



UQ-developed sensor that monitors power grid health

Professor Tapan Saha's sensor technology, which monitors the condition of ageing electricity transformers, was licensed to Queensland company Aurtra. Aurtra was acquired by French multinational Schneider Electric in a multimillion dollar deal in 2021, taking the UQ technology to the world.

Brisbane start-up company Aurtra develops remote industrial sensors to monitor ageing transformers, using patented technology designed at UQ's School of Information Technology and Electrical Engineering by Professor Tapan Saha, Dr Hui Ma, Dr Chandima Ekanayake and Dr Dan Martin.

Aurtra has quickly expanded into 16 countries throughout the world, with its product developed, supported, and shipped from Brisbane.

Aurtra CEO and co-founder Terry Woodcroft believed a number of factors have led to the success of the company, including being able to leverage from the combination of available capital and software architecture that facilitated ease of product roll-out and support: that and a unique product that would deliver a strong return to the customer.

The impact

During the initial and rapid expansion phase, Aurtra came to the attention of global energy company Schneider Electric based in Germany.

Within five years Aurtra has managed to in-licence the intellectual property from UQ, build a successful company with global sales, and exit on strong terms.

The remote sensing market is estimated to be worth up to US\$2.5 billion and the technology is highly valued by asset managers as a way of undertaking preventative maintenance or controlled shutdowns.

Aurtra's technology provides automated online reports to electricity distributors on a transformer's condition, highlighting insulation problems, damage, and any probability of failure ahead of time.



Professor Saha, has been working for more than 25 years on condition monitoring tools for ageing transformers.



Overview

A smart way to monitor ageing power networks



Pathway

Licence to Aurtra
Aurtra acquired by Schneider Electric



IP Position

Patent applications granted



Commercialisation

Patent application
Licence intellectual property

The Aurtra journey so far

Aurtra works using the internet of things, sensors, cloud technology, maths and analysis all within a user-interface.



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Researchers from UQ's Faculty of Engineering, Architecture and Information Technology's condition monitoring tools for ageing electrical transformers is developed.

2017

UniQuest helps create start-up Aurtra with co-founders Terry Woodcroft, and investors from Sydney and Brisbane Angels.

The sensor technology IP is licensed to Aurtra.

2019

Aurtra raises capital from UniSeed and Melbourne start-up investors

2020

Aurtra Pty Ltd quickly expands into 16 countries around the world.

2022

French multinational Schneider Electric acquires Aurtra in multimillion dollar deal.

Aurtra's HealthSense multi-function sensor becomes part of the Schneider Electric services offering.

2024

Aurtra is rebranded EcoStruxure Transformer Expert.

The path to commercialisation

For more than a combined 25 years, Professor Tapan Saha, Dr Hui Ma, Dr Chandima Ekanayake and Dr Dan Martin from UQ's School of Information Technology and Electrical Engineering had been researching condition monitoring tools for ageing transformers.

The researchers set about creating a technology which would be niche and of critical interest to large-scale industrial control and transformer companies.

Ageing power infrastructure is a global issue. Some of the transformers in Australia alone are more than 50 years old and well beyond their design life.

Replacing them is expensive and problematic.

The researchers were aware that their technological development could be a valuable asset and UniQuest was able to help with licensing the technology into Aurtra and raising the capital to get the technology out to the market.

The sensor technology was licensed to Aurtra in 2017, and the company was co-founded by CEO Terry Woodcroft, Sydney and Brisbane Angels and a team of high-net-worth investors.

In 2019, Aurtra raised capital from UniSeed and start-up investors from Melbourne.

Funding also came from both state and federal governments, including vital seed money from the founders and a Brisbane-based family business, Brice Family Office.

Aurtra initially collaborated with major electricity distribution companies in Australia to develop an economical way of monitoring the health of a large and ageing network.

Aurtra quickly expanded into 16 countries across the world with the product being developed, supported, and shipped from Brisbane.

Five years after the company was founded, Aurtra was acquired by German company Schneider Electric.

By 2022, the remote sensing market was estimated to be worth up to US\$2.5 billion and the technology is highly valued by asset managers as a way of undertaking preventative maintenance and controlled shutdowns.

Aurtra has been rebranded EcoStruxure Transformer Expert as part of Schneider Electric..



Professor Tapan Saha

UQ Innovators:

Professor Tapan Saha

UQ Institute/Faculty:

Faculty of Engineering, Architecture and Information Technology

UQ Research Impact Area:

Building Better Economies

UQ Research Strength:

Information Technology and Electrical Engineering

Partner with UniQuest

UniQuest is Australia's leading university-based commercialisation company, managing the intellectual property of The University of Queensland.



We have created more than 125 companies from our intellectual property portfolio



UQ technologies licensed by us have resulted in more than \$70 billion in gross product sales



Together with our startups, we have raised more than A\$1 billion to take university technology to market



We have been granted more than 360 US patents and have more than 200 active licence agreements