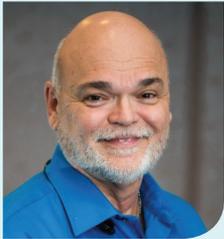


# The Challenges of Service in the Heavy Equipment Industry

EXPERT Q&A



Byron "Woody" Blackburn, Director of Business Development at GuardRFID Solutions, has more than 35 years of experience in global manufacturing operations, including roles in management, product development and senior corporate initiatives. He spent over 10 years at Caterpillar as the key Global Technology and Automation Manager Technical lead, spearheading the rapid integration of new technology into the company's processes and logistics operations. While at Caterpillar, Blackburn adopted active RFID technology, and soon after leaving, he developed and promoted the technology, acquiring significant experience in active RFID deployments in a wide range of markets, including Oil & Gas, Manufacturing and Construction.



## FieldAware caught up with Byron to discuss critical issues facing the heavy equipment sector and how they are being addressed:

Q1.

**What are the biggest pressures facing companies that service heavy equipment?**

**A.** One of the biggest pressures we face today is parts availability. This is the most underrated, yet crucial, issue in the industry. When production stops, productivity declines and revenue is impacted. In the oil industry, for example, if you're working in a remote area with below-freezing temperatures and you are waiting for a part to arrive, the equipment can freeze shut if you wait too long, which can add an additional two or three-day delay, costing millions of dollars in lost productivity. But with field service management technology, you have the data to find out where the part is and when it will arrive so you can adjust work schedules accordingly.

Field service management technology also enables preventive maintenance, another key issue in servicing heavy equipment. Everything has a service life and you want to prevent problems before they can cause downtime. The right technology provides historical data that tells you what machines will break after a certain amount of use. It records how often an asset is in operation and schedules preventive maintenance so jobs are adjusted according to asset availability.

Once you have visibility into your equipment, you can minimize downtime by implementing a preventive service schedule.

Q2.

**It appears that companies today are servicing older equipment for longer periods because of the cost of new equipment. What are the implications of this for field service?**

**A.** Servicing older equipment for longer periods puts extra stress and wear and tear on the equipment. The more stress you put on the components, the more breakdowns occur. Using technology, you can mine the data so you know the meantime-before-failure-rate (MTBF), which is crucial when maintaining older equipment. The right technology shows you cycle times so you know if it's costing you more to fix or replace it. With good analytical tools, you can then evaluate what's most cost effective -- purchase or repair.

Similarly, equipment downtime is costly. For every minute the equipment is non-functional, operating revenue is impacted and worker costs rise. Equipment never breaks when it's convenient and equipment that's not working can also jeopardize relationships with customers.

Q3.

**How important is technology to the heavy equipment industry?**

**A.** Technology can be vastly beneficial when deployed correctly. Technology is critical to our industry, especially now that the digital interface has become the primary means of operating equipment. We access more and more functions through a touchscreen, for instance. In addition, the government's environmental and safety regulations for heavy equipment make it necessary to put more technology into products and production. So if you don't leverage technology -- especially field service management technology -- you could fall behind the competition.

I've mentioned the importance of data. Another benefit of using the right technology is it enables us to gather much more data and use historical information to identify trends and changes in performance. This strengthens predictive analysis and future planning, which helps us to know when and where we need to put our energy and resources.

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**Q4. The risk of equipment theft is high, so monitoring assets is critical. How are companies handling this?**

**A.** Again, by leveraging technology we can identify and control unscheduled movement of assets. For every minute that one of our assets isn't available, our productivity is impacted. Solutions such as Active RFID and FieldAware help track assets. These solutions automatically send alerts to systems or personnel when an asset is disconnected or moves, or if there's unauthorized use such as taking the asset to a restricted area. Since everything is in real time, we can take immediate action to protect the asset. GPS offers a similar value but at a much higher cost.

**Q5. How are environmental regulations affecting the operation of equipment?**

**A.** This falls into the technology realm. If something moves, has an engine and moving parts, or has the potential to harm someone, it is considered "pollution potential" by the Environmental Protection Agency (EPA). This means the equipment must be monitored electronically 100 percent of the time to protect the environment or those operating in and around the equipment. It also means there are massive amounts of sensors and devices, which add a high degree of complexity and require highly trained personnel with the technology and know-how to keep everything functioning smoothly.

**Q6. There is a shortage of skilled workers. How is the industry coping with the shortage and what is the solution?**

**A.** Clearly there is a cultural issue that's influencing the shortage. There's more pressure on graduates to find a white collar job. Until we fill the shortage, we will continue to equip older workers with new technology that is easy to use and makes their job simpler and more efficient.

What we're finding with the emerging generation of workers is they are quite tech-savvy and comfortable using the latest technologies but they don't have the practical experience. This is where data-driven decision-making is paramount. If they don't have the history or view of the end-to-end process, it's hard for them to identify the problem. We will provide the process flow so they can then use field service management technology to create a data-driven schematic of what's happening and compare it to the process. This allows them to better understand the end-to-end flow and enables them to think beyond the data when looking for solutions.

**Q7. What do you see as future trends for the industry?**

**A.** One future trend will be the increased use of advanced technologies that leverage data-driven decision-making to squeeze out as much value as possible for every dollar spent. These technologies will allow us to view the bigger picture faster so we can make informed decisions about future planning and resource allocation.

**Q8. Any examples of where you have seen technology have a direct impact?**

**A.** In one company I worked with, we were losing poorly utilizing far too many equipment delivery carts that cost up to \$30,000 each. Yet I could walk through a building and see 40 empty carts sitting along the wall. We started logging each cart, setting up alerts if it didn't move for 20 minutes. Someone was assigned to gather the carts not in use. By the end of a week we had enough carts to last for four years ending the constant purchasing of additional carts. Our problem was that we didn't have visibility into our business and our assets. That's why you need software (like FieldAware) that aggregates the data you collect and then makes use of it. By investing in technology, we realized more than \$1 million in lost inventory.

**Q9. Any final words for success?**

**A.** Always evaluate your processes before addressing problems. When there's an issue, it's usually the result of following a procedure or process that isn't working. Start by identifying the issue. This is where advanced technologies come in. Using the appropriate solution provides greater visibility into your operations so you can assess challenges, identify the cause of a problem and then resolve it.

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