



Confederation of Indian Industry

# FUTURE MOBILITY SHOW 2019

26-28 FEBRUARY 2019, BIEC, BENGALURU

LARGEST SHOWCASE OF FUTURE MOBILITY PRODUCTS AND TECHNOLOGIES



- Total Visitors 12875
- Conference delegates 400+
- B2B meetings – 1180
- Exhibitors: 75
- Business delegations from Japan, China, Thailand and the UK
- A big boost to networking with mobility solution providers
- International conference focusing on 5 national objectives of Responsible Mobility, Energy Security, Environment, Urban Mobility and Make in India



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Ministry of Petroleum and Natural Gas  
Ministry of Road Transport & Highways  
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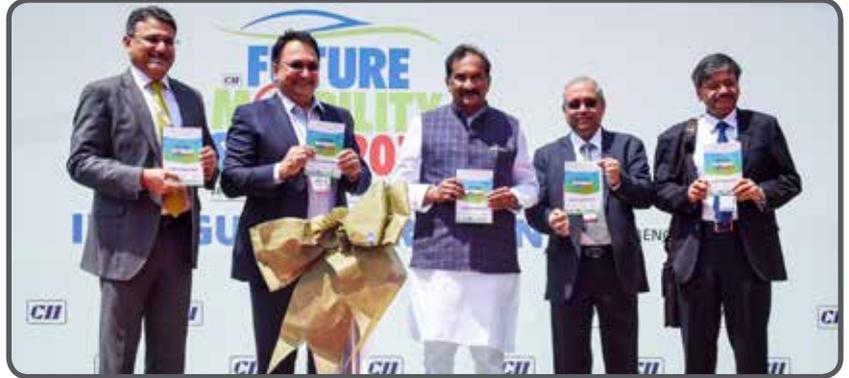
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- ▶ Future Mobility Show 2019 was organised as a follow-up of the MOVE Summit organised by Government of India's policy think-tank NITI Aayog in September 2018.
- ▶ FMS followed the two previous editions of Green Mobility Xpo (GMX) that were organised by CII in 2015 and 2017 at Pragati Maidan, New Delhi.
- ▶ The show was conceptualised keeping in view the Hon'ble Prime Minister's 7C Vision on Future Mobility in India—Common, Connected, Convenient, Congestion-free, Charged, Clean, and Cutting-edge.
- ▶ FMS was a complete event for Future Mobility with three days of exhibition, two days of concurrent International Conference, B2B, B2G & B2C Meetings, with special focus on Urban Infrastructure, E Mobility, Alternative Fuels and Shared & Connected Mobility.
- ▶ As many as 75 exhibitors from across India and the world showcased their innovative products and technologies at the three-day FMS Expo.
- ▶ CII partnered with various ministries of the Government of India - Heavy Industries and Public Enterprises; Petroleum and Natural Gas; Road Transport and Highways; Environment, Forest and Climate Change; and Niti Aayog for FMS 2019. Government of Karnataka was the partner state, while country pavilions at the show included companies from Japan and China showcasing their future mobility solutions.
- ▶ Various industry associations – ACMA, SIAM, SMEV, APEV of Japan, ARAI, IEEMA, PCRA, SAE India, TERI, Char-in, Germany, etc – participated at FMS making it one of the most comprehensive events in the EV space in India.
- ▶ Auto majors who participated at FMS 2019 included Ashok Leyland, Maruti Suzuki, Toyota Kirloskar, Tata Motors, BHEL, Indian Oil, Bajaj Auto, Delta Power Solutions, JBM Group, BMW, Mahindra Electric, FCA India, Nissan and TVS Motor Company, among others. Major technology providers at the show included Bosch, Hella, Vector, Altair, MSC Software, SEG Automotive, Continental Devices, Greenfuel Energy, AVL India, Ather Energy and Lucas TVS, among others. There was also a pavilion showcasing innovation by start-ups and select engineering colleges.
- ▶ Some of the major mobility solutions on display included Electric Buses, Electric & Hybrid Cars, Electric Two-Wheelers, Fuel Cell Technologies, Charging Infrastructure and Software solutions, among others.
- ▶ The international conference at FMS 2019 was structured around the five national objectives of: Responsible Mobility, Energy Security, Environment, Urban Mobility and Make in India (MII).



# KEY HIGHLIGHTS



## Supporting Organisations

**ACMA**  
Automotive Component  
Manufacturers Association of India

**APEV**  
Association for the  
Promotion of Electric Vehicles, Japan

**ARAI**  
Progress Through Research

**CHARIN**

**ieema**  
your link to electricity

**PCRA**  
पेट्रोलियम रिसर्च अडवन्सन्स सल

**SAEINDIA**  
Society of Automotive Engineers INDIA

**SIAM**  
Society of Indian  
Automobile Manufacturers

**SMEV**  
SOCIETY of  
MANUFACTURERS of  
ELECTRIC VEHICLES

**teri**

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## FMS 2019: MAJOR OUTCOME

- Who's Who from the mobility and transportation sector converged at FMS 2019 to co-create a framework to transform future mobility. Providing a future roadmap of mobility in India, it helped stakeholders understand where to play and how to win.
- The maiden edition of the show was successful in starting a dialogue on the future options that India needs to look into from technology aspect, ecosystem requirement and fuel choices.
- FMS addressed three important issues of clean and sustainable environment, energy security and job creation in a very technology agnostic manner.
- The mobility sector today contributes more than 7 percent to the country's GDP. It is half of the manufacturing sector which supports jobs for 32 million people and has the potential for creating even more jobs in the future.
- The Government of India through its various schemes has shown a great will to transform the mobility landscape of India by adopting new policies like the National Policy on Biofuels, National Electric Mobility Mission Plan.
- The Union Cabinet cleared a Rs. 10,000 cr programme under FAME-II for promotion of electric and hybrid vehicle soon after FMS 2019.
- An important aspect of the FAME scheme is to encourage adoption of Electric and Hybrid Electric Vehicles.

Considering energy consumption patterns, the scheme focuses on segments with maximum impact on energy security and environment. CII to support integrated approach in this context.

- It is important for CII and its membership to look at various mobility & technology options that are sustainable and in line with India's Climate change commitments.
- The way that people and goods travel is changing, driven by a series of converging technological and social trends.
- The capability to manage and share data will be a key differentiators in the future of mobility, and managing the data from the first mile to the last mile will provide incredible insight and power.
- To ensure credibility, reliability and robustness of the work force in the future, the mobility industry and government need to work together to making skill development aspirational and integrated with academic pathways.
- India needs to change the urban infrastructure to make it suitable for large scale adoption of EVs. Electric charging infrastructure need to be a part of the planning process of new buildings and malls that are coming up.
- India need to develop a technology agnostic approach towards future mobility, putting in place policies that provide an enabling environment to make things happen quickly.





*Karnataka has realised the relevance of Electric Mobility and has emerged as a frontrunner; determined to play a vital role in driving EV penetration. Karnataka, a pioneer state, home to first electric vehicle in the country along with the required ecosystem, is at the cusp of making a transition to new mobility solutions.*

**K J George**  
Hon'ble Minister for Large and Medium Scale Industry, Government of Karnataka



*We have published a draft National Logistics Policy. Logistics sector contributes 14 percent to India's economy. Our whole aim is to further boost its growth while keeping the cost low. Our cheapest port, the Jawaharlal Nehru Port Trust, is at least three times costlier than Singapore port, which makes products expensive. Therefore, it is very important to reduce the cost.*

**N Sivasailam**  
Special Secretary – Logistics, Department of Commerce, Ministry of Commerce and Industry, Government of India

*Even though India is one of the fastest growing countries in renewal energy, it still needs to look at the overall energy equation, ensure that the energy future is secure and find ways to sustain energy requirements for everyone. The mobility sector is a ray of hope given the pressures the country faces to provide jobs to the young people.*



**Vikram Kirloskar**  
Vice President, Confederation of Indian Industry and Managing Director, Kirloskar Systems Ltd and Vice Chairman, Toyota Kirloskar Motor

*I believe that this is the start of the future. If you see globally, two major transformations are taking place - there is energy transformation from fossil to renewable energy and there is transport transformation from internal combustion engine to electric vehicles. I think these transformations are very closely linked and that's where a lot of good for the society will happen.*



**Manoj Kohli**, Chairman, CII Task Force on Electric Mobility and Storage

*Mobility is going to get greater traction in the future. Future Mobility Show 2019 is a great initiative by CII. We must bring people together on one platform to determine the future of mobility to help India realise its carbon emission reduction goals. Participation from auto majors, technology providers, academia and startups gives FMS a unique advantage to start a meaningful conversation around future of mobility in the country.*



**Vipin Sondhi**, Chairman CII Trade Fair Council

*India will have around 70 million cars by 2030, considering an average CAGR of 8 percent. With an EV penetration of 20-30 percent, the internal combustion engines will still be 70-80 percent of this number. Therefore, a technology agnostic approach with focus on alternate fuels, hybrid electric vehicles, electric vehicles will have a lot of impact on our oil imports.*



**C.V. Raman**  
Chairman of CII Steering Committee on FMS 2019

*The Government of India has shown a great will to transform the mobility landscape of India by adopting new policies like the National Policy on Biofuels, National Electric Mobility Programme. Also in the works is the newer version of FAME I. Recent fiscal incentives with customs duty cuts on hybrid and EV cars also augur well for India's mobility transition.*



**Chandrajit Banerjee**, Director General, CII



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## CII OBJECTIVE: A BLUEPRINT FOR GREEN INDIA



The mobility space is continuously evolving and many new solutions will come in the future. The maiden Future Mobility Show 2019 will carry forward the momentum it has created by making it a structured platform where the discussion can be continued.



FMS has successfully emerged as a convergence point for all mobility stakeholders to come together for the development of future-ready and environment-friendly mobility solutions that are convenient, safer and affordable.



FMS 2019 stressed on a technology agnostic approach towards finding futuristic mobility solutions that are relevant to diverse Indian conditions.



FMS drew stakeholders from India and abroad to highlight and discuss how technological innovation and the existing ecosystem will play a supporting role to achieve the Five National Objectives of: Responsible Mobility, Energy Security, Environment, Urban Mobility and Make in India.



Participation from auto majors, technology providers, academia and startups gave FMS a unique advantage to start a meaningful conversation around future of mobility in the country.



Through FMS, CII hopes to play a crucial role in shaping policies that are set to guide two major transformations -- energy transformation from fossil to renewable energy and technology transformation from internal combustion engine to electric.



# OVERSEAS PARTICIPATION



- ▶ The maiden edition of FMS saw business delegation from countries like Japan, China, Thailand, USA, Germany and the UK
- ▶ Mobility exhibitors from Japan and China
- ▶ Thought leaders participation in the international conference from UK and Germany
- ▶ B2B Meetings with stakeholders.
- ▶ Overseas business delegation participation highlighted the scope of both the countries working together on policies, research, technology partnership and knowledge exchange in a wide spectrum of areas.
- ▶ The delegation explored opportunities to collaborate with Indian state governments, think-tanks, businesses and research institutions to develop long term partnerships in the electric mobility space.
- ▶ There is an urgent need to find new ways for skill development keeping in view the requirements of future mobility.





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# FMS 2019: A WINDOW IN



# EXHIBITION



## TO MOBILITY FUTURE

*The FMS exhibition was structured in such a way that it acted as a convergence point by covering the entire mobility value chain like EV/Alternate Fuel vehicle Manufacturers, Energy Companies, Components Manufacturers, Charging Infrastructure & Technology providers, Software solution providers & Solution Integrators, Engineering Colleges and Universities*



# RESHAPING MOBILITY



- ▶ FMS 2019 was home to a number of startups, who are ready to disrupt the mobility space with their great ideas and technologies.
- ▶ Along with many big names, startups put on display their innovations ranging from electronic boats to electronic motorcycles.
- ▶ Besides products in the EV space, startups also offered solutions like ride pooling services and fire extinguishers for vehicles, among others.
- ▶ Imperial Society of Innovative Engineers has put on display Go-Kart innovative designs prepared by students.



A good number of start-ups pinned their hopes on FMS 2019 to help reshape the mobility of the future through networking and collaborations



- ▶ eMotion exhibited geared electric motorcycle called Surge.
- ▶ Deccanleap exhibited solutions for vehicle fire which can be easily installed.
- ▶ Quick Ride offers a powerful platform to find real-time options for ride-sharing, carpooling and bike pooling.

▶ Dolphin Recreation, has taken the eco-friendly mobility to water. It manufactures eco-friendly solar and Electric Boats.

▶ Top manufacturing companies and overseas delegations provided startups useful insights into the global trends in future mobility.





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## SESSION TAKEAWAYS

- Some of the key recommendations included Market Creation and Adoption, Creating Scale for Make in India, Domestic Manufacturing of Vehicles Components and Batteries, Skill Development, Integration of Renewable Energy into Charging Infrastructure and Measures for Cost Reduction.
- The session on 'Digital Solutions for Future Mobility' deliberated on how mobility would put huge pressure on developers' time and cost to bring out frugal innovations. Experts also discussed shared challenges about the use of technology in integration of all mobility solutions such as a digital infrastructure for shared mobility.
- The session on 'Responsible Mobility: Building a Sustainable Ecosystem' deliberated upon a well thought out strategy for future mobility that needs to be put in place. The panellists discussed the future of mobility in terms of climate change and road congestion as well as urban planning. The experts suggested that there was a need for an integrated policy making approach at the local, state and central level.
- The session dwelled upon the need to look for electric and hybrid solutions to tackle modern mobility problems, as well as the need for two-wheelers to go electric.
- Solutions towards cleaner and sustainable mobility such as exemption to Electric & Hybrid Vehicles, charging stations, logistic cost reduction were also discussed in detail.
- It was agreed upon that the government must look into all kinds of possibilities and alternatives to make strategic decisions which can make mobility sector more responsible.
- The session 'Smart, Shared and Connected: India's Urban Mobility Landscape' was helpful in coming up with the solution to India's traffic congestion problem which has dramatically increased over the past few years. The panellists agreed that convenience, predictability and reliability are the three focus areas while planning and looking into smart urban mobility.
- The session 'Future of Transportation Fuel in India' deliberated upon the need for diversification of energy sources that comes with exploration and exploitation of alternative energy to improve energy security.



# KNOWLEDGE SESSIONS



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# MOBILITY TRANSFORMATION



*The Future Mobility Show (FMS) 2019 organised by Confederation of Indian Industry (CII) set the agenda for transformation of India's mobility sector by bringing all stakeholders on a single platform for the development of future-ready and environmentally sustainable mobility products and technologies. FMS 2019 has catalysed the dialogue on the options that India needs to look into both from the technology aspect and the fuel choice. The maiden edition of FMS saw global participation to provide useful insights into the global trends in future mobility*





## Confederation of Indian Industry

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society, through advisory and consultative processes.

CII is a non-government, not-for-profit, industry-led and industry-managed organization, playing a proactive role in India's development process. Founded in 1895, India's premier business association has around 9000 members, from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 300,000 enterprises from around 265 national and regional sectoral industry bodies.

CII charts change by working closely with Government on policy issues, interfacing with thought leaders, and enhancing efficiency, competitiveness and business opportunities for industry through a range of specialized services and strategic global linkages. It also provides a platform for consensus-building and networking on key issues.

Extending its agenda beyond business, CII assists industry to identify and execute corporate citizenship programmes. Partnerships with civil society organizations carry forward corporate initiatives for integrated and inclusive development across diverse domains including affirmative action, healthcare, education, livelihood, diversity management, skill development, empowerment of women, and water, to name a few.

India is now set to become a US\$ 5 trillion economy in the next five years and Indian industry will remain the principal growth engine for achieving this target. With the theme for 2019-20 as 'Competitiveness of India Inc - India@75: Forging Ahead', CII will focus on five priority areas which would enable the country to stay on a solid growth track. These are - employment generation, rural-urban connect, energy security, environmental sustainability and governance.

With 66 offices, including 9 Centres of Excellence, in India, and 10 overseas offices in Australia, China, Egypt, France, Germany, Singapore, South Africa, UAE, UK, and USA, as well as institutional partnerships with 355 counterpart organizations in 126 countries, CII serves as a reference point for Indian industry and the international business community.

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