

Learning Under Constraint: Upskilling Inside a Moving Production System

Upskilling in the automotive sector is increasingly judged by a practical test: can a worker be moved into the role where the company needs capacity now? That question is difficult because **companies are managing shortages and overcapacities at the same time**. Software, microelectronics, battery, AI, electrician and automation profiles are hard to find, while combustion-linked, traditional mechatronic or low-skilled roles may become harder to place. In some cases, EV component projects planned around earlier volume forecasts are running at only a fraction of expected demand, leaving expensive capacity underused.

This makes **training less a classroom issue than a redeployment issue**. A worker is not “ready” simply because a course exists. They need time away from production, access to relevant learning, practical exposure, and in safety-critical areas a credential that allows them to perform the task. **Time remains the hardest barrier**: taking people off the line reduces output or creates overtime costs, while the experts who could train others are often already absorbed by delivery work. Even access is uneven; some shopfloor workers cannot easily follow e-learning, which is in many cases even not sufficient.

The **gaps themselves are practical and hybrid**. Factories need mechanics who can work with digital diagnostics, electricians who understand PLCs and connected systems, operators able to handle robots and sensors, and engineers who can connect software, hardware, chemistry, safety and production logic. Several respondents also point to less visible gaps: analytical reasoning, willingness to learn, resilience, structured problem-solving and the ability to stop relying on old habits.

The most credible reskilling models are therefore close to work. One company built a high-voltage competence pyramid, from overall safety responsibility down to workers authorised to intervene on vehicles, remove high voltage, or simply understand the risks. Another described a hybrid-vehicle launch using one week of off-production training followed by two weeks on the line. Internal academies, learning beside experts, modular EV and AI courses, university links and learning-by-doing appear because external provision is often too generic or too slow.

But **learning must also be recognised**. Missing certification can block deployment in safety or security-related work. At the same time, internal academies, bootcamps and micro-courses often do not translate into portable credentials, job grading or career progression. **The unresolved challenge is not just to train faster, but to make new skills trusted, transferable and usable** before workforce imbalances become permanent.

This brief draws on the TRIREME report [Skills for the Mobility Transition: An Industry Perspective](#), based on structured interviews with 60 industry stakeholders across the automotive and mobility value chain in 2025.



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