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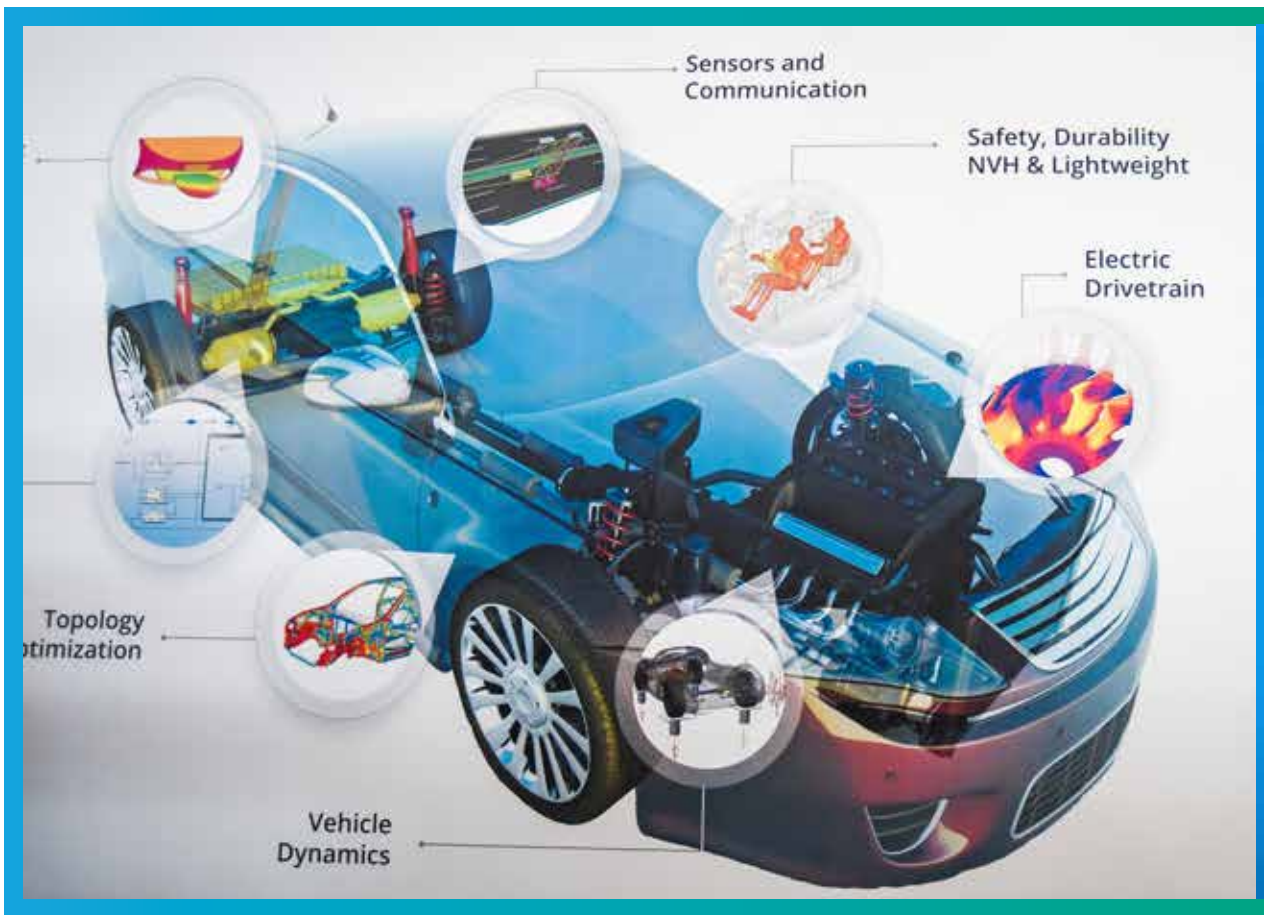
FUTURE MOBILITY NEWS

THE EXCLUSIVE EVENT ON FUTURE MOBILITY SOLUTIONS

FUTURE MOBILITY SHOW | FEB 26, 2019, BANGALORE INTERNATIONAL EXHIBITION CENTRE, BENGALURU | FOR PRIVATE CIRCULATION ONLY | OFFICIAL NEWS LETTER OF THE 1ST FMS EDITION



FMS 2019

POWER TO TRANSFORM

The Future Mobility Show (FMS) 2019 by CII is a unique platform to bolster transformation of India's mobility sector by bringing all stakeholders together to prepare an EV roadmap for a shared and connected future that is clean and efficient

ENSURING SMOOTH ROAD FOR EVS

FMS 2019 has been planned by CII as a follow-up of the MOVE Summit organised by government's policy think tank NITI Aayog, in New Delhi, in September 2018. Promising a smooth road for electric vehicles, the global summit further bolstered India's efforts to usher in a new era of electric mobility. The summit assured of the government's commitment to reducing emissions and encouraging cleaner vehicles on its roads. It promoted the idea of driving investments across the value chain.

The industry looks forward to a stable policy framework for electric and alternate fuel powered vehicles. Industry leaders are confident that policies will be designed as a win-win for all and will enable huge opportunities in the Indian automotive sector.

Electric mobility is fast emerging as the leading path to help the world transition into a low-carbon, clean and sustainable economy. India too has planned its green journey by including EVs in its policy to lower carbon emissions while providing convenient and cost-effective mobility. This has led to emergence of unprecedented opportunities.

It is against this backdrop that the Future Mobility Show (FMS) 2019, organised by the Confederation of Indian Industry (CII) from 26 to 28 February in Bengaluru, assumes significance. It will set the agenda for development of future mobility industry and help develop a clear EV roadmap for India. Organised with an objective to present a holistic view for India's future mobility, including products, technologies and ecosystem requirements, FMS has been conceptualised keeping in view the Prime Minister's 7C's Vision on Future Mobility in India – Common, Connected, Convenient, Congestion-free, Charged, Clean, and Cutting-edge.

> We want to make India a world leader in electric vehicles and energy storage devices
>
> **Shri Narendra Modi**
> Prime Minister of India

With as many as 70 exhibitors from across India and the world set to showcase their innovative products and technologies at the three-day FMS Expo, CII has partnered with various ministries of the Government of India, Government of Karnataka and various industry associations for making it one of the most comprehensive events in the EV space. The first edition of FMS will also have country pavilions set up by Japan and China apart from participation from countries like Germany to provide useful insights into the global EV industry to help India gain from emerging technology trends in EVs across the world.

Besides having innovation pavilion by start ups and select engineering colleges, FMS will also see participation from all auto majors and technology providers.

Focused on five national objectives of Responsible Mobility, Energy Security, Environment, Urban Mobility and Make in India, a number of international conferences will be organised concurrently with FMS on February 26 and 27.

With special focus on Urban Infrastructure, E Mobility, Alternative Fuels and Shared & Connected Mobility, a large number of B2B, B2G and B2C meetings have also been planned on all three days of FMS 2019.

The show is set to help India realise its carbon emission reduction target and leapfrog it to a low carbon economy using high-end and emerging technologies.

Convergence For Policy Push

A coherent policy on electric mobility is the need of the hour if India is to achieve its green goals. For this to happen, convergence of various EV stakeholders is inevitable. It is with objective in mind that FMS 2019 has partnered with various ministries of the Government of India including Heavy Industries and Public Enterprises; Petroleum and Natural Gas; Road Transport and Highways; Environment, Forest and Climate Change and Niti Aayog, to provide some clarity on policy making.

Partners in Transformation

FMS 2019 will also see for the first time coming together of various industry associations like ACMA, SIAM, SMEV (Society of Manufacturers of Electric Vehicles), APEV of Japan, ARAI, PCRA, SAE India, TERI, Char-in, Germany, etc, to help catalyse the transition by laying down a futuristic road map. The event will feature global industry leaders from EV space deliberating and discussing exciting future technologies and cutting edge innovations which will shape the mobility paradigm in India.

Supporting Organisations

ACMA Automotive Component Manufacturers Association of India | APEV Association for the Promotion of Electric Vehicles, Japan | ARAI | CHARIN | ieema your link to electricity | PCRA | SAEINDIA | SIAM Society of Indian Automobile Manufacturers | SMEV Society of Manufacturers of Electric Vehicles | teri

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Voices

FMS 2019 comes at a time when the Government of India and various State Governments are announcing favourable policies for this sector to achieve the target of a clean and sustainable future mobility for India. This platform, I am sure, will provide an opportunity to all stakeholders to network and initiate dialogues for action to achieve the common objective.

Mr. Vikram Kirloskar
Vice President
Confederation of Indian Industry

The Future Mobility Show 2019 - international exhibition and conference, showcasing innovations for future mobility in India - is a new addition to the portfolio of exhibitions of the Confederation of Indian Industry. FMS is aimed at creating a platform for all stakeholders of this sector to come together and initiate dialogues to create a clean and sustainable Future Mobility for India.

Mr. Chandrajit Banerjee
Director General
Confederation of Indian Industry

The Future Mobility Show (FMS) 2019 – targeted to become the largest International Exhibition and Conference on future mobility – is being organised with an objective to present a holistic view for India's future mobility, including products, technologies and ecosystem requirements.

Mr. C.V. Raman
Chairman, Steering Committee, FMS 2019 and Senior Executive Director-Engineering
Maruti Suzuki India Ltd.

Policies Paving Way for Future Mobility Growth in India

India, with a population of 1.3 billion people which is continuously rising, is at the centre stage of world energy transformation. The country relies heavily on conventional fuels to meet its energy demand and transport continues to be highest oil consuming sector. As India aims at reducing 10 percent of total oil import by 2022, there is an urgent need for a comprehensive government policy that is geared towards creating a sustainable future for mobility.

In this context, EV policies have made meaningful progress in India. In 2013, Government of India launched a National Electric Mobility Mission Plan 2020 aimed at electric/ hybrid vehicle fleet of 6-7 million by 2020. Keeping in view the low level of annual share of electric vehicle sale to total vehicle sale, the government launched FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) India Scheme on 1st April, 2015 with the objective to support hybrid/electric vehicles market development and manufacturing ecosystem, which led to marginal improvement to pre-existing technology.

Subsequently, several states like Delhi, Karnataka, Kerala, Telangana, Maharashtra, Andhra Pradesh and Uttar Pradesh have also announced an EV policy to complement national policy and address state specific needs.

However, there still remain barriers in wider adoption of electric vehicles in areas of consumer perception, efficiency of batteries, driving range, speed of EVs, charging time, creation of infrastructure for charging, battery recycling and technology development. Focused events like FMS 2019 are set to play a major role in bringing together all EV stakeholders on one platform to deliberate on the ways to help India overcome the existing challenges.

Karnataka: An EV hub in the making

To maintain the lead share of Karnataka as a preferred destination for attracting investments in manufacture of electric vehicles, Karnataka has come up with an Electric Vehicle & Energy Storage Policy. As a partner state at FMS 2019, Karnataka is set to highlights the incentives and concessions to EV and its components manufacturing enterprises. Known as IT capital and startup capital of the country, Karnataka envisions making the state a hub for the production of alternative fuel vehicles.

Setting the Framework for Future Mobility

NITI Aayog came up with a groundbreaking study that provides basis for engaging discussions and dialogues, and for helping India collectively march towards a sustainable mobility pathway

In a groundbreaking report, India Leaps Ahead: Transformative Mobility Solutions for All, NITI Aayog says that India can save 64 percent of anticipated passenger road-based, mobility-related energy demand and 37 percent of carbon emissions in 2030 by pursuing a shared, electric, and connected mobility future.

This would result in reduction of 156 M Tonnes in Diesel and Petrol consumption for that year and net saving of roughly Rs. 3.9 lakh crore (approximately $60 billion) in 2030 at present oil prices, the report adds. The study set the ball rolling in terms of policy feedback by clearly stating that India could leapfrog the conventional mobility model and achieve a shared, electric, and connected mobility future by capitalising on existing conditions and building on foundational government programmes and policies.

A large share of public and non-motorised transport, and low personal auto ownership in comparison to countries like China and USA create huge opportunity

for introduction of electric vehicles in Indian Markets, it says.

The report goes on to say that "existing capabilities—including India's dynamic public- and private-sector leadership, entrepreneurial culture, ability to build infrastructure right the first time, and a unique confluence of IT and manufacturing skills—could enable it to lead the world in advanced mobility solutions".

Underlining a set of actionable and specific solutions to accelerate India's leadership in advanced mobility, the NITI Aayog report calls for establishing a unified metropolitan planning authority, creation of metropolitan planning councils and development of networked city-level innovation and incubation centres.

In terms of policy and incentives, it also suggests some actionable solutions that can make Electric Vehicles more profitable for automakers and more affordable for consumers.

FMS 2019
A Blueprint for Green India

Realising the significance of electrification of the road transport sector, CII's FMS 2019 could prove to be a turning point for the sector by helping convergence of various stakeholders to prepare a blueprint of the future

FMS 2019 follows the two previous editions of Green Mobility Xpo (GMX) that was organised by CII in 2015 and 2017 at Pragati Maidan, New Delhi. As the EV industry looks poised to step into a new era of accelerated growth marked by a shift in the government's position to offer incentives only for electric vehicles, unveiling of EV policies by several state governments, FMS will prove to be a key platform to bring together and engage with key stakeholders within the rapidly transforming global mobility landscape to evolve a public interest framework for a shared, connected, zero emission and inclusive mobility agenda for the future.

As per a report by the McKinsey Center for Future Mobility, India holds 15th rank in the Market Electric Vehicle Index (EVI) of selected countries and 7th in the Industry Electric Vehicle Index, which are topped by Norway and China respectively. In terms of electric vehicle market adoption, India was ranked 4th just behind China, France and Germany. While the report stresses that both EV market acceptance and EV industry dynamics are at an early stage in India with demand coming mainly from commercial owners and the public sector and the country lacking charging infrastructure, the country's emergence in the EV space is important given its carbon-dioxide levels from electricity generation are among the world's highest. This presents huge opportunities for EV industry in every aspect of the EV ecosystem. FMS 2019 could prove to be a turning point in catering to this growing market.

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KEY DRIVERS OF FMS 2019

The show has been conceptualised as a unique platform to highlight latest trends in connectivity, new mobility solutions, emerging business opportunities in the new mobility ecosystem and innovative ways to make the future of mobility environmentally sustainable

The world is on the cusp of a mobility revolution, which is set to transform the way we move people and goods. It will happen on the back of fast emerging technologies, creating unprecedented opportunities for making transportation clean as well as efficient. Therefore, for any country investment in hyperloops, autonomous vehicles and digital railways will pave the way for the future of transport. In India, city and state governments also need to embark on a sustainable and equitable urban mobility pathway for sustainable and equitable growth or risk finding themselves on a road to nowhere.

Population growth, urbanisation and globalisation are expected to continue accelerating the deployment of new mobility solutions. The forces that are driving the new mobility ecosystem will get reflected in the Future Mobility Show 2019. The show will witness participation from auto majors like Ashok Leyland, Maruti Suzuki, Toyota Kirloskar, Tata Motors, BHEL, Indian Oil, Bajaj Auto, Delta Power Solutions, JBM Group, BMW, Mahindra Electric, Fiat, Nissan and TVS Motor company.

Technology providers like Bosch, Hella, Vector, Altair, MSC Software, Faurecia Clean Mobility, Okinawa Scooters, SEG Automotive, Continental Devices, Greenfuel Energy, AVL India, Ather Energy and Lucas TVS, will also be demonstrate their technological innovations at FMS 2019.

As a comprehensive platform for future mobility products, the international exhibition at the show will put on display Electric Buses, Electric & Hybrid Cars, Electric Two Wheelers, Fuel Cell Technologies, Charging Infrastructure and Software solutions, among others. Building on the success of previous editions of Green Mobility Xpo (GMX), CII's FMS 2019 aims to broaden the conversation to focus on disruptive forces driving the new mobility ecosystem and how they could impact different stakeholders.

DISRUPTIVE FORCES TO DRIVE FUTURE OF MOBILITY

More cities and governments are going for new mobility solutions like MRT, LRT and monorail. Investments in hyperloops, autonomous vehicles and digital railways is paving the way for the future of transport, which aren't just set to change how we travel, they are set to change the world

AUTONOMOUS VEHICLE

First driverless car was introduced by Google in 2009 and has covered 1.3 million miles on normal streets by 2016, compiling a vast array of automated driving knowledge.

DRONES & UNMANNED AERIAL VEHICLES

US and European countries are framing guidelines for usage of drones across agriculture, telecom, infrastructure and e-commerce sector.

FLYING CARS

Airbus' self-piloting flying car concept 'Vahana' plans to offer modular functionality, which means it can operate both on ground and in the air.

MAGNETIC PODS

Israel Aerospace Industries is testing suspended magnetic pods called SkyTran, a self-driving monorail designed to hover 20 feet above roads and travel up to 155 miles per hour.

HYPERLOOP

Hyperloop will have floating train pods using magnetic levitation technology in a tube operating at near-vacuum and gliding at an airline speed of 670 mph over long distances.

ROCKET TRAVEL

Elon Musk envisions long-distance travelling between cities on Earth by using the same rocket system which is being developed for the Moon and Mars trips.

EXHIBITORS AT FUTURE MOBILITY SHOW 2019

Advance Cable Technologies (P) Ltd	B5
Altair Engineering India Pvt Ltd	B10
Ampere Vehicles Pvt Ltd	D1
AMRL Hitech City Limited	D2
Apollo	A1
ARAI	B1B
Ashok Leyland	C1A
Ather Energy Pvt Ltd	B1A
Autotech Review	B2
AVL India Pvt Ltd	B1
Bajaj Auto Limited	B2H
Bharat Heavy Electricals Limited	B6
BMW India Private Limited	B3G
Bosch Ltd	A3
Bounce Share	B3B
Cell Prop Pvt Ltd.	B5B
Chenghang New Energy Vehicles Co.,Ltd	B2E
CII IQ	B3D
Continental Automotive Components (India) Pvt Ltd	B2B
Dassault Systems India Pvt Ltd	B2D
DeccaLeap Technologies LLP	C1F
Delta Power Solutions Pvt Ltd	B3C
Dolphin Recreation	B5F
Dowa	A2
eMotions Motors	B5C
ETO Motors Pvt Ltd	B5b
Exicom Power Solutions	B2C
FCA India Automobiles Pvt Ltd	B3A
Govt of Karnataka	B1
Greenfuel Energy Solutions Pvt. Ltd.	C1B
Hella India Automotive Pvt Ltd	B5G
iDisha Info Labs Pvt. Ltd. (Quick Ride)	B6A
IIT Kharagpur	B6B
IIT Madras	B3
Indian Oil Corporation Ltd	C1
ISIE India	B7
JBM Group	B2A
JIIPA	C2B
Logistics Sector Skill Council	B5A
Lucas TVS	C2F
Mahindra Electric Mobility Ltd	C2D
Maruti Suzuki India	C2E
Motor India	B10C
MSC Software Corporation	C2F
NextGen3dTech	B5F
PCRA	C2C
Power-One Micro Systems Pvt Ltd	C1E
SAE India	C2G
SEG Automotive	C1D
Shenzhen Herewin Technology Co.,Ltd	A3B
Shindengen	A3C
Tata Motors	A3A
TERI	C11
Toray	C2A
Toyota Kirloskar Motor Pvt Ltd	B5E
Vector Informatik India Pvt Ltd	B6C

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SMART CITIES TO BOOST EV GROWTH

With India embarking upon an ambitious target of achieving an all-electric nation status in a decade, smart cities being developed under the Smart Cities Mission will pave the way for the EV evolution

By 2050, about 70 percent of the world's population is projected to live, commute and work in urban areas, which in turn will require cities to have mobility and energy solutions that are sustainable, affordable, secure and inclusive, and integrated with customer-centric infrastructure and services.

Given the fast pace of urbanisation in India with urban population expected to reach about 600 million by 2030, the country has already embarked on an ambitious plan to develop 100 smart cities under the Smart Cities Mission, making them citizen friendly and sustainable. Under the mission, Smart Mobility is a key component to help move Indian cities towards a more connected and sustainable future.

Indian cities in near future are set to witness rapid changes in mobility as electric vehicles (EV) proliferate, ride sharing continues to grow, and eventually autonomous vehicles (AV) enter urban fleets.

As per a recent study, EVs are set to become more affordable than vehicles powered by internal combustion engines (ICEs) as the cost of batteries declines.

With Special Purpose Vehicles (SPVs) already in place for most of the smart cities in India, the Government of India has announced funding to Smart Cities for the purchase of purchasing electric vehicles to be used for mass transportation under the Faster Adoption and Manufacturing of (Hybrid and) Electric Vehicles in India (FAME) programme. The government has also proposed that it will provide funds to set up charging infrastructure in the selected cities.

The Smart Cities Mission will, therefore, provide a much-needed boost for India to reach its targeted goal of deploying millions of electric vehicles in the country for a sustainable future.

KNOWLEDGE SESSIONS
FUTURE MOBILITY CONFERENCE - 2019

26 – 27 February 2019 | BIEC, Bengaluru

DAY 1: 26 February 2019	
11:00 - 11:30 Hrs.	Exhibition Inauguration
12:00 – 13:30 Hrs.	INAUGURAL SESSION: 7C's Vision: India's Roadmap towards Sustainable Mobility
14:30 – 16:00 Hrs.	Session I: Make in India: Manufacturing Hub for Automobiles
16:00 – 17:30 Hrs.	Country Session: United Kingdom
DAY 2: 27 February 2019	
10:30 – 11:30 Hrs.	Digital Solutions for Future Mobility
12:00 – 13:45 Hrs.	Session II: Responsible Mobility: Building a Sustainable Ecosystem
15:00 – 16:30 Hrs.	Session III: Smart, Shared and Connected: India's Urban Mobility Landscape
16:30 – 18:00 Hrs.	Session IV: Future of Transportation Fuel in India

Decoding India's Mobility Vision

To be organised concurrently with FMS 2019 along the five national objectives of Responsible Mobility, Energy Security, Environment, Urban Mobility and Make in India, international conferences will anchor debate and deliberations on preparing a collective mobility agenda.

The knowledge sessions on 26 and 27 February are set to draw stakeholders from India and abroad to highlight and discuss how technological innovation and the existing ecosystem will play a supporting role to achieve the national objectives by charting out a clear roadmap.

The conference will have participation from stakeholders covering the entire mobility value chain like EV/Alternate Fuel vehicle Manufacturers, Energy Companies, Components Manufacturers (xEV parts, Alternate fuel part makers), Charging Infrastructure & Technology providers, Software solution providers & Solution Integrators, Start-up, Academicians representing the best Engineering Colleges and Universities and Government officials (State and Centre).

It will have sessions on 7C's Vision: India's Roadmap towards sustainable mobility; Make in India: Manufacturing Hub for Automobiles; Responsible Mobility: Building a Sustainable Ecosystem; Smart, Shared and Connected Mobility: India's Urban Mobility Landscape, and Future of Transportation Fuel in India.

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