CLUE

# How to Choose A Construction Equipment Management Software

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# Executive Summary

For contractors, selecting the right construction equipment management software is a strategic decision that impacts efficiency, cost management, and long-term business competitiveness. Choosing the right software improves productivity, reduces downtime, and streamlines operations, ensuring your company stays competitive.

Four Key Considerations When Choosing the Right Software:

## 1. Avoid Hardware Lock-In

Proprietary hardware ties your operations to one vendor, driving up costs and limiting flexibility.

## 2. Choose a Complete Solution

Surface-level tools without telematics or ERP integration fail to capture critical data and increase labor costs.

## 3. Avoid Obsolete Legacy Software

Outdated, on-premise systems are costly to support, hard to integrate, and unable to adapt to modern workflows.

## 4. Don’t Underestimate the Importance of Strategic Implementation

Even feature-rich software fails without proper training, data migration, and vendor guidance during rollout.

## Bottom line

# The software you choose today will shape your margins, asset performance, and competitive advantage for the next decade.

# This is not just a technology decision. It is a business-critical choice.

As soon as a construction contractor is running 50 pieces of yellow iron, software that facilitates equipment management with data from telematics and equipment-mounted sensors is no longer a nice-to-have.

***It's table stakes.***

Struggling with manual processes, low utilization rates, and unplanned downtime—while competitors aren't—puts a contractor at a significant competitive disadvantage.

The largest contractors may have the resources to absorb a false start or two while selecting or implementing an application, or the administrative staff to reconcile duplicate or non-integrated systems. But for most contractors with a growing fleet, selecting the wrong construction equipment management software can slow growth, reduce efficiency, and create challenges that ripple across projects.

Modernizing equipment operations is no longer optional — it directly impacts margins, utilization, and competitiveness.

According to CONEXPO-CON/AGG

# 60 percent of construction companies in the United States rely on telematics to monitor their equipment and vehicles.

## A 2022 study revealed that almost 40 percent of contractors surveyed were already using GPS-enabled construction equipment management software and another 20 percent were at the budgeting and planning stage.

Modernizing equipment operation and maintenance is an organizational imperative right now. But be careful — selecting construction equipment management software is not just the equivalent of choosing a Cadillac versus a Camry. Some software offerings are missing important components, and others are yesteryear's technology and have not seen recent evolution or investment.

Here are four key factors to consider when selecting construction equipment management software.

01

# Avoiding lock-in to proprietary hardware

Imagine you've selected your next construction equipment management software, excited to start making more data-driven decisions, decrease unplanned downtime, and increase utilization. However, these benefits and the resulting return on investment (ROI) may not materialize if the hardware component of the solution isn't flexible.

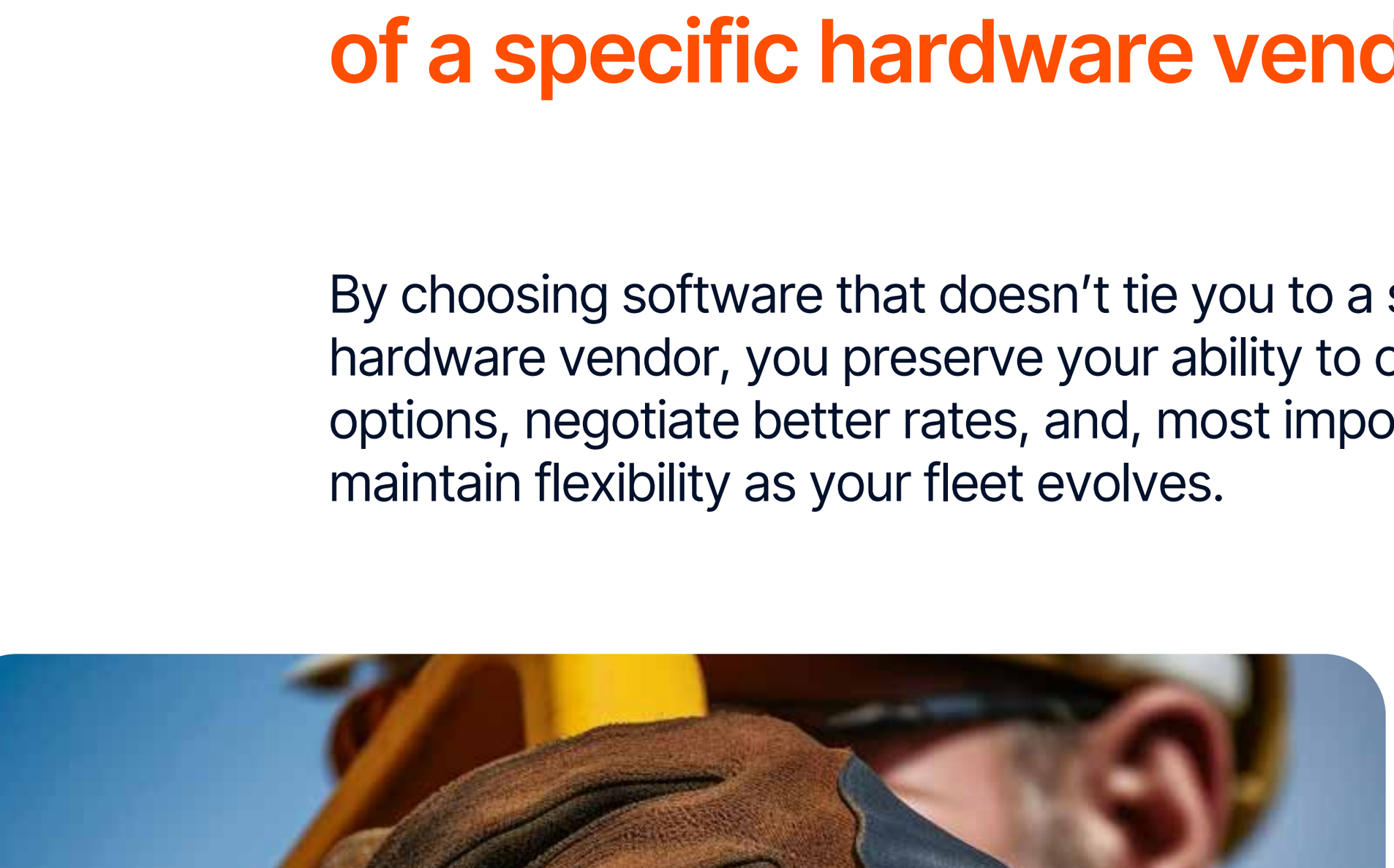
**Most contractors already rely on OEM telematics built into their machines—the challenge is integrating those feeds without paying for additional hardware.**

When software is tied to a specific vendor's hardware, it can severely restrict your long-term flexibility.
By relying on proprietary hardware, you limit your ability to shop around for better or more cost-effective options. This becomes especially problematic when it's time to renew your contracts, as switching hardware providers becomes difficult, especially if you've deployed a large number of devices.

Instead, choose construction equipment management software that integrates with multiple telematics systems and doesn’t lock you into a specific hardware provider. Major vendors like Motive, Samsara, Geotab, and Lytx provide connected operations clouds with broad device support. These platforms can connect to telematics from various manufacturers, providing more flexibility and competitive pricing when selecting hardware.

**Moreover, integrating with these systems means you can take advantage of more advanced data and insights, making better decisions without the limitations of a specific hardware vendor.**

By choosing software that doesn’t tie you to a single hardware vendor, you preserve your ability to compare options, negotiate better rates, and, most importantly, maintain flexibility as your fleet evolves.



02

# Choosing a comprehensive solution

Selecting construction equipment management software is not just about choosing between two options like a Cadillac versus a Camry. It’s about finding a solution that can handle all the tasks required by a fleet owner. It’s more like running a full construction site with a complete crew rather than trying to manage with only half your team.

Many generic tools provide surface-level features—things like labor, parts, and maintenance cost management, just to check off the necessary boxes. However, these tools often lack the depth needed to be truly effective.

When comparing software solutions, fleet owners should go beyond the surface-level checklist and evaluate whether they are getting:

- Time-saving tools like automated work order creation from equipment fault codes and dynamic forms for manual data entry.

- Direct API integrations with not only the big OEMs (like Cat, Case, Bobcat) but also a range of other telematics systems, whether they use the AEMP standard or a proprietary one.

- Mobile apps that allow users to close work orders from a mobile device, even when there’s no data or cell connection, and then synchronize data when a connection is available.

- Role-based security ensuring that each user (mechanics, supervisors, finance managers) sees only the data needed for their role.

- Task tracking on maps, with priority-based task organization.

- Proactive maintenance tools, like preconfigured maintenance dashboards, preventive maintenance triggers, and bulk generation of work orders to automate recurring tasks and spare parts reorders.

- Cost control and ROI measurement based on labor, parts, and service costs.

Contractors often recognize the functional limitations of certain software but still try to implement them without fully understanding the gaps. Others might try to rely on the limited capabilities of broad connected operations cloud vendors, thinking they can get by with that alone—ignoring the need for integration with a more capable construction equipment management system.

Both approaches create bigger challenges because they don't just bypass essential functionality but fail to capture key data, such as service history, utilization data, and diagnostic information. These are lost once contractors realize they need to migrate to a more comprehensive solution.

Moreover, if the software doesn’t integrate properly with the fleet’s system of record (ERP), it’s incomplete. Even if there is a standard integration, can it assign equipment time to the right project or phase code? Can it track the full cost of maintaining a piece of equipment, including repair-or-replace decisions based on projected revenue from the equipment's productivity?

Fleet owners must consider whether the software integrates seamlessly with multi-industry ERP systems and construction-specific ERP software (such as Foundation, Viewpoint Vista, CMiC, Sage Intacct, etc.). How robust is the integration? If no standard integration exists, how will the system exchange data, such as equipment time and timecards, between the equipment management software and ERP?

The integration between equipment management software and ERP is critical for success, but so is the ability to collect data directly from the equipment itself. Selecting software that doesn't connect to equipment may seem cost-effective initially but can be a costly oversight in the long run.

For smaller contractors, the initial cost of connecting equipment may seem like a way to save money. However, the value of real-time, automated data collection is immense. Connected equipment enables consistent, reliable, and automated capture of:

- Real-time and historical location data
- Runtime/engine hours, critical for tracking usage and scheduling preventative maintenance
- Engine diagnostics/fault codes, providing insights into potential equipment issues
- Fuel level and consumption, helping optimize fuel usage
- Maintenance alerts, triggered by factors like calendar days, runtime hours, and odometer readings
- Inspection reports that automatically generate work orders when needed

Capturing and preserving this data unlocks valuable opportunities. It builds a reliable maintenance history, supports predictive maintenance, and enables more accurate forecasting for parts and service demand.

When software collects data automatically, it improves accuracy, strengthening the foundation for predictive maintenance and process automation.

03

# Avoiding obsolete legacy software.

When contractors evaluate construction equipment management software, it’s crucial to consider not only its functional features but also its underlying technology.

Software that has been on the market for decades may boast a long list of features and appear reliable due to its large install base. However, many older systems were originally built for client-server architectures or even desktop environments in the 1980s or 1990s, designed to run on-premises on racks of computers. Today, these legacy systems are often pushed into cloud-hosted environments or operate as rudimentary Software-as-a-Service (SaaS), which can lead to performance issues and integration challenges.

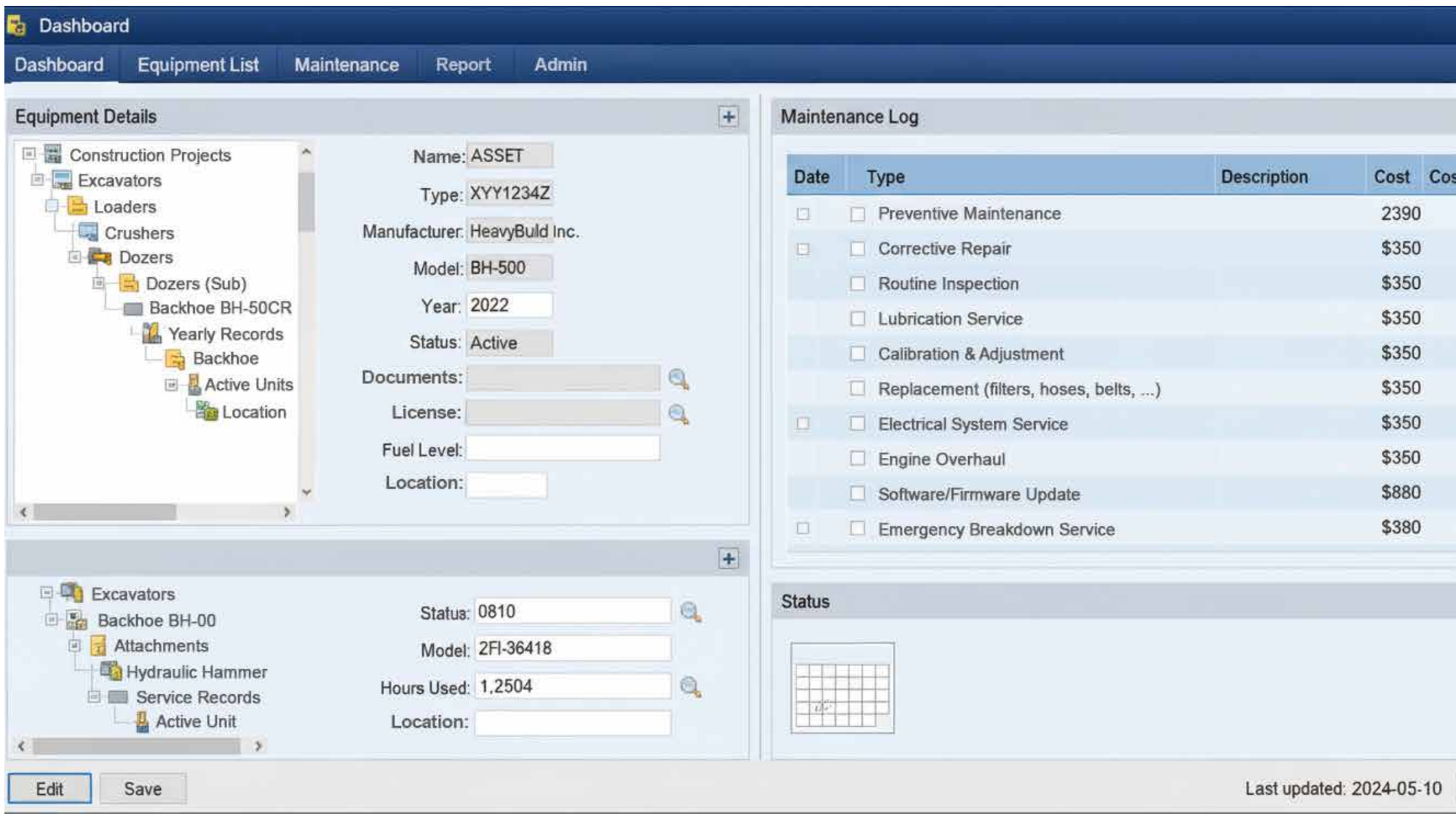
Contractors often select these outdated systems because they may already be purchasing other software from the same vendor that wants to expand its share of their business. But would they choose that equipment management software based solely on its merits? Likely not. These systems struggle to integrate with modern software like ERP and have difficulty adapting to a fleet owner’s evolving business processes, which is essential for effective asset management.

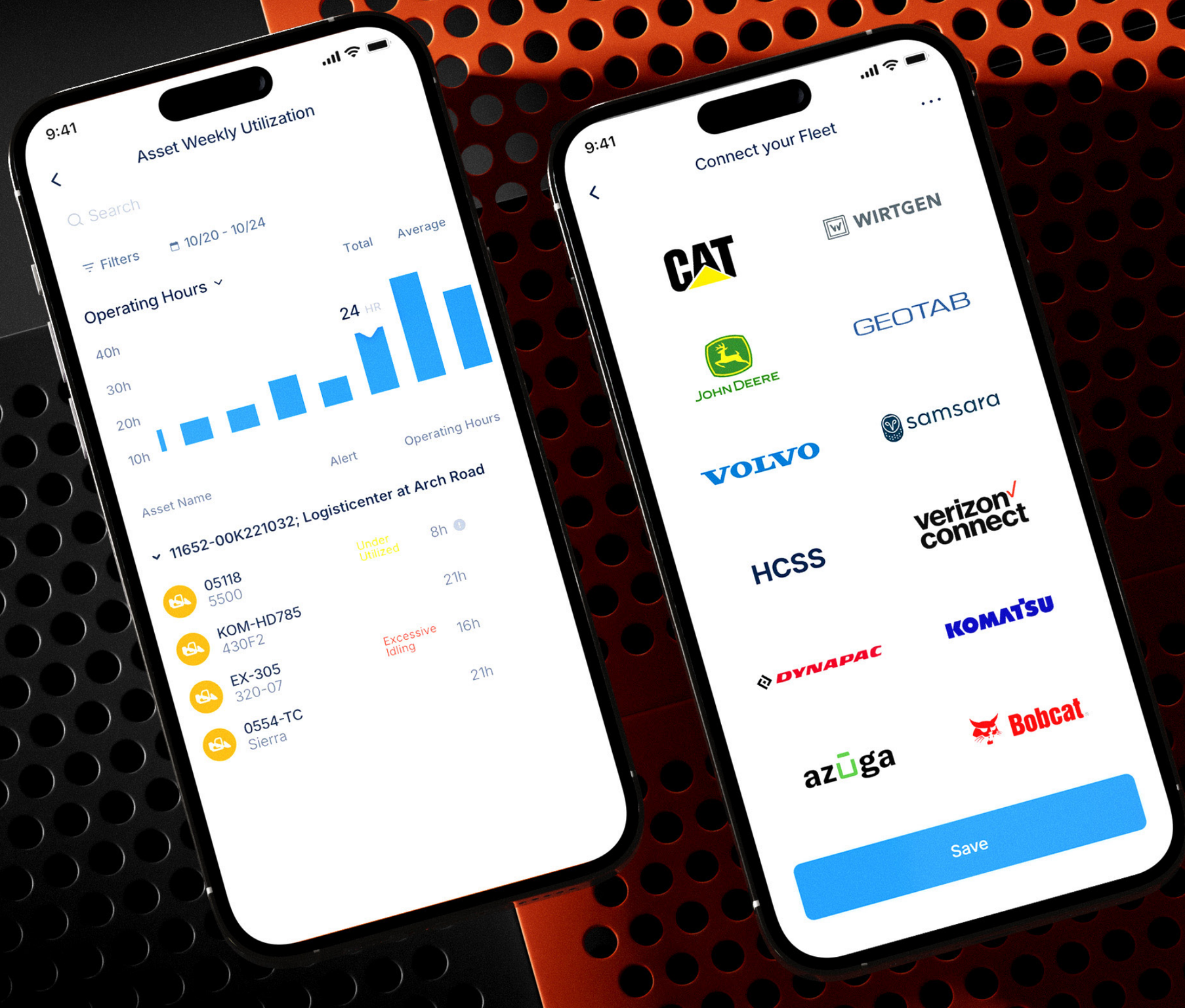
Think of it this way: it's like using a backhoe from the 1980s. While it was once reliable, it now lacks the modern capabilities that can enhance efficiency and comfort. Yes, it will still “connect,” but is that enough when what you need is the capability to navigate, communicate, and run the applications that drive your business today?

Modern, flexible construction equipment management software should seamlessly integrate with other construction software like bidding, project controls, and reporting, extending equipment data into the wider construction business processes. Quality software will aggregate data from multiple sources, ensuring a single version of the truth contractors need.

A significant drawback of legacy systems is their reliance on outdated programming languages and technologies, which hinder their evolution. These systems struggle to integrate with newer software products, become more expensive to maintain, and are increasingly unattractive to new software developers.

**Contractors should avoid spending resources to keep an outdated system alive and instead invest in a modern solution with a promising future.**






# Modern software built for the cloud offers the ability to create new integrations with other software quickly and easily, often through application programming interfaces (APIs) or direct data exchanges.

Software vendors typically provide standard integrations with products from other vendors; such as ERP software, telematics, maintenance management, and even competing equipment management solutions. However, contractors need to anticipate how their integration needs will evolve over time and make sure the software they choose can accommodate those changes.

One of the most important factors in selecting software is due diligence on how quickly the vendor can implement new integrations or features as needed. Legacy systems with limited APIs can pose serious challenges, making it hard to integrate specific workflows that might not be supported by the software's existing capabilities.

04

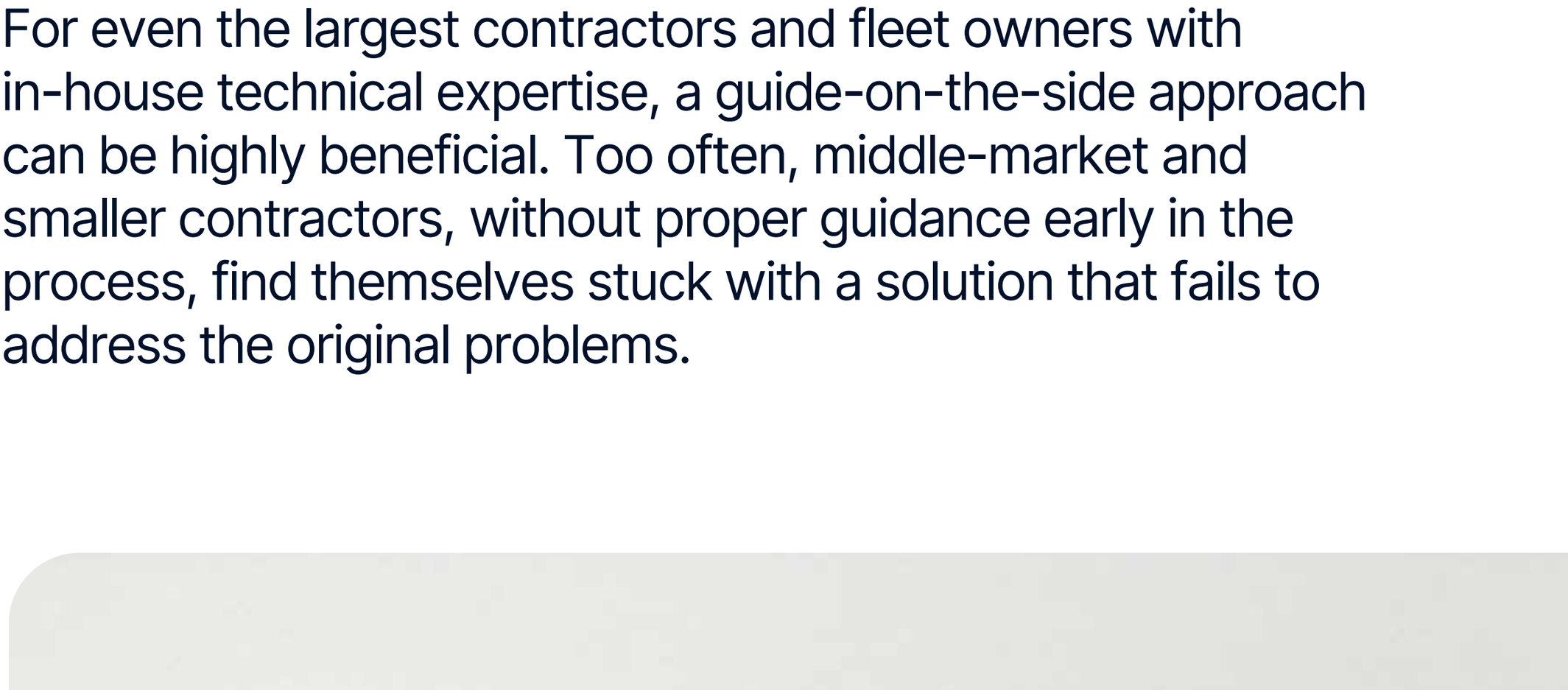
# Recognizing the importance of strategic implementation.

Even the best software can fail if rollout and adoption aren’t properly handled.

When vendors present construction equipment management software, they often emphasize simplicity by suggesting a quick and easy implementation. While technical implementation should indeed be swift, aligning the software with your business processes, goals, and other systems is essential for long-term success. Additionally, it’s critical to ensure your team is aligned with the new operating environment.

Modern construction equipment management software typically offers streamlined methods for migrating data from legacy systems. However, the vendor must ensure the data is correctly structured, cleaned, and harmonized to facilitate a smooth transition. This ensures not only a successful technical migration but also a positive, lasting user experience.

For even the largest contractors and fleet owners with in-house technical expertise, a guide-on-the-side approach can be highly beneficial. Too often, middle-market and smaller contractors, without proper guidance early in the process, find themselves stuck with a solution that fails to address the original problems.



The more tasks an equipment software vendor pushes onto the customer at the start of the relationship, the higher the risk of implementation failure. Contractors and fleet owners should ask the vendor about the role they will play in the following:

- End-user training to ensure smooth adoption.
- Data migration for equipment, service history, project plans, and more.
- Structuring a preventative maintenance plan and formatting timecards.
- ERP integration and ensuring seamless data flow.
- Reporting to ensure reports go to the right people at the right time.
- Setting up geofences and alerts to manage assets effectively.
- Identifying and coding equipment for classification.
- Ensuring accurate capture of equipment names and serial numbers.

While these tasks are not impossible for an internal team, doing them for the first time carries more risk than repeating them. A small mistake, like incorrectly entering one or two details, can disrupt the system indefinitely, reducing user adoption and inacreasing the risk of failure. Proper vendor guidance during implementation allows you to align your processes, train your team, and realize ROI faster.

A software vendor with experience in multiple implementations can provide valuable insights and best practices. This not only reduces the chance of failure but also ensures that your team is set up for long-term success.

The right construction equipment management software will impact your business for years. Doing due diligence, such as checking references and thoroughly evaluating the implementation process, is crucial.

# Your choice of construction equipment management software will impact your contracting business for years to come.

# NEXT STEPS

To help you choose, here are four key steps:

## Ensure Hardware Flexibility

Choose software that integrates with multiple hardware vendors to avoid lock-in and maintain flexibility.

## Select a Comprehensive Solution

Ensure the software covers all necessary features like telematics, real-time data capture, and maintenance management.

## Opt for Modern, Scalable Software

Choose cloud-based software that is scalable and integrates well with other systems.

## Prioritize Vendor Support

Make sure the vendor provides proper training, data migration, and system integration.

CLUE

Peers, review sites, and analysts are all good sources as you evaluate products in the market.

When you’re ready to evaluate solutions, we’d be glad to show how Clue helps contractors simplify operations and improve margins.

Learn more at **getclue.com**