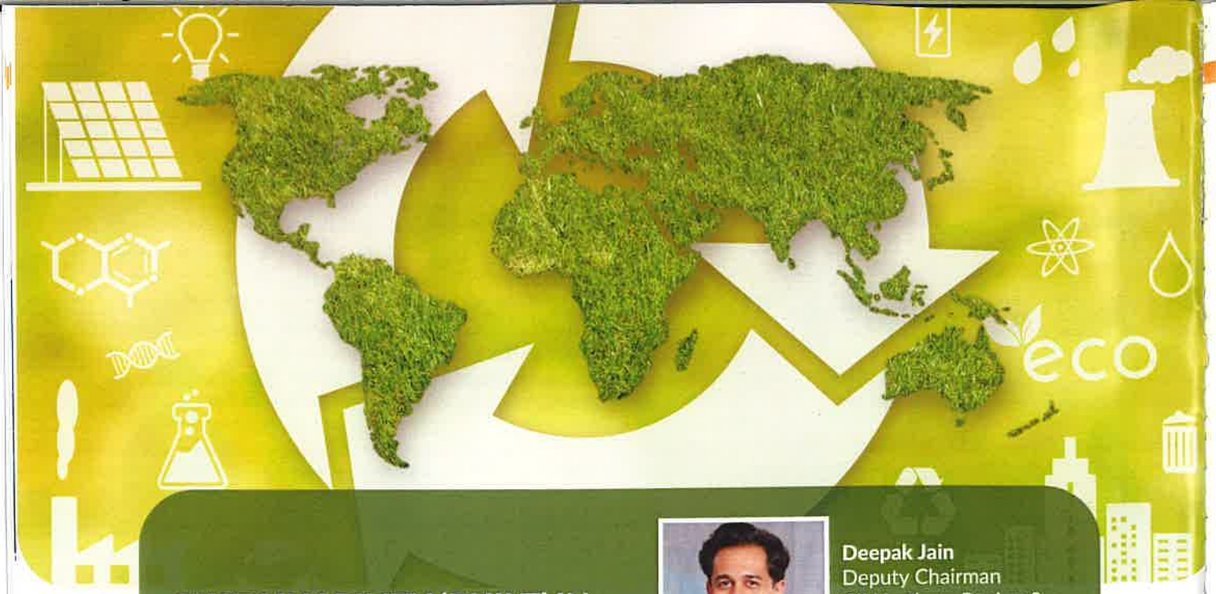

SUSTAINABILITY 'BUILT' IN

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India Energy Outlook 2021 published by International Energy Agency (IEA) [1] ranked India as the third largest primary energy consumer in the world. The report also cites the current share of India in global consumption at 6.1% which is likely to increase to about 9.8% by 2050. This highlights India's growing power and energy demand leading to the need to diversify energy alternatives, upgrade to sustainable refinery processes, accelerate the bio-fuel economy, and attract investment in exploration and production to enhance domestic energy capacity and facilitate a smooth transition towards a sustainable economy.

The current logistics sector is heavily dependent on fossil fuels; however, the future is looking at developing alternatives to attain a green economy. E-mobility thus emerges as a potential game changer in this arena. Electric vehicles have experienced significant technological developments that have not only lowered their costs but also reduced their environmental footprint and increased their utility. At the same time, public transport and shared mobility are the key ingredients for efficient transportation. Furthermore, India's commitment to becoming net zero by 2070 at the UNFCCC Conference of Parties (COP26) held in Glasgow strengthens its commitment to fulfilling the pledged targets.

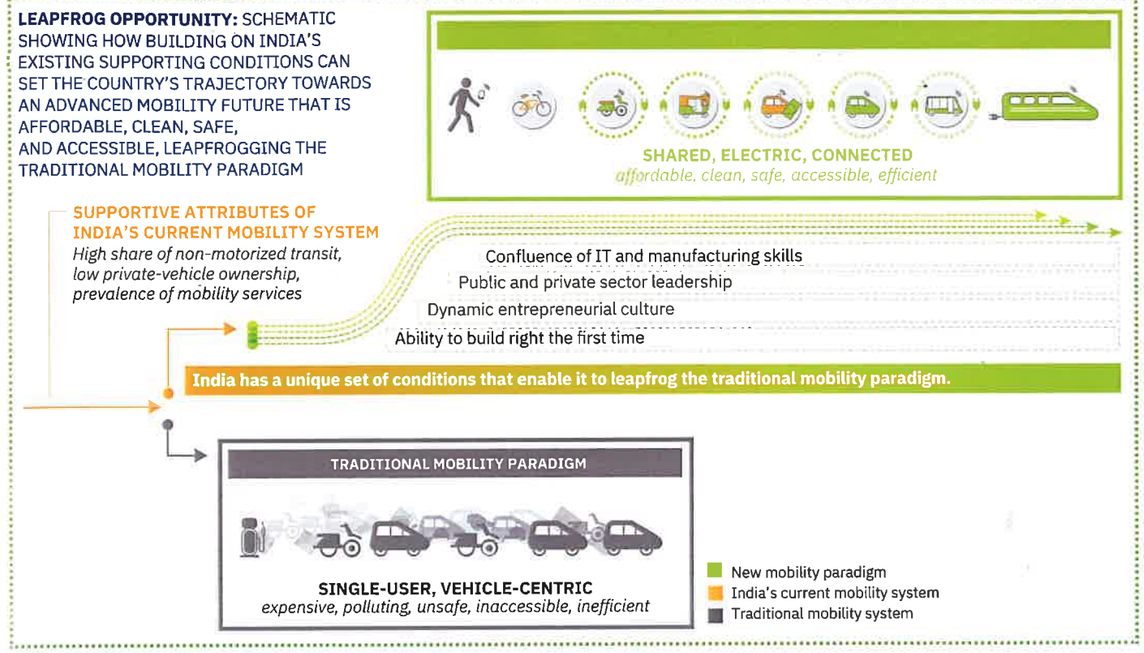
In order to achieve 100% e-mobility by 2030, the government has introduced policies and initiatives like e-AMRIT (Accelerated e-Mobility Revolution for India's Transportation), National Electric Mobility Mission Plan (NEMMP), FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) Scheme that has entered in its second phase, has recorded an increase in usage of electric vehicles in all the categories along with consideration towards the required infrastructure like availability of lithium-ion batteries and charging stations. This further emphasises building a strong foundation in the automobile sector of the country that contributes to 78% of the total Gross Value Added (GVA) [2] of road transportation. To facilitate faster adoption of e-mobility, there is a need to transform manufacturing processes into more sustainable and accessible ones.

Given that the MSMEs contribute maximum to the manufacturing sector, realising their potential will expedite India's transition to EV adoption exponentially. By linking innovation and technological automation, manufacturers are reducing energy costs, limiting waste generation, and lowering emissions thereby eliminating risks of consequential environmental damages. A similar set of mechanisms and strategies need to be introduced to the MSMEs as well.

Some measures may include:

- Defining Environmental, Social and Governance (ESG) goals for the industry and implementing them to develop a sustainable framework
- Leverage renewable energy & smart technology
- Introducing Extended Producer Responsibility (EPR) to ensure sustainable Li-ion battery management and suggest ways to remodel them to achieve better outcomes
- Adopting a Circular Economy by following the 3R approach of Reduce, Reuse and Recycle thereby pursuing green measures to maintain sustainability

LEAPFROG OPPORTUNITY: SCHEMATIC SHOWING HOW BUILDING ON INDIA'S EXISTING SUPPORTING CONDITIONS CAN SET THE COUNTRY'S TRAJECTORY TOWARDS AN ADVANCED MOBILITY FUTURE THAT IS AFFORDABLE, CLEAN, SAFE, AND ACCESSIBLE, LEAPFROGGING THE TRADITIONAL MOBILITY PARADIGM



Source: NITI Aayog 'India Leaps Ahead: Transformative mobility solutions for all' Report

Implementing these measures at the ground level invites a set of challenges that are crucial to address. Li-ion batteries are proving to be short in supply and expensive which further increases India's dependency on countries like China and a rise in the import bill. Although Battery Swapping Policy, 2022 is an effective solution and has been beneficial to the EV sector. However, it cannot be accepted as a permanent alternative to Li-ion batteries. In addition to this, securing timely finance is paramount for setting up recyclable units capable of handling different types of batteries and technological breakthroughs required in the recycling process.

Despite these limitations, states like Uttar Pradesh, Delhi and Karnataka [3] have emerged as the top three EV states indicating significant growth in adopting e-mobility. India is aiming to further increase the sales of its electric vehicles to 30% by 2030. It is high time that corporates stop looking at sustainability as a compliance burden and view it from a commitment lens that caters to the future generation's needs. Consistent efforts towards it will enhance the overall competitiveness of the industry.

Shri Narendra Modi, Hon'ble Prime Minister of India said, "The world is now in the middle of a new mobility revolution." This affirms the potential that the industry encompasses, given that we optimise it in an efficient and strategic manner to achieve a sustainable economy along with the achievement of the Sustainable Development Goals committed by India.

[1] India has been ranked third largest primary energy consumer in the world. Press Information Bureau. (2022, March 24). Retrieved from https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1809204
[2] Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. (2021). (rep.). Status quo analysis of various segments of electric mobility and low carbon passenger road transport in India. New Delhi.
[3] Over 13 lakh Electric Vehicles in use in India; Centre is taking a number of steps to promote use of electric vehicles in India. Press Information Bureau.)19 July 2022). Retrieved from https://pib.gov.in/PressReleasePage.aspx?PRID=1842704