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It's a hit: Israel's startups are champions at sport-tech

Our athletes may not set many records, but Startup Nation has emerged a world-beater in the field of digital sports

Eliran Rubin

Imagine, for a moment, being able to watch automatically edited video highlights from your kid's basketball club on your cellphone, having a virtual physiotherapist who can screen an athlete's movements to predict the risk for injury, or a shoe that can track a soccer player's statistics.

Sports – where the difference between breaking records and not making it past the trials is a fraction of a second – is constantly on the lookout for innovative technology. Over \$5 billion was spent worldwide from 2014 to 2016 on sports technology and companies that provide services to the industry.

Israel has become a world leader in the field of computer vision and image analysis – the result of military and academic work in the area that has led to the establishment of a number of startups that develop products for a variety of industries.

The Israeli company

that has made the biggest splash is Replay Technologies, which was acquired by Intel about a year ago for around \$170 million. Replay developed an advanced system for viewing sports events in 360 degrees and from the perspective of players on the field. The technology is being used in the top Spanish soccer league and American NFL broadcasts.

Replay isn't alone in the field. The SmartCourt system developed by PlaySight includes cameras that turn any ball court, playing field – or gymnastics, martial arts or dance studio – into a “smart” venue offering advanced video and analytics technology.

PlaySight says it wants to do for other sports categories what GoPro brought to the world of extreme sports. The company began with tennis, before branching out into basketball, soccer, hockey and wrestling, among other sports. It focuses on practice grounds and small gymnasiums, in order to bring profession technology to lower levels,

in what it calls the “democratization of technology.”

“We turn any court in any sport into a space that offers livestreaming and analyzes player activity. It lets players improve their abilities, and makes practice and games more challenging and enjoyable,” says PlaySight CEO Chen Shachar.

Recruiting tennis stars

The company has raised some \$13 million since launching seven years ago, with investors including tennis ace Novak Djokovic and former champion Pete Sampras. The retired Serbian pro Ana Ivanovic recently joined the company, which has offices in Kfar Sava, New York and Los Angeles and a staff of around 50. Customers include NBA teams such as the Phoenix Suns and the Golden State Warriors.

WSC Sports Technologies, based in Ramat Gan, is another Israeli startup that upgrades the sports viewing experience. Its products automatically create video content that is tailored individually for each viewer.

WSC announced a \$12-million funding round last September, bringing investment to date to \$16 million. Investors include Intel Capital, the Wilf family (owners of the Minnesota Vikings), the owners of the Los Angeles Dodgers and Yossi Moldawsky's PLUS Ventures, which is creating a sports-dedicated investment fund.

WSC Sports was established in 2011 by Daniel Shichman, Shmulik Yoffe, Aviv Arnon and Hy Gal, in order to provide focused, short-form videos for coaches and scouts,

but pivoted to concentrate on sports broadcasts after recognizing the unrealized potential in the area.

The company's system can automatically analyze and index events on the field in real time using audio analysis, video processing and editing algorithms, creating custom highlights that focus on a single element such as a basketball team's dunks or the moves of a particular player.

WSC works with organizations including the NBA and the Big East college basketball league, and content providers such as Turner Sports. It also creates personalized content for fans of a team.

In the most recent NBA finals, WSC launched a chatbot on the league's Facebook page to let fans request tailor-made video clips, for which it won a Sports Technology Award.

Pixellot, which is based in Petah Tikva, also uses computer vision and image-analysis technology. However, its products are used mainly as a distribution channel for professional and amateur sports events. The target audience includes not only professional teams but also, say, parents who want to watch their children's afterschool sports activities.

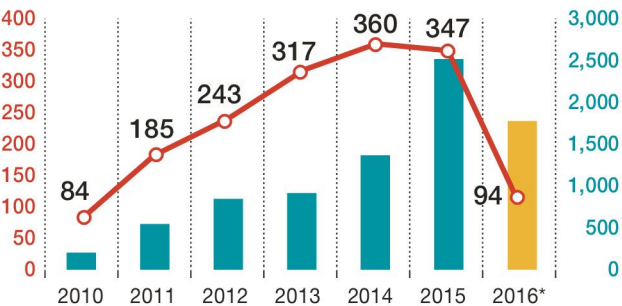
“Every year there are some 75 million soccer and basketball games that are not recorded,” says Pixellot CEO Alon Werber, adding, “With the right products, we can play an important role in the media world.”

His company's clients include a Chinese sports broadcasting portal, sports auditoriums, media companies and various amateur leagues, including the youth clubs of soccer giants Bar-

Moneyball

Global venture capital investment in sports technology

- Number investment rounds
- Amount raised, \$ millions



*First three quarters

Source: Deloitte

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Pixellot technology on a soccer field.



Oklahoma Thunder, Cleveland Cavaliers at play. Sue Ogrocki/AP

celona and Bayern Munich. Pixellot has raised \$12 million to date, from investors that include Baidu of China.

PhysiMax Technologies develops technology that analyzes athletes' movements to help identify the risk of injuries and let professionals design corrective programs. It was founded in 2013 by Ram Shalev – an engineer with years of experience with rehabilitation technologies – and David Kahani, who has a background in video-image analysis. Three months ago, PhysiMax signed a partnership agreement with the Indiana Pacers.

The company's product uses 3-D video cameras and proprietary software to film and analyze an athlete's movements and to create detailed reports that assess performance and injury risk factors.

Shalev notes that his company's target audience includes amateur as well as professional athletes, putting powerful motion-analysis tools in the hands of people without access to sports medicine professionals.

The brain analysis technology developed by El-



Tennis star Novak Djokovic using PlaySight technology, Yair Asaf

MindA, which has offices in Herzliya and Silicon Valley, measures neural activity. The company's products have been used to identify concussions in American football players, and El-MindA operated a clinic in the Olympic village in Rio last year.

Checking athletes brains

ElmindA's BNA Analysis System uses a cap fitted with electrodes to measure electronic activity in the brain. It was developed to supplement existing imaging tools, in order to give a fuller picture of brain function in cases that do not involve bleeding.

Minute Media is no longer in the startup category, after its 90min became one of the biggest media platforms in the world of soccer; its new 12up platform seems set to do the same for basketball.

The company's technology allows fans to automatically create videos from their own content, in 11 different languages. Minute Media has raised around \$60 million, has 130 employees and its customers include brands such as Nike, Pepsi, MasterCard, Verizon and Warner Bros. Content created by Minute Media is also broadcast on platforms that include ESPN, NBC and Yahoo Sports.

Fanzone is an Israeli company that aims to get young people to put down their devices and show up to concerts, festivals and

sports events by getting them to the venue in comfort and style.

The company's platform aims to provide logistics for event organizers, and to manage transportation for ticket holders.

Founded in 2014 by Ori Shilo and Tomer Kazaz, Fanzone has raised \$6.2 million and has 20 employees. Clients include sports teams, concert organizers, ticket agencies and local governments.

Statistics has always been at the heart of the sports industry. Data analytics is most closely associated with Major League Baseball, with the NBA a close second. According to Deloitte, the market for sports-data analytics is expected to exceed \$600 million by 2021.

The startup founded by the retired judoka Aviv Hatzir extends data analytics to judo, with a chatbot at the front-end of a library of videos of the athletes. The company went into high gear ahead of the Rio Olympics, and the tool was rolled out a few minutes before the games were held last August.

Another Israeli startup with a unique speciality is Motionize, whose technology uses sensors to record and analyze the strokes of kayakers to help them improve their technique. Founded in 2014, Motionize has 21 employees and has raised around \$4 million.

Motionize CEO and co-founder Guy Aharon notes that the company is branch-

ing into additional sports, including the development of a smart shoe for soccer.

Not everyone considers eSports or gaming a real sport, but it's a growing field that is forecasted to be worth around \$1 billion in 2019. Major sports teams have begun to invest in their eSports brands, and even to acquire professional gamers.

Israel is not a major player in the area of competitive gaming, but at least one Israeli company is trying to profit from the popularity of the category. Zengaming is the social network for gaming, where gamers can join leagues, find sponsors and reach out to fans.

Zengaming was founded by Jimi Gecelter, Shai Gecelter and Or Preiss, self-confessed gamers who say they saw a need for amateur players to communicate among themselves and gain wider exposure.

Viewers are an important part of the eSports industry – indeed, they're what make it profitable. Israel's Partner Communications hopes to get in on the game, and to that end will soon launch the international gaming channel GINX eSports TV, which is already available on the company's 4GTV app. The television channel was mentioned in a Deloitte report as representing a global trend.

"The gaming industry has enormous power and an audience with a very high level of engagement, and their numbers are only increasing," said Partner CEO Itzik Benvenisti in a statement. "In Israel, too, there are hundreds of thousands of gamers – from 12 years old to 40 and older – who consume global content and follow international events in the field."

Minute Media is also trying to get a piece of the eSports action, and plans to start covering gaming leagues alongside traditional sports.