



Llywodraeth Cymru
Welsh Government

Innovation

Window Cleaning Warehouse

Vale of Glamorgan based Window Cleaning Warehouse has quadrupled staff numbers and more than trebled turnover, thanks in part, to three Knowledge Transfer Partnerships with Cardiff Metropolitan University.



The Sponsors

The Welsh Government and Innovate UK have invested in a diverse range of programmes to encourage and support industry-university collaboration. The longest established scheme is Knowledge Transfer Partnerships (KTP), which for nearly 50 years has helped businesses to innovate and grow by collaborating with a university to bring in new skills and the latest academic thinking to deliver a specific strategic innovation project.

KTP projects involve three key parties, a business, a university and a recent university graduate or Associate, being appointed to work within a business for an agreed amount of time. The Associate, under the supervision of a university academic, transfers new knowledge from the university to help the business innovate and grow.



About the three Window Cleaning Warehouse and Cardiff Metropolitan University KTP projects

One such industry-business collaboration, funded by Welsh Government, which started in 2013 enabled Window Cleaning Warehouse and Cardiff Metropolitan University to strike up a relationship which has seen them successfully work together and deliver impactful outcomes for almost ten years.

This started with the scoping of the very **first KTP**, supervised by Professor Steve Gill, Cardiff Met's Director of Research, which embedded an in-house product design capability and resulted in a suite of new user-centred products to support Window Cleaning Warehouse with its strategy to enter new markets and to grow its market share.

This success was quickly followed by a **second KTP** in 2015, which leveraged the expertise of Dr Bethan Gordon, from Cardiff Met's School of Art & Design, which resulted in the business developing a unique and highly innovative van-mounted system and

becoming recognised as the world leader for aircraft cleaning equipment. This partnership was top-rated by Innovate UK and received a Business and Education Partnership Award in 2017.

The most recent and third KTP involving Computer Science graduate Sion Brown, working under the supervision of Dr Imtiaz Khan and Dr Chaminda Hewage from Cardiff School of Technologies, enabled the business to extend into new and innovative products. The focus was on the development of an app which enabled window cleaners to efficiently plan and execute their cleaning operation with maximum effectiveness and with minimum use of resources like pure water and chemicals. Clever algorithms underpinning the app optimise the resource and route by utilising the data collected on a real-time basis. This project was awarded the highest possible grading of 'Outstanding' by Innovate UK.

Over the course of the three KTP projects, Window Cleaning Warehouse has quadrupled staff numbers and more than

trebled turnover. Further roles and growth are planned in line with the aspirations of the 2015 Wellbeing of Future Generations Act, which aims to create a more prosperous Wales.

The new app developed in the third KTP provides data to help minimise the use of pure water and chemicals. Encouraging reduced use of resources in this way contributes to Wales' environmental wellbeing, as sustainable development is also a key aspect of the Act.

The company

Established in 2004, Window Cleaning Warehouse has grown its market share and become a market leader in the manufacture, supply and distribution of professional window cleaning equipment, with 40,000 domestic and business customers based across the UK and internationally.

With operations in the Vale of Glamorgan and Liverpool, the business currently employs 26 staff and has a turnover of £6 million.

In addition to its notable local economic impact, the business has consciously impacted on the environment, including through innovations developed in conjunction with Cardiff Metropolitan University which resulted in a reduction in its use of natural resources, such as water and fuel.

Stephen Fox, Window Cleaning Warehouse's Co-Founder and Director commented: -

“It is incredible to think that it is almost 10 years since we started working with Cardiff Met on our very first KTP. During this

time, we have grown as a business, not only in terms of the level of turnover, but the number of staff we employ has significantly increased. The way we operate has also been completely transformed. Having now completed our third KTP, I look back and can see how, through our work with the University, there is a clearly defined line in the sand as to where we were and where we are now.”

The Associate

Further to the ongoing successful journey of this programme of projects, Sion Brown the KTP Associate on the third KTP, who is now employed by the company said: -

“I thoroughly enjoyed the KTP. The dynamics of balancing the academic research, innovation, streamlining company processes for industry 4.0 and the focus on personal development made the experience invaluable. I enjoyed the structure, responsibility and plentiful personal development.”

The Academic Partner

Matthew Taylor, Director of Innovation at Cardiff Metropolitan University commented: -

“Ensuring research has a positive societal impact is a priority at Cardiff Met. The KTP programme is an excellent vehicle that allows us to share our expertise with industrial partners. We are proud that, for nearly a decade, academic staff from different disciplines have been able to directly support the rapid growth of a local SME.”

To find out more about funding and support from the Welsh Government:

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