

immersion INDIA®

FIELD NOTES · SHEET 10

Swapping Instead of Charging

India's Different Answer to EV Downtime

BATTERY SWAPPING · 98 OPERATORS · NATIONWIDE

A swap station at shift change. Delivery riders are the customers who make the economics work.

98
battery-swapping companies
a model formalised only in 2022

1,569
Battery Smart stations
281,000 batteries in circulation

100m
swaps completed
by the market leader alone

<5 min
to swap a 12m bus
two packs, demonstrated July 2026

> A rider pulls up to a kiosk the size of a vending machine, slides a depleted pack out, slides a charged one in, and is back on the road in under ninety seconds.

Charging takes thirty minutes on a fast charger and up to eight hours at home. For someone whose income depends on uptime, thirty idle minutes is thirty minutes of lost fares, compounding daily.

Underneath sits Battery-as-a-Service: buy the vehicle without the battery, pay a subscription for energy. India has at least 98 swapping companies; the leader runs 1,569 stations. In 2026 the format moved to twelve-metre buses.

THE SIGNAL TO WATCH Consolidation among the 98 operators. A swap network is worth only as much as its ubiquity.

FIELD NOTES · SHEET 10 · BATTERY SWAPPING

Bring the cohort to the case.

Every sheet in this series is a place you can stand in. The dark store, the fab, the swap kiosk, the mandi, the GCC floor — all of them within a day of Bengaluru, and all of them take visitors.

Field Notes is a series on the forces shaping India now, designed to give decision-makers exploring India the right perspective before they commit to it. Each one takes a single force, gives you the argument and the four numbers that anchor it, and names the places in India where you can go and stand in front of it. The series is drawn from *The India That Is Unique*, Immersion India's field guide for global executive education.

ON THE GROUND — BATTERY SWAPPING

A swap station at shift change
Ninety seconds, repeated, and the queue around it.

A Battery-as-a-Service operator
Who owns the pack and carries the degradation risk.

A cell assembly line
The part of the chain India still imports.

THREE QUESTIONS FOR THE ROOM

01 Battery-as-a-Service moves battery ownership, degradation risk and capital cost off the driver. Who should bear those in your students' markets, and who currently does?

02 SUN Mobility put swap stations inside Indian Oil's retail network. What other incumbent footprints are secretly the cheapest route to a new infrastructure?

03 Ninety-eight operators cannot all survive. What does consolidation do to a network whose value depends on ubiquity?

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