

What comes first in heavy machinery: Electrification, autonomy, or the black swan?

Dr. Harri Kulmala
DIMECC Ltd.

The twin transition, the change towards digital and green at the same time, meets heavy machinery industry in various ways. It can all be summarized with some heavy “words”: Electrification, carbon neutrality, autonomy, cyber security, and possibly black swan as well.

Electrification is a MUST and it certainly comes because of the climate issues and carbon neutrality targets. After this MUST, there are the real digital business opportunities such as business boosting autonomy and controllability demanding cyber security. Industrial data sharing practices and tools are under serious and strong development at the moment, not only inside and between companies, but also on standardization and regulatory levels.

In addition, there might be attitudes and opinions in the forthcoming generations and especially after shock type of events, which may significantly increase or reduce the need for certain machines and this what we call the “black swan”. For example: If remote delivery of packages is primarily operated by drones, it may reduce the need for earth-operated heavy machines, but it may blow up the volumes of transported goods. Forecasting the volumes and impact direction of black swans remains really challenging.