UTS:ENGAGE

UTS UNIVERSITY OF TECHNOLOGY, SYDNEY

TECHVOUCHERS:

A smart way to manage incontinence

Partners

Simavita (Aust) Pty Ltd

Problem

Urinary incontinence is a serious condition that affects many Australians. In aged care facilities, it is estimated that over 70% of residents suffer from this condition, making incontinence, and the health problems associated with it, the single biggest cost in such facilities. But more importantly, urinary incontinence can have a profound impact on health, safety and quality of life.

Simavita (Aust) Pty Ltd, one of the world's leaders in continence management solutions, has developed a device to better manage this condition – the Smart Incontinence Management (SIM™). Using wireless technology, the small device is fitted to the diaper, and transmits information instantly to carers and the facility. SIM™, in short, takes away the guess work of managing incontinence, allowing aged care providers to better establish an evidence-based care plan for its residents.

The problem was, further product development had been completed and needed support to validate this.

Solution

UTS was introduced to Simavita (Aust) Pty Ltd by the NSW Trade and Investment. The brief was clear - they wanted UTS to review Simavita's medical device in a controlled environment and provide data that could be used to validate the accuracy of the system.

The TechVouchers scheme was identified as an ideal way for Simavita and UTS to collaborate on this initial small project, providing matched funding for the research activity.

Dr Bruce Moulton, a wireless technology expert with research interests in aged care technologies, was chosen as Chief Investigator. Under his guidance, 60 test subjects were recruited to take part in a study that simulated a variety of incontinence events.

Using the data recorded from the study, Simavita were able to validate the accuracy of their algorithms, whilst providing insights into ways to improve their current wireless technology.

The study helped Simavita deliver a proven solution to improve people's quality of life and the economic burden of aged health care. Since then, Simavita have contracted further research with UTS and Dr Moulton, to improve and refine their technology even further and are continuing to explore ongoing research collaborations.

"Working with UTS has been a great experience because their insightful know-how in conducting field research saved time in research protocol."

About the UTS Research Group

The Centre for Intelligent Mechatronic Systems (CIMS) is a multidisciplinary group undertaking innovative research and research training in mechatronic systems. Dedicated to engaging industry in the commercial development of advanced mechatronic devices, CIMS holds key expertise in autonomous robots, electrical machines, automotive systems and human-machine interaction.

Dr Bruce Moulton is a core member of CIMS and another major UTS Research Strength: the Centre for Health Technologies. He is an expert in electrical and mechanical engineering with a keen interest in the application of sensor and wireless communications technologies in the healthcare sector.