

<p>Institution: University of Chichester</p> <p>Unit of assessment: 26 Sport and Exercise Sciences, Leisure and Tourism</p> <p>a. Context</p> <p>The majority of research undertaken by staff in the Sport and Exercise Sciences, Leisure and Tourism UoA is applied and focuses on outcomes for specific groups or stakeholder beneficiaries. The Unit of Assessment demonstrates a positive upward trajectory and has grown from 11.8 FTE in RAE 2008 to 19 FTE in REF2014. Activity is coordinated through 4 research groups: Applied Sport and Exercise Biomechanics, Applied Sport and Exercise Physiology, Applied Sport and Exercise Psychology and Health Promotion, that address the cross-cutting themes of: Performance in sport and exercise and Physical activity and health. The research conducted at Chichester has an international reach and beneficiaries include:</p> <ul style="list-style-type: none"> • The athlete or performer (at professional and competitive amateur level) • Those who train / support athletes/performers at professional or competitive amateur level • Those in professional roles entailing significant occupational demands (e.g. armed services) • Those seeking the health and wellbeing benefits of physical exercise (and sport), particularly clinical populations, children, females and older people. <p>The types of immediate or long term impact achieved through the translation of high quality research within the framework described above include:</p> <ul style="list-style-type: none"> • Improved performance of athletes and practitioners (as individuals and in teams) • Reduced injury and enhanced recovery • Efficiency in sporting or physical roles (desired outcomes achieved with less resources and shorter timescales) • Improved health and wellbeing <p>The Unit has a particularly rich history and reputation for applied research. Researchers are acutely aware of the need to disseminate research to the end user and do this through publication (academic and policy), workshops, conference presentations and direct engagement with local, regional and national/international practitioners and performers and the media.</p> <p>b. Approach to impact</p> <p>The approach to impact has emerged in line with the research strategy for the Unit with the last REF cycle enabling the Unit to more firmly establish areas of focus (e.g. applied physiology, applied sports psychology) whilst still remaining inclusive. The Unit operates within the University's published commitment to embed research at every level of engagement and to contribute to the wider society regionally, nationally and internationally. The approach to impact includes those entered in REF2 as well as those on a research career trajectory.</p> <p>Evidence of this approach is in the large number of user groups and stakeholders working in collaboration with the Unit at both the Department level (<i>Sport and Exercise Sciences - Royal Yachting Association (RYA), Sport Development and Management - Anita White Foundation links – UK Sport, International Working Group on Women and Sports (IWG) and the Women's Sport and Fitness Foundation, Adventure Education – British Canoe Union</i>) and at an individual level (Hale - St Richard's Hospital; Willems – Maximuscle / Health Currancy / Bulkpowders; Day - English Institute of Disability Sport / Peter Harrison Centre for Disability Sport; Lowry – The Bariatric Consultancy Limited; M.Smith – Clem Burke Drumming Project; Myers – Birmingham Medical Research Expeditionary Society, STResearch and FRC International; Page – Royal National Lifeboat Institution (RLNI); Edmunds – Mental Health Foundation). Some of these impacts have been achieved through direct intervention with different individuals and groups (Lowry, M.Smith & Hale – drumming as a physical activity intervention for children with additional needs and obese children; Lowry - social network structures of youth athletes), some are mediated through modified training approaches or exercise regimes (Cunningham - Concept2 Indoor Rowing Sailing Guide; Harris - U.S. Patent entitled "Methods and compositions for increasing the</p>
--

anaerobic working capacity in tissues."; **Blacker** - Developing pre-deployment operational fitness tests (Royal Air Force - RAF) and others through influencing policy (**Edmunds** - Let's Get Physical: The impact of physical activity on wellbeing, Mental Health Foundation; **Myers** - High-Speed Marine Craft - A summary report of support provided to US Naval Special Warfare Command Combatant Craft Division; **Blacker** - Setting new physical selection standards for Standard & Junior Entry Recruits, Territorial Army Recruits and Officer & Setting evidenced based hydration guidelines for (Police) Officers when wearing CBRN PPE).

In addition, the Department actively promotes public engagement/science communication (**Greenlees** - Bradford and Cheltenham Science Festivals 2012; **M.Smith** - Cheltenham Science Festival 2012; **Myers** - High Speed Boat Operators Forum, Sweden, 2010; **Day & Greenlees** - British Psychological Society "Psychology for all", 2009) and a number of its staff have been invited to participate in high profile sport science focused media activities (**Greenlees** - BBC Horizon The Science of Colour, 2011; **Myers** - Channel 4 Food Hospital, 2012) that may not lead to direct impacts for individuals yet nevertheless impact a positive public discourse on the value of Sport and Exercise Sciences.

The sustained development of applied research across the Unit is the underpinning ethos of the Unit to achieve impact: dynamic and ambitious with real focus in end-users/beneficiaries. The research structure facilitates groups and individuals to work together. The establishment of the Chichester Centre for Applied Sport and Exercise Sciences (CCASES) in 2010 as a focus for research activity and the Sports Performance and Rehabilitation Unit (SPRU) in 2011 as a focus for consultancy activity demonstrates the University's commitment to the Unit. The University Research Facilitation Fund provides funding opportunities for applied research and dissemination of impact. The financial commitment to both has been significant with the Unit receiving Strategic Development Funding for two SPRU posts and research active staff within the Unit being awarded from 08/09-12/13 a total of £166k of internal Research Facilitation Funding. Collaborative studies accessing this fund include **Lowry** with GB Archery and the Bariatric Consultancy Limited, **Greenlees** to support the BBC Horizon programme & **M.Smith** with the launch of the Clem Burke Drumming Project. Over the period (since 2008) bursary funding and targeted bursaries in the Unit have also been utilised to support collaborative programmes of research (Brown 2008 British Canoe Union; **Blacker** 2009 Ministry of Defence, **Myers** (2008) QinetiQ Centre for Human Sciences, Jones (current) RYA). Bursary allocation across the Unit has been competitive with successful projects allocated to areas of expertise within the Unit with a view to future impact and the strategic objective to increase supervisory capacity within the Unit.

The Unit over the period has also developed a strategy around recruitment with new appointments (8FT in total, **Blacker, Edmunds, Hudson, Lake, Moll, Page, Scott, Ma.Smith, Steer**) of which 7 are early career researchers. Many of these new appointments have recent knowledge exchange and/or commercial experience (**Blacker** - Optimal Performance Limited, **Page** - RLNI; **Hudson** - DARPA Robotic Cheetah Project). Recruitment to the Unit (SPRU) also includes a Sports Science Support Officer (Wilkinson) with extensive (12 years) experience in occupational physiology at Optimal Performance Limited delivering and applying science and best practice to create client-focussed solutions to the health, fitness, safety and performance of people in physically demanding roles (clients included Army, RAF, RLNI, Police and Fire Services).

Notwithstanding the substantial investment in the activities described above, there has been a significant investment in facilities. Over the period, the University has invested £4.5m in facilities including a Sports Dome (September 2012), Running track (July 2012) and new Sport and Exercise Science laboratories and therapy clinics (December 2013). This investment has supported research by creating dedicated research spaces whereby the capacity to work in collaboration with user groups and stakeholders to provide immediate or long-term impact is greatly enhanced.

The Unit has used this period to explore different strategies and practices for achieving and developing impact. The capital developed throughout the period (networks, relationships etc.) is the platform for the future strategy.

c. Strategy and plans

The expertise and partnerships that have been developed within the broader context of the University strategy places research and impact at its heart. The Unit has a specific and comprehensive strategy that will systematically support future impacts arising out of research into the Applied Sport and Exercise Sciences.

We will achieve the strategy through:

- A strategic approach to supporting sustained collaboration with user groups and stakeholders
- Refined and formalized research strategic planning and budget with funds to support impact
- Targeting strategic relationships and networks, investing in the relationships as a precursor for paid work, using proven models (RYA - Pathway Sports Scientist Bursary)
- Adoption of the RDF as a framework for development
- Continued use of University bursaries, when allocated, in achieving strategic goals

This strategic approach is already taking shape with the development of collaborative research projects nationally and internationally (described in REF3a section b and REF5 Section e). In addition, we will aim to maximise the new laboratory and consultancy space to engage with user groups and stakeholders, foregrounding research, delivering a research seminar series and the biennial CCASES research conference. The investment in the new Sport and Exercise Science laboratories and therapy clinics will encourage collaborative investigations aimed at higher impact journals and increase opportunities to capture internal and external research income, thus supporting the research strategy of CCASES. The Unit plans to continue collaborative work and will support this with Unit and University support such as mentoring, development of impact plans, and allocation of resource and administrative support where available and appropriate. The Unit is already seeing rewards from this strategy with registration on the Defence Human Capability Science and Technology Centre (DHCSTL) register of suppliers and recent contracts awarded by the RLNI and the DHCSTL totalling £56k in value. The Unit will continue to draw on University resources such as the Research Facilitation Fund and Strategic Development Funding as well as external partners.

d. Relationship to case studies

The overarching aim of the Unit is to enhance research impact by forming collaborations locally, nationally and internationally with user groups and stakeholders. The case studies submitted are examples which broadly categorise this work drawing on research activity that has informed national and international (including global) practices. Harris' work demonstrating the performance-enhancing effect of beta-alanine has transformed the sports nutrition industry and is likely to have influences for elite sport world-wide. Myers' work on high-speed marine craft human factors has achieved significant international impact for organisations and personnel both at home and overseas with changes to working practices, equipment and measurement standards. The long-term collaborative partnership between The University of Chichester and the Royal Yachting Association (RYA) has informed evidence based training and has influenced training guidelines and competitive strategies to keep national sailing performers ahead of the competitors over the last 5 Olympic cycles with strategies and personnel in place to maintain this edge over the next Olympic cycle.