

ELECTRIC VEHICLE FLEET MANAGEMENT

EBOOK



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PURPOSE OF THIS EBOOK

This eBook is designed to highlight the feature's value proposition by showcasing its role in optimizing operations and enhancing performance. It explains the feature's unique advantages and why it stands out in the market.

This also aims to **educate system integrators** on integrating the feature into existing systems. Simplified technical details make the implementation process easier and more efficient.

It demonstrates the **versatility of the feature** through real-life examples from industries like logistics, rental services, government and public transportation. These examples inspire innovative use cases to meet various business needs.

To **build trust with data**, the eBook uses measurable results to prove the feature's effectiveness. Testimonials and case studies add credibility and show its real-world impact.

Finally, the eBook focuses on **encouraging easy integration** by providing practical guidance on compatibility and implementation. It helps integrators add value and deliver great results for their clients.

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INTRODUCTION



Electric vehicles (EVs) are transforming the fleet industry with their cost-efficiency and sustainability. However, managing an EV fleet comes with unique challenges, such as battery health monitoring and route optimization. Without the right tools, fleet managers struggle to maximize efficiency and reduce downtime.

Our EV Fleet Management feature in Trakzee enables fleet operators to monitor all the information regarding battery status, and optimize vehicle usage. With real-time insights and automated alerts, businesses can ensure seamless EV operations while reducing operational costs. This eBook explores how our system helps businesses make better decisions with instant visibility and actionable data.

CHALLENGES IN ELECTRIC VEHICLE FLEET MANAGEMENT

Battery degradation

Over time, EV batteries degrade, reducing range and efficiency. Without proper monitoring, unexpected battery failures can lead to operational disruptions.

Range limitations

EVs have a limited range compared to traditional fuel-powered vehicles. Without route optimization, vehicles may run out of charge before reaching their destination.



Inconsistent charging costs

Charging costs vary based on location, time of day, and provider. Fleet managers need insights to optimize charging schedules and minimize expenses.

Lack of real-time monitoring

Monitoring EV-specific metrics such as battery health, energy consumption, and charging status in real time is crucial for fleet efficiency but often lacks visibility.

SOLUTIONS THROUGH FUNCTIONALITIES

This section explains how our EV Fleet Management feature helps fleet managers optimize operations and improve efficiency. It offers real-time monitoring of battery health, charging status, and energy consumption. The system helps detect issues like unexpected battery drain and inefficient charging patterns.

Fleet managers can analyze EV performance through intuitive dashboards and reports. It helps in identifying trends in energy usage and optimizing charging schedules. With easy-to-use controls and mobile access, fleet operators can ensure seamless EV management while reducing downtime and operational costs.



Dashboard



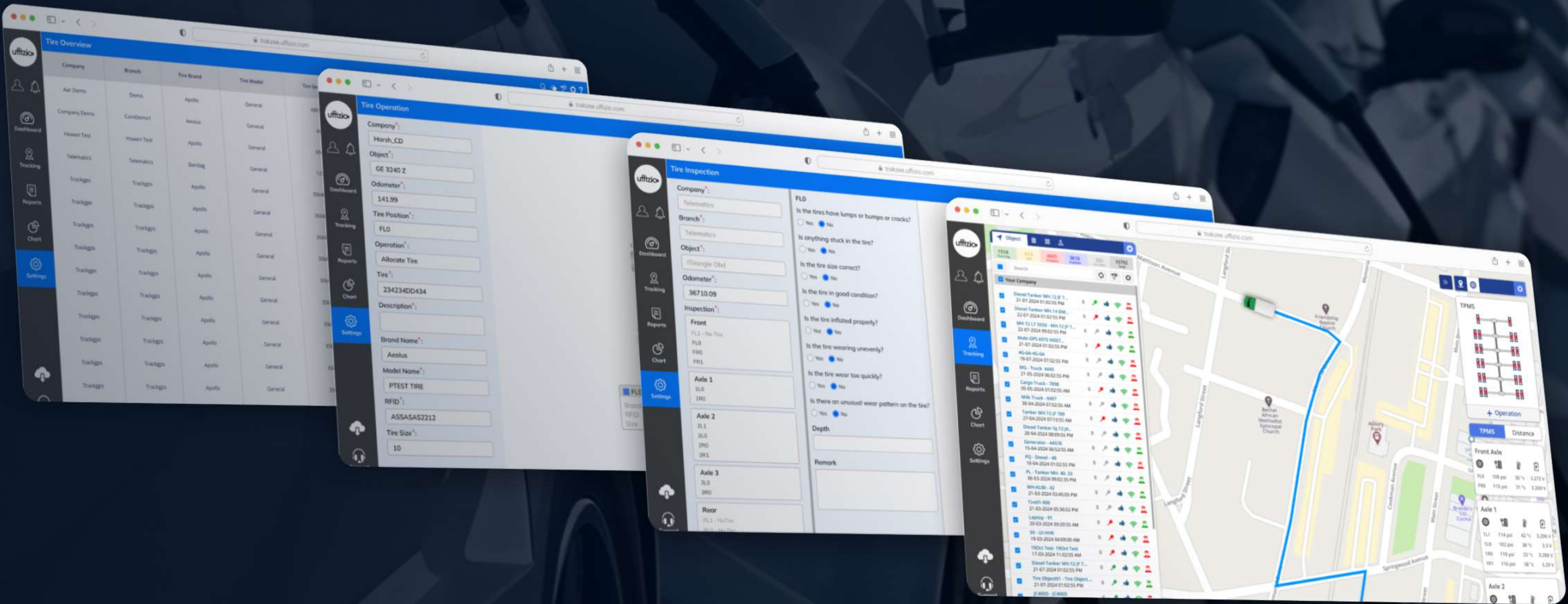
Live tracking



Reports

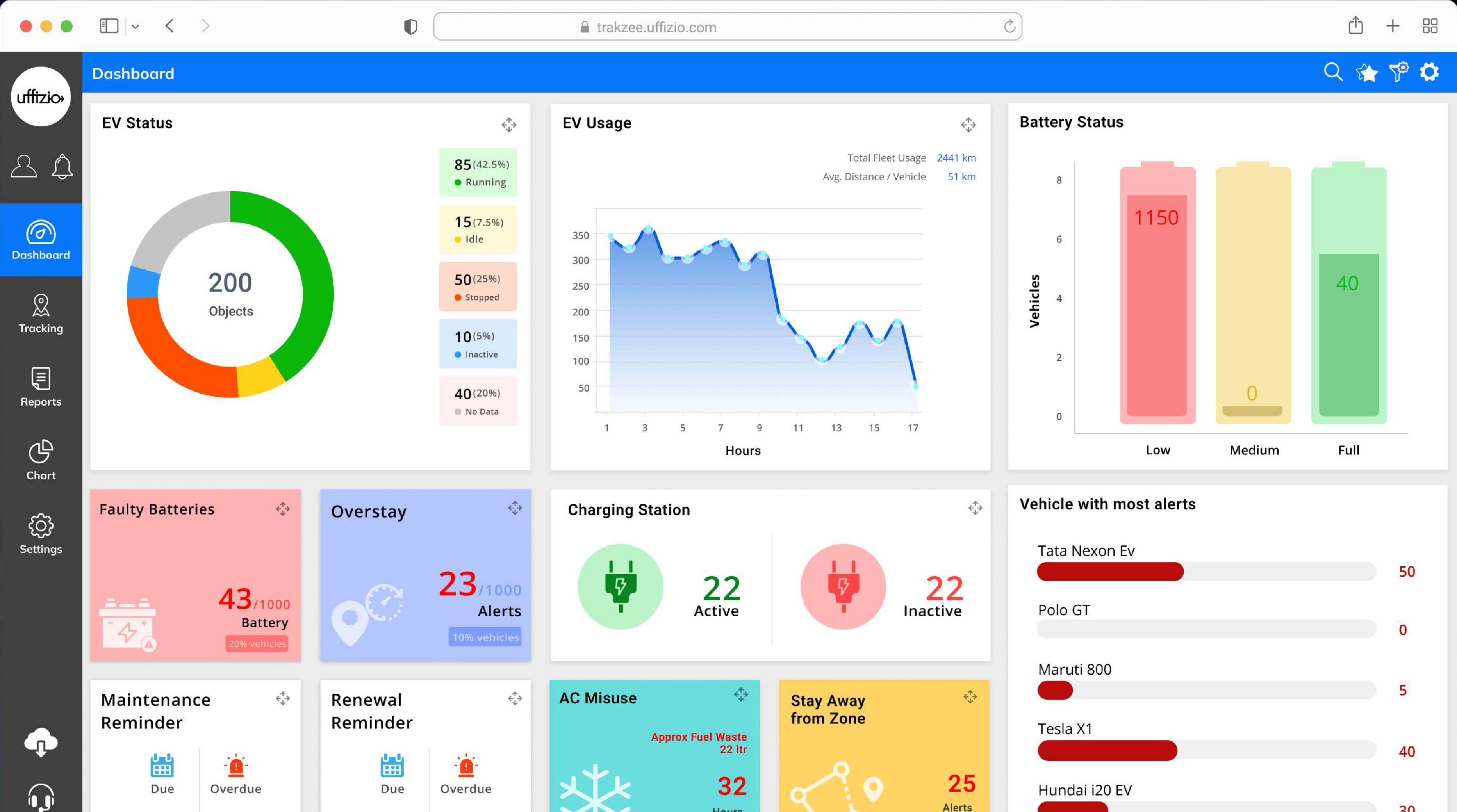


Alerts



INFORMATIVE DASHBOARD

Get a quick overview of EV fleet analytics for your entire fleet. Monitor battery health, temperature, and state of health to ensure optimal vehicle performance and longevity.



KEY FEATURES

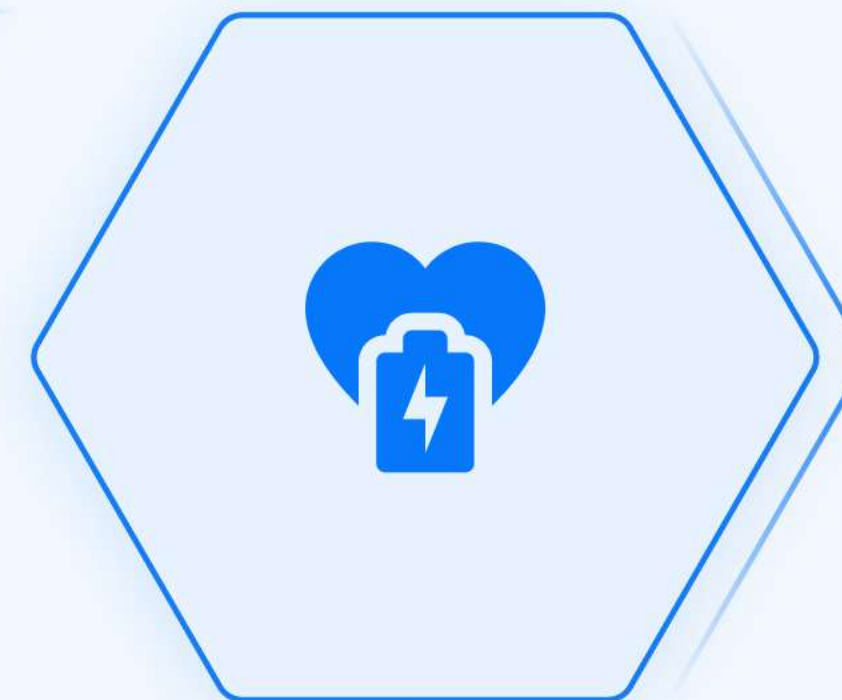
Battery health status

Track the real-time health of EV batteries. Identify potential degradation and ensuring proactive maintenance.



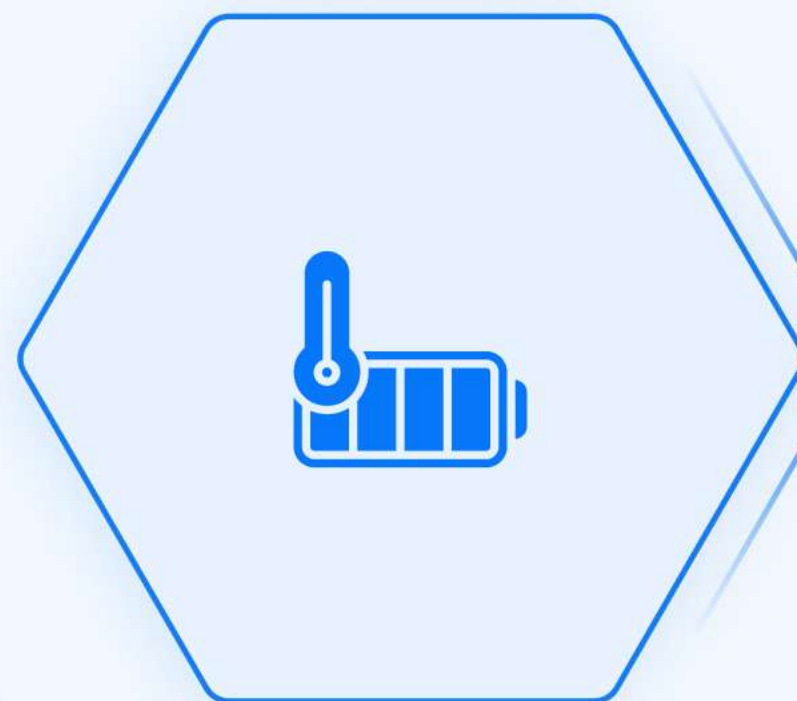
State of health widget

Analyze the overall battery lifespan and condition. This helps fleet managers plan replacements and avoid unexpected failures.



Battery temperature monitoring

Keep an eye on temperature fluctuations to prevent overheating. This helps in ensuring batteries operate within safe limits.



BENEFITS OF INFORMATIVE DASHBOARD



1

Enhanced battery performance

Maintain battery efficiency by tracking temperature and health status in real time.

2

Proactive maintenance

Detect early signs of battery degradation to schedule timely maintenance and extend battery life.

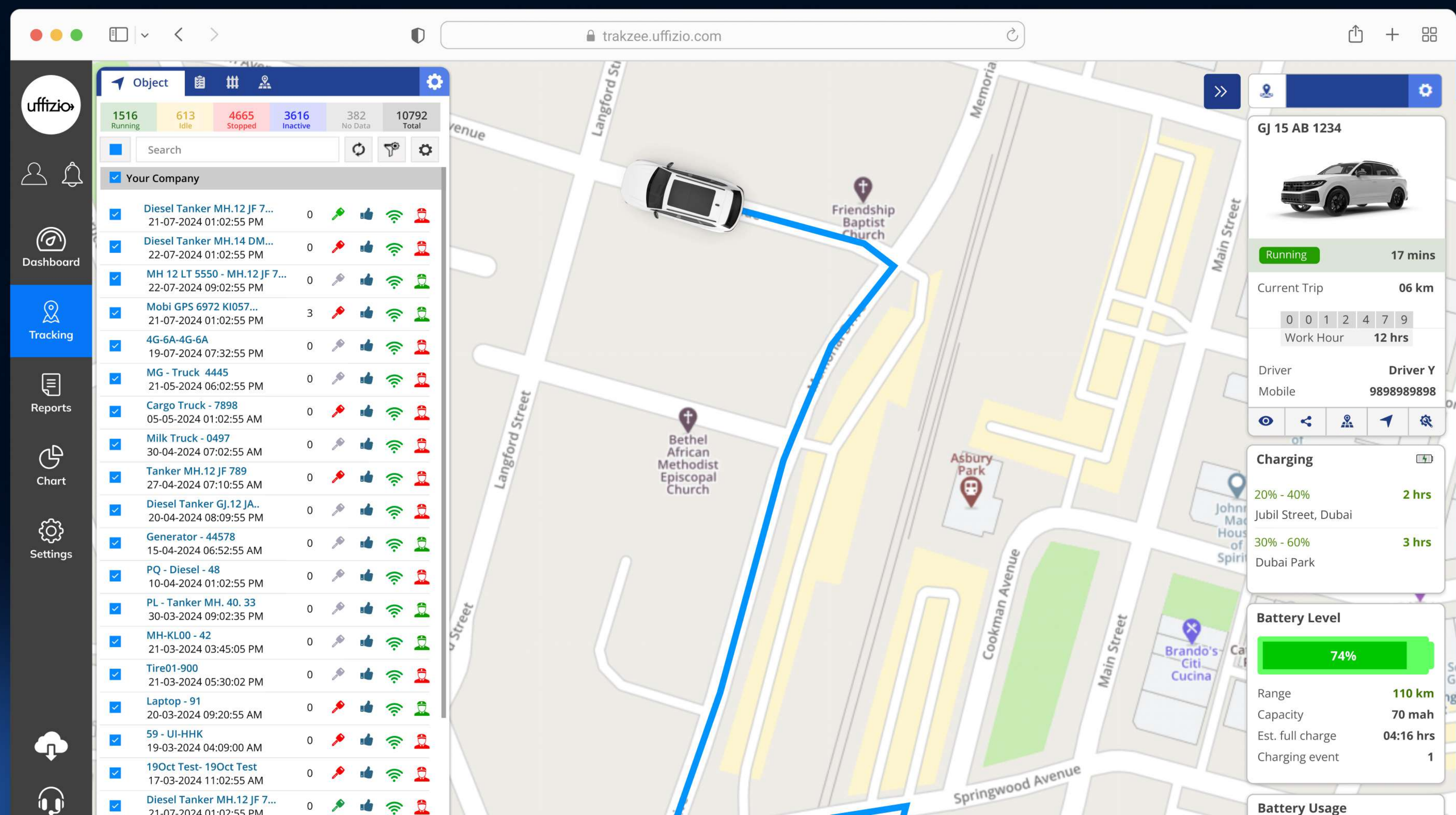
3

Optimized fleet operations

Reduce downtime and improve operational efficiency with accurate battery monitoring insights.

REAL-TIME EV MONITORING MADE EASY

Imagine having a real-time view of every EV's battery level and usage directly on the live tracking screen. With our battery level and battery usage widgets, fleet managers can monitor essential EV data alongside location and vehicle status—all in one place. This ensures efficient energy management and prevents unexpected downtimes.



KEY FEATURES

Battery level monitoring

Instantly view the current charge percentage, range, and capacity of each EV.



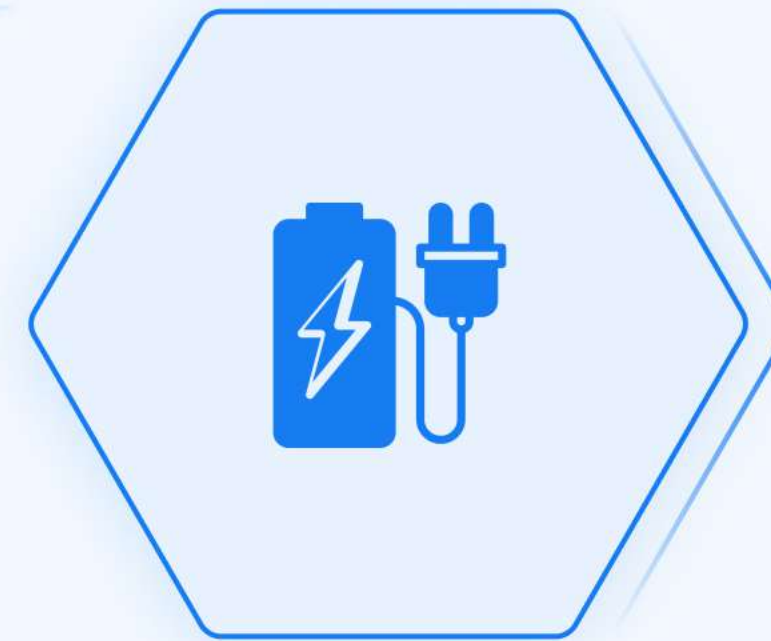
Battery usage tracking

Track real-time energy consumption, identifying patterns in running and idle states to optimize efficiency.



Charging event monitoring

Stay updated on charging events and estimated full charge times.

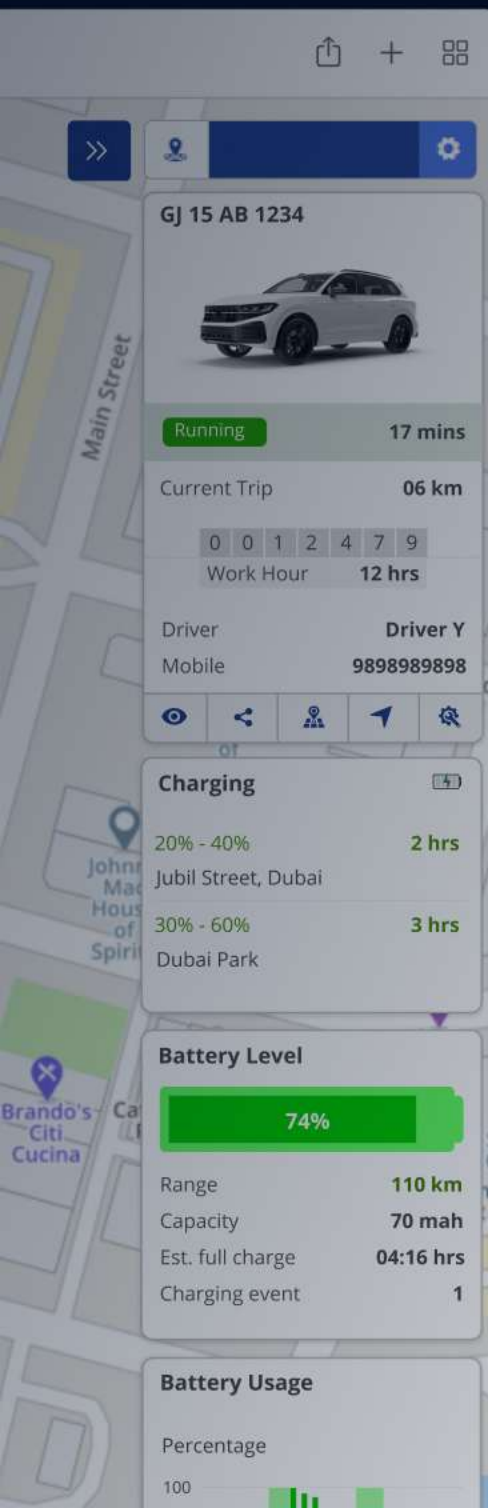


Range estimation

Based on battery level and past consumption trends, fleet managers can estimate the remaining travel distance to prevent mid-route breakdowns.



BENEFITS OF REAL-TIME EV MONITORING



Battery Level

74%

Range **110 km**
Capacity **70 mah**
Est. full charge **04:16 hrs**
Charging event **1**

1

Immediate issue detection

Sudden battery drops or unusual energy usage patterns can be addressed instantly.

2

Optimized charging planning

Live tracking of battery levels helps prevent unexpected downtime by ensuring vehicles are charged when needed.

3

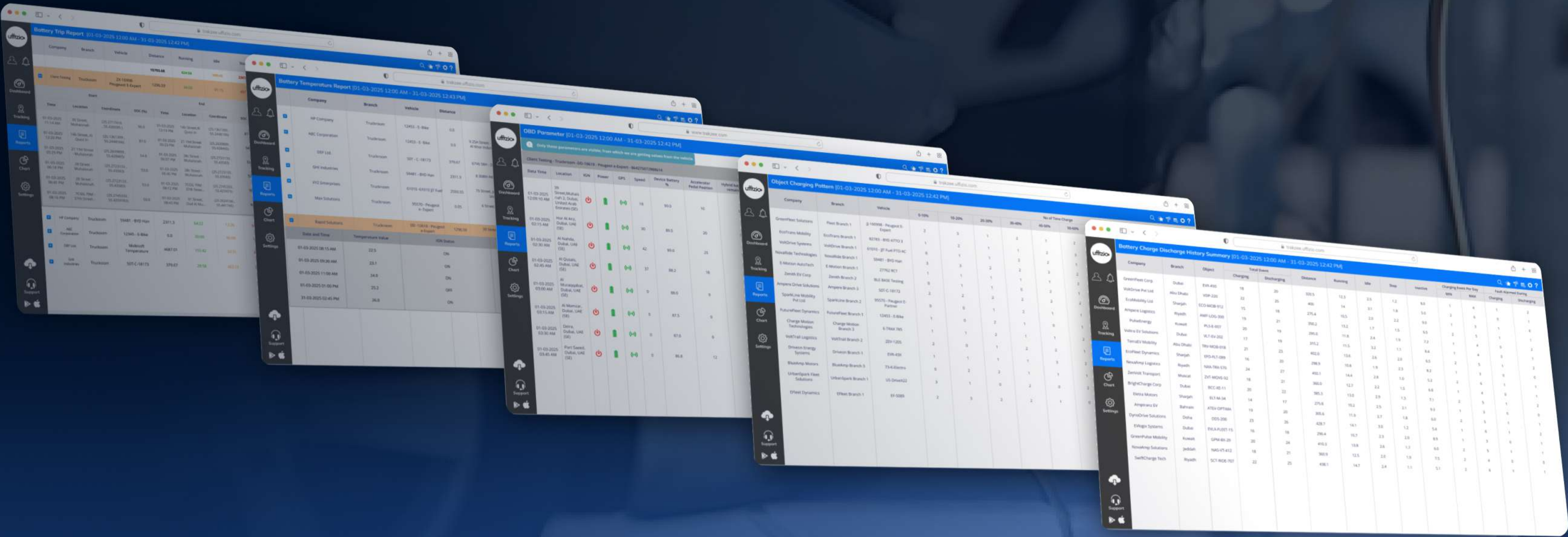
Energy-efficient fleet operations

Data-driven insights improve route planning and energy utilization, maximizing the fleet's performance.

DETAILED REPORTS

Reports play a crucial role in EV fleet management, offering valuable insights into battery performance, charging behavior, energy consumption, and overall vehicle efficiency. These reports enable fleet managers to track real-time data, detect anomalies, and optimize operations for better cost management and sustainability.

With accurate and structured reports, fleet operators can analyze trends, identify inefficiencies, and take proactive measures to enhance EV performance and longevity.



BATTERY TRIP REPORT

The Battery Trip Report provides a complete view of each trip taken by electric vehicles, tracking key metrics such as battery consumption, distance traveled, idle time, and charging events. This report helps fleet managers analyze energy efficiency, optimize vehicle usage, and plan charging schedules effectively.

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Dashboard

Tracking

Reports

Chart

Settings

Battery Trip Report [01-03-2025 12:00 AM - 31-03-2025 12:42 PM]

<



KEY INSIGHTS

1

Trip-wise battery consumption

Logs the battery usage for each trip, helping fleet managers track energy efficiency.

2

Distance and efficiency tracking

Calculates how much distance an EV covers per charge, aiding in route optimization.

3

Idle and stop time analysis

Breaks down time spent idling, running, and stopped, allowing for energy waste reduction.

BENEFIT

Enables tracking of battery performance during trips. This allows fleet managers to optimize energy consumption, reduce breakdown, and enhance operational efficiency.

BATTERY TEMPERATURE REPORT

The Battery Temperature Report provides a detailed analysis of temperature variations in EV batteries during operations. Monitoring battery temperature is crucial for preventing overheating and maintaining battery efficiency. This report helps fleet managers take proactive measures and avoid performance degradation.

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Battery Temperature Report [01-03-2025 12:00 AM - 31-03-2025 12:43 PM]

	Company	Branch	Vehicle	Distance	Strat Location	Temperature			End Location	Temperature Graph
						AVG	MIN	MAX		
+	HP Company	Truckroom	12453 - E- Bike	0.0	--	0.0	0.0	0.0	--	
+	ABC Corporation	Truckroom	12453 - E- Bike	0.0	9 25A Street - Ras Al Khor Industrial Area - Ras Al Khor Industrial Area 2 - Dubai, United Arab Emirates (SW)	0.0	0.0	0.0	9 25A Street - Ras Al Khor Industrial Area - Ras Al Khor Industrial Area 2 - Dubai, United Arab Emirates (SW)	
+	DEF Ltd.	Truckroom	50T - C -18173	379.67	67V6 58H - Dubai, United Arab Emirates (SW)	0.0	0.0	0.0	58GG 6MX - Bukadra - Nad Al Sheba 1 - Dubai, United Arab Emirates (SE)	
+	GHI Industries	Truckroom	59481 - BYD Han	2311.3	8 308th Rd - Al Satwa -Dubai, United Arab Emirates (SW)	0.0	0.0	0.0	4 16A St- Jumeirah - Jumeirah 1 - Dubai, United Arab Emirates (NW)	
+	XYZ Enterprises	Truckroom	61010 -61010 JJT Fuel	2593.55	75 Street, Jebel Ali Industrial Area 3, Dubai, United Arab Emirates (SW)	0.0	0.0	0.0	75 Street, Jebel Ali Industrial Area 3, Dubai, United Arab Emirates (NW)	
+	Max Solutions	Truckroom	95570 - Peugeot e- Expert	0.05	6 Street, Al Quoz, Dubai, United Arab Emirates (NW)	0.0	0.0	0.0	6 Street, Al Quoz, Dubai, United Arab Emirates (NW)	
-	Rapid Solutions	Truckroom	DD -10618 - Peugeot e-Expert	1296.59	39 Street, Muhaisnah 2, Dubai, United Arab Emirates (SE)	0.0	0.0	0.0	6 Street, Al Quoz, Dubai, United Arab Emirates (NW)	
Date and Time		Temperature Value		IGN Status		Speed		Location		Map
01-03-2025 08:15 AM		22.5		ON		45		Al Ittihad Rd, Dubai, United Arab Emirates (SE)		
01-03-2025 09:30 AM		23.1		ON		50		Al Qusais Industrial Area 3, Dubai, United Arab Emirates (SE)		
01-03-2025 11:00 AM		24.0		ON		38		Damascus Street, Dubai, United Arab Emirates (SE)		
01-03-2025 01:00 PM		25.2		OFF		0		Parking Zone - Deira, Dubai, United Arab Emirates (SE)		
31-03-2025 02:45 PM		26.0		ON		42		Al Twar 1, Dubai, United Arab Emirates (SE)		



KEY INSIGHTS

1

Temperature variations tracking

Logs minimum, maximum, and average battery temperature throughout trips.

2

Impact on battery health

Helps in identifying temperature fluctuations that may lead to battery degradation.

3

Preventive maintenance insights

Alerts fleet managers if battery temperature exceeds safe operational limits.

BENEFIT

Enables continuous monitoring of battery temperature. This ensures optimal performance, safety, and longevity while reducing the risk of overheating-related failures.

EV PARAMETER REPORT

The EV Parameter Report provides a complete analysis of key electric vehicle parameters. This helps in offering fleet managers detailed insights into vehicle performance, efficiency, and battery health.

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OBD Parameter [01-03-2025 12:00 AM - 31-03-2025 12:42 PM]

Only those parameters are visible; from which we are getting values from the vehicle.

Client Testing - Truckroom -DD-10618 - Peugeot e-Expert - 864275072988614

Data Time	Location	IGN	Power	GPS	Speed	Device Battery %	Accelerator Pedal Position	Hybrid battery pack remaining life	Door	Total Vehicle Distance	Lvc CNG Status	Lvc control state flags	Lvc agricultural machinery flags	Lvc security state flags	Security state flag	State of charge
01-03-2025 12:09:10 AM	39 Street,Muhais nah 2, Dubai, United Arab Enirates (SE)				18	90.0	10	95	1	34010	0	0	0	36028797018963	549755813944	95
01-03-2025 02:15 AM	Hor Al Anz, Dubai, UAE (SE)				30	89.5	20	94	0	34015	0	0	0	36028797019000	54975581402	94
01-03-2025 02:30 AM	Al Nahda, Dubai, UAE (SE)				42	89.0	25	94	0	34023	0	0	0	36028797019001	54975581403	94
01-03-2025 02:45 AM	Al Qusais, Dubai, UAE (SE)				37	88.2	18	93	0	34030	0	0	0	36028797019002	54975581404	93
01-03-2025 03:00 AM	Al Muraqqabat, Dubai, UAE (SE)				0	88.0	0	93	0	34030	0	0	0	36028797019002	54975581404	93
01-03-2025 03:15 AM	Al Mamzar, Dubai, UAE (SE)				0	87.5	0	92	0	34031	0	0	0	36028797019003	54975581405	92
01-03-2025 03:30 AM	Deira, Dubai, UAE (SE)				0	87.0	0	91	0	34032	0	0	0	36028797019004	54975581406	91
01-03-2025 03:45 AM	Port Saeed, Dubai, UAE (SE)				0	86.8	12	91	1	34037	0	0	0	36028797019005	54975581407	91



KEY INSIGHTS

1

Battery voltage & state of charge

Track the battery voltage levels and charge percentage to prevent unexpected power depletion.

2

Hybrid battery pack life

Monitor the remaining lifespan of the battery pack to plan timely replacements and reduce maintenance costs.

3

Log report

Analyze risky driving behavior patterns through EV parameters

BENEFIT

This report enables fleet operators to make informed decisions by analyzing EV parameters. It helps prevent unexpected breakdowns, optimize vehicle usage, and improve overall fleet performance.

OBJECT CHARGING PATTERN REPORT

The Object Charging Pattern Report provides insights into the charging behavior of EVs, tracking how often vehicles charge at different battery levels. This report helps fleet managers analyze charging frequency, identify inefficient charging habits, and optimize charging schedules to enhance battery performance and longevity.

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Object Charging Pattern [01-03-2025 12:00 AM - 31-03-2025 12:42 PM]

Company	Branch	Vehicle	No of Time Charge									
			0-10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-100%
GreenFleet Solutions	Fleet Branch 1	JJ-160998 - Peugeot E-Expert	2	3	1	2	1	2	1	1	2	4
EcoTrans Mobility	EcoTrans Branch 1	82783 - BYD ATTO 3	1	2	1	1	2	3	1	0	3	5
VoltDrive Systems	VoltDrive Branch 1	61010 - JJT Fuel PTO AC	0	1	1	2	2	1	2	3	2	2
NovaRide Technologies	NovaRide Branch 1	59481 - BYD Han	3	3	2	2	3	2	2	1	1	3
E-Motion AutoTech	E-Motion Branch 1	27762 RCT	1	1	1	1	1	2	3	2	1	2
Zenith EV Corp	Zenith Branch 2	BLE BASE Testing	0	1	1	0	2	1	1	0	0	2
Ampere Drive Solutions	Ampere Branch 3	50T-C-18173	2	2	2	2	2	2	2	2	2	2
SparkLine Mobility Pvt Ltd	SparkLine Branch 2	95570 - Peugeot E-Partner	0	0	1	2	1	1	2	1	1	1
FutureFleet Dynamics	FutureFleet Branch 1	12453 - E-Bike	1	0	2	1	0	1	1	1	1	2
Charge Motion Technologies	Charge Motion Branch 3	E-TRAX 785	1	1	2	1	1	2	1	1	2	3
VoltTrail Logistics	VoltTrail Branch 2	ZEV-1205	2	0	1	2	2	1	1	0	1	4
Driveon Energy Systems	Driveon Branch 1	EVR-43X	1	1	1	1	3	2	1	2	2	1
BlueAmp Motors	BlueAmp Branch 3	73-K-Electro	0	2	2	1	1	1	2	1	1	2
UrbanSpark Fleet Solutions	UrbanSpark Branch 1	US-DriveX22	3	1	0	2	0	2	1	2	2	3
EFleet Dynamics	EFleet Branch 1	EF-5089	2	3	2	2	1	0	0	1	2	2



KEY INSIGHTS

1

Charging frequency monitoring

Tracks the number of times EVs are charged at various battery percentage levels.

2

Battery level trends

Identifies how often vehicles charge at low levels (0-10%) or high levels (90-100%), helping optimize charging practices.

3

Energy usage insights

Helps in understanding charging patterns and reducing unnecessary charging sessions.

4

Battery health optimization:

Encourages optimal charging cycles to prevent premature battery degradation.

BENEFIT

Enables detailed tracking of EV charging habits, allowing fleet managers to optimize charging schedules, reduce energy waste, and extend battery life.

BATTERY CHARGE DISCHARGE HISTORY SUMMARY

The Battery Charge Discharge History Summary provides a detailed log of charging and discharging events across the fleet. This report helps fleet managers monitor battery performance, energy utilization, and fault alarms, ensuring vehicles operate efficiently with minimal downtime.

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Dashboard

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Battery Charge Discharge History Summary [01-03-2025 12:00 AM - 31-03-2025 12:42 PM]

Company	Branch	Object	Total Event		Distance	Running	Idle	Stop	Inactive	Charging Event Per Day		Fault Alarmed During	
			Charging	Discharging						MIN	MAX	Charging	Discharging
GreenFleet Corp	Dubai	EVX-450	18	20	320.5	12.3	2.5	1.2	8.0	1	4	1	2
VoltDrive Pvt Ltd	Abu Dhabi	VDP-220	22	25	400	14	3.1	1.8	5.0	2	6	0	1
EcoMobility Ltd	Sharjah	ECO-MOB-912	15	18	275.4	10.5	2.0	2.2	9.0	1	3	1	0
Ampere Logistics	Riyadh	AMP-LOG-300	19	21	350.2	13.2	1.7	1.5	6.5	2	5	1	1
PulseEnergy	Kuwait	PLS-E-007	20	19	295.0	11.8	2.4	1.9	7.2	1	4	0	2
Voltro EV Solutions	Dubai	VLT-EV-202	17	19	315.2	11.5	3.2	1.1	8.4	1	4	0	1
TerraEV Mobility	Abu Dhabi	TRV-MOB-018	21	23	402.0	13.6	2.6	2.0	6.5	2	5	1	2
EcoFleet Dynamics	Sharjah	EFD-FLT-089	16	20	298.9	10.8	1.9	2.3	8.2	1	3	0	0
NexaAmp Logistics	Riyadh	NXA-TRX-570	24	27	450.1	14.4	2.8	1.0	5.2	2	6	1	1
ZenVolt Transport	Muscat	ZVT-MOVE-92	18	21	360.0	12.7	2.2	1.5	6.8	1	4	0	1
BrightCharge Corp	Dubai	BCC-XE-11	20	22	385.3	13.0	2.9	1.3	7.1	2	5	1	2
Eletra Motors	Sharjah	ELT-M-34	14	17	275.8	10.2	2.5	2.1	9.3	1	3	0	0
Amptranz EV	Bahrain	ATEV-OPTIMA	19	20	305.6	11.9	2.7	1.8	6.0	2	5	1	1
DynoDrive Solutions	Doha	DDS-200	23	26	428.7	14.1	3.0	1.2	5.4	1	6	1	2
EVlogix Systems	Dubai	EVLX-FLEET-15	16	18	290.4	10.7	2.3	2.0	8.9	1	3	0	1
GreenPulse Mobility	Kuwait	GPM-BX-29	20	24	410.3	13.8	2.6	1.7	6.0	2	5	1	1
NovaAmp Solutions	Jeddah	NAS-VT-412	18	21	360.9	12.5	2.0	1.9	7.5	2	4	0	0
SwiftCharge Tech	Riyadh	SCT-RIDE-707	22	25	438.1	14.7	2.4	1.1	5.1	2	6	1	1



KEY INSIGHTS

1

Charging and discharging events tracking

Logs each instance of battery charging and power consumption throughout operations.

2

Trip-based energy usage

Analyzes battery performance across different trips, stops, and idle durations.

3

Charging event frequency

Tracks the minimum and maximum charging events per day for better scheduling.

4

Fault detection alerts

Identifies anomalies in charging or discharging patterns, preventing potential issues.

BENEFIT

Enables comprehensive tracking of battery charge cycles, helping fleet managers optimize energy efficiency, extend battery life, and prevent unexpected failures.

BATTERY FAULT REPORT

The Battery Fault Report provides a detailed record of battery-related faults and errors detected in EVs. This report helps fleet managers identify potential issues before they escalate, ensuring proactive maintenance and minimizing unexpected breakdowns.

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Dashboard

Tracking

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Battery Fault Report [01-03-2025 12:00 AM - 31-03-2025 12:42 PM]

	Company	Branch	Object	Fault Generated
+	GreenFleet EVs	Dubai	GF-EVX-1101	2
+	AmpereAuto Corp	Abu Dhabi	AMP-EEV-22	1
+	NexaVolt Mobility	Riyadh	NX-ELECTRO-504	4
+	ZenithCharge Group	Sharjah	ZEN-BATT-90	0
+	SparkLine Motors	Muscat	SPL-ELECTRIC-701	3
+	UrbanEV Solutions	Jeddah	UEV-TRX-318	1
+	NovaAmp Technologies	Doha	NVA-500X	0
+	Voltora FleetTech	Bahrain	VTF-BTRY-77	2
+	DriveEco Mobility	Kuwait	DE-E-FLEET-XL	5
+	EcoMotion Drives	Dubai	EMD-VoltX-102	3
+	BluWave Energy	Abu Dhabi	BW-EV-Ranger-22	0
+	TerraVolt Mobility	Riyadh	TVM-E-XR500	1
-	ElecFleet Dynamics	Sharjah	EFD-CityGo-07	2
Date	Event Name	Fault Name	Location	Map
01-03-2025 01:05 AM	Battery Alert	Over Voltage Detected	Sheikh Zayed Rd, Dubai, UAE (SE)	
02-03-2025 02:22 AM	Fault Code 103	Cell Imbalance	Al Quoz Industrial 3, Dubai, UAE	
08-03-2025 04:12 AM	Fault Trigger	Low Charging Efficiency	Oud Metha, Dubai, UAE	



KEY INSIGHTS

1

Fault detection tracking

Logs instances of battery faults, helping diagnose recurring issues.

2

Operational impact analysis

Identifies faults that could affect vehicle performance and efficiency.

3

Maintenance planning assistance

Provides data to schedule battery servicing and replacements on time.

BENEFIT

Enables early detection of battery issues, helping fleet managers reduce downtime, prevent costly failures, and ensure vehicle reliability.

KEY REASONS TO INVEST



WHY SYSTEM INTEGRATORS SHOULD INVEST IN OUR EV FLEET MANAGEMENT SOLUTION

Providing EV fleet management capabilities to your clients enables them to make data-driven decisions, improve efficiency, and optimize energy usage. These insights enhance your value as an integrator, supporting your clients' transition to sustainable mobility.



SEAMLESS INTEGRATION WITH EV FLEETS

Smart charging insights

Get data on charging sessions, energy efficiency, and battery performance to optimize usage.

Compatible with all EV models

Supports electric trucks, delivery vans, buses, and company EVs without extra setup.

One platform for all EV

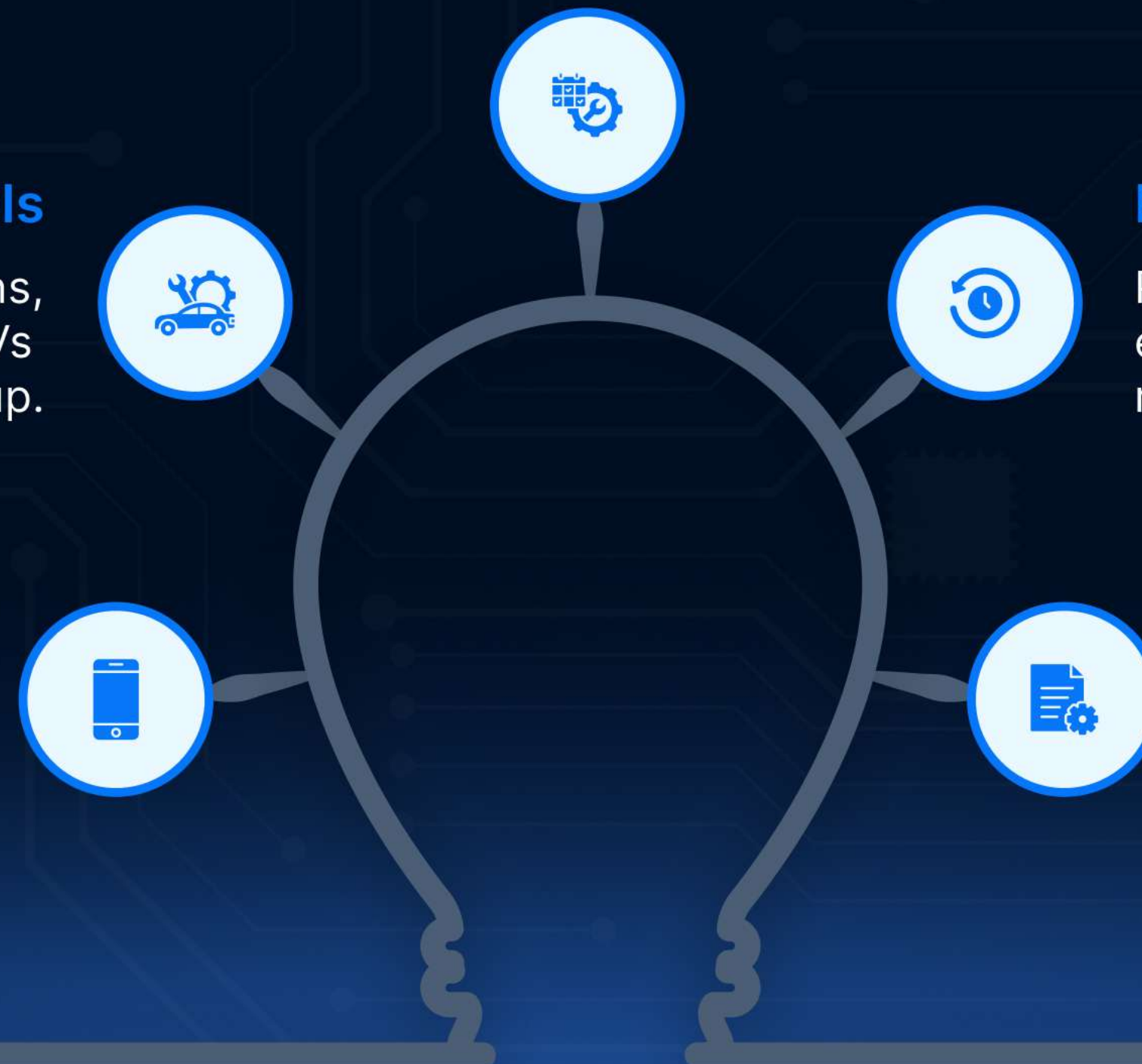
Monitor battery health, charging status, and energy consumption in real time.

Reduce downtime

Plan routes and charging schedules effectively to keep your fleet running smoothly.

Sustainable & cost-efficient

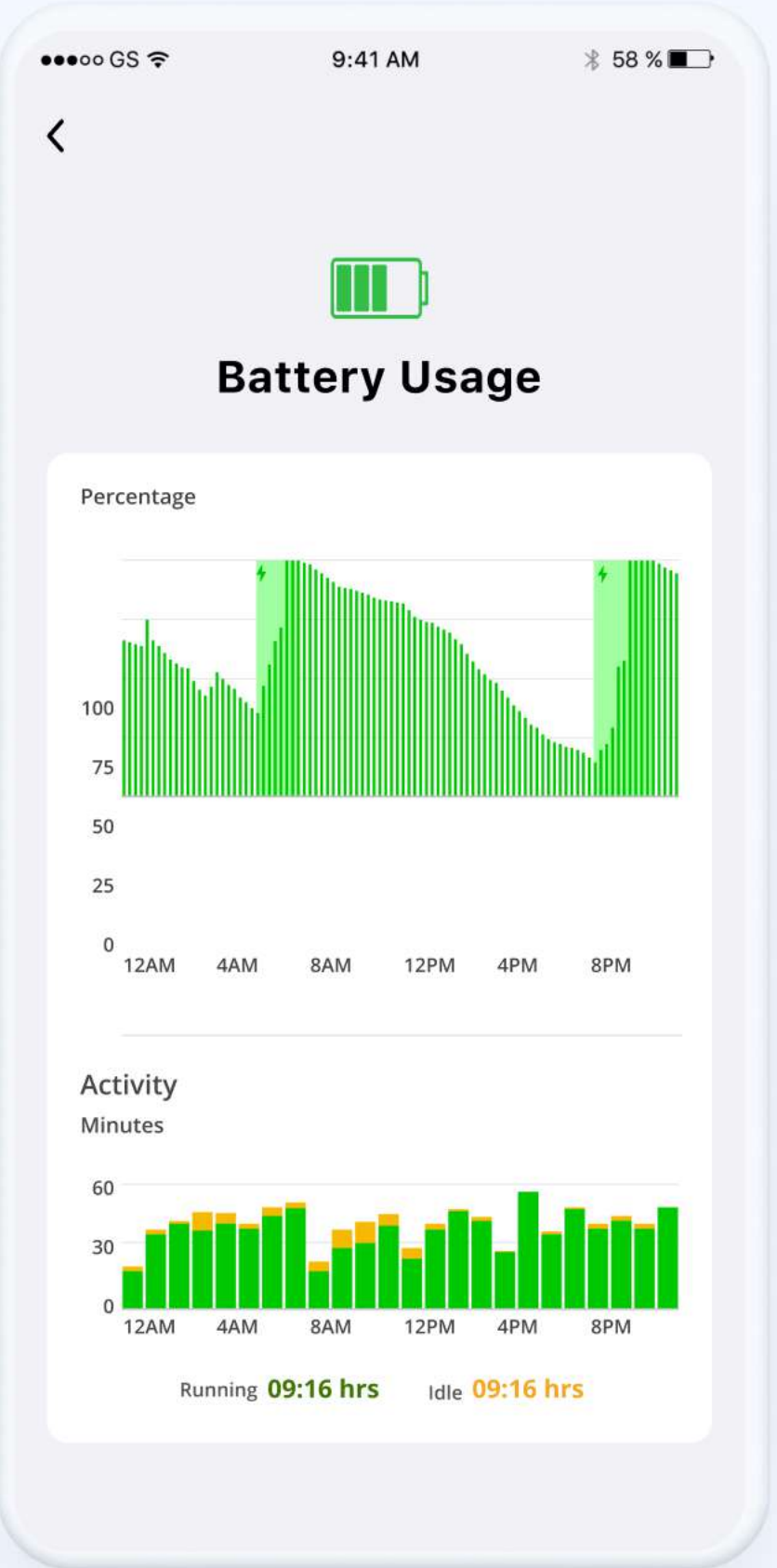
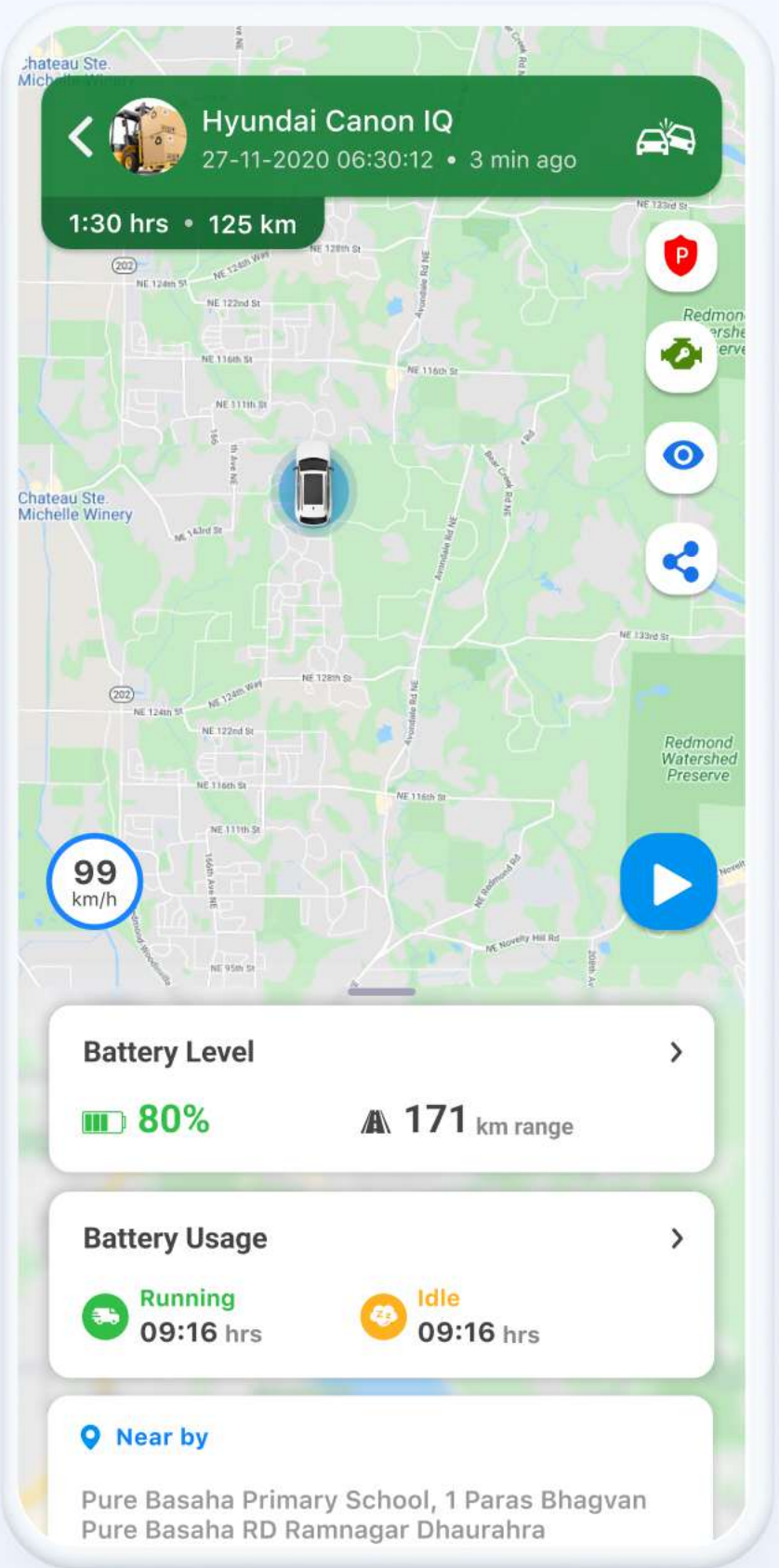
Lower operational costs while ensuring a smooth transition to electric mobility.





MANAGE YOUR FLEET WITH OUR MOBILE APP

Get instant access to live EV data, battery status, charging events, and energy consumption reports. Monitor and manage your fleet seamlessly from anywhere.



USE CASES ACROSS INDUSTRIES



Car Rental & Leasing



Logistics and Transport



**Government and Employee
Transit**

Use Case

CAR RENTAL & LEASING

CHALLENGES

→ **Battery level uncertainty**

Renters may return EVs with low battery levels, leading to unexpected downtime and reduced availability for the next customer.

→ **Untracked charging patterns**

Without monitoring, vehicles may be charged inefficiently, increasing energy costs and delaying fleet readiness.

→ **Range anxiety for renters**

Customers unfamiliar with EVs may face range anxiety, affecting user experience and satisfaction.

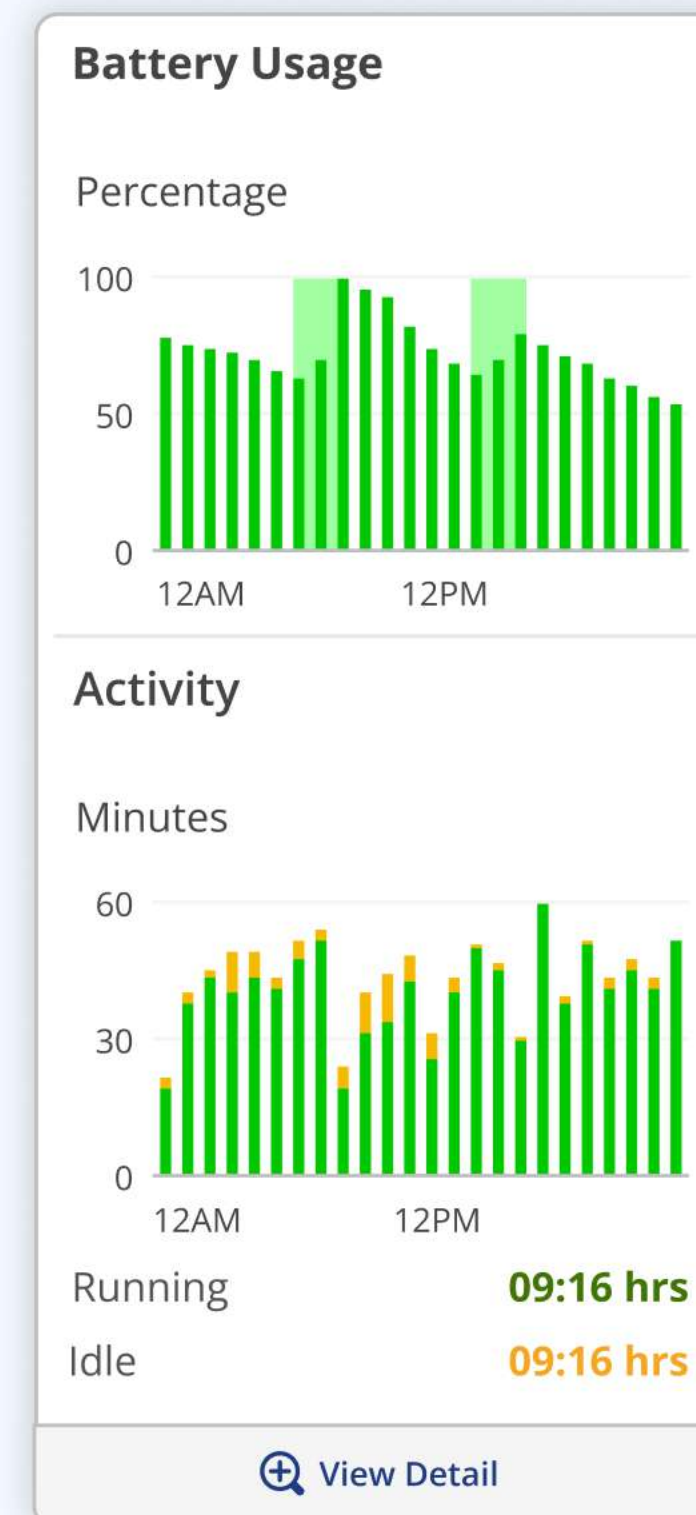
→ **Maintenance & battery health management**

Frequent short-term usage can impact battery health. Without proper tracking, rental companies may struggle to schedule timely maintenance.



SOLUTIONS

- **Real-time battery monitoring**
Track each vehicle's battery percentage, range, and charging status to ensure optimal fleet availability.
- **Smart charging insights**
Identify inefficient charging patterns and recommend optimal charging schedules to reduce downtime and electricity costs.
- **Range & charging station guidance**
Provide renters with real-time insights on remaining range and nearby charging stations for a seamless rental experience.
- **Automated battery health reports**
Schedule proactive maintenance based on battery health insights, ensuring long-term fleet efficiency and reducing unexpected breakdowns.



RESULTS



1

Reduction in rental downtime

Real-time battery tracking and optimized charging schedules keep more vehicles available for customers.

2

Better user experience & satisfaction

Renters receive clear insights on vehicle range and charging locations, reducing range anxiety.

3

Lower maintenance costs

Proactive battery health tracking reduces repair expenses and extends vehicle lifespan.

Use Case

LOGISTICS AND TRANSPORT



CHALLENGES

→ Load impact on EV performance

Heavy cargo drains the battery, reducing range and affecting vehicle inefficiency during long hauls.

→ Inefficient route planning for charging

Drivers may take unoptimized routes that lack proper charging stations.

→ Lack of real-time battery monitoring

Fleet managers cannot track battery usage trends, leading to inefficient energy planning.

→ Unplanned charging stops

Without charge monitoring, EVs may run low unexpectedly, causing delivery delays.



SOLUTIONS

→ **Load aware range estimations**

Estimates range based on cargo weight to support better trip planning and fewer charge interruptions.

→ **Optimized route planning**

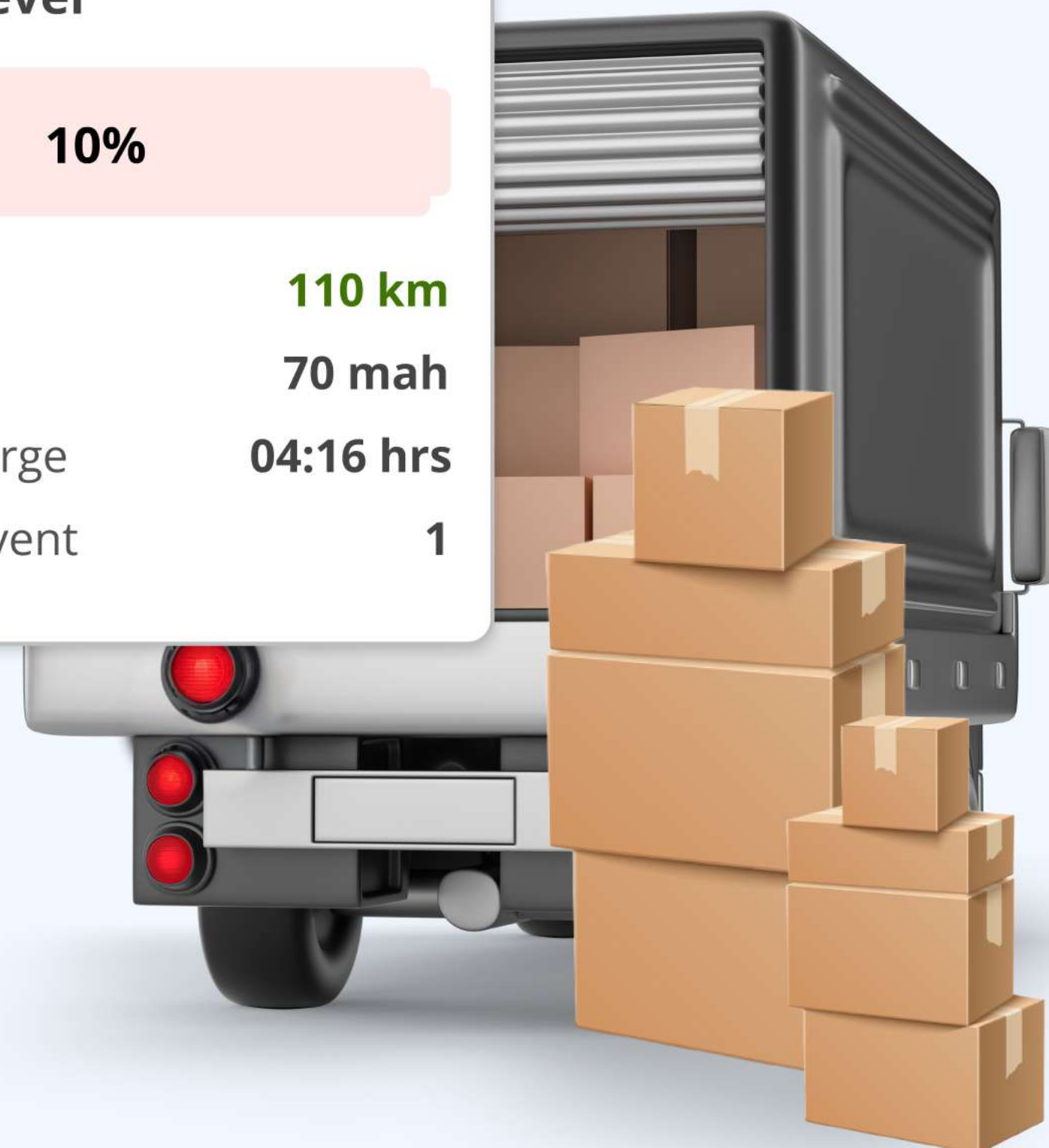
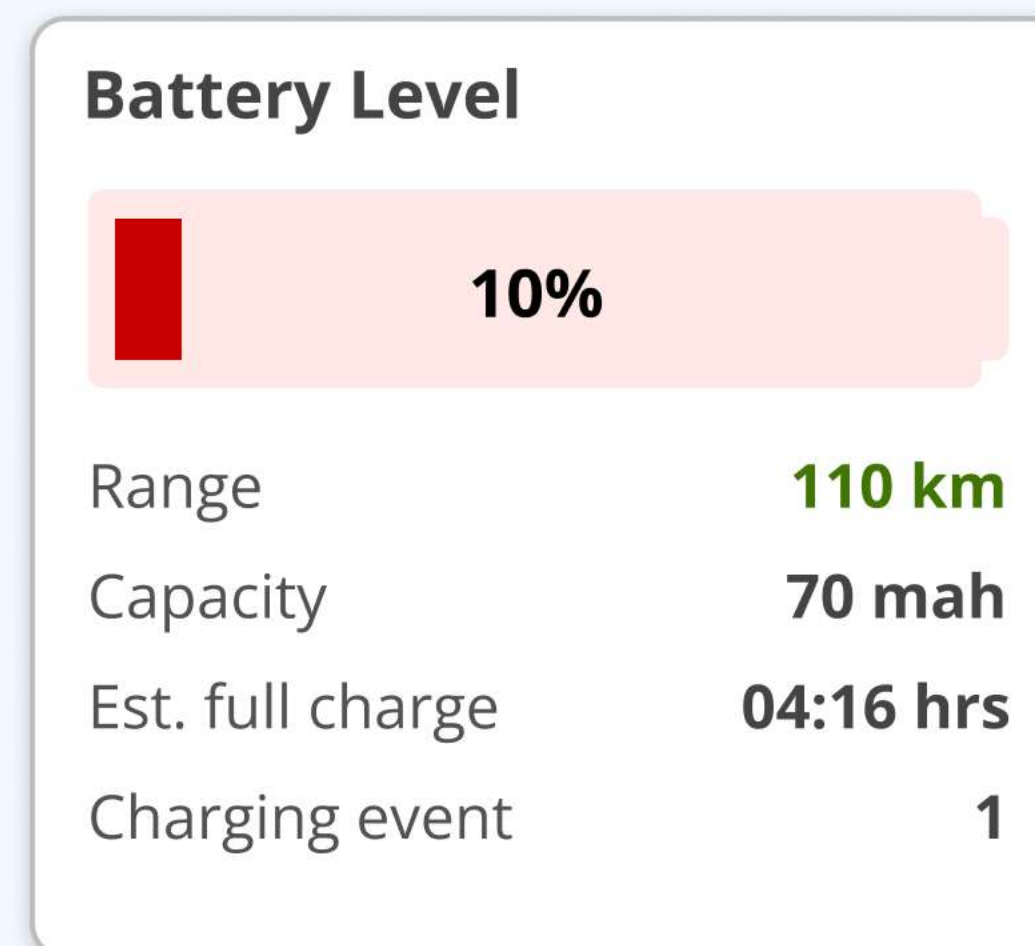
Maps the best routes with charging stations, reducing delays.

→ **Live battery monitoring**

Provides real-time battery insights for informed decision-making.

→ **Smart charging alerts**

Notifies when charging is required, avoiding unplanned stops.



RESULTS



1

Reduction in unplanned stops

Real-time battery tracking and proactive alerts help avoid last-minute charge-related delays.

2

Faster trip completion

Optimized route planning ensures efficient paths with compatible charging stations.

3

Improved battery efficiency & range estimation

Energy tracking provides better trip planning and prevents unexpected charge depletion.

Use Case

GOVERNMENT AND EMPLOYEE TRANSIT

CHALLENGES

→ Range uncertainty

Inconsistent battery performance and lack of real-time monitoring lead to route inefficiencies.

→ Limited charging infrastructure

EV buses and employee shuttles may struggle with inadequate charging stations, causing delays.

→ Unplanned downtime

Unexpected battery drain or poor charge scheduling disrupts daily transit operations.

→ High energy costs during peak hours

Charging EV fleets during peak hours leads to higher electricity costs and increased operational expenses.



Battery consumption during trip



Time taken for the trip completion



SOLUTIONS

→ **Route optimization**

Integrates charging stops into transit routes, ensuring vehicles operate without delays.

→ **Smart charging insights**

Provides real-time battery monitoring and predictive charge scheduling for smooth operations.

→ **Battery health tracking**

Prevents breakdowns by detecting issues early, reducing repair costs and improving uptime.

→ **Energy cost optimization**

Enables off-peak charging schedules and real-time energy usage insights to minimize costs.



Battery consumption during trip



Time taken for the trip completion



RESULTS



1

Fewer service disruptions

Smart charge planning prevents mid-route energy depletion.

2

Better fleet utilization

Optimized routes and real-time monitoring improve operational efficiency.

3

Reduced maintenance costs

Predictive battery health tracking extends vehicle lifespan and lowers repair expenses.

KEY TAKEAWAYS FOR EFFECTIVE EV FLEET MANAGEMENT

Here's what you've learned about EV fleet management and how it benefits operations:

- ✓ Real-time battery monitoring ensures optimal charge levels and prevents unexpected stops.
- ✓ Analytics and reports provide insights on energy consumption and charging patterns.
- ✓ Detailed reports support data-driven decision-making for better fleet performance.
- ✓ Proactive battery health tracking reduces maintenance costs and improves lifespan.
- ✓ Optimized charging schedules enhance efficiency and sustainability.

Notes



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