With six weeks to go before the Summer Olympic Games begin, this week, we take a look at the advances in wearable technology and advanced textiles and fabrics that will be used before and during the Games.

Brands like Speedo and Arena work alongside athletes to create the most advanced swimwear possible; these suit often mean the difference between silver and gold.

Visa will debut its prototype wearable payment ring that will be worn by Visa sponsored athletes. The rings are compatible with the 4,000 new contactless-enabled machines the company is installing for the Games.

Wearable tracking devices will help athletes get live data about their performance while they are training for the competitions through new devices like the Solos smart cycling glasses that are designed to help cyclists keep their eyes on the road.
COUNTDOWN TO RIO 2016:
SIX WEEKS LEFT TO GO

Fung Global Retail & Technology is counting down the weeks until the 2016 Summer Olympic Games in Rio de Janeiro, Brazil begin on August 5. The Olympic Games have evolved into one of the best-managed global brand-marketing outlets in the world due to their global reach, and they are one of the largest and most profitable of all media events. We will track developments and news related to business, the economy, politics, retail and technology in the run-up to the Games.

With six weeks to go before the Summer Olympics begin, this week, we take a look at the advances in wearable technology and advanced textiles and fabrics that will be used during the Olympic Games.

CONTEXT

Brazil is the first South American country ever to host the Olympics, and it has faced both challenges and triumphs as it has undertaken rapid and expansive development in order to succeed in its role as host.

The Summer Olympic Games, taking place August 5–21 in Rio, constitute one of the most highly anticipated global sporting events and are expected to generate record-breaking viewership numbers. According to Nielsen, the Beijing Olympics attracted 4.7 billion viewers over 17 days in 2008. In 2012, NBC’s London Summer Olympics broadcasts were the most-watched television event in US TV history. Thus, all eyes are on Brazil as it prepares to host more than 10,000 athletes and hundreds of thousands of tourists.

Source: Reuters, Sergio Moraes
MACROECONOMIC CONDITIONS IN BRAZIL

According to the Instituto Brasileiro de Geografia e Estatística, Brazil is currently facing:

- Unemployment of 11.2%
- Inflation of 9.3% (April 2016 versus April 2015)
- An exchange rate of R$1 = US$0.29
- A 7.0% decline in retail sales volume in 2016

Figure 1. Brazilian GDP: YoY % Change

Source: Bloomberg

Figure 2. Price of the Brazilian Real in USD: June 2011–May 2016

Source: Bloomberg

RIO OLYMPICS BUDGET FIGURES

According to the International Olympic Committee (IOC):

- The 2007 proposed balanced Olympic budget from the Organising Committees for the Olympic Games (OCOG) was US$2.82 billion.
- The 2007 proposed non-OCOG capital investment budget was US$11.1 billion.
- The current operating Olympic budget is R$7.4 billion (US$1.85 billion).
- Total private and public Olympic-associated expenditures have totaled US$10 billion.
COUNTDOWN: 6 WEEKS

SWIMSUITS MADE TO TAKE THE GOLD

Within the $1 billion competitive and fitness swimwear market, competition to take Olympic Gold is fierce as swimwear companies battle to create the most high-tech swimwear within the strict guidelines of swimming’s governing body.

Seven years ago, the Fédération Internationale de Natation (International Federation of Swimming—FINA) placed strict regulations on the type of swimwear that could be utilized during competitive swimming as a way to stop “technical doping.” At the time, some of the swimsuits introduced were compared to “second skin” or even “spacesuits,” particularly the polyurethane-based swimsuit introduced by Speedo. FINA now requires that swimsuits be made of textiles, and plastics are completely banned.

Source: apparelnews.net

Swimming is notorious for differentiating between Olympic gold and silver by only a fraction of a second. Therefore, creating the type of swimwear that can make the difference, while abiding with the strict FINA guidelines, has been a challenge for companies like Speedo, TYR and Arena.

Speedo has the highest share of the men’s swimwear market at 2.0%, followed by Nike at 1.7% and Arena at 1.7% according to Euromonitor.

In May, Speedo unveiled the swimsuits its sponsored swimmers will wear while competing. According to Jamie Cornforth, the company’s VP, “The Speedo federation suits look so eye-catching, dynamic and powerful that our athletes will no doubt hit the blocks with confidence, empowering them to look, feel and perform their best.”
Source: Speedo

Arena, in response to the FINA guidelines, released its Powerskin Carbon-Ultra suit, which uses carbon fibers in place of plastics. Arena claims the amount of research and technological advances the company has been able to incorporate into its swimsuits allows the company to help more athletes reach for gold.

**Figure 3. Arena vs. Speedo Medals**

![Bar chart showing Arena vs. Speedo medals](image)

Source: Arena

Michael Phelps, 18-time gold medal winner, announced this year he would part ways with Speedo, the brand he donned during all of his Olympic wins, in favor of a brand launched by Phelps himself, called MP.

**VISA SAYS OLYMPIC GAMES ARE AN “INCREDIBLE OPPORTUNITY” FOR NEW PAYMENT WEARABLES**

Visa debuted a new wearable ring in preparation for the Games: a near-field-communication-based payment ring that syncs directly to the user’s credit card account. Although it is still a prototype, the ring will be used by a few select Visa-sponsored athletes. The ring uses the same platform as Apple Pay, Samsung Pay or Android Pay, although it does not need to be charged and it is water resistant, thus it does not need to be taken off.
Source: Digital Trends

Visa also created a new operating system infrastructure for the Olympics that will be implemented in all venues including stadiums, press centers, point-of-sale (POS), the Olympic Village and Olympic Superstores, with approximately 4,000 POS terminals expected to be ready for the games, and an additional 11 ATMs in partnership with Bradesco. All of the POS terminals will be contactless-enabled. Visa spokesperson Andy Gerit said Visa is actively “using its sport sponsorships to introduce, highlight and test emerging payment technology.”

WEARABLE TECHNOLOGY GIVES ATHLETIC COMPETITIVE EDGE

The Director of Technology and Innovation for the US Olympic Committee, Mounir Zok, predicted wearable sensors will someday be equally as important as the types of shoes or other athletic gear Olympic athletes use. This year, they’ll play an important role in sports like diving and gymnastics, in which the wearables track performance metrics, and in cycling, in which glasses that track cadence, speed and heart rate can display the information directly into the cyclists field of view. The Paralympic Games will also feature a new wheelchair developed by BMW that tracks miles traveled and frequency of arm strokes.
Source: Kopin

The US track cyclists’ glasses are known as Solos smart cycling glasses, by Kopin Corporation, and they display personalized data in their line of vision. These glasses are usually utilized along with heart rate monitors that are strapped around the athletes’ chests or wrists. Although the glasses have been used in training and will be used up until the games, they are not currently allowed to be used during Olympic competition in Rio.

CONCLUSION

As wearable technology continues to advance and rules surrounding the devices continue to change, athletes will become increasingly accurate and efficient while exerting themselves. This will revolutionize the sporting world. Until then, fans and tourists will be able to see some of the new technology in action in payments and competitive sportswear.