FUEL MONITORING
EBOOK

uffizio

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, mining, 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.

TABLE OF **CONTENTS**

INTRODUCTION TO FUEL MONITORING

Fuel is one of the biggest expenses amongst any fleet operation. With fuel prices always changing and the chance of fuel being wasted, it's important to track fuel use carefully. Our fuel monitoring solution enables fleet operators to take control, reduce costs, and improve overall efficiency. This ebook explores how our system helps businesses make better decisions with instant visibility and actionable data.

CHALLENGES IN FUEL MONITORING

Fuel theft

Fuel theft is a common issue where drivers or unauthorized personnel steal fuel. This leads to unexpected expenses and reduced profits.

Untracked refills and drains

Without proper tracking systems, managers cannot monitor when and where fuel is filled or drained. This causes financial losses and accountability gaps.

Manual data errors

Manually recording fuel data often leads to mistakes. It creates inaccurate reports and mismanagement of resources.

Fuel usage inefficiencies

Inefficient driving habits or poor planning result in unnecessary fuel wastage. It increases overall operational costs.
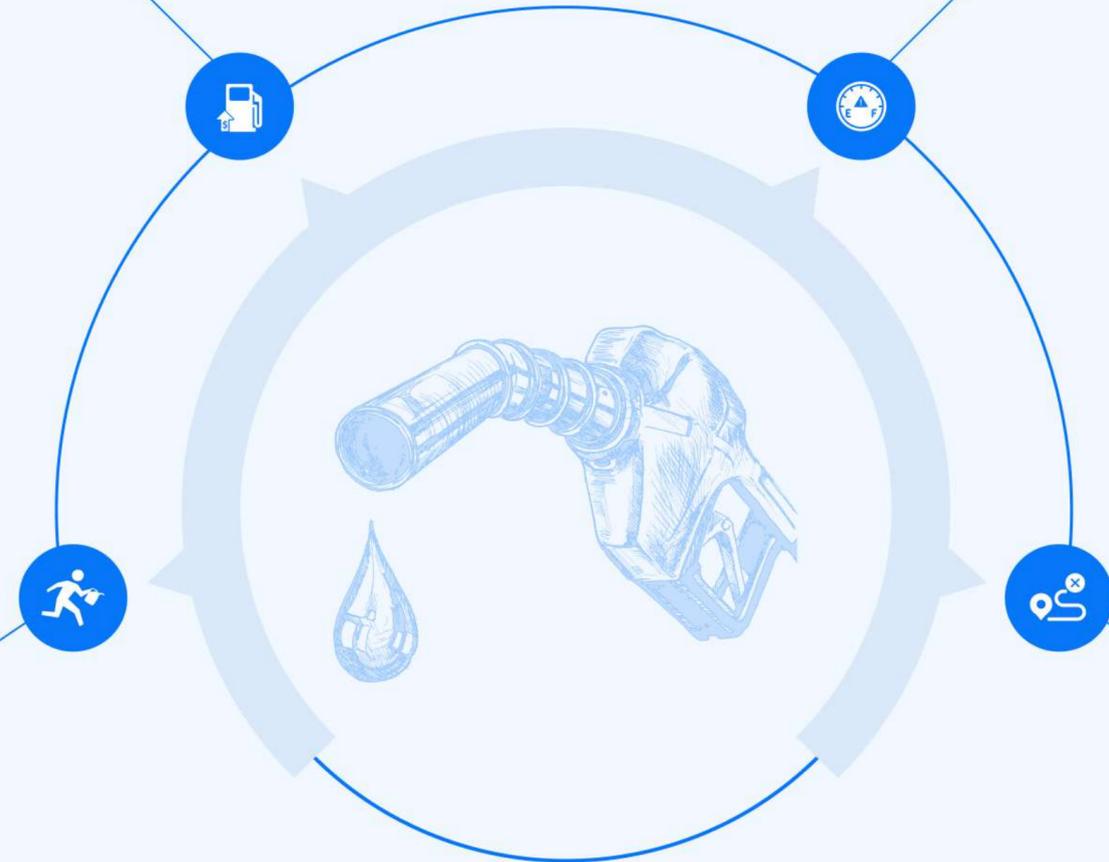
FUEL MONITORING FUNCTIONALITIES

This section explains how our fuel monitoring feature helps fleet managers to save money and improve efficiency. It offers the ability to track fuel in real-time. It also helps to detect fuel theft by providing alerts for any unusual fuel drops. Managers can analyze fuel use to find out which vehicles use too much fuel and fix the issues.

The dashboard and reports are easy to use, showing how much fuel is used over time, patterns in refueling, and which vehicles are more fuel-efficient. With simple controls and mobile access, fleet managers can keep an eye on fuel usage anytime.

Dashboard　　**Live tracking**　　**Reports**　　**Charts**　　**Alerts**

INFORMATIVE DASHBOARD

Get a quick overview of fuel analytics for your entire fleet. Monitor fuel levels, usage, and efficiency to manage fuel costs effectively.
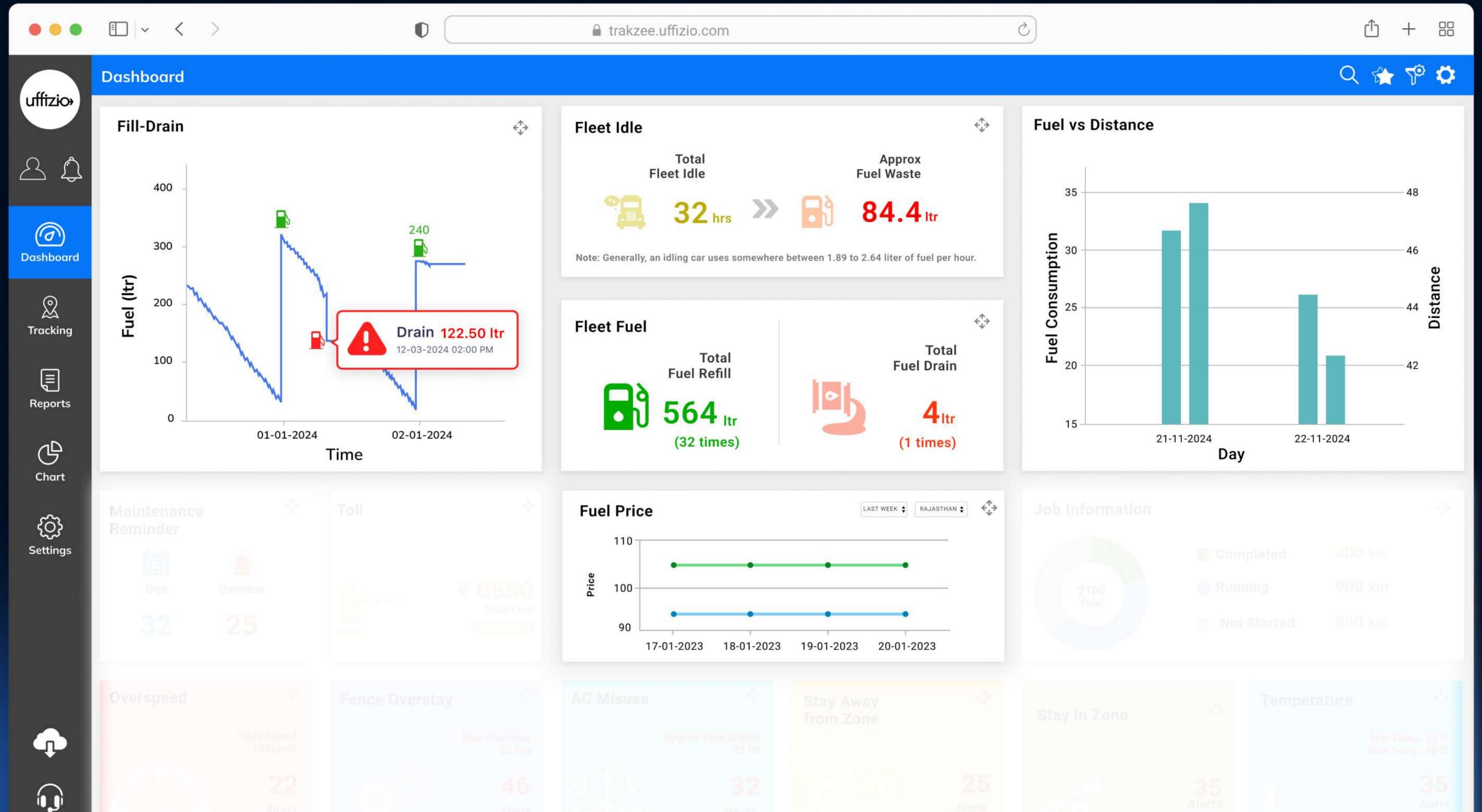
KEY INSIGHTS

Fuel refill and drain overview

See how much fuel was refilled and drained during a specific time period.

Fuel used per distance

Get answers to questions like: How much distance did the fleet travel? How much fuel was consumed?

Fuel wasted during idle time

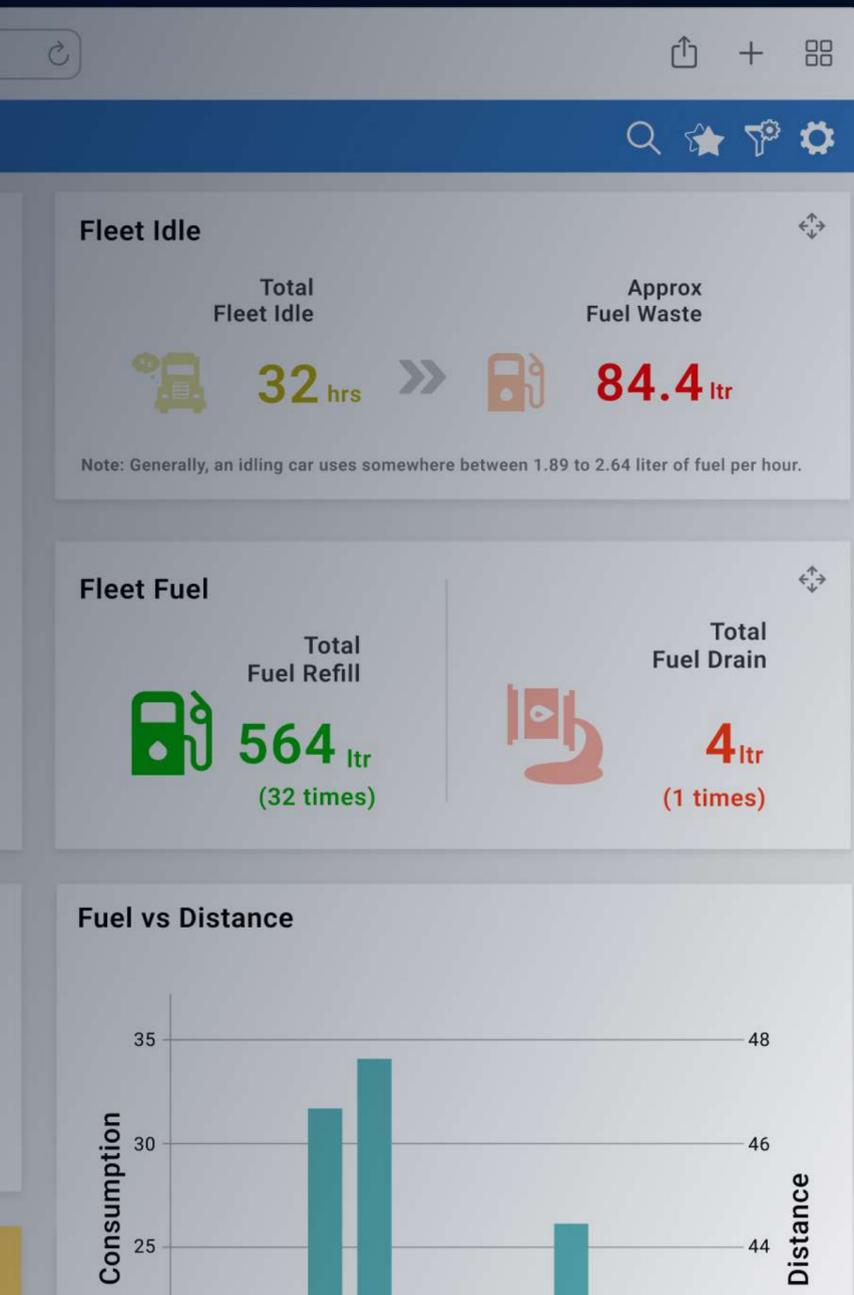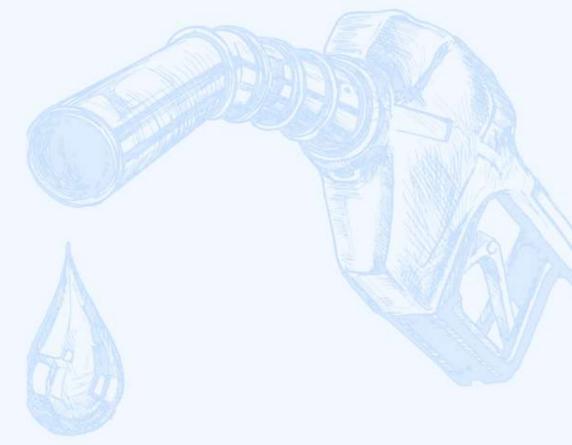Monitor total idle hours and estimate fuel wasted during idle periods directly from the widget.

Alerts for fuel drops

Receive notifications for unusual drops in fuel levels. Take this opportunity to detect fuel theft.

BENEFITS OF INFORMATIVE DASHBOARD

Fleet Idle

Total Fleet Idle	Approx Fuel Waste
32 hrs	**84.4** ltr

Note: Generally, an idling car uses somewhere between 1.89 to 2.64 liter of fuel per hour.

Fleet Fuel

Total Fuel Refill	Total Fuel Drain
564 ltr (32 times)	**4** ltr (1 times)

Fuel vs Distance

1 — Better fuel management

Monitor refills, drains, and consumption to plan fuel usage effectively.

2 — Reduced fuel waste

Identify idle hours and track wasted fuel to optimize efficiency.

3 — Accurate fuel usage insights

Understand how much fuel is consumed over time for better cost control.

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REAL-TIME FUEL MONITORING

Imagine having a real-time view of every vehicle's fuel level right on the live tracking screen. Fuel widgets make this possible! It allows fleet managers to monitor fuel levels alongside essential details like location and speed-all in one place. It gives instant access to the information that matters most.

KEY INSIGHTS

Fuel level display

Instantly view current fuel levels in each tank. This will help to keep track of fuel availability and plan fuel refills effectively.

Tank capacity check

Know the total capacity of each fuel tank and the remaining fuel level, enabling efficient fuel management.

Refill and drain tracking

Get notifications and logs for each refill and drain event. This enables to track all fuel activity and detect anomalies.

Fuel consumption

Track fuel consumption over time with precise consumption figures. It helps to improve fuel management.

Carbon emission tracking

Calculate carbon emissions based on fuel usage. Use real-time data on emissions to keep a track of impact.

Monitor multiple sensor

Track fuel levels for multiple sensors in a single tank in a vehicle separately. This makes it easier to manage.

BENEFITS OF FUEL WIDGETS ON LIVE TRACKING
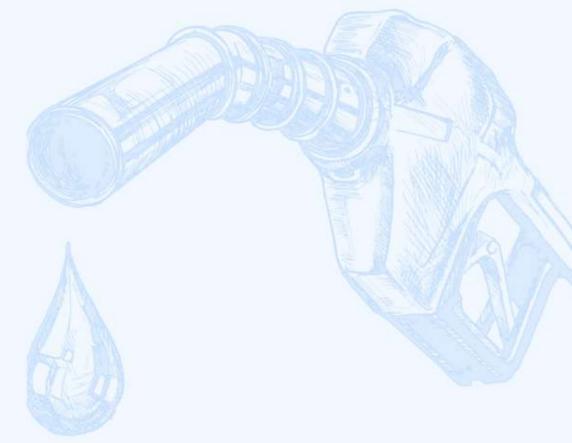
1 Immediate issue detection

Sudden changes in fuel are visible instantly, so potential issues can be addressed without delay.

2 Enhanced decision-making

Having all key data in one view makes it easier to make quick, informed decisions that keep operations running smoothly.

3 All-in-one monitoring

Fleet monitoring is more streamlined and efficient with fuel levels, locations, and speeds displayed altogether.

CRITICAL ALERT NOTIFICATIONS

Receive instant alerts on fuel refills, drain, and excessive idling. Our system ensures transparency and helps you take quick action, enhancing fuel efficiency and safeguarding your resources.
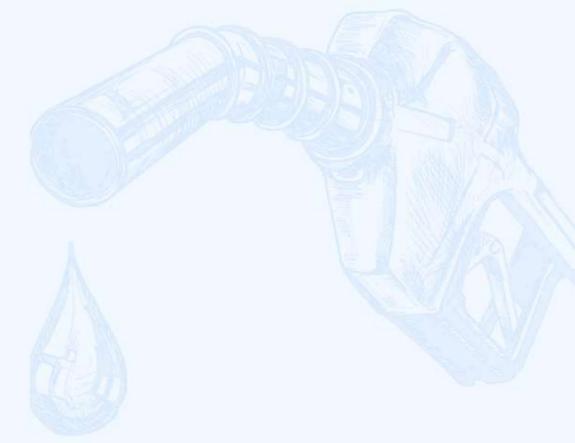
→ ## Fuel drain detection

Fuel theft is a common issue in fleet management. The system provides real-time alerts on sudden fuel drains. This allows to detect and address unauthorized fuel usage immediately.

→ ## Idling alerts

Excessive idling and AC misuse can significantly impact fuel economy. Receive alerts when vehicles idle for extended periods. This will help to reduce fuel wastage and save on fuel costs.

→ ## Fuel refill notifications

Get notified whenever a vehicle's fuel tank is refilled. Track refill events accurately with uploaded billing receipts. This will ensure there's no variation and preventing fuel fraud.

Idling Alert
Vehicle **GJ21HS1609** has been idling for **36 mins** at Abrama Valsad. Please take action

Fuel Refill Notifications
Vehicle **GJ15VS1407** has been refueled with **100 ltrs** at Tithal Rd, Valsad.

trakzee   Just now
Fuel Drain 5 ltr
Vehicle Hyundai CC-450 detected fuel theft at 04:55 PM near Belgrave Town

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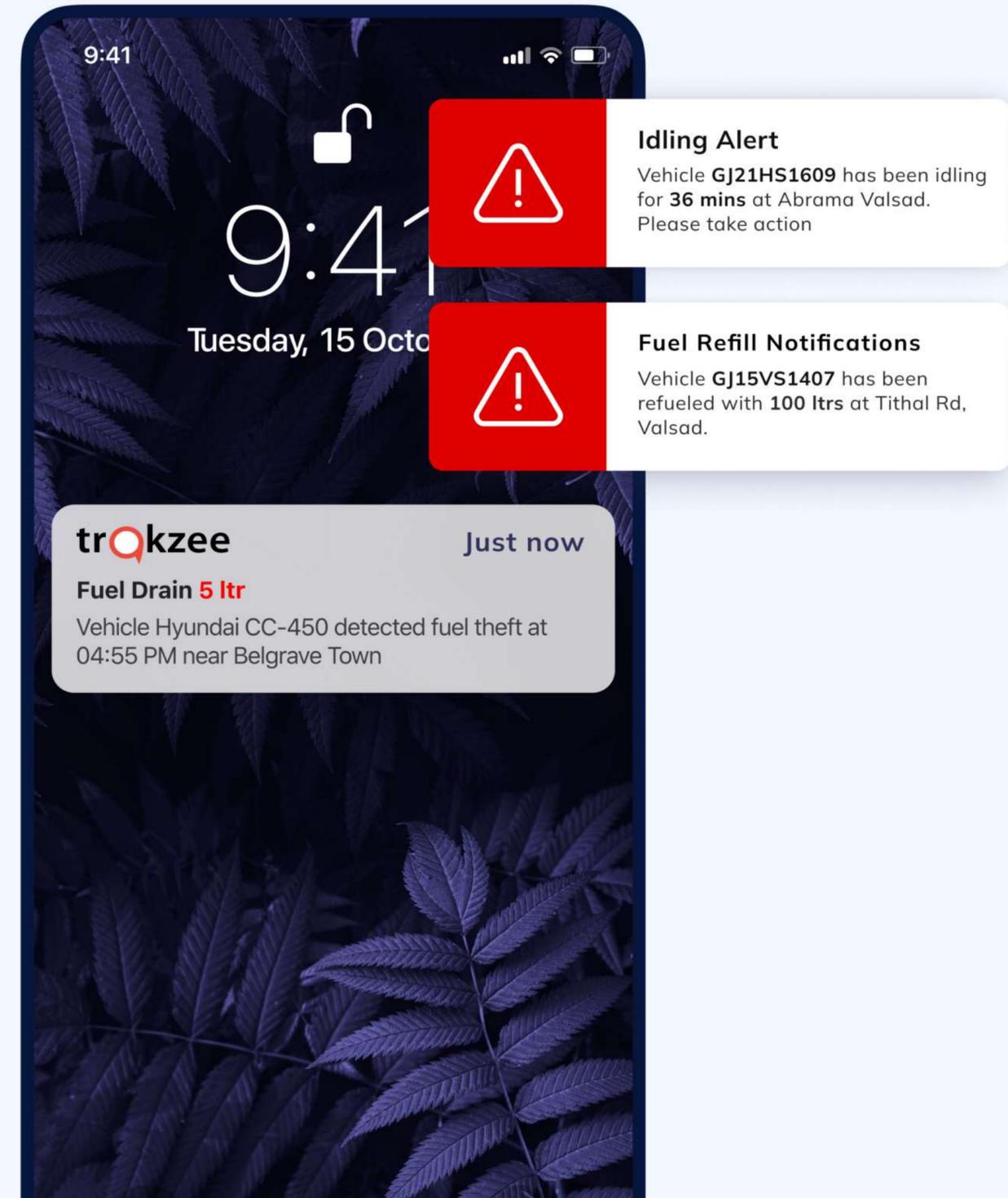
DETAILED REPORTS

Reports are the backbone of effective fuel monitoring. They provide detailed insights into fuel usage, helping fleet managers make data-driven decisions. With Uffizio's fuel monitoring system, generating accurate, easy-to-read reports is seamless.

DEDICATED FUEL DASHBOARD

Designed to provide the fleet manager with precise, live fuel data. This will help the fleet manager to monitor fuel levels, consumption, and spot potential issues at a glance.
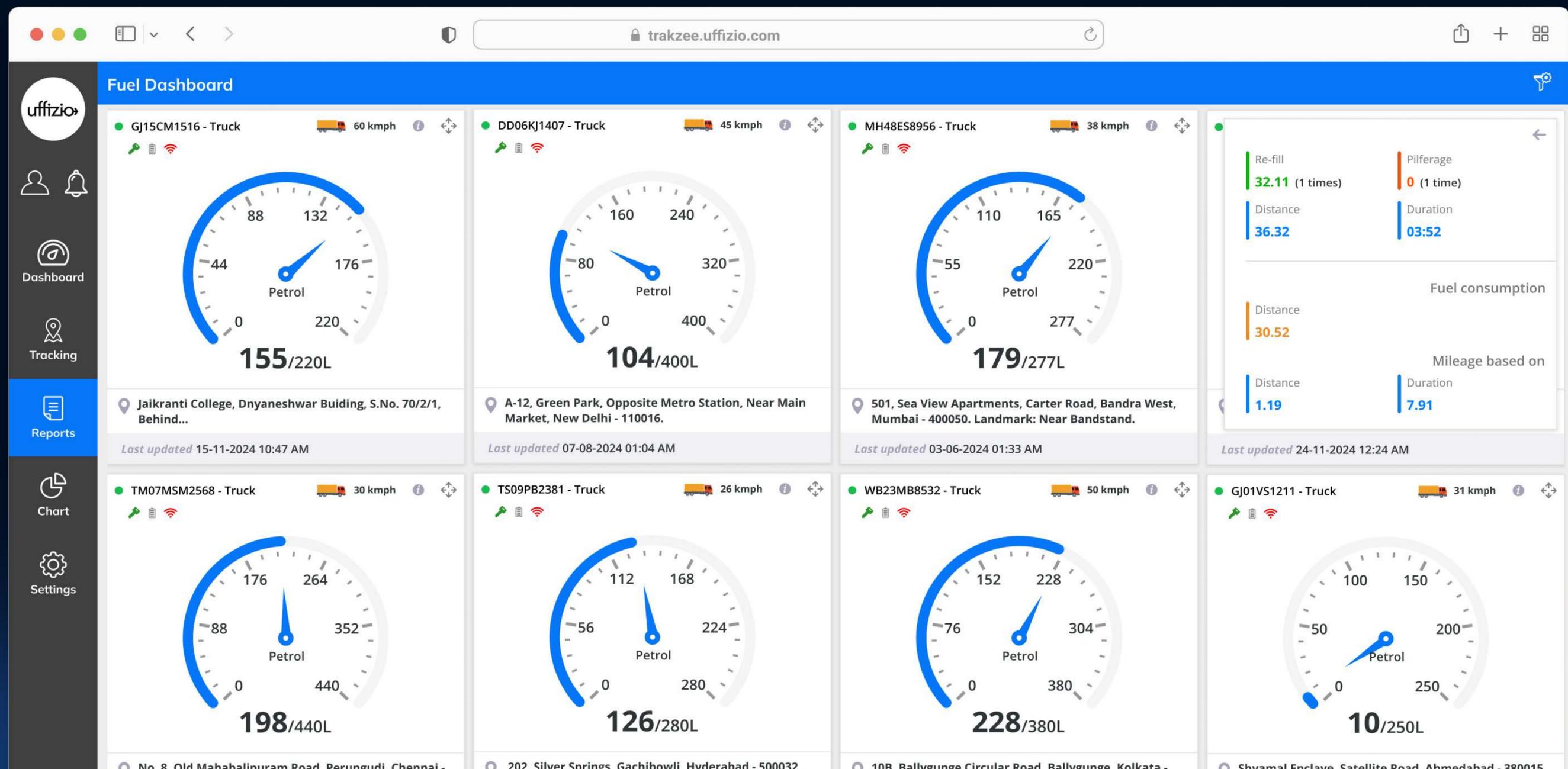
KEY INSIGHTS
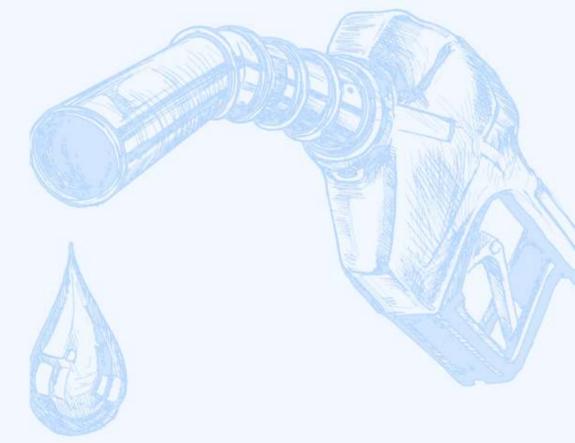
1 Fuel level tracking

Monitor fuel levels across your fleet in real time. This feature allows identification of fuel levels at a glance. This ensures that vehicles are adequately fueled for their routes.

2 Refill and drain events

See live data of all refills and fuel drain events. This helps to track fuel usage patterns and detect irregularities. This data supports better fuel planning and highlights any abnormal fuel activities.

3 Fuel consumption

View fuel consumption over time. This helps in assessing the efficiency of vehicles, drivers, and routes, aiding in cost control and optimization.

4 Fuel mileage insights

Access mileage data based on fuel consumption and distance covered. This enables evaluation of fuel efficiency across different vehicles, which is essential for optimizing routes and reducing costs.

BENEFIT

Offers a real-time, centralized view of all fuel-related data. It allows managers to quickly identify issues and respond. This will further keep fleet operations smooth and efficient.

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FILL-DRAIN REPORT

The Fill-drain report gives a detailed view of every fuel refill and drain event across the fleet.

Fill-Drain [29-11-2024 12:00 AM - 01-12-2024 11:59 PM]

Company	Object	Running	Idle	Stop	Inactive	Distance	Max Stoppages	Fuel Consumed Idling	Fuel Consumed Total	Avg. Consumption / 100	Mileage	Fill	Drain	Start Fuel Level	Last Fuel Level	Fill-Drain Chart
Swargate Division	GJ15AD2467	03:19	02:29	569:49	157:11	57.61	24:00	0.00	5.13	8.90	11.23	26.41(1)	0.00(0)	0.00	21.28	
Bhandara	MH48CC8745	05:55	95:14	447:11	55:23	15.29	13:43	0.00	108.43	709.16	0.14	108.68(1)	0.00(0)	0.00	0.25	00:00
Swargate Division	MH01CF1772	12:47	00:58	513:09	23:59	487.69	24:00	0.00	36.54	7.49	13.35	68.78(3)	0.00(0)	5.44	37.68	00:00
Swargate Division	RJ01DD2525	10:58	02:25	484:16	23:59	263.38	24:00	0.00	17.31	6.57	15.22	31.64(2)	0.00(0)	5.38	19.71	
Swargate Division	GJ01AD2467	55:24	04:15	660:20	00:00	2157.26	24:00	0.00	130.26	6.04	16.56	121.22(7)	0.00(0)	34.11	25.07	
Swargate Division	GJ21CF9632	02:05	30:58	644:07	34:49	6.66	24:00	0.00	323.16	4852.55	0.02	314.57(2)	0.00(0)	27.33	18.72	
Swargate Division	GJ06AE6089	72:05	17:20	630:34	00:00	1753.96	08:21	0.05	616.75	35.16	2.84	781.83(13)	142.01(3)	64.06	87.13	
Swargate Division	GJ21HS1609	05:55	95:14	447:11	55:23	15.29	13:43	0.00	108.43	709.16	0.14	108.68(1)	0.00(0)	0.00	0.25	
Swargate Division	MH11CH0105	27:11	12:22	680:14	00:00	661.08	24:00	0.00	310.96	47.04	2.13	30620(6)	0.00(0)	31.29	26.53	

Driver	Port Name	Start Event DateTime	End Event DateTime	Location	Odometer	Before Event Fuel Level	After Event Fuel Level	Diff	Event Type	Distance Covered	Mileage
Ravi Prajapati	BLE Fuel Level 1	29-10-2024 06:33:35 AM	29-11-2024 06:37:50 PM	Abrama, Valsad,Gujarat	15918.49	30.51	89.45	59.07	Fill	0.41	0.53
Shivam Yadav	LLS Fuel 1	30-10-2024 10:29:17 AM	30-11-2024 10:34:25 AM	Subway, Surat,Gujarat	16015.14	45.46	101.74	56.28	Fill	97.65	2.22
Ramesh Tiwari	BLE Fuel Level 1	31-11-2024 01:18:37 AM	31-11-2024 01:30:09 AM	Jio World,Mumbai	16212.42	28.48	67.78	39.30	Fill	196.28	2.68
Rahul Shukla	BLE Fuel Level 1	31-11-2024 07:43:35 AM	31-11-2024 07:45:53 AM	Hotel Shivneri , Goa	16263.36	30.29	76.52	46.23	Fill	50.94	1.37
Ahmed Khan	BLE Fuel Level 1	01-12-2024 11:34:26 AM	01-12-2024 11:39:25 AM	NH665, Maharashtra	16378.05	28.46	76.66	48.20	Fill	114.69	2.39

KEY INSIGHTS
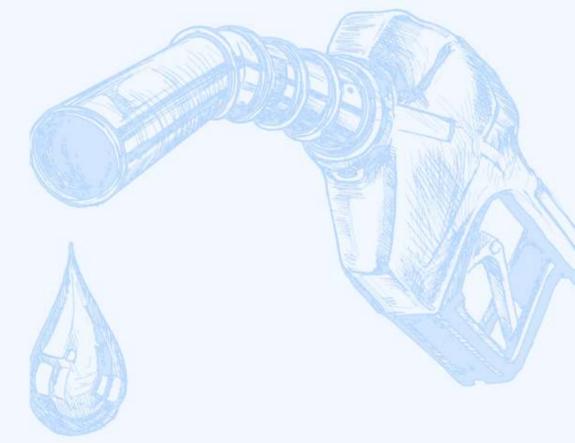
1 Detailed fuel activity

The report logs each instance of fuel being added (fill) or removed (drain). This helps in spotting activity, such as unexpected fuel drops which might indicate theft. It also shows fuel level values before and after the event.

2 Distance and mileage tracking

By pairing fuel data with distance covered, the report calculates mileage. It shows how efficiently each vehicle uses fuel. This is valuable for understanding which vehicles consume more fuel. It allows to optimise route and saves cost.

3 Idle and active status

The report breaks down time spent in different states, such as running, idle, and stopped. Tracking these time periods gives insights into fuel use during idle state of vehicle. It helps in identifying ways to cut unnecessary fuel consumption and reduce idling time.

4 Fuel cost analysis

The report includes the total fuel cost based on the fuel added. This helps to track fuel expenses over time. This feature enables more accurate budget planning and cost control for the fleet.

BENEFIT

Enables detailed tracking of every fuel fill and drain event to detect theft. It also tracks unauthorized refills and leaks, thereby enhancing security and accountability across the fleet.

FUEL ECONOMY REPORT

This report provides a detailed analysis of fuel consumption and mileage variations over a selected time period, helping to identify driving patterns and operational inefficiencies.

Fuel Economy [06-11-2024 12:00 AM - 10-11-2024 11:59 PM]

	Company	Object	Object Brand	Distance	Work Hour	Start Fuel Level	Average Speed	Max Speed	Fill	No of Fill	Drain	No of Drain	End Fuel Level	Consumption	Avg Consumption /100	Total Load (t)	Mileage Based on Distance	Mileage Based on Duration
+	Bhandara	MH31FA9531	JCB	1.25	00:23	97.06	9	13	17.17	1	0.00	0	114.67	0.000	0.000	0.000	0.000	0.000
+	Gourav Engineers	MH42T0793	Ashok Leyland	1753.96	89:25	64.06	24	77	781.83	13	142.01	6	87.13	668.26	38.10	0.000	2.62	7.47
+	Gourav Engineers	MH42TQ0597	Ashok Leyland	1598.24	68:28	50.13	27	64	518.82	16	118.15	6	61.28	391.08	24.47	0.000	4.09	5.71
+	Gourav Engineers	MH42MJ5430	Tata	1016.41	47:08	15.13	26	67	319.94	13	78.65	8	54.03	202.39	19.91	0.000	5.02	4.29
+	Gourav Engineers	MH42AQ5196	Tata	308.42	18:11	25.08	25	82	31.02	2	0.00	0	39.07	32.57	10.56	0.000	9.47	1.79
+	Swargate Division	MH12RR0898	Mahindra	152.31	66:14	61.32	10	31	299.68	3	0.00	0	38.21	322.80	211.94	0.000	0.47	4.87
+	Bhandara	Tata Hitachi Ex70 18478	Caterpillar	16.48	114:34	28.44	2	36	248.35	10	0.00	0	41.49	235.56	1429.37	0.000	0.07	2.06

GLASS AUTO EXPRESS - GLASS AUTO EXPRESS - 12782-B-7

Date	Start Location	Start Fuel Value	Fill	Drain	End Fuel Value	End Location	Distance	Work Hour	Consumption	Mileage Based on Distance	Distance Mileage Variation	Mileage Based on Duration	Duration Mileage Variation	Playback
06-11-2024	Pragati Mahila Kala	28.76	91.93	0.00	100.52	Gondia Rd, Madag	0.46	00:34	20.17	0.02	0.00	35.32	0.00	▷
07-11-2024	Gondia Rd, Madag	100.52	0.00	0.00	67.85	Gondia Rd, Madag	0.65	05:54	32.67	0.02	0.00	5.53	0.00	▷
08-11-2024	Gondia Rd, Madag	67.85	0.00	0.00	57.62	Gondia Rd, Madag	0.55	06:52	10.23	0.06	0.04	1.49	0.39	▷
09-11-2024	Gondia Rd, Madag	57.62	0.00	0.00	24.53	Gondia Rd, Madag	1.01	07:20	33.09	0.03	0.00	4.51	3.02	▷
10-11-2024	Gondia Rd, Madag	24.53	21.63	0.00	31.22	Gondia Rd, Madag	1.09	08:20	14.94	0.07	0.04	1.79	0.20	▷

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KEY INSIGHTS
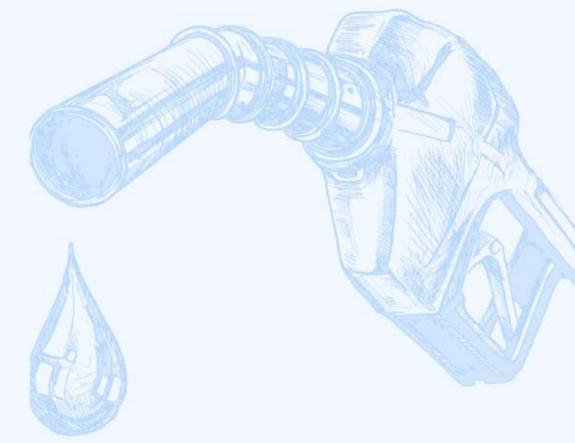
1 **Mileage comparisons**

Compare mileage based on distance and duration to detect deviations and inefficiencies.

2 **Driving pattern analysis**

Understand driver behavior by analyzing mileage variations across a week. Patterns such as harsh braking, overspeeding, or idling are highlighted.

3 **Fuel consumption tracking**

Track the amount of fuel refilled, consumed, and drained, providing clarity on usage trends.

4 **Work hour impact**

Correlate work hours with mileage and fuel consumption to identify areas for optimization.

BENEFIT

Helps identifying the most fuel-efficient vehicles and promotes better driving habits. Tracking fuel use under various conditions will ultimately save fuel costs.

FUEL CONSUMPTION REPORT

This report provides approximate fuel consumption, and costs based on vehicle mileage averages, especially useful for systems without fuel sensors.

Fuel Consumption [02-12-2024 12:00 AM - 03-12-2024 11:59 PM]

Object	Distance	Working Duration	Fuel Waste (Due to Idling)			Idle	Fuel Consumption					Duration based Fuel Consmption	Cost	Carbon Emission [Kg]	Pre-defined	Unit	Total		
			Consumption	Cost	Carbon Emission [Kg]		Distance based Fuel Consumption	Cost	Carbon Emission [Kg]	Pre-defined	Unit						Consu-mption	Cost	Carbon Emission [Kg]
MH13CU4948	5.48	18:56	19.07	152.6	154.58	10:06	10.96	876.8	154.58	1.0 / 2.0	Ltr/Km	8.22	657.6	154.58	1.0 / 1.5	Ltr/MM	19.07	1525.6	154.58
MH13CU4947	76.0	56:20	132.22	10577.6	147.58	69.57	152	12160	147.58	1.0 / 2.0	Ltr/Km	114	9120	147.58	1.0 / 1.5	Ltr/MM	132.22	10577.6	147.58
MH11CH3192	0.537	10:15	59.87	4789.6	148.58	31:41	1.06	84.8	148.58	1.0 / 2.0	Ltr/Km	0.795	63.6	148.58	1.0 / 1.5	Ltr/MM	59.87	4789.6	148.58
MH11CH3194	382.753	53:27	41.5	3320	149.58	21:58	765.46	61236.8	149.58	1.0 / 2.0	Ltr/Km	574.095	45927.6	149.58	1.0 / 1.5	Ltr/MM	41.5	3320	149.58
MH12RR0247	373.1	42:19	45.04	3603.2	150.58	23:50	746.2	59696	150.58	1.0 / 2.0	Ltr/Km	559.65	44772	150.58	1.0 / 1.5	Ltr/MM	45.04	3603.2	150.58
MH13CS9454	375.35	42:08	49.1	3928	151.58	25:59	750.7	60056	151.58	1.0 / 2.0	Ltr/Km	563.025	45042	151.58	1.0 / 1.5	Ltr/MM	49.1	3928	151.58
Excavator 052302	166.01	34:37	35.48	2838.4	152.58	18:46	332.02	26561.6	152.58	1.0 / 2.0	Ltr/Km	249.015	19921.2	152.58	1.0 / 1.5	Ltr/MM	35.48	2838.4	152.58
Excavator 052301	33.3	28:18	25.5	2040	153.58	13:29	66.6	5328	153.58	1.0 / 2.0	Ltr/Km	49.95	3996	153.58	1.0 / 1.5	Ltr/MM	25.5	2040	153.58
MH13CU4946	33.3	23:18	35.48	28838.4	95.08	28:56	66.6	5328	95.08	1.0 / 2.0	Ltr/Km	49.95	3996	95.08	1.0 / 1.5	Ltr/MM	35.48	2838.4	146.58

Date	Day	Distance	Working Duration	Fuel Waste (Due to Idling)			Idle	Fuel Consumption					Duration based Fuel Consumption	Cost	Carbon Emission	Pre-defined	Unit	Fuel Consumption		
				Consumption	Cost	Carbon Emission [kg]		Distance based Fuel Consumption	Cost	Carbon Emission[kg]	Pre-defined	Unit						Consumption	Cost	Carbon Emission [kg]
02-12-2024	Monday	1.08	03:07	5.43	434.4	14.55	02:52	10.86	868.8	14.55	1.0 / 2.0	Ltr/Km	8.145	651.6	14.55	1.0 / 1.5	Ltr/MM	5.43	434.4	14.55
03-12-2024	Tuesday	1.34	04:00	6.89	551.2	18.46	03:39	13.78	1102.4	18.46	1.0 / 2.0	Ltr/Km	10.335	826.8	18.46	1.0 / 1.5	Ltr/MM	6.89	551.2	18.46
03-12-2024	Wednesday	0.97	01:08	1.69	135.2	4.52	00:54	3.38	270.4	4.52	1.0 / 2.0	Ltr/Km	10.335	202.8	4.52	1.0 / 1.5	Ltr/MM	1.69	135.2	4.52

KEY INSIGHTS

1

Estimated fuel consumption

Approximate fuel usage is calculated based on the average mileage of the vehicle. It helps the managers to track usage even without sensors.

2

Fuel waste due to idling

Displays the time vehicles were idling and the corresponding fuel wasted during those periods. It helps to identify inefficiencies.

3

Carbon emission estimates

Calculates approximate carbon emissions linked to fuel usage, assisting fleets in aligning with sustainability goals.

BENEFIT

Provides a reliable estimate of fuel usage and costs, enabling fleet management even without sensors while promoting better financial control and operational efficiency.

FUEL ABNORMAL CONSUMPTION REPORT

This report highlights irregularities in fuel consumption by comparing predefined mileage with actual mileage, helping identify instances of abnormal fuel usage. It is designed to uncover potential fuel thefts and inefficiencies.

Fuel Abnormal Consumption [01-11-2024 12:00 AM - 03-11-2024 11:59 PM]

Vehicle	Vehicle Brand	Vehicle Model	Distance	Work Duration	Fuel Consumption	Predefined Mileage		Actual Mileage		No of Variation	Variation %	
						Distance	Duration	Distance	Duration		Distance	Duration
MH13CU4948	BEML	BE75	27.55	11:36	25	1.75	0.95	1.22	0.75	1	30.50%	83.10%
MH12RN3600	Eicher	Tera 25	76	56:20	132.22	1.8	1	1.2	0.75	2	37.04%	75.00%
MH12TV4545	Eicher	Tera 25	0.53	70:15	59.87	2	1.25	1	1	1	30.50%	64.00%
MH12TV9090	Eicher	Tera 25	382.73	53:27	41.5	1.5	1	1.5	1	3	66.67%	100.00%
MH12MU9999	Eicher	Tera 25	373.1	42:19	45.04	1.7	1.1	1.5	1	2	51.90%	82.64%
MH48VF3456	Ashok Leyland	1616XL	375.35	42:08	49.1	2	1.5	1.7	1	5	42.50%	44.44%
Excavator 052302	Mahindra	Earth Master SX	166.01	34:37	35.48	1.8	1	1.2	0.75	2	37.04%	75.00%
Excavator 052301	Tata Hitachi	ZX 120	33.3	23:18	25.5	2	1.25	1.22	1	3	30.50%	64.00%
MH13CU4947	Tata Hitachi	ZX 120	5.48	18:56	19.07	1.5	1	1.2	0.5	2	53.33%	50.00%
MH12RN1900	Mahindra	Earth Master SX	33.3	23:18	35.48	2	1.5	1.22	1	3	30.50%	44.44%

Earth Master SX from 01-11-2024 12:00 AM To 03-11-2024 11:59 PM

	Start			End			Driver	Distance	Work Duration	Running	Idle	Stop	Fuel Consumption	Mileage Based on		Variation % Based on		Playback	Chart
Start Time	Start Location	Start Coordinate	End Time	End location	End Coordinate									Distance	Duration	Distance	Duration		
01-11-2024 07:02 AM	Banglore_malur	(14.3458166, 78.2059249)	01-11-2024 08:10 AM	Banglore_malur	(14.36932, 78.14975)	Ravi jadeja	11.91	08:33	04:25	00:05	04:03	12.6896369		1.22	1	30.50%	44.44%	
02-11-2024 03:33 PM	Dalmia Cement	(16.20735,75, 75.2136622)	02-11-2024 04:13 PM	Dalmia Cement	(16.20735,75, 75.2136622)	Harsh	12	08:39	05:00	00:04	03.35	12.7585585		1.22	1	30.50%	44.44%	

KEY INSIGHTS
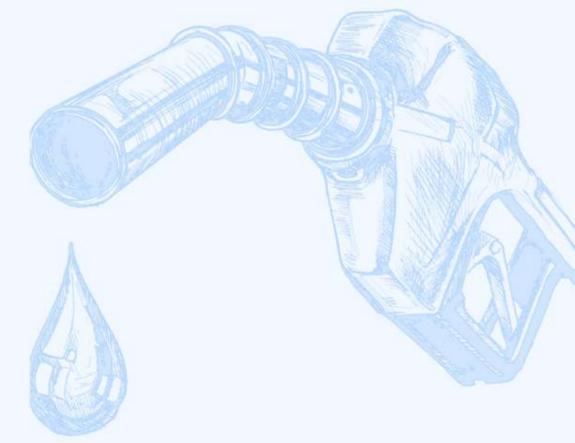
1 Mileage variance analysis

Identifies deviations between predefined and actual mileage. This helps in highlighting potential fuel misuse or inefficiencies.

2 Fuel theft detection

Pinpoints unusual consumption patterns, such as fuel being extracted through reverse pipes or other tampering methods.

3 Operational irregularities

Flags sudden drops or increases in fuel levels that may indicate unauthorized usage or system anomalies.

BENEFIT

Helps fleet managers detect fuel theft. This ensures efficient and accountable fuel usage across operations.

FUEL TRIP COST REPORT

This report gives a clear breakdown of how much fuel each trip costs, helping fleet managers see where money is being spent.

	Vehicle	Vehicle Brand	Vehicle Model	Driver	IMEI No	Distance	Running	Idle	Stop	First Ignition On — First Ignition OnTime	First Ignition On Location	Last Ignition Off Time	Last Ignition Off Location	Speed AVG	Speed MAX	Fuel Usage	Fuel Mileage	Fuel Cost	No of Trip	Play Back
+	MH12RR0247	Ashok Leyland	1616 XL	Driver No	8655434269	1145.29	59:54	50:00	400:25	08-11-2024 10:51:00 AM	Dhulked, Karnataka (NE)	30-11-2024 05:44:00 PM	Solapur, Maharashtra (SE)	19	55	90.45	8.47	6331.5	52	▷
+	MH13CS9454	Mahindra	Mahindra	Driver No	35061207512	35.42	07:38	64:21	395:34	07-11-2024 10:34:00 AM	Dhulked, Karnataka (NE)	30-11-2024 04:54:00 PM	Dhulked, Karnataka (NE)	5	15	0.0	0	0.0	59	▷
+	MH13CS9454	Excavator 052302	TATA HITACHI	Driver No	35054450909	6.54	06:44	53:13	04:51	09-11-2024 10:45:00 AM	--	30-11-2024 04:53:00 PM	HP PETROL PUMP - GIRIRJ PETROLEUM	1	13	0.0	0	0.0	19	▷
−	MH11CH3194	Eicher	Tera 25	Driver No	8655434269	790.13	42:31	52:01	485:36	06-11-2024 07:50:00 PM	SH149, Solapur, Maharashtra	30-11-2024 05:52:00 PM	GIRIJ PETROLEUM, Maharashtra	19	55	177.43	4.46	12411.0	85	▷

Start Time	Start Location	Start odometer	End Time	End Location	End Odometer	Driver	Distance	Total Distance	Running	Idle	Stop	AVG	MAX	Over Speed	Alert (s)	Fuel Usage	Fuel Cost	Show Path	Fuel Mileage
06-11-2024 07:50 PM	Wakkad, Shankar Kalat N	3904.96	06-11-2024 07:54 PM	HP PETROL PUMP - GIRIJ	3904.97	Driver not defined	0.01	0.01	00:00	00.03	11:26	3	5	0	6	0.06	4.20		0.17
07-11-2024 07:20 AM	Shree Ganesh Petrol Pump	3904.97	07-11-2024 07:23 AM	HP PETROL PUMP - GIRIJ	3904.98	Driver not defined	0.01	--	00:00	00.03	00:25	0	0	0	3	0.11	7.70		0.09
08-11-2024 07:48 AM	Shree Ganesh Petrol Pump	3904.98	08-11-2024 08:00 AM	HP PETROL PUMP - GIRIJ	3905.02	Driver not defined	0.04	0.05	00:01	00.11	59:45	3	3	0	1	0.05	3.50		0.80
09-11-2024 07:45 AM	GJ SH 166, Gujarat	3905.02	09-11-2024 07:46 AM	HP PETROL PUMP - GIRIJ	3905.09	Driver not defined	0.0	0.0	00:00	00.01	12:14	0	0	0	2	0.10	7.00		0
10-11-2024 01:31 PM	Wakkad, Shankar Kalat N	3905.09	10-11-2024 01:32 PM	HP PETROL PUMP - GIRIJ	3905.11	Driver not defined	0.07	--	00:00	00.00	05:32	0	0	0	1	0.00	0.00		0

KEY INSIGHTS
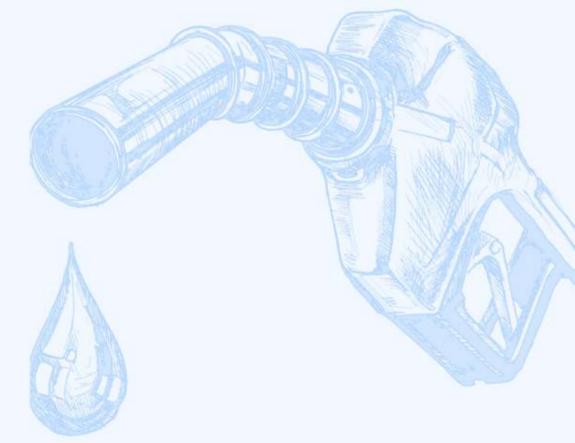
1 **Trip-specific fuel costs**

It calculates the fuel expenses for each trip, making it easy to identify which routes are more expensive.

2 **Distance and fuel data**

Shows the distance traveled, fuel consumed, and the total cost for each trip.

3 **Cost insights by trip**

Helps managers spot trips that use fuel efficiently and those that don't. This allows one to manage better budgeting and planning.

BENEFIT

Breaks down fuel costs for each trip. It helps to identify high-cost routes and enabling budget-conscious decision-making for more cost-effective operations.

CARBON EMISSION REPORT

The carbon emission report helps fleet managers track fuel usage and calculate carbon emissions, supporting efforts to reduce carbon footprints and comply with environmental standards.

Carbon Emission Detail

		Company	Branch	Object	Fuel Type	Driver	Distance	Running	Idle	Fuel Consumption (Liter/Gallon)	Approx Carbon Emission (Kg)	Carbon Emission Trend
+		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	12774-B-7	diesel	No Driver Found	937.80	22:55	01:14	52.60	140.97	
+		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	12782-B-7	diesel	No Driver Found	580.85	15:46	00:29	23.80	63.78	
−		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	14228-B-7	diesel	No Driver Found	255.25	11:33	00:17	20.94	56.12	

Sr.No	Date	Start Location	End Location	Distance	Running	Idling	Consumption	APPROX CARBON EMISSION (KG)
1	03-12-2024	Shree Ganesh Petrol Pump, Pipodara, Gujarat	Simada Naka,Yogi Chowk,Surat Gujarat	29.05	01:11	00:01	2.36	6.32
1	04-12-2024	16, Bombay Annexe, Sec 17, Vashi, Navi Mumbai	32/33, Kanyakumari Shpg Centre, Sir M.v. Road, Andheri(e)	30.62	01:21	00:02	3.06	8.20
1	05-12-2024	Ambrosia Shopping Complex, Opp Vithalwadi Stn, Ulhasnagar, Mumbai	13 A, Arenja Arcade, Sector 17, Next To Apna Bazaar, Vashi, Mumbai	48.16	01:52	00:01	3.52	9.43
1	06-12-2024	7, Shivraj Nagar, Almeida Road, Panchpakhadi,naupada, Thane (west)	23, Ganga Niwas Compound, X Linking Road, Chincholi Bunder, Malad(w)	46.10	02:18	00:02	3.77	10.10

		Company	Branch	Object	Fuel Type	Driver	Distance	Running	Idle	Fuel Consumption	Approx Carbon Emission	
+		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	15754-B-7	diesel	No Driver Found	358.86	12:47	01:07	23.00	61.64	
+		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	20407-B-7	diesel	No Driver Found	164.13	08:15	01:01	4.69	12.57	
+		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	20408-B-7	--	No Driver Found	0.00	12:27	02:47	0.00	0.00	
+		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	33797-B-7	diesel	No Driver Found	2840.09	42:01	01:06	131.93	353.57	
+		GLASS AUTO EXPRESS	GLASS AUTO EXPRESS	35018-B-7	diesel	No Driver Found	798.05	25:34	03:24	39..05	104.65	

KEY INSIGHTS
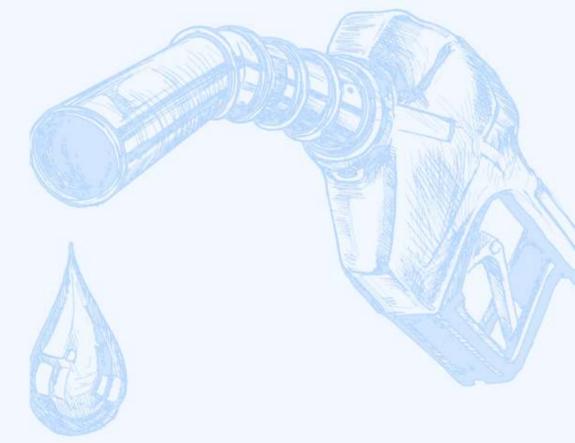
1 Carbon emission tracking

By calculating carbon emissions based on fuel consumed, this report provides a clear view of each vehicle's contribution to total emissions.

2 Trend analysis

The report includes a trend section that shows changes in emissions over time. Monitoring these trends can help fleet managers assess the effectiveness of fuel-saving measures and other eco-friendly practices.

3 Operational insights

The report shows vehicle usage, including idle time, which affects fuel consumption and emissions, with idle time reduction improving efficiency and lowering emissions.

BENEFIT

Tracks carbon emissions based on fuel consumption, aiding fleets in meeting sustainability goals and regulatory requirements, and promoting an eco-friendly fleet image.

INSIGHTFUL CHARTS

Charts provide a visual representation of fuel data. Uffizio's fuel monitoring system includes dynamic charts that simplify complex information. It is easy for fleet managers to understand data trends at a glance. They allow managers to quickly spot problems without sifting through detailed numbers, saving time and effort. Additionally, charts present insights in a clear and visual way, making it easier to share information effectively with stakeholders.

FILL-DRAIN CHART

→ **Purpose**

This chart shows the refills and drains in a vehicle's fuel tank, providing exact refill amounts.

→ **Benefit**

It helps to monitor actual refills and drains, track power during events, and and compare fuel raw data for anomalies.

→ **Usage**

Managers can use this report to monitor refills and drains for better cost control and transparency.

35

FUEL ECONOMY CHART
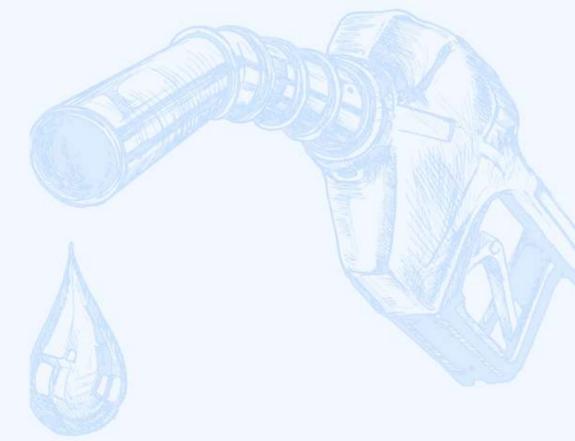
→ **Purpose**

This report highlights a vehicle's mileage, either by distance or hourly, using fuel data from sensors.

→ **Benefit**

It helps detect driving pattern variations or activities causing higher fuel usage, aiding in cost monitoring and strategic planning for trips.

→ **Usage**

This report is essential for fleet managers to track mileage efficiency, identify excessive fuel consumption, and optimize operational costs effectively.

trakzee.uffizio.com

Fuel Economy

uffizio

GJ15MM2654
[04-12-2024 to 10-12-2024]

Distance Mileage   Hourly Mileage   Distance   Consumption   Variation

Sr No	Date	Distance	Distance Mileage (km/tr)
1	04-12-2024	2.20	1.09
2	05-12-2024	20.47	2.09
3	06-12-2024	57.48	1.89
4	07-12-2024	54..63	2.40
5	08-12-2024	16.74	0.00
6	09-12-2024	8.02	2.67
7	10-12-2024	50.16	2.23

Dashboard

Tracking

Reports

Chart

Settings

48 km

1.3 km/ltr

Distance (km)   Distance Mileage (km/ltr)

Date

Distance (km)   Distance Mileage (km/ltr)

KEY REASONS TO INVEST

WHY SYSTEM INTEGRATORS SHOULD INVEST IN OUR FUEL MONITORING SOLUTION
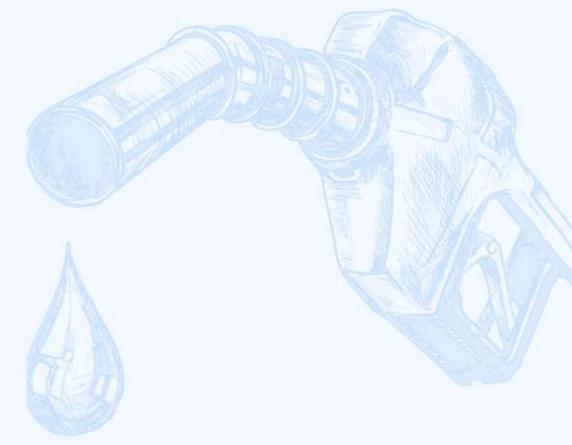
Deliver in-depth fuel analytics to your clients and help them make informed decisions. These insights reinforce your value as an integrator, supporting your clients' strategic goals.

Strong after-sales support and training

Accurate fuel analytics

Customizable development options

Scalable solution

Return on investment for clients
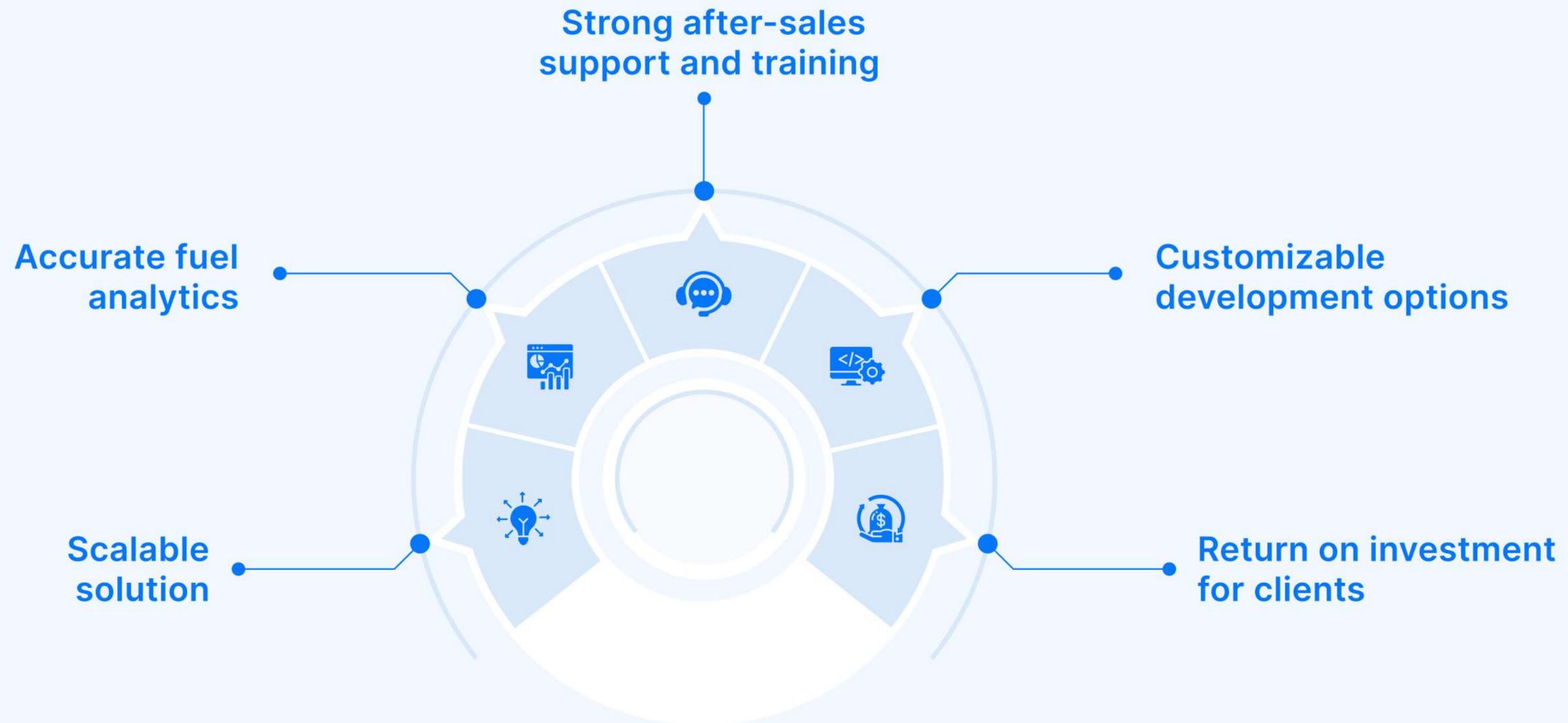
WORKS WITH ANY FUEL SENSOR

Our software works smoothly with all types of fuel sensors, like capacitive sensors, ultrasonic sensors, and fuel flow meters. This means the user can use the sensors that best fit the industry needs, and our software will provide accurate fuel level data.
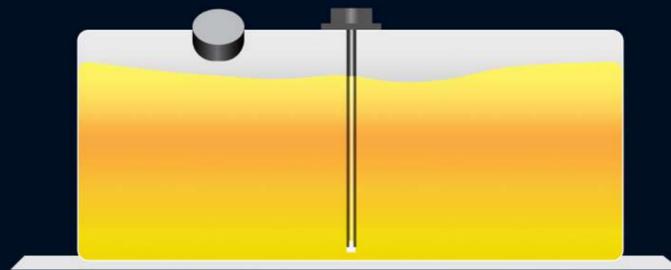
Capacitive sensors

Ultrasonic sensors
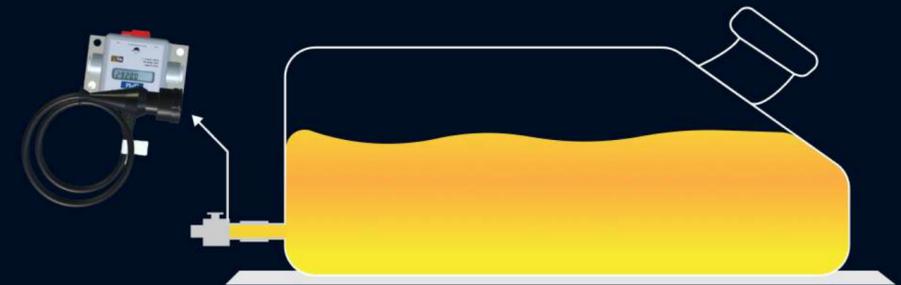
Fuel flow meters

→ With our software, you don't have to worry about compatibility. Whether you're using existing sensors or adding new ones, our system adapts easily. This flexibility lets you choose the right sensor for your equipment and get clear insights into your fuel use.

MANAGE YOUR FLEET WITH OUR MOBILE APP

Get instant access to live fuel data, customizable reports, and actionable alerts. Manage your fleet professionally with ease through our mobile app.
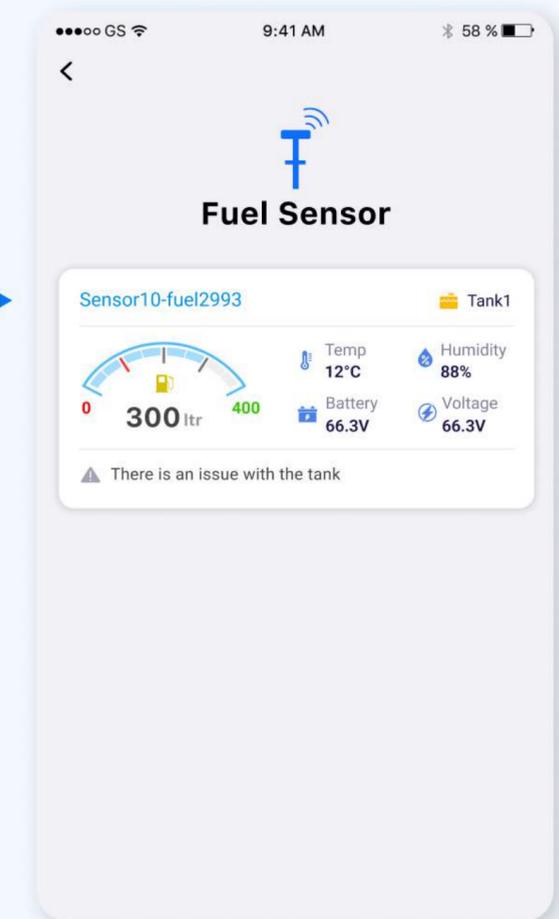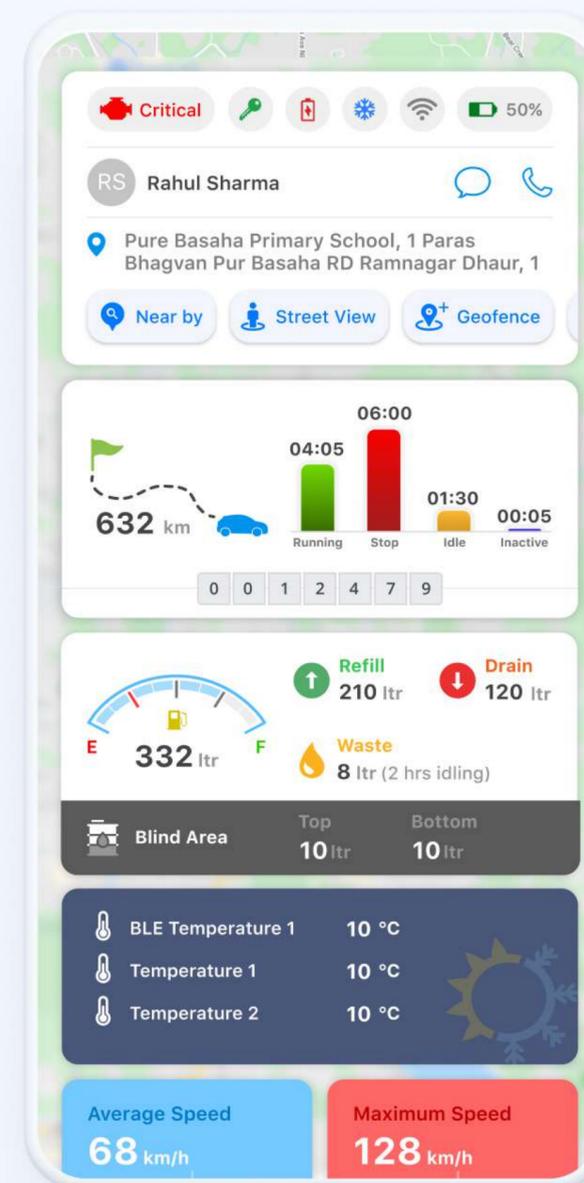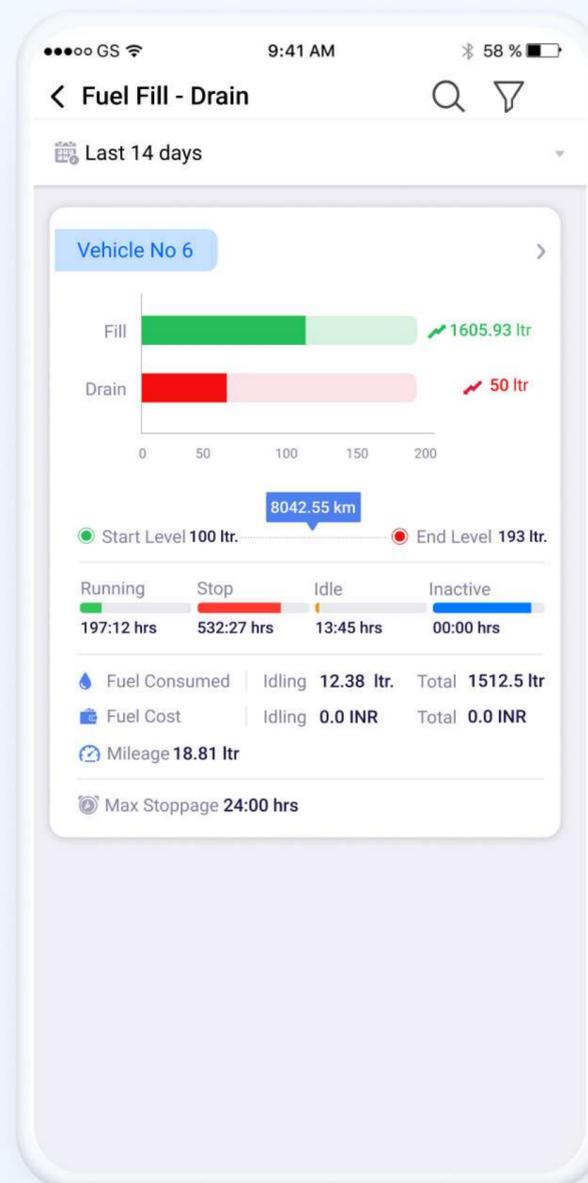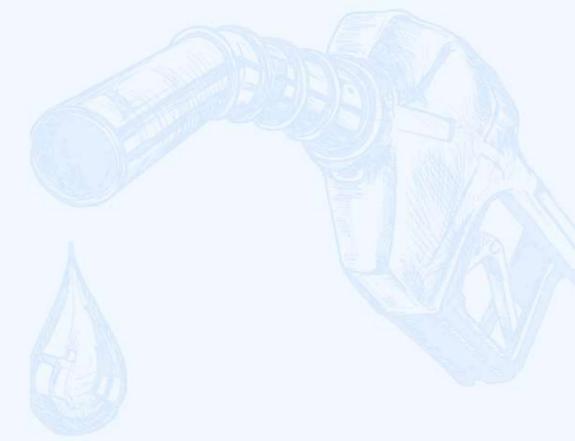
USE CASES ACROSS INDUSTRIES

Logistics & Transport

Construction Vehicles and Machinery

Mining Vehicles and Machinery

Fuel Transport and Security

Power Generator

Marine Fleets

Use Case

LOGISTICS & TRANSPORT

CHALLENGES

→ **Fuel wasted during waiting times**

Fuel is often wasted when vehicles idle for long periods during loading and unloading or in traffic. This fuel use adds costs without actually moving the vehicle.

→ **Unapproved fuel stops**

Drivers may refuel at places that are not approved or are more expensive. It creates difficulties in controlling fuel costs and tracking where fuel is actually used.

→ **Route changes**

Drivers sometimes take unplanned routes, using more fuel than necessary. This makes it hard to manage fuel costs and can increase expenses.

→ **Hidden fuel loss from tampering or theft**

In remote areas or overnight stops, fuel theft or tampering can go unnoticed, causing hidden fuel losses that impact the budget.
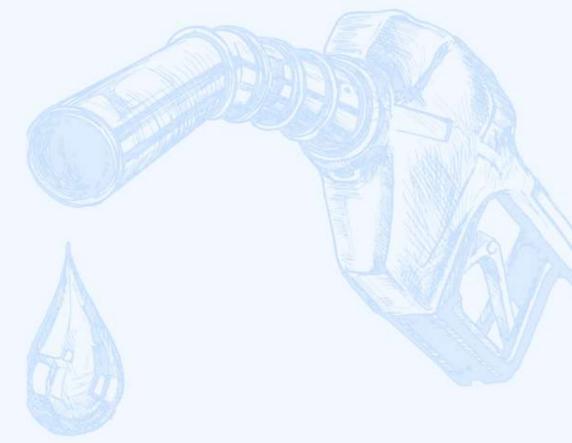
SOLUTIONS

→ **Custom idle alerts**

Set a custom idling time limit in the software, and get alerts when any vehicle idles beyond that limit. This allows managers to take quick action and save fuel.

→ **Refueling control with geofencing and cost analysis**

Set geofences around approved refueling stations to track where and when refueling occurs. It helps in monitoring costs to ensure compliance with refueling policies.

→ **Route optimization with deviation alerts**

Implementing GPS tracking and route optimization features to ensure drivers follow the planned route. Receive alerts on any deviation, reducing unauthorized fuel usage.

→ **Fuel drain detection**

Real-time fuel monitoring detects sudden drops in fuel levels. This alerts managers to potential theft or tampering so they can take immediate action.

MH48AQ6089

Fuel Wastage	26 ltr
Idling	16 ltr
Drain	10 ltr

RESULTS

1
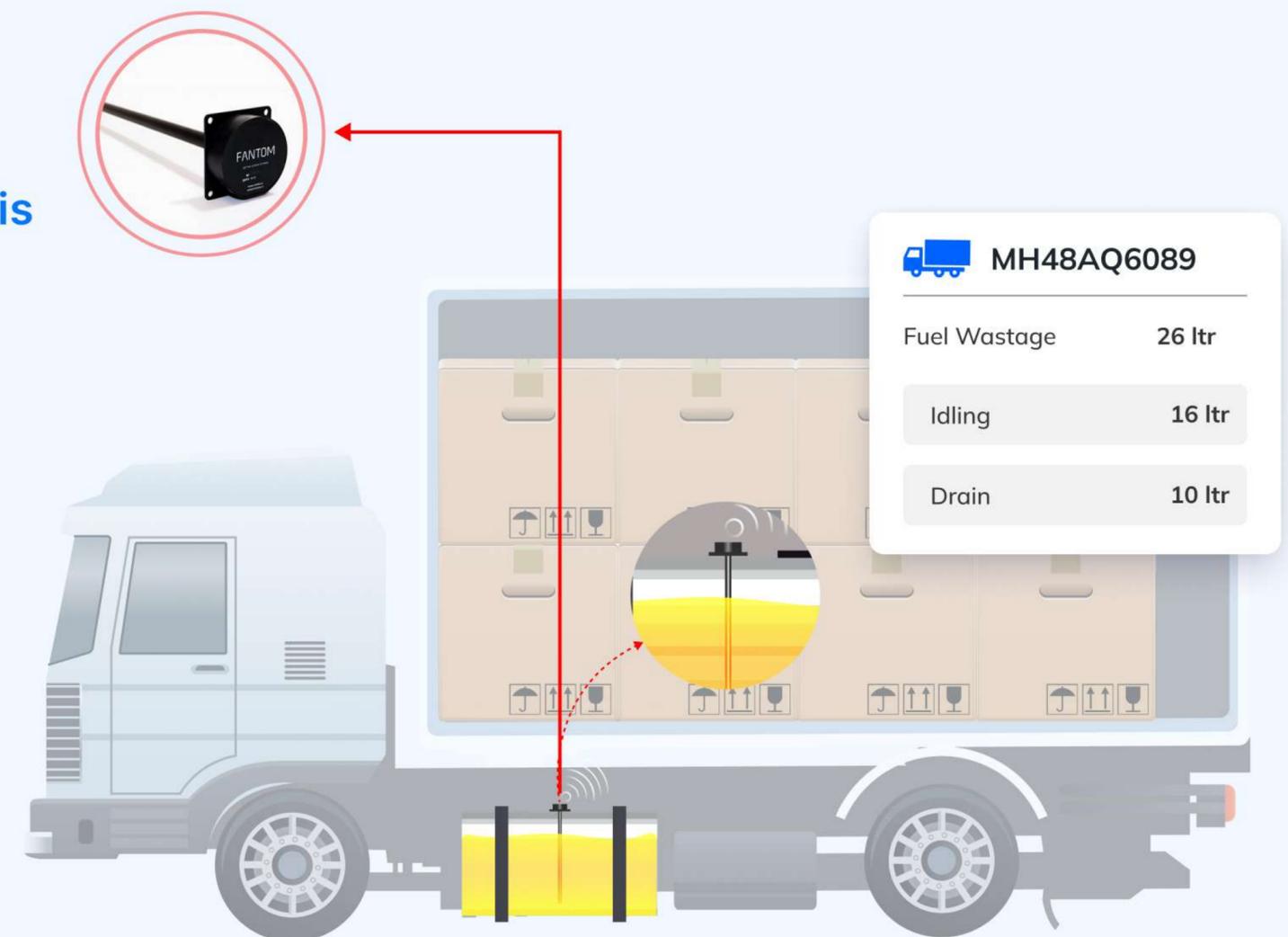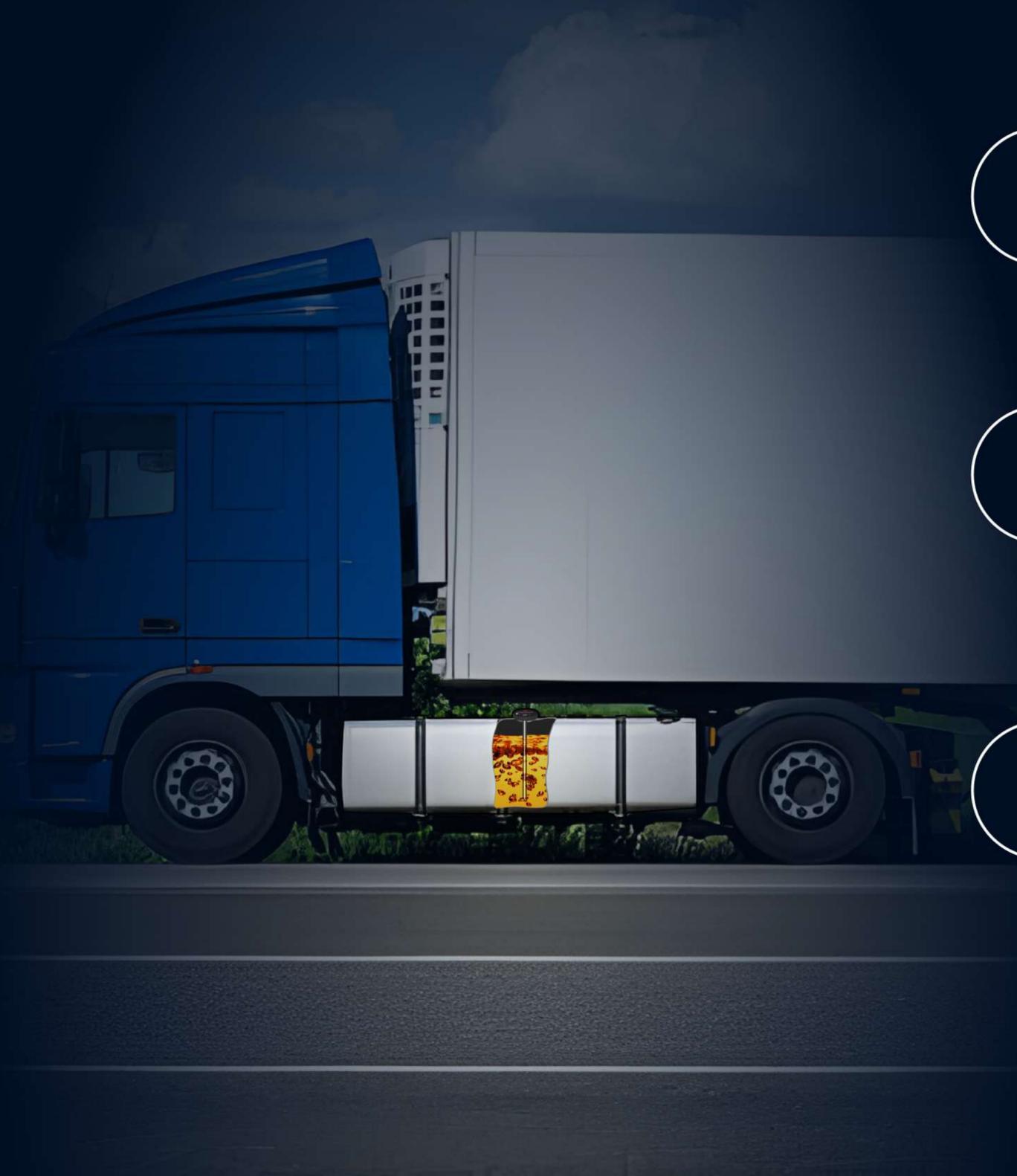
Reduced fuel theft by 40%

Real-time monitoring and instant alerts reduced fuel theft incidents significantly, saving on operational costs.
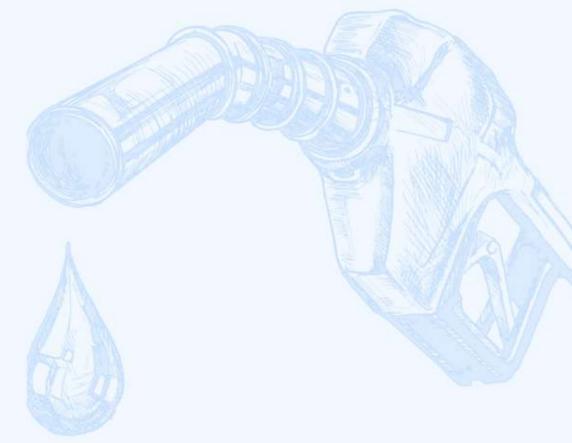
2

Improved fuel delivery accuracy by 30%

With digital records and accurate tracking, delivery records became more reliable, reducing billing errors and discrepancies.
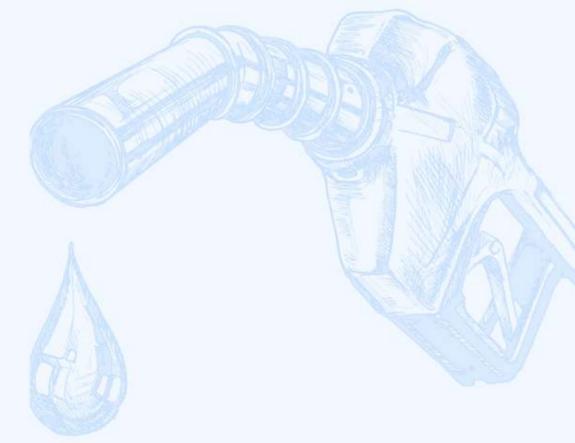
3

More control over operations

Managers now have a clearer view of how fuel is used, which helps with budgeting and planning.

Use Case

CONSTRUCTION VEHICLES AND MACHINERY

CHALLENGES

→ **Excessive idle time of heavy equipment**

Construction machines often sit idle during breaks or between tasks. This results in fuel misuse without any productive work. This idle time adds to fuel costs unnecessarily.

→ **Hard to track fuel use across multiple sites**

With construction sites spread across different locations, managing and monitoring fuel refills becomes difficult. Especially when unauthorized refuels occur, leading to budget overruns.

→ **Fuel theft from equipment left overnight**

Fuel theft is a risk on remote or unsecured sites, especially when equipment is left overnight. Fuel can be stolen without anyone noticing until a large amount has been lost.

→ **Different fuel use for different machines**

Each piece of equipment uses fuel differently. Without a way to track this, it's hard to know which machines are using too much fuel, leading to more fuel waste.

SOLUTIONS

→ **Idle time alerts**

Set up alerts for when equipment idles too long. This helps managers take quick action to reduce unnecessary fuel use.

→ **Fuel tracking across sites**

The software shows fuel use and refills for each site, making it easier to monitor fuel costs across multiple locations and reduce wastage.

→ **Theft alerts for fuel drain events**

Get alerts when fuel levels suddenly drop, helping managers detect fuel theft and reduce losses.

→ **Fuel monitoring through work hour tracking**

Accurately tracks equipment work hours alongside fuel consumption. It helps managers to identify idle times and optimize operating schedules.

→ **Equipment-specific fuel efficiency tracking**

Track fuel consumption for each piece of equipment individually. This makes it easy to identify inefficient machines and enables targeted fuel-saving actions.

Fuel Consumption

Distance	89 ltr
Duration	0 ltr
Waste	02 ltr
Due to 1 hrs idling	
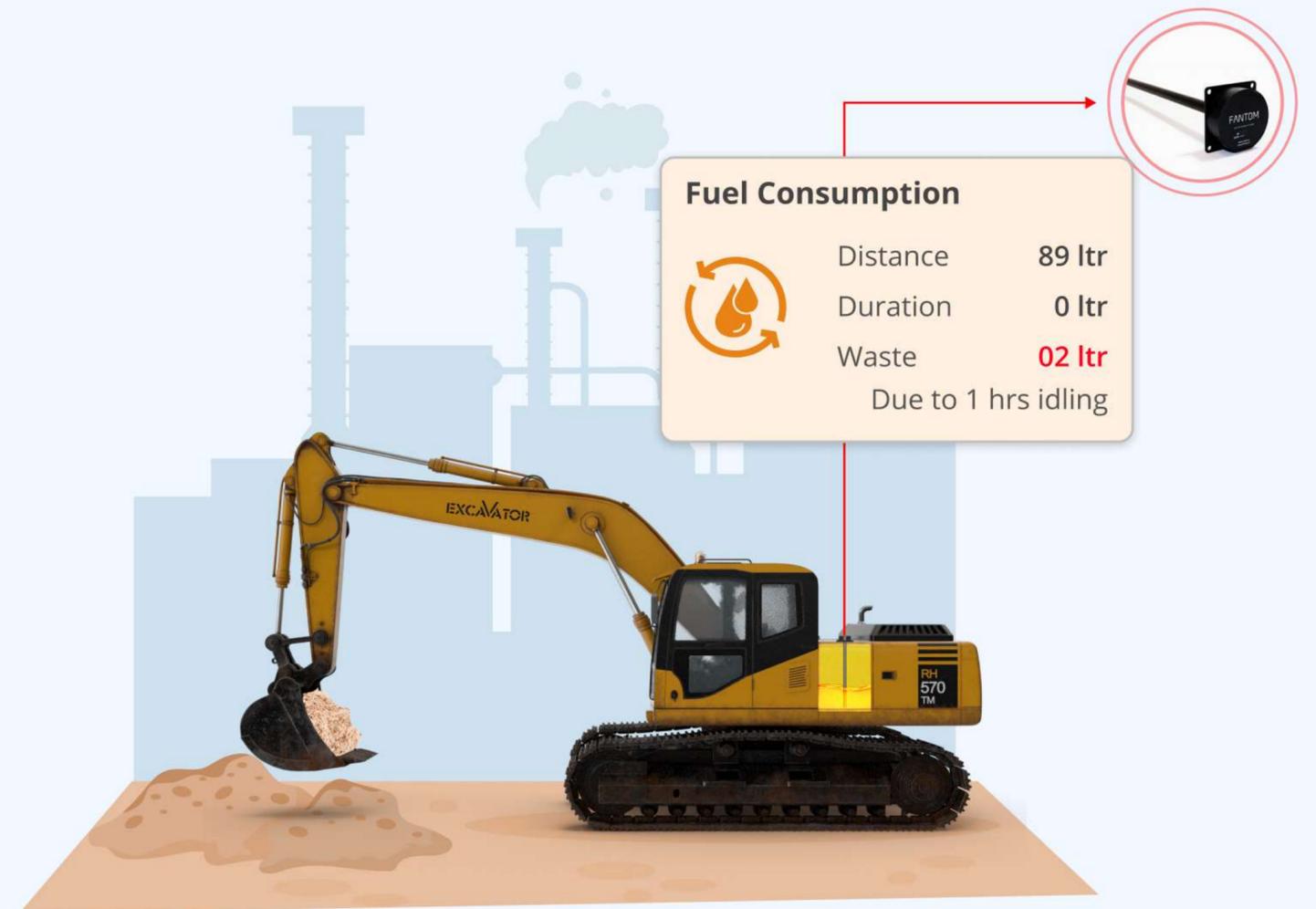
RESULTS
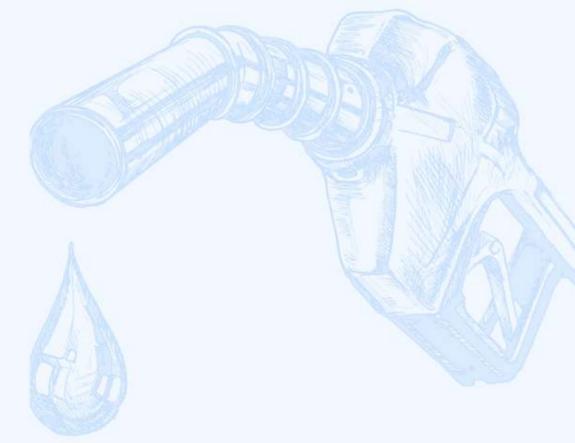
1

Saved up to 15% on fuel costs

Reducing idle time, tracking fuel use by site, and preventing theft has helped companies cut fuel costs by up to 15%.

2

Reduced fuel theft by 30%

Theft alerts have helped construction managers catch and prevent fuel theft, especially on remote sites.
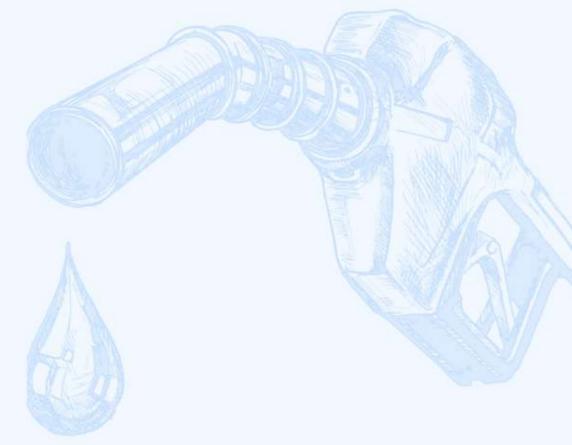
3

Efficient fuel use for equipment

Tracking fuel per machine has helped identify and correct inefficient fuel use, leading to overall better fuel management.

MINING VEHICLES AND MACHINERY

CHALLENGES

→ **Fuel theft and misuse in remote locations**

Mining sites are often far from cities, making fuel theft or misuse more likely. Without monitoring, it's hard to detect these issues on time.

→ **No clear data on fuel use for different machines**

With different types of equipment, like excavators and dump trucks, it's tough to compare fuel efficiency across machines. It leads to unnoticed wastage and higher costs.

→ **Inconsistent fuel delivery and storage**

Due to the remote locations, fuel deliveries can be delayed or uneven. This makes it hard to keep track of storage levels and ensure enough fuel is available.

→ **Maintenance delays leading to higher costs**

With constant use, equipment needs regular maintenance. Delayed maintenance due to lack of monitoring can lead to breakdowns, higher fuel use, and a shorter equipment lifespan.

SOLUTIONS

→ **Fuel theft detection with instant alerts**

Detect sudden drops in fuel levels and receive instant alerts, helping to address theft or unauthorized usage in remote mining areas.

→ **Detailed fuel analytics by equipment type**

Analyze fuel consumption by equipment type to identify machines that consume fuel inefficiently and optimize their usage or maintenance schedules.

→ **Fuel storage and delivery tracking**

Helps monitor fuel storage levels to make sure there's enough fuel and track usage during delays in delivery.

→ **Maintenance alerts to reduce downtime**

Tracks equipment usage and sends alerts for maintenance needs, helping reduce breakdowns, save fuel, and extend equipment life.

Notification   2m ago

Low Fuel
Truck #1609 fuel level is below 10ltrs. Need refueling.

RESULTS
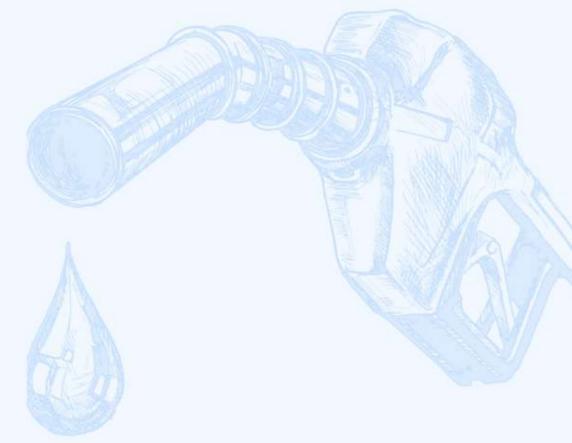
1

Fuel cost reduction of up to 20%

Real-time tracking and reducing fuel theft have helped cut down overall fuel expenses by as much as 20%.

2

30% less fuel theft

Alerts for unusual fuel drops have helped catch fuel theft early, especially in remote areas.

3

Extended equipment Life by 10%

Regular maintenance alerts have helped reduce breakdowns. It leads to lower fuel use and longer-lasting equipment.

FUEL TRANSPORT AND SECURITY

CHALLENGES

→ **Fuel theft during transportation**

Fuel tankers are often targeted for fuel theft during transit, which can lead to significant fuel losses and increased operational costs.

→ **Unauthorized access to fuel storage**

Fuel stored in tankers or depots may be accessed by unauthorized personnel, leading to unaccounted fuel usage.

→ **Difficulty in tracking fuel levels during transport**

Without real-time tracking, it's challenging to monitor fuel levels in transit, making it hard to detect theft or leaks.

→ **Inconsistent fuel deliveries and record-keeping**

Keeping track of fuel delivered at multiple locations can be inconsistent, leading to potential billing discrepancies and inventory issues.
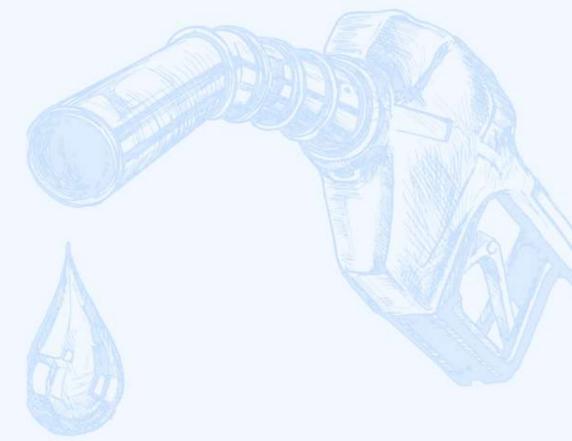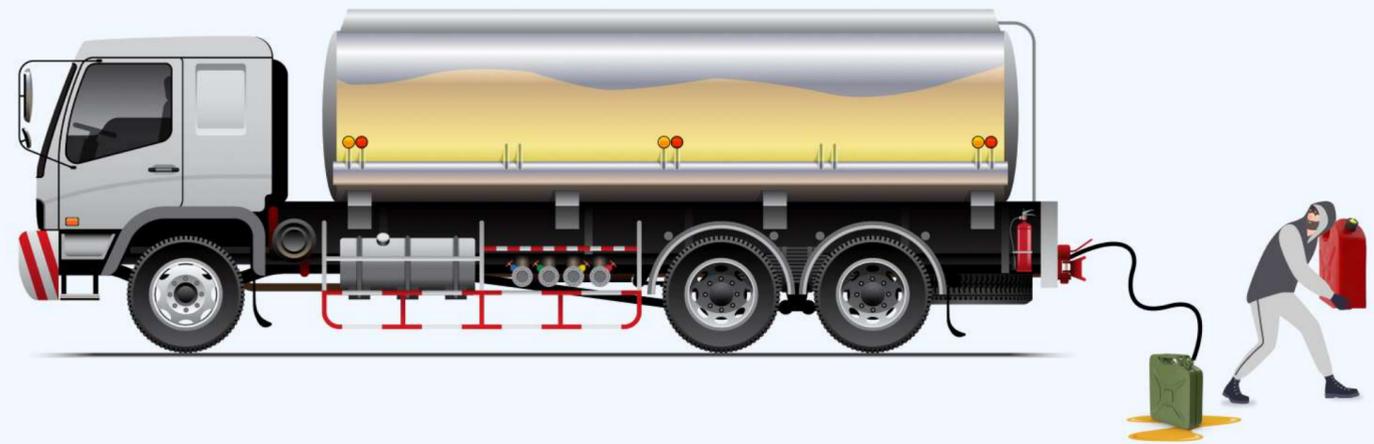
SOLUTIONS

→ **Real-time fuel monitoring for transport vehicles**

The software provides live tracking of fuel levels in transit. It helps managers to monitor fuel till its delivery, and identify any discrepancies instantly.

→ **Instant security alerts for fuel tampering**

Alerts notify managers immediately of any unauthorized access, theft, or unusual drops in fuel levels. It ensures that quick action can be taken.

→ **Fuel usage analytics and reporting**

Track fuel consumption patterns and generate reports to identify any irregularities or excessive fuel usage. This data aids in optimizing fuel usage and reducing operational costs.

→ **Automated compliance reporting**

Generate automated compliance reports related to fuel transportation standards. This makes it easier to maintain regulatory compliance and avoid fines.

Flow meter

Consumption	207.50 ltr
Flow rate	66.00 ltr

RESULTS

1
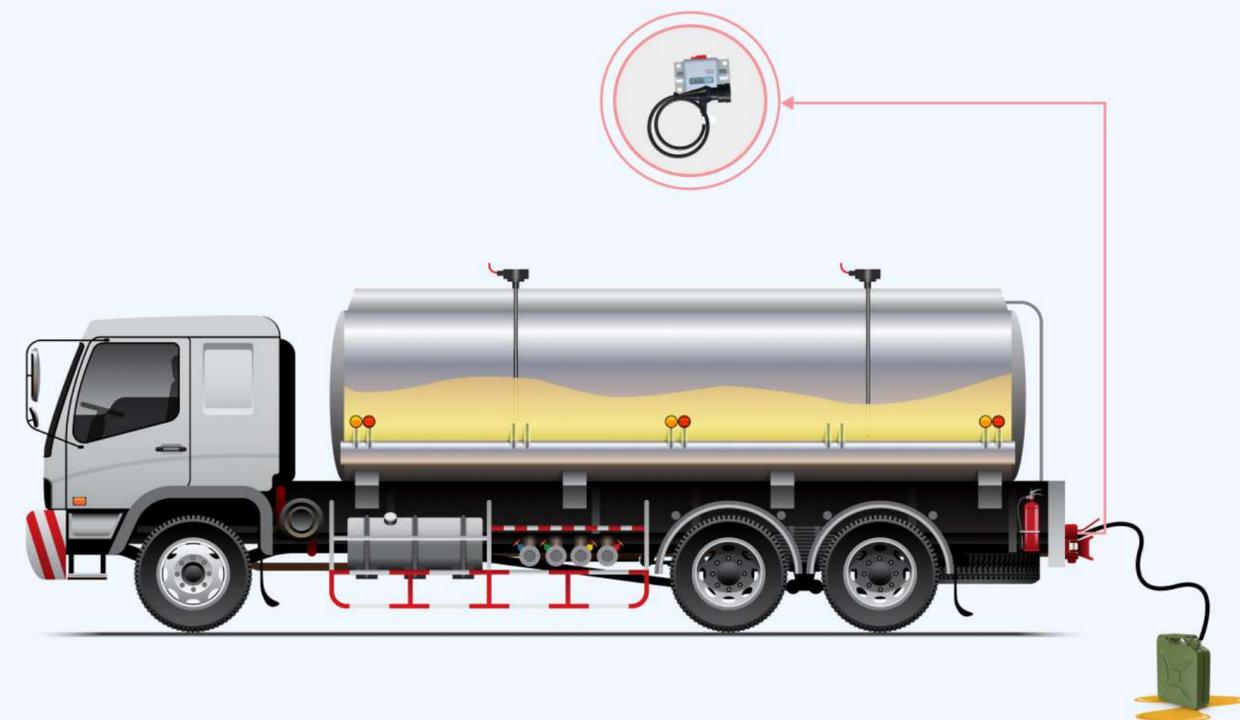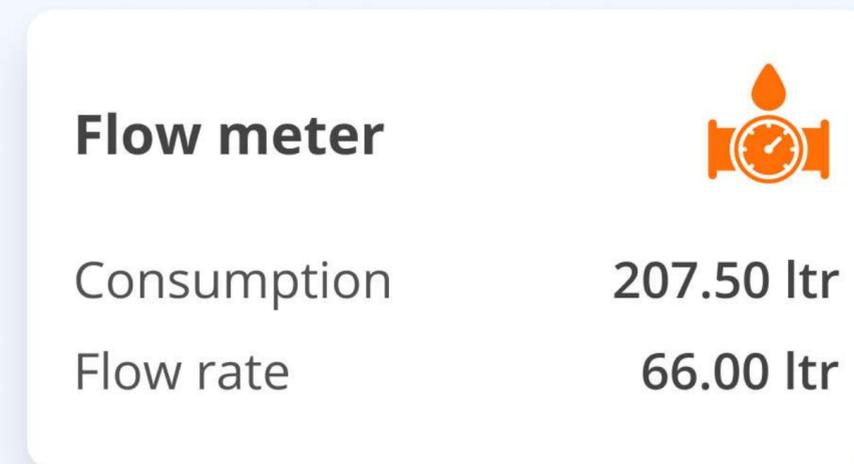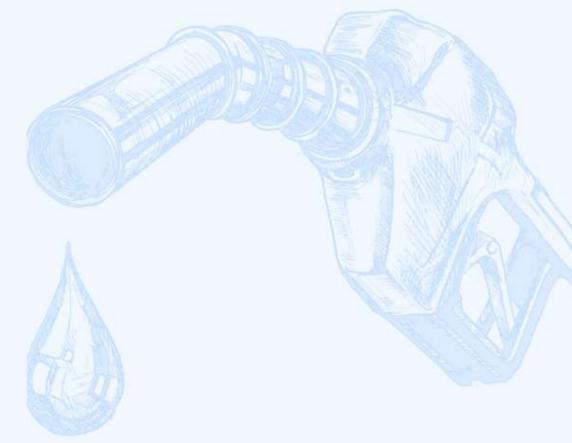
Reduced fuel theft by 40%

Route optimization of reduces unnecessary stops. It saves up to 20% on fuel and delivery time.

2

Fuel delivery accuracy by 30%

Real-time monitoring and instant alerts reduced fuel theft incidents significantly. It saves on operational costs.
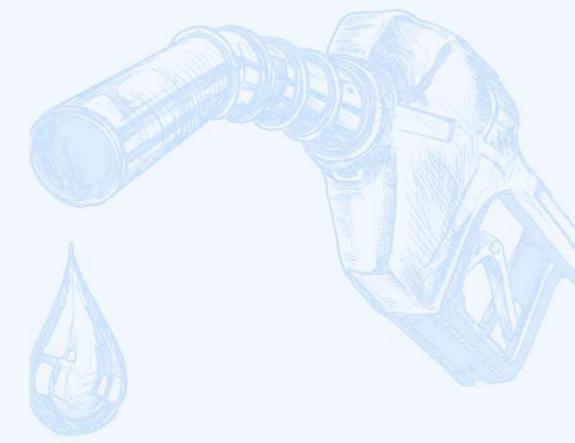
3

Greater accountability

Drivers are more likely to stick to approved routes and avoid unnecessary stops. It makes fuel usage more predictable and cost-effective.

Use Case

POWER GENERATOR

CHALLENGES

→ **Inaccurate fuel level measurement**

Traditional methods like manual dipsticks and tank gauges often provide inaccurate readings. It leads to unreliable fuel consumption data. This can result in inefficiencies and increased operating costs.

→ **Frequent fuel theft and drain event**

Diesel generators (DG sets) are often left unattended at remote locations, making them vulnerable to fuel theft. This leads to higher operational costs and unexpected downtimes.

→ **Unmonitored fuel consumption**

Fuel usage in DG sets can vary based on load. It is difficult to track fuel consumption accurately without real-time monitoring, resulting in inefficient fuel utilization.

→ **Difficulty in predicting refuel requirements**

Without accurate fuel monitoring, it's challenging to predict when refueling is needed. It leads to sudden shutdowns during critical operations due to fuel shortages.

SOLUTIONS

→ **Accurate fuel level monitoring**

The software uses sensors to measure fuel levels in real-time with high precision. It replaces manual methods and provides reliable data for efficient generator fuel management.

→ **Fuel level alerts**

Receive instant alerts when fuel levels are low or if there are unusual consumption patterns. This ensures timely action.

→ **Fuel quality monitoring**

The software detects fuel contamination or quality issues. It prevents engine damage and extending the life of the equipment.
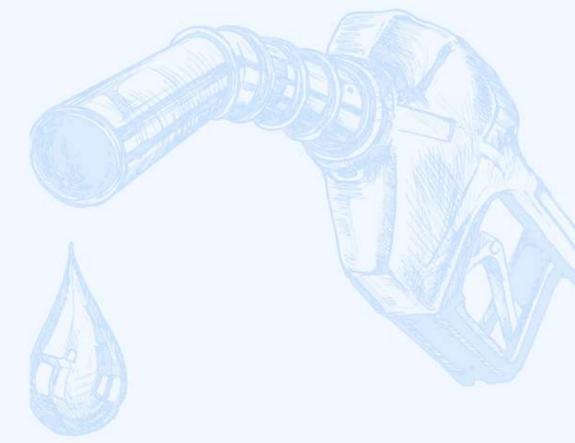
→ **Reports and charts**

Detailed fuel usage trends helps operators spot problems and optimize fuel consumption.

→ **Fuel consumption forecasting**

Predictive analysis based on past data helps forecast future fuel needs. This aids in better budgeting and planning.

Fuel Consumption chart — Quantity Consumed (L) and No. of Operation Hours, Jan'24–Aug'24
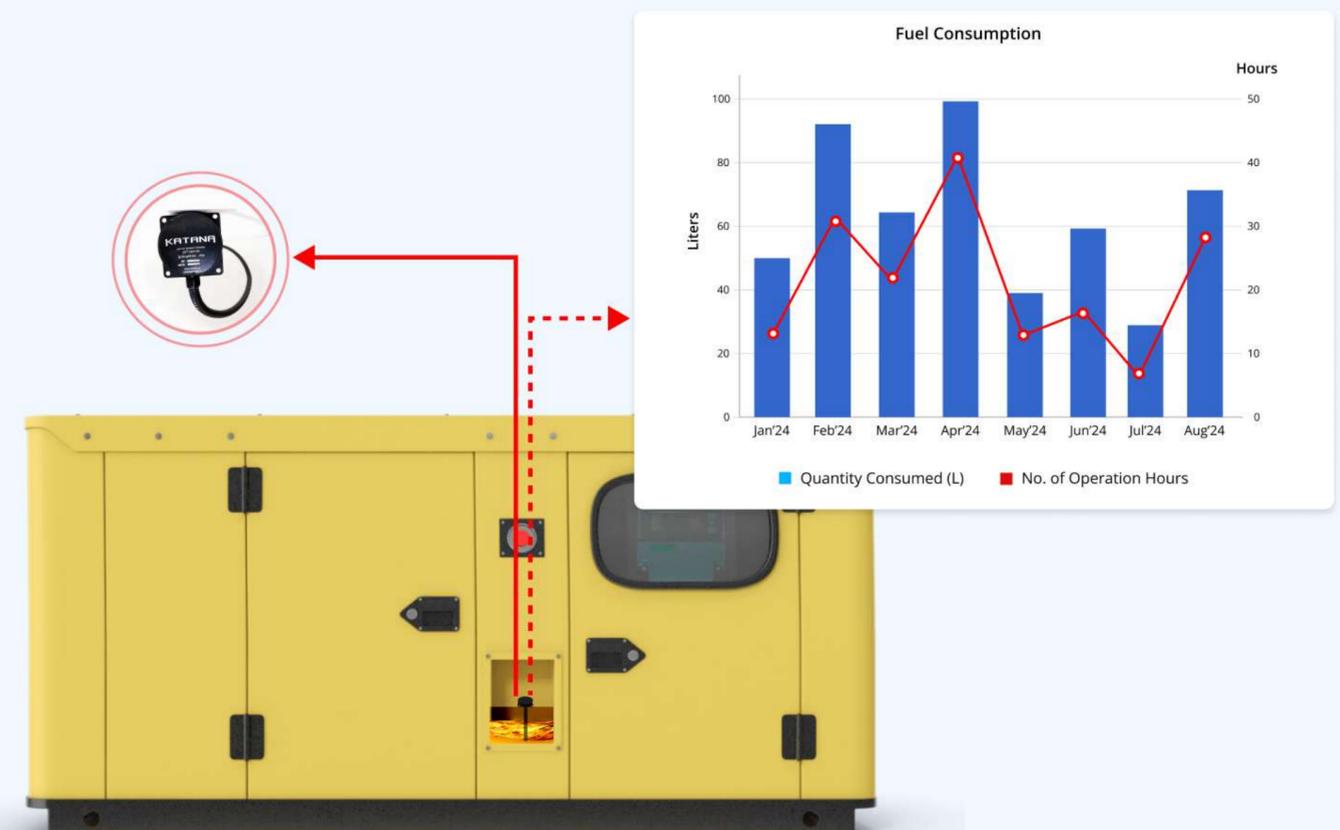
RESULTS

1 **Reduced fuel theft by 35%**

Real-time monitoring and alerts reduced incidents of theft, saving on fuel costs.

2 **Enhanced fuel efficiency by 25%**

Accurate tracking and consumption data helped improve fuel use, minimizing waste.

3 **30% lower maintenance costs**

Scheduled maintenance alerts led to timely servicing, reducing repair needs and maintenance expenses.

Use Case

MARINE FLEETS

CHALLENGES

→ **Complex fuel storage and consumption**

Marine vessels often have multiple fuel tanks, making it difficult to monitor fuel usage and detect abnormalities.

→ **Constant vessel movement**

The ongoing movement of vessels leads to frequent fluctuations in fuel levels, complicating fuel monitoring.

→ **Fuel theft and unauthorized usage**

The risk of fuel theft and unauthorized use is high due to the valuable fuel resources on board.

Fuel tank 1   Fuel tank 2
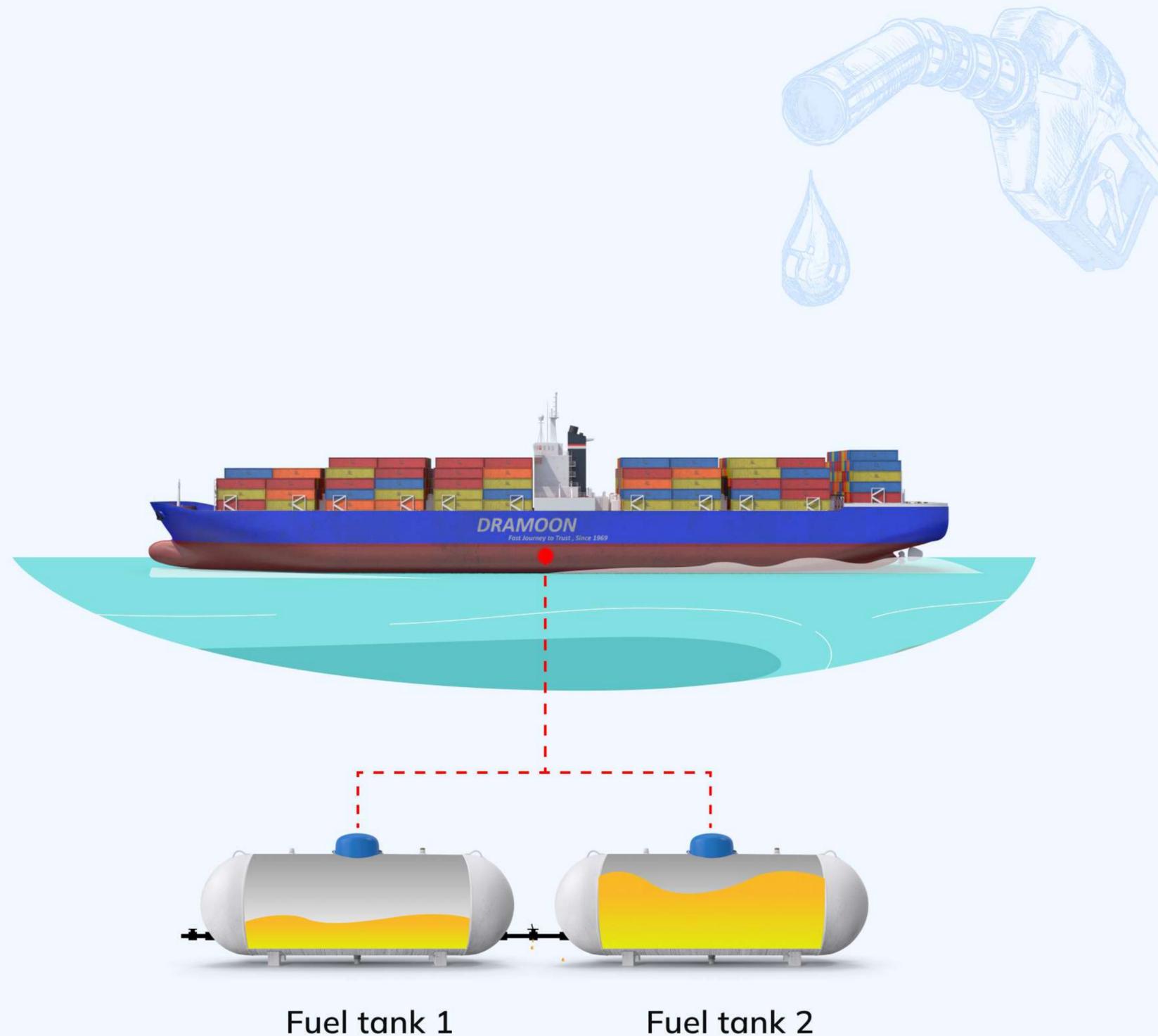
SOLUTIONS

→ **Multiple sensors in a single tank**

Use multiple sensors in a single tank for accurate monitoring and better control of fuel usage.

→ **Real-time fuel monitoring**

The software provides real-time visibility into fuel levels, consumption, and potential fuel theft or leakage of multiple tanks.
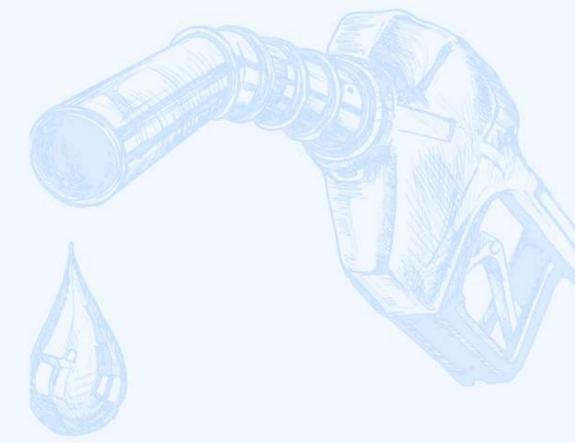
→ **Reports and charts**

Detailed analytics and reports on fuel consumption, fill-drain activities, and more.

→ **Instant alerts**

Automated alerts are triggered when fuel levels are critically low, and suspicious activities are detected.

Fuel tank 1   Fuel tank 2
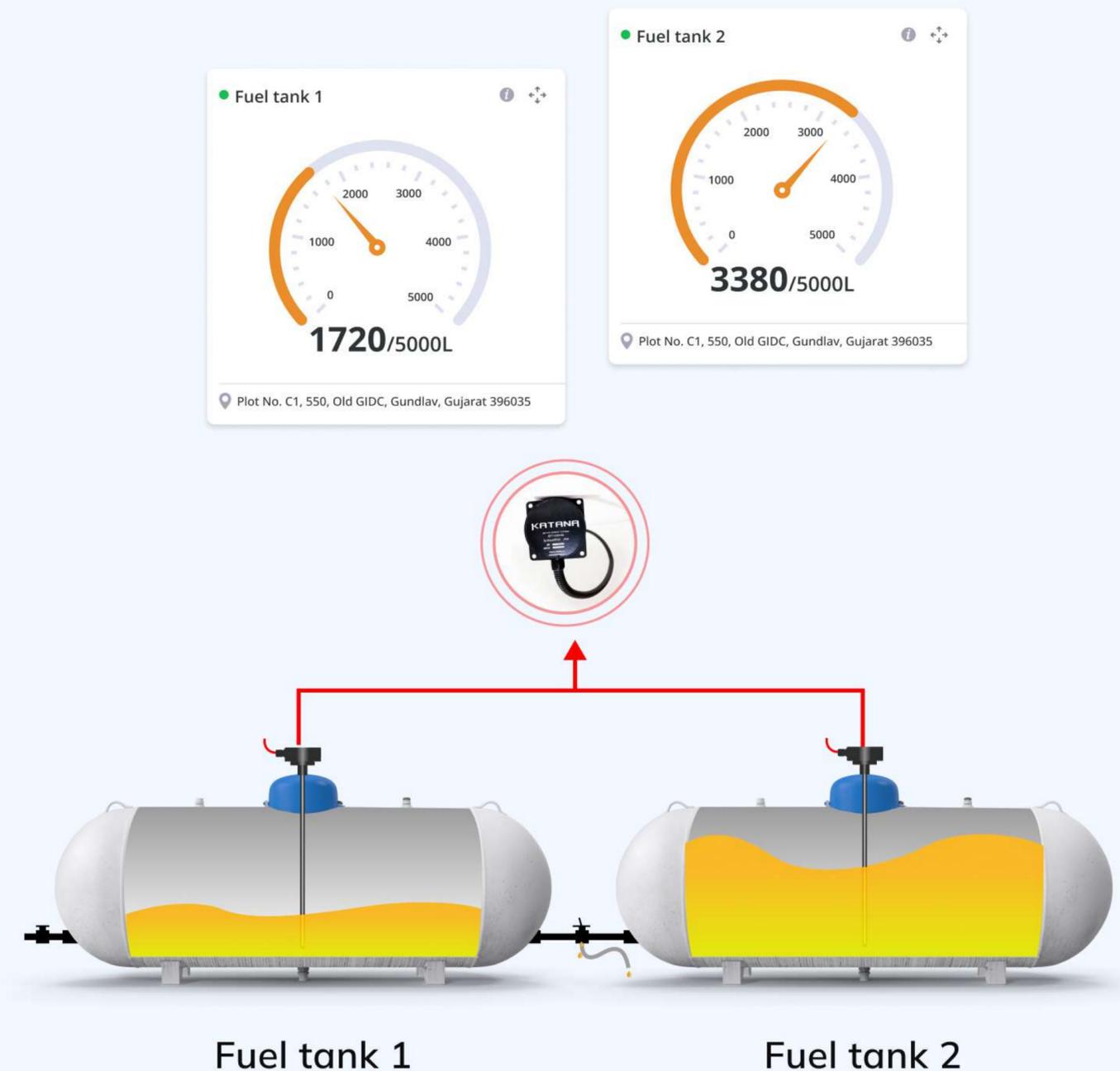
RESULTS

1

Reduced fuel waste by 20%

Real-time tracking helped identify and reduce unnecessary fuel usage, saving fuel costs.

2

30% decrease in theft cases

Alerts for unusual fuel drops reduced theft incidents by allowing quick action.

3

Improved refueling accuracy by 25%

Better planning tools ensured vessels carried the right amount of fuel, reducing extra fuel costs.

KEY TAKEAWAYS FOR EFFECTIVE FUEL MONITORING

Here's what you've learned about fuel monitoring and how it benefits the fleet:

- Real-time fuel monitoring helps to track consumption and levels instantly.

- Analytics and reports helps to detect fuel theft and irregular fuel usage.

- Detailed reports provide data-driven insights for better decision-making.

- Accurate fuel monitoring reduces unnecessary fuel usage.

- Improved fuel efficiency contributes to cost savings and sustainability goals.

Notes

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