

Knowledge Transfer Partnerships

KTP BENEFITS

Knowledge Transfer Partnerships are designed to benefit everyone involved

- 🔄 Businesses will acquire new knowledge and expertise
- 🔄 KTP Associates will gain business-based experience and personal and professional development opportunities
- 🔄 Universities, colleges or research organisations will bring their experience to enhance the business relevance of their research and teaching

Knowledge Transfer Partnerships

Accelerating business innovation; a Technology Strategy Board programme

<http://www.ktponline.org.uk>

NHS FIFE APPLYING PROCESS MAPPING AND MODELLING TOOLS TO BENEFIT HEALTHCARE SERVICES

ABOUT THIS CASE STUDY

NHS Fife is committed to improving its healthcare services, smoothing the patient journey whilst deploying resources effectively. This Knowledge Transfer Partnership (KTP) with the University of Stirling focused on developing, implementing and assessing a variety of process mapping and modelling tools to support the redesign of a range of healthcare services.

ABOUT THE SPONSORS

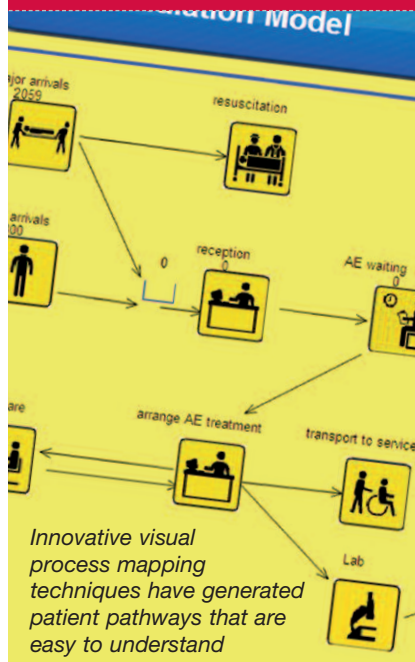
The **Scottish Government** is the devolved Government for Scotland. It is responsible for most of the issues of day-to-day concern to the people of Scotland, including health, education, justice, rural affairs and transport.

The **Economic and Social Research Council (ESRC)** is the UK's leading research funding and training agency addressing economic and social concerns, providing high quality research to business, the public sector and government.

FAST FACTS

- 🔄 Increased knowledge and capabilities in process mapping, patient tracking, simulation, capacity planning and waiting list management
- 🔄 Tools and methodologies developed and disseminated throughout the Organisation, improving ability to review operations and identify areas for improvement
- 🔄 Positive impact on waiting times in Accident and Emergency (A&E) and for planned care, helping NHS Fife to meet local and national performance targets
- 🔄 Modelling approach embedded at the centre of service redesign
- 🔄 Academic Partner gained an appreciation of the practicalities and benefits from applying pathway and other modelling techniques in healthcare
- 🔄 Valuable skills and professional experience for the Associate, and a job with the Organisation

The Company



“The tools provided through the KTP greatly assisted our understanding of clinical service delivery from the patient’s perspective. Consequently, we were able identify pragmatic changes to our processes and procedures that enhanced patient experience and in many instances, directly improved the working lives of our staff.”

Ken Laurie, Director of Strategic Change, NHS Fife

One of the 14 regions of NHS Scotland, NHS Fife provides healthcare services in the Fife area. It employs over 7,500 staff, including nurses, therapists, consultants and support staff.

ABOUT THE PROJECT

NHS Fife remains committed to providing excellence in healthcare across its region. The Organisation was considering several redesign initiatives to improve its performance, smooth the patient journey and maintain effective use of resources. Through this KTP, NHS Fife gained a highly-skilled and enthusiastic Associate and access to the expertise

within the University of Stirling, enabling it to develop, implement and assess a variety of process mapping and modelling tools in support of its various redesign initiatives, thereby maximising their impact.

BENEFITS

The collaboration has proved successful, introducing a number of tools and capabilities that have improved NHS Fife's ability to review its operations and identify areas for improvement, leading to greater operational efficiency.

Innovative visual process mapping techniques have been developed, including picture icons to generate patient pathways that are easy to understand. Following successful application in a number of

departments, including A&E, mapping now forms the accepted first stage in any service redesign in NHS Fife.

A more systematic approach to patient tracking has been adopted, generating data to validate draft pathways and populate process maps; for example, tracking data reveal the flow and timing of activities in outpatient clinics, facilitating more detailed analysis.

Simulation modelling has also been introduced, utilising information from mapping and tracking to develop 'what if' models, assessing the likely impact of changes to processes or patient flow.

Overall, knowledge transfer has enabled NHS Fife to reduce waiting times in A&E and outpatient clinics in line with local and national performance targets. The Organisation

is also better placed to assess its future workforce and training needs, using specially-designed modelling tools to predict service demands, monitor waiting lists and determine actions to maintain performance levels.

RESULTS

- 🌀 Innovative visual process mapping tools developed, clarifying patient pathways
- 🌀 Simulation modelling introduced, enabling the Organisation to predict impact of redesign initiatives
- 🌀 Performance targets for A&E and outpatient waiting times met and sustained
- 🌀 Potential for other regions to utilise tools and methodologies

The Associate

"It was an extremely valuable experience for me that changed my career path."

Mike Ghattas, KTP Associate

Mikhail Ghattas was recruited as KTP Associate on this project. His initial work to support the redesign of orthopaedic services and map mental health services highlighted his skills in mapping and the technique's potential within the NHS.

BENEFITS

The work with NHS Fife provided the Associate with many opportunities to develop his technical skills, in particular in process mapping techniques, computer simulation, development of internet pages and statistical analysis. Mike also gained professional qualifications in health economics and project management, reflecting his increased skill levels. He enhanced his interpersonal skills, proving able to work with a wider range of staff and gain their support for his initiatives, and successfully presented his work to NHS and academic audiences.

RESULTS

- 🌀 Technical, professional and project management skills enhanced
- 🌀 Gained Postgraduate Certificate in Health Economics and Prince II Practitioner Qualification
- 🌀 Offered and accepted a post within NHS Fife as Process Design Analyst

The Academic Partner

"The KTP project was a valuable and rewarding experience. We have seen our tools and techniques being used to help Fife achieve national performance targets and a number of opportunities for continued collaboration have arisen."

Gillian Mould, Senior Lecturer Management Science, University of Stirling

John Bowers, Professor of Management Science in the Business and Organisation Division of Stirling Management School at the University of Stirling, was lead academic on this successful KTP project.

BENEFITS

The project provided the University of Stirling with the opportunity to develop its pathway and capacity planning modelling techniques. The collaboration with NHS Fife staff enabled previous research to be refined, producing practical tools, with access to a wide range of staff ensuring that the academic partners were fully aware of the real needs of the NHS. The simulation studies and waiting list capacity planning work provided academics with much richer, topical data sets, advancing research into modelling in healthcare management. Experiences from this project have also benefited teaching providing topical case studies and student dissertation projects related directly to the KTP.

RESULTS

- 🌀 Development of pathway and capacity planning modelling techniques
- 🌀 Valuable exposure to public sector organisation, ensuring the relevance of the research programme
- 🌀 Several conference and journal papers published
- 🌀 Further research grant applications and funded projects



UNIVERSITY OF STIRLING