

The Future of Construction Fleet Management

Top Experts Share Five Insights You Need to Know

Introduction

Rapidly changing technology and shifting priorities are fundamentally reshaping the functions of construction fleet management.

Within the span of a career, heavy equipment managers have grown from a fairly narrow focus of maintaining equipment and managing labor to increasingly finding themselves involved in a construction organization's contracts, safety, outsourcing, finances, and use of capital.

So what are the factors that are influencing the trends in construction fleet management?

In this article, we've talked to three leading certified equipment managers (CEM) — Ernie Stephens at [Superior Construction](#), Adam Ralph at [Traylor Bros.](#), and Mason Ford at [Skanska USA](#) — for their insights on how the role is changing, how it's affecting construction organization and project workflows, and what are the keys to future success in the field of heavy equipment management.

Here's what they had to say.

About The Author

Karen Scally is a B2B journalist who has covered the construction industry for over a decade.



Karen is experienced in creating award-winning content that helps businesses achieve their goals and succeed.

She has previously served as the editor of both *Lift and Access* and *Site Prep* magazines.

She currently develops content for the [Gearflow.com](https://gearflow.com) blog, which empowers fleet professionals with the insightful resources, advice, and success stories they need to make better decisions.

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Mason Ford, Skanska



Ernie Stephens, corporate equipment manager for Superior Construction, says it's hard to feel stagnant in his role because heavy equipment fleet management is always changing. // Source: Ernie Stephens

Ernie Stephens, CEM, Superior Construction

Just a farm kid from Central Illinois.

That's how Ernie Stephens, corporate equipment manager for Superior Construction, describes himself.

So naturally, by birth and location, a career at CAT was in the cards for him — until it wasn't.

"I grew up third generation working at Caterpillar and [had no clue what I wanted to do](#)," Stephens says.

One day, he got a call from Peter Walsh at Walsh Construction, asking him what he knew about equipment management.

He didn't know much about it then, but he does now.

In 2017, Stephens was recognized by [Construction Equipment magazine's Under 40 awards](#), which showcase the best young talents in the industry. After more than a decade at Walsh, Stephens left to build the fleet department from the ground up at Superior Construction, a heavy/civil contractor with corporate offices in Portage, Indiana, and Jacksonville, Florida.

Superior Construction is a fourth-generation family-owned company in business for over 80 years, with \$600 million in annual revenue. Stephens oversees the contractor's fleet, which is valued at \$120 million and includes earthmoving equipment, cranes, and foundation pile driving equipment, along with his team of jobsite equipment managers, equipment operating engineers, mechanics, and drivers.



Superior Construction, a heavy/civil contractor with corporate offices in Portage, Indiana, and Jacksonville, Florida, has a fleet valued at \$120 million. // Source: Superior Construction

Since he's gotten into construction fleet management, the job is constantly changing — and that's exactly what Stephens loves about it.

"I think the coolest part is I get to learn something new every day," Stephens says. "You're always learning and able to challenge yourself. I think it's definitely a role that doesn't get stagnant because of the change."

Less (Data) is More (Important)

Particularly over the last decade, [construction fleet telematics](#) has produced a [wealth of digital information](#) about heavy equipment operations.

But Stephens says drinking from the fire hose of data is actually not all that appealing — or helpful.

"I sit on a couple boards of large construction company equipment managers," he says. "And I think most of us just want to go back to the basics with technology."

The streams of available data often introduce new headaches for the heavy equipment management team.

"We spend so much time checking technology and then rechecking it to make sure it's accurate, and then figuring out why it's not," Stephens says. "It's so frustrating."



Stephens says construction fleet telematics should ideally focus on a few key pieces of information for the data to be most effective. // Source: Superior Construction

Because of this, Stephens sees a future in construction fleet management where less is more.

He says telematics should ideally focus on a few key areas: meter reading, location, fuel levels, and idle time.

"The rest is just noise," Stephens says. "And tech companies are continuously trying to come up with the next big thing, but they forget the importance of accuracy of those basics."

Though it seems simple, Stephens says a lot can be predictively managed from those reports, if the data was trustworthy and not overly complicated.

"I don't need to have every sensor," he says. "If OEMs focus on getting those basics right, it would allow customers to see the more proactive opportunities with data."

From there, construction fleet managers could more effectively monitor utilization and maintenance, he says.

Auto Industry is Paving Way for Innovation

Though he's responsible for a construction equipment fleet, Stephens thinks it's important to keep a side eye on the auto industry, because the trends that are taking root there will eventually make their way to heavy equipment.

"I try to stay in touch with what they're doing," he says. "The new Ford 2021 F150s are coming out with 240 volts of power in the back. They're coming out with hybrid options and over-the-air updates."



Fleet managers should watch for trends in the auto industry, such as object detection and blind-spot indicators, to make their way to construction equipment. // Source: Superior Construction

Similar to the auto industry, Stephens believes that the future's electric. Not only will that be better for the environment, but it will also reduce the number of maintenance issues that equipment managers are experiencing with Tier 4 engines and DPF filters.

Other technology improvements rooted in the automakers' developments that he's eager to see become standard on construction equipment include people and object detection, automatic stopping, and blind spot indicators. And just over the horizon: autonomous vehicles.

These features will influence project specs and construction fleet decisions in the years ahead.

"Looking at the automaker industry is very exciting for me," Stephens says.



Live equipment schedules could assist construction fleet managers with tracking costs and enhancing forecasts. // Source: Superior Construction

Dreams for the Future

Even when focused on the fundamentals of equipment operation, construction fleet managers are having to sift through a ton of information. It can be death by a thousand spreadsheets.

He thinks a way to better manage heavy equipment operations moving forward is through living, shareable, aggregated resources.

“We need some type of live, virtual equipment schedule,” Stephens says.

He says there is so much valuable data in the equipment schedule and the asset’s source — whether it’s owned, leased, or rented — that could track costs and enhance forecasts. If the information did not have to be manually updated, equipment managers could plan better.

“I want to know if 100% of my assets are working somewhere,” Stephens says. “Then I need to figure out how many new pieces I need to buy. Then that’s capital in the company. This is the most basic spreadsheet that everyone needs, but we need it more live and interactive.”



Adam Ralph, a corporate equipment superintendent at Traylor Bros., a heavy/civil high-risk contractor based in Evansville, Indiana, serves as a liaison between how projects run and the use and maintenance of the construction fleet. // Source: Adam Ralph

Adam Ralph, CEM, Traylor Bros.

With jobs scattered all over the country, Adam Ralph's role is the tie that brings everything back together.

Ralph is a corporate equipment superintendent at Traylor Bros., a heavy/civil high-risk contractor based in Evansville, Indiana, with projects ranging from mining subway tunnels in Los Angeles to building the Howard Frankland Bridge connecting Tampa and St. Petersburg in Florida. Traylor Construction Group's annual revenues are about \$650 million.

Traylor's equipment division, with nearly 2,000 assets including cranes, boats, trains, and more, works almost like a rental company, with Ralph serving as a liaison between how projects run and the use and maintenance of the equipment. He also manages one of their equipment yards.

"Most of the time, I'm behind a desk, doing paperwork," he says. "But sometimes I'm out putting cranes together and overseeing the assembly and repairs."

In 2018, Ralph was named to Construction Equipment's Under 40 list, where he was noted as [one of the key team members within Traylor Bros.](#)

The Missing Link Between Field and Office

Ralph says there's a distinct difference in equipment management of the past and the role today.

"At almost 40, I'm one of the younger corporate equipment superintendents," he says. "The guys that I work with might be better at hands-on repairs than I am. I excel at being equipped to manage the project as a whole and use tools to communicate that as opposed to just going in there and taking care of it."



Ralph says today's construction fleet managers are taking on more of a sales or project management role, where they need to demonstrate to customers the value of their organization. // Source: Traylor Bros.

He sees the responsibilities of the construction fleet manager continuing to shift into the financial realm, including influencing revenue opportunities. Most of Traylor's jobs are joint ventures, where the **lead of the project has more control in the equipment decision-making**.

"We're doing more outside sales work, where we have to make a good impression," Ralph says.

He says equipment managers need to function more like project managers, closing the loop with customers by communicating and demonstrating the company's value.

"You have to be a little sharper to help your customers while making them long-term customers," Ralph says.

While Ralph currently handles the telematics for Traylor, moving forward more organizations will create a dedicated role for equipment data analysis.

"You need someone there that owns it and makes sure it's right," he says. "Then you can truly play with the data and do something significant with it."



Equipment data analysis roles are a growing need within the fleet management team, Ralph says. // Source: Traylor Bros.

Dreams for the Future

Forget asking Google, Siri, or Alexa.

Ralph can't wait for the day when images become the next big way to search for information.

Often, construction fleet management teams need parts and tools that are not universally named or require a specific number to even begin looking for the item.

In these cases, a picture truly would be worth a thousand words.

"It's definitely gone through my head more than once that if I could take a picture of whatever it is, and then based off of that picture, it would be my Google search," Ralph says. "I just can't believe that it doesn't already commonly exist."

Parts and tools sometimes even have regional and trade-specific names, complicating searching online for the right one further. Visual searches could help move the entire parts and tool procurement process entirely online, Ralph says.

"If it would work like that, I would more often buy parts and supplies online instead of calling the salesman," he says.



Mason Ford, the director of sustainability and equipment services at Skanska, says equipment management of the future has the power to change construction processes over time the more deeply they are pulled into the designs of heavy equipment and technology. // Source: Mason Ford

Mason Ford, CEM, Skanska

Mason Ford has found himself in an unusual spot.

He's a Gen-Xer who's a wanna-be millennial.

"In a lot of aspects, I'm an early adopter," Ford says. "And I'd much rather move into doing things with purpose."

That probably had something to do with why his role has recently grown into the director of sustainability and equipment services at Skanska, one of the Top 10 largest construction companies in the world.

Ford's been with Skanska USA, which had [\\$7.6 billion in revenue in 2019](#) and was No. 7 in revenue on [ENR's 2019 Top 400 Contractors list](#), for over 20 years.

He also served as the AEMP [executive chairman of the board for 2019-2020](#).

A Perfect Union: Sustainability + Equipment Services

Just as millennials are known to quickly embrace changes in technology, research has shown they also highly value sustainability and [care about the environment](#).

So it makes sense that Ford, the millennial at heart, is now overseeing Skanska's sustainability initiatives. Though admittedly, at first glance, it seems like the union of the two roles is a bit of an odd coupling.

"I don't know of another corporate equipment manager, at least not in my field of peers and friends, that has both of those dual roles," Ford says. "But there's a reality that the two go so well together."

A closer look reveals the two are not as unlikely partners as they may initially seem.

"Most of the conversation around sustainability is generated in equipment anyway," Ford says. "And I think that's the future there."

Ford sees the potential of equipment management and sustainability efforts increasingly pairing up, because the values of the rising generation of decision-makers, with millennials now approaching age 40, are vastly different than their predecessors in construction.

"We all know that 30 years ago, it was about the dollars," Ford says. "Today, that isn't the mindset."

Understanding Carbon



SKANSKA

Ford says it makes sense for construction sustainability efforts to start with and be focused on heavy equipment. // Source: Skanska

Now, more corporate emphasis is being given to the environment, diversity, inclusion, and safety.

“I think that will continue to evolve in that by living out the mission of the company, we’re not going to hurt the environment,” Ford says. “We’re not going to hurt our people. We’re not going to hurt the ethical fabric of the country or the industry. And we’re going to make a profit.”

It also will result in efficiencies for contractors to bring together sustainability with heavy equipment management, he says.

Typically, the individual overseeing sustainability within the construction organization is not someone who has had a lot of hands-on fleet experience or isn’t positioned to have much control over decisions like [what equipment to buy and how to use it](#).

Merging the two areas will add support to overarching goals and reinforce a holistic approach to a contractor’s culture. Fleet decisions will inherently give consideration for sustainability moving forward, Ford says.

"I envision that very shortly, when we bid a job or we forecast the job, we're going to see how much equipment we need, what that's going to cost, and how much of a carbon impact it's going to have," Ford says.

Ford says though Skanska may be leading in this arena, he believes others will not be far behind.

"I think all a lot of our owners or a lot of our customers will be in that same boat," he says. "In the next 10 years, the big municipal organizations are all going to be looking at the carbon impact."

Lending a Voice to Design Changes

While the construction industry is known more for incremental rather than radical shifts in its processes, one of the byproducts of the pandemic is that it has forced change in many ways, particularly when it comes to [adoption of technology](#), Ford says.

"COVID is the storm that's going to break the dam of having excuses out there for why not to use technology," Ford says. "It's kind of kicking us in the butt to get modernized right now rather than drag it out over another 30 years."

And how could successful adoption be accelerated further?

Ford says future development of technology needs to involve the people that have the hands-on experience to make it right.

"I think for the evolution of technology — robotics, autonomous, the next iteration of equipment — that equipment manager and team need to be pulled heavily into that loop," he says. "You start talking about getting the equipment management people deeper into the design of the construction process and the tools that will touch the heavy steel or the foundations, it will just bring the entire program one step further."

He says construction fleet management teams need to be brought deeper into OEM conversations about technology and design, and organizationally, they need to be more heavily inserted in the construction design phase.

"When you get involved in the technology, it then changes the construction process over time," Ford says.

And in his expanded role, Ford now has the power to push the parameters of that conversation further — and that potential excites him.

"The thing that ... has the biggest opportunity for change is the evolution of technology and the inclusion of sustainability being bolted on to equipment," he says. "That's the big piece that's missing."

Dreams for the Future

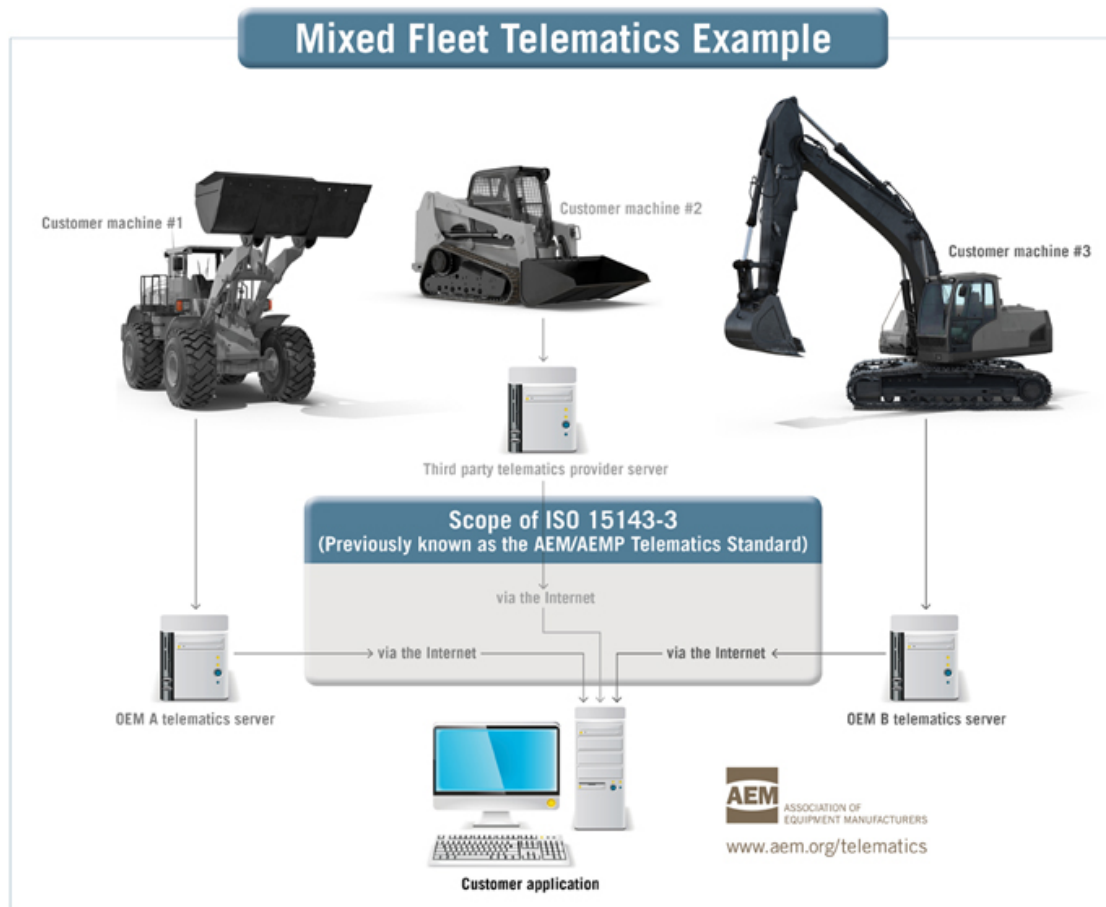
There's no doubt that telematics have already brought about transformative change for contractors, essentially allowing the equipment management role to expand into operations and finance through the power of the data.

But it's not been without its problems. The biggest one: the lack of communication among different OEM brands present in a mixed construction fleet.

"None of the devices talk to one another, and none of them are streamlined," Ford says. "If you've got 30 different systems to pull information in, we're not really saving any time."

Ford says this has impeded additional progress and momentum.

"Everybody was stuck on this telematics thing for a long time trying to keep it proprietary, trying to keep it locked up, using it as a differentiator," he says. "That was just a knot that had everybody tied up."



An updated version of the telematics standard, ISO 15143-3, was published at the beginning of 2020. //
Source: AEM

Though the [AEM/AEMP Telematics Standard, ISO 15143-3](https://www.aem.org/telematics), is designed to break down some of the barriers that existed, Ford believes the continued value of telematics solutions for construction hinges on OEMs working together in order to be able to easily share limited sets of data among systems.

“You only need about four or five data points,” Ford says.

What Do You Think?

So what’s next for construction fleet management?

How do you see the role of the equipment manager evolving in your organization?

What are the barriers for change? How could OEMs and dealers partner more effectively with heavy equipment owners and users in the Equipment Triangle?

Share your thoughts by emailing karen@gearflow.com. We want to hear from you!

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