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The global alliance advancing the technology of mobility

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FISITA Launches Battery Technology White Paper: *Advancing battery and EV technologies: Strategies for widespread EV adoption and the post-chasm era*

The latest white paper from the global automotive engineering alliance outlines the technological roadmap needed to accelerate mass-market EV adoption

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FISITA, the global alliance advancing the technology of mobility, has published its latest Battery Technology White Paper: *Advancing battery and EV technologies: Strategies for widespread EV adoption and the post-chasm era*.

The paper created by FISITA's Battery Technology Expert Group brought together industry experts to examine the six technological pillars shaping the next phase of electric vehicle development – cost, charging, driving range, standardisation, safety and sustainability. It sets out how coordinated progress across these areas can help the industry move beyond early-adopter enthusiasm towards true mass-market acceptance.

With batteries accounting for 30–40 percent of total EV cost, affordability remains the defining barrier to adoption. The white paper highlights emerging strategies to reduce battery costs, including low-cost chemistries, manufacturing innovations to reduce energy consumption, and system-level efficiency gains through integration. Together, these approaches support the industry's goal of achieving cost parity with internal combustion vehicles.

While driving range has reached a point where most consumers consider it sufficient, the paper shows that charging infrastructure is now a stronger indicator of consumer confidence. Regional imbalance and insufficient availability remain central barriers. The authors argue for a balanced strategy: expanding accessible AC charging while deploying fast charging where economically justified, enabling more affordable EV ownership and smoother adoption.

Battery standardisation is a major enabler of scale, reducing development effort and processing costs without constraining innovation. Safety and sustainability also remain foundational, with the paper emphasising defect-minimising manufacturing, structural fire containment, carbon-footprint disclosure, recycled content and resilient mineral supply chains as essential components of a mature EV ecosystem.

Collectively, these six pillars form an integrated roadmap for overcoming the EV "post-chasm" challenge and enabling a sustainable, accessible, mass-market EV future.

Martin Kahl, FISITA's Director of Technical, said: *"This white paper reflects the collaborative strength of our Expert Group, bringing together every part of the battery value chain – from OEMs to testing organisations – to build a shared understanding of the technological pathways ahead. As EVs enter the post-chasm era, the industry must move beyond isolated breakthroughs and towards coordinated, system-level progress. Cost, charging, safety, sustainability – these are not separate challenges but interconnected – that will define the pace of global EV adoption."*

The Battery Technology White Paper is available to download here: https://fisita.com/go/6/

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Notes to Editors

The FISITA Battery Technology White Paper is the product of the FISITA Battery Technology Expert Group, with contributions from Jeonghun Seo, Kangwon Lee Young Kyo Kim, Dong Gun Kim, Sung Ho Ban, Seung-Min Oh, SangJin Park, Haewon Park, Bohyun Lee, Yeolmae Yeo, Yunsung Kim and Samuel Seo (Hyundai Motor Company), Choongho Yu (Samsung SDI), Seungtaek Hong, Youngjae Yang, Jiyoung Kim and Wonjun Lee (LG Energy Solutions), Kisoo Park and Cheorbeom Park (SK On), Akihito Tanke (Toyota), Chen YiZhang (CATL), Gidon Leader (StoreDOT), Galen Ressler (General Motors) and Remi Bastien (FISITA).

The Expert Group includes representatives from Hyundai Motor Company, ACC, BYD, CATL, Dukosi, General Motors, Geely, LG Energy Solutions, NIO, Samsung SDI, Strat Anticipation, Stellantis, SK Group and Tinci.

About FISITA

FISITA is the global alliance advancing the technology of mobility. As an international federation of automotive and mobility engineering societies, FISITA connects engineers, researchers and industry professionals around the world to drive innovation, share knowledge and shape the future of sustainable and safe mobility.

Media Contact

Frances Williamson Director of Communications, FISITA

E: f.williamson@fisita.com W: www.fisita.com