

## Knowledge Transfer Partnerships

Research and testing for next generation, sustainable hot water cylinder solutions

### Copper Industries (Ireland) Ltd

<b>Location:</b>	Toome, Co. Antrim
<b>Project length:</b>	2 years
<b>University School:</b>	School of the Built Environment, Ulster University
<b>Academic Team:</b>	Dr Mervyn Smyth



The team behind the research (l-r): Mark Anderson, Centre for Sustainable Technologies, UU, Vincent O'Brien, KTP Associate and Charlie Shivers, MD, Copper Industries.

### The Company

Copper Industries (Ireland) Ltd manufactures a wide range of standard and bespoke hot water cylinders, thermal stores and buffer vessels.

The company has a solid reputation in research and development collaboration with academic institutions and private companies, producing high quality prototype and final market products.

### The Challenge

Through the KTP the company aimed to develop and embed an Innovation Framework comprising a pioneering test rig facility to adapt and augment their existing range of bespoke hot water cylinders to meet market demands.

The facility was required to conform to industry standards, providing a unique capability to test and quantify new lower cost materials, thermal storage products and tanking arrangements to produce more effective, efficient and sustainable solutions.

### The KTP

As a result of the KTP Copper Industries has established an in-house R&D facility and developed a new, comprehensive library of technical, design and product information. They have created bespoke software programmes to deal with most day-to-day operational technical queries.

When the 'Hothead' the company's newest product was launched, the KTP Associate produced sales and technical literature, animations and online videos. This has been achieved through the technical understanding of products tested on the newly developed test rig.

The test rig was also used to develop technical literature and a new cylinder sizing application. This application helps plumbers to advise clients on the size of system they require and directly links them to the company and its products.

## Company benefits

The KTP 'copper fastened' its reputation as a leading supplier of hot water tanks, enabling the company to:

- strategically expand in new areas and target new stakeholder groups.
- Identify an untapped strength – the company's customer network.
- produce packaged products in collaboration with a commercial partner for roll out across the extensive customer network creating a new revenue stream.
- launch a new product range and extend market share in UK and ROI resulting in higher growth than originally predicted.
- establish a sister company in ROI (LB Cylinders)
- introduce a 'step change' into a culture of innovation.

*"Through this KTP, we have achieved our goal of creating an in-house research and development department headed up by our KTP Associate."*

**Charles Shivers, Managing Director  
Copper Industries (Ireland) Ltd**

## University benefits

Staff have already applied some of the hot water cylinder knowledge they have learned to augment research in the design and manufacture of novel products for producing hot water.

Five journal publications have been written and are in various stages in the associated press. Throughout the project there were numerous press releases and good news stories generated, which has increased the brand awareness of Ulster University and the Centre for Sustainable Technologies.

The work conducted during the KTP has the potential to contribute to future National Research Framework evaluation processes in publications and case studies.

*"This KTP facilitated the development of a research facility at the company's premises to test and scientifically analyse the performance of future innovative hot water concepts and new and emerging materials and technologies."*

**Mark Anderson  
Centre for Sustainable Technologies**



## How to apply for a KTP

### Contacts

Check the feasibility of your idea with your University Programme Manager.

Ulster University Programme Manager  
Ms Amanda Fullerton  
E: [a.fullerton@ulster.ac.uk](mailto:a.fullerton@ulster.ac.uk)

Or you can call Ulster University  
on **028 7167 5236** or go  
to [www.ulster.ac.uk/ktp](http://www.ulster.ac.uk/ktp)



Or with an Invest Northern Ireland executive.

Contact the Invest NI Programme Manager  
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