

Kāinga Ora is using Power Trip's Game Plan™ solution to transition its vehicle fleet to electric.

The New Zealand Government has set an EV-first policy as part of their plan for a carbon-neutral public sector by 2025. With over 900 vehicles in its fleet, Kāinga Ora is at the forefront of implementing these policies and is using Power Trip's new Game Plan™ tools to overcome the challenges of such a large transition.

In 2020 Kāinga Ora commissioned a fleet consultant to conduct an EV-readiness assessment of their fleet. This review showed that many of Kāinga Ora's travel needs could be met with a mixture of short and long-range EVs.

However, Covid-19 lockdowns significantly changed the travel patterns of Kāinga Ora's staff and, while it was clear that many vehicles could be replaced with EVs, it was not clear where these vehicles would be charged, what real-world challenges the drivers might face and what public infrastructure the drivers may need to rely on.

Despite adopting the EV-first policy, Kāinga Ora still needed to assess each vehicle and driver in detail to determine what vehicle they would get and how their charging needs could be met.

It was also relatively easy for a driver to turn down an EV in favour of a hybrid or other ICE vehicle, simply by stating that an EV did not suit their needs, or that they would not be able to charge it anywhere.

What is Game Plan?

Game Plan uses historical driving data provided by Kāinga Ora's telematics partner, Argus Tracking, to show how their travel could be achieved with different electric vehicles.

Game Plan also uses this information to create charging strategies for each vehicle, including how often they will need to be charged, any public infrastructure they will likely rely on, and any frequent stops that could serve as private charging locations.

Transitioning a complex fleet

As many organisations with large fleets are finding, moving to electric is not as simple as purchasing EVs to replace ICE vehicles. Drivers need EVs that are suitable for their trips and they need to be supported with a charging strategy that minimises downtime in their day.

Kāinga Ora provides tenancy services to over 200,000 customers and owns and maintains nearly 69,000 public houses all over the country. The work of Kāinga Ora people is demanding, diverse and geographically spread, resulting in varied travel patterns and requirements. Kāinga Ora also supports flexible working arrangements meaning primary workplaces, and therefore travel patterns, can change regularly.

A 'live' solution that evolves with the fleet and the EV industry was needed

With this diverse and varied workforce, Kāinga Ora wanted a solution that provided more than a one-off snapshot of its vehicle needs.

It wanted a tool that:

- Provides repeatable analysis as new data and EV models become available
- Predicted real-world energy consumptions for the EV models they are interested in
- Took geospatial driving patterns and driver behaviours into account
- Identified public and private charging strategies to support their staff
- Identified drivers with legitimate criteria for exemptions from the EV first policy, and drivers who were not exempt, but would need more support transitioning to EVs
- Visualises the impact that different EV purchasing and charging policies could have on their drivers
- Could be used for ongoing monitoring and analysis of its fleet movements as they progress on their electrification journey.

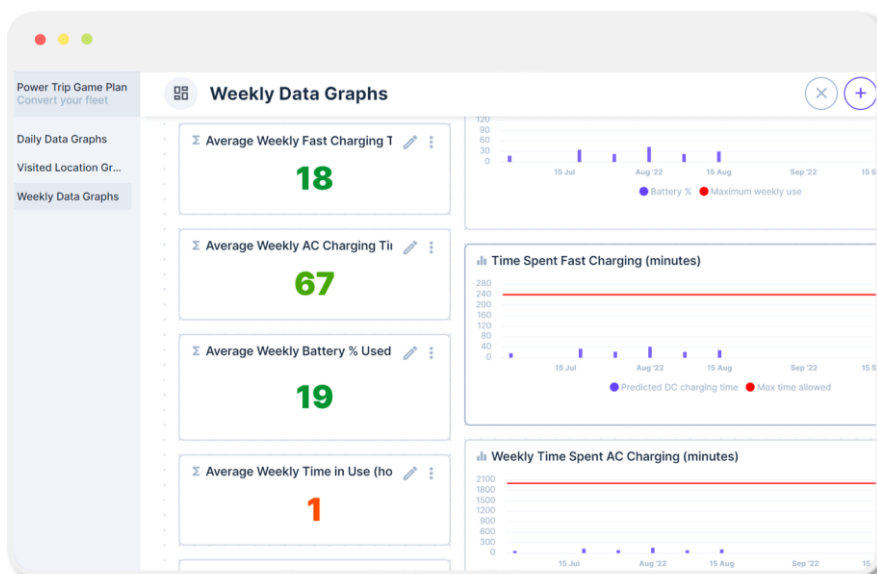
"Transitioning our 900 vehicle fleet was a nightmare. We had to manually assess each vehicle and driver one at a time. We needed a tool that tells us how our vehicles are being used and then gives us useful recommendations on which vehicles could switch to electric and how to charge them."

- Nick Marcusson - Manager Fleet at Kāinga Ora.

By far the biggest problem for Kāinga Ora's fleet manager was the amount of time it took to transition a staff member to an EV. Staff had to fill in a survey and the fleet team had to conduct a deep-dive into each vehicle's travel history.

Power Trip's Game Plan takes the pain out of electrifying Kāinga Ora's fleet

Game Plan provides Kāinga Ora with a simple traffic-light system that quickly identifies which vehicles can be replaced with EVs, based on Kāinga Ora's own policy settings and vehicle telematics data. A simple dashboard then shows the fleet manager exactly what life would have looked like if that vehicle's historic driving had been done by a specific make and model of EV, with energy consumption and charging time predictions.



Starting with 80 ICE vehicles that were due for replacement, 12 months of historical data was analysed and Power Trip's algorithms determined that all of those vehicles could easily be replaced with EVs. Kāinga Ora is now planning on using Game Plan to make future recommendations for its fleet as it moves to 100% electric in the coming years.

"This tool is useful when making decisions on the type of EV to give a staff member. When they raise a concern we can now easily show them that we are letting the data decide on who gets what."

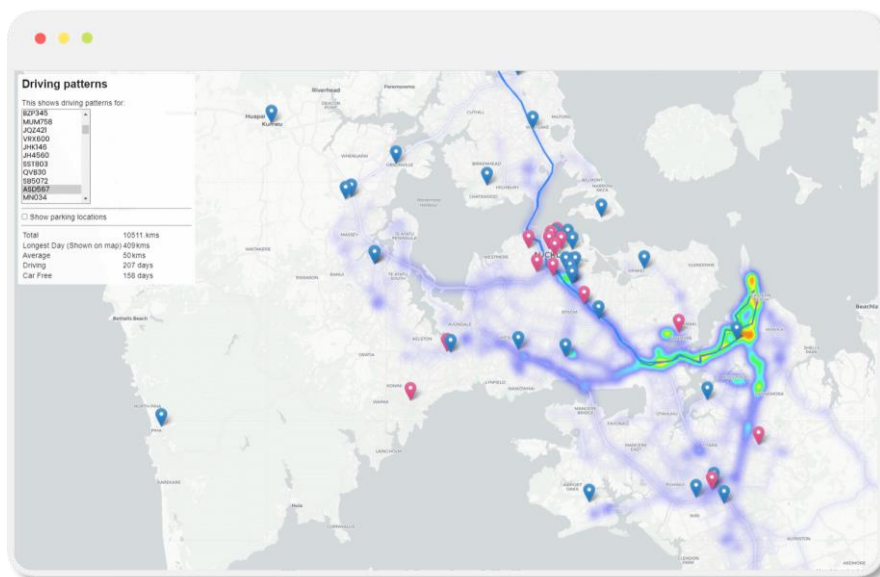
- Nick Marcusson – Fleet manager at Kāinga Ora.

Understanding charging needs is key

A key issue for Kāinga Ora is understanding how its EV fleet could be charged so that staff can be kept on the road and productive. There's no point moving to electric vehicles if staff don't use them, can't charge them properly or lose significant time out of their days waiting for chargers.

Game Plan predicts the charging needs for each vehicle, highlights which public charging stations an EV is likely to rely on, and identifies regularly visited locations that would be ideal hosts for Kāinga Ora's own charging stations.

Fleets produce a lot of data and Game Plan is helping Kāinga Ora understand theirs with a combination of heat maps, charging maps and an interactive dashboard.



Initially Kāinga Ora adopted a policy of providing every EV driver with a home charging station. However, this meant that staff who lacked home charging capabilities were much less likely to qualify for getting EVs.

Kāinga Ora are using Game Plan to understand where and how often drivers would need to charge an EV if home charging is not an option. This includes where building out its own charging infrastructure, like office charging pools, would support EV uptake.

"This tool has been an absolute god-send, it has made my job so much easier. The heat maps with the public chargers clearly marked allow me to quickly make a choice on who gets a home charger. For drivers that don't get a home charger it provides a very useful way of showing them how they can still achieve all their driving with an EV"

What comes next

Electrifying Kāinga Ora's fleet is just the beginning and Power Trip are now working with Kāinga Ora to bring new innovations to Game Plan with the aim of reducing and rationalising the number of vehicles in their fleet.

Staff education and engagement and charging station management is also an increasingly time consuming part of the fleet manager's job. Transitioning to an EV can be daunting for some drivers who are only used to filling up at the pump and they often require a significant degree of hand-holding and support.

As Kāinga Ora continues to move to EVs, it plans on increasing staff engagement and education to demystify EVs and reduce the anxiety that comes from not understanding how they work.

Game Plan provided Kāinga Ora with a new way to show drivers exactly how easy driving an EV is, and Power Trip has used these insights to add educational features into its other EV driver support tools. These tools include features which help drivers plan and manage trips and charging and help fleet operators manage battery health. These will help Kāinga Ora's drivers spend less time worrying about charging and driving, and more time supporting New Zealand's communities.

