Evaluation and development of a novel binocular treatment (I-BiT(™)) system using video clips and interactive games to improve vision in children with amblyopia ('lazy eye')

Amblyopia is abnormal visual development in the brain during childhood causing poor vision in one eye. Amblyopia affects 2-3% of the population and leads to restrictions in employment and risks of blindness. Conventional treatment involves patching the "good" eye for hours each day which has a detrimental effect on the child's ability to use their eyes together. Patching affects quality of life and poor compliance results in poor visual outcome. Overall results are mediocre. Alternative treatments exist but only the novel I-BiT(™) system stimulates both eyes simultaneously. Preliminary studies show encouraging results with reduced treatment times. Mr Richard Gregson and colleagues at Nottingham University Hospitals NHS Trust have been given Translation Award funding to develop and evaluate a new I-BiT system using 100MHz shutter glasses technology and to develop unique software for use on the system. The system will then be validated in terms of software delivery and in a crossover study comparing patching treatment and I-BiT"

Dr Lisa Banks, Senior Innovations Manager of NHS Innovations East Midlands suggested applying for the fund. She initially introduced the team (Paula Waddingham formerly of the University of Nottingham (UoN) and Nottingham University Hospitals NHS Trust (NUH), Isabel Ash (NUH), Mr Richard Gregson (NUH), and Richard Eastgate (UoN)) to the Wellcome Trust.