



Tesla's EV Journey in India

AS ANALYSED BY

S O V A

Indian Case Challenge 2022

Tesla in India: Major Issues



Import taxes in India are considerably higher than in any other country. In India, 100% import tax is levied on CBU cars with a CIF (cost, insurance, freight) value of more than \$40,000. This does not help them price their cars competitively.

Tesla can either set up a plant in India, which they do not want so early, or the government can lower the tax, but nothing concrete has happened yet.



India's fledgling electric vehicle (EV) market accounted for only 5,000 out of a total of 2.4 million cars sold in the country last year. A lack of local production of components and batteries, negligible charging infrastructure, and the high cost of EVs mean there have been few takers in the price-conscious market.



Tesla's sought-after and expensive autonomous driving features will be futile on India's congested roads. Although India's road infrastructure has improved in recent years, traffic discipline - like lane driving - is still rudimentary.

Auto analysts say that means many of Tesla's features like the automatic lane changing function will be tough to deploy on crowded Indian streets. Stray animals, including cattle, and potholes on the road are a further problem.

TATA & VW's success story in the EV market



- **360° Approach:** An intelligent strategy with a clear focus on breaking the key EV barriers and partnerships with group companies such as Tata Power, Tata Chemicals for establishing the EV ecosystem, called TATA 'uniEVVerse' has paid dividends for the company.
- Aggressive pricing points
- Tried and tested architecture
- An acceptable range of 300+ km made its products the best bet for most buyers.



Volkswagen

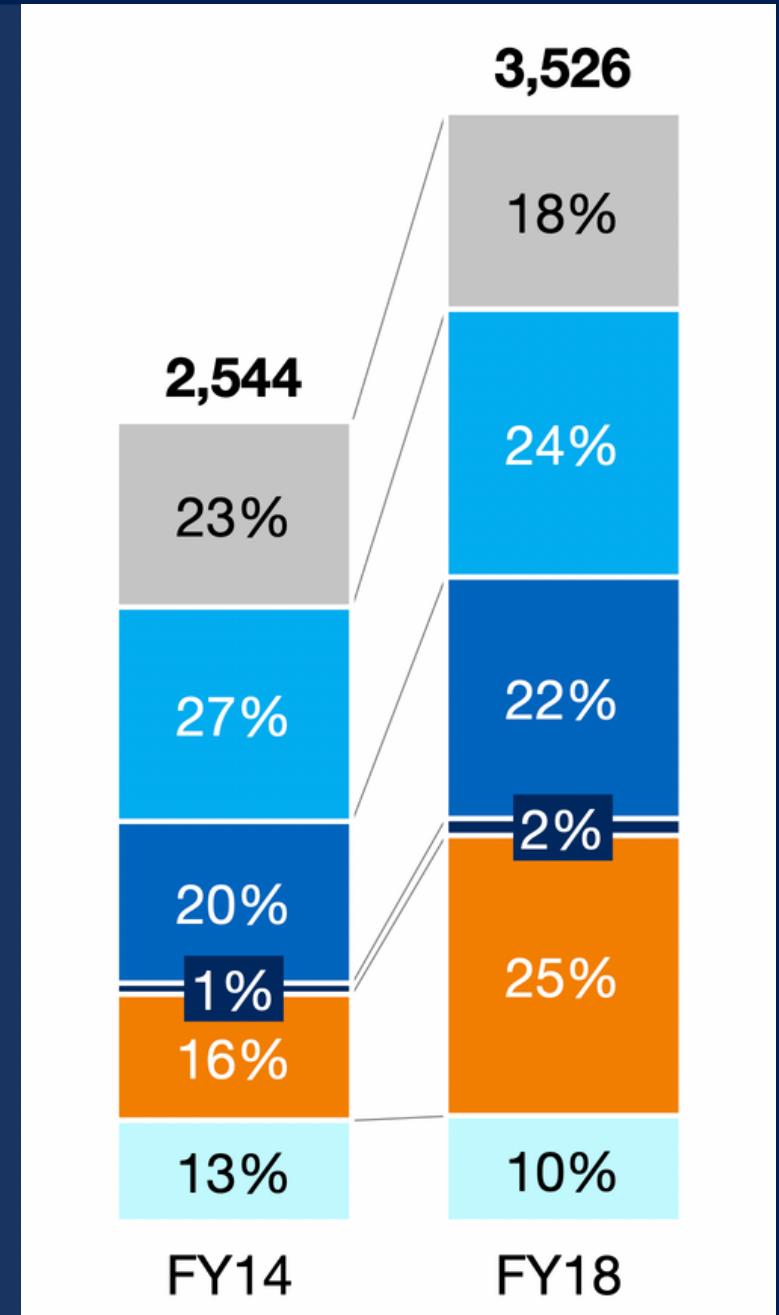
- Local manufacturing, brand familiarity, cheaper price points.
- A wide array of marquee brands in its portfolio
- The diesel gate scandal forced VW to go all-electric in a move to find an alternative source to power their vehicles.
- Volkswagen plans to double its staff, strike new alliances and roll out a new payment technology next year.
- The company spend much of its revenue on R&D in a move to overtake its rivals.

Product Trends

Buying Trends

An average vehicle purchase in the US costs \$45000 (~INR 35 lakh), while the same value is \$10000 (~INR 7.7 lakh) in India. Therefore, though affordable in the US, Tesla's offerings will cater to India's premium/luxury segment.

The data reveals that demand is shifting towards premium and higher capacity vehicles. The most significant growth is and could continue to be in luxury vehicles and SUVs among all categories of passenger vehicles.



Target Demographics

Small families and working individuals between 25 and 55 years of age living in urban and semi-urban areas, ready to pay a premium for a Tesla EV.

Consumer Habits

01 —

Customers likely stick to their newfound buying behaviour. Consumers trust recommendations from people they know and trust – friends, co-workers and family members – more than brand-owned channels.

02 —

Launching a tried and tested product in India will minimise the risk of consumer complaints and can help the company establish itself as a trustworthy carmaker in the country.

03 —

Tesla's soon to be launched \$25000 EV (Model 2) should not be its first car in the Indian market, primarily because issues can arise from a new product, and some may not even be visible during the controlled testing phase.

The company should introduce the sedan Model 3 and SUV Model Y upon launch, in accordance with the buying trends exhibited by the customers and in lieu of its upcoming low-cost alternatives.

Pricing Strategy



High import taxes and lack of EV infrastructure will require Tesla to price their cars in the premium EV segment.

CBU

Model X - ₹ 1.4 crore
Model S - ₹ 1.8 crore

CKD

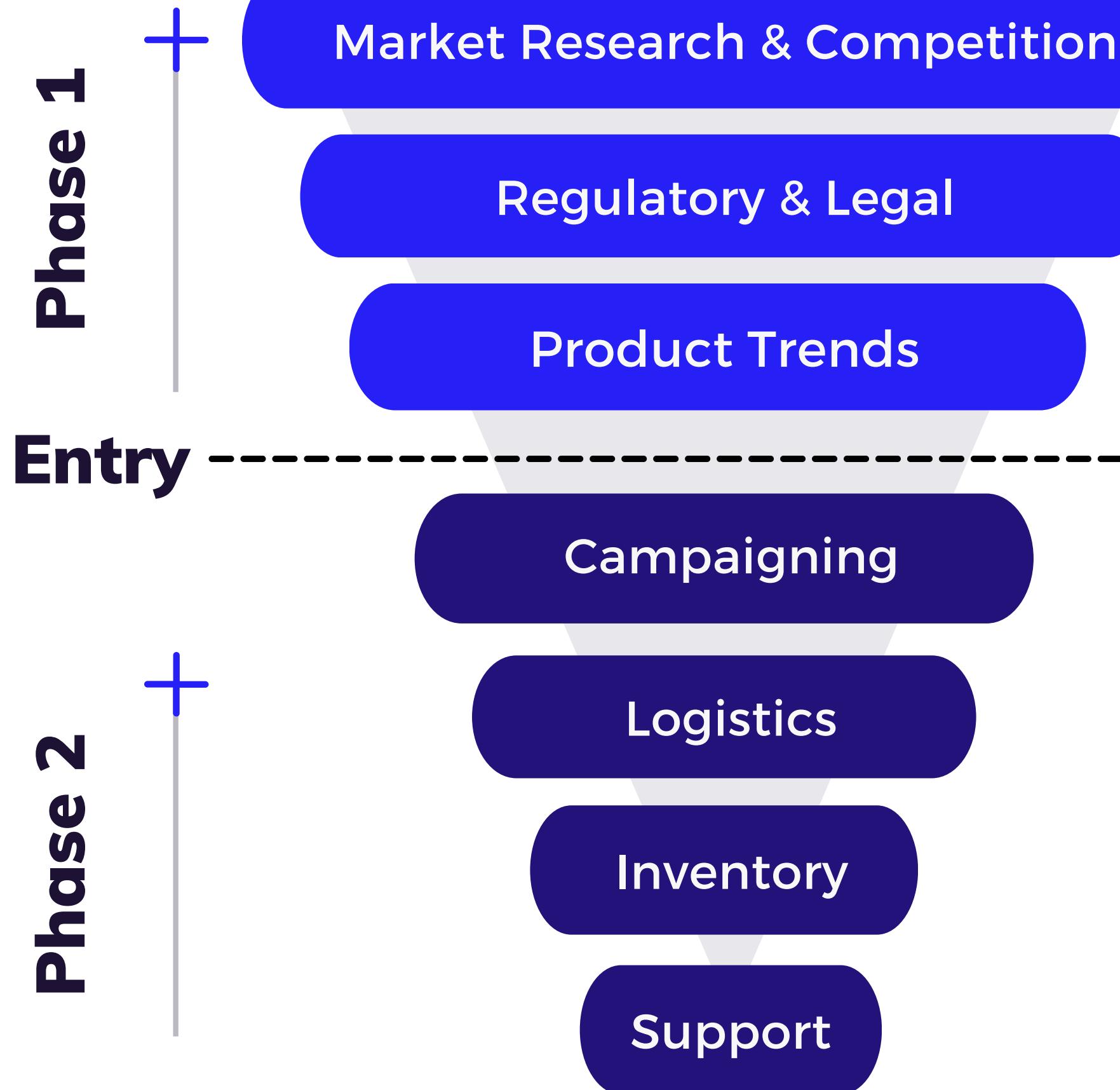
Model 3 - ₹ 45 lakh
Model Y - ₹ 52 lakh
Cybertruck - ₹ 40 lakh

Future*

Model 2 - ~ ₹ 18 lakh, if entirely made in India.
Model 3 and Model Y- reduction by 10-15% over CKD prices.

Model X and Model S will compete in the ultra-premium segment, and hence they could be fully imported as the number of cars sold would not be more than a couple of hundreds. Cybertruck, Model 3 and Model Y could be partially imported or brought as CKD units and assembled in India, which would reduce costs by up to 50% compared to fully built units. Tesla's Model 2 could be made in India in future and be sold at about INR 18 lakh.

Entry Framework



Phase 1 has already been discussed*

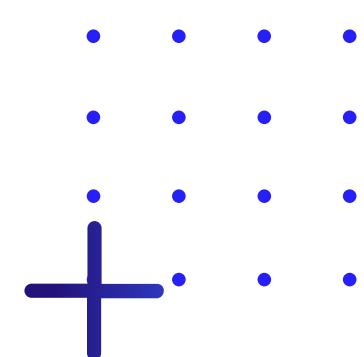
Phase 2: Execution

The easiest way to replicate its vertical integration strategy in the US is to source components from a single Indian partner.

It could be a joint venture / limited partnership.

Then Tesla should identify the key driving factors and align themselves.

Value Drivers



Services and Resources

Using predictive maintenance and remote maintenance mechanisms can reduce maintenance costs. Intelligent IoTs can improve productivity rates considerably.

Labour & Process

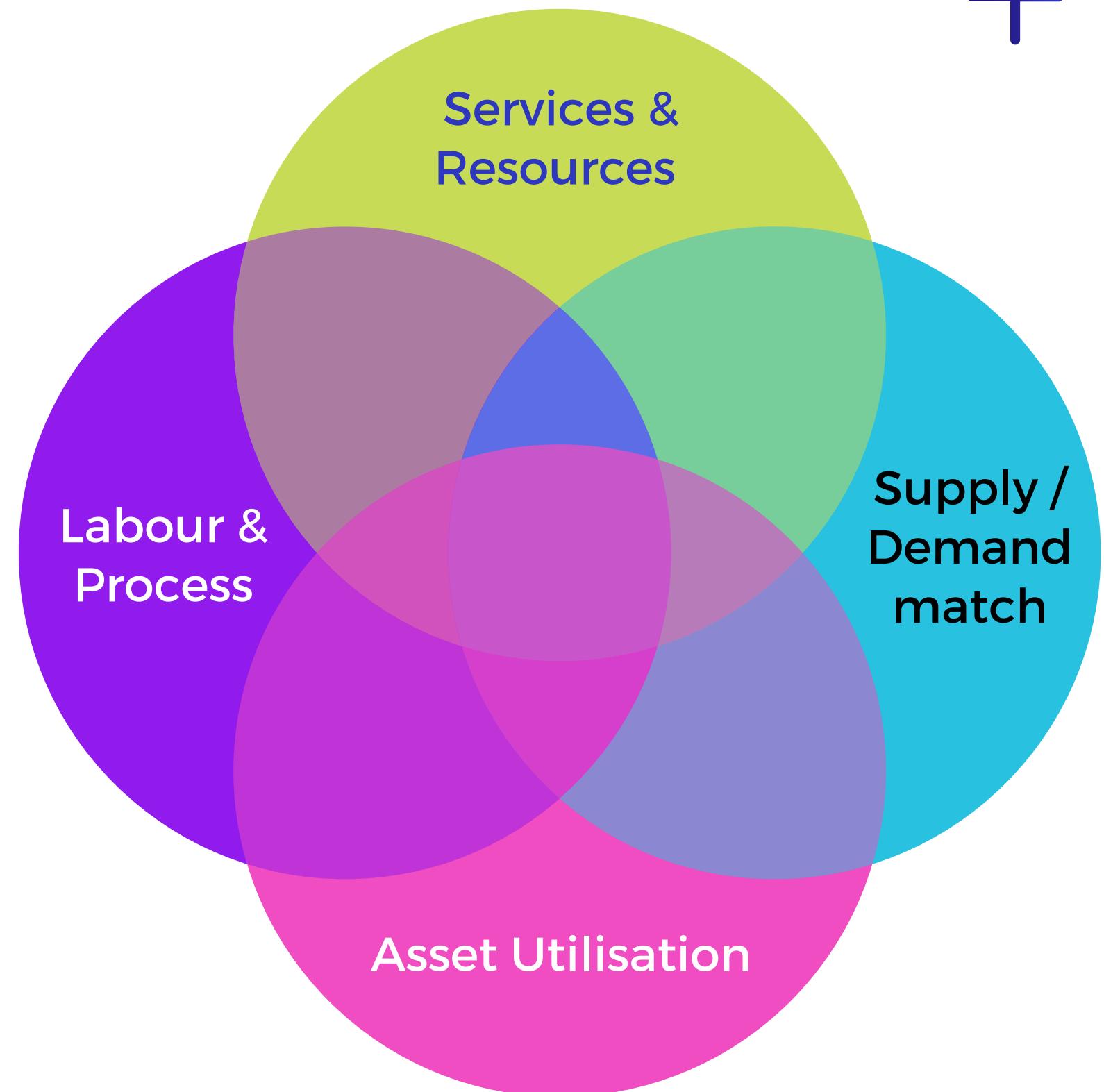
Remote monitoring, automation, digital performance management, smart energy conservation methods will help improve productivity in technical professions.

Asset utilisation

Flexible routing and predictive maintenance technologies will help reduce machine downtimes by as large as 50%.

Supply / Demand match

Data-driven demand prediction, open innovation and optimisation algorithms will reduce the cost of holding inventory and ensure adequate supply to match demand.



Business Model & Market Entry

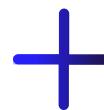
Given are the three possible options for bringing its cars to the Indian Market

- + CBU (Completely Built-Up Unit) imported from other countries- will likely shoot up the prices as high as 2x its base price.
- + Imported CKD (Completely Knocked-Down Unit) kits locally assembled in India - will require additional investment but tax only up to 30%
- + Units entirely/partly sourced from and assembled in India- requires billions of dollars in sunk costs- but export opportunities are promising.

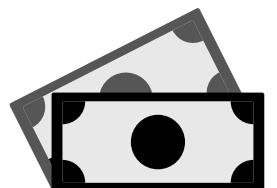
Strategy - Limited Partnership

Some of the company's cheaper models could be imported / locally sourced as knocked down components- and assembled in India with the help of a local partner - this could be a joint venture or a partnership limited to a specific period - until Tesla can solely take over the business. The joint venture could set up a battery assembly plant. Both companies would be able to use it since the scale of operations will be limited to a particular group of customers, and sharing resources can help achieve operational efficiency. CBU route is still the best way for its high-end models.

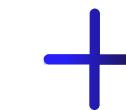
Advantages of a JV / Partnership



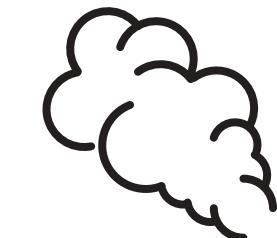
Splitting Costs



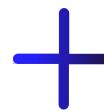
Investing a considerable amount of money to set up a factory can be riskier for Tesla. Hence, it is better to find a partner Tesla could **split costs** with.



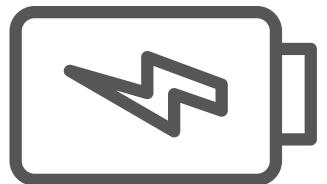
CAFE-II Norms and Incompliance Fines



ICE (Internal Combustion Engines) vehicles take up a majority of auto sales in the country.



Battery Tech



Tesla boasts of having an **excellent in-house Li-Ion battery system**. Even sharing its older technology (which Tesla no longer uses) could benefit some car manufacturers in India.

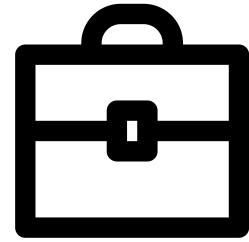
With the implementation of the newly announced Corporate Average Fuel Efficiency (CAFE) - II Norms, it would be harder for most companies to fund to **develop less polluting IC engines and simultaneously pay** a tremendous amount of money in the form of **incompliance charges** to the government.

But teaming up with an all-electric partner like Tesla should **lower the overall emission values of the company** and subsequently avoid paying the fine.

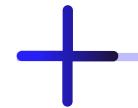
Advantages of a JV / Partnership



Skilled Labour



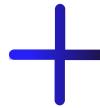
Tesla will need skilled labour to expedite manufacturing, which the sector lacks; partnering with an established company in India will help Tesla **focus less on that part and make profits during the period.**



Good Infrastructure

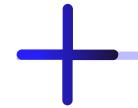


After five years, when Tesla starts manufacturing cars in India, they will have skilled labourers and an **excellent infrastructure, including a good network of charging points**, which will boost their sales exponentially.



Learn Market Dynamics

During the joint venture, Tesla will learn more about their **target audience and hotspots of their product** which will help Tesla improve their services and enhance its strategies.



Zero Loss for Tesla

Less spending on R&D and finding OEMs, and splitting costs with a local partner could tremendously benefit the company by not spending billions in India.

SOLVED

Why is Mahindra & Mahindra the best partner for Tesla?



Partnership with LG Chem

Both Mahindra and Tesla share the same partner, LG Chem, for supplying battery components; hence sharing a factory in India for assembling components would be cost-effective.

Mahindra's EV batteries

Tesla could help its partner develop better batteries for the latter's low cost commercial EV business.

Logistics & Assessment

Mahindra operates one of India's leading logistics and IT consultancy companies, which could help accelerate Tesla's ground operations in India and enabling its goods' point-to-point transport.

CKDs

Assembling knocked down kits in Mahindra's factories would be cheaper than importing fully built units abroad.

Mahindra had previously stated that it was looking for international partners to jointly set up a battery assembly plant.



Pininfarina

Mahindra-owned Italian legacy design company Pininfarina could help Tesla design mass-market models in future.

Possible Alternatives



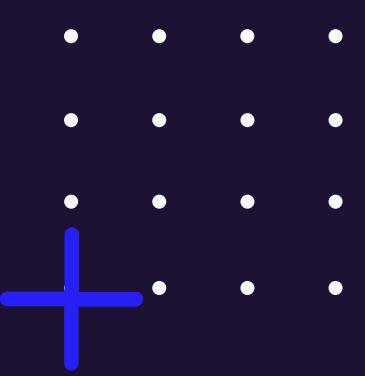
Execution: Timeline



We have estimated the timeline for launch of Tesla in India.



Execution: Short Term Plan



Localize to Grow

A targeted approach could achieve critical growth in exports of product categories where India has a competitive advantage. Possible collaborations with global suppliers relocating manufacturing operations to India could further reinforce these efforts and help build new capabilities.

Optimize resources and be future ready

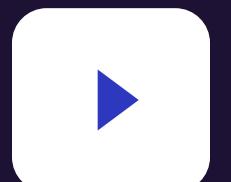
Tesla should integrate digital analytics and automation into their everyday operations. Advanced analytics, process digitization, robotics and automation could accelerate transformations necessary to evolve for the future.

Minimize hidden costs

Granular analysis of various hidden cost segments could help component manufacturers cut between 15 to 25 per cent of costs. These include categories such as real estate, IT, insurance, logistics, packaging, etc., which are traditionally de-prioritized, focusing on material cost.

Adapt and evolve

Offering premium features at “Indian costs” more rapidly can help Tesla capture a considerable chunk of the tech-enthusiastic Indian market. Also it should actively acquire or develop the core and technical skills necessary for the future.



A commercial truck business may not be profitable for Tesla. Here's why.

High Cost of Ownership

A base model TESLA Semi costs \$150,000, while a long-range model starts at \$180,000. Indian buyers will never invest this much in commercial vehicles.

Ethanol Engines

India has found an alternative source of fuel in ethanol. Ethanol is an octane enhancer or anti-knock additive. With today's higher compression engines, ethanol helps the engine be more efficient. It also helps the gasoline burn cleaner, making it environment friendly with less CO and NOx emissions. Moreover, India has a huge reserve of ethanol.

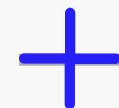


Gol's proposal to use flex fuel engines



For long, the central government has been advocating the use of ethanol as a greener alternative to conventional fuels in the transportation sector. Union Minister of Road Transport and Highways, Nitin Gadkari, had previously appealed to carmakers in India to introduce flex-fuel engines across their portfolios. In the latest development, the transport minister has revealed that the government will soon be ready to pass orders on the same.

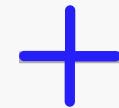
Replicating the TATA Story



Presently ,Tata Motors' first-mover advantage, cheap along with its battle-ready position owns up to 75% of India's domestic electric vehicle market.



Tata Power operates a network of about 1000 charging stations across the country and an aggregator service showing charging stations from third-party companies.



The Tata brand's distinction is the trust of society earned by the values by which the Tata group and its companies operate which makes even harder for Tesla to be market leader in EV's.



TATA's success can be attributed to its e-mobility platform uniEVerse, a result of integrating operations of all group companies.

Tesla can replicate this by **collaborating with multiple sectors which could help the company enter non-automotive adjacencies**. Tesla could step into making motors, generators, transformers and alternative energy solutions in the form of **power generation tools like engines and turbines**.



Tesla could **set up a Gigafactory in India**. Combined with **cheap labour costs and exemption from paying import taxes**, Tesla's car costs will be reduced.

However, India does not have the rare metal reserves needed for making lithium-ion batteries. But Tesla can **import Lithium ore from Australia**, which recently signed pacts with India to create a strong logistics network connecting the two nations.

How to solve India's EV Charging Dilemma?

1 / 2



Placing a **fast charger every 100 km** on highways across a region and a charger in every zone of a specific size.



Public-Private Partnerships

Creating public-private partnerships, such as offering public **land concessions** to private players to install public CPs or **establishing multi-stakeholder platforms** to facilitate dialogue and collaboration.



Gol should ensure **inclusive and convenient charging access** for low earning users who can't easily upgrade their homes for EV charging.



Providing a **seamless and smooth charging experience** by preventing different operators from setting up specific access options.



Fair, Transparent, and Comparable Pricing for EV charging

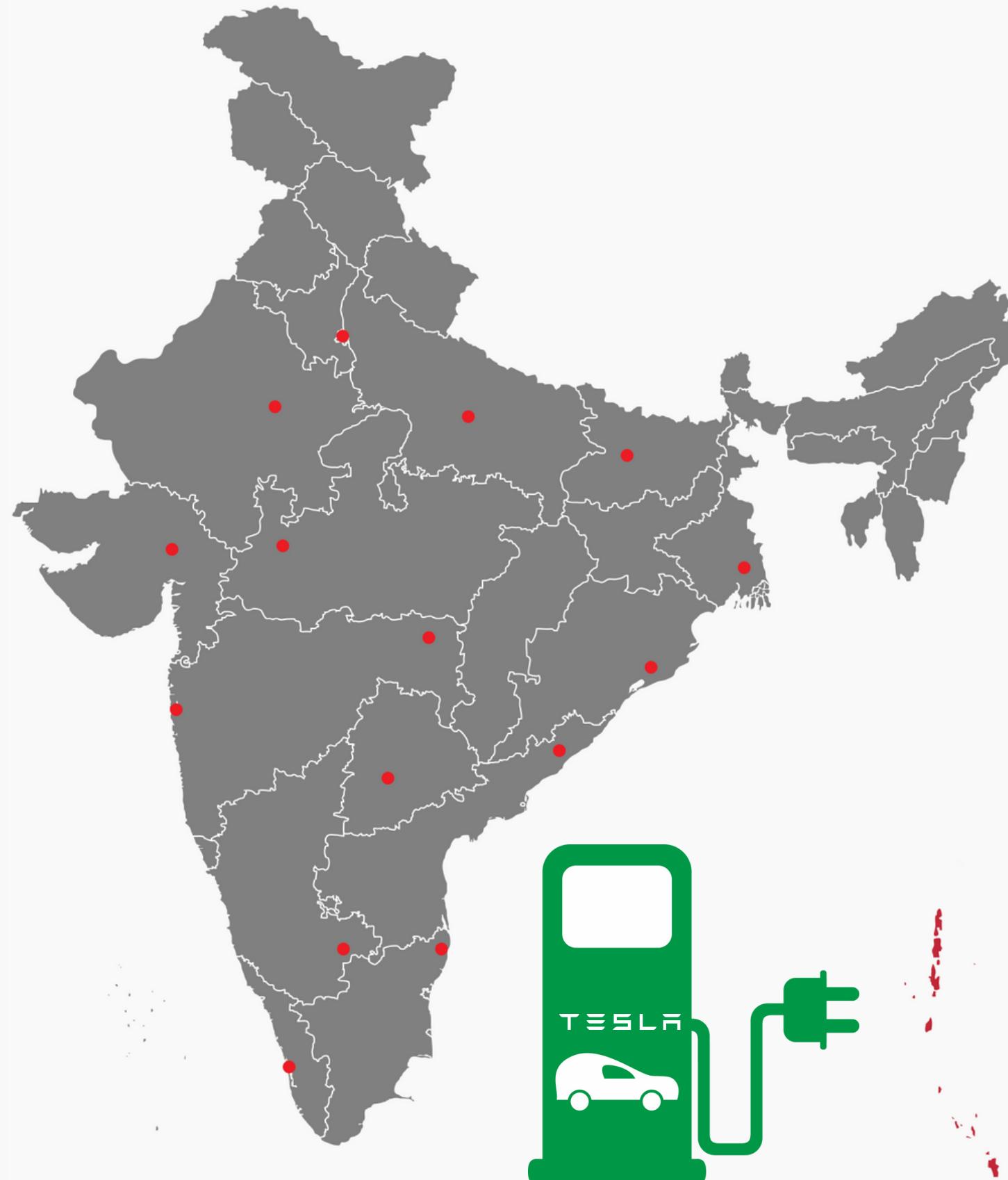
Supporting an attractive, fair, and inclusive private charging market, one that will **foster competition** while ensuring that the most vulnerable customers are not left behind.



Using adequate criteria when determining charger locations, thus **avoiding low CP utilization rates**.

Superchargers - Solved

2 / 2



Tesla should fit all its cars sold in India with a CCS compatible charger since India's EV infrastructure is underdeveloped. Using a different technique will require customers to buy converters to charge their cars using public systems.

Moreover, Tesla should enable other cars to be charged at Tesla's charging stations at a fair price per minute used.

Considering EV availability and target audience analysed, Tesla should start with the following 15 touchpoints and some major highways upon launch: Delhi, Mumbai, Bangalore, Chennai, Hyderabad, Vizag, Cochin, Bhubaneswar, Lucknow, Kolkata, Nagpur, Indore, Patna, Lucknow and Ahmedabad. It could be expanded to other regions in the future.



Campaigning in India

Referral Program
with
Free Supercharging miles



Online Competitions
Winners get
Tesla Merchandise



Early Bird Advantage
First buyers get a
discount over the base
price.



Uphold
Company
Values

Tesla advertises its products by not doing any advertising on its own. It relies on its customers who share their experiences with others.

Promote the company's mission "to accelerate the world's transition to sustainable energy".

Storyboards

Inviting customers worldwide to share their ownership experience with Tesla.

Every ownership experience is unique. So when customers from diverse backgrounds share what made their 'Tesla' special, this will, in turn, inspire other users and even convince prospective buyers into buying a Tesla over its alternatives.

Customer Support Initiatives

Referral Program

Tesla uses a referral program to encourage customers to spread the word about their cars. In exchange, customers get a **discount on the price of their car or get free miles** (free supercharging). A similar system could be introduced in India, subject to the availability of charging networks.

For a company that builds its customer base by relying entirely on word of mouth advertising, keeping up the brand trust is vital for its existence. Tesla should focus on providing exceptional customer experience and after-sales support. Some of its initiatives in the USA will indeed work in India.

Sales Centre

Tesla **does not have dealerships**. Instead, it has sales centres, sometimes combined with Tesla service stations. Continuing this model to a full extent will cost huge, but Tesla could operate some touchpoints to provide the ultimate **direct to customer experience**.

Mobile Service

Tesla developed the Tesla Rangers, now Mobile Service Support, a **mobile service team** that can meet you where you need a repair. Tesla could ensure such service in Metro cities and some major highways, with the possibility of expanding to more locations after 5 years.

Government Incentives



As part of the NEMMP 2020, the Ministry of Heavy Industries formulated a scheme, namely **Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) Scheme** in 2015 to promote the adoption of electric/hybrid vehicles in India.

FAME-I came into operation between April 1, 2015, and March 31, 2019. It supported about 2.8 lakh EVs with total demand incentives of ~ INR 359 crore.

FAME-II commenced on April 1, 2019. 92,393 Electric Vehicles were supported as of now under FAME-II by way of demand incentives amounting to about INR 278 crore.



National E-Mobility Programme launched in 2018 for entire e-mobility ecosystem with focus on creating charging infrastructure and policy framework so that by 2030 more than 30% of vehicles are electric.



India will spend INR 100 billion (\$1.4 Bn) over three years on incentives and India's cabinet has approved an incentive scheme of about INR 260 billion (\$3.5 Bn or €3 Bn) over a five-year period.

The aim is to boost the production of battery-electric and fuel-cell vehicles and to promote the manufacture of drones.

Team

Advaith Krishna A | Shashank Mishra | Khushi Singhvi | Swati Jhawar | Tiyasa Kayal

Reference

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