

# Technology for Urban Liveability Project

A Smart Locale Initiative [www.smartlocale.com.au](http://www.smartlocale.com.au)

Harnessing the Internet of Things to track the health of the urban environment, advocate for positive change and support sustainable, flourishing communities.



TULIP is a voice for building liveable urban communities that are clean, cool and quiet. We want to reduce traffic, improve air quality, minimise the urban heat island effect and cut noise pollution. We want fresh air, more green space, improved bike and pedestrian infrastructure and world-class sustainable design across buildings and public spaces.

As the intersecting pressures of climate change, increasing urban density, energy and water security increase, the challenge of urban liveability rises. We believe that the generation and creative use of data relating to the health of the city is the key to catalysing action. Emerging Internet of Things (IoT) technologies are for the first time enabling relatively low-cost deployment of environmental sensor networks that can capture this data in real-time. This has the potential to significantly disrupt urban development agendas by strengthening advocacy for world-class sustainable design approaches and progressive public policies.

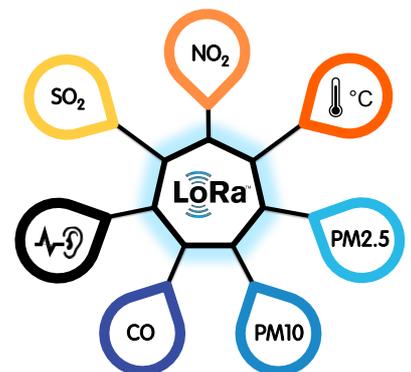
## Who are we?

TULIP is a collaborative team that has gathered under the multi-stakeholder Smart Locale program to run a pilot deployment of environmental sensors in central Sydney. Participants include the Institute for Sustainable Futures (ISF), the Total Environment Centre (TEC), the Knowledge Economy Institute (KEI), UTS Faculty of Engineering and IT (FEIT), UTS Faculty of Design Architecture and Building (DAB), Meshed, Skygrid, Wattwatchers and The Things Network.

## The TULIP Pilot

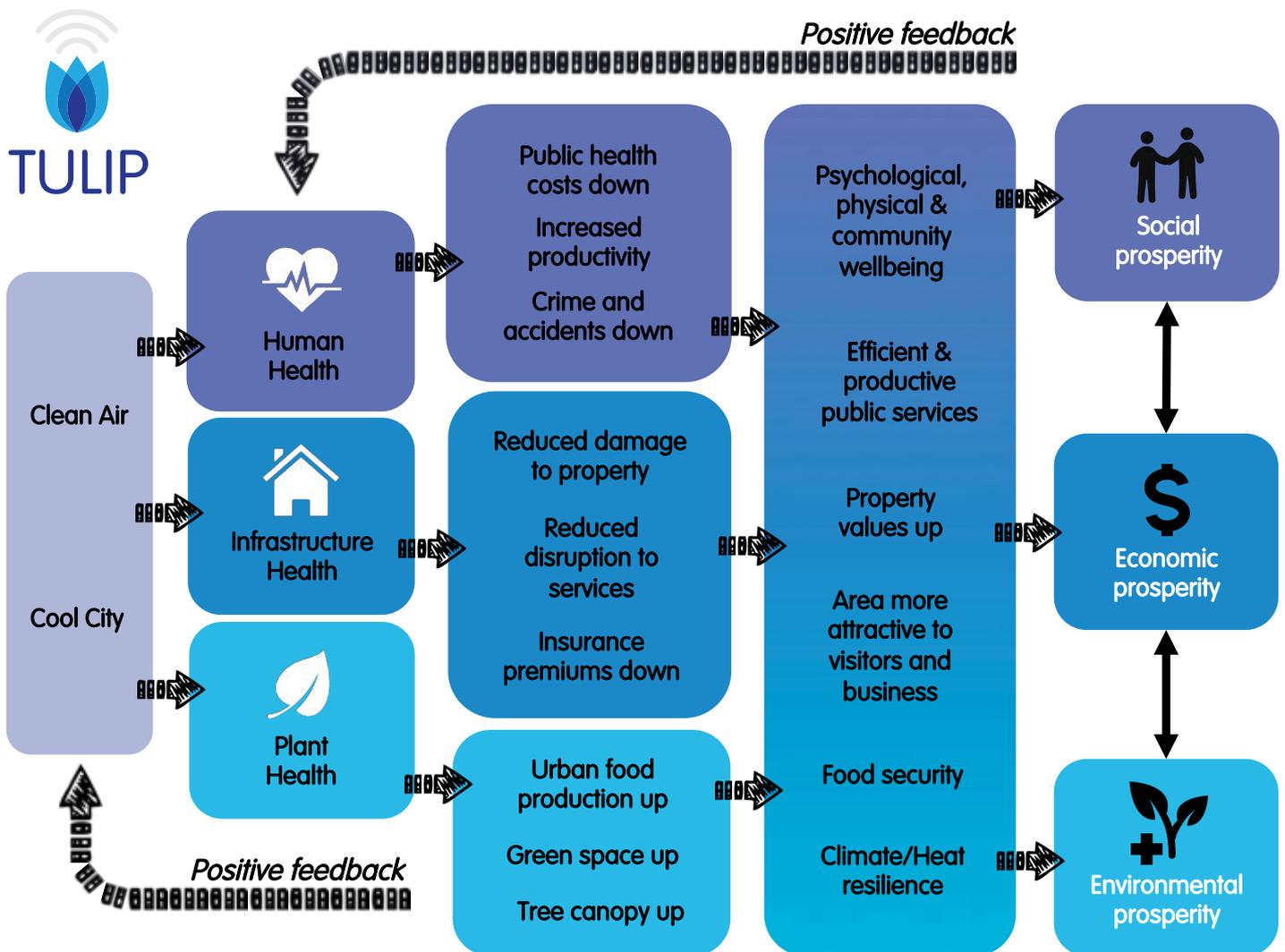
LoRaWAN is a new open-standard wireless connectivity technology that enables a localised network of sensor nodes to connect to one or more central 'gateways'. Nodes can host an array of environmental sensors. LoRaWAN networks have been successfully deployed in a number of major cities around the world, such as Amsterdam, New York, Paris and Singapore. TULIP, in collaboration with The Things Network - a global open source IoT network ([thethingsnetwork.org](http://thethingsnetwork.org)) - will deploy a LoRaWAN network in Sydney with sensors that measure noxious gases, fine particles, temperature and noise - all factors that contribute strongly to urban liveability.

Pilot deployment will commence in early 2017 with a focus on the Central to Everleigh (C2E) precinct of inner Sydney. Our early objectives are to develop the science and methodology of the project; research and understand sensor placement and accuracy; set a baseline for ongoing measurements and benchmarking; develop crucial community relationships; and refine our advocacy and communications.



## The longer-term vision

IoT technology is poised to create a paradigm shift across the global economy, with widespread disruptive implications. The potential for applying this technology to urban liveability and climate change adaptation is clear. TULIP, with its broad coalition of industry and research partners, is leading the way towards the first major environmental monitoring initiative of its type for Australian cities. While C2E will form the focus of our work during the first twelve months of the project, we plan to expand across Sydney and to other Australian cities in the future. Beyond the potential for community empowerment, policy and development impact, there is a range of exciting commercial applications in the property, human resources, insurance and health sectors that might be developed following a pilot phase deployment.



## Get involved

- Take an active role in the future of Sydney and your local community
- Show your support for a green, smart, connected, and liveable city
- Demonstrate your commitment to the positive potential of new digital technologies
- Be associated with a unique, exciting and significant project that will likely gain wide national and international attention and acclaim.

### **TULIP is actively seeking partners.**

Principal Partners – four \$5000 packages available  
 Community Champions – sponsor a sensor node for [\$1000]  
 Community Supporters – host a sensor node in our pilot precinct

For more details or to discuss partnership opportunities, contact [info@tulipnetwork.org](mailto:info@tulipnetwork.org)

