Introduction

On the 16th of January 2012 Simon Baker began a journey to run the Dublin City Marathon. No one has achieved this before. He underwent nine months of intensive training, but he didn’t do it alone. He had a professional team behind him: Jason Kenny, Strength Training and Nutritional Coach of Forever Fit Promotions, who headed up the project, along with Alan Ward (National 50m Pool Manager of the University Arena), Karen McCreesh and Neasa Canavan (Physiotherapy, University of Limerick), Dr Drew Harrison and Dr Ian Kenny, Biomechanics (PESS, University of Limerick) and Dr Brian Carson (Physiology, PESS, University of Limerick). The project was supported by Jan Ottoson and Donna Fisher from human prosthetics company IDS Independent Disablement Services & Otto Bock and Dave Mahedy Arena Manager, University of Limerick.

Marathon Blade Runner

Type Blade Runner into your computer’s search engine and a 1982 science fiction movie starring Harrison Ford will pop up first. Scroll down and you’ll find Oscar Pistorius, the South African double amputee runner who made athletic history by competing in the 400 m relay final in the London 2012 Olympics. But Simon Baker is making his mark. He lives and trains in Limerick - and he is Ireland’s first and only marathon Blade Runner.

Simon’s Background

By his own admission, Simon Baker was an entirely different person eight years ago. He had moved from his native London to work as a plasterer. Simon lost his leg in 2004 from a build-
The incident that changed Simon Baker's life in 2004 appeared trivial enough; it was the simplest of accidents that caused him to fall 12ft shattering the bones in his leg. After months of heavy medication, failed operations and countless hospital admissions he made the life changing decision to have the leg amputated below the knee.

Guinness Book of Records

In 2008 after a battle with depression Simon realised that he needed a challenge to turn his life around and this took the form of completing the Dublin Marathon which he completed earning himself a place in the Guinness Book of Records (fastest marathon on crutches on one leg). From this day on Simon decided to set himself a challenge each year with his end goal to run a marathon in under 3.5 hours.

Oscar Pistorius’s Influence

For those who hadn’t been paying attention during the London 2012 Olympics, Oscar Pistorius is a South African 400 metre runner making athletics history by being the first disabled runner to compete at the Summer Olympics using two carbon fibre artificial limbs or blades. At first he was prevented from competing against able-bodied athletes, but a Court of Arbitration for Sports in Lausanne reversed this decision in 2008.

Jason Kenny takes up the story. “Simon had definitely been influenced by the Pistorius story. He had immersed himself reading and learning about the carbon fibre blades, the technology available and the possibilities it created.

The Blade

“We discussed the project at length and came up with the idea of running the Dublin City Marathon using a blade. It hadn’t been done here before. As well as that, no Irish amputee athlete had ever competed in a track event in the Paralympics and no centre of excellence exists in this country for amputee athletes or disability sports in general.”

Jason and Simon got to work quickly, contacting Alan Ward and Dave Mahedy of the University of Limerick, to set the ball rolling in autumn of 2011. “They were very enthusiastic, supportive and excited about the whole idea from the outset. We were immediately offered full use of the university’s facilities.”

Simon approached Ottobock, a Dublin company that manufactures the specialised blades. They too promised their full support, as well as sponsorship. Meanwhile an inter-departmental team was assembled in UL to co-ordinate the project. Jason became the overall project manager as well as personal trainer to Simon.

Biomechanics and Performance Testing

Dr Drew Harrison and Dr Ian Kenny set about designing bi-monthly biomechanics and performance tests. The tests included start excursion balance, gait analysis for left and right leg underfoot force, stride length and ground contact time, and sled drop jump reactive strength.

“The biomechanical tests had two purposes:

1. To initially assess left and right leg differences to help inform Jason what conditioning work was needed and
2. To continually monitor and give a boost to Simon through data that his training was going well” said Dr Kenny. Test days were supported by PESS biomechanics PhD researcher Laura-Anne Furlong.
Physiological Testing

Meanwhile, Dr Brian Carson and PESS PhD researcher Ciara Sinnott-O’Connor periodically provided physiological support and feedback. Simon underwent a number of tests in the lab including measurement of his maximal oxygen consumption capacity (VO2 peak) and his lactate threshold. According to Dr Carson this information “indicates the amount of oxygen Simon is capable of consuming which determines the availability of energy to the working muscles and the running speed he could tolerate before accumulating lactic acid in the blood. As Simon’s training with Jason and the team progressed, both his ability to consume oxygen and deal with lactate improved, allowing him to run faster before reaching his threshold, thus improving the time in which Simon could complete the marathon”.

Daily Learning Curve

According to Jason “What was vital from the outset was that we straight away achieved credibility. Our short term goal was to get Simon to run the Dublin Marathon in under three and a half hours. But our long-term goal is to set up a template for a future centre of excellence in this country so that Irish track and field amputee athletes can compete in future Paralympics with the best possible support system.”

Jason admits there was a steep daily learning curve: “Simon had never walked properly, let alone run properly! We had to teach him to do just that. Change his posture. Alter his stride pattern. Retrain his brain’s muscle memory. His right leg had turned almost outwards since the accident. His left side of his body dominated his right side. So we had to break him down to start again and build him back up, block by block.”

Out on a Limb

Through intensive training involving specific running and posture exercises and brutal core work, Simon and Jason had succeeded in turning his right leg back to its proper alignment. Jason says it was a pivotal moment in the project, which is now called Out on a Limb: “I never doubted the man’s determination. I had walked alongside him from Dublin to Limerick in hailstones. I had seen him get into a boxing ring time and time again. I had seen the sores on his leg. I’d never heard him complain - almost! But now all these scientists and experts could see that determination and the subsequent results for themselves.”

“We all keep on telling each other that if we can learn and achieve this much in nine months, imagine what we can do in four years, in time for the Rio de Janeiro Paralympics. The sky really is the limit.”

Limerick Marathon 2013

Three weeks before the marathon and the disappointing news came from Simon’s doctor advising no more running until a severe case of shin splints (tibial periostitis) subsided. An MRI scan revealed bone marrow edema (swelling) and despite plenty of rest and non-impact training, Simon symptoms did not lessen. Simon made the tough decision to go to the start line still in some pain and complete as much of the race as possible. He was applauded all the way to 10 miles and now on the road to recovery setting his sights on Limerick Marathon in May 2013.