



# Joint Commercial Project - 1

LCV Battery

Presented by

**xtrawrkx**

There's a lack of low-cost, electric LCV. Existing vehicles are not interoperable hence discouraging anyone to develop battery swapping solutions. This means that **EV fleet operators** must either invest in expensive fast-charging infrastructure or accept longer downtime for their vehicles while they are being charged.

High product development costs, lack of standardization in the EV industry, makes it difficult for **EV OEMs and Retrofit** companies to develop vehicles that can use a wide range of battery packs enabling swapping.

Developing a battery pack and BMS that is swappable, interoperable, complaint requires significant investment in materials, expertise, and testing. But this is necessary for **Battery manufacturers** to compete in the rapidly evolving electric vehicle market.

Difficulty in repurposing mixed battery packs as **ESS**. Because they may contain batteries from different manufacturers and with varying levels of degradation, resulting in high integration costs and reduced performance.

Finally, conducting a JCP to address the issues involves **aggregating all layers**, talent, and finance. This would require collaboration between multiple stakeholders, including vehicle manufacturers, battery manufacturers, energy storage solution providers, and fleet operators. Also significant investment in R&D.

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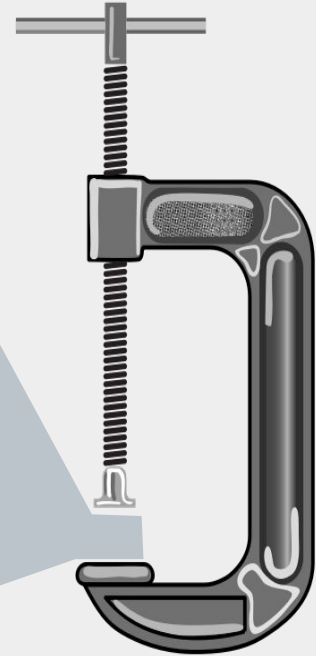
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**LAYER 1** : EV Fleets & Charging Infrastructure

**LAYER 2** : EV OEMs and Retrofit Companies

**LAYER 3** : Battery Manufacturers and 2nd Life ESS Companies

**LAYER 4**: Execution Layer, Consultants, Engineering Companies



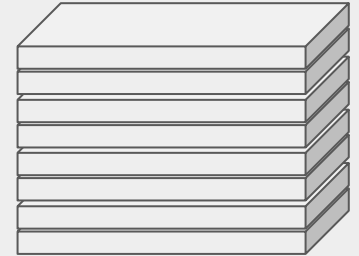
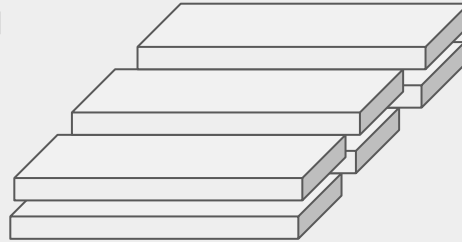
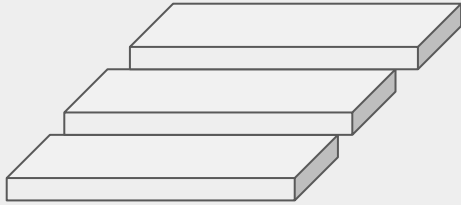
Product

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## PROBLEM STATEMENT

- Higher TCO - high upfront cost to buy **car + battery**
- Low Salvage Value as proprietary car batteries have no second life use cases or **Battery Buyback** option
- Lack of swapping solution, reducing vehicle usability while charging
- Lack of **interoperability**, one-kit doesn't fit all

## HOW JCP SOLVES THIS?

Purchase Tiers | Battery Buyback | Swapping | Interoperability

## COMMITMENT TO JCP

Sign JCP Agreement | Commit to buy if conditions are met

### EV Fleets



e3W (L5)  
Cargo



e4W Car Taxi



e4W Cargo

### Charging Infra



Battery  
Swap



Charging  
Station



Refueling  
Station

## PROBLEM STATEMENT

- Retrofitted pre-owned cars are not covered under FAME subsidy
- High product development cost to build new car and fit the battery kit
- Bulk B2B sales does not prefer pre-owned, retrofitted car
- Less appealing to B2C as well, because of high upfront cost
- Lack of **interoperability**, one-kit doesn't fit all

## HOW JCP SOLVES THIS?

Donor Vehicles | Claim FAME Subsidy | Interoperable Battery Pack | Sales & BD

## COMMITMENT TO JCP

Sign JCP Agreement | Application Engineering Cost (₹50lac - ₹1Cr) | BD Overheads (₹10 - 20lacs)

### New EV OEMs



e3W (L5)  
Cargo



e4W Car Taxi

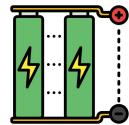


e4W Cargo

### Retrofit OEMs



e4W Car Taxi



Battery Pack

## PROBLEM STATEMENT

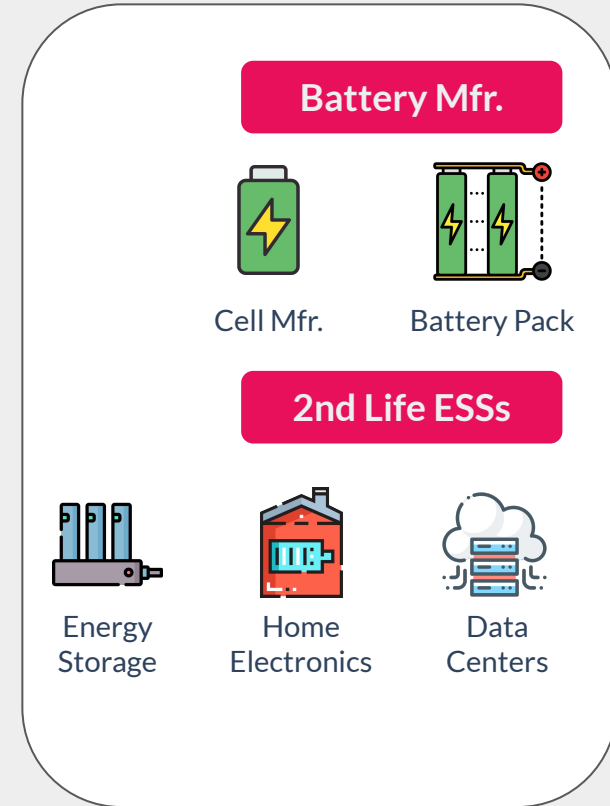
- Extremely high R&D cost to develop new battery pack + BMS
- Low demand for LCV battery pack
- Mixed battery packs are difficult to repurpose as ESS
- High cost of integration to convert existing mixed battery packs into ESS

## HOW JCP SOLVES THIS?

Quality R&D at fractional cost | Generate Demand |  
Standardized Battery Packs | Low Cost of Integration for ESS

## COMMITMENT TO JCP

Sign JCP Agreement | Share Cost of Product Development (₹1Cr)  
Battery Buyback via Partner or Self | Appn Engg Cost (₹50lac - ₹1Cr)  
for ESSs





# Layer 4 - Execution Layer

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## PROBLEM STATEMENT

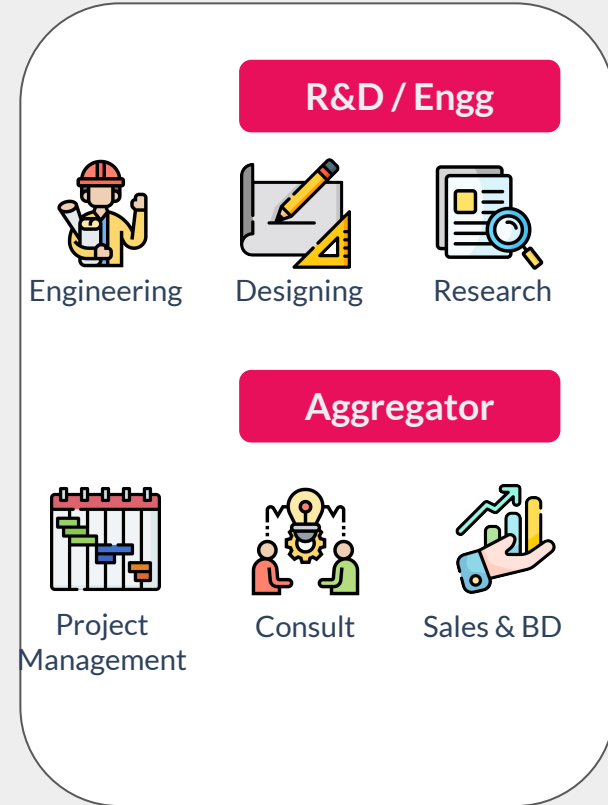
- High impact, large scale project that can only be pulled off jointly, which are difficult to get commissioned as an individual consultant
- Low opportunity for individual consultants for large project
- Lessert opportunities for recurring revenue projects
- High failure rates at client side while working with multiple consultants

## HOW JCP SOLVES THIS?

Project Management | Aggregate Layers, Talent, Finance

## COMMITMENT TO JCP

R&D | Product Development | Application Engg | Quality Assurance



Thank you