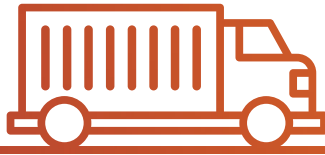


THE FUTURE OF FLEET REPORT

In this report, AssetWorks outlines the top trends facing the fleet industry today, as well as predicts what may be coming next so fleets across the globe can adequately prepare.

TABLE OF CONTENTS



- 3** Key Statistics
- 4** Clean Air and Climate Change
- 5** Alternative Fuels
- 7** Grey Fleet
- 8** Circular Economy
- 9** Digitalization and Mobilization
- 9** Autonomy
- 10** Artificial Intelligence
- 10** Ownership to Users
- 11** AssetWorks Solutions



KEY STATISTICS

The fleet industry has changed throughout the 21st century and will only continue to evolve as new technologies and data collection tools are developed. If fleets want to remain competitive, managers need the resources to keep up with industry trends.

DID YOU KNOW?

85%

of managers believe tackling air pollution should be a combined effort between motoring and non-motoring organizations.

56%

of fleet managers believe fully, or hybrid, electric vehicles will be the most widely used fuel type beyond diesel or petrol in ten years.

66%

of fleet managers believe autonomous vehicles would have a positive impact on the environment.

86%

believe monetary incentives or grants would positively impact the uptake of alternatively fueled vehicles.

19%

expected increase in the % of fleet managers using fully electric vehicles in five years

16%

expected reduction in the % of fleet managers using diesel-powered vehicles in five years.

72%

of fleet managers believe diesel vehicles have an unfair reputation for producing harmful emissions.

CLEAN AIR AND CLIMATE CHANGE

Climate change, sustainability, and clean air are massive trends spanning public and private industries but understanding clean air policies and how practices should look for different businesses is still lacking.

Emission Requirements

The Environmental Protection Agency (EPA) regulates vehicle emission requirements under the Clean Air Act. These requirements set limits on the amount of pollutants emitted by vehicles, including carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM), and hydrocarbons (HC).

The specific emission standards vary depending on the type of vehicle and its model year. New cars and trucks must meet emission standards, and older vehicles may be subject to emissions testing requirements in some states. The standards are typically more stringent for newer vehicles, and automakers must ensure their vehicles comply with the standards before being sold in the U.S. market.



Ensure those involved are aware of their state's emission requirements



Develop plans to ensure your organization is prepared to take on future requirements



Understand what grants and incentives are available to support the sustainability journey



Start incorporating low emission vehicles into facilities

LIGHT AND MEDIUM-DUTY VEHICLES MANUFACTURED BETWEEN 2027 & 2032 WILL HAVE NEW EMISSION REQUIREMENTS

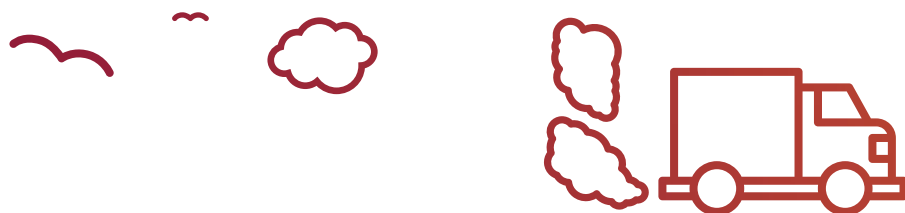
Bipartisan Infrastructure Law

The Bipartisan Infrastructure Law was released in November 2021. The Bipartisan Infrastructure Law will help meet the White House's goal of confronting the climate crisis by building the infrastructure required so by 2030, EVs will make up at least 50% of new car sales, so by 2050, the United States will be on the right path to net-zero emissions.

With the law, around \$1.2 trillion will go towards various infrastructure projects across the United States. It focuses on repairing roads, bridges, public transit, and expanding broadband access. For EVs, the law includes significant funding, around \$7.5 billion, to establish a network of EV charging stations. This investment aims to increase accessibility and convenience for EV owners, addressing one of the major barriers to widespread adoption.

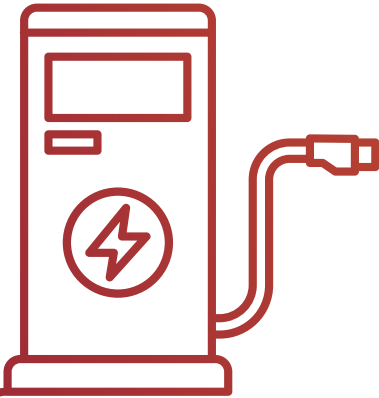
The funding will support the installation of chargers along highways, in urban areas, and rural communities, encouraging more people to consider EVs without worrying about running out of charge. The law also allocates funds for manufacturing EVs and their components within the United States, promoting domestic production and supply chain development.

SINCE THE BIPARTISAN INFRASTRUCTURE LAW WAS RELEASED, EV SALES HAVE TRIPLED, AND 40% MORE PUBLIC CHARGING PORTS ARE AVAILABLE



ALTERNATIVE FUELS

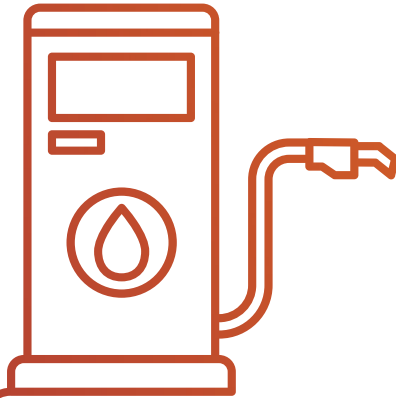
As the world grapples with the environmental consequences of fossil fuel consumption, the search for alternative fuels has gained unprecedented momentum. These innovative energy sources offer a promising path toward reducing greenhouse gas emissions and lessening our dependence on finite resources. In this section, we explore the diverse array of alternative fuels that hold the potential to shape a sustainable and greener future.



Battery Electric Vehicles

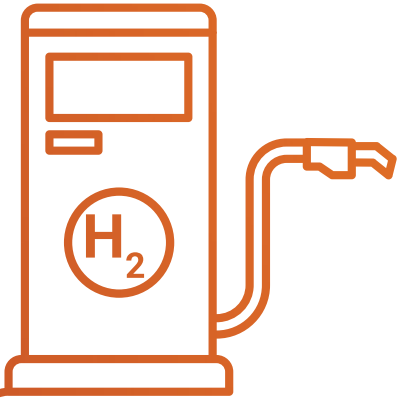
Battery or all-electric vehicles do not use any petroleum fuel. They have large batteries that provide power directly to the electric motors. Battery electric vehicles are charged at home, work, or publicly at different speeds, depending on the charger.

Battery electric vehicles do not produce any direct emissions. Although they get charged with electricity generated by coal or natural gas, they are still cleaner to operate than a petrol vehicle.



Plug-in Hybrid Electric Vehicles

Plug-in Hybrid Electric Vehicles (PHEVs) have a petrol tank and a battery that is plugged in and charged. PHEVs typically have a short all-electric range. Once the battery life is empty, the vehicle switches to petrol and drives like a conventional car. PHEVs will eventually phase out in favor of battery electric and hydrogen fuel cell vehicles.



Hydrogen Fuel Cell Vehicles

Hydrogen fuel cell vehicles use electricity but do not plug into a charger. Hydrogen is stored inside and uses a fuel cell to convert it into electricity during operations. The fuel cell charges a small battery that powers the electric motor.

Hydrogen fuel cells produce no harmful emissions- only water vapor. Fuel cell vehicles have the same qualities as electric vehicles but with the advantages of traditional fueling. Hydrogen fueling stations are not as popular as EV chargers, but more stations and vehicle options are under development. Hydrogen fuel producers are also making progress in reducing the cost of fuel.

Hydrogen fuel cells are the ultimate clean energy technology. Hydrogen fuel cells produce only water vapor as a byproduct. However, the cost of hydrogen and the durability of hydrogen fuel cells are two major roadblocks to full commercialization. For hydrogen fuel cells to replace petroleum and battery electric vehicles, the cost of hydrogen must decrease relative to petroleum, and hydrogen fuel cells must be able to operate longer in rigid trucks before requiring replacement.

ELECTRICITY

Electricity is the most common alternative fuel in the fleet industry due to advancements in electric vehicle technology and the known environmental benefits. Being a forward-thinking organization also presents good PR to customers as they prefer a business with positive environmental credentials.

EVs are the most popular vehicle type, with hybrid vehicles close behind as an alternative. Nearly three-quarters of fleet managers agree the appetite for EVs in operational fleets is growing. Some fleet management vendors have already introduced software specifically for electric fleets in preparation for electrification. For example, [AssetWorks FuelFocusEV](#) offers full integration with our charge management software so managers can manage operations and plan future growth.

Despite the electrification movement continuing to progress, some experts remain cautious as approximately 79% of electricity in the United States gets generated through fossil fuels. The raw materials and carbon used to produce EVs in manufacturing cause them not to be as green as they first appeared. To eliminate pollution, countries that create EV batteries need alternative ways to manufacture the vehicles.



About FuelFocusEV

AssetWorks has been ready for the electric charge with our [FuelFocusEV solution](#). Not only does FuelFocusEV help manage EVs, but it also helps fleets get the most out of EV charging and improve capital planning. FuelFocusEV monitors, alerts, and records all relevant data from the charge status to management operations. Your fleet will save money and time by accurately accounting for private and electric charging sessions.

DECARBONIZATION

The fleet and logistics industry is one of the largest contributors to carbon emissions.

More fleets are investing in alternatively fueled vehicles and charging infrastructure, but managers should complete a [life-cycle cost analysis \(LCA\)](#) to plan and clean their data for future investments. LCA helps managers understand how to budget so they have room for later investments- such as charging infrastructure and alternatively fueled vehicles. It also helps managers understand the cost of owning and operating EVs, from the initial purchase to the maintenance. LCA serves as a great tool to measure an asset's life cycle.

Aside from maximizing profitability and assisting with decarbonization efforts, life-cycle cost analysis provides other benefits for a fleet organization, including:

Regulatory Compliance

While existing petrol and diesel vehicles are still compliant, LCA can help fleet managers prepare accordingly, as some state and government regulations often require specific reporting and analysis for compliance.

Corporate Policy Evaluation

LCA serves as a tool to review the impact of corporate policy decisions on an asset's life cycle. For example, LCA can weigh the upfront cost of implementing an alternative fuel in a vehicle vs. the fuel savings over the vehicle's life cycle.

THE FLEET AND LOGISTICS INDUSTRY CONTRIBUTES APPROXIMATELY 18% OF CARBON EMISSIONS



Comprehensive Asset Management

Instead of managing only operating and maintenance expenses, there is an expanded emphasis on replacement, procurement, and remarketing strategies to minimize life cycle costs and maximize salvage value.

GREY FLEET

With grey fleets, drivers use their cars for business purposes. Fleet organizations monitor direct costs, such as mileage claims, and potential hidden costs, such as third-party claims, relating to any on-road incidents. Especially with larger fleets, implementing software helps support your business by automatically tracking these incidents.

For example, if high annual mileage is detected based on expense claims, the software flags the driver and vehicle. Experts in the fleet industry say investing in the software will be more than repaid as it detects any efficiencies instantly and accurately on a platform that is easy to use.

Grey fleet day-to-day operations are more complex and require more management time. Fleet management software is a great way to stay on top of operations, but there are other ways to make operating a grey fleet easier:



Have a policy that employees must agree to when brought on that requires only permitted employees to drive the vehicles for business use.



Only use vehicles that are suitable for grey fleets (ex: four doors, no more than seven years old, and no cabriolets).



Have a driver documentation and license checking process to keep up with any fines and infringements.

About KeyValet & Rental

If you are looking for a way to phase out the grey fleet, AssetWorks KeyValet offers integrated motor pool management to increase vehicle utilization. KeyValet helps fleets manage all aspects of running a motor pool, including customer reservations, vehicle check-out, and the billing and maintenance of vehicles.



CIRCULAR ECONOMY

EVs will help deliver a sustainable transportation system and allow fleets to transition from a linear economy. Repairing and reusing materials extends an EV's lifetime and lowers the environmental impact of manufacturing new parts. Batteries pose a challenge as they are hazardous and flammable.

EV batteries can last for approximately 10-20 years before they need replacement. Even once the battery has outlasted its usefulness, it still holds value and could be used for a different purpose. Batteries are currently not recyclable, so at the end of their life cycle, they end up in a landfill.

The circular economy goes beyond electric vehicle batteries. More than 80% of consumers have expressed an interest in a circular economy-based car interior trim, floor coverings, and seats, followed by another 63% who are for recycling car body materials:

- Mirrors
- Steering wheels
- Rims
- Electronic & electronics

Consumer interest is necessary for further circular economy development. The automotive industry is doing its part to incorporate consumer input into manufacturing, but fleets need to do their part as well.

These future changes will impact the fleet industry and how we maintain assets. Organizations must start looking at everything they own to ensure they are maintained. AssetWorks can manage that change and shift in culture as we have been helping fleets from acquisition to disposal of assets.



DIGITALIZATION AND MOBILIZATION

Digitalization is transforming various sectors, including fleet management, as it incorporates GPS tracking alongside electronic logging devices (ELDs) and telematics. This integration automates operations and streamlines workflows- allowing for efficient communication among drivers, dispatchers, and clients. This shift toward digitalization not only elevates customer service but also amplifies operational effectiveness by simplifying tasks and processes within fleets.

Utilizing [GPS technology](#), fleet managers gain the ability to strategize routes and timetables, allowing them to accommodate a higher volume of customers daily while upholding superior service standards. Addressing customer requirements, on-time arrivals, and prompt responses remain pivotal in delivering outstanding customer service. As of 2023, 47% of fleet managers acknowledged fulfilling their routing objectives through GPS tracking.

22.2 MILLION GPS TRACKING SYSTEMS WILL BE IN USE ACROSS NORTH AMERICA IN 2024

AUTONOMY

Alternative fuels and EVs are the future of operational fleets, with many organizations having already purchased or leased EVs. Despite having the vehicles available, many fleets are waiting on government incentives in three areas: infrastructure, information, and finances.

Infrastructure

To confidently implement EVs, more charging infrastructures are needed to operate as they would with a traditional fleet.

Information

Only half of the fleet managers are aware of monetary incentives and grants, so there needs to be more promotion of the support accessible.

Financial

The cost of alternatively fueled vehicles is higher than traditional diesel and petrol vehicles- presenting a barrier to entering the market.

Besides these three incentives, many fleet managers do not fully understand what goes into maintaining alternatively fueled vehicles. One way to prepare for managing these non-traditional vehicles is by investing in a vendor who has proven they stay up with modern fleet trends and provide many products- such as AssetWorks FuelFocusEV.

Even though the technology is available now, many remain skeptical since only 29% of fleets believe autonomous vehicles will be in operational fleets within the next five years. Many fleet managers instead see semi-automation in the future.

Semi-automation of automotive features is more likely with automatic braking, distance sensors, and more, becoming mainstream shortly on commercial vehicles. Fleet managers feel this could benefit the environment because of better fuel efficiency and reduced vehicle weight. However, some see a risk and predict more trips and faster driving can negatively impact the environment.

ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) is nothing we have not seen or heard about before, and it will continue thriving within the fleet industry. AI programs machines to possess the intelligence to help with jobs. The advancement of AI driver management systems keeps drivers safe on the road. Self-organizing fleets, autonomous cars and trucks, and driverless ride-share vehicles are some examples of future opportunities.

Investing in an AI fleet solution can help streamline operations so fleets can retrieve the data necessary to improve driver performance and many more elements of operations:

Real-time Tracking

Helps plan the most efficient route for drivers. It also provides analytics to determine traffic issues, weather conditions, and the best road conditions.

Customer Satisfaction

Provides customers with an accurate arrival time and alerts them if drivers get delayed. Keeping customers in touch makes them want to use your services again.

Reduced Fuel Consumption

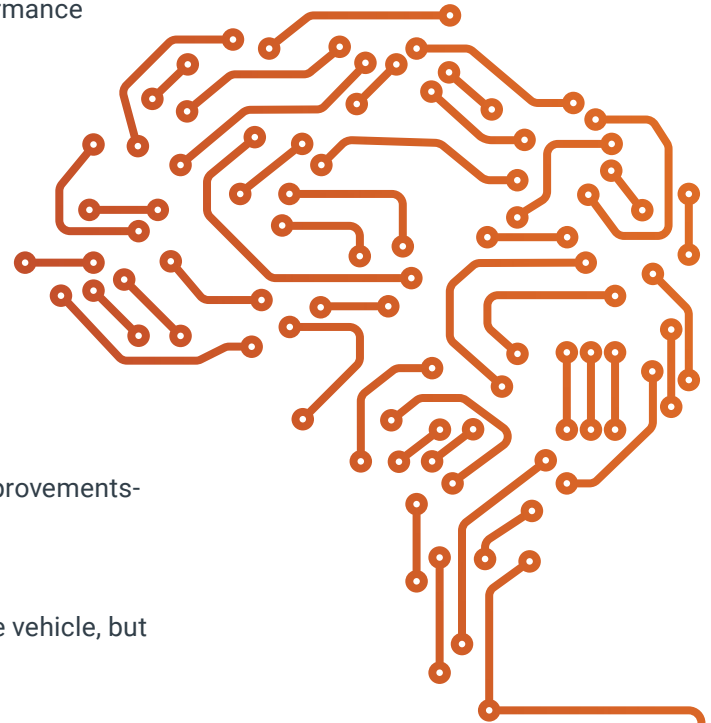
Analyses driver behavior to determine if there is any need for improvements- such as if they need to brake less harshly or accelerate less.

Vehicle Maintenance

Engine warning lights do not often tell you what is wrong with the vehicle, but AI allows you to pinpoint the issue.

About the Asset Analytics Platform

With fleet management becoming more data driven, AssetWorks has provided the software for fleets to take control of their data. [AssetWorks' Asset Analytics](#) prepares fleets for the future by decreasing costs and maintenance while increasing revenue- all in sleek custom reports.



OWNERSHIP TO USERS

Smartphones make [accessing transportation simpler](#) than it was just three years ago. The concept of proud ownership has changed with technology. Businesses are now looking for flexible short-term options for business travel instead of owning a vehicle. Short-term flexibility and convenience have caused more users than ownership. AssetWorks [telematics](#) and [fleet management software](#) solutions allow fleets to more efficiently manage their vehicles to reduce their fleet sizes or use other transportation.

CONCLUSION

Technology can be a powerful tool for fleet organizations looking to keep up with modern trends and achieve key sustainability goals. For over 40 years, AssetWorks has developed leading-edge fleet and asset management software solutions to benefit fleets across their operations.

ASSETWORKS SOLUTIONS

AssetWorks handles every aspect of running a modern fleet organization. Our FleetFocus suite of solutions offers a centralized location for fleets to collect and record information on their fixed assets: asset location, transfer details, maintenance notes, repair tracking, and much more. Whether you deal with assets or the staffing and workflow around assets, technology can help.

AssetWorks technology helps organizations manage and maintain their assets efficiently and cost-effectively. With our integrated software, fleets can track vehicle equipment life-cycle management, shop scheduling, warranty, claims, and more.

AssetWorks solutions are not one size fits all and are custom software designed for your organization's needs.




FLEET MANAGEMENT AND MAINTENANCE

Fleets across the globe have been using [AssetWorks FleetFocus](#) to manage and maintain their fleets for over 40 years. Fleet management software maximizes fleet efficiency and minimizes downtime. FleetFocus provides data in less time so fleets can excel at managing and maintaining their vehicles.



FUEL MANAGEMENT

[AssetWorks FuelFocus](#) helps fleets save up to 15% on fuel costs with precise billing and accurate dispensing data. Measuring and securing fuel allows fleets to embrace green fleet initiatives.



LIFE-CYCLE COSTS ANALYSIS

[AssetWorks Capital Asset Management \(CAM\)](#) automates vehicle life-cycle cost analysis for a modern asset management approach. CAM provides multiple life cycle cost models based on real-time fleet data by calculating annual operating rates, forecasting operating costs, determining labor equivalents, and more.



MOBILE APPS

[AssetWorks SmartApps Suite and mobile tools](#) allow workers and customers to process their information from any device. The MobileFocus Enterprise suite includes the FleetFocus EDGE fully responsive interfaces, the Fleet Connect suite of disconnected mobile applications, and the [SmartApps suite](#) of connected mobile apps.

To learn more about AssetWorks solutions, please visit www.assetworks.com.