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When Jon Fielder, SOCOTEC's technical director for Water Treatment Equipment, Environment and Safety, wanted to develop an electrolytic disinfection device, the company approached Brunel University London to assist.

Both the company and Brunel staff agreed that the best way to achieve this business goal was to take part in a Knowledge Transfer Partnership. The academic team and our Research Support and Development Office put together a bid for a grant to cover the costs of the project. Following that, the team was awarded an Innovate UK grant to the value of £153,000 to commence work.

Brunel evaluated the use of electrolytic disinfection (ED) for controlling Legionella and other pathogens in hot water systems. Dr. Giovanna Cossali was selected as the Associate to work at the company headquarters because she demonstrated the potential of electrolytic disinfection (ED) during her PhD programme, which was funded by SOCOTEC. Her work at the company was overseen by Professor Tassos Karayiannis, Dr Edwin Routledge, and Martin Ratcliffe.

This Knowledge Transfer Partnership was part a five year collaboration between SOCOTEC and Brunel University London, resulting in the development of Protex! This ED device has been proven effective in reducing bacteria levels by up to 99% in the hot water system of a Multiple Sclerosis centre in Wendover, Buckinghamshire, meeting rigorous regulatory water treatment requirements and offering the highest standards of hygiene. In addition, numerous laboratory experiments have proved that Protex! is also effective at lower temperatures, thereby reducing energy consumption and improving safety, whilst reducing our dependence on traditional chemical biocides.

The study so far has proved that ED could play an important role in the energy reduction strategies necessary to meet the ambitious nondomestic zero carbon target the UK government has set for 2020. It is also estimated that UK non-domestic buildings could make energy savings of up to £62 million through the use of Protex!.

Following the success of the mutually beneficial programme, Giovanna is now directly employed by SOCOTEC and has recently begun the role of Service Delivery Manager at SOCOTEC's Thame office. Now, Giovanna is helping to support the business from a number of key technical aspects, including implementing development plans to improve the efficiency of strategic areas of the business.

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