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Skills for the Mobility Transition

An Industry Perspective

TRiREME
DIGITAL & GREEN SKILLS TOWARDS FUTURE OF THE MOBILITY ECOSYSTEM

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Preface

This summary captures the perspectives of industrial stakeholders on how decarbonisation, digitalisation and automation are reshaping competitiveness, workforce needs and execution capacity in Europe, with a particular focus on skills and workforce challenges affecting the mobility transition.

It draws from a **report** on structured qualitative interviews with 60 industry stakeholders across the automotive and mobility value chain. The interviews were conducted in two phases between June and November 2025 in the frame of the work carried out under project TRIREME - Digital & Green Skills Towards Future of Mobility Ecosystem.

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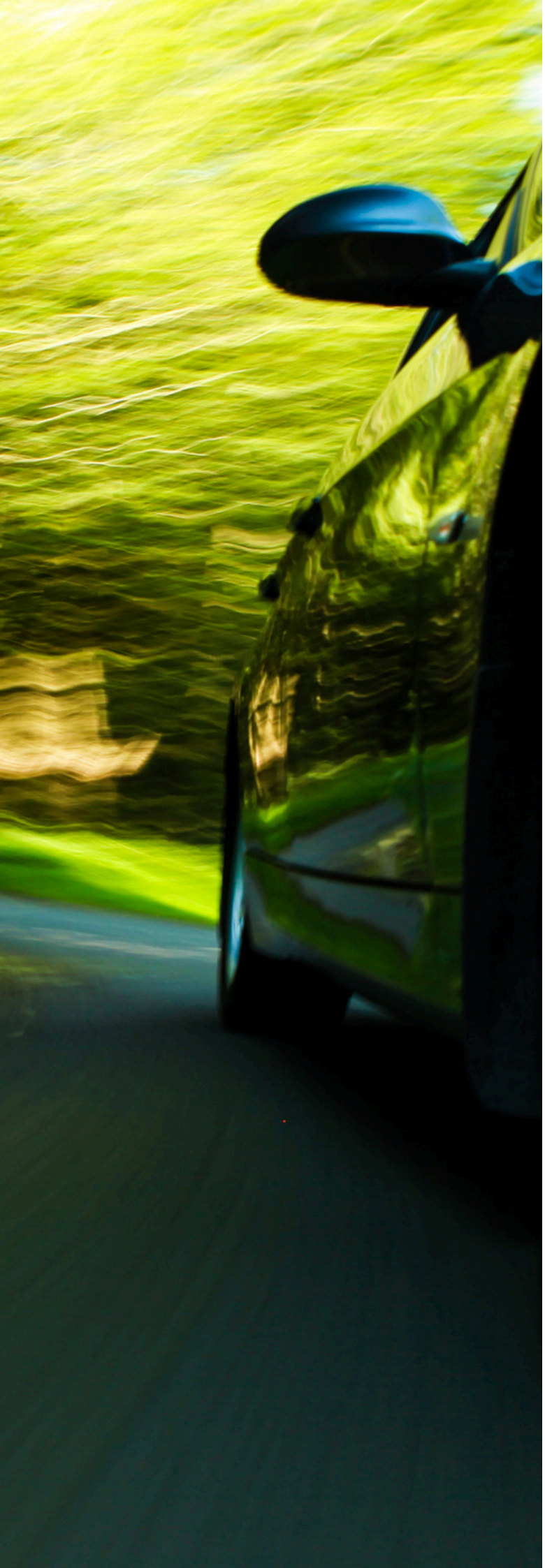

Sectoral Transformation and Influence

Three linked transitions—**decarbonisation, digitalisation, and automation**—are reshaping the automotive-mobility system end to end, affecting products, production, supply chains and operating models at the same time. Electrification dominates the decarbonisation pathway, but infrastructure readiness, energy costs and charging availability remain uneven across Europe, creating a persistent gap between policy ambition and delivery capacity.

Digitalisation is central to competitiveness as vehicles and factories increasingly function as connected computing and data systems, with cybersecurity, data governance and access to compute becoming core industrial requirements rather than supporting topics.

Value-chain strategies are shifting under geopolitical and resource pressure. Companies increasingly prioritise resilience and trade insulation over pure global cost optimisation, as raw materials, energy affordability and supply security shape industrial decisions. Competitive pressure from low-cost entrants, including Chinese players, is structural and immediate, reinforcing the need to scale quickly while managing higher capital intensity and volatility. As a result, the pace of transformation differs significantly across regions, sites and firms.

Workforce as a Core Execution Challenge

The workforce dimension is a decisive factor for execution. **Talent is a key determinant of European competitiveness**, as the transition shifts demand from traditional mechanical roles toward **software, electronics, data, AI and cybersecurity,** while safety-critical engineering and quality remain essential.

Cybersecurity is addressed as a core product and business risk, not an IT add-on, and **skill gaps already affect development speed,** industrialisation and operational reliability.

Upskilling and reskilling are constrained less by willingness than by day-to-day realities. **Time is the main limitation:** lean staffing and production pressure make it difficult to release employees for training without reducing output or increasing costs.

At the same time, many external training offers lag technological change, and qualification and regulatory differences across regions reduce mobility and slow redeployment of skills. Where skills and credentials are not portable or consistently recognised, training remains locally valid rather than widely usable, which weakens internal mobility and reduces the ability to scale upskilling across sites and borders.

Public support instruments are important enablers for skills conversion and transition investments, especially for SMEs and large -scale retraining programmes. Their impact depends heavily on usability in real operating conditions—fast access, simple rules, clear eligibility and predictable multi-year horizons—while fragmented, short-cycle calls and heavy administration tend to push activity toward pilots and slow down sustained workforce conversion.

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Evolving Skills Demand and Workforce Adjustment

Skill demand concentrates where the **most critical gaps** sit—at the intersection of software, electrification and systems integration. Companies increasingly focus on building **hybrid profiles** rather than relying only on specialist hiring.

AI acts as an accelerator across functions, but effective use depends on practical integration into roles, clear governance and strong understanding of safety and compliance implications.

Workforce change is primarily a mismatch challenge rather than a simple shortage problem. **Transition and restructuring are constrained by a combination of funding design, limits to skills conversion, organisational friction and legal uncertainty.**

Human and organisational factors slow adoption, while **generational expectation gaps** add tension between digital roles and shift-based manufacturing environments. In this context, retaining critical skills and maintaining workforce stability becomes a strategic priority.

Approaches and Enabling Conditions

Approaches to skills and transition increasingly rely on **combinations of measures rather than single solutions:** stronger employer-led training, modular and work-compatible learning formats, clearer visibility of skills for internal mobility, and closer coordination across companies, training providers and regional actors.

Education and training systems struggle to keep pace with the speed of change in the automotive value chain, and coordination remains fragmented and often project-based rather than sustained at scale.

Join us in shaping the future of the Automotive-Mobility ecosystem.

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