

Knowledge Transfer Partnerships

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Key Benefits

- Knowledge Transfer Partnerships are designed to benefit everyone involved
- Businesses are solving strategic challenges and long-term problems by drawing on the expertise of the knowledge base
- 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:
an Innovate UK programme
<http://ktp.innovateuk.org/>

Enzen Global Limited

Applying data analytics to the utilities sector

About this Case Study

Enzen Global provide the utilities industry with bespoke IT solutions. Their vision is to increase efficiencies in the sector by making use of data analytics. To achieve their goals, they undertook a two year KTP with Newcastle University's School of Maths and Statistics.

About the Sponsor

KTP is primarily funded and managed by Innovate UK. It supports UK businesses wanting to improve their competitiveness, productivity and performance by accessing the knowledge and expertise available within UK Universities and Colleges. 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

- Increase in turnover at Enzen as a result of new data analytics capability
- KTP has helped Enzen bid for new work and grow into new areas
- Project awarded a "Very Good" rating by Innovate UK
- Wider impact on gas distribution networks and the way they gather data
- KTP has raised Enzen's profile

The Company

"The KTP engagement between Enzen and Newcastle University achieved the desired business and academic outcomes. The relationship with the University has been taken to the next level through multiple initiatives."

Mr Subramani Venkatachalam, Account Manager, Enzen

About the project

The aim of the project was to explore the application of data analytics in the utilities sector, with particular focus on the gas industry. Data analytics offered the project a flexible approach, allowing applications to specific challenges in gas networks, and an extension of the work into the water and electricity sectors. The aims remained consistent throughout the project, but application areas were revised in line with developments at Enzen.

Several projects were undertaken, with three longer term projects ultimately taking precedence. The first looked at improving demand estimations by using local rather than regional weather measurements. The other two investigated relationships between socio-economic factors and residential demand, and financial optimisation of resolving public

reported escapes of gas.

During the project, the enthusiasm for data analytics has grown worldwide. At the same time, economic conditions have become more restrictive for utility companies, increasing their need to find efficiency savings. As a result, Enzen's need to establish analytical capabilities has continued to grow.



Relationships between open source socio-economic data and residential demand were established.

We work with
Innovate UK

Knowledge Transfer Partnerships

The Company

Benefits

As the KTP progressed various projects were undertaken resulting in a wider range of benefits for Enzen. Broadening the scope of the project into a number of application exemplars allowed Enzen to provide network operators with working examples of data analytics usage. They were also able to integrate their data with official statistics and open data sources, including weather data.

As a result of the KTP, Enzen incorporated data analytics into their "Knowledge Studio" and now offer the service to customers. During the KTP, Enzen expanded their range of business process improvement products.

Furthermore, the KTP has provided Enzen with a methodology for determining how suitable a client's data is for analytics. The guidelines produced allow Enzen to demonstrate to their clients the requirements and why they are necessary. As faulty data can lead to incorrect conclusions, this is integral to the business.

Knowledge has been embedded at the company through the production of user guides and slides, as well as the production of detailed reports.

Results

- Increased profits
- Established a data analytics capability
- Led to a wider range of consultancy offerings
- Staff upskilled in data mining techniques
- Significant culture changes at the company

The Associate

"The KTP enabled further upskilling of my statistical knowledge, which I directly applied to diverse and interesting business projects."

Dr Warren Yabsley, KTP Associate

Benefits

The Associate furthered his knowledge of data analytic and statistical techniques, while also enhancing his management skills and gaining insight into business practice. Due to the nature of Enzen's business, he also gained experience of working in a dynamic, customer responsive, project based environment.

He presented to the directors and executives of one of Enzen's key customers, which resulted in the agreement of a long term project. This provided the Associate with a positive, tangible results based outcome.

Results

- Developed expertise in data mining software
- Gained data analysis and statistical skills
- Experience of training staff
- Conference attendance
- Continued employment at Enzen

The Academic Partner

"KTP shows how academic expertise contributes to a wide range of projects and is fundamental to growth and success in the business world."

Dr Shirley Coleman, School of Maths & Statistics, Newcastle University

Benefits

The KTP developed the lead academic partner's interest in geographical mapping, official statistics and time series modelling. Benefits, outcomes and results have been shared with other staff, expanding their knowledge base.

Working with Enzen has enriched teaching materials by providing the academic with case study material. Analytical methods that concern businesses are of great interest to students. Similarly, work fed into a project undertaken by a summer school student, improving the academic's team leadership skills. The University's research also benefitted as a result.

The project and its outcomes have helped foster a collaborative environment and potential impact case study.

Results

- Expanded network of colleagues
- Improved teaching materials
- Presented KTP work at conferences
- Potential for new industrial collaborations
- Enriched academic work and research
- Potential impact case study



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