



**ELECTRIC  
MOBILITY  
FORUM**



# CORPORATE ADOPTION OF ELECTRIC VEHICLES IN INDIA

November 20, 2019  
3:00 PM - 4:00 PM (IST)  
WRI India Delhi

**Speaker:**

Mr Nittan Bhalla,  
General Manager & Head - Facilities Management & Operations at  
Wipro Digital Operations and Platforms

**Moderators:**

Miss Shravani Sharma  
WRI India



WRI INDIA  
— ROSS CENTER



# Agenda for Today

*1. Wipro Sustainability Initiatives*

*2. Corporate adoption of EV - Three Phase Approach to Adoption*

*A. Diagnostic – Business Case, Market Landscape, Stakeholder Alignment*

*B. Design – Operational Planning, Infrastructure Roll Out, Resourcing*

*C. Deploy – Productivity, Measure impact, Feedback mechanism*

*3. Learnings from EV deployment campus*

*4. Q&A*





Outperform.  
*With Wipro.*

Sustainable Mobility

November 2019



## Our Values

The Spirit of Wipro is the core of Wipro. These are our Values. It is about who we are. It is our character. It is reflected consistently in all our behavior.



- Be passionate about clients' success
- Treat each person with respect
- Be global and responsible
- Unyielding integrity in everything we do

# Sustainability Highlights

## BIODIVERSITY, WASTE AND WATER

- 4% reduction in water consumption intensity
- 42% of water recycled in FY 2019
- 97% of waste diverted from landfill
- 3 biodiversity projects completed
- Bengaluru Sustainability Forum

## ENERGY & EMISSION

- 29% reduction in emissions intensity
- 40% Energy from Renewables
- First to receive Greenco Silver Rating award
- 44% YoY increase in energy saving
- 21% YoY reduction in air travel footprint

## REWARDS & RECOGNITION

- Dow Jones Sustainability Index (DJSI)
- 2019 World's Most Ethical Company
- Silver Class Sustainability Yearbook Award 2019
- A- in Carbon Disclosure Project (CDP)
- Ecovadis-CSR rating of Gold
- Golden Peacock HR Excellence Award, 2018
- United Nations - Women at Workplace Awards 2019
- Nipman-Microsoft Equal Opportunity Awards 2018
- Top 20 Companies in DivHERsity



# Diagnostic - Business Case, Market Landscape, Stakeholder alignment

- Develop Business Case for “Why Electric Vehicle should be implemented”
  - Mega trends in the Future of Mobility – Shared, Connected and Electric
  - Assess current carbon footprint and impact on carbon abatement by switch to EV
  - Evaluate savings potential from reduced trip cost and abatement from fuel cost increase
- Understand the market landscape for Electric Mobility in India
  - What are the current electric vehicles available to deploy – sedan, SUV, bus etc.
  - Who are the current electric fleet operators
  - What are the charging infrastructure requirements – fast charging, slow charging
- Align internal stakeholder with the vision to transform the mobility system
  - Identify stakeholders to engage – Procurement, Transport, Real Estate, CXO
  - Create individual value proposition for each stakeholders about the paradigm shift
  - Introduce selected vendors with the wider stakeholder early in the process

Business Case. Market Landscape. Stakeholder Alignment



# Design - Operational Planning, Infrastructure roll out, Resourcing

- Detail Operational Planning to be developed once the decision is made to switch to electric
  - Route/Trip allocation – Maximise productivity to derive value from lower electricity fuel cost
  - Each EV should complete 250+ km in 6-8 trips per day to it should get preferential allocation
  - Transition plan to switch to EV in phase wise approach should be ready for seamless transition
- Plan Infrastructure Roll out at the company premise
  - Identify locations where charging station can be deployed based on convenience of pick up and drop as well as closer to electric connection available
  - Clarify roles and responsibilities between service provider and company
  - Right mix of fast and slow charging to be deployed to ensure utilization as well as availability
- Identify resourcing needs and hire right skillsets
  - Integration with the existing automation routing system
  - Manpower to manage charging infrastructure requirements with right skill sets
  - Assign clear roles and responsibilities between Service Provider team and Company resources

Operational Planning. Infrastructure roll out. Resourcing



# Deploy - Productivity, Measure Impact, Feedback Mechanism

- Ensure Productivity of Electric Vehicles
  - Maximise productivity by ensuring right mix of long, medium and short routes
  - Each EV is capable to do 300+ km in single day if managed properly
  - Charging schedule to be planned accordingly
- Measure Impact to capture benefits from this switch to EV
  - Assess carbon emissions abatement from the distance covered on regular basis
  - Evaluate transport cost reductions and how can this be further reduced
  - Develop survey mechanisms to take feedback from people experience
- Develop objective feedback review mechanism
  - Design score card to understand the EV deployment performance
  - Regular review meetings between service provider and company
  - Identify gaps that can be closed on jointly basis

Productivity. Measure Impact. Feedback Mechanism





# Why Electric?



Abatement of Fuel Price Escalation



Future Proofed Against Emission



ESG Norms for Listed Fortune 500 Companies



Safety Through Connected Car



Productivity Drives Cost Reduction

Sustainability. Cost Reduction. Above Market Compliance. Safety. Employee Experience.

# Strong tailwinds towards EV adoption

## Maruti Suzuki to phase out diesel cars as stricter emission norms kick in

Diesel cars account for almost a third of sales

BS Web Desk | New Delhi/Bengaluru  
Last Updated at April 25, 2019 19:07 IST

Maruti Suzuki India Ltd said on Thursday it would stop making all diesel cars beginning April next year and forecast a weak rate of growth for the current fiscal

## After Maruti, Now Tata Motors To Stop Small Diesel Car Production In India

Tata Motors' is set to phase out small diesel cars from its portfolio in India and becomes the second auto major to do so after Maruti Suzuki. The move comes as Tata Motors expects that the demand for small diesel cars will phase out once the upcoming BS-VI emission norms are rolled out in the country.

BS-VI emission norms will come into effect starting April 1, 2020, post which, the prices of diesel cars is set to see a rise. Due to this, many car makers believe that the small segment diesel cars will be out of reach for budget buyers in India.

## End of the road for diesel cars nears as emission norms get stricter

Moreover, diesel would cost nearly as petrol in coming years

Abhishek Waghmare  
Last Updated at May 5, 2019 23:13 IST



## India apprehensive Iran sanctions could boost oil prices, inflation

Iran's oil customers last week by saying no waivers would be granted

May 02, 2019, 06:16 AM IST



WASHINGTON: US sanctions on Iran could boost oil prices and inflation to a point that hurts the common person in India, the country's ambassador to the United States said on Tuesday, after the Trump administration said it would end waivers for Iran's oil buyers.

President Donald Trump's efforts to sink Iran's oil exports to zero will have a direct impact on India, the largest buyer of the oil after China, Harsh Vardhan Shringla, the ambassador, said at a Carnegie Endowment

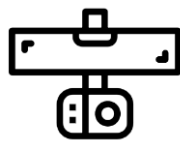
## Global oil prices soar, India remains stable: Sharp fuel price hike after elections?

Much to the displeasure of the Narendra Modi government, turbulence in the international oil market has made an unexpected comeback. That, too, at a time when the country is voting in the country-wide Lok Sabha elections 2019.

Impact of BS VI, CAFE norms, IMO, Indian Motor Vehicle Act 2019  
Diesel prices to increase @5% CAGR = Rs 3-4 per litre per year



# Safety & Security



**CAMERA**  
*Two- Way; Event based  
Continuous Internal Storage*



**AIS 140**  
*GPS  
Panic Button*

**SLEEP ALERT SYSTEM**  
*Fixed time alert  
Warning modes*



**TURNING CHAIR**  
*Special transportation needs  
for PWD, pregnant women*



- Electronic Speed Governed Car  
- 140 kms range/charge



**FACTORY FITTED**  
GPS & Telematics Device  
*Location  
4G connected  
SOC  
DTE  
HVAC  
Energy Efficiency*

# Transparency in Operations

- **Dedicated & Connected fleet** provides better control
- **Unlimited travel distance** ensures Transparency
- **Analytics drives High Fleet Productivity**
- **EV Fleet = Flat Budgets** with zero fuel price escalations
- **100% regulatory Compliance**
- **Real-time monitoring** with an Off-Site Vehicle NOC
- **Future proofed** against Emission Regulations



Fast Charging Infrastructure



EV Fleet



Assurance Stack



On-Site Team + Off-Site NOC



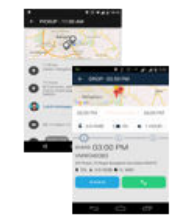
Trained & Certified Drivers



Integrated Fleet Management System



Data Science & Analytics



Mobile Apps

# Employee Experience



**Air-conditioned commute year round**

**New vehicles**

**Noise and vibration less commute**

**Security and Safety through connected car + camera and AIS 140**

**Driving behavior monitoring and management through ADAS**

**App based convenience**

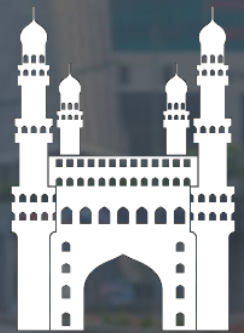
# Our Pilot



40 EVs



powered by  
FAST CHARGERS



at  
HYDERABAD



2 DRIVERS  
per car in shifts



24x7

availability



4,500,000+  
cumulative green kms  
by December 2019



Avg 275-300 KMS  
per vehicle per day



~200,000+ PASSENGERS  
transported till date

Electric Mobility powered by renewables is the killer app in mobility

Zero carbon footprint + low and stable fuel cost



# Effectiveness and Impact

## Impact of Pilot (60 EVs)

- ~\$100k saved in trip costs/annum
- ~\$50k saved from abatement of fuel price escalations
- ~4.5m green kms per annum
- = ~900 MT of CO<sub>2</sub>e abated/annum (equivalent to)
- + ~3 KBR Parks to HYD/annum

## Next 4-6 months

- ~300+ EVs
- ~\$5m savings per annum
- ~\$2.5m savings from abatement of fuel price escalations
- ~22.5m green kms per annum
- = ~5,000 MT of CO<sub>2</sub>e abated/annum across Hyderabad, Delhi/NCR, Pune, Bengaluru

## By 2021 (1000+ EVs)

- 35-40% fleet with zero Co2 footprint
- ~100 mil km per annum
- ~15,000 MT of CO<sub>2</sub>e abated/annum



**SERVING THE NATION  
SAVING OUR PLANET**

# Our Journey : Sustainability in Mobility

## Next 4-6 Months

- 300+ EV Sedans for Employee Commute:
  - Hyderabad
  - Delhi
  - Gurgaon
  - Noida
  - Pune
  - Bengaluru
- Introduce EV Buses for employee commute
- Long range EVs for day rentals, inter-city commute

## Next 12-24 months

- 30-35% of total fleet as electric
- Electric mobility across all locations in India across different form factors applicable duty cycles



**100,000,000+ GREEN KILOMETERS PER ANNUM BY 2021**







thank you

