



A magnet-less e-motor technology for the global EV market

iCreate brings together IRP Systems of Israel and Sona Comstar of India to create a magnet-less e-motor technology for the global EV market.

India's Sona Comstar, a premier global automotive component manufacturer, and Israel's IRP Systems, a leading provider of cutting-edge electric powertrain solutions for e-mobility, have come together with iCreate (International Centre for Entrepreneurship and Technology), in a unique joint development project that will invent a new powertrain, manufacture it and market it globally.

Inspired by the 'Atmanirbhar Bharat' philosophy, iCreate has initiated this 'iEV Powertrain Project' with the objective of Indian companies creating and owning futuristic technology, going beyond merely licensing and manufacturing. The project entails India and Israel collaborating to conceive, design, prototype and manufacture a high efficiency, low-cost, magnet-less powertrain (motor + controller) for electric two and three wheelers, for the global market.

This powertrain will give both Sona Comstar and IRP Systems a global competitive advantage, and targets substituting imports worth Rs 1,300 crore (\$ 200 million), and capturing an export market many times this size.

iCreate's 'iEV Powertrain' project is about creating an innovative motor-plus-controller combination that does not use rare earth elements like neodymium, besides offering high efficiency and low cost to manufacturers of electric two and three wheelers. While there are several motor manufacturers in India, they still need to import the magnets. Additionally, the fast-growing global EV market is looking to diversify supply chains and mitigate risk stemming from dependency on limited and unreliable sources.

Apart from needing to be imported, rare earth elements represent a significant environmental impact in their mining process, and health risks in their use during the magnet production process. This project gives a strong push to climate change and the Paris Accord. A strong business case has thus emerged for developing alternative suppliers of EV components as well as alternatives to rare earth enriched magnets.

"This is another step in IRP's mission to lead the automotive ecosystem with innovative and sustainable technology," said Moran Price, IRP Systems Co-founder and CEO. "Our technology ensures not only cleaner air but also a more environment-friendly production



process and responsible use of natural resources.

We are excited to partner with a global, leading player such as Sona Comstar to bring the product to the mass market.”

“We are excited with this partnership as it will help India reduce its dependence on imports of critical raw materials, and is well-aligned with the Prime Minister’s vision of a self-reliant India. The system developed through this partnership will be environmentally-compatible and cost-effective, ensuring the security of natural resources by avoiding the use of rare earth elements,” said Kiran Deshmukh, CTO, Sona Comstar.

iCreate was envisioned by Shri Narendra Modi in 2012, when he was the Chief Minister of Gujarat. In 2018, as the Prime Minister of India, he, along with the the Prime Minister of Israel, inaugurated iCreate’s world-class 40-acre campus. Supported by the Government of Gujarat and the Government of India, iCreate is India’s leading institution for transforming tech innovation based start-ups into successful businesses.