

Total Cost of Operation + Insights (TCO+)

A guide for public and not for
profit sector fleet procurement.

Better with every move.

 **ayvens**
SOCIÉTÉ GÉNÉRALE GROUP

Introduction

Having worked with the public and not-for-profit sectors for over 25 years, we understand that public sector fleet procurement faces the constant challenge of tight budgets. This often forces organisations to make difficult decisions about how to allocate limited resources.

While cost-saving measures may appear necessary in the short term, these decisions can result in longer-term negative consequences for efficiency, sustainability and overall service delivery. What we think is needed instead is strategic, forward-thinking procurement. This can help ensure fleet investments are financially sound and future proofed.

However, traditional procurement often fails to capture the full cost and operational impact of fleet vehicles, which means decisions are based purely on headline vehicle costs rather than true operational impact. This can lead to a much higher level of hidden costs, including maintenance downtime, under-utilisation, inefficient vehicle selection and charging infrastructure misalignment.

You might already be familiar with the concept of Total Cost of Operation (TCO), which looks beyond just the purchase price to capture all costs associated with running a fleet – including maintenance, downtime, fuel, insurance, and more. However we developed TCO+ insights to go even further. It combines traditional TCO principles with real-world usage data and advanced analytics, backed by Consultancy Expertise and Insight giving a fuller, more accurate view. This enables better, more informed procurement and operational decisions, helping organisations achieve greater long-term value and sustainability from their vehicle fleets.

Our award-winning TCO+ Insights platform can help public sector fleet procurement teams and decision makers to access essential information, before going to tender, so they can:

- 1 Understand the true total cost of operation (TCO+), not just the purchase price.
- 2 Define precise vehicle requirements based on real-world usage data.
- 3 Capture critical in-life costs, including downtime and charging infrastructure impact.
- 4 Ensure procurement decisions reflect actual fleet operations.

In the following guide, we have prepared an overview of the tools available, along with use cases – so you can see the measurable difference that accessing data and insights early can make.

If you are interested in anything we cover or need support with your fleet, please get in touch with our expert team.

Russ Boulton
Head of Innovation and Data Insights



What is TCO+?

TCO+ Insights is a suite of tools and reports designed to provide full visibility over fleet selection, cost analysis and performance insights.

These tools have been based on our Consultancy and Insights Team's deep knowledge of, and insight into, operating vehicle fleets. We have then overlaid millions of data points produced by operating the UK's largest leased vehicle fleets.



TCO+ Insights contains a suite of tools, including:

Van Finder

[About this tool >](#)

Van Finder selects vehicles based on technical fit, to help organisations procure the right vehicles from the outset.

Technical Identifiers

[About this tool >](#)

This tool compares vehicle payloads, dimensions and powertrain capabilities to eliminate inefficiencies.

Maintenance Insights

[About this tool >](#)

Accessing over one million service events across the Ayvens fleet, this maps downtime data to reveal the true servicing costs by manufacturer and region. This helps you ensure the manufacturer you select is able to support your vehicles in-life.

Charger ROI Calculator

[About this tool >](#)

Our Charger ROI Calculator quantifies the return on investment for installing home charger when compared to workplace and public EV charging.

Miles per kWh vs. Miles per Gallon [About this tool >](#)

Many fleets find it challenging to compare MPG to the electric car equivalent. This calculator accurately converts complex energy efficiency metrics into simple pence-per-mile figures, making electric vehicle (EV) vs. internal combustion engine (ICE) comparisons easy.

EV Charging Downtime

[About this tool >](#)

This tool compares how different electric vehicles perform in charging downtime to assess operational impact. It is based on our experience of managing 500,000 battery electric vehicles.

Downtime Performance Reports

[About this tool >](#)

This tool benchmarks manufacturer and model reliability, helping organisations identify and remove vehicles with a high probability of downtime from procurement tenders.

Telematics Analysis

[About this tool >](#)

This tool analyses real-world daily mileage to ensure EV selection matches operational needs and identifies the quick win vehicles, journeys and drivers that could transition to electric.

Electric Van Journey Profiling

[About this tool >](#)

Commercial vehicle fleets tend to rely much more on the public charging network. This tool breaks down weekly mileage, including range reduction in winter and the reliance on public charging, to help fleets optimise commercial electric vehicle procurement.

When to Flex?

[About this tool >](#)

This new tool has been developed alongside our Ayvens Flex rental team. It is designed to help you understand when to flex, so you can optimise the combination of rental and lease vehicles in your fleet to deliver cost efficiencies.

The tools and subsequent reports are designed to bridge the gap between procurement and operations, so organisations have all the information they need to make the best decisions, based on efficiency, cost and environmental impact.



Van Finder

Optimised vehicle selection

About Van Finder

Van Finder helps public sector organisations refine vehicle choices based on technical specifications, including body type, manufacturer, fuel type and operational needs.

Why use Van Finder?

For teams that are new to fleet purchasing and may be lacking the necessary technical depth, Van Finder can help to reduce incorrect vehicle selection or higher operational in-life costs. It helps organisations ensure they only tender for vehicles that fit their needs.

Example use case

A local authority is looking for electric vans with a minimum payload of 1,000kg and a battery range above 150 miles. Van Finder filters and displays the most suitable options, ensuring the tender process requests the right vehicles.

Key features:

- ✓ Filter by size, fuel type and transmission.
- ✓ Compare vehicles by rental cost, payload and dimensions.
- ✓ Avoid purchasing underpowered or oversized vehicles.

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Technical Identifiers

Vehicle fit analysis

About Technical Identifiers

The Technical Identifiers tool allows users to define vehicle requirements based on payload, towing capacity, fuel economy, emissions and dimensions.

Why use Technical Identifiers?

Without detailed technical specs, procurement tenders fail to capture true operational needs, which can lead to hidden costs from inefficient vehicles.

Example use case

A Housing Association requires vans capable of carrying 1,500kg, with a minimum load length of 1.8m and a maximum external height under 2.1m for underground car park access. The tool ensures only vehicles matching these needs are short-listed.

Key features:

- ✓ Define payload, dimensions and emissions thresholds.
- ✓ Compare diesel and electric powertrain capabilities.
- ✓ Ensure compliance and sustainability targets.



Maintenance Insights

Understanding downtime and OEM performance

About Maintenance Insights

The Maintenance Insights map provides a UK-wide view of over one million Ayvens recorded maintenance events from the past three years. It allows organisations to analyse manufacturer performance at a dealership level, so they can track downtime, service efficiency and the total maintenance impact on fleet operations.

Why use Maintenance Insights?

Many organisations focus on headline vehicle costs, but regional dealership performance can make or break fleet efficiency. A cheaper vehicle from an OEM with slow regional support could lead to longer vehicle off-road time, increasing operational costs and service disruption.

TCO+ Maintenance Insights can help public sector fleets factor in dealership performance before tendering, ensuring the lowest true cost – not just the lowest price.

Example use case

A national charity is choosing between two manufacturers for a vehicle tender. One manufacturer has strong dealership support in region 1 but has limited support in the region 2, leading to higher downtime costs in certain regions. By using Maintenance Insights, the fleet manager can make an informed decision that minimises hidden in-life costs.

Key features:

- ✓ Hover over locations to see downtime performance by dealership.
- ✓ Compare manufacturers and franchises based on real-world maintenance data.
- ✓ Identify regional variations in support quality, avoiding procurement risks.

Charger ROI

Understanding home vs. public charging costs

What it does

Transitioning to electric vehicles isn't just about vehicle price. Charging infrastructure has a major impact on TCO and operational costs. Without proper planning, fleets may unknowingly overspend on public charging, reducing the financial benefits of electrification.

The **Charger ROI (Return on Investment) Tool** is all about emphasising the delta. The tool quantifies the difference between workplace / home versus public charging then uses that delta to calculate the return on investment. It also takes into account location-specific energy rates which can help organisations determine how long it might take to recoup the investment in a home or workplace charger based on real-world conditions.

Why it matters

Fleets transitioning to electric vehicles need to optimise charging strategies to control costs. Relying on public charging can significantly increase fleet running costs, whereas installing home or workplace chargers can offer long-term savings. This tool quantifies the difference, enabling data-driven procurement decisions.

Example use case

A fleet manager of a Non-Government Organisation (NGO) is evaluating whether to fund home chargers for employees or continue using the public charging network. By inputting mileage, energy costs and charger installation fees, the tool shows that investing in home charging results in a payback period of just 2.57 months, making it a cost-effective decision.

Key features:

- ✓ Compare pence per mile costs for home, workplace and public charging.
- ✓ Calculate total energy spend based on mileage and charger type.
- ✓ Determine the ROI period for home charger installation.

Miles per Kilowatt vs. Miles per Gallon

Simplifying EV vs. ICE cost comparisons

What it does

This tool converts miles per gallon (MPG) and miles per kilowatt-hour (MpKWh) into a simple pence-per-mile cost comparison between internal combustion engine vehicles and electric vehicles.

Why it matters

Many fleet decision makers hesitate on EV adoption due to perceived cost concerns and struggle to evaluate electric and petrol/diesel running costs because fuel efficiency metrics aren't directly comparable. By translating everything into pence per mile, this tool provides a clear, data-driven comparison that helps organisations make smarter procurement decisions.

Example use case

A University is deciding between diesel and electric vans for its ground's maintenance vehicles.

- **Diesel van:** 50 MPG at £1.45 per litre = £0.13 per mile
- **Electric van:** 4 MpKWh at £0.07 per kWh = £0.02 per mile

The tool shows that, at current energy and fuel prices, the electric van costs significantly less to run. This helps the organisation quantify the potential long-term savings before going to tender.

Key features:

- ✓ Converts fuel and electricity consumption into pence-per-mile for easy comparison.
- ✓ Has adjustable inputs for real-world accuracy (mileage, MPG, kWh costs).
- ✓ Helps fleets avoid misleading cost assumptions when transitioning to electric vehicles.
- ✓ Eliminates hidden electric vehicle cost misconceptions.



EV Charging Downtime Analysis

Comparing charging efficiency between electric vehicles

What it does

This tool compares the downtime impact of charging two different electric vehicles. It factors in the time spent and range delivered per charge session, the total downtime cost per charge, the downtime cost per mile and the total downtime cost over a contract period.

The calculator determines how much range is delivered between 5% and 80% charge, since each electric vehicle has a different charging speed. This variation affects total downtime spent charging and translates into downtime cost per mile. When scaled to fleet operations, this reveals potential hidden costs in procurement decisions.

Why it matters

EV selection shouldn't be based on range alone, as charging speed has a significant impact on operational costs. A slower-charging EV may seem viable, but hidden downtime costs can quickly add up, leading to unexpected fleet inefficiencies. A fleet relying on public charging must account for how these differences affect operational efficiency and in-life cost. This is something that traditional procurement models often overlook.

For public and not for profit sector fleets, choosing a vehicle with faster charging speeds can save thousands per vehicle and millions across a full fleet over its contract period.

Example use case

A council fleet is choosing between two electric vans:

- **Vehicle 1:** 28 minutes charging → 165 miles delivered per session
- **Vehicle 2:** 41 minutes charging → 135 miles delivered per session

Based on these figures, Vehicle 1 has a downtime cost per mile of £0.17 and Vehicle 2 has a downtime cost per mile of £0.30. This equals a total downtime cost over the contract of £10,182 for Vehicle 1 and £18,222 for Vehicle 2.

The difference in total cost is £8,040.40. Scale that up to a fleet of 1,000 vehicles and you're looking at a potential cost difference of £8.04 million. Charging downtime really does translate directly into real-world operational costs.

Key features:

- ✓ Compares downtime cost per charge, per mile and over the contract.
- ✓ Calculates the real-world impact of slow vs. fast-charging electric vehicles.
- ✓ Scales downtime impact across an entire fleet.
- ✓ Factors charging speed into procurement decisions.



Downtime Performance Insights

Benchmarking manufacturer and model reliability

What it does

This tool provides a data-driven analysis of downtime events across manufacturers and vehicle models. With almost 900,000 maintenance events recorded, it allows fleets to make evidence-based procurement decisions, ensuring they choose vehicles with low downtime and high availability. This includes being able to:

- **Benchmark average job length and vehicle availability.**
- **Compare downtime costs per event.**
- **Assess which vehicles perform best in fleet operations.**
- **Analyse fuel type reliability (electric, hybrid, diesel, petrol).**

Why it matters

Public sector fleets often focus on vehicle acquisition costs but overlook in-life downtime costs. However, these can be significantly higher than purchase savings. Selecting vehicles with poor maintenance performance or long repair times can lead to operational inefficiencies and hidden costs.

Understanding real-world vehicle performance allows public sector fleets to optimise procurement for both cost and performance. By leveraging real-world downtime insights, they can:

- **Eliminate unreliable vehicles and dealerships from procurement decisions.**
- **Reduce downtime-related financial losses.**
- **Ensure fleet vehicles remain operational and cost-effective.**

Example use case

A Transport Manager needs to decide between multiple manufacturers (OEMs) for its next procurement cycle.

- **Vehicle A has an average job length of just 1.5 days, with 99.9% availability.**
- **Vehicle B averages 6.3 days per job, significantly reducing availability.**

Using this data, the fleet can eliminate high-downtime vehicles from the tender process, ensuring minimal operational disruption.

Key features:

- ✓ Compares downtime cost per charge, per mile and over the contract.
- ✓ Calculates the real-world impact of slow vs. fast-charging electric vehicles.
- ✓ Scales downtime impact across an entire fleet.
- ✓ Factors charging speed into procurement decisions.



Telematics Analysis

Understanding real-world usage

What it does

This tool provides a detailed breakdown of fleet daily mileage patterns, showing how vehicles are used in real-world conditions. It categorises daily journeys into fewer than 100 miles, 100 to 150 miles, 150 to 200 miles and greater than 200 miles. It also includes graphical analysis of total and average daily mileage trends to highlight fleet-wide usage patterns over time.

Why it matters

Many fleets assume a high daily mileage requirement but, in reality, most fleet journeys are significantly shorter than expected. This can lead to unnecessary expenditure on long-range electric vehicles when lower-range models would suffice. By using real-world data, organisations can link electric vehicle selection to actual operational needs. This means they can optimise procurement spend by avoiding over-specified vehicles and reduce the total cost of operation by choosing appropriate vehicle ranges. In addition, when transitioning to electric vehicles, procurement teams can use the tool to identify the most suitable drivers to move first within the fleet.

Example use case

A Local Authority fleet that is considering electric vans believes they need vehicles with 250+ miles of range. However, the analysis shows that 84.2% of daily journeys are under 100 miles and only 3.37% exceed 200 miles. This means the fleet could transition to lower-range electric vans, which would reduce their acquisition costs while still meeting operational needs.

Key features:

- ✓ Categorises journeys by distance for precise fleet insights.
- ✓ Visualises maximum and average daily mileage trends.
- ✓ Prevents procurement teams from overspending on unnecessary range capacity.

Electric Van Journey Profiling

Assessing real-world electric vehicle suitability

What it does

The **Electric Van Journey Profiling** tool provides a detailed breakdown of vehicle usage patterns, energy consumption and charging costs. This can help public sector fleets make data-backed decisions about which electric vans best fit their duty cycles. The tool looks at a range of factors, starting with the daily mileage profiles per vehicle. It can then consider weekly charging requirements, including range reductions in winter temperatures, and public vs. home/workplace charging dependency. Plus, it explores total downtime and provides a fuel cost analysis.

Why it matters

Selecting the right electric van is about operational viability. If you have too much range, you're overspending on larger battery packs unnecessarily. But if you have too little range, you could face operational disruptions as a result of your inadequate daily mileage capacity. Similarly, if you make incorrect charging assumptions, you could end up with an increased reliance on costly public charging. By modelling real-world journey profiles, this tool allows fleet managers to:

- **Match vehicles to actual duty cycles, preventing range shortfalls.**
- **Ensure the correct charging infrastructure is in place.**
- **Minimise public charging dependency to reduce long-term costs.**
- **Plan for winter range reductions to avoid service disruptions.**
- **Plan accurately for fleet electrification, avoiding unexpected costs and downtime.**

Example use case

A council fleet based in Scotland is thinking about moving to electric vans, but it is unsure if the vans' range will meet operational needs in winter. The tool looks at:

- **Monday to Friday mileage: varied miles/day**
- **Public charging rate: £0.77/kWh**
- **Winter range reduction: 12%**
- **Weekly downtime for charging: 1.74-4.09 hours per vehicle**

Using this information, the total energy cost differences between vehicles are identified. The council were able to see which EVs are able to meet daily operational needs consistently, which will require more public charging and which may introduce downtime risks.

Key features:

- ✓ Compares weekly mileage and charging costs across multiple electric van models.
- ✓ Assesses range reduction in winter to avoid unexpected shortfalls.
- ✓ Calculates weekly energy spend and downtime associated with charging.
- ✓ Identifies reliance on public charging vs. home/workplace charging feasibility.





When to Flex?

Understanding the right time for flexible rental solutions

What it does

The **When to Flex?** report within the TCO+ Tool provides data-driven insights to help public and not for profit sector organisations see how flexible rental can complement and optimise fleet leasing operations and support fleet electrification strategies.

Why it matters

Fleets often default to fixed-term leasing when procuring vehicles. However, this can lead to hidden inefficiencies if fleet demand tends to fluctuate as a result of seasonal workload changes, project requirements or unplanned vehicle downtime. Our aim is to help organisations make smarter procurement decisions by:

- Preventing over-leasing and underutilisation of fleet assets.
- Ensuring fleets align with real-world demand rather than committing to fixed-term leases.
- Supporting an electric vehicle transition by allowing fleets to trial electric vehicles before committing.
- Reducing hidden costs associated with early lease terminations and unused vehicles.
- Identifying the best balance between leasing and rental.

Example use case

An NGO needs 30 additional vans for a seasonal project. It was considering a three-year lease, but decides to use the *When to Flex* report. This shows them that:

- Leasing the vans for three years would cost 30% more than using rental during the period when the seasonal work occurs.
- Rental eliminates early termination fees if the vans are not required after the project ends.
- Renting electric vehicles first could provide data-driven confidence in electrification before long-term lease commitments.

Key features:

- ✓ Evaluates vehicle demand fluctuations over time.
- ✓ Shows the cost per vehicle per day in lease vs. rental scenarios.
- ✓ Highlights break-even points where rental becomes more cost-effective.
- ✓ Supports seasonal or project-based fleet adjustments.
- ✓ Can help with electrification uncertainty – renting EVs for trial periods before committing to full lease contracts.



Summary

By using TCO+ and working with the Ayvens Consultancy Team before going to tender, public sector organisations can:

- 1 Prevent costly missteps by defining exact requirements.
- 2 Ensure operational efficiency by selecting vehicles suited to real-world use cases.
- 3 Reduce hidden costs from downtime, charging inefficiencies and over-specification.
- 4 Maximise value by making procurement decisions based on real-world data, not assumptions.

Find out more

Please get in touch with your Ayvens Account Manager or contact our Ayvens Consultancy Team. We will be happy to provide you with all the information and support you need to ensure your fleet is optimised for cost, efficiency and long-term sustainability.



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