Optimizing Last-Mile Delivery: Planning for Cost Reduction

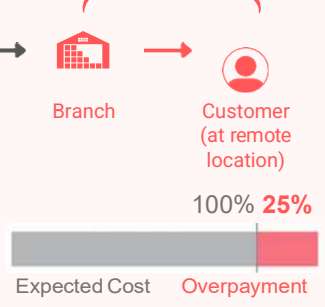**Domain & Process** Logistics >>> Last-mile   **Tool Stack Used**   Excel + Tableau

PROBLEM

A logistics company's last mile process became inefficient. The cost of delivering package to remote areas exceeded expected amount by 25%.

PROBLEM AREA

Last-mile **ODA*** delivery cost** became **very high**

Seller → Branch* → Origin Cluster** → Destination Cluster → Branch → Customer (at remote location)

Fig. A typical logistic process

100% **25%**

Expected Cost   Overpayment

Implication

- Overpayment to partners led to a **decrease in profitability** of the business.

Objectives

- Find why the cost has become high and what was its impact on the payouts of the partners.
- Calculate payouts to be given to the partners for making deliveries in the current month.
- Improve the current process to reduce the cost even further.

APPROACH

Steps	Findings & Impact
Understood the process of delivering consignments to ODA areas	On any given day, a last-mile delivery partner can **make only 2 trips.**
Checked if partners followed the process established for making deliveries in ODA areas	In **~95% of clusters,** partners are **violating** the process
Calculated current payouts to be made to the partners	The report was needed by finance team for **releasing payouts** to the partners
Analyzed the impact of process violation on the payouts to the partners	Payouts to partners was **20% more** than expected. **That was ₹28 lacs!**
Reduced the cost further by making improvements to the current process	Cost could be further **reduced by ~27%** (₹28 lacs)

Expected Cost   Overpayment

Current Process   20%

Suggested two scenarios to optimize current process.

Scenario 1   6%

Scenario 2   27%

Cost Savings that can be achieved **over Current Process**

100 %