## THE FUTURE OF NEW TECHNOLOGIES...IN SPORTS



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In the 21st century, the global digital transformation has permeated all aspects of human life, sports included. In our contemporary society, jobs are increasingly less physically demanding; however, experts around the world agree that sports, whether at an amateur, olympic or professional level, are fundamental to lead a healthy lifestyle. Muscle development, weight loss, fat reduction, hormone regulation, and immune system strengthening are some of the many benefits of practicing a sport.

In our country, as well as in the rest of the world, sports are undergoing a transformation; thanks to the implementation of modern technologies, there are new business opportunities geared to satisfying the needs of a society that demands innovative products and services to help them to achieve their health and sports performance goals with greater speed, efficiency, and efficacy.

But what are these new sports technologies? There is a great diversity; however, the most noteworthy ones are:

- 1. Carbon fibre nanotechnology, which is used to develop ultra-light, highly-resistant products that are stronger than steel and capable to withstand high temperatures. These nanomaterials are useful to develop products such as rackets, golf clubs, bicycles and even prosthesis for different parts of the human body capable of emulating human muscle movement.
- 2. Smart sports clothing, which leverages different types of technology, from digitisation by means of full-body 3D scanners to develop custom-made sportwear equipped with micro-sensors to record athletes' biometric data, to sportswear 3D printing utilising different materials depending on the stress levels and environmental conditions of each sports discipline.
- **3.** New sports applications and biometric data mining, which are linked to data analytics and cloud-storage to monitor and study the movements made by athletes to improve their training and physical fitness programmes. These applications use sensors connected to external devices and sports equipment such as balls, gloves and bats, just to name a few, to analyse the geometry and kinetics of the human body, gathering useful data and information to improve athletes' skills and performance.
- 4. Swallowable computers or devices used to monitor and control athletes' health, detect and prevent abnormal behaviour that may be fatal, such as heart attacks or a sudden rise in body temperature, but that are inherent to any highly demanding physical activity.
- **5.** Drones and augmented reality lenses to observe athletes' performance in real time and to analyse possible scenarios and the movements athletes would make while running, throwing or changing trajectory.

Sports industry is evolving rapidly and creating endless business opportunities for Mexico.



