

# Western Parkland Councils collaborate to create a connected smart city

## SMART CITY PARTNERSHIP

4M

Data points collected per month

170+

Sensor locations

180+

datasets

### CONTEXT:

COLLABORATING TO DRIVE BETTER OUTCOMES

The Western Parkland Councils area is one of the fastest growing areas of Australia, with its population expected to rise from 1 million people in 2020 to 1.7 million by 2036.

The Western Parkland Councils is an alliance of the area's eight local councils - Blue Mountains, Camden, Campbelltown, Fairfield, Hawkesbury, Liverpool, Penrith and Wollondilly. They have committed to working collaboratively to deliver better outcomes for their communities and the Western Parkland City.

### CUSTOMER QUOTE

*It did not take us long to reach consensus on selecting Ubidots and Opendatasoft and partnering with Peclet, as it is giving each council the flexibility to have their own secured environment and branding while providing us the ability to easily share data between us, with our business partners and with our community.*

**SHARLENE VAN LEERDAM,**

Business Solutions Manager at Campbelltown City Council

### CHALLENGE:

MONITORING AND PREPARING FOR FUTURE GROWTH

In order to measure population growth, and the impact of development and urban growth on the environment the eight councils have established the Western Parkland City Sensor Network Project.

This has created a shared, scalable sensing network, data sharing platform, and data governance processes across the eight Western Parkland Councils.

## DATA EXPERIENCE:

### A COMPREHENSIVE PLATFORM TO ENABLE COLLABORATION

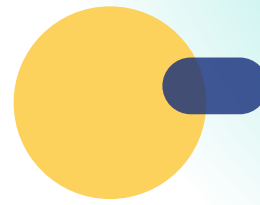
Ensuring that sensor data was available both internally and externally via open data portals was key to project success. Following a full market evaluation the Western Parkland Councils chose the Opendatasoft (ODS) data sharing platform. This was deployed by ODS partner Peclet Technology alongside the Ubidots Internet of Things (IoT) management platform.

Data is now collected from a range of sensors:

- ▶ **Environmental sensors, measuring soil moisture, air quality, weather stations, thermal cameras, water quality and noise levels.**
- ▶ **Movement and counting technologies, including people/device counters, CCTV and thermal cameras.**

The project includes a focus on specific areas. These include:

- ▶ **Environmental sensing to measure water quality in the upper South Creek catchment and Hawkesbury, and to measure air quality, heat and noise in Liverpool and Campbelltown central business districts (CBDs).**
- ▶ **Public domain sensing to measure the movement of people, vehicles and bicycles in Penrith, Katoomba, Liverpool and Picton city centers.**
- ▶ **Smart governance through a coordinated approach between all councils to implement interoperable technologies, and a common IoT and open data platform and associated data governance processes.**
- ▶ **Data analytics, provided by the University of New South Wales and University of Wollongong.**
- ▶ **Communication and engagement by sharing all collected data via engaging open data platforms.**



The project is now collecting over 4 million data points every month, across over 180 datasets. This is then shared internally and made publicly available via APIs and dashboards. It is shared through nine data portals, one for each individual council and an overall project portal. All data is also reused at the state government level in the New South Wales Government digital twin.

Although the network sensor project was initially focused on specific areas, usage has already grown. For example, Campbelltown City Council is using the data sharing platform to collect all utilities, fuel and waste data and build a Carbon Inventory to track its progress towards carbon neutrality. Another council is connecting council fleet electric vehicle charging data, while Penrith and Camden have used the open data platform to publish useful data to citizens ahead of council elections. Two other councils are conducting transparency initiatives and working on sharing Corporate Strategy implementation metrics to the public.



#### **INSIGHT BOX: HARNESSING SENSORS TO ENABLE A SMART CITY**

##### **Extending data use through innovation**

The project demonstrates the value of collecting data via a wide range of IoT sensors to give a comprehensive view of the environment and area. Building on this data, the 8 councils are now creating additional IoT use cases to support the aims of monitoring the impact of development and better serving citizens.

# OPENDATASOFT: THE DATA SHARING FOUNDATION BEHIND THE WESTERN PARKLAND CITY SENSOR NETWORK PROJECT

The Western Parkland City Sensor Network Project relies on the ODS platform for data sharing and visualization. Implemented by Peclet Technology, the solution collects data from the sensor networks and then publishes and shares information across a range of data portals, ready to be used internally and externally.

The project uses three key ODS features in particular:

## PARENT PORTAL AND SUBDOMAINS

Using Opendatasoft's parent-subdomain features, the eight councils can easily align and share data, while the project's parent portal automatically collects subdomain data and facilitates partnership across three tiers of government.

## SEAMLESS IOT CONNECTIVITY

The platform is capable of easily ingesting data and seamlessly connecting to a wide range of IoT devices from different providers, all managed by the Ubidots platform.

## TURNKEY AND FLEXIBLE VISUALIZATIONS

Opendatasoft's turnkey solution enables the easy collection, publication, and visualization of data. Users can slice and dice the data, create their own visualizations, and bring data to life.

## RESULTS: USING DATA TO CREATE A COLLABORATIVE SMART CITY

The project's success is allowing the eight councils to meet three key objectives:

- ▶ Minimizing environmental impact by monitoring over 4 million monthly data points, enabling the measurement of future development impacts.
- ▶ Maximizing the return of economic development initiatives by collecting people, vehicle and bicycle counting/movement data in 41 different locations. This enables councils to measure the effectiveness of projects around areas such as urban revitalization, tourism, demand for cycleways, and the development of the night-time economy.
- ▶ Streamlining council operations and enhancing service to customers. Individual councils are extending the platform to meet their needs, such as by building dynamic business directories to enable the sourcing of local suppliers. Councils are now sharing over 180 datasets between themselves, with an ongoing program of collaboration to identify new initiatives.

Thanks to its success the project has been recognized through multiple awards. It has won in the Smart Cities category at the 2021 IoT Awards and is now a finalist in the local government category at the 2022 iTnews Benchmark Awards.

*The Opendatasoft environment provides a great platform for councils to collect and share data with the community but also with other organizations such as State government agencies. All the data we collect is now available in realtime in the NSW Digital Twin and the Park'n Pay app.*



## ALEX SALES

founder and director,  
Peclet Technology

