

New invention set to protect hamstrings around the world

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Dr Tony Shield and an athlete demonstrate the NordBord which measures the strength of athletes hamstrings and is set to change the face of elite sports science.

A new invention being manufactured in Brisbane by a QUT spin-off company is set to change the face of elite sports science and save professional sports clubs hundreds of millions of dollars in lost player time in the process.

Vald Performance, based in Brisbane, has manufactured the NordBord Hamstring Testing System which measures the strength of athletes' hamstrings.

Vald Performance Chief Executive Officer Laurie Malone said hamstring injuries were the most common form of sports injury and

NordBord Hamstring Testing Systems were being sent to major teams across the globe.

"Years of sports science, research and technology has gone into the development of the NordBord Hamstring Testing System and we're thrilled to already be filling orders for dozens of elite teams and sports organisations around the world," he said.

"Nordbords are already being sent to eight English Premier League soccer teams, nine AFL teams, five Rugby World Cup national teams, four NRL teams and five to different National Institutes of Sport.

"We are also sending the hamstring testing system to a range of European soccer teams, universities, National Football League (NFL), National Collegiate Athletic Association (NCAA), and Major League Baseball (MLB) teams.

"This is a fantastic result for a Brisbane start-up company."

Manufactured in Australia, and in part by Brisbane-based metalwork company Minecorp, Mr Malone said the production of the Nordbord Hamstring Testing System was a great example of how technology and innovation could help drive Australian manufacturing.

Vald Performance was set up with the help of QUT's technology transfer company [gutbluebox](#) and last year received a federal government Accelerating Commercialisation grant to boost the commercialisation process.

QUT exercise scientist and Institute for Health and Biomedical Information (IHBI) member, Dr Tony Shield, initially invented and built the portable prototype with his former QUT PhD student Dr David Opar, now of the Australian Catholic University.

QUT is the common thread at Vald Performance, as the company is headed by Mr Malone as CEO (QUT alumnus, Law and Finance), Sam James as Chief Technology Officer (QUT alumnus, Industrial Design and Mechanical Engineering) and Christopher Rowe as Operations Director (QUT alumnus, Law), while Dr Shield and Dr Opar maintain advisory roles alongside their continuing research.

"It's fantastic to see our research out there in sporting clubs making a real difference to elite sporting [teams](#) and athletes by providing them with useful insights," Dr Shield said.

He said the NordBord Hamstring Testing System was based on the well-known hamstring exercise, the Nordic curl.

"The NordBord's advanced sensors and data capture software will enable clinicians, coaches and high performance staff to accurately understand the hamstring strength of each player," Dr Shield said.

"The Nordbord tests 'eccentric' strength - the amount of force that a muscle can generate while it lengthens, with injuries most often occurring in athletes with poor strength or strength imbalances."

Mr Malone said if an athlete was fatigued or returning from injury, the NordBord would allow their coaches to quantify their progress and adapt their training load accordingly.

"The NordBord Hamstring Testing System is set to change the face of elite [sports science](#), and we're extremely excited to see it influencing the world's largest sporting organisations."

Provided by Queensland University of Technology

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