



## USING IOT TO IMPROVE STRADDLE EFFICIENCY FOR THE PORT.

### THE CHALLENGE:

The Port of Tauranga Container Terminal offers a 24-hour, seven-day service for ship planning, ship operations, marshalling, on-board stevedoring and reefer services. It operates a fleet of straddle carriers, which are pieces of machinery used by drivers to pick up containers and move them around the wharf.

The Tauranga Container Terminal strives to further improve its performance, efficiency and service to customers. Cucumber were tasked with improving planning, visibility and reporting around straddle usage, costs, maintenance and refuelling. The Container Terminal were also keen to understand driver performance in order to enhance straddle utilisation and improve their health and safety metrics.

### OUR APPROACH:

Cucumber worked closely with the Terminal Operations Management team to identify the key performance metrics that would be required to deliver straddle optimisation.

The straddles have onboard PLC's but their data was not easily visible to enable management to proactively make decisions for optimising asset utilisation and inform the drivers on improvements in operations. Using IoT sensors, data ingestion, spatial and time-series analysis capabilities, our team developed a proof of concept covering 7 straddles that enabled vital KPI's to be visible on a dashboard.

The Proof of Concept was then developed into an initial pilot for over 46 straddles delivering a location focused dashboard work area status dashboard, and accurate reporting by straddle, driver and service partner.



## THE OUTCOME:

By developing a real-time dashboard view of straddle usage, along with an integrated source of information for planning and reporting purposes, the Port of Tauranga will be able to make a number of improvements in their operations.

Reduced maintenance costs, safer and more effective operations of straddles and the ability to evaluate driver performance are the priorities. They will also be able to improve accuracy and effectiveness in managing straddles in real-time within spatial zones, and deliver bottom-line financial improvements from enhanced operational efficiency.

“Cucumber have enabled us to see real-time data from the Straddles that was previously invisible or difficult to access. They have allowed us to visualise the fleet, understand straddle performance, highlighted health and safety aspects and delivered it all on a dashboard that supports better decision making.”

Martyn McColgan, Terminal Operations Manager  
Port of Tauranga