

Opportunities in India's Future Mobility Sector

*Presented by
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Advantage India

- ✓ Fastest Growing Major Economy
- ✓ World's Fourth Largest Automobile Market
- ✓ Stable Government
- ✓ Government focus on "Make in India"
- ✓ Initiatives for "Ease of doing business"
- ✓ Tax reforms and focus on good Governance
- ✓ Rapidly growing industrial and logistics infrastructure (ports, rail, road and air)
- ✓ Skilled labor and talent
- ✓ World's largest young population
- ✓ Buoyancy in local demand

Indian Economy at present

India in the World

- India is the fastest growing major economy in the world.
- Ranks 3rd globally in GDP PPP terms and 5th in nominal GDP terms.

Domestic economy

- GDP grew at 8.2% in Apr-Jun 2018 after improving steadily for the 4th consecutive quarter. Robust growth in GVA of agriculture (5.3%), industry (10.8%) and service sector (7.5%).

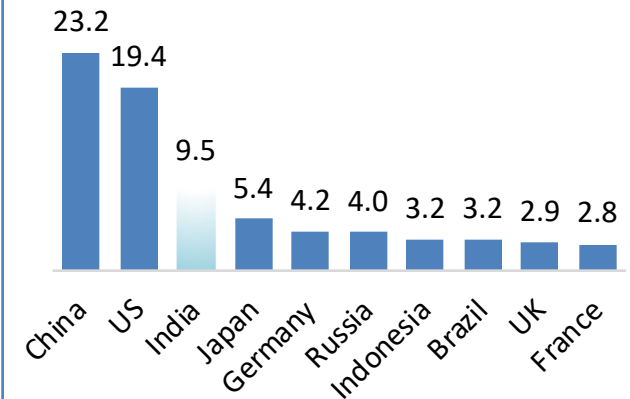
International Trade

- External trade situation remains healthy with both exports and imports expanding in double digits in the last 4 months (May to Aug 2018).

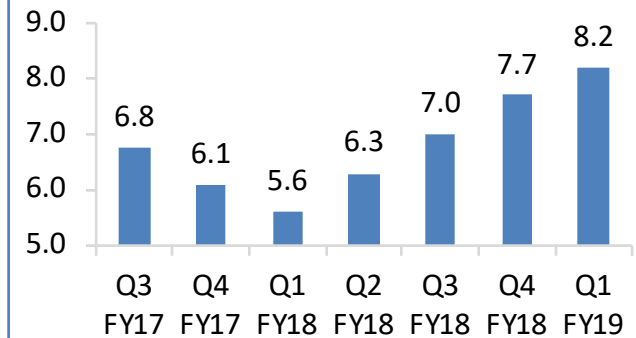
Foreign Inflows

- Despite the sharp outflows in FPIs this year due to global headwinds, the net FDI inflows continue to remain strong (~USD 18.1 billion)

GDP at purchasing power parity (PPP), 2017 (Trillion US\$)

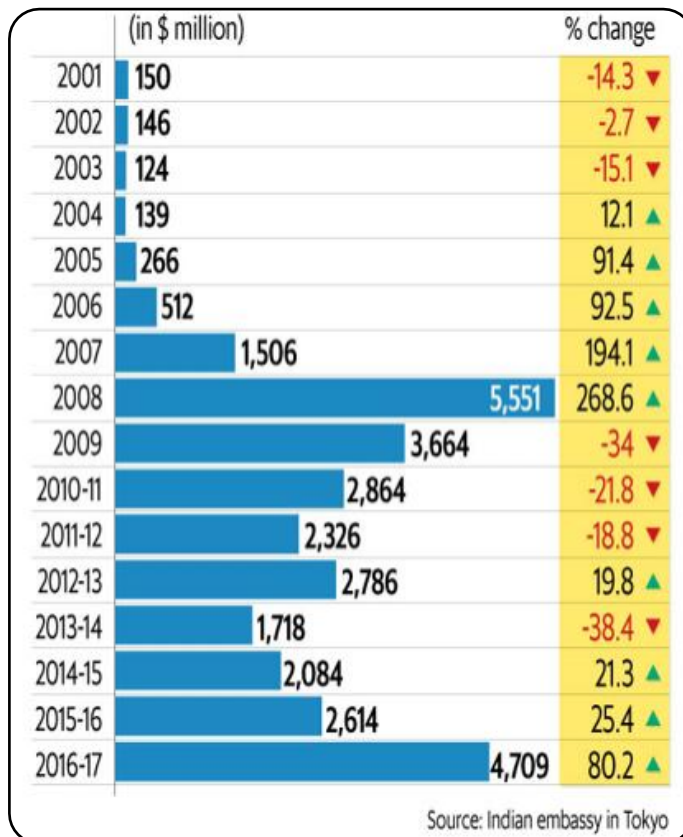


GDP Growth (% Y-o-Y)



India- Japan Trade Relations

FDI inflow in India from Japan



- Japan is ranked 3rd in terms of cumulative FDI inflow in India since 2000
- **1369 Japanese companies registered in India**, as of October 2017
- **4838 Japanese business establishments in India**, as of October 2017

India-Japan Trade relations

- Auto Sector is the 2nd largest sector in terms of cumulative FDI Inflow from Japan

SHARE OF TOP SECTORS ATTRACTING FDI EQUITY INFLOWS FROM JAPAN

(from April 2000 to March 2016):

(Amount of FDI equity inflows)

Rank	Sector	Amount of FDI equity inflows		% age of FDI equity inflows from JAPAN
		Rs. in crores	US\$ in million	
1	Drugs & Pharmaceuticals	22,080.91	4,463.48	21.29
2	Automobile Industry	21,925.43	4,021.99	19.18
3	Services Sector*	18,021.87	3,257.85	15.54
4	Metallurgical Industries	7,383.68	1,538.40	7.34
5	Electrical Equipments	5,586.68	1,094.31	5.22
Total of Above		74,998.57	68.57	68.57

FDI COUNTRY NOTE ON JAPAN FROM DIPP

(*)Star refers here Fin.,Banking,Insurance,Non Fin/Business,Outsourcing,R&D,Courier,Tech. Testing and Analysis, Other

India- Japan: Vision 2025



Hon'ble PM Modi and PM Abe released "India-Japan Vision 2025"; a 'Special Strategic and Global Partnership' document between the two democracies in 2015.

Key Sectors for Industry Cooperation for realizing India-Japan Vision 2025

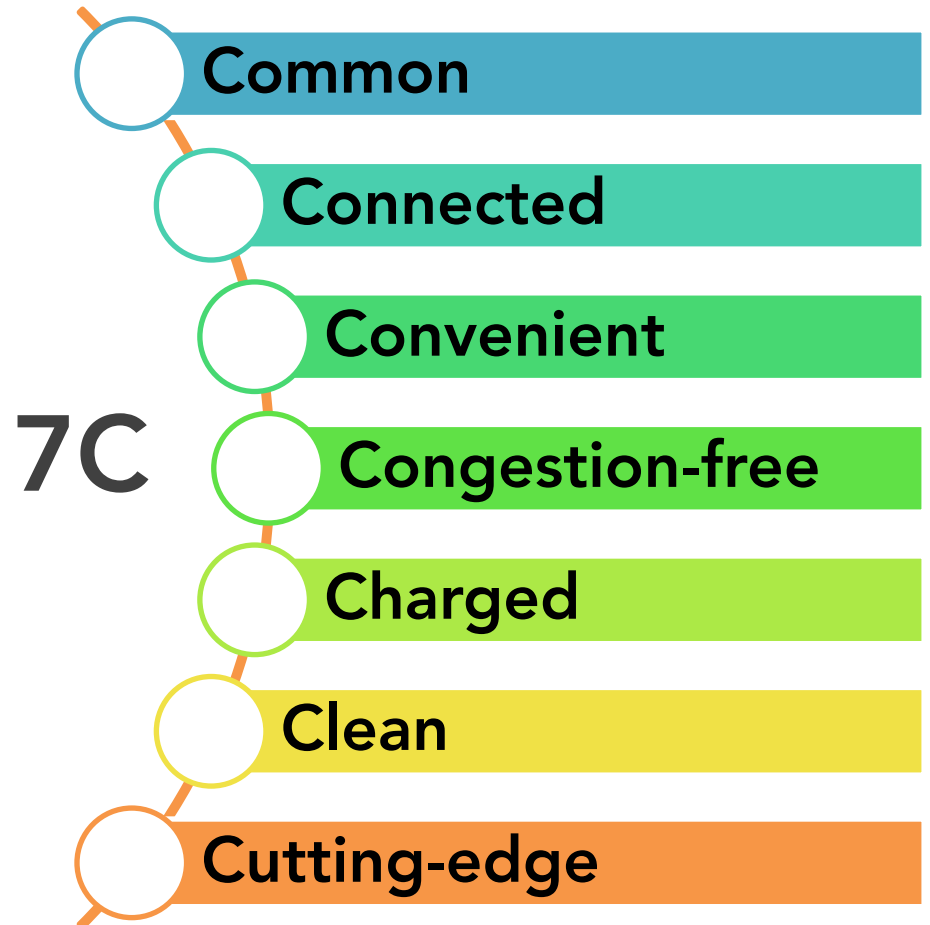
Infrastructure	Automotive	Skill Development
<ul style="list-style-type: none"> • High Speed Rail Project: ~81% of USD 17 Bn to be funded by JICA • Delhi-Mumbai Industrial Corridor: USD 4.5 Bn Investment • Collaboration to develop Japanese Industrial Townships & Road Infrastructure Development in North East India 	<ul style="list-style-type: none"> • Automakers like Toyota and Suzuki are committed towards green mobility via hybrid & electric vehicles production in India. • Toshiba, Suzuki & Denso will set up India's 1st Lithium-ion battery manufacturing plant in Gujarat 	<ul style="list-style-type: none"> • To set up Japan-India Institutes of Manufacturing (JIMs) in India in collaboration with Japanese Companies to create a pool of skilled manpower for manufacturing units in India. - 1st JIM has come up in Gujarat by Maruti Suzuki, Gujarat Govt. & Japan Govt. • India will send 300,000 youth to Japan for on-job training for 3-5 years as part of the government's skill development program.

FUTURE MOBILITY FOR INDIA

Hon'ble PM Modi's Vision



Hon'ble PM Modi explaining his 7C Vision for the Future of Mobility in India in the recent MOVE- Global Mobility Summit



7C's of Future Mobility

Common

- Common Public Transport must be the cornerstone of our mobility initiatives.
- New business models driven by digitization, are reinventing the existing paradigm.
- Focus must also go beyond cars, to other vehicles such as scooters and rickshaws

Connected

- Connected mobility implies integration of geographies as well as modes of transport.
- Internet-enabled Connected Sharing Economy is emerging as the fulcrum of mobility.
- Leverage the full potential for vehicle pooling to improve private vehicle utilization

Convenient

- Convenient mobility means safe, affordable and accessible for all sections of the society. This includes the elderly, the women and the specially abled
- Need to ensure that public transport is preferred to private modes of travel

7C's of Future Mobility

Congestion-free

- Congestion free mobility is critical to check the economic and environmental costs of congestion.
- Hence, there should be emphasis on de-bottlenecking of networks.
- This would result in fewer traffic jams and lower levels of stress for commuters

Charged

- Charged mobility is the way forward.
- Want to drive investments across the value chain from batteries to smart charging to Electric Vehicle manufacturing.
- India's entrepreneurs & manufacturers are now poised to develop and deploy break-through battery technology
- Will soon put in place a stable policy-regime around electric and other alternative fuel vehicles. Policies will be designed as a win-win for all, and enable huge opportunities in the automotive sector.

7C's of Future Mobility

Clean

- Clean Mobility powered by Clean Energy is the most powerful weapon in our fight against Climate Change. This means a pollution-free clean drive, leading to clean air and better living standards for our people. **We should champion the idea of 'clean kilometers'.**
- Could be achieved through bio-fuels electric or solar charging. Electric Vehicles in particular can complement our investments in renewable energy. We will do whatever it takes, because this is our commitment to our heritage, and our promise to future generations.

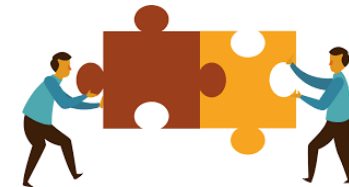
Cutting Edge

- Mobility is like the Internet in its early days. It is Cutting-edge. It is the next big innovation sector.
- Entrepreneurs should see mobility as a sector with immense opportunity for innovation and growth. It is a sector where innovation can help solve problems for public good.

Future Mobility in India - Actionable Solutions

➤ System Integration

- Mobility as a service
- Interoperable transport data



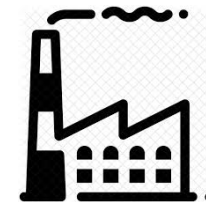
➤ Shared Infrastructure Development

- Mobility-oriented development
- Vehicle-grid integration



➤ Scaled Manufacturing

- Product manufacturing
- Clean Vehicle deployment



Future Mobility in India - Actionable Solutions

➤ Governance:

- Unified Metropolitan planning authority
- Metropolitan planning councils
- Networked city-level innovation and incubation centers

➤ Policies & Incentives:

- Policies that encourage Mobility as a Service (MaaS)
- Roll out enhanced fiscal incentives
- Design non fiscal incentives – easier registration and preferred electricity tariffs

Future Mobility in India – Supporting Programs

- Make in India
- Digital India
- FAME (Faster Adoption & Manufacturing of Electric Vehicles) providing incentives for purchase of Electric & Hybrid vehicles
- Green Mobility Fund for cities and state capitals
- Smart Cities Mission – develop 100 cities all over the country making them citizen-friendly and sustainable
- Renewable Energy Program - 175 GW by 2022
- Establishing a learning platform to coordinate and prioritize actions

Future Mobility in India

A transformation with many benefits:

- Improving air quality
- Improving asset utilization
- Better access to public transit
- Decongesting roads and highways
- Reducing traffic fatalities
- Reducing the direct and indirect costs of transportation for citizens
- Stimulating technology development and manufacturing
- Accelerating India's renewable energy goals

Future Mobility in India – Challenges & Opportunities:

- Knowledge about xEVs (EV, HEV, FCEVs), performance capabilities, operation and use, interaction with electric energy supply system etc.
- Range/Capacity of xEVs, specially for commercial operations
- Innovation for cost effective battery solutions and critical components
- Create Local manufacturing ecosystem for future technologies
- Awareness and sensibility about the impact of the future mobility on the environment and energy management.
- Building Charging infrastructure with Renewable energy

Future Mobility in India – Challenges & Opportunities:

- Specific courses at Universities and Engineering Colleges
- Standardisation entities
- Technology development & application capability
- Recycling and re-use technologies for batteries
- Software systems for integration of grids, etc.
- IT Platforms for charging, payment & other applications



Confederation of Indian Industry

Supported by



SOCIETY of
MANUFACTURERS of
ELECTRIC VEHICLES



FUTURE
MOBILITY
SHOW 2019

The main title is centered on the page. "FUTURE" is in blue, "MOBILITY" is in green, and "SHOW 2019" is in blue and red. A red speedometer icon is integrated into the letter "O" of "MOBILITY". A small "CII" logo is positioned to the left of "FUTURE". Above the text is a stylized blue and green swoosh graphic.

26 - 28 FEBRUARY 2019, BIEC, BENGALURU, INDIA

www.futuremobilityshow.in

FUTURE MOBILITY SHOW (FMS 2019)

Complete event for Future Mobility:

- Three Days of Exhibition
- International Conference
- B2B & B2C Meetings
- Panel Discussions on specific subjects

FUTURE MOBILITY SHOW (FMS 2019)

Organised by : Confederation of Indian Industry (CII)

Dates : Tuesday 26 - Thursday 28 February, 2019

Venue : Bangalore International Exhibition
Centre (BIEC), Bengaluru, India

Aerial View of Venue, BIEC



FUTURE MOBILITY SHOW (FMS 2019)

Event will cover:

- *Infrastructure including charging*
- *Solar Energy*
- *Alternate Fuel Technologies*
- *Raw Material Security*
- *Increase in Manufacturing Units*
- *Fast Track Approvals & Single Window Clearance*
- *Taxation*

FUTURE MOBILITY SHOW (FMS 2019)

Supported by : ACMA (Automotive Component
Manufacturers Association of India)
SIAM (Society of Indian Automobile
Manufacturers)
SMEV (Society of Manufacturers of
Electric Vehicles)

FUTURE MOBILITY SHOW (FMS 2019)

Who should Exhibit:

- *xEV / Alternate Fuel vehicle Manufacturers*
- *Energy Companies*
- *Components Manufacturers (xEV parts, Alt fuel part makers)*
- *Charging Infrastructure & Technology providers*
- *Software solution providers & Solution Integrators*
- *Start-ups*
- *Engineering Colleges & Universities*
- *Government*

Glimpses from Previous Green Mobility Show



Glimpses from Previous Green Mobility Show Conference

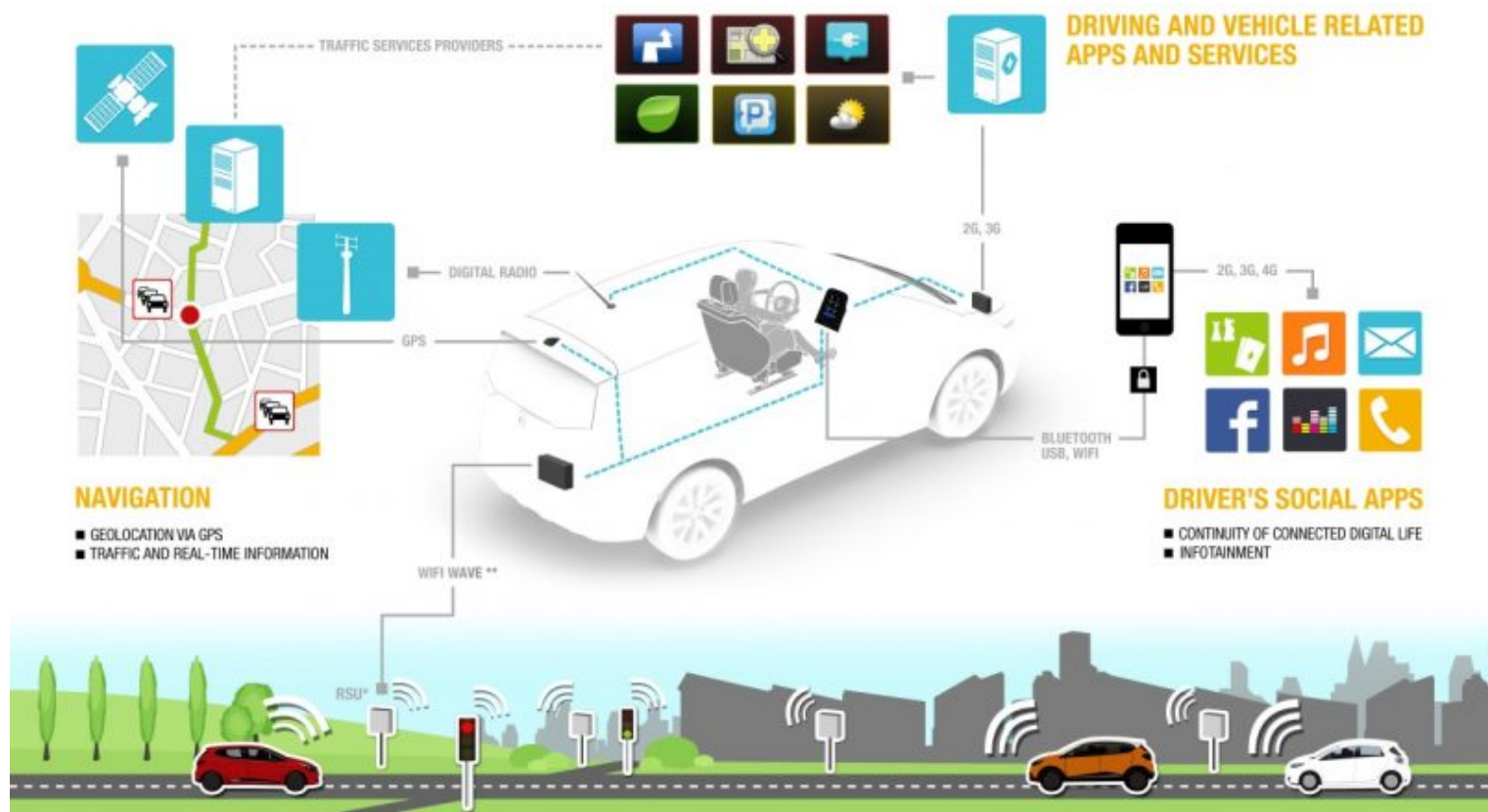


Japan @ FMS 2019 As Partner Country

CII Invites Japan at FMS 2019:

- *Participate as Partner Country*
- *Showcase technological advancements and capabilities in an exclusive area*
- *Key stakeholders to exhibit*
- *Government and Industry Associations involvement*
- *Largest Overseas Pavilion*
- *Indo-Japan Future Mobility Forum (exclusive seminar)*

Japan is pioneer in Ecosystem Approach



Partnership will be mutually beneficial!

Welcome to India



- ✓ A Land of Billion+ People
- ✓ A Land of Billion+ Opportunities

Japan @ FMS 2019

Open for Discussions

www.futuremobilityshow.in