

## **Entrepreneur to tackle rugby force with new wearable tech**

*Internet of Things-inspired sensor system to inform player power and recuperation*

Professional rugby players could soon be fitted with wearable Internet of Things (IoT) devices, which monitor how they tackle with their bodies, improve training drills and inform post-injury rehabilitation programmes, thanks to a Scottish start-up company.

Sansible Wearables – founded by Jack Ng, a rugby aficionado, and Charlie Patterson, a sport performance enthusiast, and winners of the ‘Ones to Watch’ category at the first-ever IoTUK Boost event in Scotland – has created ‘LiveSkin’ intelligent sensors, which are fitted within players’ shoulder pads to capture data from collisions on the playing field.

Transferring data wirelessly to specially-designed software, sports coaches, physiotherapists and medics can use the devices to monitor the force exerted by the athletes in a tackle or a scrummage, as well as examine how their bodies recover from injury. This information can then be used to improve training regimes and rehabilitation programmes to better reflect how players recuperate.

Jack Ng, founder of Sansible Wearables, said: “The big opportunity for wearables is in sport and the timing is right for our product for a number of reasons. Firstly, the sector is already embracing the technology, with sports such as football equipping players with devices that monitor their speed, orientation, GPS coordinates and a variety of other data.

“Secondly, what we’re developing is unique. Although wearables are already used in sports, our product is doing something very different: measuring force. There is a real gap in the market for a system which can accurately understand and communicate how impact relates to different athletes, at different times and, ultimately, the outcome of a game. Unsurprisingly, contact sports, like rugby and American football, are the likeliest to adopt it and see the biggest results.”

The technology being constructed by Sansible Wearables can store data and monitor it over time, helping those working with athletes to spot trends, potential areas of concern and ways in which tackling techniques and rehabilitation can be improved. The company is working with several clubs to trial the device, with interest high and a full roll-out planned in 12-18 months’ time.

Jack, who played rugby while at Heriot-Watt University, hopes the technology will eventually also be used by amateur clubs and grassroots sport initiatives. Among the projects he highlighted to support are the All Schools programme, which aims to have 1,000,000 children playing rugby by the next World Cup.

Sansible Wearables was one of five winners at the Scottish leg of IoTUK Boost, organised by Scottish Funding Council-backed CENSIS, The Data Lab, the University of Edinburgh’s Informatics Ventures and IoTUK. It is now undergoing a one-month period of incubation and mentoring, to refine the company’s business model and make it fully fundable.

Jack said: “As someone who is a technology geek and a rugby nut, I’m very passionate about combining the two together and believe it’s vital to get more young people involved in the sport. I wish they taught rugby at my school in Edinburgh when I was a kid. Although we’ll initially be aiming for elite professionals with the LiveSkin, the RFU All Schools programme in England is a great example of an initiative we’d look to support in the future by

giving them access to our product. Ultimately, we want the technology to help more people take part in a variety of sports.

“IoT UK Boost couldn’t have come at a better time for us and will undoubtedly accelerate the development of the technology at a crucial stage in our evolution. Being among the winners of the competition, we’ve been given access to a range of skills we otherwise wouldn’t have. It’s a huge opportunity for us and we’re looking to seize it as we target a sizeable niche within the wearable fitness technology market, estimated to be worth \$14.9 billion by 2021.”

Mark Begbie, Business Development Director at CENSIS, said: “What struck us about Sansible Wearables was the energy and passion of the people involved in the company – they are what really sold the idea. Jack’s love of rugby and grasp of cutting-edge technology shone through and, combined with a revolutionary idea that could be explosive, it proved to be a winning combination. We’re thrilled to be working with such an innovative start-up and believe they have a great future ahead of them.”

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