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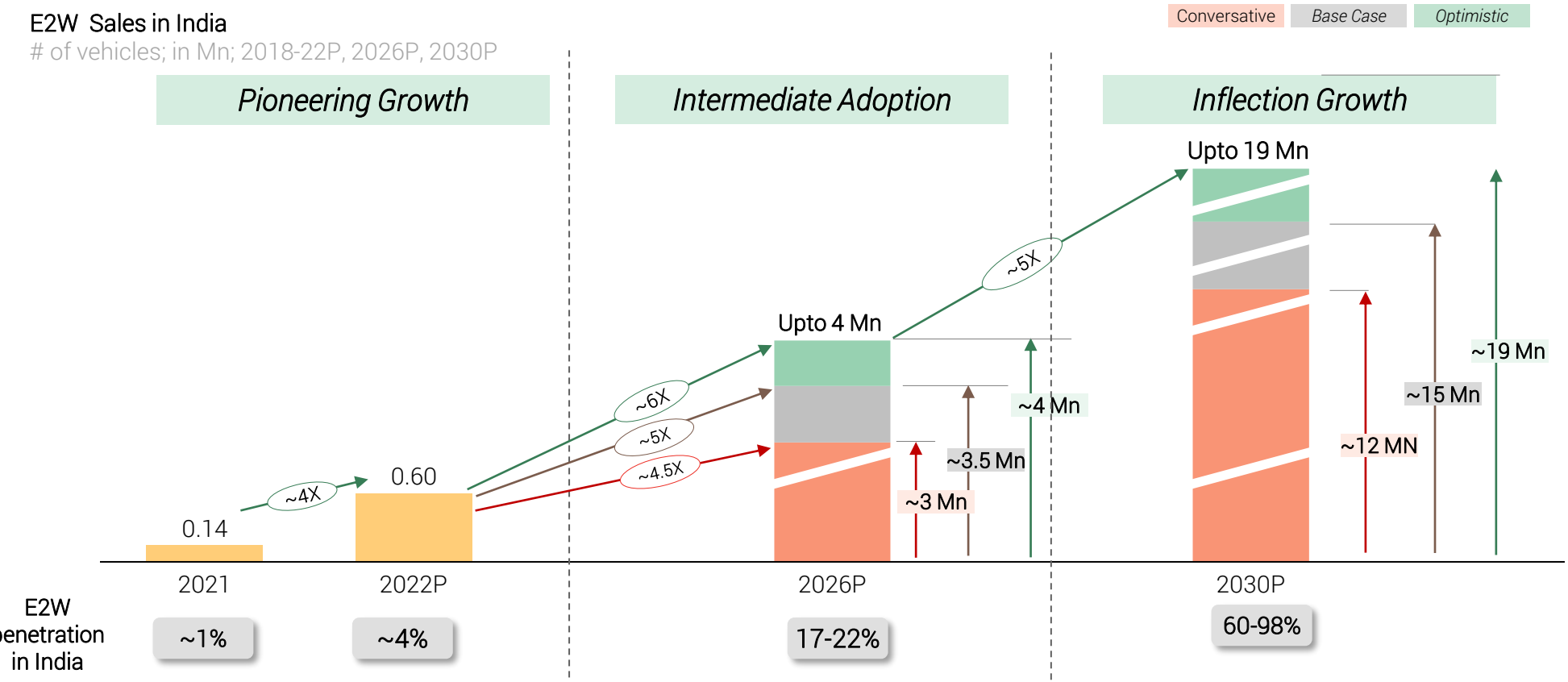
Electric 2W Adoption: From Zero to 100

redseer
Strategy Consultants

Bangalore. Delhi. Mumbai. Dubai. Singapore. New York

Driven by policies, technology, infrastructure and consumer acceptance, E2W sales penetration expected to reach upto ~78% in 2030



Early adopters are encouraged by policies & innovative products to drive the early stage adoption of E2W in India

Widescale adoption of the product yields high volumes of E2W penetration, though the growth rates might slow down temporarily

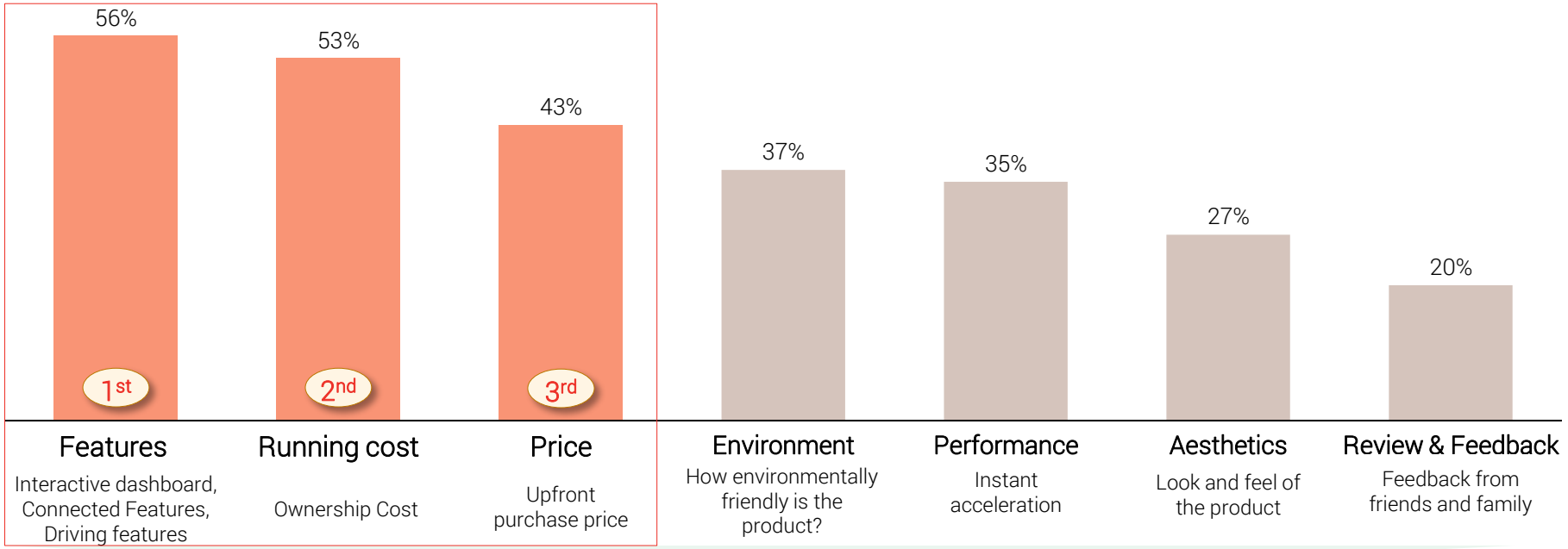
Inflection in the growth rate as overall charging ecosystem strengthens and results in a sustained growth of the E2W market in India

Source (s): Redseer Analysis

E2W adopters impressed by features and superior economics

Top reasons for choosing an E2W

N=580, % of respondents

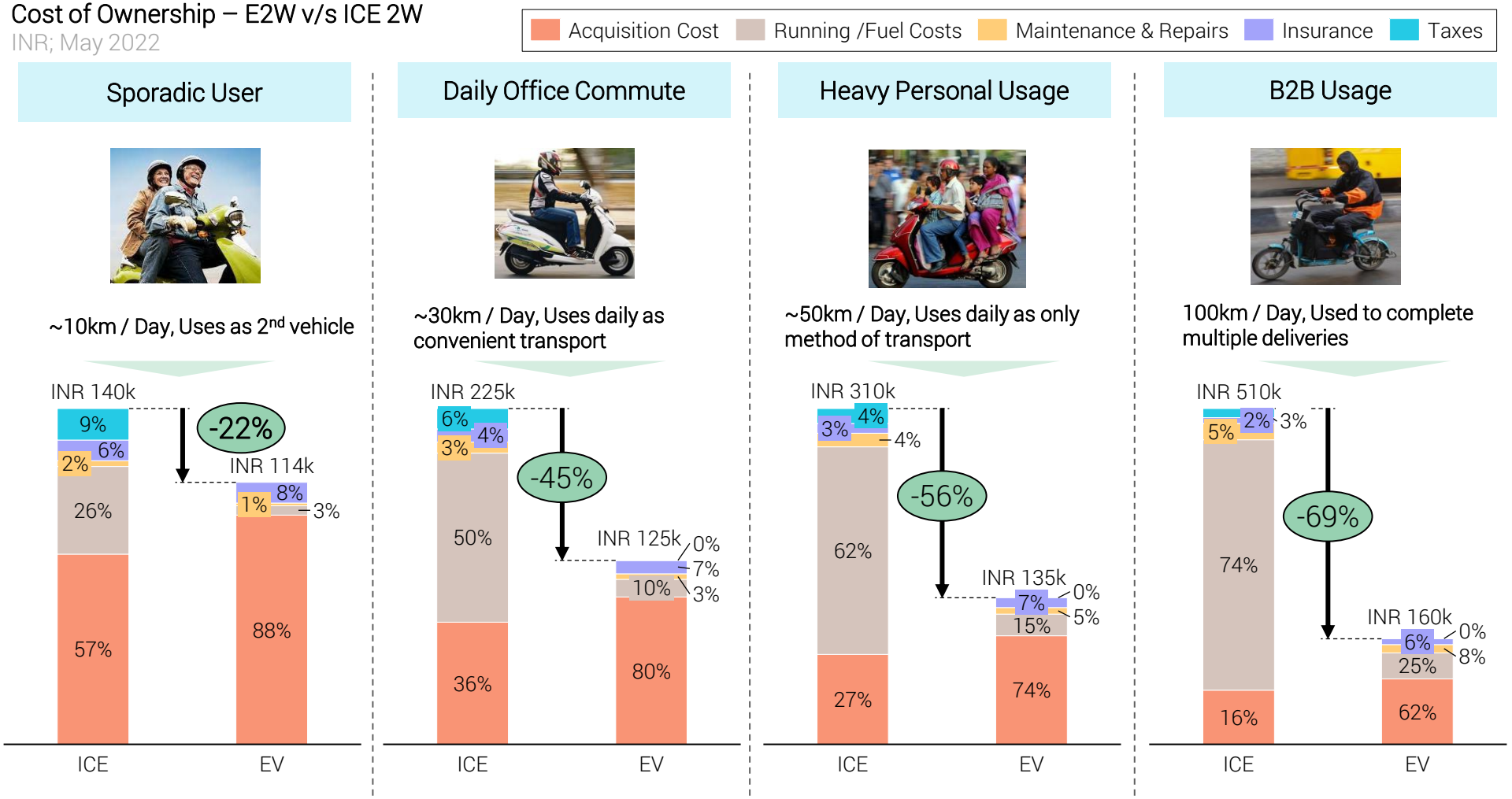


- Inherently electronic nature of EVs lending itself well to features that customers value
- Economics (Running Cost and Price) driving adoption suggest a larger addressable market than just "Green" adopters

Source(s): Consumer Survey

E2W cost of ownership 20-70% lower than an ICE vehicle; cost savings increase with increased usage

Cost of Ownership – E2W v/s ICE 2W
INR; May 2022



Note(s): Running cost calculation for 1500 days (5 yr), Ex-showroom prices for Ola S1& Activa 125, Insurance quotes, Servicing cost from manufacturer websites, taxes based on KA, Energy prices as of June, 2022

Source(s): Company websites, 3rd Party platforms, Government websites

Negligible need for maintenance and minimal fuel costs attracts B2B players to explore E2W as a clean mode of commercial operations

B2B Use Cases for E2W
Descriptive

Environmentally friendly | Running Cost | Maintenance

Operating Economics
Companies realize the strong advantages of E2W in terms of lower running costs, negligible maintenance costs and favorable overall ownership costs

Environment Consciousness
Eco-conscious companies using EVs to turn their businesses green

Shared Mobility
E2W are used as rental vehicles and shared vehicles for intracity personal mobility

Last Mile Logistics
Many delivery companies have started using or planning to use EVs for last mile deliveries in cities

Private, intra-campus mobility
Private companies and campuses using EVs to turn their campus green

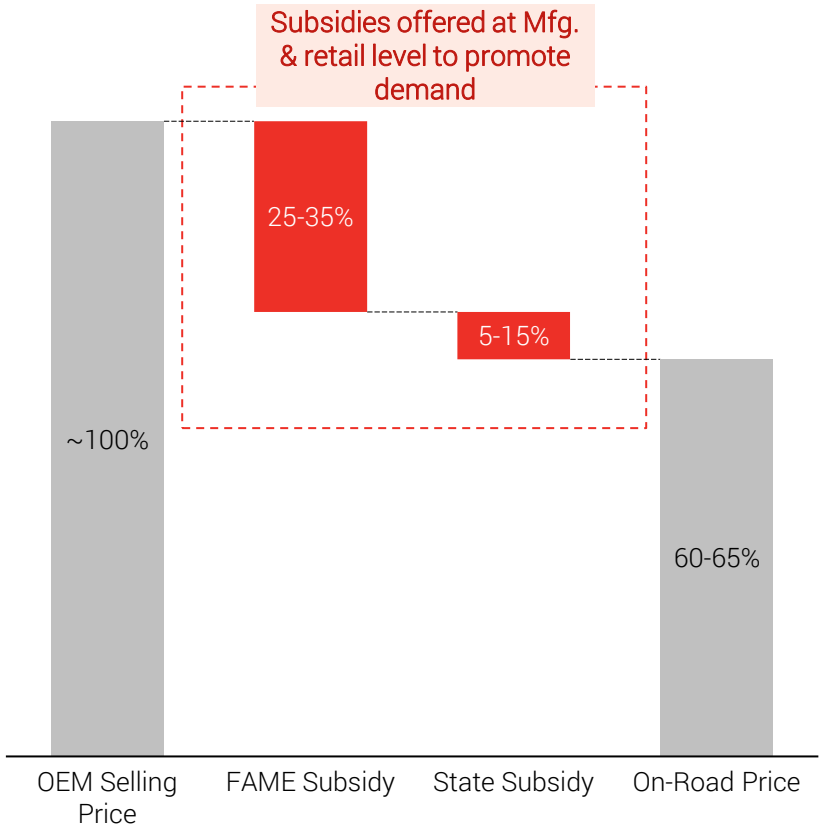
- BOUNCE: *Shared rides completed : 30 Mn; Distance covered 170 Mn Km*
- Mahindra electric + amazon: 10,000 fleet to be EV by 2025
- Jio bp + zomato: Target of 100% EV fleet by 2030
- EVIFY + SWIGGY: Partnership for EV fleet in Surat
- इसरो ISRO + HERO ELECTRIC: *100 EV scooters*

Source(s): Redseer research

Customers only pay ~60% of the selling price of E2W due to government subsidies and concessions; financing also easy and attractive

E2W Unit economics

In % of ex-showroom cost - Indicative only



Government Provided Incentives

Subsidy

Central & State government subsidies available on E2Ws for up to ₹86,000; additional road tax exemption also offered by select states

Tax Savings

E2W owners can claim the interest on E2W loan as a tax deduction with a limit of 1.5lakhs under 80EEB of Income Tax Act

Various Financing Options

Loans from Public and Private Banks

Loans available from leading banks, a few of them have started to offer special lending rates, 20 bps lower than ICE Vehicles

Financing Options from Fintech

Fintech players co-lend with banks to offer innovative schemes and attractive interest rates, mainly to customers with no credit history

Note (s):

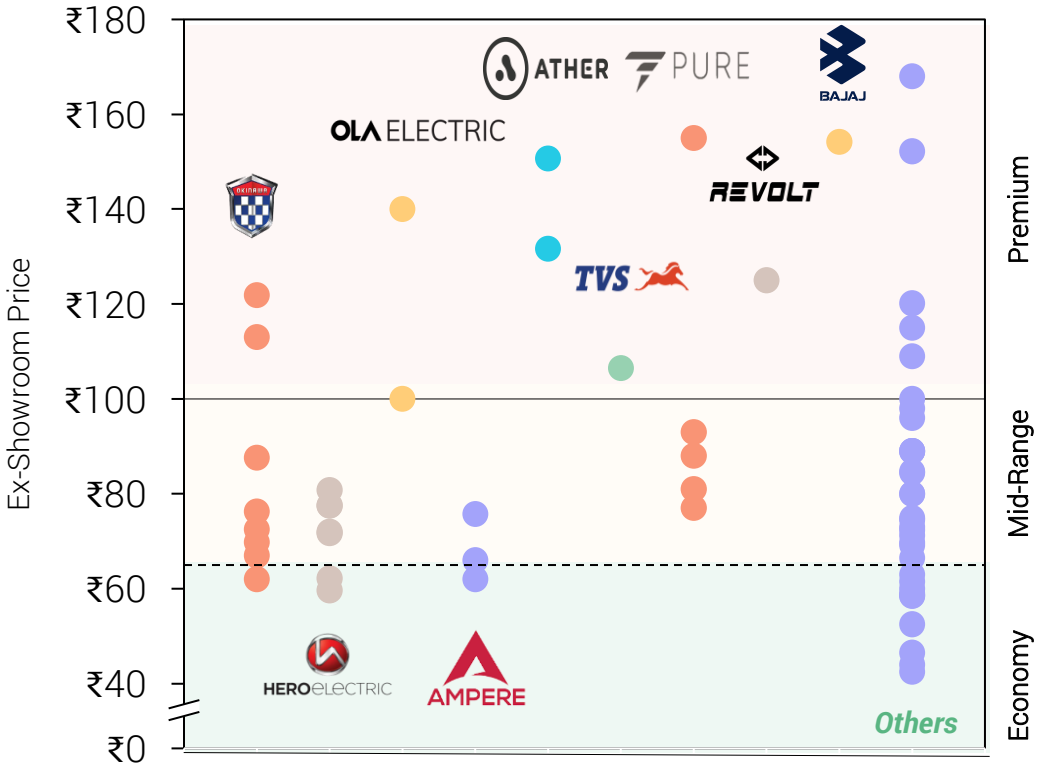
1. *The price structure is for typical E2W sold in Karnataka*
2. *On Road Price refers to the net price for E2W paid by the customers after upfront FAME subsidies and reimbursement of state subsidy*
3. *State subsidy applicable on select states*

Source(s): Redseer research, Government websites

While over 250 E2W players exist, the market is dominated by the top 9 players

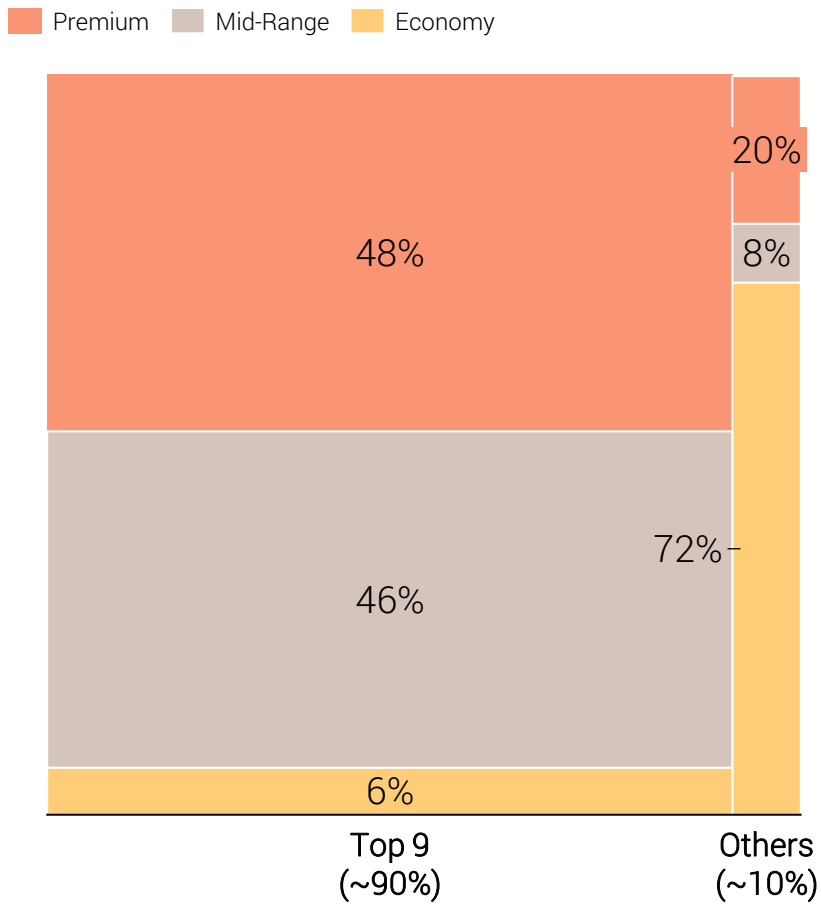
SKU Spread of E2W Brands in India

Ex-showroom Price & SKU , June 2022



E2W Market in India

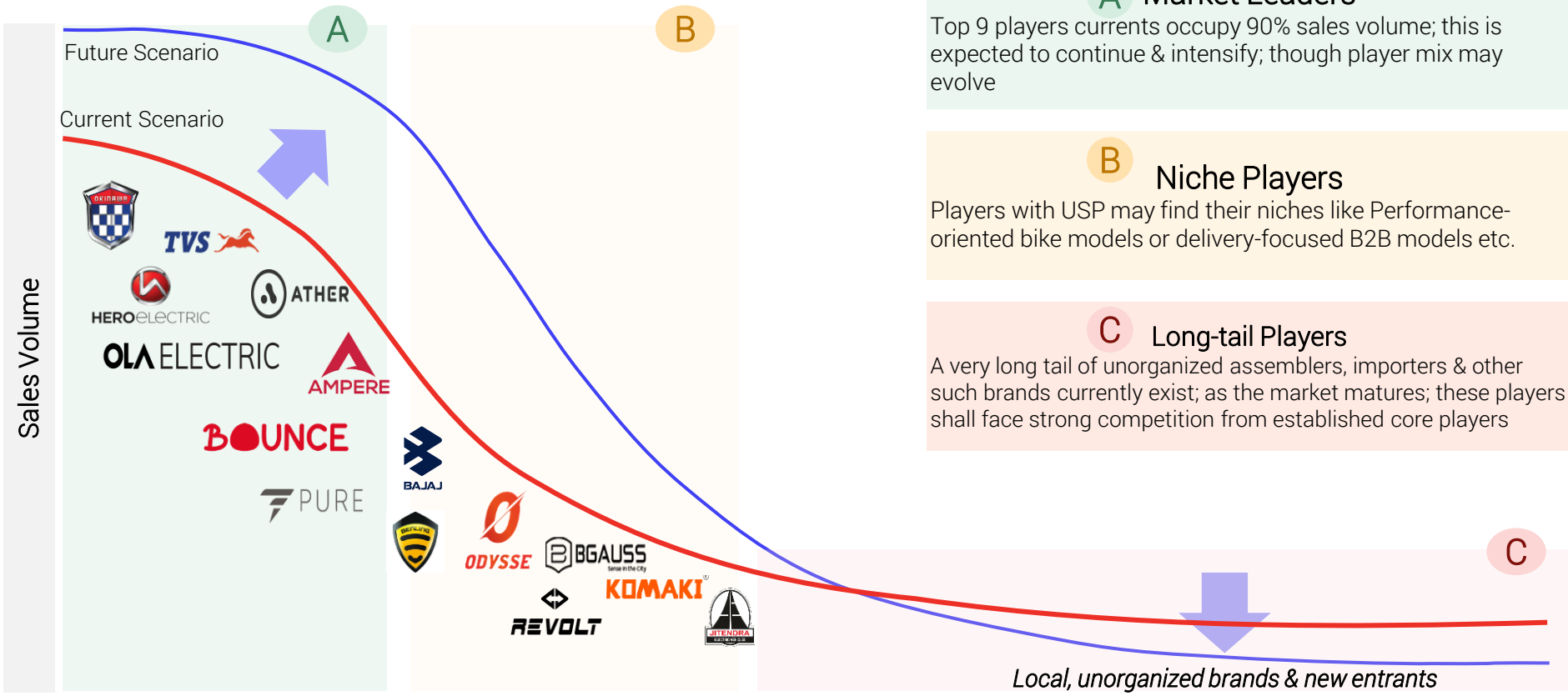
Type of player vs. Price segment



Source(s): Manufacturer websites

In mid-long term consolidation of the market is inevitable with leaders benefiting more and smaller players finding it harder to compete

Expected Evolution of Indian E2W Market



A Market Leaders

Top 9 players currents occupy 90% sales volume; this is expected to continue & intensify; though player mix may evolve

B Niche Players

Players with USP may find their niches like Performance-oriented bike models or delivery-focused B2B models etc.

C Long-tail Players

A very long tail of unorganized assemblers, importers & other such brands currently exist; as the market matures; these players shall face strong competition from established core players

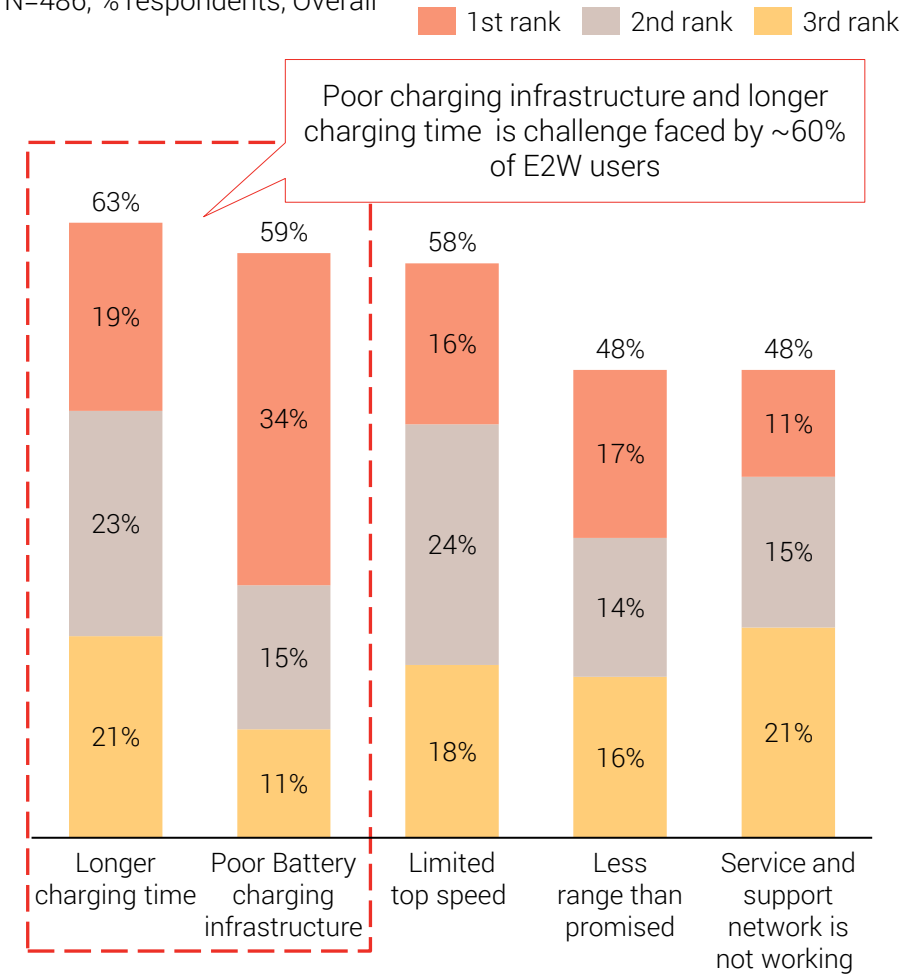
Note(s): List is not Exhaustive. Relative brand positions are indicative in nature and not representative of actual market position.

Source(s): Vaahan Database, Redseer Analysis

Longer charging time and poor charging infrastructure perceived as problems for both current users and non-users

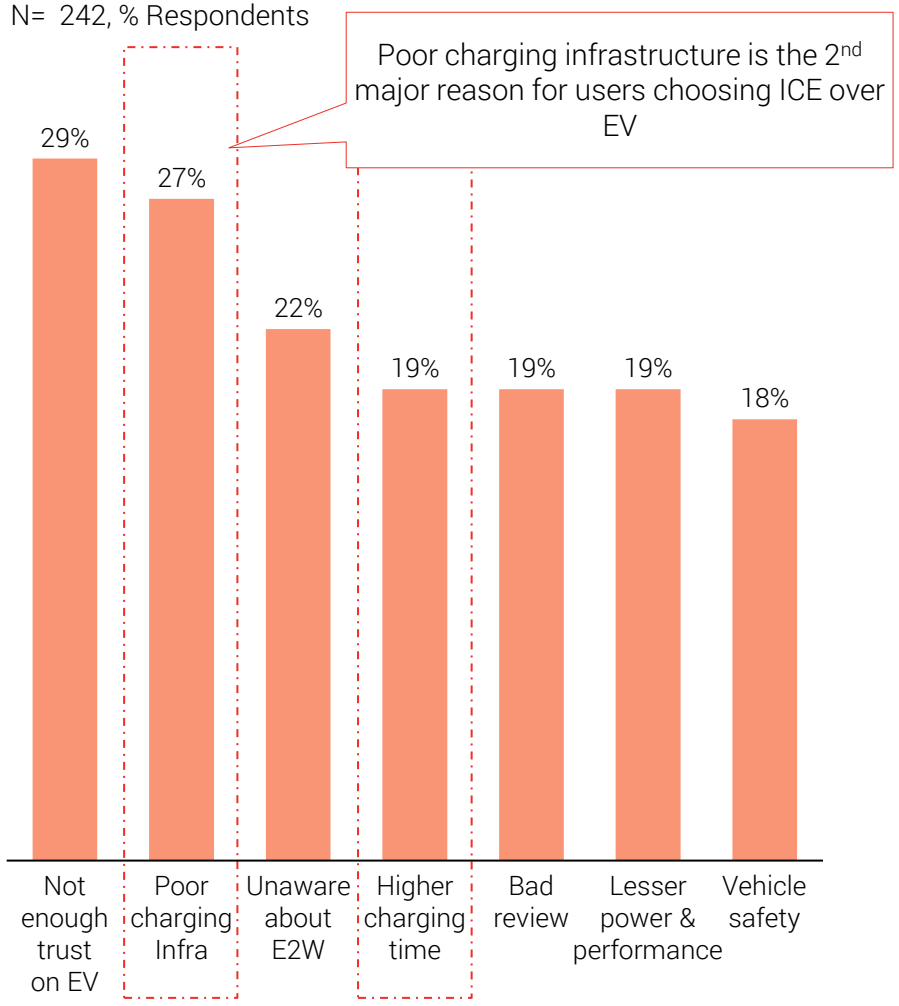
Top 3 challenges you faced while using the E2W?

N=486, % respondents, Overall



Why did you not consider buying E2W?

N= 242, % Respondents



Source(s): RedSeer Analysis, Consumer Surveys

Because of govt incentives and growth in the segment, lot of start-ups along with govt bodies are building charging infrastructure in India

Different emerging players in charging infrastructure

Charging Infrastructure Provider[1]	Description	Indicative Players	What worked for them?
 Oil Marketing Companies (OMC)	*Public Charging Stations set up by OMCs, set up in existing fuel pumps*	Bharat Petroleum, IndianOil, HP	• Existing public network of real estate infrastructure
 Govt. Bodies & PPP	*Charging Stations self owned by government bodies or developed with a Public Private Partnership type model*	OKAYA, Jio, bp, BESCOM, BRPL, BOSCH, EESL, Honda e:TECHNOLOGY	• Leverage electricity distribution and connection capability
 OEMs/ Charging Point Operators/ Start-ups	*Charging Stations set-up & fully owned by EV OEMs* *Set-up by Start-ups establishing interconnected charging network.*	ATHER, TATA POWER EZ CHARGE, LOG, Statiq, charzer, BOLT, fortum, VOLTTIC	• First mover advantage by building proprietary network

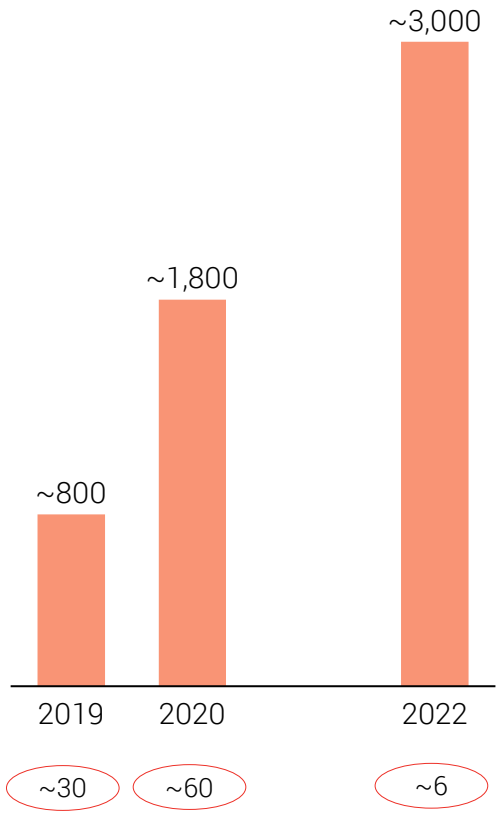
Note(s): (1) A standard 3-pin 5A/16A plug is provided at all of the charging stations for Level 1 slow charging.

Source (s): RedSeer IP

India currently has ~3000 EV charging stations, with ~6 charging station available per 1000 EVs

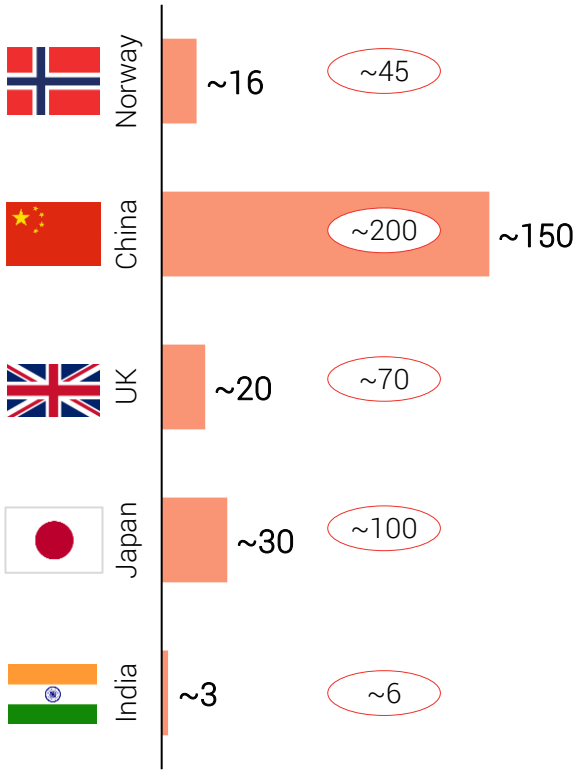
EV Charging Stations in India

 # charging stations, 2018- April 2022



EV Charging Stations- Global

charging stations, '000s



Charging stations per 1000 EVs

Strong charging infrastructure is the key enabler for EV adoption & penetration

China has maximum no, of Charging station per 1000 Evs

India has currently the least number of charging station with only ~6 charging station per 1000 EVs

EV Adoption predicated on major drivers – demand, supply and infrastructure

Presentation Themes

1. E2W offers a better value & performance proposition than ICE for the consumers
2. Market shall undergo consolidation to a few large E2W OEMs in the mid-long term
3. Growing Charging infrastructure a key lever in further growth
4. E2W Penetration in India likely to increase to 75-80% by 2030

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