Taclo Drone Delivery: A New Era of Logistics

Taclo, India's leading food delivery brand, is exploring a drone-enabled delivery system to tackle high attrition among delivery personnel and peak-hour delays. This report provides a comprehensive analysis, rollout plan, and cost-benefit assessment of this innovative approach.

by Somya Routaray

Current Delivery Model: Challenges and Limitations

Operational Overview

- Orders per executive: 350–500/month
- Earnings: ₹55 per order + ₹4,000 fixed salary
- Avg. distance: 3 km

Key Challenges

- Monthly attrition rate: 10%
- High peak-time delays due to traffic
- Restricted service radius by algorithm

Drone Delivery Model: Design and Capabilities

Drone Specifications

- Max range: 7–8 km
- Avg speed: 40 km/h
- Max payload: 5 kg
- Flight time: 30 mins

Advanced Features

- Obstacle avoidance
- GPS tracking
- Return-to-home feature

Cost & Maintenance

- Drone cost: ₹130,000
- Battery: ₹13,000 (3-month lifespan)
- Maintenance: ₹6,500/month

Assumptions for Drone Operations

Order Capacity

One drone can deliver approximately 15 orders per day, totaling around 390 orders monthly.

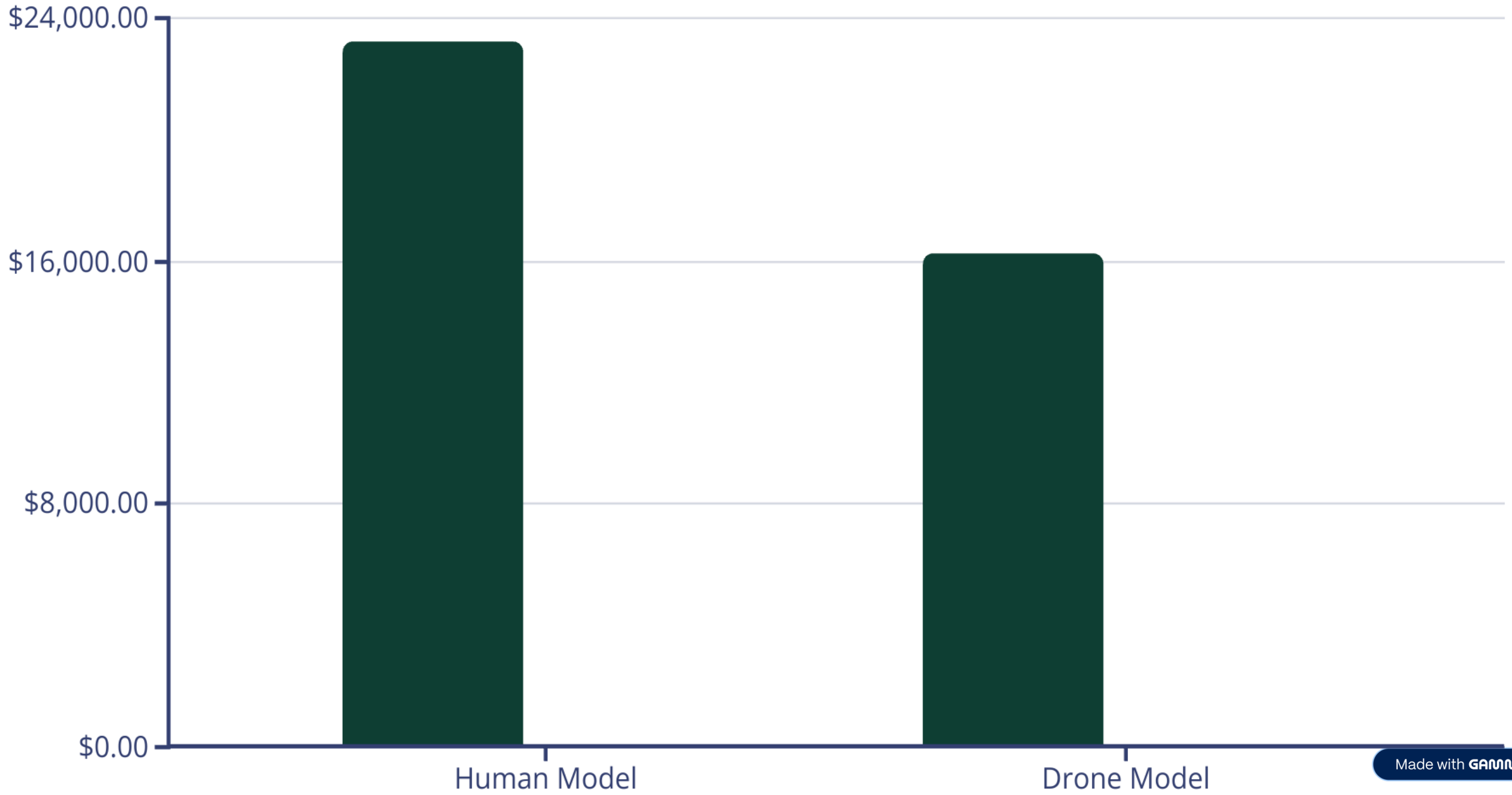
Lifespan

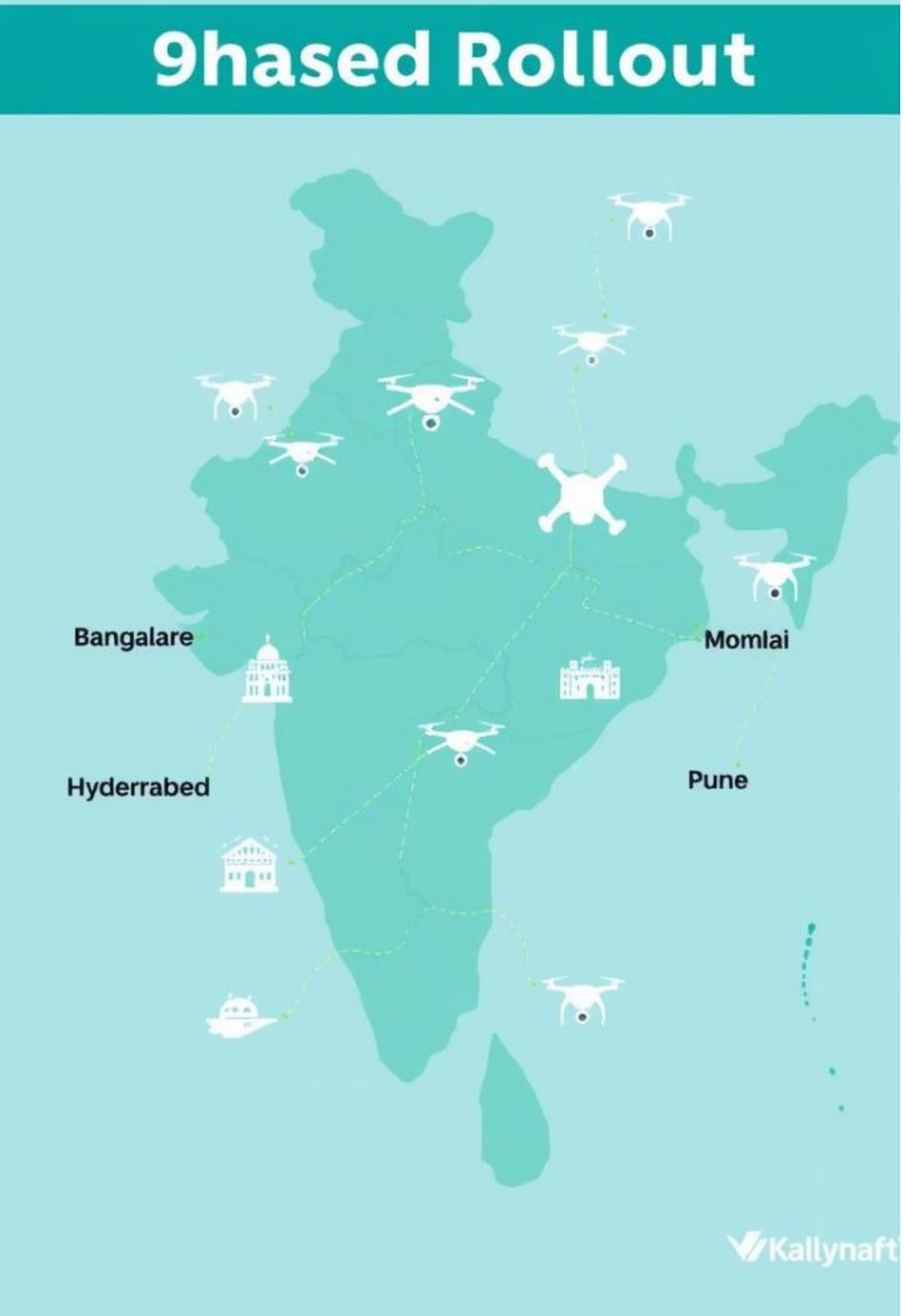
Each drone is assumed to have a life expectancy of 2 years, while batteries last for 3 months.

Operational Radius

Drones will operate within a 6 km urban radius, optimising efficiency in dense areas.

Monthly Cost Comparison: Human vs. Drone





Rollout Plan & Investment Schedule

Pilot Phase (Bangalore)

Months 1–2: 50 drones, ₹65 Lakhs investment.

Scale 1 (Hyderabad, Chennai, Mumbai)

Months 3–5: 150 drones, ₹1.95 Cr investment.

Scale 2 (Delhi NCR, Pune, Kolkata)

Months 6–9: 200 drones, ₹2.6 Cr investment.

Infrastructure & Training

₹10 Lakhs for infra setup, ₹5 Lakhs for training.

Cost-Benefit Analysis: Annual Savings & ROI

₹84L

Annual Savings

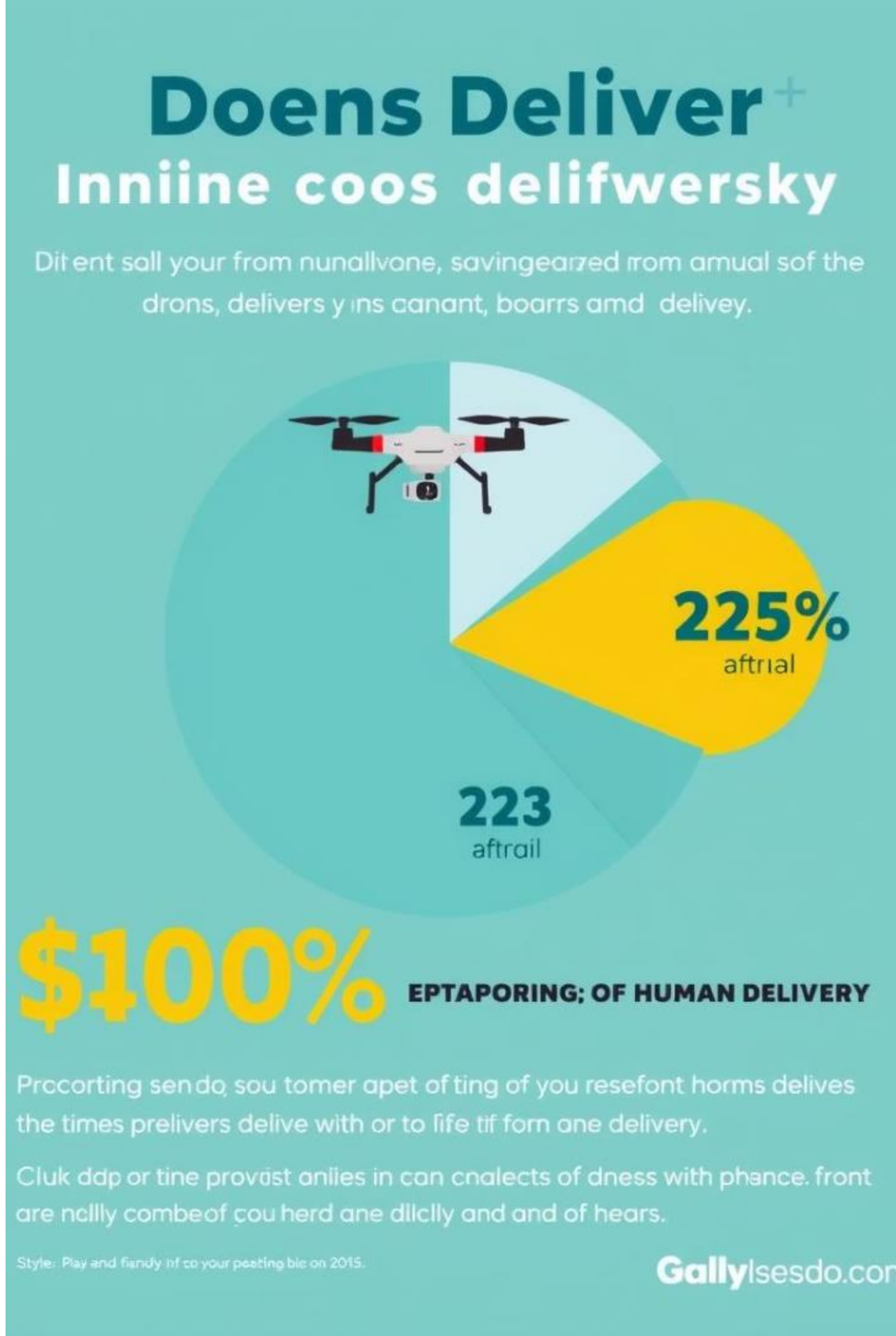
Estimated annual savings by transitioning to drone delivery.

~2 years

ROI Period

Estimated return on investment period for the drone system.

The cost-benefit analysis highlights substantial annual savings of ₹84 Lakhs with the drone model. This translates to an estimated ROI period of approximately 2 years, making the drone delivery system a financially viable and attractive investment for Taclo.



Risks, Mitigation & Recommendation

Weather Impact

Maintain a hybrid drone-bike fallback system to ensure continuous service during adverse weather conditions.

Battery Downtime

Keep spare charged batteries readily available to minimise operational interruptions and maximise drone uptime.

Regulatory Issues

Coordinate closely with DGCA to secure certified flight zones and ensure compliance with all aviation regulations.

Based on the analysis, Taclo should transition to a drone-based delivery model in a phased manner, starting with metro cities. Drones offer significant cost efficiency, reduced attrition, and scalable delivery, especially during peak hours.