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Electric Vehicles and the Digital Customer Experience

Decoding the next stage in India's EV revolution



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India Smart Utility Week

Electric vehicle headlines in India...

Some key facts to consider

- ① The Indian EV market varies significantly by state, depending on factors including **demographics, income levels, regulatory landscape and urbanization**
- ② The electric vehicles (EVs) sector account for **less than 1% of total vehicle sales in India** currently but the market is expected to be around at least **INR 475 billion by 2025**.
- ③ Two-wheelers account for the largest share of this market at 62%, followed by three-wheelers at 37%. The penetration of **electric two-wheelers is projected to reach up to 15% by 2025 from 1% currently**.
- ④ The **four-wheeler segment** currently has the lowest EV penetration of 0.12% (3,400 units of electric passenger cars sold in 2020) but **expected to grow to 5% by 2025**.

India plans to shift to 100% of the car sales to Electric Vehicles by 2030

① The policymakers in India have set a goal of **30% penetration of EV in new sales by 2030**.

② The **EV** sales are almost **26 Million** and the global fleet size has reached **116 Millions**

③ India's transition to electric mobility is guided by three main imperatives—**energy security, curbing local air pollution, and curtailing GHG emissions** from the transport sector

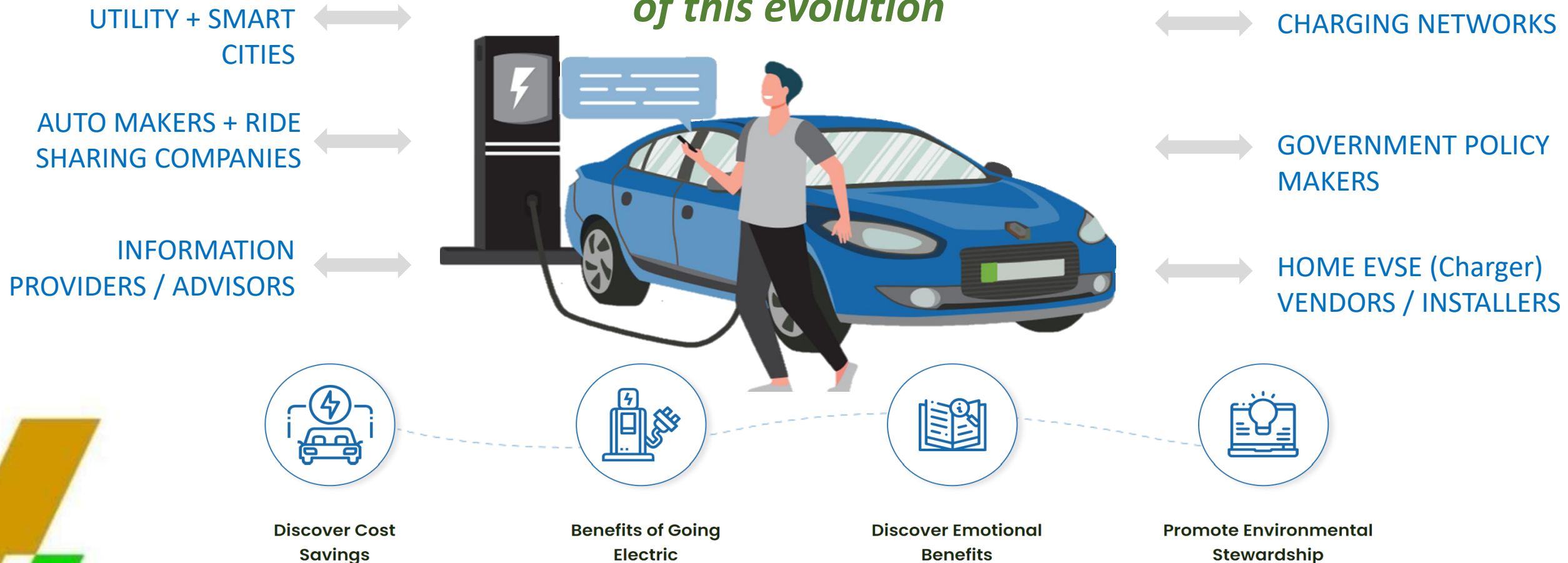
④ As per the Niti Ayog Report, By making India's mobility shared and electric, **energy consumption and carbon emissions to be reduced by 64% and 37 %, respectively, by 2030**.

As of **January 2022** DHI has sanctioned **6690 Electric Buses, 3.32 Lakh Electric Vehicles in addition of 3297 Charging stations** across the country.



The rapidly evolving EV ecosystem

*The Customer is at the centre
of this evolution*



Energy utilities are responding and building connected customer experiences

Utilities are delivering Connected Experiences for E-Mobility

Deploy Infrastructure

- Public charging
- Residential charging
- Workplace charging
- Customer fleet EVSEs

Manage Load

- 3rd party electricity resale rules
- EV-specific rates
- Managed charging
- Vehicle-to-grid

Engage Customers

- Customer education
- Fleet programs
- EV incentives
- Engagement and Mobility Apps

Build Foundations

Allow customers to better manage and control their electric vehicles, with energy consumption tracking and charging reminders



Offer EV-specific rate plans and shift energy demand to off-peak hours via personalized programs to EV owners

Ramp up the EV charging infrastructure by proactively anticipating customer demands in an area



Become a trusted energy advisor and guide customers throughout the process of EV ownership

Educate and incentivize customers to actively adopt Electric Vehicles and shift consumption to clean energy



Give customers the convenience of capturing the EV data and ease of locating the nearby charging stations, all with a single portal and app



From electric vehicles to smart grids...

Our expectations of the New Utility Ecosystem



EMPOWERMENT

- ✓ Monitor, manage and adjust energy consumption
- ✓ Real-time visibility into energy levels and consumption
- ✓ Real-time charger location and availability
- ✓ Reserve-ahead capability
- ✓ Route planning & navigation
- ✓ Detailed information on billing plans and transactions
- ✓ Multiple methods to pay bill
- ✓ Merge with existing systems and smart-home apps



AUTOMATION

- ✓ Advanced energy management algorithms
- ✓ Visual insight-driven operator dashboards
- ✓ Comprehensive charger and driver management
- ✓ Proactive problem resolution powered by self-healing algorithms
- ✓ Automated alert management system
- ✓ Personalized TOU rate-plans

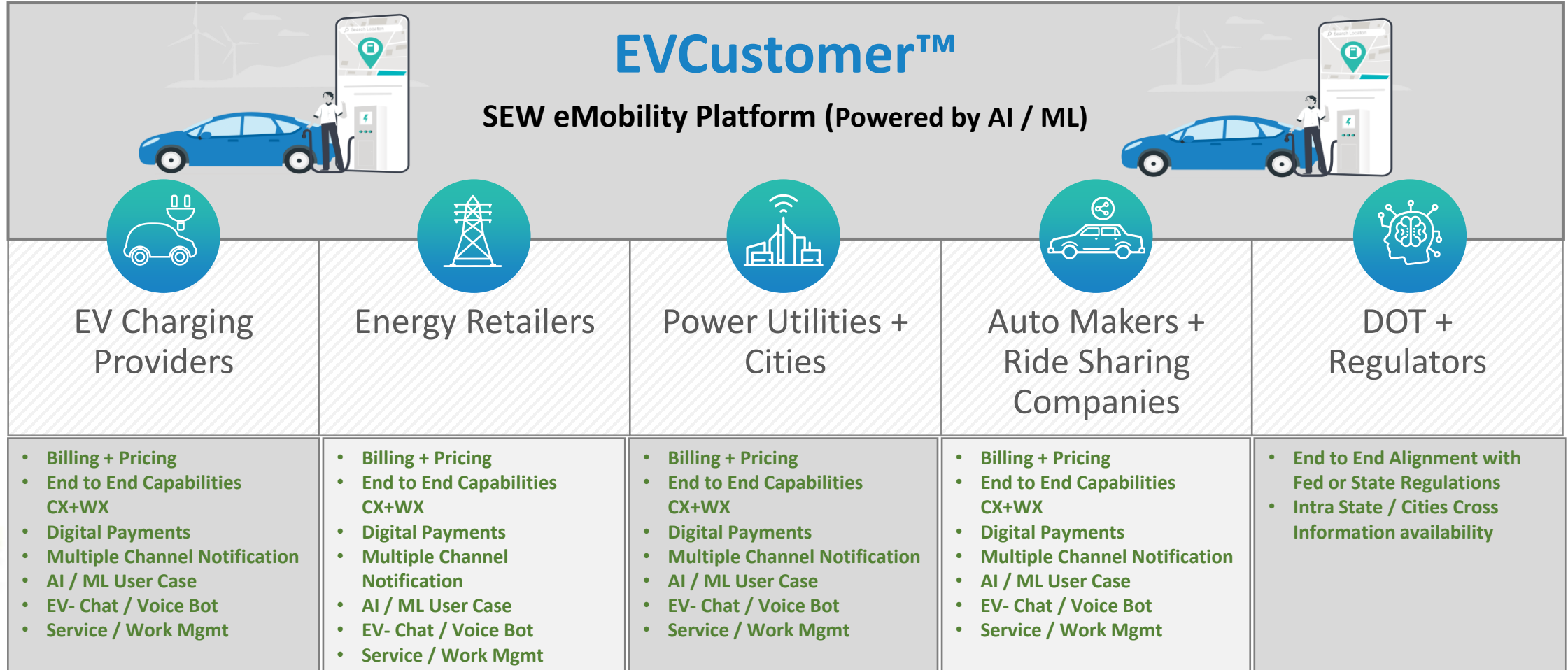


GRID MANAGEMENT

- ✓ Dynamic energy distribution to and from the grid
- ✓ Real-time monitoring of power needs
- ✓ Controlled EV charging during low power demand
- ✓ Personalized demand response programs and events










SEW's EV Platform covers the entire ecosystem in the EV value chain



SEW's EV platform provides energy utilities with 360° capabilities and features

EVCustomer™

SEW eMobility Platform (Powered by AI / ML)

						
Billing + Digital Payment Services	CRM + Service Mgmt Cloud	Asset + Mobile Work Mgt Cloud	Smart IOT + Asset Monitoring	EV Marketplace + Marketing Cloud	CX Platform Mobile + Responsive Web	Grid Management + Demand Response



- Accelerating EV adoption
- Enabling hassle-free EV mgt. and ownership
- Driving digital empowerment and self service
- Promoting clean energy transition



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SEW's EV Platform delivers and exceptional customer experience



- **Locate charging stations:**
A GPS enabled system to locate charging stations in the vicinity. Includes the list of charging stations, with detailed address and time to reach.
- **Monitor and Manage Battery Charge:**
Provides information on the current charge level of the vehicle and specific ranges for different types of journeys
- **Usage Reports:**
Monthly and daily reports showing consumption in KWH and \$\$\$. It also details consumption cost incurred during on/off-peak hours and provides monthly insights on average charging duration and costs, and recommended charging time.
- **EV-specific TOU Rates:**
Unlock previously unavailable insights to offer customers with programs that suit the usage requirements.
- **Incentivize EV ownership:**
AMI-informed action plans to reveal clear paths to incentivize EV ownership while also enable load balancing on the grid.



SEW's EV Platform enables the full end-to-end EV Customer Journey

The SEW digital platform gives customers a set of comprehensive capabilities to manage their EV

- Finding the right EV
- Purchasing an EV via a relevant marketplace
- Charging, booking and billing etc.
- Personalized programs tailored to specific needs
- Notifications through the channels of choice
- Tracking usage and comparison

