Case Study

The Olympics and Technology

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**Will Technology Lead to Greater Victory at the Games?**

Sir Clive Woodward, former coach of the English rugby team once stated that; *"If you win in IT, you tend to win"*. What exactly did he mean?

The basis for Woodward’s comment came as a result of his belief in, and commitment to, engagement with cutting edge technology to enable individual athletes and sports teams to gain a competitive advantage over sporting rivals. Woodward was a man who was unafraid to implement uncommon techniques (such as a wide-ranging coaching staff to concentrate on the coaching of specific aspects of the game), a masseuse, chef and even legal staff. The latter would undoubtedly have benefited the current England rugby team during the Rugby World Cup. Woodward also revised the health, strength & conditioning strategies of his players to ensure peak fitness and ensured that they followed a well-developed high protein diet developed by specialist sports nutrition experts. He also invested in the use of ice baths following training.

**Sport Psychology**

Woodward realised that a commitment to development of the elite athlete required the development of mental as well as physical skills. He employed Sherylle Calder, a visualisation coach, to train the players. Calder employed the use of both face-to-face counselling and software specifically to improve their special awareness.

**Sports Clothing**

Woodward studied team performance and realised that some athletes were prevented from accelerating away from opponents as rival players were able to tug at their jerseys and hold them back. He approached Nike with the problem, and Nike duly engaged in the development of a solution, creating tight-fitting shirts that make it more difficult for players to be tackled in this way

**Video Analysis**

Woodward introduced the use of a 12-camera analysis system called *Prozone*, which relied on the views of the cameras (attached to the roof of Twickenham Stadium) to provide video feedback of the performance of each individual player. Under his tenure, the England squad were able to outplay southern hemisphere rivals and win the Rugby World Cup, an achievement that he attributes, in part, to the use of such systems

**From Rugby to the Olympics**

Woodward has now left the rugby world stage to enter a new sports role that carries global impact; Director of Elite Performance for the BOA (British Olympic Association). One of Woodward’s goals is to enable the same level of technical proficiency to the training of Team GB to engender a competitive advantage over rivals that will ultimately lead to the securing of more medals.

One of the cornerstones of his approach is the use of Dartfish technology. Dartfish technology is now used by 22 of the BOA's Olympic sport teams. Woodward comments that: “*With England [rugby] we understood how important technology was...so I implemented the use of Prozone and it allowed us to lead the way ahead of the Aussies and the Kiwis. We’ve now set up an IT hub down in Stratford where we're planning on getting live feeds from the all London 2012 events, and we're hoping to work with Dartfish in terms of the overall software programme that we're using."*

The way that Dartfish works is to allow the feeding of live video footage (provided by the Olympic Broadcasting Services during the Games) through the Dartfish software. This would then enable coaches who are actively coaching on the sidelines during that particular event to view and analyse the pictures using technology such as iPhones and iPads, upon which critical performance-based decisions can be executed. The software allows coaches to benefit from multiple camera angles and instant statistics in real time that supplement their own observations and that will, notionally, lead to more informed coaching decisions.

If the Dartfish software proves effective, Team GB may well have secured a competitive advantage as other national governing bodies do not currently have access to this software (although the US Olympic Committee employ its use in training). The success of Dartfish has also been endorsed by Chelsea FC and Manchester United FC and the Gold medal Olympian Usain Bolt.

**Technology & Performance**

One can comment, of course, that the use of technology did not ultimately prove successful for Woodward’s ill-fated 2005 tour of New Zealand, when the British Rugby squad lost 3-0. This underscores the concept that technology can only

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provide one part of a wider coaching strategy, and it is the manner in which the technology is integrated successfully, within the context of so many other coaching variables, that will determine its usefulness, and ultimately, its contribution to the generation of a competitive advantage for Team GB and the other athletes that use it.

**Sailing to Victory?**

Another proponent of the use of technology in sport is Peter Bentley, a Performance Coach for Team GB sailing. The sailing fraternity have engaged in a long running battle to develop and apply the best technology available, citing video technology as absolutely fundamental to the development of performance in the sport. Bentley uses Dartfish technology in training and uses the playback to help the athlete understand how they can improve in specific situations or when undertaking specific movements. It allows feedback to be more specific, more highly tailored to individual athletes and quicker to deliver. The playback allows a raft of options such as slow motion playback, statistics and multiple angles.

As the technology is hosted on a server, athletes do not have to limit their viewing of the video analysis to within the training session itself; they are also able to log on to the Dartfish servers from their home Internet connection and access the data from home.

**Further Information**

* **Dartfish Sports Enhancements**

http://www.dartfish.com/en/sports-enhancements/sport\_performance\_software/index.htm

**Discussion**

* Discuss the benefits and drawbacks of live video feedback being used in all major sports competitions.
* Identify cases where a referee’s decision has been incorrect, and could have been corrected by video analysis feedback.
* Name a sport that uses video feedback analysis.
* Why do you think that some sports are resistant to the use of video feedback?
* Discuss other uses of technology in the Olympics (for example, clothing) and consider the following question: can access to some technologies unavailable to others constitute an unfair competitive advantage?

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WOMENS PARTICIPATION IN THE OLYMPIC GAMES

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