Technology for Urban Liveability Program

Winter News 2018

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TULIP

UTS Institute for Sustainable Futures

UTS: ENGINEERING AND INFORMATION TECHNOLOGY

TULIP blooms in Lake Macquarie

A TULIP recently bloomed in Lake Macquarie – in the form of one of Australia's most progressive smart city projects.

TULIP (Technology for Urban Liveability Program) is UTS' flagship smart city delivery initiative. With significant funding from the Australian Government, and a dynamic partnership with Lake Macquarie City Council and a range of industry partners, TULIP is delivering an 18-month project focused on developing 'climate responsive neighbourhoods'. The project is using networks of sensors to measure environmental variables such as urban heat, air quality, noise levels and vehicle and pedestrian density.

Last month saw two new LoRaWAN (Long Range Wide Area Network) gateways switched on in Lake Macquarie, at Charlestown and Speers Point. LoRaWAN is a relatively new type of network technology, using inexpensive battery powered sensors to build a large network of connected data points. What this allows is high-definition mapping of real-time environmental conditions. The aim of gathering all this data is to understand how environmental liveability variables and the use of public space and services interact at a highly local scale, to help Council to improve planning, design and management of public space and facilities. *Read more on this story at www.tulipnetwork.org*

TULIP EMS (Environmental Monitoring System) prototype arrives!

TULIP and our partners at ARCS Group have been working for the past five months to develop the TULIP EMS - a uniquely Australian solution for low-cost distributed air quality, temperature and noise monitoring in urban settings. The first prototype has just arrived and the team is extremely excited to show a bit of a sneak peak at what we think is going to be something of a game changer for smart cities across the country. If you'd like to know more, contact the team today!

Air Quality Sensor Benchmarking is underway

A team at UTS Faculty of Engineering and IT has begun to benchmark a range of commercially available air quality, temperature and humidity sensors. As low-cost devices become increasingly available, the performance of devices and the quality of data that they produce becomes increasingly important. If we understand what a device can and can't do, we can treat its data accordingly. The work is expected to be a rolling initiative, with results published periodically. We hope that the information is useful to Council's exploring procurement options.

The Smart Liveable Neighbourhoods Challenge for Lake Mac

Makers and IoT enthusiasts might want to take note. UTS and Lake Macquarie City Council have just launched a competition to design and build DIY LoRaWAN devices as part of an activation strategy for the newly installed gateways. With $600 of prizes up for grabs, plus a bunch of free kit available for participants, this is a great opportunity for community to dive in and get creative. More info on the TULIP website!

2018 has been fast-paced and exciting for TULIP. With so many initiatives coming together, UTS and partners are learning by doing. TULIP is a vehicle for rolling up our sleeves and getting our hands dirty in a collaborative environment, welcoming the chance of failures and the excitement of success. With plenty more in the pipeline, watch this space as we continue to expand our activities and research