

## 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>

# JOHNSON & JOHNSON MEDICAL LTD PROVING THE VALUE OF ACCURATE DATA COLLECTION

### ABOUT THIS CASE STUDY

Johnson & Johnson Medical Ltd was looking to reduce waste at its Livingston site. Working with the School of Engineering and the Built Environment at Edinburgh Napier University, this Knowledge Transfer Partnership (KTP) aimed to identify sources of waste in suture manufacture and embed innovative analytical processes for continual waste reduction.

### 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 Technology Strategy Board is a business-led organisation established by the Government. Its mission is to accelerate research into, and development and exploitation of, technology and innovation for the benefit of UK business – building economic growth and quality of life.

### FAST FACTS

- 🔄 Accurate and robust data collection regime implemented
- 🔄 Improved data analysis in place, highlighting opportunities to reduce waste
- 🔄 Innovative waste reduction techniques introduced, reducing waste by over 20%
- 🔄 Process improvements made, delivering significant, year-on-year operational savings
- 🔄 The Academic Partner gained valuable insight into current operational methods and technologies in a leading manufacturing organisation
- 🔄 The Associate developed his technical and managerial skills, and accepted a position with the Company

## The Company



Baroness Greenfield presents the Judges' Commendation Award for Outstanding Benefit to the Company at the Scottish KTP Awards 2009 to: left to right Martin Askey, Edinburgh Napier University; Colin Yuill, Johnson & Johnson Medical Ltd; and Andrew Pollock, KTP Associate

"The outstanding legacy of the project is the ability to identify and quantify opportunities for improvement. This sounds simplistic, but while the immediate financial benefits were impressive, the most significant contribution has been the embedding of the capability to drive improvements year on year."

Colin Yuill, Business Unit Manager, Johnson & Johnson Medical Limited

**Johnson & Johnson Medical Ltd is a UK subsidiary of Johnson & Johnson, a global provider of consumer healthcare products and services, medical devices and pharmaceuticals. Its Livingston site manufactures and markets surgical sutures for the Ethicon franchise, and medical devices for other businesses within the Johnson & Johnson family of companies.**

### ABOUT THE PROJECT

Like all manufacturers, Johnson & Johnson Medical produces waste, however, inaccuracies in the data collection process at its Livingston site were hampering the Company's ability to identify improvement projects. Management were aware that reducing waste would help the site to meet its cost reduction targets and improve its environmental performance.

They also recognised that the Company lacked sufficient in-house expertise to improve its data collection and analysis, and therefore embarked on a KTP project with the School of Engineering and the Built Environment at Edinburgh Napier University.

### BENEFITS

The collaboration has proved successful, embedding improved practices that continue to deliver Company-wide benefits. An accurate and robust data collection regime is now in place, coupled with improved data analysis, providing Johnson & Johnson Medical with the knowledge and capabilities to identify where waste is occurring and opportunities for

improvement. During the project site waste was reduced by over 20%.

Improved product routings have been established, enabling the Company to eliminate unnecessary activities, cut cycle time, lower the risk of quality issues and reduce non-value-added activities, such as transport and material handling. As a result, the site has achieved higher batch yields and increased capacity through fewer rejects and less reprocessing.

A range of visual indicators, such as plasma screen presentations and real-time data displays, have been introduced, raising awareness of customer service, quality and waste metrics, as well as the impact of waste

and its associated costs at all levels of the Company.

### RESULTS

- Improved data collection and analysis in place, highlighting opportunities to reduce waste
- Process improvements made, increasing plant efficiency and yield
- Waste levels reduced by over 20%
- Project awarded Judges' Commendation Award for Outstanding Benefit to the Company at the Scottish KTP Awards 2009

## The Associate

**“Amongst many opportunities, this project allowed me to develop a portfolio of professional achievement in order to apply for membership of the Institute of Electrical Engineers (now known as the Institution of Engineering and Technology) or other appropriate professional body.”**

Andrew Pollock, KTP Associate

Andrew Pollock was recruited as Associate on this KTP project. In addition to applying his technical expertise to facilitate accurate data collection and effective analysis, he worked hard to highlight the advantages of reducing waste and encourage participation in initiatives by staff at all levels.

### BENEFITS

Working with Johnson & Johnson Medical has proved a challenging yet rewarding experience for Andrew. His role involved working on a variety of tasks and projects with many departments across all levels of the Company, providing opportunities to enhance and apply his team-working and presentation skills. Andrew developed his technical skills through dedicated training and practical application, and also attended relevant conferences, enabling him to share experiences and build useful industry contacts.

### RESULTS

- Technical, project management and team working skills enhanced
- Progressed towards NVQ Level Four in Management
- Presented paper at international manufacturing conference
- Offered and accepted a position with Johnson & Johnson Medical as Process Development Leader

## The Academic Partner

**“This is the most successful of the many programmes I have been involved with. The**

**KTP engendered a two-way transfer of knowledge and expertise between academia and industry, and I would recommend the experience to any academic colleagues.”**

David Webster, Lecturer, School of Engineering and the Built Environment, Edinburgh Napier University



This KTP project was led by David Webster, Lecturer in the School of Engineering and the Built Environment at Edinburgh Napier University, with support from Dr Máire Brennan in the School of Health and Social Sciences.

### BENEFITS

Both academics have gained a valuable insight into the current operational methods and technologies used in a world-class manufacturing organisation, and have been able to apply theoretical and research ideas to a 'live' project. The work has also enabled the academics to build their supervisory skills.

Knowledge gained has been fed into course work, with several case studies being generated, adding to the library of industry-linked material available. One paper has been presented at an international conference, with journal articles planned, raising the University's research profile.

### RESULTS

- Opportunity to update knowledge of current operational methods and manufacturing technologies
- Useful industry-linked teaching material prepared
- Links with Johnson & Johnson Medical cemented, providing opportunity for future student placements and sponsorships