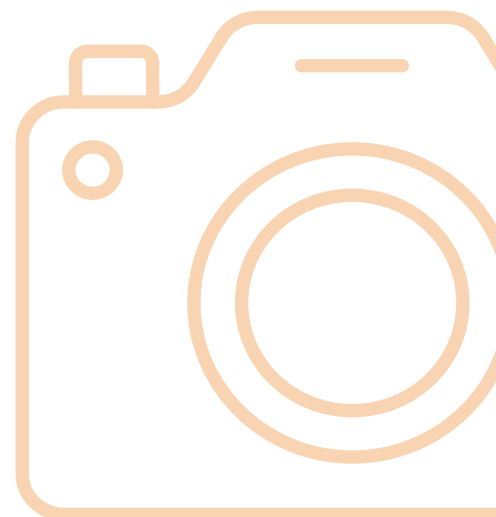
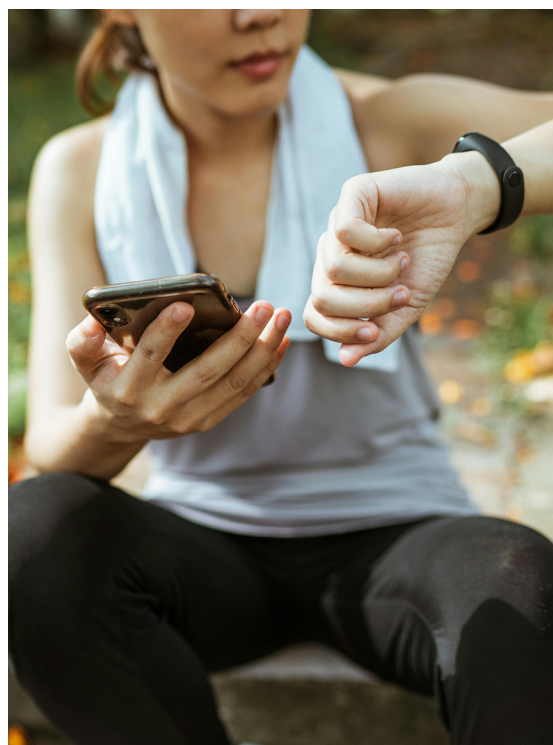
The **growth of the sports technology market** can be attributed to several factors, such as an increasing focus on sports entertainment, sustained pressure to improve the performance of professional players and the use of technology in amateur sports practice.

Modern sports technology involves an improvement in one or more aspects of sports activities (precision, performance and safety measures): people can **monitor their performance** and **identify areas they need to improve** to achieve their maximum potential. In addition, sports technology provides **advanced analytical tools** that help coaches examine performance, identify weaknesses and design strategies to improve the athlete's overall capacity. More technology also involves less risk of injury.

Sports gadgets have massively promoted the development of individual athletes and the sports industry in general. From measuring basic vital factors, such as heart rate, to predicting tissue damage risks, these devices have much to offer. They improve sports performance, training techniques and health conditions.

The development of sports wearables over recent years has been enormous. With new materials and improved manufacturing processes, people who practise sports gain confidence in their possibilities, because adequate sports equipment contributes to improving performance, avoiding injuries and training more effectively.

In the future, we can expect to **see more sophisticated and specialised devices**, as well as more applications and integrations with other sports technologies. This will provide a clearer vision of a sportsman's performance and allow for even more effective and safe training.



Sources consulted

- TechTarget Mobile (2023). [Computing wearable technology](#).
- Wikipedia (2023). [Wearable Technology](#).
- The Strategist (2023). [The 9 Very Best Smart Home-Gym Machines](#).
- Garage Gym Reviews (2023). [The Best Compact Exercise Equipment For Small Spaces](#).
- Euncet Business School. [Pla de màrqueting esportiu: com fer per aconseguir l'èxit](#).
- Euncet Business School. [L'aplicació de les noves tecnologies en l'esport](#).
- Euncet Business School. [Els millors gadgets esportius i els seus beneficis](#).
- Cult MTL (2023). [The Evolution Of Sports Equipment And Technology](#).
- Yahoofinance (2023). [Sports Equipment Market Set to Surpass US178.50 Billion by 2033: Key Growth Drivers and Trends](#).
- Yahoofinance (2023). [Top 15 Sports Tech Companies And Startups In The World](#).
- Generalitat de Catalunya (2021). [L'esport a Catalunya](#).
- Ministerio de Educación, Formación Profesional y Deportes (2022). [L'ocupació vinculada a les activitats esportives millora els nivells prepandemia](#).
- INEFC Observatori Català de l'Esport (2020). [Volum de negoci de les empreses del sector esportiu](#).
- MarketsandMarkets (2022) [Sport Technology Market](#).
- MarketsandMarkets (2023). [Sports Technology Companies - IBM \(US\) and Cisco \(US\) are the Top Players](#).
- Diamond Scheduler (2023). [14 Sports Tech Companies Transforming Modern Athletics](#).
- COGNITECH (2023). [How wearable technology is changing the sports industry](#).
- Mbicycle (2022). [Wearable Technology in Professional Sports — How to Adopt it for Better Results](#).
- Garmin (2023). [Sports & Fitness](#).
- Salsita (2023). [Sports Gear Revolution: 5 Trends Driving Innovation](#).
- APAC Business Headlines. [10 Most Innovative Wearables for Fitness and Sport](#).
- Qorvo (2017). [The Next Wave of Job Opportunities, Brought to You by the IoT \(Part 1 of 5\)](#).
- The Athletic (2023). [How the growth of wearable technology is transforming football](#).
- Sports Health (2016). [Wearable Performance Devices in Sports Medicine](#).

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