

Evaluating System Dynamics in Place-Based Physical Activity Interventions: An Embedded PhD within Active Suffolk Using the ENCOMPASS Framework

Introduction

Communities within the UK face unique 'place-based' challenges to their health and wellbeing, which are best understood by whole-systems and place-based approaches[1]. The evaluation of place-based programmes is complex, this is because places are situated within complicated systems[2-4]. This means we need to use an approach which is non-linear and adaptable[5] to change both across the system, and within each place.

Sport England has committed £250 million to an ambitious place-based initiative through to 2028, aiming to expand partnerships to 80-100 additional high-need areas and deepen progress in existing ones. This ground-up approach, focusing on understanding local barriers to physical activity and developing tailored solutions, aligns perfectly with the proposed PhD project's goal of enhancing system dynamics within Suffolk.

This PhD will enable systems level evaluation of the place-based expansion that has started in Suffolk. This initiative presents a unique opportunity to enhance research capacity, deepen understanding of system dynamics within Suffolk, and fund future research capacity in the region. The PhD student will be embedded within Active Suffolk, leveraging the ENCOMPASS model[5], a five-stage process exploring system functionality through an adaptive, non-linear approach to design and evaluation. This offers a cost-effective, innovative approach that promises long-term benefits in knowledge transfer and capacity building.

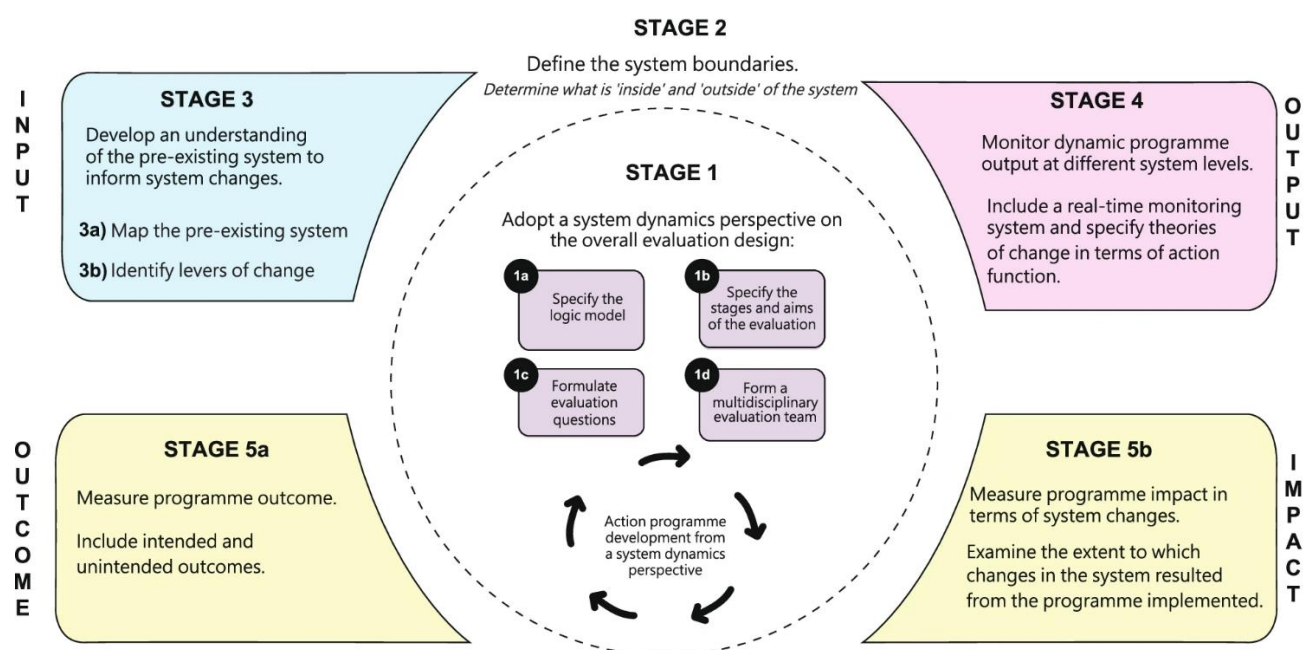
PhD Objectives

- 1) To achieve a PhD qualification, awarded by the University of Essex
- 2) To apply the ENCOMPASS framework to evaluate and enhance system dynamics in Suffolk
- 3) To develop innovative approaches for sustainable increases in population physical activity levels
- 4) To produce a comprehensive system map for Suffolk and each place
- 5) To identify key leverage points for sustainable physical activity change at both system and place-based levels
- 6) To contribute publishable research to high-quality academic literature
- 7) To bridge the academic research and policy and practice gap by having a dedicated embedded researcher and to build research capacity
- 8) To enable rapid knowledge exchange and evidence-based practice

Project Structure

The PhD student will work full-time at a system level, bridging insights from the two places across the project. We propose embedding the student up to two days per week within Active Suffolk, furthering our existing collaboration and ensuring proper immersion in the system. This arrangement will contribute to wider research capacity and culture. The student will benefit from a strong supervision team from the University of Suffolk and the University of Essex, bringing vital expertise.

The PhD research will be based on the ENCOMPASS model, a comprehensive five-stage process:



Overview of the various iterative stages in the ENCOMPASS framework[5].

This structured approach will ensure a thorough, systems-based evaluation that aligns with the project's goals and our existing work together. The PhD student's immersion in both academic and practical environments will facilitate the application of ENCOMPASS across the project, enhancing our understanding and effectiveness in creating positive change within the system.

Estimated Project Timeline

Year 1: Reviewing and expanding on current system definition and complexity mapping (Stages 1-3)

Year 2: Identifying leverage points, developing solutions, implementing interventions (Stages 3-4)

Year 3: Monitoring outcomes, assessing impacts and PhD write-up (Stages 4-5)

Expected Outcomes to include:

- Updated comprehensive system map for Suffolk and each place
- Identification of key leverage points for sustainable physical activity change at both a system and place-based level.
- Publishable research contributing to academic literature in high quality journals (E.g., IJBNPA, Lancet, BMC Public Health)
- Strengthening the whole-systems approach to physical activity and public health design, implementation and evaluation in Suffolk
- Practical recommendations and learning which can inform wider projects in Suffolk/nationally

This PhD project lays the foundation for continued research and impact in the region. Upon completion, the PhD graduate will be well-positioned for post-doctoral opportunities at the University of Suffolk, University of Essex, or within partner organisations. This creates a pathway for retaining expertise within the local system, potentially leading to sustained research programmes and long-term improvements in physical activity promotion and public health in Suffolk and beyond.

Supervision Team

Professor Valerie Gladwell is the Director of the Institute of Health and Wellbeing at the University of Suffolk (www.uos.ac.uk/people/professor-valerie-gladwell) and Head of Research at the Integrated Care Academy (www.integratedcareacademy.org.uk/about/our-people). She has secured and managed over £1 million in grant funding. She utilises whole system approaches to wellbeing (PI Sport England's Local Delivery Pilot Essex Evaluation), was principal investigator for Northeast Essex Neighbourhood evaluation and also currently is the principal investigator for Suffolk's Active travel and social prescribing pilot. She is a committee member for systems evaluation network. Valerie uses mixed methods in her research, and she has expertise in co-production and participatory design. Her projects involve different environments (indoor housing; workplace, hospital grounds, green spaces) and encompass a holistic approach including movement, sleep and air pollution. She is experienced in measuring wellbeing qualitatively and quantitatively including survey design. She is a board member of Suffolk Health and Wellbeing, Better Health at Work and Active Suffolk. She is academic convenor for the public engagement in research group at UoS and is actively involved in trying to make research inclusive.

Dr Rob Southall-Edwards is a Research Fellow at the Institute of Health & Wellbeing, University of Suffolk (www.uos.ac.uk/people/dr-rob-southall-edwards). Rob's expertise lies in developing and evaluating complex behavioural and systems-based physical activity interventions for public health, combining whole-systems approaches with investigations into individual responses to exercise. Rob has extensive experience working with local councils, Sport England, and community organisations. He contributed to the systems mapping project with Active Suffolk and the University of Essex, evaluated the Essex Local Delivery Pilot as an embedded researcher within Essex County Council, and recently worked with Suffolk County Council evaluating their Public Mental Health Programme. Currently, Rob leads on

the evaluation of "Moving Minds," a Suffolk Libraries project funded by Arts Council England, delivering opportunities to support physical and mental wellbeing in Suffolk. His work contributes significantly to policies and practices promoting community health, informing local physical activity strategies and enhancing understanding of barriers to sustained PA participation. Rob brings diverse research skills from academic, public sector, and community settings.

Dr Andrew Brinkley is a Lecturer in Exercise Psychology in SRES (www.essex.ac.uk/people/brink38902/andrew-brinkley), a Chartered Psychologist (CPsych), and the programme lead of the Sport and Exercise Psychology at the University of Essex. Andrew's expertise is within how complex behavioural and systems-based physical activity and public health interventions can be developed, implemented, and evaluated. Using qualitative and quantitative research, Andrew explores how programmes can be translated into practice and policy. He is currently working on a series of systems-based projects with local and regional councils, Active Partnerships, Street Games, and the NHS. Specifically, working in partnership with the research team and Active Suffolk, Andrew's research has contributed to mapping the system underpinning physical activity participation in Suffolk (tinyurl.com/SuffolkPA) and identifying leverage points for systems-change. This research directly contributed towards the Suffolk Physical Activity Strategy (www.activesuffolk.org/uploads/move-more-to-feel-better.pdf?v=1715251622). He currently leads the evaluation of the place-based approach to public health delivery in Epping Forest and has extensive experience creating impact alongside Sport England and charities.

References

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4. Boswell, J., et al., Place-based Politics and Nested Deprivation in the U.K.: Beyond Cities-towns, 'Two Englands' and the 'Left Behind'. *Representation*, 2022. **58**(2): p. 169-190.
5. Luna Pinzon, A., et al., The ENCOMPASS framework: a practical guide for the evaluation of public health programmes in complex adaptive systems. *International Journal of Behavioral Nutrition and Physical Activity*, 2022. **19**(1): p. 33.