



WHAT IMPACT WILL INCREASING EV SALES HAVE ON THE AUTOMOTIVE SUPPLY CHAIN?

Few non-car industry people can fully appreciate the perfectly choreographed performance required behind the scenes to manufacture just one car. Even the most efficient and automated factories in the world cannot operate until the thousands of individual parts needed for each vehicle align at the right time. A host of suppliers, big and small, combine to manufacture and deliver parts to the production facility in a carefully synchronised pattern to ensure the supply chain remains lean but operational.

As the recent chip shortage highlighted, this delicate chain is easily broken. As we move into a period of fundamental change for the automotive sector, can the logistics industry adapt to the changing needs of manufacturers without disrupting this fragile just-in-time supply chain model?

The general feeling across the industry is that, regardless of whether the parts supplied are for a combustion (ICE) or electric vehicle (EV), the just-in-time model will remain the norm as stockpiling parts will always be a costly exercise. With the average EV requiring roughly 40% fewer parts than an ICE vehicle, Tier 1 suppliers may need to diversify their product range and services to continue operating profitably. In fact, we may well see many of the Tier 1 suppliers merging to consolidate their offering and expertise.

A further possibility is that many of these Tier 1 suppliers will relocate as the automotive industry becomes more reliant on local sourcing. In either scenario, the demand for logistics solutions could potentially drop as the length of the supply chain is altered.

In the short term, the logistics industry will continue to benefit from the fact that the automotive sector is still in an R&D phase for EV manufacturing. New and old EV producers are experimenting with various technologies and components, which involves small and frequent shipments from the globally sourced supply. While this phase continues, the logistics sector continues to benefit.

But, as environmentally conscious consumers drive the demand for EVs, manufacturers with environmental commitments drive the need for more sustainable practices. This goes further than just an efficient factory, right down to the sourcing of goods and having a sustainable (in environmental terms) supply chain. The EV era is opening up vehicle manufacturing to new tech companies who have the freedom to set up their operation close to supply, which shortens the supply chain, is cost-effective and reduces the company's environmental footprint.

In the medium term, the key to success for logistics providers will be acquiring the skills, competence, training, and equipment necessary to transport the lithium-ion batteries needed for EVs. The three main criteria for compliance and success are safety - providing trained drivers and ADR* spec equipment, as lithium batteries are dangerous goods; specialist services to move them; and specialist facilities to store them. By 1st January 2024, manufacturers must follow the new EU rule dictating that no more than 50% of the material components of an EV battery can be sourced from outside the EU or the UK. The logistical challenge combined with this latest legislation suggests that sourcing battery materials locally is the best option for manufacturers.

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The automotive industry is going through a period of fundamental change, not only in terms of the move to EVs but also how the electric era will impact the parts supply and manufacture of zero emission models. Some forward-thinking startups are establishing 'micro factories' on the edge of key cities whose sole aim is to manufacture EVs to meet demand in that city alone, using modular parts designed in-house. Fewer component parts can be more easily and quickly developed in-house, removing the need for a lengthy supply chain. Perhaps it's how EVs will be made, rather than the shift to ecomobility itself, that poses the most significant challenge to how the automotive supply chain operates in the coming years.

**ADR - Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road).*



Gavin Andrews, Business Development Manager

Gavin has extensive knowledge of the automotive supply chain and its global complexities. With over 15 years' experience in the automotive industry, Gavin is responsible for shaping relationships with new and existing clients, and advising how Priority Freight can assist with their time-critical logistics requirements.



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