



Towards a sustainable future with smart energy insights

We're helping one of Countdown's busiest and largest stores save time, money and the environment, by gaining valuable insights into the different ways they consume energy.



52 sensors installed in 4 hours



Reducing Energy Cost



Cutting carbon emissions

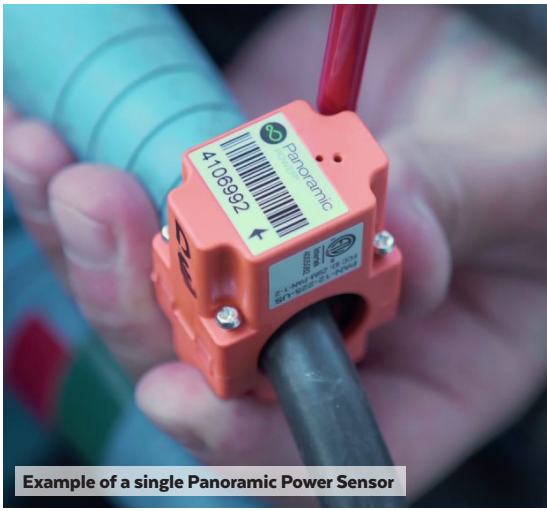


Driving sustainable growth

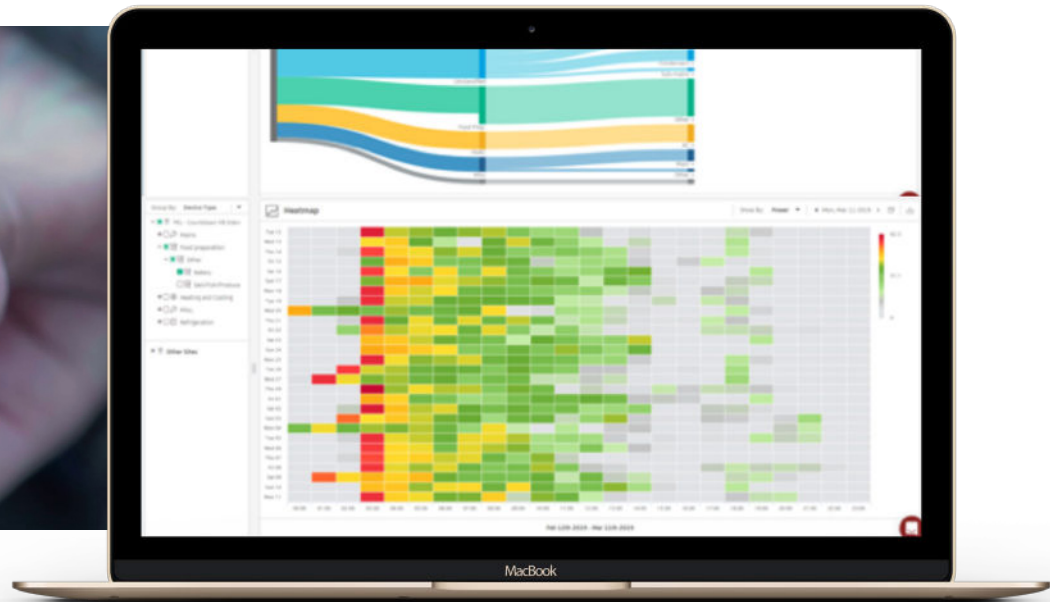


Innovative Solutions for Sustainable Business

www.TotalUtilities.co.nz



Example of a single Panoramic Power Sensor



Dashboard example of a sensors heatmap

Why they needed our help

Countdown is part of the Woolworths New Zealand group of companies (previously Progressive Enterprises) which also includes Fresh Choice and Super Value.

The Mount Eden store is one of Countdown's busiest stores and has been serving the locals for over 40 years. In December 2016, they launched their new look, refurbished store - 1,350sqm larger than the original store. The refurbishment included a larger deli, new meat and seafood counters and a bigger fruit and vegetable section. The store is open from 6am to 12am every day.

To allow them to meet their energy reduction goals, Woolworths needed an integrated system at the Countdown Mount Eden store that provides real-time insights into a number of factors including: how outside temperature impacts energy usage and efficiency; data around their out-of-hours energy usage and alerts on any faults; and ways to quickly and easily compare energy usage across Mount Eden's different departments and different Woolworths' stores.

Refrigeration and HVAC

As a retail store where food quality and safety are paramount, the highest energy consumption in the Countdown Mount Eden store is refrigeration - around 63% of all energy consumed on site. Air conditioning or HVAC is the second highest at around 8%.

What we did: Real-time insights

In partnership with Genesis Energy, Total Utilities designed a monitoring solution and deployed 52 wireless, self-powered Panoramic Power sensors on critical areas and equipment around the Mount Eden store to monitor energy consumption. This included deploying the sensors on refrigerators and freezers, plant rooms and corridors, food preparation areas (deli, fish, produce and bakery) and air-conditioning units. Installation of the system was easy and straightforward taking around half a day to complete and normal store operations were not impacted as no power shut downs were required.

The live data was transmitted to Centrica Business Solutions' cloud-based analytics platform, PowerRadar®, providing unique, comprehensive and real-time insights into energy consumption and asset performance, identifying inefficiencies, wastage and giving an overview of the overall health of the assets.

Results

By monitoring energy use at a device level, Countdown managers now have insights into:

- **Out-of-hours usage:** By closely monitoring their out-of-hours power consumption, any faults or wastage can be rectified. It is easy for managers to identify where improvements can be made which will increase efficiency and decrease costs.
- **Across store comparisons:** Managers can see exactly where the Mount Eden store consumes power and how different areas of the store perform compared to other areas. Benchmarking the refrigeration units against each other enables them to accurately find, check and rectify any faults or inefficiencies and discover where the biggest savings can be made.
- **Heat:** How outside temperature impacts the efficiency and performance of the equipment inside the store.
- **Timing:** When their refrigeration, air-conditioning and other equipment is used and how much power is drawn.
- **Between store comparisons:** How the equipment and energy consumption compares to other Woolworth stores. The benchmark comparisons are normalised by opening hours, area and ambient temperature.



Towards a more sustainable future

These rich insights allow managers to monitor and gather a deeper level of data, so they can make adjustments to increase efficiency and reduce wastage.

Over the long-term, the insights will also empower managers to maintain a robust energy management policy across the Mount Eden Countdown store and other Woolworths stores. As they are committed to reduce their emissions and food waste, and improve their sustainability, these insights will remain critical to Woolworths.



EXPLORATION IS WIRED INTO OUR BRAINS.
IF WE CAN SEE THE HORIZON, WE WANT TO KNOW WHAT'S BEYOND.