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Headline	Car parts makers scurry to upgrade components

# Car parts makers scurry to upgrade components

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Automobile component major Sona group has hired a head of technology in order to help it negotiate changes the advent of electric vehicles would bring to its business. "The component industry will go through a major disruption. We need to be prepared before it hits us," says Chief Executive Officer Sunjay Kapur.

The \$30-billion Indian automobile component industry is in the throes of disruption, as vehicles powered by the internal combustion engine are replaced by battery-operated electric vehicles. As much as 60 per cent of the industry's revenue, which now comes from fuel engines and drive trains, would be replaced by the battery and the motor. Also, the cost of electronics—software, embedded systems and sensors—that now make up for 15-20 per cent of a

vehicle's cost, would rise to 40-50 per cent, according to the Auto Components Manufacturers Association (ACMA).

Underlying these changes is the fact that the number of moving parts in a vehicle would drop from 2,000 to 20. Many components like pistons, clutches, radiators, engine valves and the various drive parts would become obsolete. The focus would shift on motors, batteries and their management systems, and use of light materials for seats, body and control panels.

If former Power Minister Piyush Goyal's utterances are accepted as government policy, all new cars would be electric by 2030. Road and Transport Minister Nitin Gadkari had also given an ultimatum to the auto industry to shift to non-polluting alternatives or get "bulldozed". Component manufacturers are naturally scurrying to face the new reality. Sona, for instance, is developing com-

ponents that go into the electric motor at its R&D centres in India and Germany. It is also making the differential, which helps a pair of wheels to rotate at different speeds, for an electric motor to be used in an auto-rickshaw. Kapur says he is open to making the entire motor for electric vehicles, provided he finds the right technology partner. Gurugram-based Sandhar Technologies has invested ₹250 crore in the last few years in a joint venture to manufacture audio-video navigation units, rear parking sensors, smart key systems and cameras to replace mirrors.

Technology companies are also seeing a new opportunity. KPIT Technologies, which combines infotech and engineering to offer solution, has developed an electric power train that is being tested on a Eicher bus and is awaiting clearance from the Automotive Research Association of India for commercial launch. *Turn to Page 12*



## ELECTRIC SWITCH

- Auto component industry generates revenues of \$30 bn annually, a third is exports
- Engines and drive train constitute 50-60% of revenue. With e-vehicles, they will not be required
- Number of moving components in a vehicle would go down from 2,000 to just 20 in an e-vehicle
- Electronics constitute 20% of the cost of a vehicle; would go up to 50% with e-vehicles
- Firms that make pistons, clutches, radiators, carburetors would be in trouble. Those making batteries, motors and wire harnesses (like Motherson Sumi) would do well

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Says Ravi Pandit, managing director of KPIT, "Earlier, original equipment manufacturers would buy everything, including hardware and software, as a box from a tier 1 supplier. We expect this to change; they will now buy hardware and software from different vendors for electric vehicles. And that provides a new opportunity."

Tata Elxsi, a virtual outsider in the auto sector, is working on developing in-house IPR and solutions for battery management systems, DC-to-DC converters, drive controls, inverter solutions and on-board chargers. This would also include range-extender solutions and cloud connectivity, going forward. Nitin Pai, senior vice-president and marketing at Tata Elxsi, says they are already working on prototypes and future production programmes with certain customers for India. "From a cost stand point, Tata Elxsi would possibly contribute to systems that would account for 15-25 per cent of the vehicle's cost." But automobile component manufacturers are worried by the lack of clarity within the government over the transition to electric vehicles. Says Ashok Taneja, managing director of Shriram Pistons and Rings, "There is no roadmap from the government on the basis of which companies can plan their investments or the products they should make." He adds Europe has a 20-year roadmap for the transition and there is no way India can pull it off in 10 years.

According to the ACMA, the industry is investing over ₹50,000 crore to switch from BS-IV to BS-VI emission standards in three years, a feat Europe accomplished in 12 years. But it would take seven to 10 years to recover investments, say component makers. "Bankers and investors are telling us why should we invest or lend if by 2030 all vehicles will become electric," says an executive with a leading automobile component major.

Worse, tier 2 and tier 3 component suppliers could face serious pressure as they do not have the money to invest in new technology. "A disruption like this could put large segments of the tier 2 and tier 3 suppliers at risk. Those in chassis and electrical systems will need to master new technologies. But seeing the record of the sector in creating intellectual property, I have my doubts," says B V R Subbu, former president of Hyundai Motors India and director in consultancy firm Beyond Visual Range.

Many component manufacturers argue the government should provide an emission-reduction map and not interfere in technology. They oppose the decision to leapfrog from fuel burners to electric without pushing hybrids.

With only 22,000 electric vehicles sold in India every year, the government is expected to announce a comprehensive policy in December that could lay at rest many of the apprehensions of the component industry.