

# EV Emergency Ambulance *Trial*

## Making an impact for Financial, Operational and Environmental Sustainability

### Year one core insights

In year one of the trial, the EV emergency ambulance has attended over **500 incidents**, travelled **13,671 kms** and provided a quieter, more comfortable experience while cutting approximately **four tonnes of CO<sub>2</sub> emissions**. It has proven reliable and efficient within the metropolitan area as an additional vehicle in the fleet offering fuel savings and reduced emissions without compromising performance and quality service delivery. The insights gained over the first year of the trial have helped to inform minimum requirements and thresholds for wider fleet transition.



Live insights during year one of the trial **informed continuous improvement of design** and fit-out.



**Driver training was relevant** to the environmental and operational context.



**15% quieter** than a standard ICE ambulance.



Maintenance in first year was no more than expected for a new model in fleet, and was **not increased by use of EV technology**.



**Trust and confidence in EV technology has improved at HHStJ** and in public sentiment over the first year, in the context on an emergency ambulance service and as part of a commitment to delivering more sustainable health care.



Financial impact – the EV ambulance **cost about the same to produce as our standard ambulances, while costing less to run** (\$9 less per day on average) and **is expected to require 50% less maintenance**.



Attended **521 incidents** where patients were transported – **4 incidents per day on average**.



**It is possible to complete a 12-hour shift in a metropolitan context in New Zealand**. Returning to station for charging does limit its range of operation and we are exploring increased range options.



**Only two recorded incidents** where the EV had to be swapped out for an ICE ambulance due to change management process.



Travelled **13,671km** – **93km per day on average**.

## Environmental *impact*

### Our initial calculations indicate that:

- Compared to a standard HHStJ diesel ambulance, the EV contributed four tonnes less CO<sub>2</sub>-e operation emissions during the trial.
- The EV's lower operation emissions are expected to outweigh its higher non-operation emissions once it has travelled ~35,000 kms. We expect to reach this break-even point within 1–2 years.
- Overall lifespan emissions (accounting for operation and non-operation emissions) are expected to be less than half that of a standard HHStJ diesel ambulance.
- Please see full report for further detail.