THEME 01

The amateur becomes a pro

SPORTS   CONSUMER TECHNOLOGY   WEARABLES

In the past ten years, the combination of scalable IT and payable smart devices has generated endless tools for amateur athletes to track their performance and play sports like a professional. The first wave of sports wearables, characterized by basic smartwatches and fitness trackers, has brought mixed results. Nevertheless, new smart devices and open eco-systems have the potential to revolutionize the way we practice sports. This could be the revival of a struggling sports wearables market, but also raises new questions about the way we practice sports.

Our observations

- The worldwide growth of sales of basic sports watches and activity trackers is declining rapidly (from 19.1% in Q1 2017 to 1.2% in Q1 2018), mostly due to the increased competition from smartwatches of big tech companies, offering more functionalities and a wider app ecosystem.

- In general, the smart wearables market is expected to double to $27 billion by 2022, according to an industry forecast by CCS Insight. This growth is mostly generated by smart watches and smart "hearables" (i.e. smart connected earbuds or headphones).

- Fitbit, the unquestionable market leader in wearables before Apple and Xiaomi surpassed it in the last two years, is struggling. It has lost 80% of market capitalization in the last three years. It's counting on the new flagship smartwatches Ionic and Versa to turn the tide. Both have access to the app ecosystem of Fitbit: app gallery. With paid apps from third parties, Fitbit could generate new non-hardware revenue streams.

- The sports wearables market consists mainly of fitness trackers and sports watches. But sports equipment manufacturers are looking to move away from the wrist into smart clothing. Smart clothing has the potential to gather more valuable metrics during an athlete's activity and recovery periods.

- The company SciSports delivers data intelligence to professional football clubs. It uses data-analyses to support football transfers of big clubs such as Olympique Lyon and helped the national team of Belgium with its pre-match preparations during the last World Cup.

- Last year, Apple delivered a health records API to developers and researchers, thereby creating an app ecosystem around the health of iPhone users. Currently, apps are being developed for medication reminders, nutrition planning and disease management.

Connecting the dots

The relationship between technology and sports is powerful and intimate. Since the origin of sports, artifacts have formed an indispensable part of the way we practice it. In modern times, technology helps athletes to crush personal records and stretch physiological limits. In the last decennia, information technology brought a new wave of innovations to sports. Wearables with sensors, data-analysis and intelligence became essential tools for professionals. It provided athletes, coaches and teams with new insights into their behavior and the behavior of their opponent. All of them looking for that slight competitive edge that could mean the difference between being world champion or "world loser". Why professionals use these tools is self-evident. However, because of payable and scalable IT innovations in the past decade, a lot of these innovations have become available to a wider audience. We have already encountered the first wave of sports wearables. Specialized companies Fitbit and Garmin developed basic smartwatches and fitness trackers with heart rate monitors. Complementary mobile applications were developed to track our progression and platform-based applications such as Strava let us share our progression and compete with everybody around the world. Although some of these smart devices and applications have been great successes, the sports wearables market is struggling. Jawbone and Moves have gone out of business and Fitbit has seen its market capitalization decrease enormously as it is dealing with falling device sales. Partly, this can be explained by increased competition from big tech companies entering the wearables market in the past five years. However, there is another possible explanation. The first wave of sports wearables has enabled athletes to follow their progression. Smartwatches give basic live tracking information and applications provide a pile of data and stats to the user. Nevertheless, the capacity to help you improve performance is rather low. Current intelligence is still weak, and the applications developed by hardware producers are basic and operate in closed eco-systems. In the upcoming years, this may change, as we are moving into more advanced technologies and better integration of the sports wearables stack. Currently, we're seeing improvements on several layers of the stack and a convergence of technological forces. On the *hardware* level, basic activity trackers and smartwatches are being complemented with a proliferation of smart sports equipment. These provide the athlete with more valuable metrics. For example, Underarmour has developed a smart shoe tracking more advanced running metrics such as stride length and step impact. Furthermore, these kinds of sports wearables generate more valuable *databases* creating the potential of better *intelligence*. The Pure Babolat racket, which tracks exactly where and how hard you hit the ball, is compared to a database generated by Rafael Nadal in 2004. On the *platform* level, traditional sport wearables companies and their big tech competitors are starting to create open app-based ecosystems around smart sport devices, thereby allowing third-party applications to unlock the full potential of valuable sports data. And last, on the *interface* level, the smartwatch

remains dominant, but the biggest growth is expected from smart hearables: a voice interface that perfectly accommodates coaching. The second wave of innovations will still give basic insights to the amateur athlete. But the most important takeaway is that this technological convergence might finally fulfill its original purpose: improving performance. The new devices and apps have the potential to create live feedback loops with continuous technological guidance. This way, every amateur gets a personal artificial intelligence top coach. An artificial coach that tells you where to hit the ball, when your body needs some more rest and which combinations of exercises suits your muscular recovery capacities. However, there are several challenges and possible objections to be made. First, the current sports wearables market is interfering with - and partly being overshadowed by - the general wearables market. For example, the Apple watch has built-in fitness and health functions. What will be the future dynamic between big tech and sport wearables manufacturers? Will sports be better off within closed eco-systems dominated by companies with a sports DNA, mainly focusing on the *performance of athletes*? Or will the practice of sports benefit most from fully integrating it into health and letting it function as part of a wider smart wearables eco-system, dominated by big tech companies and focusing on the *health of humans*? And do they exclude each other and collide? Possibly, Fitbit's acquisition of cloud-based health management platform Twine Health shows there is a way in between. Second, the Strava scandal of last year, revealing the private geological data of U.S. soldiers in the Middle East, shows that security and privacy will remain key issues in the upcoming years. The sensitive nature of the data generated might decrease the willingness of athletes to track every single part of their bodily performance. Third, we can ask ourselves whether every amateur athlete wants to act and train like a professional, or whether this will remain a small niche of the sports population (which, in itself is already becoming a niche of the wearables market). To a certain extent, it seems plausible that an amateur would want to act like a pro, but how far are amateurs willing to go? From a wider perspective, this trend coincides with the quantified self-movement, which has received criticism concerning the way the body is continuously objectified, transformed and externally controlled by technological devices. Technology can be an amazing tool, but as philosopher Jacques Ellul already pointed out half a century ago, it also reaches into the "individual's innermost life", transforming his body and motions and making him a function of technology, thereby subordinating human values such as happiness, freedom or joy to the inherent logic of technological forces. Therefore, the next period will confront amateur athletes with a difficult trade-off. There is the attractive opportunity to professionalize our sports activities, track and objectify everything from our body to optimize performance, and reveal and share our data with third parties to compete and showcase. However, this could be at odds with the excitement, joy, happiness, freedom, unpredictability and "fun-factor" of sports.

Implications

- A key to success in the future sport wearables market is to build an ecosystem around the combination of payable smart wearables, user-friendly interfaces, relevant intelligence and competitive worldwide platforms with sufficient user engagement.

- Technological convergence opens interesting new business models for traditional sport wearables companies with a strong user base. As revenues on hardware fall short, the app-based ecosystem with relevant data services and intelligence creates potential new revenue streams. Fitbit might find itself at an advantage here compared to Apple or Samsung, because of its strong fitness user base and the fact that switching costs are high. Without solutions of transferring individual data backlog to