

WHAT IS NEXT FOR THE ERP INDUSTRY?





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Pinar SENGUL

EDITOR'S NOTE

As you all know, in the December issue every year, we cover emerging ERP trends that will shape our lives in the next 12 months. The global instability marked by pandemics will definitely continue to affect the business world and staying agile will be the key to success. How can we stay agile against all the odds in 2023? We will share some valuable insights about both the challenges and the new trends that you should be prepared for so that you can evaluate your roadmap for 2023.

Don't miss out on the special interviews with **Sage and SirionLabs** and the great articles from **Infor, Acumatica, QAD, and OptiPro**.

The latest news on the ERP industry, customer studies, and much more are also awaiting you through the following pages as always!

Have a wonderful New Year!

Sincerely,

Pinar Sengul



FIVE AREAS OF FOCUS FOR THE EV BATTERY INDUSTRY IN 2023

Article by **Carter Lloyds**,
Chief Marketing Officer, QAD

Electric vehicles have always been just around the corner, but they are finally here. With record-high gas prices in 2022, the industry has started to see electric vehicles (EVs) emerge as a more practical and cost-effective automobile solution for drivers around the globe.

By 2030, Germany is planning for up to 10 million EVs to be on its roads, and California is aiming for 5 million. Canada is shooting for 100% of new car sales to be zero-emission vehicles by 2040. Many established carmakers and a handful of start-up companies are also expected to unveil several new vehicles in 2023.

It's a very exciting time as the automotive industry transitions to EVs and the critical battery industry ramps up around the world to support the surge in interest and sales.

So, what is in store for the EV battery industry in 2023? There are several things that lay ahead for this emerging industry, including the five following areas of focus.

Supply Chain: The energy crisis in Europe, driven by the reliance on Russian gas, has shined a light on risks posed in the energy supply chain. Over half of EV battery production is in China. Beyond the batteries themselves, China currently controls the processing of nearly 60% of the world's lithium, 35% of nickel, and 65% of cobalt. Much of the U.S. annual graphite requirements are sourced in China. Energy independence in the future will require a domestic battery supply chain or one that is integrated. Battery technology will likely need to evolve beyond the lithium-ion models used today. New methods, like solid-state sodium batteries,

may hold the key to more efficient, longer-lasting charges. We recently saw Tesla consider raw material processing -- filing paperwork to create a lithium hydroxide processing facility and potentially mining the raw materials themselves to avoid any supply chain disruptions or shortages.

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ENERGY INDEPENDENCE IN THE FUTURE WILL REQUIRE A DOMESTIC BATTERY SUPPLY CHAIN OR ONE THAT IS INTEGRATED. BATTERY TECHNOLOGY WILL LIKELY NEED TO EVOLVE BEYOND THE LITHIUM-ION MODELS USED TODAY. NEW METHODS, LIKE SOLID-STATE SODIUM BATTERIES, MAY HOLD THE KEY TO MORE EFFICIENT, LONGER-LASTING CHARGES.

Vertical Integration: Batteries represent the largest cost in producing an EV accounting for between 30 and 57%. Vertical Integration can help to reduce costs and ensure supply. Collaborative design can result in purpose-built solutions like structural battery packs that reduce weight and improve performance. The raw materials used in batteries represent another critical bottleneck. Tesla is now vertically integrating further down the supply chain, beyond cell production, into lithium refining to ensure that needed supply is available.

Charging Infrastructure: [McKinsey Research](#) calculates the U.S. will need 1.2 million public and 28 million private EV chargers by 2030—approximately 20 times more than there currently are to meet the growing demand for EVs. EV charging stations will need to be accessible in many places if they can service fleets of EV trucks and consumer vehicles. Some companies are stepping up to create a network for EV chargers (like today's gas stations), like Volta Charging and EVGo. In 2020, GM announced it would build out 2,700 chargers in 40 cities across the U.S. and we anticipate there will be more and more charging stations needed to support the millions of additional vehicles expected on the roads next year. In addition, the Federal Government is also now involved in making sure EVs are easy to find and accessible and the Biden administration recently announced it will allocate \$900 Million for EV charging stations across 34 states and Puerto Rico. Currently, there are just under 47,000 EV charging stations available for public use, according to the [U.S. Department of Energy](#), and Biden aims to increase that number to 500,000 by 2030.

Energy Storage and Transmission: Perhaps no greater area needs investment than the electrical grid. Nearly 30% of greenhouse gas emissions in the U.S. come from transportation. Beyond the environmental impacts of removing that much carbon from the emissions equation, that's a massive amount of additional energy that the electrical grid needs to be able to support. It is likely to still be a significant drain on the grid if millions of new EVs are plugged in each day, especially for people who don't have access to chargers at home overnight.

Legacy v. New Entrants: Many new entrants are coming into the EV that has an advantage to the extent that they're not weighed down by legacy thinking, product, suppliers, and

production. But these new companies are also walking into the unknown and the world's most complex supply chain. Compare that to the legacy automotive manufacturers that have the size, scale, and robustness, but they've got a ton of baggage, and they need to think differently and become agile and resilient. Innovators from the consumer and industrial electronics market are taking advantage of their tech background and high scale to sweep the lead in the newly emerging automotive battery market. We can expect these companies to continue to rise to the top of the battery space next year.

2023 is exciting for EVs

At the end of the day, people want reliable economical transportation, and sustainability is becoming more and more important. Could 2023 be the year that automakers try to put every driver in an EV, moving the industry closer to a world with zero tailpipe emissions and longer-lasting batteries? It is an exciting time to be in the roaring 20s—signaling another awakening and big changes to come in the car industry.

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Carter Lloyds, Chief Marketing Officer, QAD.

About QAD

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