Net Zero Waste Collection

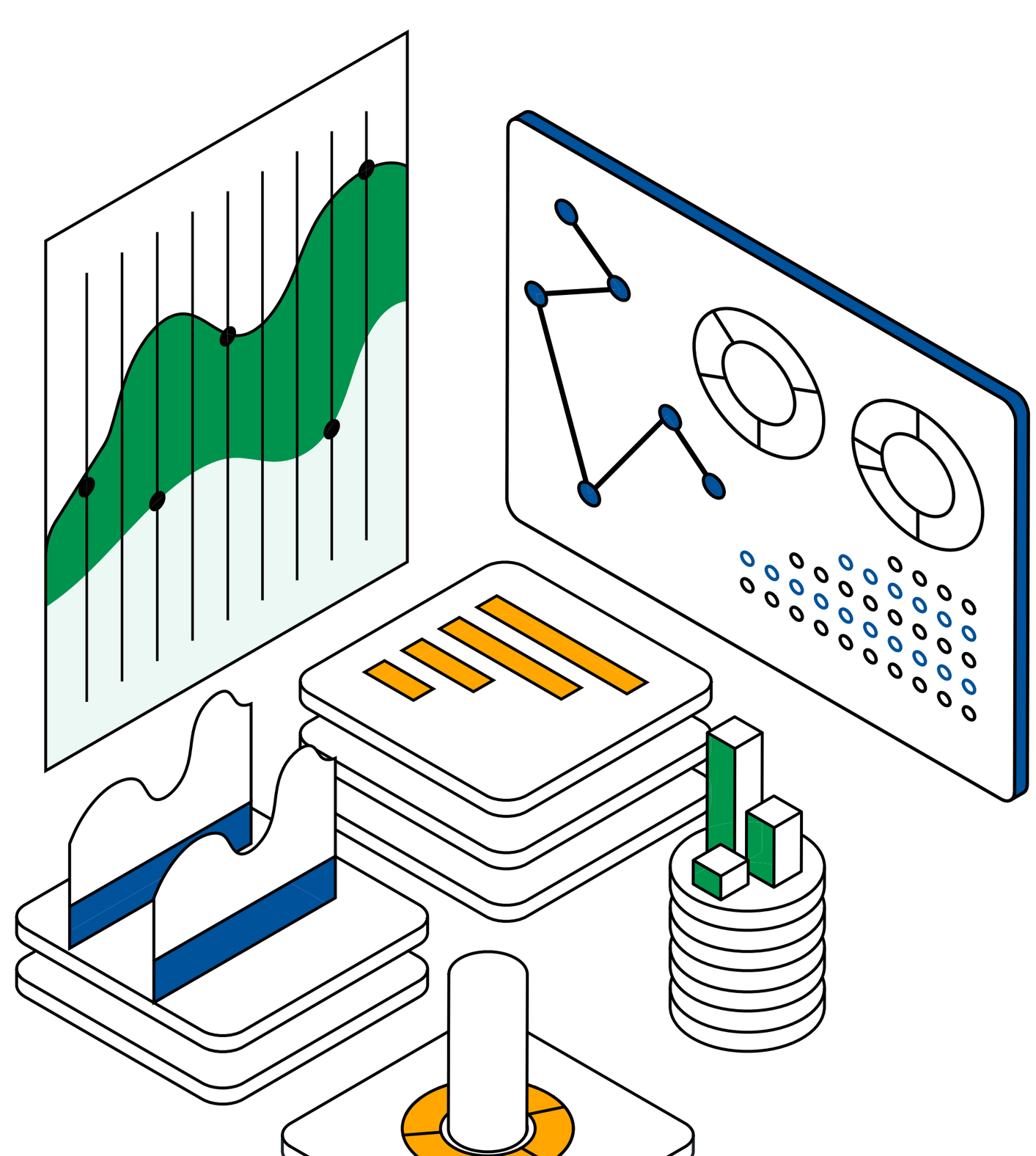
Facts and stats from an 8-week pilot of eRCVs with Serco

eRCVs - electric refuse collection vehicles

10%
of the UK's total carbon emissions come from fleets, and switching diesel vehicles to electric removes these emissions.

300
councils have declared climate emergencies and waste collection can account for more than one third of a council's total emissions.

8-Week Pilot | 2 eRCVs | 2 Depots

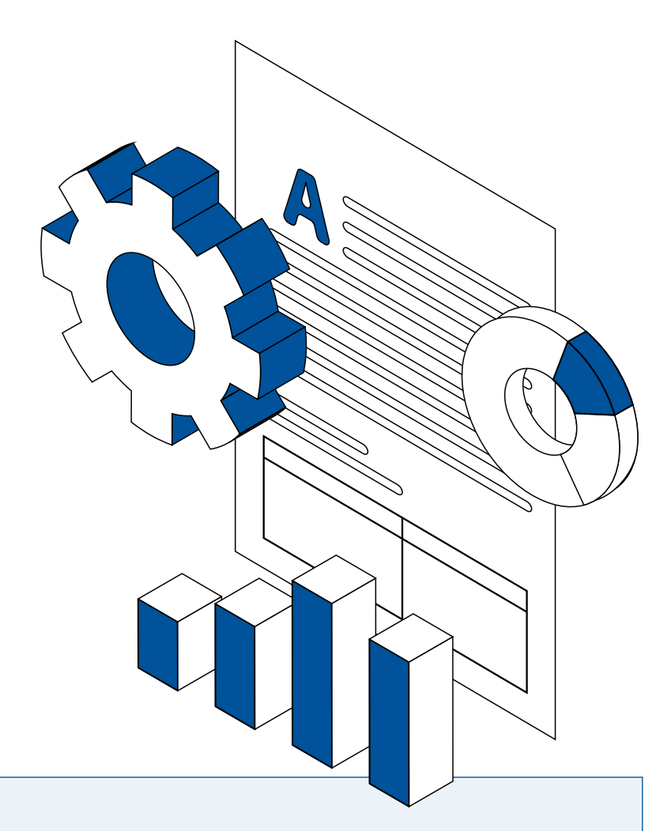


Serco wanted to gather real-world data from daily operations with eRCVs to prove operational feasibility, the carbon emissions savings and the business case.

Key Findings

- Collection rounds were completed with charge left on return - no range anxiety.
- Drivers preferred eRCVs over diesel RCVs - smooth & quiet.
- Carbon savings in 8 weeks equivalent to removing two cars from the road for 1 year.
- TCO (total cost of ownership) at parity with diesel - with potential 4-14% savings.

Performance and efficiency

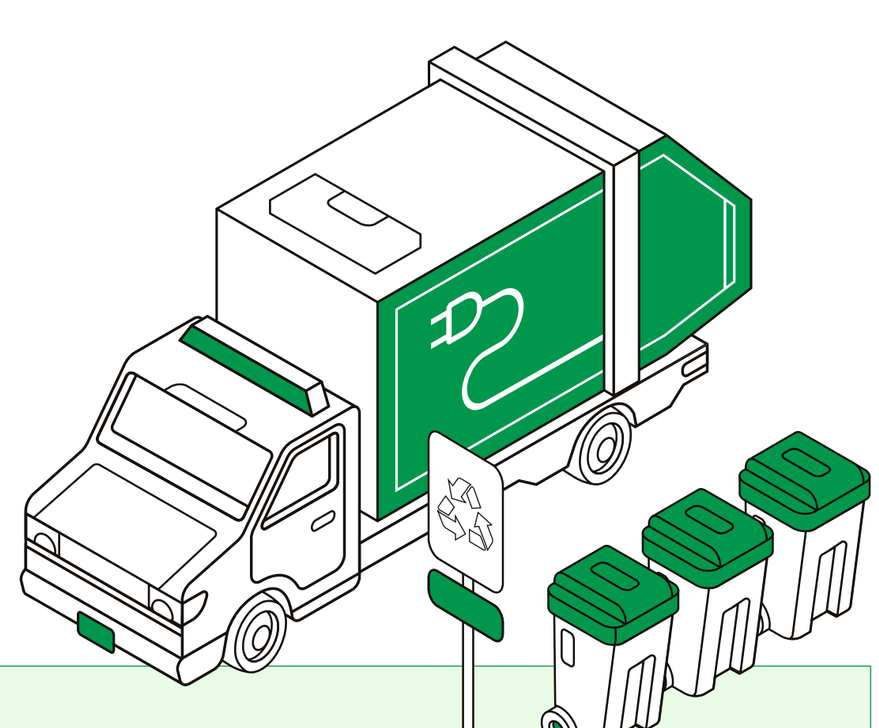


69
rounds completed

2,132
electric miles driven

Charge remaining on return to base provided
flexibility
for unplanned extra rounds

Sustainability

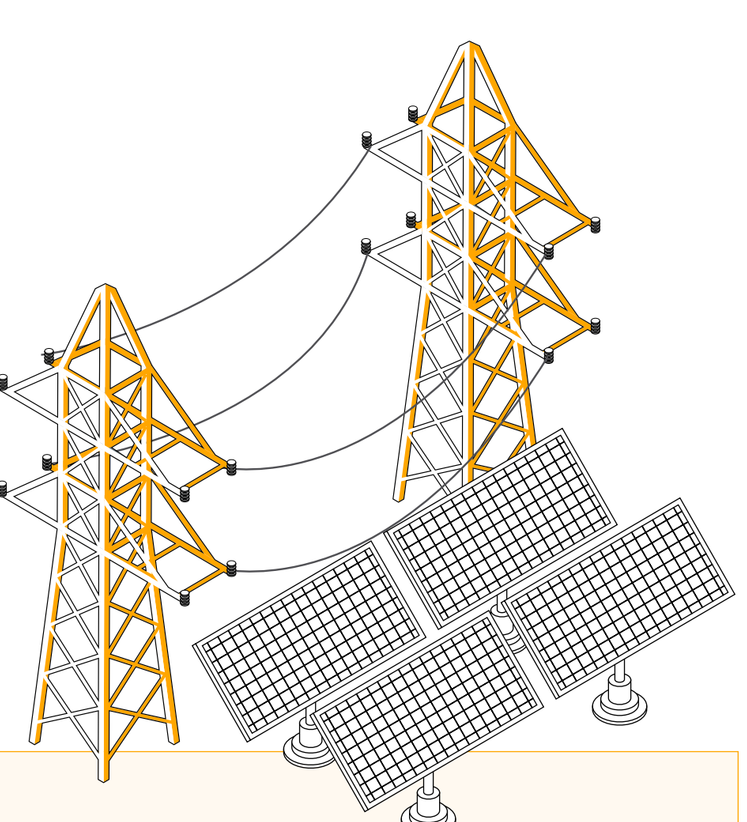


8,898kg
CO_2 tailpipe emissions removed

Equivalent to
2 cars
for an entire year.

Supports councils'
climate
emergency goals

Charging and Power



At 22kw, half of the
16 hours
charging window was used

Early afternoon returns to base make
solar
installation attractive

Potential for
DC
charging to add flexibility and reduce costs

Driver Feedback

Early scepticism changed to
positive
comments early on

Drivers said the eRCVs performed
better
than the diesel RCVs

"I like how quiet it is, I can hear the crew working behind me much easier, it feels much **safer**"

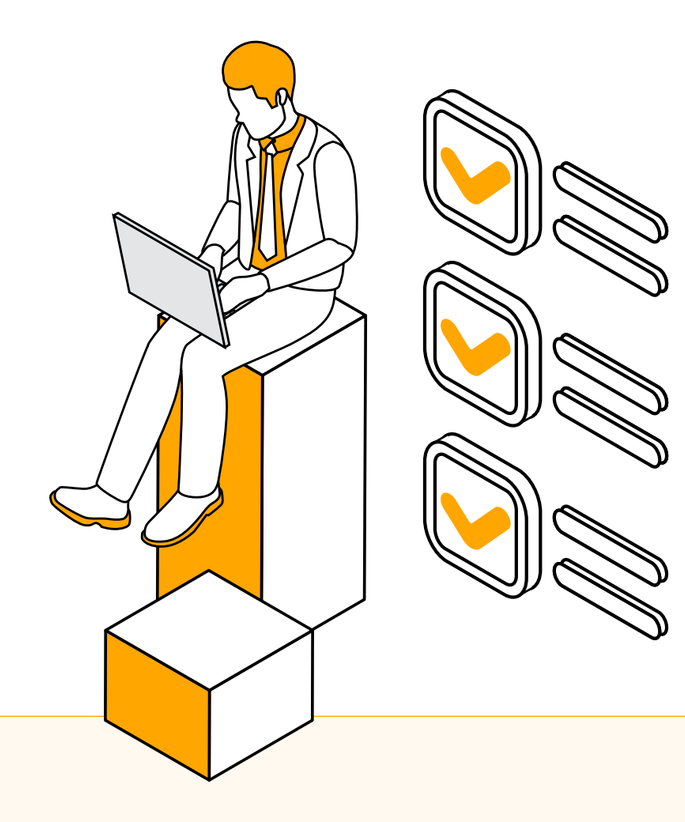
Business Case

Cost parity
eRCVs to diesel RCVs

Optimised TCO (total cost of ownership) for eRCV
2% lower
than ICE vehicle

With further optimisation, an additional
14%
saving was identified on the eRCV TCO

Lessons Learned

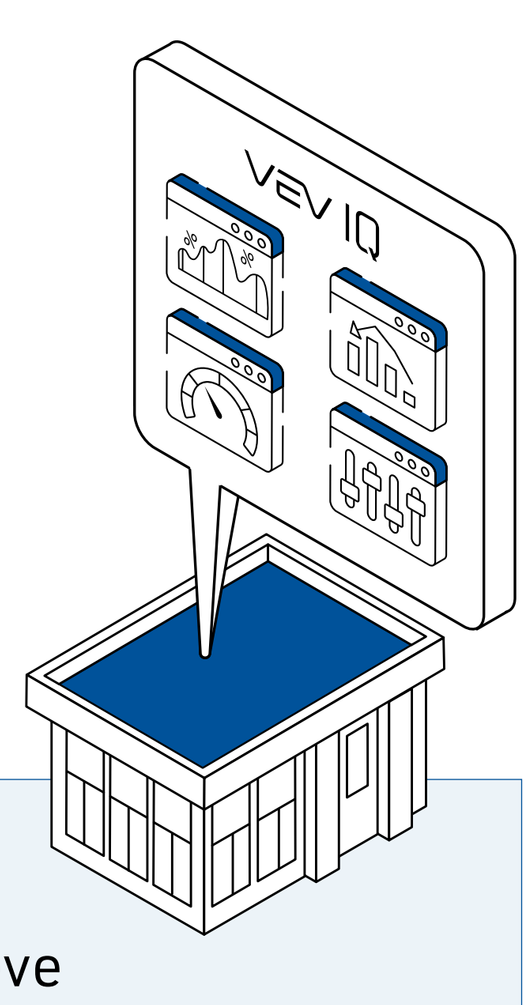


Develop a robust
energy
strategy for the increased power consumption

Continuous monitoring and data
analysis
essential to optimise operations

Effective communication with
drivers
is a critical success factor

Rollout Strategy



TCO-optimised
3-phase
rollout plan

Includes grid upgrade, solar power installation and
optimised
operations

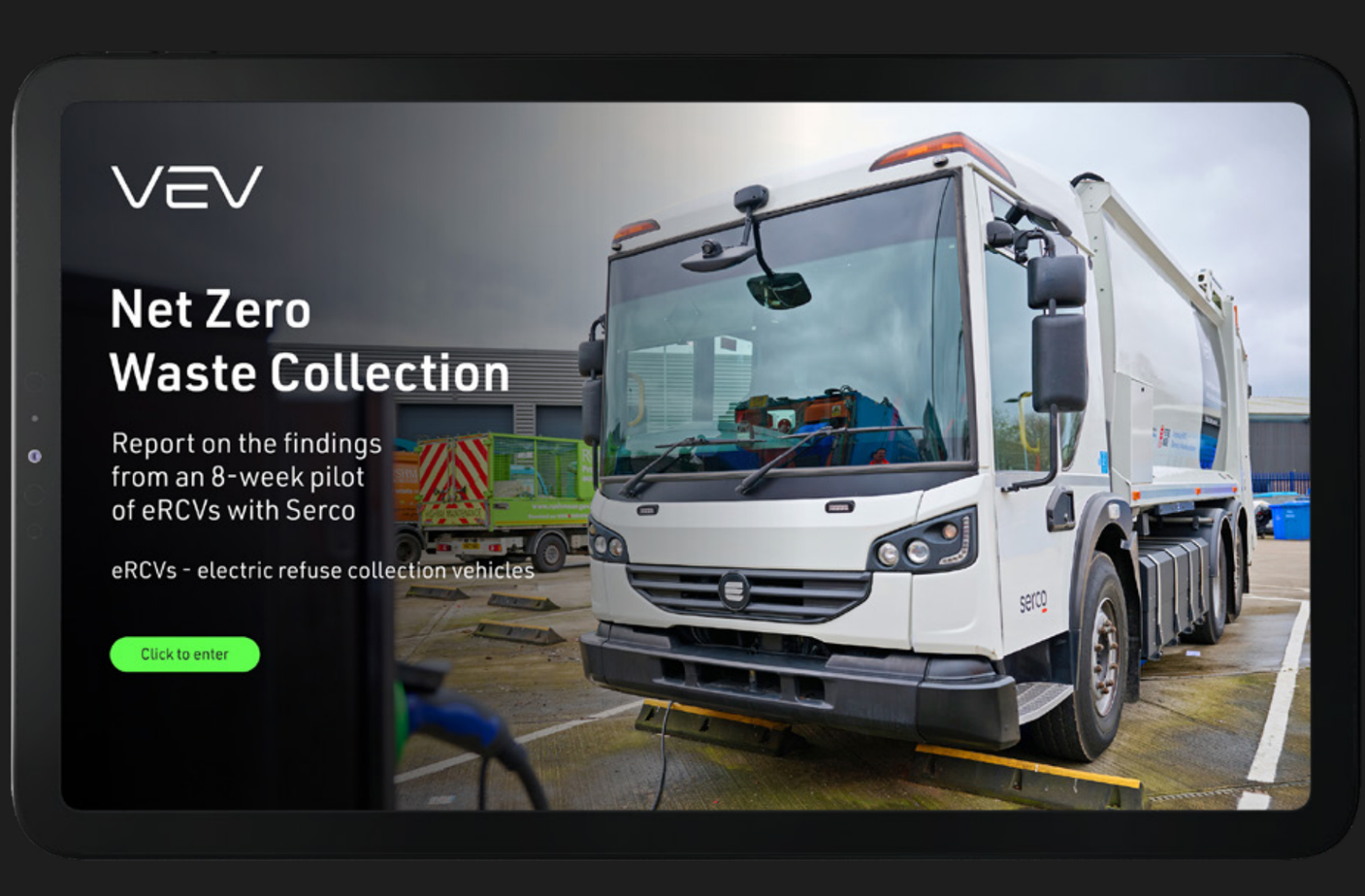
Aims to achieve
net zero
emissions at net zero cost increase

VEV

We build electric fleets as fully integrated solutions with a laser focus on cost optimisation.

Fleets are supported during planning, implementation and operations.

VEV is owned by Vitol, a world leader in energy.



Contact us: ask@vev.com
Visit: VEV.com

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