ORBCOMM®
CONNECTING THE WORLD'S ASSETS

E-BOOK

CONSTRUCTION TELEMATICS

11 QUESTIONS
to ask your telematics provider

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New technologies equal new streams of business intelligence data.

95% of business intelligence data in construction is unused.

The disconnect between people, machines and processes creates delays, increases cost, creates risk, and deviates from predictable outcomes. In recent years, construction telematics has moved from a "nice-to-have" to a "must-have" because its business intelligence facilitates increased safety, project efficiency, equipment longevity and profit margin control.

We provide fleet managers with flexible, across brand, telematics solutions that bring together actionable data beyond entry-level GPS location, runtimes and mileage to maximize utilization and productivity. Our solutions are an integral part of maintenance programs and help protect your equipment from theft or loss.

Synchronized solutions that allow machines to talk amongst themselves, in a common format for data collection and analysis are the most effective at managing mixed fleet telematics.

With our solution, data is housed in a secure cloud environment with configurable user controls and permissions. Data is easily accessible from anywhere in the world through web portals or via API for third-party application integrations.

ORBCOMM solutions have evolved over the years serving construction companies' telematics needs. Our award-winning heavy equipment fleet management solution is built on industry best practices and includes a powerful cloud application, multi-network connectivity and rugged, flexible devices that deliver end-to-end benefits to fleet owners. Before you choose your first telematics partner—or consider switching to a new provider—make sure you ask your provider these 11 key questions.

1 How can I track a wide range of different machines?

Construction sites are made up of different types of heavy equipment, fleet vehicles, machines and tools—of all shapes and sizes. The challenge is to find a range of certified tracking devices that connect to different types, brands, makes, models and sizes of assets—with data connectivity that includes both cellular and satellite to ensure you always have coverage—and easy-to-use cloud platforms to see, analyze and act on the data.

Whether you have excavators, dozers, cranes, pavers, loaders, graders, engine-power generators, work trucks, over the road trucks, containers, trailers or tools, ORBCOMM has a solution to match. Our cellular, satellite and dual-mode Internet of Things (IoT) hardware solutions are rugged, reliable and tailored for the construction industry. Our tracking hardware includes IoT devices, sensors and mobile apps, and solutions are delivered on flexible mobile and web-based software platforms that can be configured to optimize any business process.

2 How can I extract data from different manufacturers?

Most OEM telematics solutions provide their data in proprietary formats. With engine run time and engine hour data coming in different formats from different machines, it is challenging to collect—and impossible to scale.

ORBCOMM's solution utilizes the AEMP 2.0 standard. As a mixed-fleet telematics provider, we collect data from different machines, standardize and analyze it. We then allow customers to see all their heavy equipment information on the same screen—irrespective of the make, model or year.

We standardize and analyze all your telematics data from OEM manufacturers such as JLG, Komatsu, Hitachi, Volvo, Doosan and other OEM manufacturers. Non-AEMP standard data can also be accommodated.

3 Can I get everything I need from one telematics provider?

Having to log onto different telematics suppliers for different machine types is a non-starter for many equipment fleet managers. Multiple systems costs construction managers time, resources and money and need to be eliminated.

With ORBCOMM, you get the whole picture. Data is gathered in the field using multiple technologies for identification, location and condition monitoring: BLE, RFID, WIP, barcode, Wi-Fi, GPS, RTLS, cellular and satellite. Powerful cloud applications show real-time location, and geofences alert when machines enter or leave worksites. Usage data, automatic service alerts, fault codes and sensor alerts identify potential maintenance issues.

ORBCOMM's FleetEdge platform will give you visibility and control across your heavy equipment mixed fleet. Our much-used Electronic Logging Device (ELD) platform meets all U.S. and Canadian ELD compliance requirements for work trucks requiring compliance to the FMCSA's ELD mandate. The RFID platform is used to locate tools and eliminate costs due to lost or hard to find inventory. All from one provider.
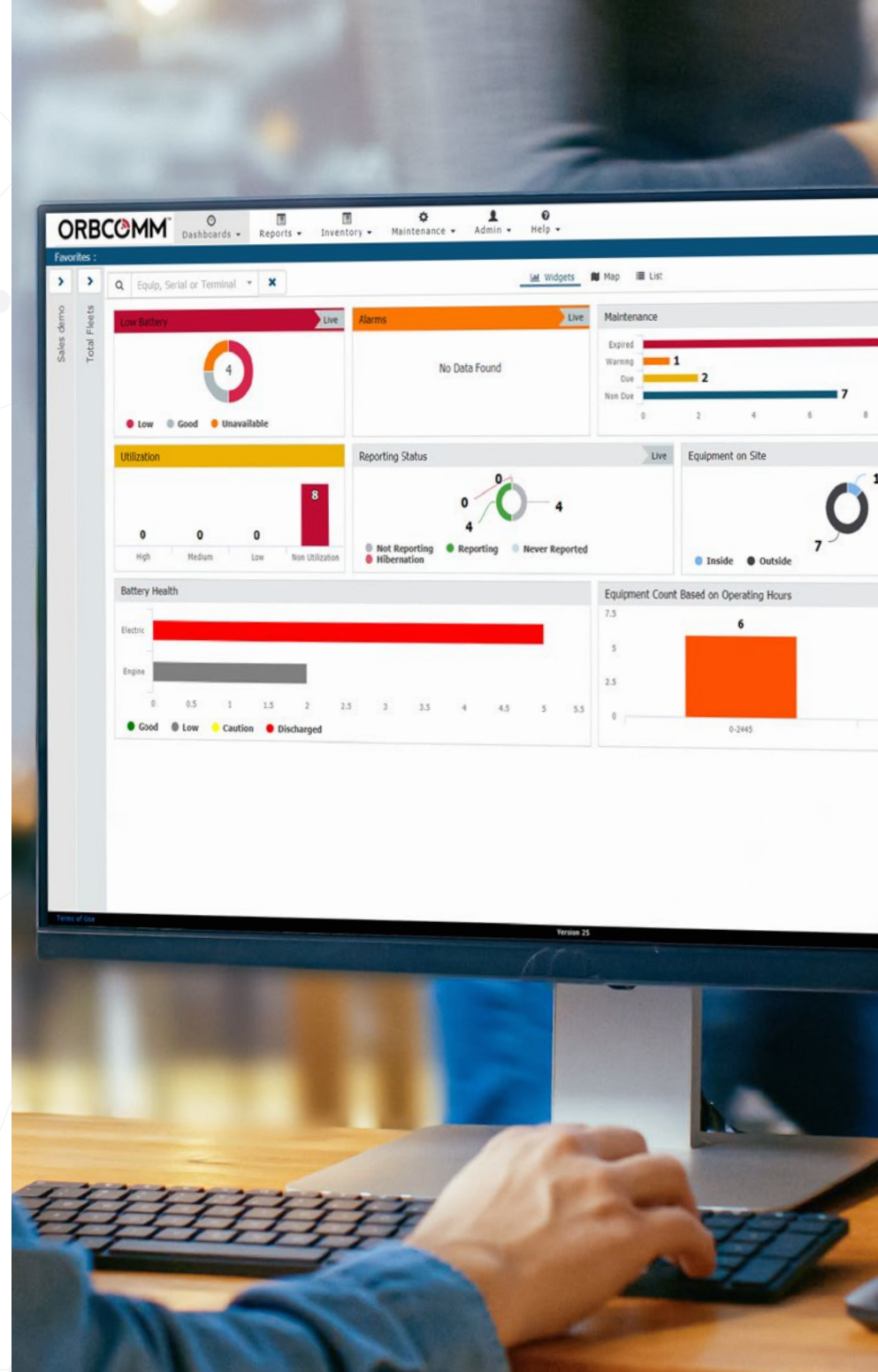
4 How do I understand my true asset utilization?

Excessive idling or underutilized assets cost construction businesses money. For a construction job, equipment can represent up to 20% of the cost.

Out of sight is out of mind. Without visibility, assets can go underutilized, reducing your return on investment, or overutilized, causing wear, maintenance and cost issues. Having too little equipment on a site may reduce productivity, prompt machine overuse and lead to breakdowns.

You will always know where your assets and vehicles are with ORBCOMM's construction fleet management solution. You will be able to locate equipment easily and quickly, see how much each machine is being used on your worksites and which ones are idle, investigate the reasons and reallocate them to where they can be productive.

5 How do I know if my assets are operating efficiently?

Without machine hours data, job requirements can be overestimated, unnecessary equipment rented, and jobs may be bid for using inaccurate data.

ORBCOMM's technology improve profitability by revealing which additional asset types you need, which assets to stop renting or which assets you need to dispose of. Real-time connectivity ensures that accurate and reliable run-time data is always available. Historical reports can compare machine performance across different job sites and locations. Sorting, filtering and customizable thresholds measure key performance indicators across similar equipment and models in the fleet.

With access to accurate and reliable engine hour data, you can track and assign equipment and engine hours for improved job and worksite billing. Utilization reports will help you analyze jobs more efficiently, bid for jobs more accurately and ensure you are not losing money through unaccounted costs.

6 How can telematics make my site safer?

Construction equipment telematics has the potential to cut safety violations and injuries in the construction industry, improve safety records and promote a safer environment before accidents occur.

By using telematics to create a culture of safety on-site, equipment managers can lower accident rates, avoid higher insurance premiums and maintain compliance with OSHA safety standards. Operators can stay within speed limits. Maintenance schedules can be monitored. Location-based geofences can be used to set boundary lines around "danger zones", limiting how close machines can approach specific areas or structures—and time-based limits can reduce the risk of unauthorized use.

Facilitating safe and efficient operation of equipment and vehicles with our devices and software is a top priority at ORBCOMM. We help ensure operator and driver safety with electronic driver behavior monitoring, verbal in-cab coaching, and immediate alerting of accidents, roll overs, or driver "panic button" requests for help. We can also mitigate untrained or uncertified personnel from operating equipment with our "badge-in" access process.
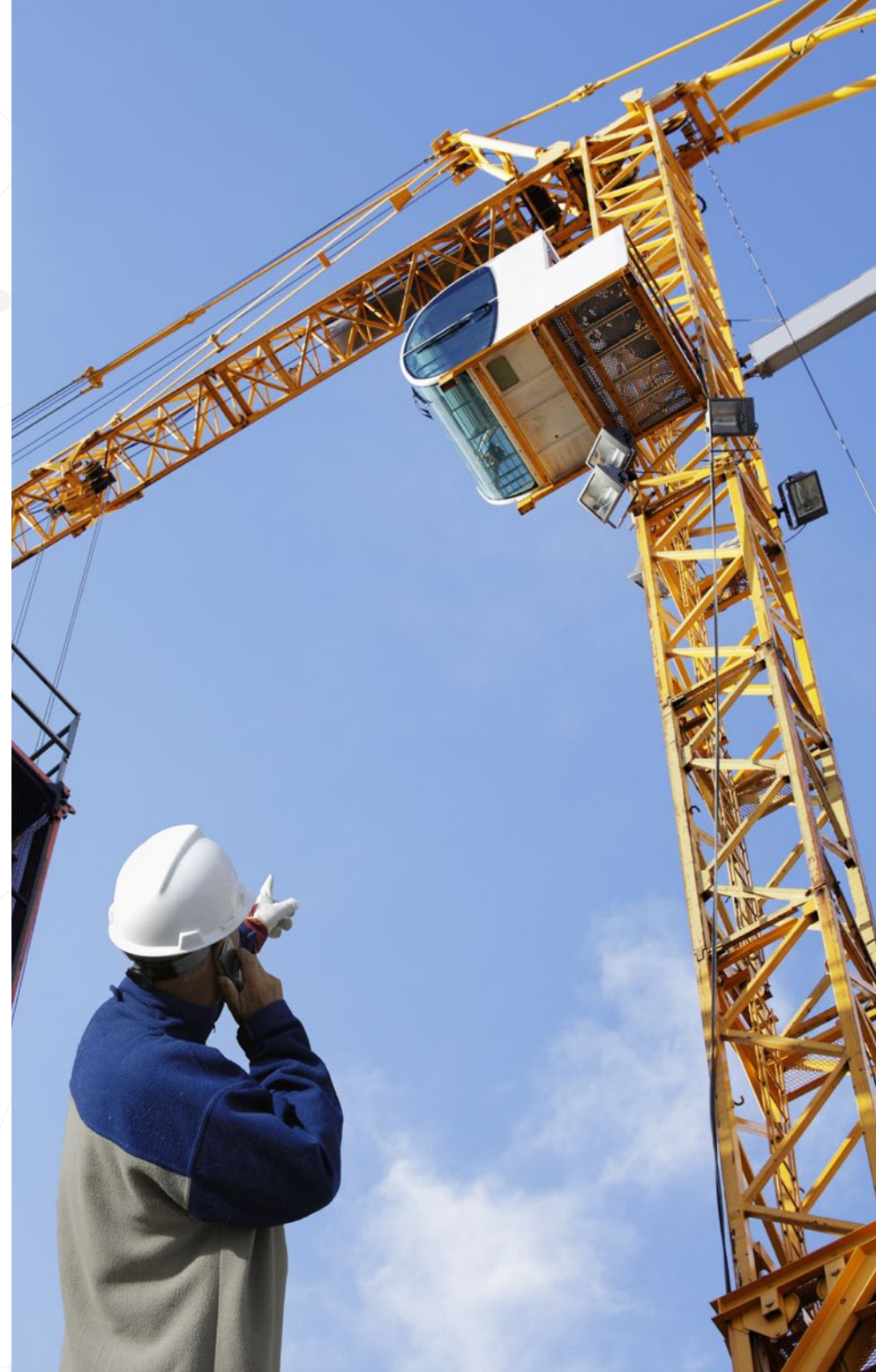
7 How do I avoid unnecessary equipment breakdowns?

Sudden and unexpected breakdowns can result in unnecessary delays, billing issues, lost revenue and ultimately, customer dissatisfaction.

The best construction telematics software will allow you to predict equipment downtime and practice proactive fleet maintenance planning. Maintenance alerts based on actual asset usage should be available and configurable by machine. By integrating telematics data into a maintenance management program, unplanned outages can be minimized by automating the scheduling of regular maintenance tasks.

The benefits are reduced repair and labor costs, and extended equipment life—through preventive maintenance and underperformance data—which suggest that components may be failing and need replacement.

8 How can telematics help my fleet to save fuel?

Any leading telematics system should allow you to compare machines, operators, projects and job sites for average fuel consumption, machine idling, operational hours, usage habits and speed.

Start by taking a close look at engine idle time. By minimizing your idle time, you could save up to 10% on fuel. Then, by proactively using maintenance scheduling reports, you can keep your machines in their best condition so that repairs and downtime are less likely, reliability is maintained, and emissions are reduced. Using utilization reports can help you minimize the number of days you need equipment and the fuel to run it.

Telematics can also assist in identifying unexpected or unauthorized fuel usage, where fuel drops have occurred and the circumstances of the change.
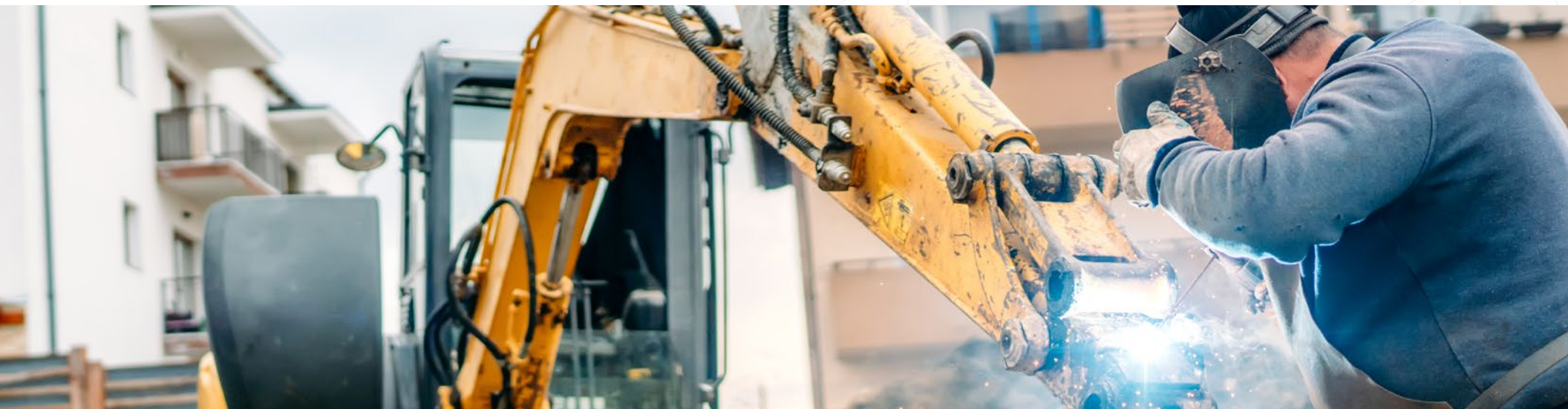
9 How do I minimize equipment theft or loss?

Heavy equipment and job sites are attractive targets for thieves. Through loss or theft, construction companies can lose a significant amount of their equipment each year. Apart from the obvious replacement costs, the hidden costs are potentially more damaging, such as time spent looking for assets, rising insurance premiums, holding spare inventory and project delays.

Combatting theft demands a range of technologies. GPS tracking allows equipment managers to be alerted to any unauthorized use 24/7. Location-based geofences monitor equipment on site, in storage yards or warehouses. Time-based geofences restrict equipment use to certain times of the day. Alerts signal any exits or entries. Breadcrumb history shows where the asset was last located.

ORBCOMM's radio frequency tracking solutions delivers asset visibility and efficient management of inventory, high-value equipment and tools. These solutions reduce labor and the unexpected costs associated with asset identification and management, inventory audits, temporary loss, redundant purchasing, theft, and schedule slips due to material availability challenges.

10 How can telematics control my haulage costs?

Dirt haulage is a critical part of any job and consumes a large amount of resources. By reducing even a small percentage of inefficiency, contractors can recover significant revenue.

With the ability to automatically track and analyze dirt haulage, companies optimize truck usage, streamline workflow, save administration time reconciling invoices and ultimately increase the probability of hitting bonus targets and timelines.

ORBCOMM can automate the process of tracking and the accounting for loads of fill during excavation and construction. By linking accounting software, truck RFID tags, portable barcode scanners and bar-coded tickets, we can reduce labor costs, reduce the number of haul trucks needed on a job, and even ease work on the jobsite. The system can monitor material types, cubic yards, site locations, scan operator names, and more.

11 Will your solution scale with my business needs?

Many construction telematics companies work with one extreme or the other. They either provide a low-cost, 'dot on the map' minimal functionality solution—or a system so complex that it is too difficult for a small to medium size contractor to implement.

ORBCOMMM's solutions are different—designed to work on businesses of every size. We have hardware solutions for a variety of assets, from powered to non-powered, from cranes to generators, from downtown cellular to desert satellite, from factory-fit to aftermarket install.

Our cloud software is intuitive for anyone to use. And with 800 employees and offices in 15+ countries, ORBCOMM will be able to scale with you as your business grows.

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Visit our website to learn more about our heavy equipment telematics. Ready to take the next step? Contact **sales@orbcomm.com** for a complimentary fleet telematics solution assessment.

ORBCOMM is a global leader and innovator in the industrial Internet of Things, providing solutions that connect businesses to their assets to deliver increased visibility and operational efficiency. The company offers a broad set of asset monitoring and control solutions, including seamless satellite and cellular connectivity, unique hardware and powerful applications, all backed by end-to-end customer support, from installation to deployment to customer care. ORBCOMM has a diverse customer base including premier OEMs, solutions customers and channel partners spanning transportation, supply chain, warehousing and inventory, heavy equipment, maritime, natural resources, and government. For more information, visit ORBCOMM.com.

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