10 Ways Telematics Improves Fleet Operations

CalAmp | SUPPLYCHAINDIVE | TRANSPORTDIVE

Custom content for CalAmp by studioID

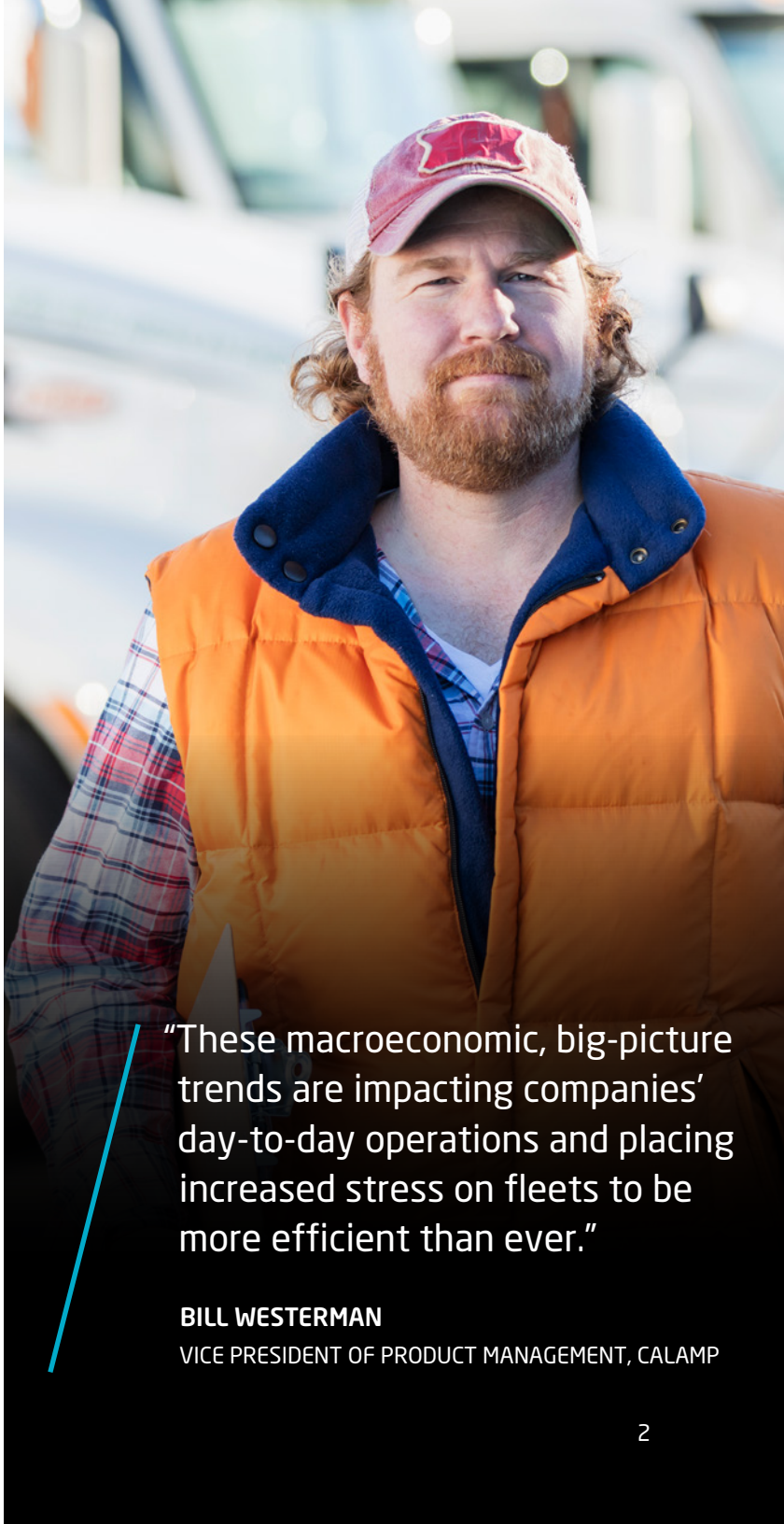
Rising fuel and equipment costs, a lack of certified truck drivers and customer demand for faster deliveries are all keeping fleet managers up at night right now. The ongoing supply chain disruptions, continued rise in transportation costs and other outside factors are in fact prompting companies to rethink how they manage their vehicles, tractors and/or trailers.

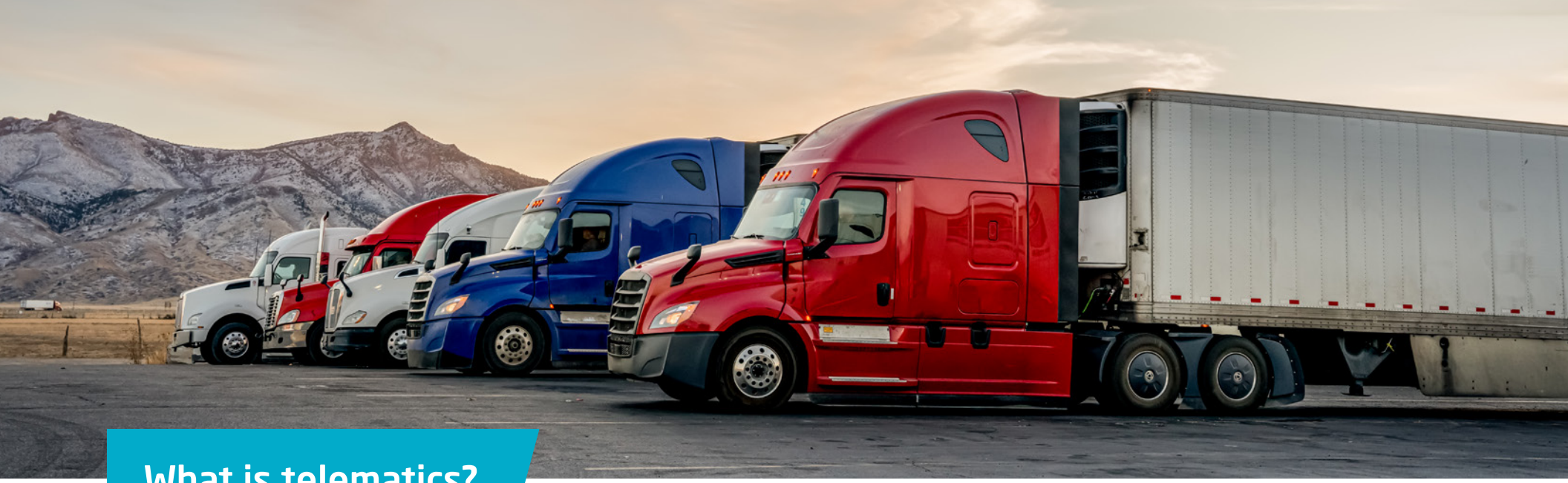
"These macroeconomic, big-picture trends are impacting companies' day-to-day operations and placing increased stress on fleets to be more efficient than ever," says Bill Westerman, vice president of product management at CalAmp, a telematics provider that helps organizations worldwide monitor, track and protect their vital assets.

The rising cost of fuel — the largest expense of most fleets — is a particularly big concern that can be addressed through the use of telematics. Equipped with timely and accurate data-based guidance, telematics can quickly pinpoint and mitigate issues impacting fuel efficiency. This not only saves companies money on fuel, but also reduces costly vehicle wear and tear, provides real-time tracking of assets like trailers and supports a proactive maintenance routine (i.e., no more waiting until vehicles break down and shipments are delayed to make repairs).

Telematics also helps reduce excessive engine idling, which burns almost one gallon of fuel per hour, and identifies harsh braking and acceleration, the latter of which also contributes to excess fuel usage. With a complete telematics solution in place, companies also have real-time insights into issues like low tire pressure, which can impact fuel economy, vehicle operation, safety and equipment life.

This playbook explores the key challenges today's fleet owners and managers face and explains how telematics helps them work through these challenges, saving money and improving overall efficiency in the process.





What is telematics?

A "full stack" or complete telematics solution comprises hardware, a cloud/backend and a software application that work together to capture and store fleet data — a scientific approach that gives drivers real-time guidance and fleet managers the intelligence they need for good decision-making. The data is stored and processed in the cloud, and fleet owners can either access those insights at the cloud level, if they're a developer, or via a front-end software application.

Telematics removes the guesswork from fleet management and allows companies to make decisions based on factual, timely and accessible data. Using the three-pronged technology platform, companies can manage:

Fleet usage. Users can monitor location, activity and current status for tractors, trailers and the cargo they're carrying.

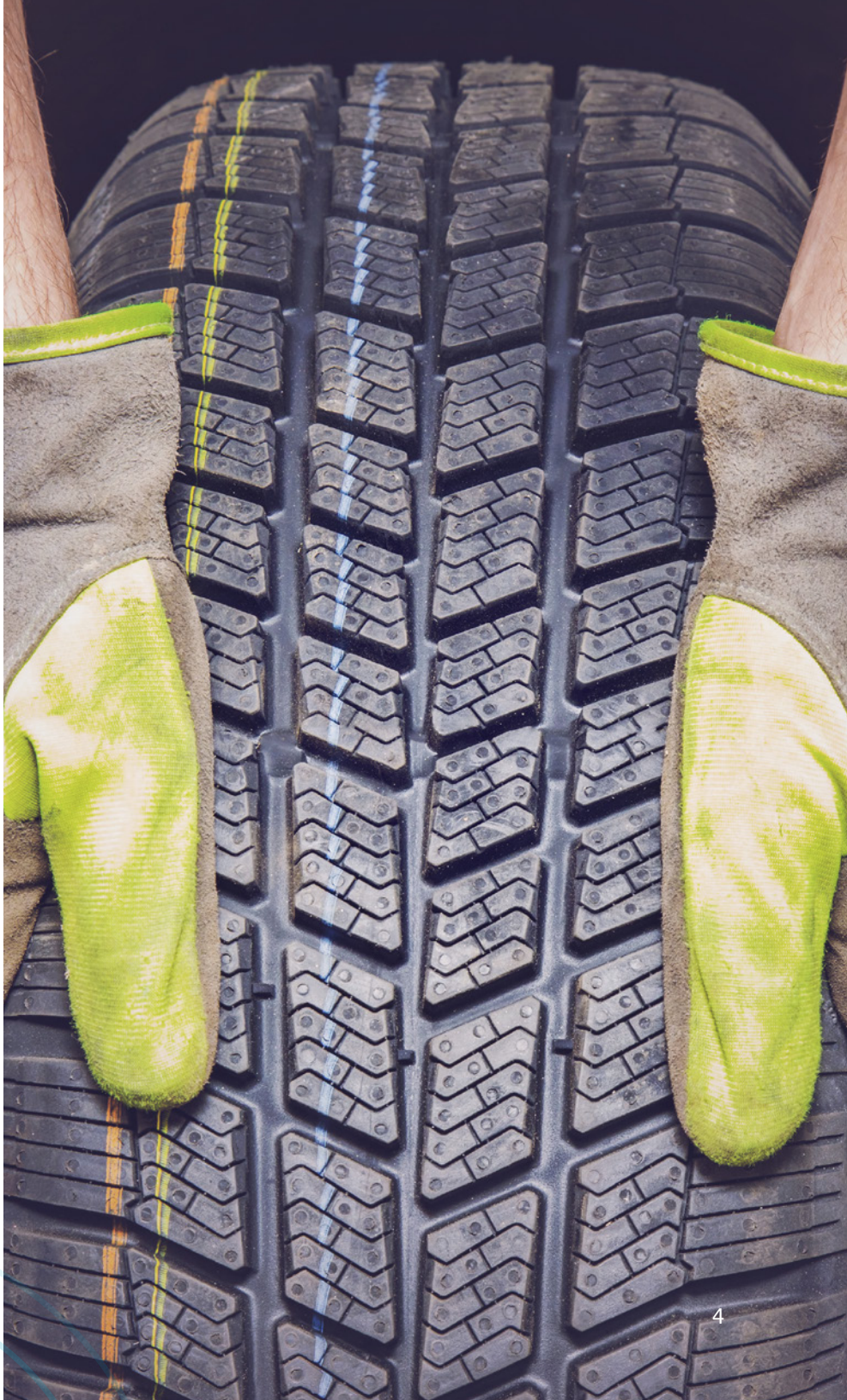
Overall fleet productivity and performance. A full-stack telematics solution includes powerful dashboard and reporting capabilities that allow fleets to monitor key performance indicators (KPIs) and big-picture trends related to usage, safety and efficiency.

Fleet safety. Aggressive driving, including speeding, factors into more than one-third of all motor vehicle fatalities. A full-stack fleet telematics solution provides valuable insights into aggressive driving behaviors, down to the specific driver.

Fleet compliance. Companies can use fleet telematics to meet compliance obligations and stay current with Department of Transportation (DOT), Federal Motor Carrier Safety Administration (FMCSA) and other relevant government regulations, rules and requirements.

Fleet maintenance. Whether managing a fleet of 20 or 2,000, fleet owners can improve fleet asset management performance by tracking and monitoring those vehicles and assets and performing any required maintenance before a real problem occurs. Taking a proactive approach rather than waiting for equipment to break down enables fleet owners and managers to reduce money and time spent on maintenance.

Vehicle repair. If a vehicle, trailer or other asset needs repair, a full-stack telematics solution alerts fleet managers to the problem in real time, thus enabling quick intervention. CalAmp's solution, for example, allows fleet managers to configure alerts sent via email or text when a vehicle produces a diagnostic trouble code (DTC). Because it flags the problem immediately, fleet owners can deal with the issue proactively and drive both money and time out of the repair process.

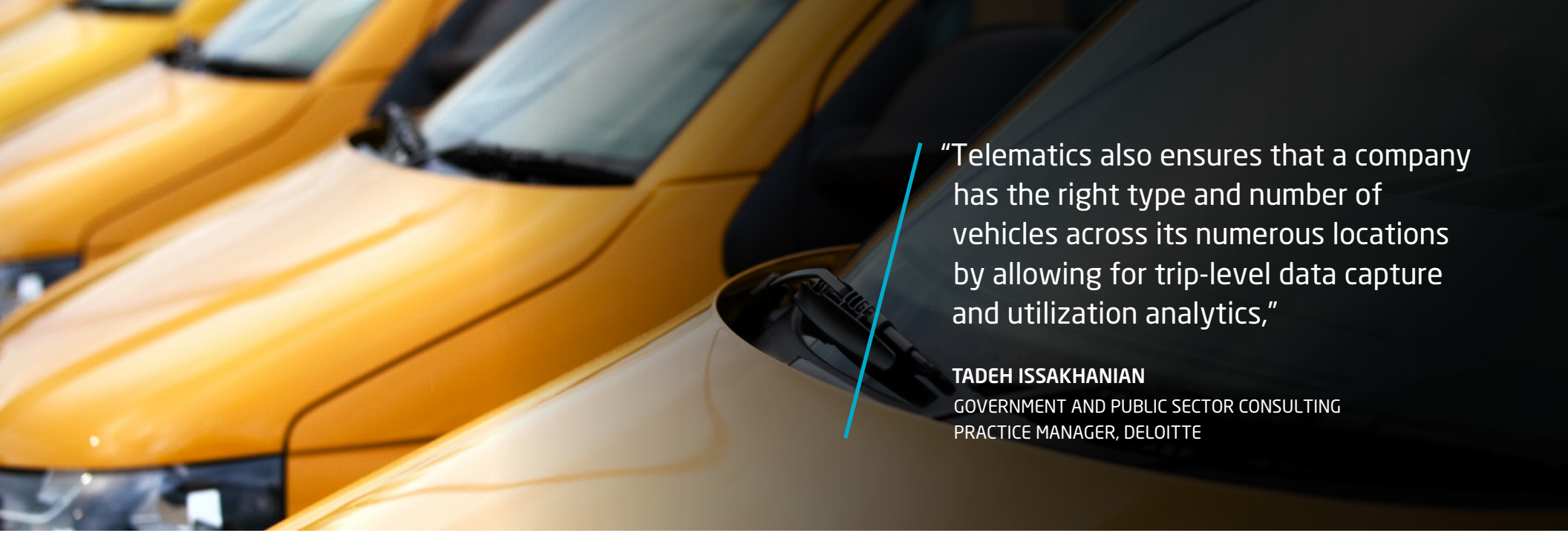


Telematics is a game-changer

As a government and public sector consulting practice manager at Deloitte, Tadeh Issakhanian has his finger on the pulse of the transportation and fleet managment industry. The biggest change he's seen over the past few years has been wide scale adoption of telematics across federal and state agency fleets through mandates and government-wide contracts.

For example, each of the General Services Administration's 200,000 federal agency vehicles includes telematics as a standard add-on to leased vehicles. "We've also seen states like California mandate telematics on all state vehicles," Issakhanian says. "The other market driver has been the success of telematics across industries in reducing operational costs and improving driver behavior and vehicle performance."

Telematics gives companies an accurate, data-driven approach to all aspects of managing their fleet of vehicles, Issakhanian explains. This helps address issues like excessive idle time resulting in higher fuel costs; identifies maintenance issues, such as fault codes, recalls and engine diagnostics, before they result in major breakdowns; and allows users to track driver locations, routes and overall fleet usage — all of which lead to more cost savings and operational efficiency.



> "Telematics also ensures that a company has the right type and number of vehicles across its numerous locations by allowing for trip-level data capture and utilization analytics,"
>
> **TADEH ISSAKHANIAN**
> GOVERNMENT AND PUBLIC SECTOR CONSULTING PRACTICE MANAGER, DELOITTE

"Telematics also ensures that a company has the right type and number of vehicles across its numerous locations by allowing for trip-level data capture and utilization analytics," says Issakhanian, who points to data accuracy as the top benefit of a telematics system compared to manual or paper-based approaches. "Knowing the data is coming directly from the vehicle in real time is a game-changer for all companies," he adds.

Telematics also gives fleet managers data they may not have access to, including driver behavior metrics like excessive speeding, harsh braking and harsh acceleration; the ability to receive alerts based on geofencing parameters; and a way to feed data into disparate software systems if necessary. Equipped with this accurate, vehicle-level data, large federal and state fleets have the necessary inputs to truly revolutionize their fleet management practices, Issakhanian says. But having the telematics and the data doesn't mean you'll know what to do with it. Though the telematics software provides some insights, it's often key for larger and more complex fleets to work with fleet analytics specialists to uncover and execute key insights. Each fleet is so unique that the parameters for each assessment and the analytics for each component of the fleet are often specialized and require input from fleet operators. So, it's important to help fleet managers uncover the true benefits of telematics and realize true ROI to get the most out of their data.

The use of telematics isn't limited to large fleets, though. In fact, fleets of all sizes can save money and improve efficiencies with a full-stack telematics solution. Once in place, these solutions provide an extremely scalable and cost-effective way to obtain fleet operations, manage fuel efficiency, reduce waste, optimize routes and make better use of tractors, trailers and other transportation assets.

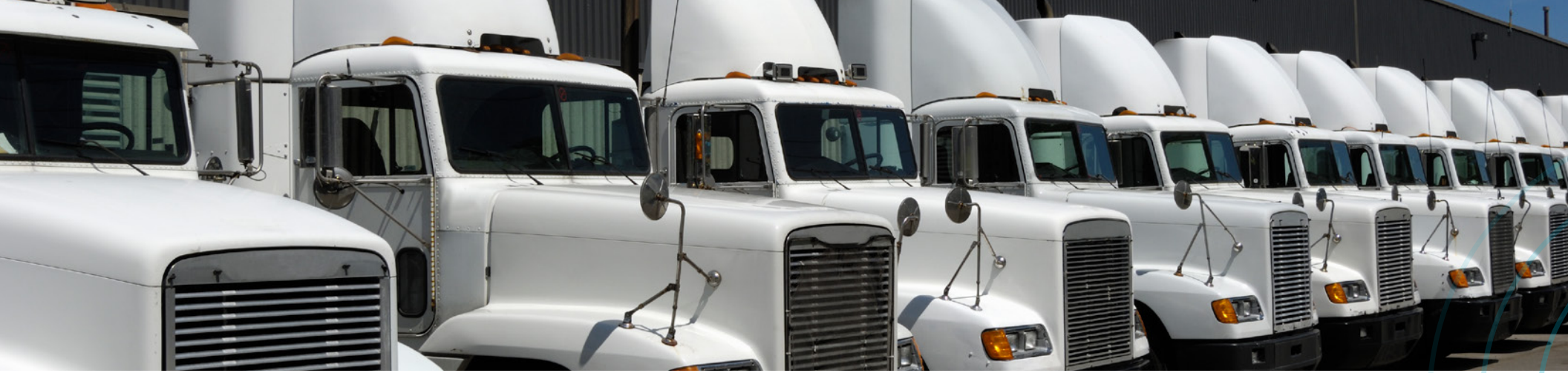
Top 10 ways a complete telematics solution improves fleet operations

As most companies are learning, the use of paper, spreadsheets, email and phone calls to manage any business process is expensive, time-consuming, prone to error and labor-intensive. Disparate technology solutions that don't "talk" to one another present similar challenges and keep companies from realizing the desired return on investment (ROI) from their technology. Fleet management is no exception to the rule and works best when a full-stack telematics solution is involved.

By using telematics-based fleet management software, companies can drive small changes in their daily operations and driver behavior. This reduces fuel consumption and, over time, translates into significant savings. Here are 10 other top benefits organizations can count on when they put a complete telematics solution in place:

1. **Improved trailer utilization with trailer tracking and cargo sensing.** Trailers typically sit idle about 30% of the time. A trailer tracking device can keep tabs on the real-time location of these assets. This helps fleet managers easily locate available trailers and pair them with trucks. Used as part of a telematics solution, cargo-sensing technology provides visibility into trailer status and supports quick decision making in today's fast-paced transportation environment. Managers can also identify any underutilized assets and make buy/sell decisions aligned with business demands.

2. **Significantly less vehicle wear and tear.** A single trailer tire underinflated by just 10% can drive a 1% increase in fuel consumption for that specific vehicle. Yet 20% of all trailers operate with at least one tire underinflated by 20 pounds per square inch (psi). The result is a dramatic decrease in fuel efficiency across the entire fleet. Telematics with a tire pressure monitoring system (TPMS) helps fleet owners save money by extending tire life cycles and addressing potential tire problems sooner rather than after a blowout or a flat.



3. **Proactive versus reactive vehicle maintenance.** The stronger the preventive maintenance program, the less downtime for trucks and the less time and money spent reallocating resources to cover for a truck that's unexpectedly out of commission. For example, telematics monitors the wheel-end temperatures and delivers alerts when wheel temperatures are rising and nearing unsafe levels, which can cause problems like wheel separation or even brake failure. Telematics can also deliver alerts, reports and reminders to fleet managers who need to know when a truck is approaching a certain mileage or engine hour threshold since its last servicing.

4. **Easier regulatory compliance.** Keeping up with the constant changes in federal and state transportation rules, guidance and requirements can be exhausting for fleets of all sizes. Fleet managers can sleep better at night knowing that their telematics solutions both automate and improve fleet compliance related to electronic logging devices (ELDs), hours of service (HOS), driver vehicle inspection reports (DVIR) and the International Fuel Tax Association (IFTA).

5. **Fewer manual tasks.** With a labor shortage still in full effect, companies need systems that can handle repetitive tasks and that free up employees to manage more important, creative or revenue-generating projects. Telematics not only helps organizations improve their own internal processes, but it also makes jobs more enjoyable and less stressful for workers who want to work for companies that have their best interests in mind.

6. **Better asset utilization.** Hiring drivers, maintaining vehicles and buying fuel are all getting more expensive. Yet a fleet can't operate properly without all these pieces of the bigger puzzle in place. Telematics helps companies make better use of their labor resources, identify the best possible results, reduce idle time and improve dispatching efficiency.

7. **All real-time and historical data is in one place.** In addition to providing real-time, actionable data, telematics also provides historical insights that can be reviewed at any time. Real-time data helps companies respond or monitor very quickly and on a micro level, while historical data will help analyze and improve on big-picture or macro trends within their fleets.

8. **Operate more sustainably.** Transportation accounts for around one-fifth of global CO2 emissions, and trucking's contribution to international trade's CO2 emissions is expected to grow to 56% by 2050 — up from 53% in 2010. In the United States, greenhouse gas (GHG) emissions from transportation account for about 27% of total GHG emissions, making the industry the largest contributor in the nation. With end customers and business partners expecting companies to reduce their carbon footprints, telematics helps companies keep better controls and make better decisions that may effectively reduce their vehicles' GHG emissions. Not to mention many telematics solutions can also help support the specific needs of fleets integrating EVs into their vehicle mix.

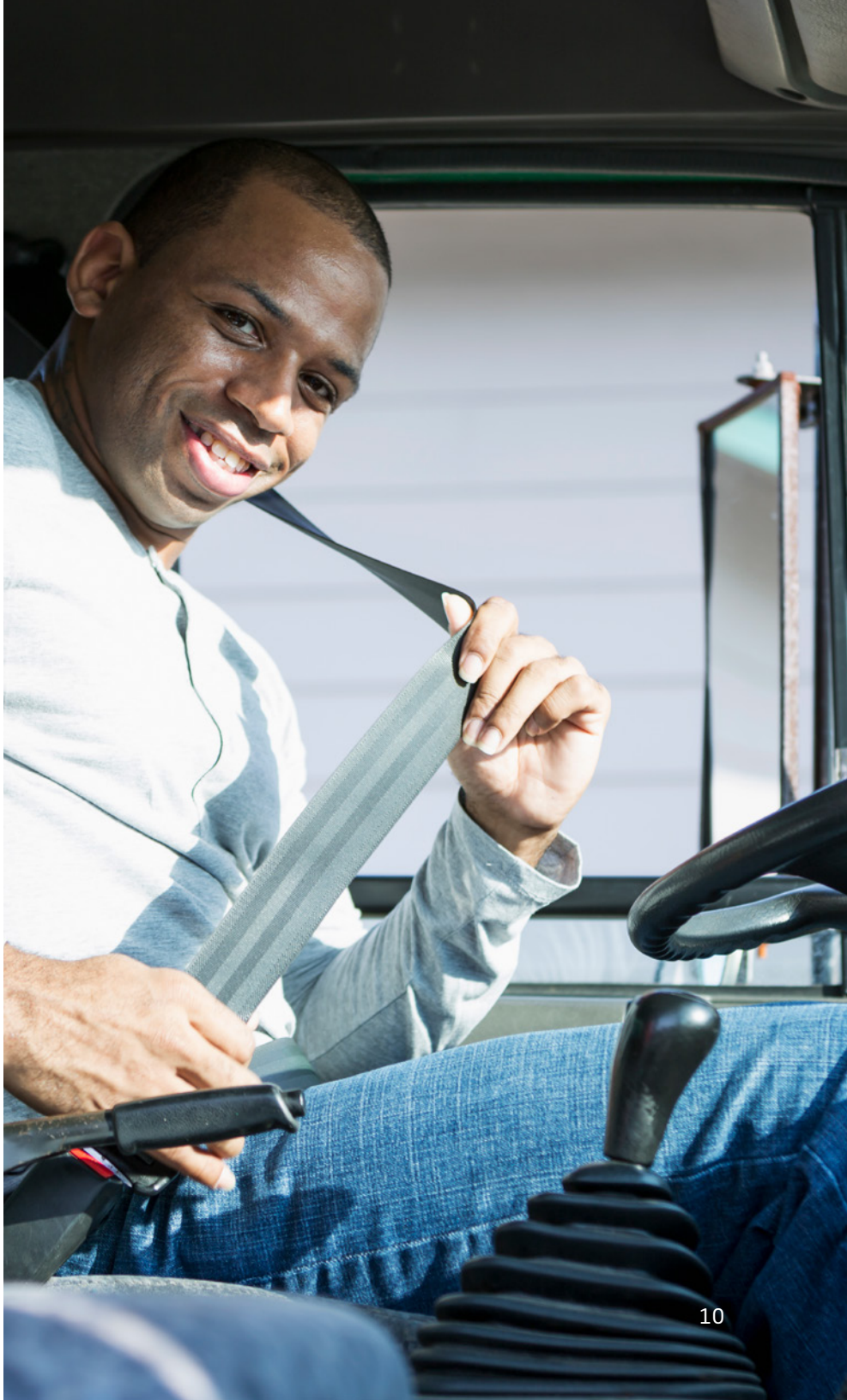
9. **Improve safety on the road.** Reducing collisions is a top priority for fleet managers, and for good reason: Repairs and injury claims can add up fast. By providing in-cab alerts, real-time crash alerts and video clips (via smart dash cam), a complete telematics solution helps companies identify opportunities for additional driver training. In-cab alerts, for example, empower drivers to self-correct in real time and help keep their attention focused on the road. Telematics delivers data-driven insights so fleet managers can take quick action, develop safety policies and/or establish driver rewards programs based on benchmarks, highest scoring drivers and other metrics.

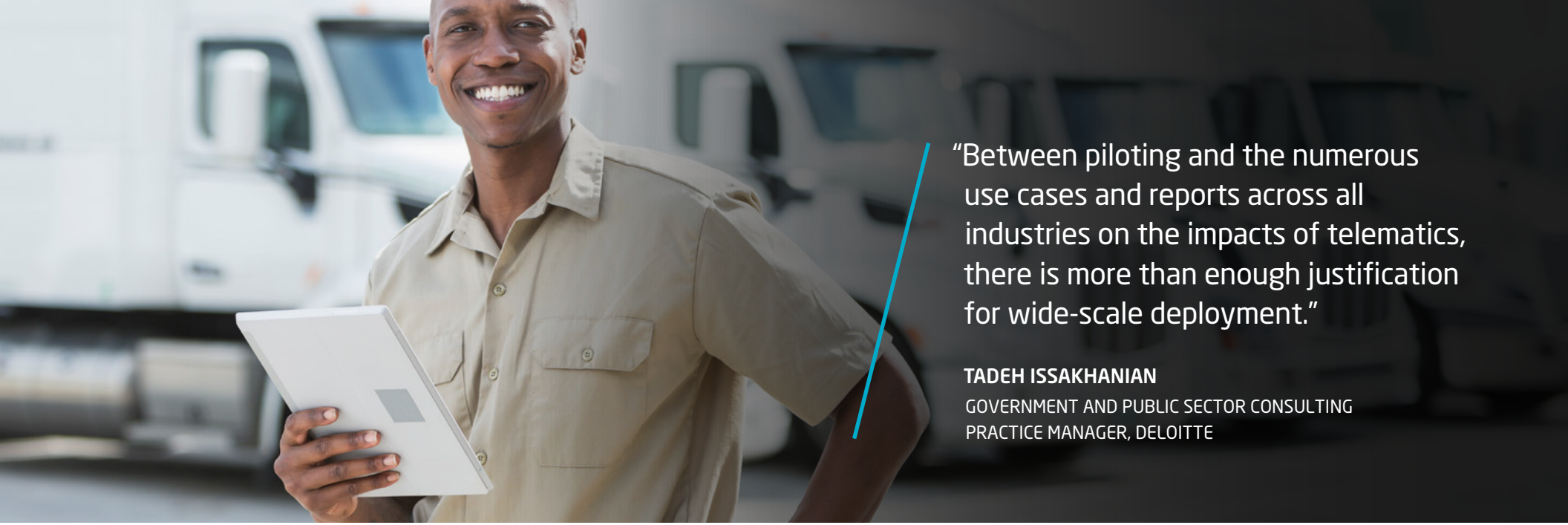
10. **Everyone works from the same playbook.** Many fleets are using separate systems and/or vendors to handle individual tasks that go into overall fleet management. Dispatchers may use one system, fleet managers have their own solution, and drivers use onboard ELD systems. A fleet telematics solution can unify those systems and be customized to meet your specific needs. By aggregating and displaying key transportation-related data in the fleet management platform — and then sharing that data with outside systems as needed — telematics gets everyone working from the same playbook.

Telematics: as standard as seatbelts and airbags

With all the pressures facing fleets today — including the ongoing push to do more with less — managers must do everything in their power to operate more efficiently and safely. The pressure of the driver shortage alone has created a pressing need for fleets managers to do whatever it takes to make drivers' lives easier so they stay happy and in place. That includes ensuring they have the right technology, which can help boost driver satisfaction and morale while also saving money, improving efficiencies and enhancing customer service.

"In light of the challenges that companies are dealing with right now, fleet managers really need to be on their games when it comes to managing customer service and satisfaction requirements," says Bill Westerman, vice president of product management at CalAmp. "Companies need solutions that keep their operations running smoothly and don't create even more problems for them."





> "Between piloting and the numerous use cases and reports across all industries on the impacts of telematics, there is more than enough justification for wide-scale deployment."

TADEH ISSAKHANIAN
GOVERNMENT AND PUBLIC SECTOR CONSULTING
PRACTICE MANAGER, DELOITTE

The good news is that piloting telematics technology is simple and inexpensive, and most vendors are motivated to prove the value of their solutions. "Between piloting and the numerous use cases and reports across all industries on the impacts of telematics, there is more than enough justification for wide-scale deployment," says Deloitte's Issakhanian.

"In fact, there's no reason for companies with more than 50 assets in their fleets not to be tracking operations, maintenance, routes and driver safety through a telematics solution of some kind."

Looking ahead, Issakhanian expects telematics usage to continue growing rapidly in the coming years. He also expects OEMs to integrate connected vehicle capabilities directly into their models and for telematics vendors to embed more predictive analytics and artificial intelligence into their solutions. These innovations will support improved maintenance, real-time routing, driver safety and fleet operations as a whole. Adds Issakhanian: "It's becoming more and more uncommon to find a non-telematics-enabled fleet in a world where telematics is becoming as standard as seatbelts and airbags."

CalAmp®

CalAmp (Nasdaq: CAMP) provides flexible solutions to help organizations worldwide monitor, track and protect their vital assets. Our unique combination of software, devices and platform enables over 14,000 commercial and government organizations worldwide to increase efficiency, safety and transparency while accommodating the unique ways they do business. With over 10 million active edge devices and 275+ issued or pending patents, CalAmp is the telematics leader organizations turn to for innovation and dependability. For more information, visit calamp.com, or LinkedIn, Facebook, Twitter, YouTube or the CalAmp Blog..

LEARN MORE

BY INDUSTRY DIVE

studioID is Industry Dive's global content studio offering brands an ROI rich tool kit: Deep industry expertise, first-party audience insights, an editorial approach to brand storytelling, and targeted distribution capabilities. Our trusted in-house content marketers help brands power insights-fueled content programs that nurture prospects and customers from discovery through to purchase, connecting brand to demand.

LEARN MORE