

Integration of the Battery Passport into the eFTI Platform to Improve Digital Data Exchange in the Context of Battery Transport

Authors : Max Plotnikov, Arkadius Schier

Abstract : To counteract climate change, the European Commission adopted the European Green Deal (EDG) in 2019. Some of the main objectives of the EDG are climate neutrality by 2050, decarbonization, sustainable mobility, and the shift from a linear economy to a circular economy in the European Union. The mobility turnaround envisages, among other things, the switch from classic internal combustion vehicles to electromobility. The aforementioned goals are therefore accompanied by increased demand for lithium-ion batteries (LIBs) and the associated logistics. However, this inevitably gives rise to challenges that need to be addressed. Depending on whether the LIB is transported by road, rail, air, or sea, there are different regulatory frameworks in the European Union that relevant players in the value chain must adhere to. LIBs are classified as Dangerous Goods Class 9, and against this backdrop, there are various restrictions that need to be adhered to when transporting them for various actors. Currently, the exchange of information in the value chain between the various actors is almost entirely paper-based. Especially in the transport of dangerous goods, this often leads to a delay in the transport or to incorrect data. The exchange of information with the authorities is particularly essential in this context. A solution for the digital exchange of information is currently being developed. Electronic freight transport information (eFTI) enables fast and secure exchange of information between the players in the freight transport process. This concept is to be used within the supply chain from 2025. Another initiative that is expected to improve the monitoring of LIB in this context, among other things, is the battery pass. In July 2023, the latest battery regulation was adopted in the Official Journal of the European Union. This battery pass gives different actors static as well as dynamic information about the batteries depending on their access rights. This includes master data such as battery weight or battery category or information on the state of health or the number of negative events that the battery has experienced. The integration of the battery pass with the eFTI platform will be investigated for synergy effects in favor of the actors for battery transport.

Keywords : battery logistics, battery passport, data sharing, eFTI, sustainability

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