

## 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 development opportunities
- 🔄 University, college or research organisation will bring their experience to enhance the business relevance of their research and teaching

A DTI Business Support Solution

# VIBRATION TECHNOLOGY LIMITED KTP TUNES INTO RADIO-BASED INNOVATION

### ABOUT THIS CASE STUDY

THIS KNOWLEDGE TRANSFER PARTNERSHIP (KTP) INVOLVED THE SUCCESSFUL COLLABORATION BETWEEN VIBRATION TECHNOLOGY LIMITED (NOW KNOWN AS VIBTECH) AND NAPIER UNIVERSITY. THE AIM WAS TO DESIGN, TEST AND MANUFACTURE MODULES TO FURTHER DEVELOP THE RADIO-BASED ONSHORE SEISMIC DATA ACQUISITION AND RECORDING SYSTEM PRODUCTS.

### ABOUT THE SPONSORS

THE DEPARTMENT FOR TRADE AND INDUSTRY (DTI) DRIVES THE AMBITION OF 'PROSPERITY FOR ALL' BY WORKING TO CREATE THE BEST ENVIRONMENT FOR BUSINESS SUCCESS IN THE UK. THE DTI HELPS PEOPLE AND COMPANIES BECOME MORE PRODUCTIVE BY PROMOTING ENTERPRISE, INNOVATION AND CREATIVITY.

THE SCOTTISH EXECUTIVE (SE) 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 (DEVOLVED AND RESERVED MATTERS).

### FAST FACTS

- 🔄 KTP helped to introduce new modules for radio-based technology
- 🔄 Implemented a new development strategy and methodology
- 🔄 Annual sales turnover is due to increase by £3.6 million
- 🔄 Associate awarded a post within the company
- 🔄 New research opportunities for University staff

## The Company



One of units produced that includes a GPS module as developed through KTP

"Having access to the Associate and our knowledge base partners has provided a considerable wealth of knowledge which has successfully supplemented expertise within the company."

**Steve Wilcox**, Technical Director, Vibtech (formerly known as Vibration Technology Limited)

**Vibtech, which was formerly known as Vibration Technology Limited, designs, develops and manufactures seismic recording equipment for use in oil and gas survey and exploration. The company is based in Larbert and has a small workforce of less than ten people.**

### ABOUT THE PROJECT

The company works within a demanding commercial marketplace and wanted to benefit from progressing a new technology which has significant commercial potential. The aim of the project was to design, test and manufacture modules to further develop the radio-based onshore seismic data acquisition and recording system products. The company (now known as Vibtech) looked to Napier University for support. The University had the necessary theoretical skills and expertise to collaborate with the company.

## BENEFITS

The company wanted to develop the next generation of seismic recording systems. As a result, the Associate's brief was to design, develop and evaluate the performance of a timing synchronisation for remote acquisition units (RAUs) but based on the global positioning system (GPS) rather than using the existing solution of very high frequency (VHF) technology. The RAU acquires the vibration sensor data, digitises the data and prepares it for transmission. The next step was to design, develop and validate a portable field test unit (a small handheld computer to allow operator interrogation, calibration and testing for the RAUs).

This has been a very successful partnership which has led to the company developing technology that is already giving it a competitive advantage. Specific GPS knowledge has been acquired and disseminated amongst staff. Vibration Technology Limited now has the capability to integrate the technology into the production line as well as developing related products. KTP has also improved the company's operations. Practices introduced through the project have helped the company to adopt a development strategy and methodology which is both effective and efficient.

The technology has not been commercialised yet but it is anticipated

that the use of GPS synchronisation will generate a 33% increase in sales from the present VHF approach. As a result of KTP it is anticipated that the sales turnover would be in the region of £3.6 million. In line with these forecasts, there is expected to be a rise in profits before tax in the region of £2.3 million.

## RESULTS

- 🌀 KTP helped to design and develop new GPS synchronisation
- 🌀 The project has enabled operational improvements and greater efficiencies
- 🌀 Sales turnover anticipated to rise to £3.6 million as a result of KTP
- 🌀 Profits before tax are expected to be in the region of £2.3 million.

## The Associate

James Gillespie, KTP Associate

### BENEFITS

The Associate brought skills from a First Class Honours Degree in Software Engineering to the KTP project. During the placement, he has acquired experience of the practicalities of electronic design and using his engineering skills within a manufacturing setting. The project has afforded him insight into the workings and constraints of a small to medium-sized enterprise (SME) manufacturing company. He has been able further his studies by starting an MPhil. The success of the placement is demonstrated by the company's job offer to the Associate, which he has accepted.

- 🌀 KTP has provided personal, academic and career development
- 🌀 Experience of the practicalities of introducing new technology within an SME
- 🌀 Associate offered a post within the company

## The Academic Partner

**“This KTP partnership gave us an exciting opportunity to investigate emerging technology (seismic use of GPS) with complex contextual issues (multiculturalism, remote locations) and so advance theories of human-centred design.”**

Tom McEwan, Lead Academic within the School of Computing, the Napier University



### BENEFITS

The University staff involved in KTP have benefited from career development and promotion as a result of a higher profile from the partnership. New research opportunities have been realised to the benefit of staff and students. Case study material related to the themes of GPS and seismic sensing technology have been introduced and MSc and final year students have benefited from insights into the systems engineering challenges that the company has faced. The partnership has provided a high quality network of contacts with industry and helped to raise the status of the University and staff involved in KTP.

### RESULTS

- 🌀 Opportunities for new case study material and greater links with an SME
- 🌀 New teaching material and research opportunities
- 🌀 Greater experience of translating learning into business solutions
- 🌀 Higher profile and enhanced reputation