

**Institution: Liverpool John Moores University**

**Unit of Assessment: 26**

**a. Context**

**Background statement:** The Research Institute for Sport and Exercise Sciences (RISES) interrogates the exercise response via investigations that range from molecular studies through to community interventions. RISES translates both fundamental and applied scholarly activity into practice. RISES oversees strategic planning, completion and the impact of research within four discipline-based Research Groups (Biomechanics, Brain and Behaviour, Cardiovascular Health Sciences, Exercise Metabolism and Adaptation). To coordinate the translation of our fundamental work as well as respond directly to end-user needs, RISES has created 2 multi-disciplinary, outward-facing Research Exchanges. Both the Football Exchange (FEx) and the Physical Activity Exchange (PAEx) engage regional, national and international end-users directly as well as promoting and recording impact.

**Main users/beneficiaries/audiences of RISES Research:** The users, beneficiaries and audiences for our research work are diverse and reflect significant reach. Within the current REF period; FEx have formal research contracts, partnerships or Memorandums of Understanding with elite football clubs (Manchester United, Liverpool, Everton, Real Madrid), national governing bodies (FA, UEFA, FIFA, Saudi Arabia FA, Qatar FA, Mexico FA) and multi-national companies (Nike, Prozone). RISES staff translate research and generate impact in association with a range of elite sports settings and organisations (English Institute of Sport, UK Sport, British Olympic Association, British Shooting, English Cricket Board, British Snowboard and Skiing, Munster Rugby Union, St. Helens Rugby League, elite boxers, professional jockeys and a range of Olympic and Paralympic athletes). In the health domain, work undertaken by the Research Groups and the PAEx is used by, and based upon, formal long-term partnerships with local government and education authorities (Liverpool City Council, Wigan Council), health service groups (formerly Sefton and Liverpool PCT) and hospitals (Liverpool Women's, Aintree, Liverpool Heart and Chest, Alder Hey, Countess of Chester). This work informs and advises groups working to implement public health initiatives (Liverpool City Council, Wigan Council) and charities (Down Syndrome Research Foundation). Research that has changed diagnostic practice related to athlete screening is used by national charities (Cardiac Risk in the Young), international organisations (World Anti-Doping Agency, ASPETAR Sports Medicine Hospital, Qatar) and informs consensus statements (European Cardiology Society). Broader impact results from individual leadership roles within specific clinical groups (Dr. Dave Oxborough, Educational Chair, British Society of Echocardiography).

**Types of impact relevant to RISES research:** In the FEx and performance domain, RISES staff (and PhD students) have become embedded (by secondment or employment) in the football industry to conduct and use research that directly impacts performance and education (football clubs, FA), player preparation and nutrition (Munster Rugby Union Football club, Liverpool FC), improvements in training and recovery activities (Liverpool FC, Manchester United FC, St. Helens Rugby League Club), and development of new technology, training policies or documents (FA, Prozone Ltd) Within the PAEx our research has changed policy and practice relating to school physical activity programming, and school playground environments (Wigan Council, Liverpool City Council), informed national (Children's Play Information Service) and international (European Childhood Obesity Group, US National Association for Sport and Physical Education) policy related to child fitness and obesity as well as school-based physical activity promotion. In addition this work has led to significant change in the physical activity opportunities and environments for children in school and community settings (Liverpool City Council, Wigan Council). In the field of athlete cardiovascular screening our fundamental research has improved athlete screening consensus statements (European Cardiology Society) and driven new technical guidelines for the British Society of Echocardiography that have changed athlete screening protocols.

**Relationship between impact and research group activity in RISES:** RISES seeks to actively generate and record impact via a number of complimentary avenues, each reflective of the main

## Impact template (REF3a)

external audiences and their needs. Over successive REF cycles long-standing and deep relationships have been developed between individuals, research groups or exchanges and a broad range of end-users. Direct impact has been generated from the fundamental work generated from within Research Groups. The translation of this knowledge is aided by the direct links between the Exchanges and specific external individuals, organisations and agencies. Further, both the FEx and the PAEx engage with end-users from the outset of applied research. This work develops new knowledge and information from direct partnerships with those whose primary role is to change policy or practice and thus generate impact.

**b. Approach to impact**

***RISES approach and infrastructural mechanisms to support impact:*** To provide developmental support and record impact within the Football industry RISES launched the FEx in 2010. To extend our engagement with end-users in physical activity we created the PAEx in 2013. Both “Exchanges” promote internal, interdisciplinary collaboration to develop “intelligent applied solutions” for our external partners. In 2012 RISES set up a Public Engagement and Impact (PE+I) group that records impact and links our research with external agencies, obtains grant funding and provides public dissemination of our science (NCCPE, Girls Sports Association, BASES, MerseySTEM, BBC, National Museums, Royal Society, Wellcome Trust). The PE+I group host MerseySTEM training for RISES staff and students to become STEM ambassadors who then disseminate research findings and their applications to a wide range of communities. The PE+I group run an external “portal” for RISES research activity called “Face-2-Face with Sport Science”. The PE+I group facilitated an RCUK Silver Podium Award (psychological support to the British Shooting Team in the run up to London 2012) and a Get Set Award for inspiring Outstanding Learning through the London 2012 Games (Face-2-Face with Sport Science). RISES promotes the use of Visiting and Honorary positions within Research Groups and Exchanges to develop end-user relationships and impact. One example was the appointment of Prof Peter Bruckner (Medical Director at Liverpool FC) as a Visiting Professor facilitating FEx staff and student appointments within the club that has resulted in changes in training, nutrition and performance analysis methods in the club. RISES supports a range of regional, national and international research dissemination activities. For example, RISES hosts and financially supports workshops (GlaxoSmithKline, UK Anti-Doping), summer schools (Ultrasound with GE Ltd), national dissemination events (Smoke Free Sports, Men’s Health, Fathers Engagement Project) as well as international conferences (ICSEMIS 2012; European College of Sport Science 2011; Science and Soccer 2008). RISES also supports the continuing public engagement and charity work of Prof Greg Whyte in association with Comic/Sport Relief (David Walliams Thames swim; John Bishop’s “Week of Hell”) that has resulted in significant fundraising. Internationally RISES hosted the Office of the World Commission for Sport Science (2003- 2012) which disseminates the latest developments and practice across a range of sports. Finally, RISES staff and Exchanges actively engage in various social media (Facebook, Twitter, Altmetrics) to broaden the reach of our scholarly activity.

***Support for the development of relationships underpinning impact:*** Staff have substantive formal relationships with end-user groups in a range of sport and exercise settings. This can reflect shared research interests (SportsLinx Project with Liverpool City Council, 1996-2013) or individual employment history (Dr. Warren Gregson as Sports Science advisor with Middlesbrough and Manchester United football clubs, 2000-2013). Other relationships have developed on the basis of strategic decision making and targeted priming support from RISES. For example, following a £4.5 million HEFCE Centre of Excellence for Teaching and Learning Award, RISES supported a staff sabbatical (2008) for Prof Barry Drust to work within the football industry (Everton, Tranmere, FA) to determine how research could best serve and impact football players, clubs and organisations. This led to his appointment (2012) with the England Football team, disseminating and translating RISES research during the European Championships in 2012 and during the successful World Cup qualifying campaign over 2012/13. RISES also support staff secondments both nationally (Dr James Morton, Prof Barry Drust with Liverpool FC) and internationally (Dr. Warren Gregson, Qatar FA; Professor Tim Cable, ASPIRE, Qatar) to develop the significance and reach of our impact. RISES hosts Knowledge Transfer Partnerships with the football industry (Prozone Ltd; 2012+; £144 k; co-funded by TSB 60% and ESRC 40%) and childhood physical activity (Destination Youth; 2010+; £142K; co-funded by TSB 42%, Department of Health 25% and ESRC 33%).

RISES financially support and (co)deliver (with industrial partners) national and international training courses in ultrasound technology (GE Ltd), performance analysis (Prozone Ltd) and biomechanics (Qualsys Ltd). RISES supports staff to undertake high profile professional roles that represent key impact relationships (Prof Stratton: Chair of National Institute of Clinical Excellence working group: Promoting Physical Activity for Children and Young People, 2008-2010).

***Institutional support to help staff achieve impact:*** RISES has close working relationships with the University’s Marketing and Corporate Communications Department as well as LJMU’s Research and Innovation Services (RIS). University support services provide a conduit for RISES research activity to the broader University, local, national and international communities (local and national radio/TV/print media/websites). For example, in May 2013 the University coordinated the delivery and evaluation of a satellite event to BBC5-live’s “Big Sporting Day Out” and RISES delivered research-based workshops to disadvantaged Liverpool school children. Through RIS, RISES staff and students have been very successful in gaining early career research bursaries (since 2012; n=7; £13.7K) and conference travel awards (since 2012; n=11, c.£300 per award) to disseminate work, develop significant research and end-user collaborations as well as promoting the reach of potential routes to impact.

**c. Strategy and plans**

***RISES goals and plans for maximising impact:*** The overarching aim of RISES is to embed impact in its research from idea inception through to translation. This is being achieved; by developing and extending close working relationships between staff and multiple end-users; structured support for staff especially in relation to financial and logistical support as well as the recording of impact; and strategic decisions related to the overall focus of external engagement. To support these goals RISES’ current and future plans include the development of “End-user Advisory Groups” for the FEx, the PAEx and the RISES Board. The advisory groups will consist of key partners within the football industry and the physical activity and health domain. Individuals will have; broad and deep oversight of these areas from a national/international perspective; be able to provide strategic research guidance and/or reflection; and be able to facilitate growth, funding and impact. To meet the continuing challenge of producing world class research that translates to significant impact, with substantial reach, RISES has set the following goals;

- 1) *To develop and extend our research collaborations with partners in industry, government, education and health care to capture end-user requirement.*
- 2) *To provide infrastructural support for staff and students engaged in translational and impact focused research.*
- 3) *To place Public Engagement and the recording of Research Impact at the core of all our scholarly activity.*
- 4) *To promote RISES research activity and impact in the development of international education and scholarship based partnerships.*

**d. Relationship to case studies**

***Relationship between RISES activity, strategy and impact case studies:*** In REF2014 RISES is submitting 4 Impact Case Studies. The Cardiovascular Health Sciences Group (Athlete screening), the FEx (Evidence-based practice in the football industry) and the PAEx (School playground markings; School-based physical activity interventions) contribute focused impact case studies that report a clear link between research, dissemination and impact. This reflects positively on (a) the world-class quality of our fundamental and applied research, (b) the ability of fundamental research to be translated to, and used by, external agencies, (c) the structural organisation, mission statements and scholarly activity of the Exchanges; (d) RISES logistical and financial support for individuals to seek and develop relationships with end users that allows research to be directly translated, has significant impact and is effectively recorded.