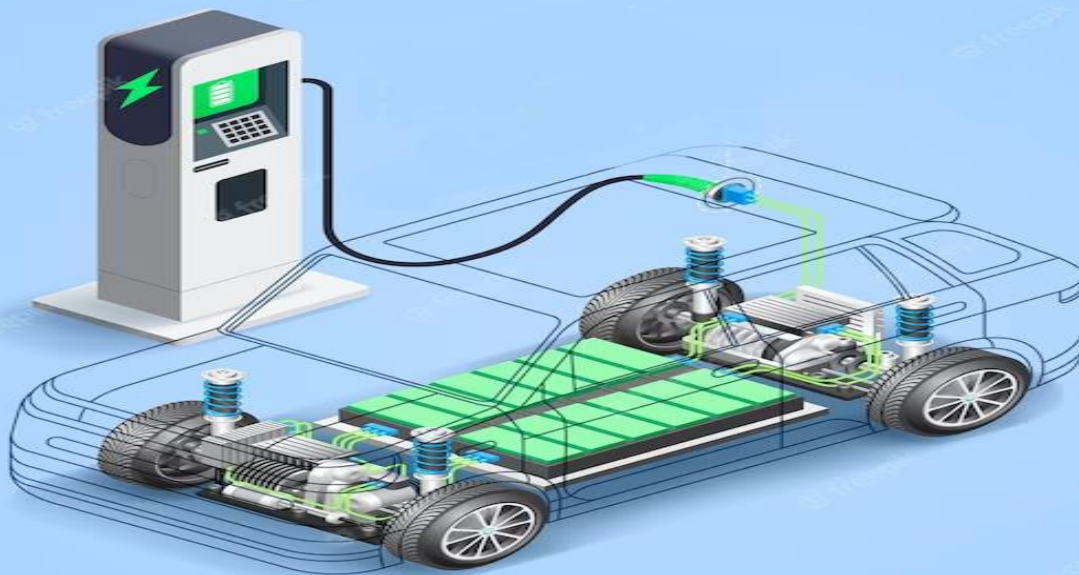


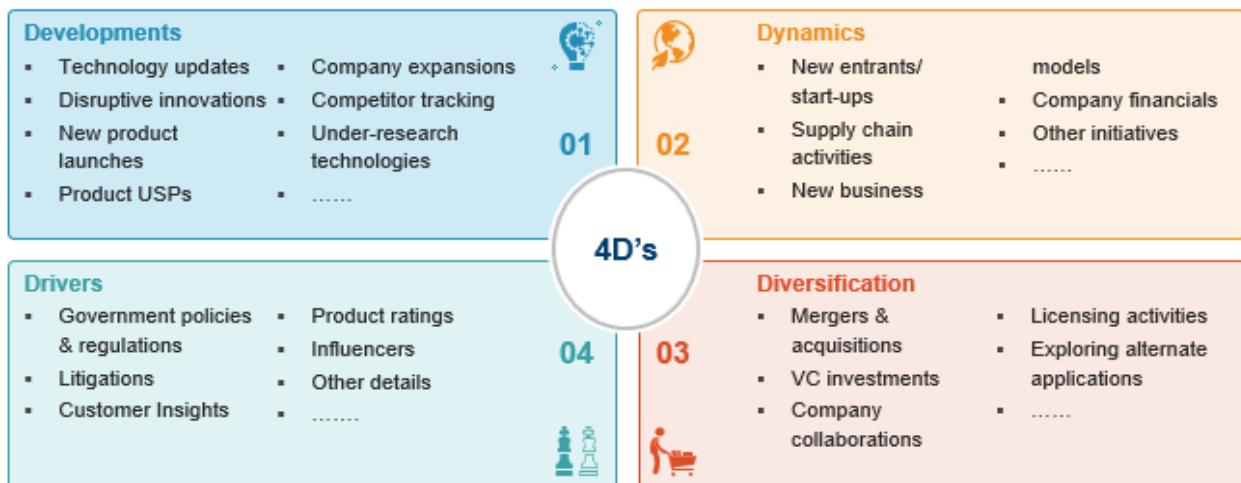
INTELLOTRACKER

E-POWERTRAIN

May 2023



ARANCA'S QUARTERLY SECTORIAL UPDATE ACROSS FOUR DIMENSIONS....





DEVELOPMENTS

Company Expansions		A groundbreaking ceremony was held for the Ramos Arizpe, Mexico, facility of LG Magna e-Powertrain that would manufacture electric vehicle (EV) parts. The plant will be completed by this year with an investment of about 100 billion won. Source: Business Korea
Company Expansions		BMW increases its research and development (R&D) expenditure on new electric vehicle (EV) platforms and powertrains. In 2022, the firm increased its investment in R&D by 5.2% year over year as it took important advances towards the release of its next-generation electric line-up. Source: Autocar
Technology/ Innovations		Nissan presented its "X-in-1" revolutionary method for developing electric powertrains. Core electric vehicle (EV) and e-POWER powertrain components will be shared and modularized as part of the process, which will reduce costs by 30% by 2026. Source: Company News
Technology/ Innovations		For electric car transmissions and e-axes, Lubrizol launched new sulfur-free driveline lubricant technology. Along with better viscosity-thermal management properties, the new e-fluids provide superior corrosion protection capabilities. Source: Charged EV Magazine
New Product Launch		Cummins has tested the 17Xe ePowertrain, a brand-new electric powertrain for heavy-duty vehicles. The engine's 430 kW continuous output qualifies it for use in heavy-duty vehicles like buses and trucks. Source: Sustainable Bus
Technology/ Innovations		New electrification technology was unveiled by Yanmar Marine International for US boaters. At the Miami International Boat Show, the company displayed a film showcasing their E-sail drive concept. Source: Company News
Technology/ Innovations		At the Auto Expo, Mahle displayed its Superior Continuous Torque (SCT) E-motors and an innovative cooling concept. SCT e-motor for electric 2-wheelers has been designed for reliability and great performance. The cooling concept is suitable for use in tractors, construction equipment, and passenger and commercial vehicles. Source: ETN



DYNAMICS

New Entrants/Start-ups		To enter the electric vehicle (EV) industry, Matel Motion will provide solutions such as motor, gearbox, and motor controllers. The company is now ready with a production plant that can produce more than 100K units annually. Source: EV Reporter
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DIVERSIFICATION

Company Collaboration		Three producers of compact municipal vehicles have agreed to use Schaeffler's high-efficiency electric wheel hub motors in their manufacturing processes. In-wheel electric drive will make municipal vehicles quieter, more agile, and locally zero-emission. Source: Company News
Company Collaboration		Greaves Cotton Ltd. has collaborated with Eta Green Power Ltd. to have exclusive rights to its technology pertaining to motors and motor controllers with integrated battery chargers in the Indian 2 and 3-wheeler market. Source: Economic Times
Company Collaboration		Greaves Cotton plans to form partnerships with leading worldwide e-powertrain providers to establish a full-service e-mobility business. Its move into the powertrain industry with in-house production of batteries, motors, controllers, and other essential components for electric vehicles will help lower the cost of its products. Source: Autocar
Company Collaboration		The free Drive system created by a partnership between Schaeffler and Heinzmann is now finally entering the production stage. The system consists of electric and mechanical drivetrains in series. It converts the rider's pedaling power into electricity that flows through wires to power the motor and turns the wheels. Source: Electrek
VC Investments		To meet the demands of the rapidly growing electric vehicle market, ZF Group will significantly expand its manufacturing capacity in Juarez, Mexico. A \$194 million investment has been announced by the company in order to boost the expansion of e-mobility. Source: Company News



DRIVERS

Others		Living Tomorrow 2030, a showcase for cutting-edge technology, and Punch Powertrain have signed on to a five-year partnership. This collaboration will enable the exchange of ideas and practices, complementing knowledge and bundling forces. Source: Company News
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Others



The "India Electric Mobility Council" (IEMC), a forum specifically for electric mobility and electric vehicle (EV) infrastructure, has been introduced by the India Energy Storage Alliance (IESA). This all-inclusive, technology-agnostic platform will cater to all stakeholders in the EV ecosystem, including EV OEMs, components providers, charging infrastructure, and battery-swapping companies.

Source: *Emobility plus*

SOLUTION PORTFOLIO – TECHNOLOGY RESEARCH & ADVISORY

IP Strategy	Technology Intelligence	Growth & Strategy
<p>How best can we proactively manage and monetise our technical knowhow / intellectual property?</p>	<p>How best can we keep abreast of technology trends, competitor activity and headwinds / tailwinds in our domain?</p>	<p>Which technologies do we invest in? How do we ensure quick wins? Speed to market?</p>
<ul style="list-style-type: none"> IP Portfolio Analysis 	<ul style="list-style-type: none"> Competitor Benchmarking 	<ul style="list-style-type: none"> R&D Strategy Roadmaps
<ul style="list-style-type: none"> IP Monetisation 	<ul style="list-style-type: none"> Tech / IP Landscapes 	<ul style="list-style-type: none"> Technology Scouting
<ul style="list-style-type: none"> IP Valuation 	<ul style="list-style-type: none"> Technology Watch 	<ul style="list-style-type: none"> Open Innovation
<ul style="list-style-type: none"> Prior Art Searches 	<ul style="list-style-type: none"> Market Analysis / Trends 	<ul style="list-style-type: none"> Product Development



GROWTH ADVISORY



INVESTMENT RESEARCH & ANALYTICS



VALUATION & FINANCIAL ADVISORY



TECHNOLOGY RESEARCH & ADVISORY



PROCUREMENT & SUPPLY CHAIN INTELLIGENCE

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