

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

PHYSICAL ACOUSTICS LTD REFINING ACOUSTIC EMISSION TESTING

ABOUT THIS CASE STUDY

PHYSICAL ACOUSTICS LTD (PAL) IS A CAMBRIDGE-BASED COMPANY PROVIDING CIVIL ENGINEERING ACOUSTIC EMISSION AND NON-DESTRUCTIVE TESTING SOLUTIONS.

THIS PROJECT CAME ABOUT AS A RESULT OF PREVIOUS WORK UNDERTAKEN WITH CARDIFF UNIVERSITY, THE KNOWLEDGE BASED PARTNER. THE AIM WAS TO REFINE ACOUSTIC EMISSION TESTING SO IT COULD BE EXPLOITED COMMERCIALY.

ABOUT THE SPONSORS

ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL (EPSRC). THE ENGINEERING AND PHYSICAL SCIENCES RESEARCH COUNCIL (EPSRC) IS THE UK GOVERNMENT'S LEADING FUNDING AGENCY FOR RESEARCH AND TRAINING IN ENGINEERING AND THE PHYSICAL SCIENCES.

FAST FACTS

- 🔄 Improved competitive position
- 🔄 Established presence in civil engineering market
- 🔄 Technology package was created for bridge testing.
- 🔄 Improvements to PAL's quality system

The Company

"As a direct result of KTP Physical Acoustics is now the market leader in the application of acoustic emission technology to civil engineering structures."

Phil Cole, Managing Director, Physical Acoustics UK



(Left to Right) Dr Aled Davies - Cardiff University (Lead Academic), Jon Watson - Physical Acoustics (KTP Associate), Prof John King - Cardiff University (Pro-Vice Chancellor), Phil Cole (MD of Physical Acoustics), Paul Thomas - Cardiff University (KTP Centre Manager)

Physical Acoustics Ltd provides testing solutions and instrumentation.

ABOUT THE PROJECT

Acoustic emissions tests (AE) are capable of detecting micro-cracks in a bridge. It can provide information about active damage sources, including those that are inaccessible to conventional inspection. The project aimed to refine and develop AE testing.

BENEFITS

As a result of the project, PAL was able to establish a presence in the civil engineering market, thereby improving its competitive position.

Sales of the new system were expected to significantly increase turnover and there was the possibility of establishing a subsidiary to market generic non-destructive techniques.

The new type of AE testing technology has been used successfully throughout the world.

RESULTS

☞ PAL is now the market leader in the application of AE testing technology to civil engineering structures.

- ☞ The company has been appointed as sub-consultant for bridge inspection to the Highways Agency and a firm of consulting engineers.
- ☞ Retention of the Associate as PAL's Civil Engineering Applications Manager

The Associate

The Associate recruited for this project was a Civil Engineering graduate from Cardiff University.

BENEFITS

The Associate gained wide-ranging experience, including conducting marketplace studies and producing publicity material.

RESULTS

- ☞ Associate employed by PAL as Civil Engineering Applications Manager and now promotes the use of AE testing in the industry. He is the company's Quality and Health and Safety Manager.
- ☞ Associate awarded a higher degree and is pursuing Chartered Civil Engineer status.

The Academic Partner

"This partnership has allowed us to apply our research into the industry, meet new challenges, and discover innovative solutions. The value of the project and innovation is illustrated by its implementation globally, the improvement of the company's competitive position, and receiving the highest recognition for a KTP at the annual KTP awards."

Professor Keith Williams, School of Engineering, Cardiff University

The Knowledge Based Partner for the project with Physical Acoustics Ltd was Cardiff University's School of Engineering.

BENEFITS

The research profile of the institution was raised and it contributed to the development of the two Academic Supervisors, raising their awareness of the practical applications of the AE technique and the commercial aspects of product development.

RESULTS

- ☞ Four journal and four conference papers
- ☞ Three undergraduate projects
- ☞ Material for teaching case studies
- ☞ Funding was secured for an EPSRC CASE Studentship and support was provided for an EPSRC research grant application. Won a Knowledge Transfer Partnership award

