

BinGenie: The AI-Native Waste Solution

Architecting the Intelligent
Waste Ecosystem

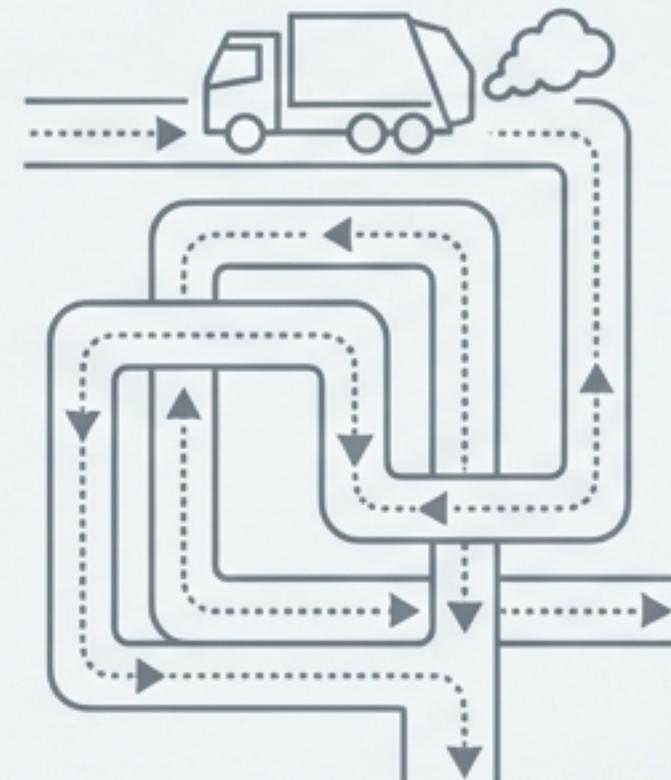
We are not just fixing trash collection; we are digitizing a physical workflow to match the speed of the modern urban environment.



The Core Failure: Operational Blindness

Managing a dynamic variable (waste generation) with a static solution (fixed schedules).

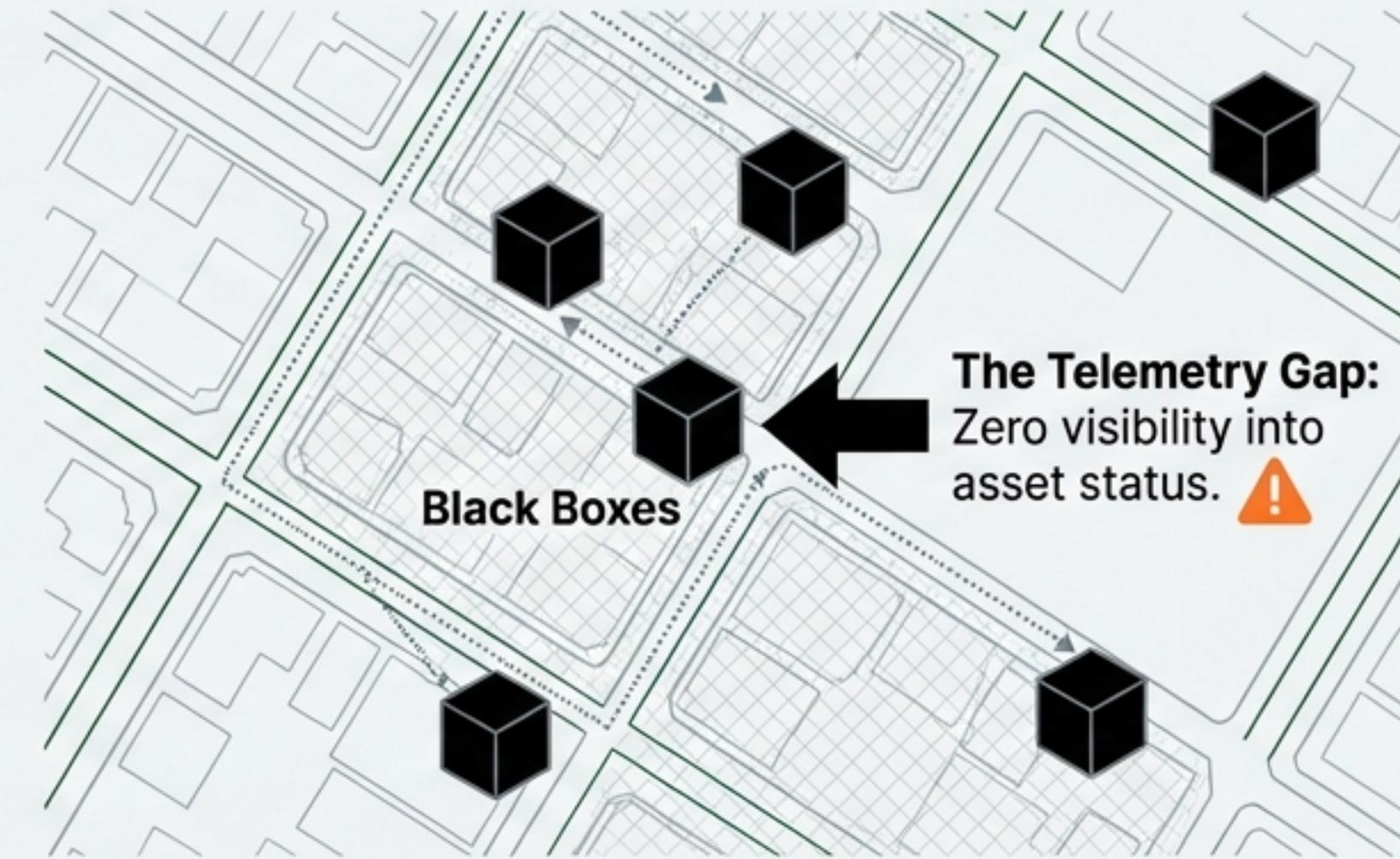
THE STATIC PAST



Legacy Failure:
Push-Based Model.

The Telemetry Gap:
No real-time data leads to over-servicing
empty bins and neglecting full ones.

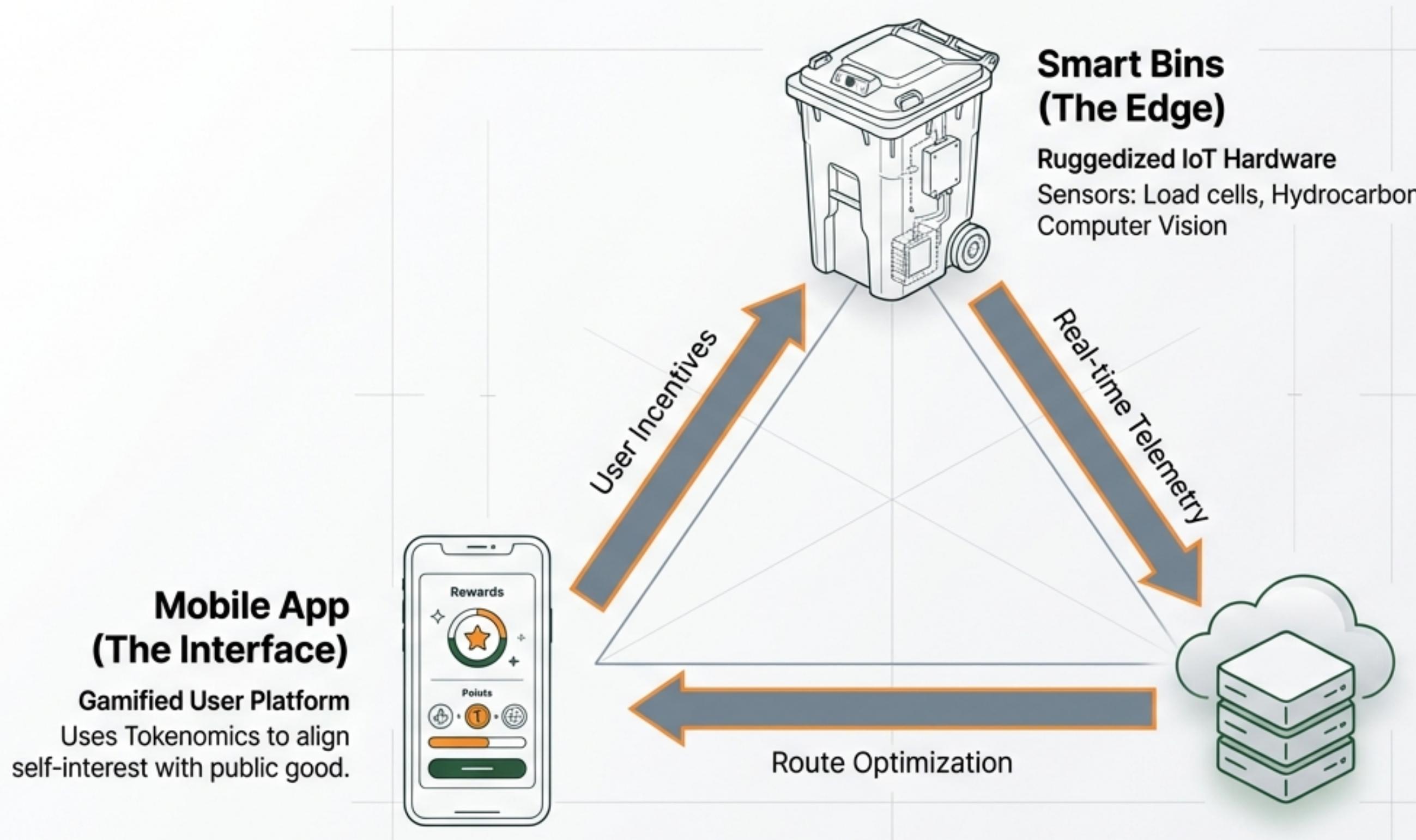
THE OPERATIONAL BLINDNESS



Logistics Latency:
Historical route planning results in
reactive emergency cleanups.

The Sorting Failure:
Resource recovery fails at the source
due to commingled waste.

BinGenie Ecosystem: Closing the Loop



Engineering the Future: 5 Key R&D Pillars

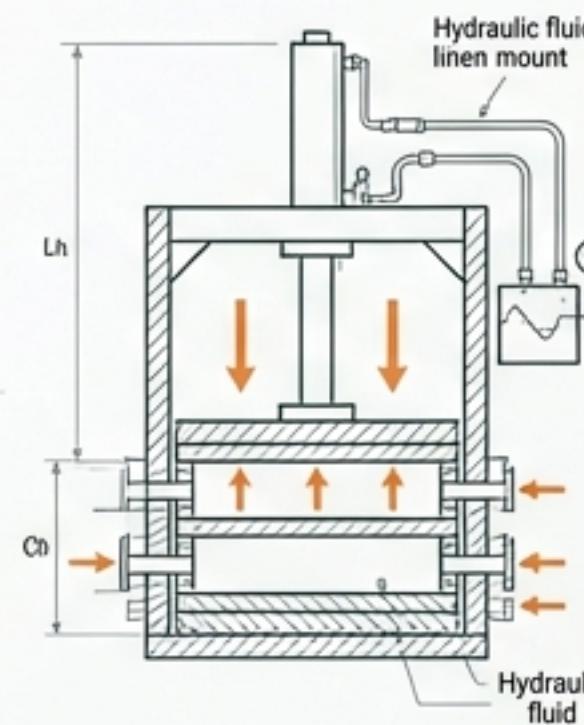
2DPL



Central Nervous System.

Goal: **99%** availability.
95% user retention via gamification.

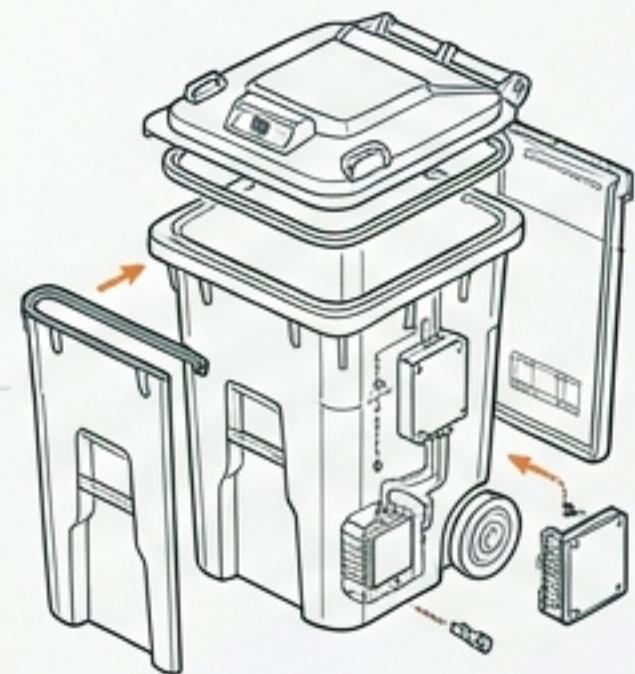
4WCP



Physical Capacity Optimization.

Goal: **1:5** compaction ratio to extend collection intervals.

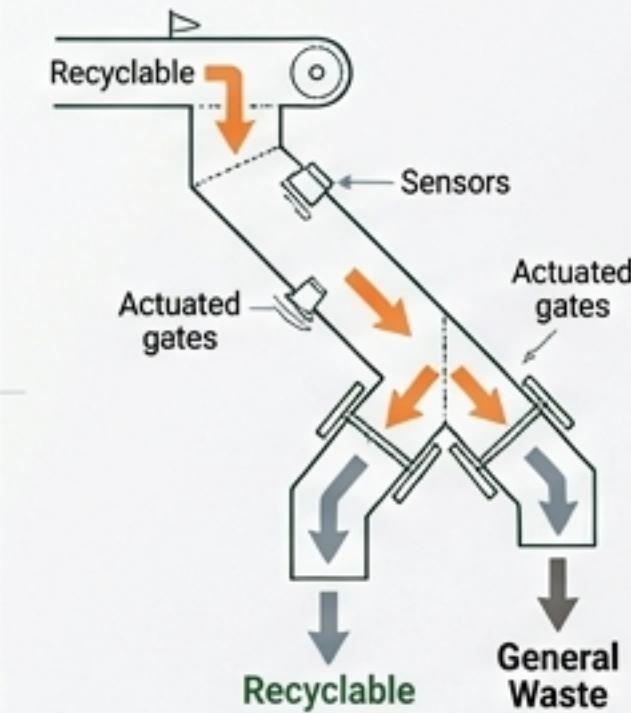
3PBD



Outdoor-First Engineering.

Goal: **90-day** MTBF.
IP-rated weather resistance.

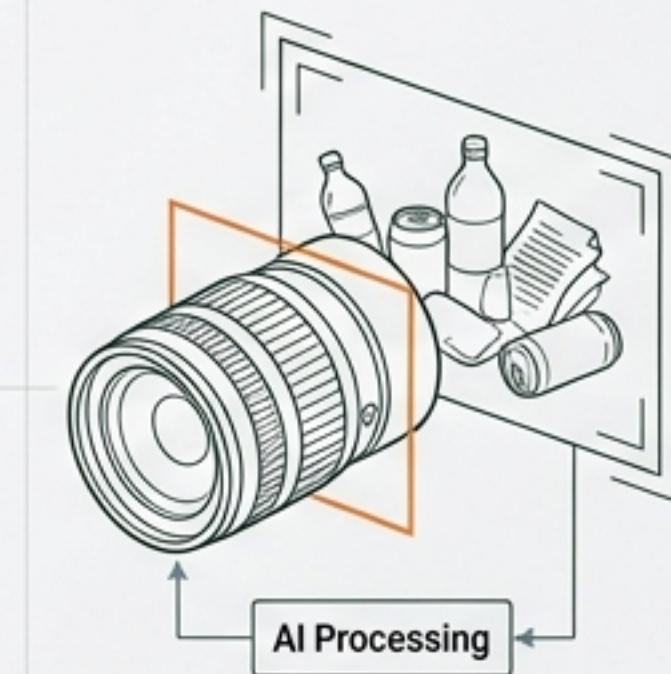
4WSR



Hybrid Automated/Incentivized Sorting

Goal: **96%** purity accuracy.
5-second cycle time.

4WID

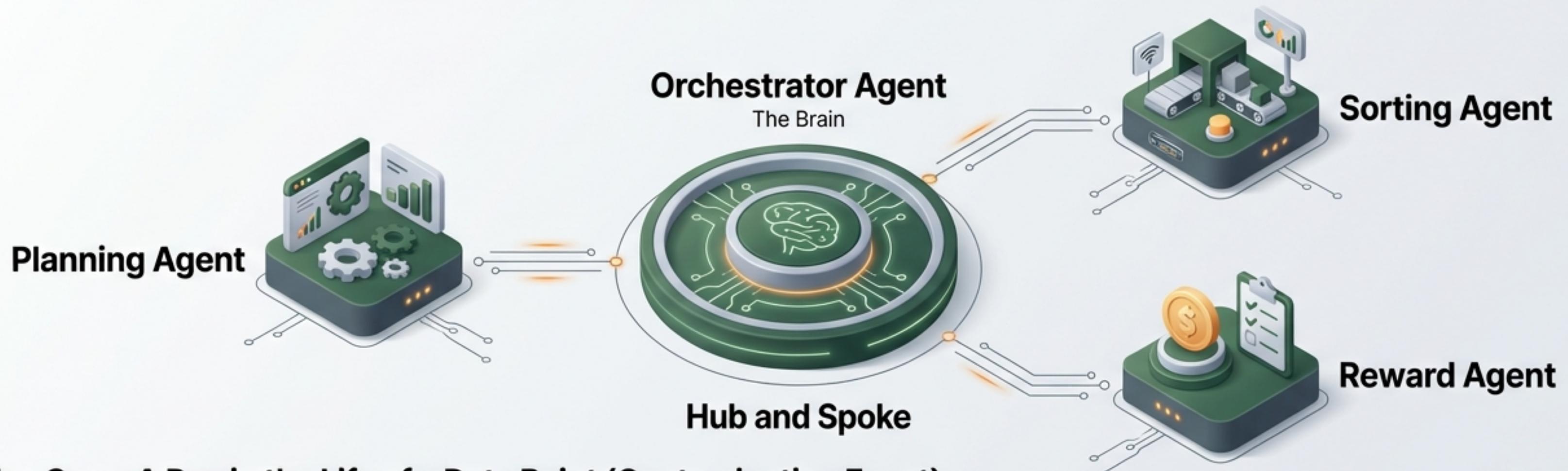


Edge AI Computer Vision.

Goal: **1-second** recognition.
96% classification accuracy.

Beyond Automation: Autonomous Agent Architecture

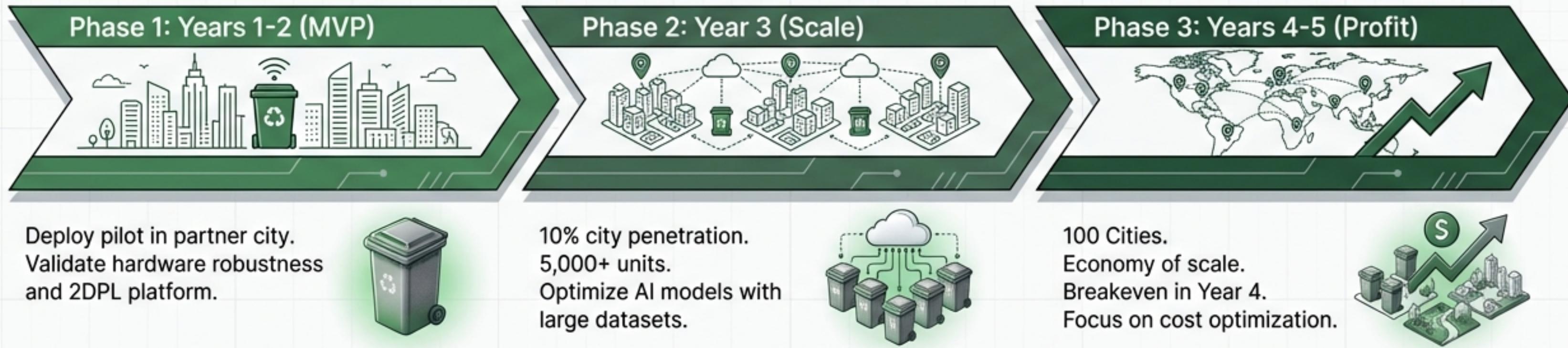
Infrastructure built on Google Cloud Vertex AI & Gemini.



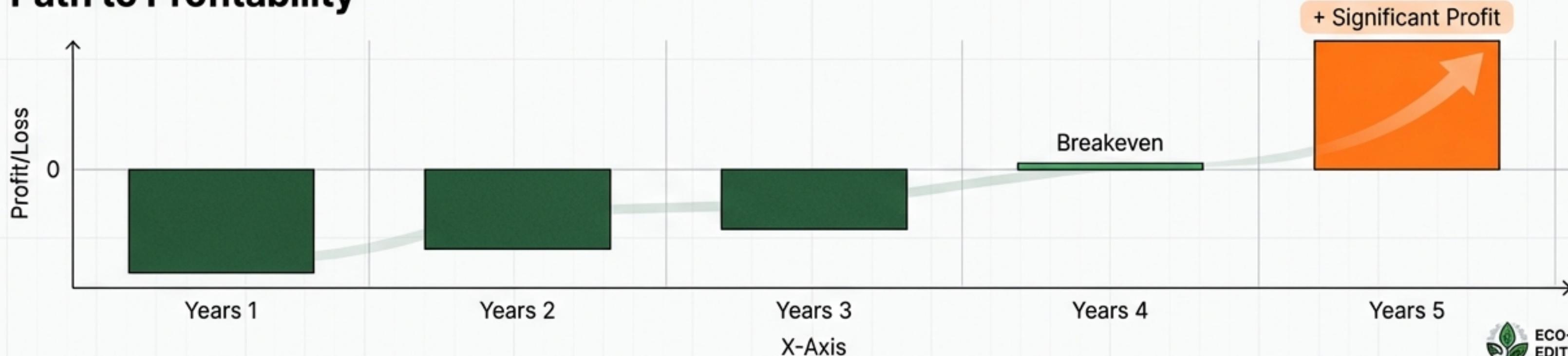
Use Case: A Day in the Life of a Data Point (Contamination Event).



Strategic Execution: From MVP to Market Dominance



Path to Profitability



The Financial Reality: Self-Funding Infrastructure

Total Annual Savings per Bin

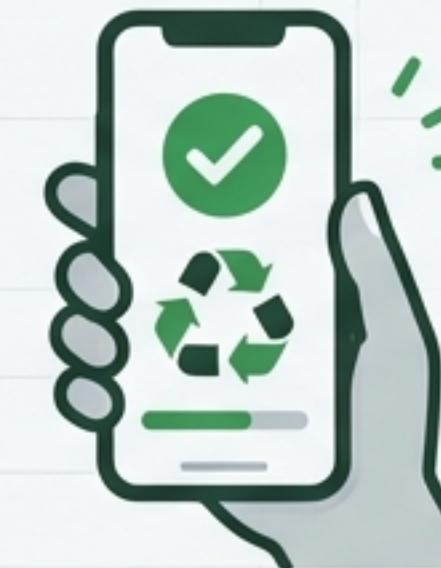
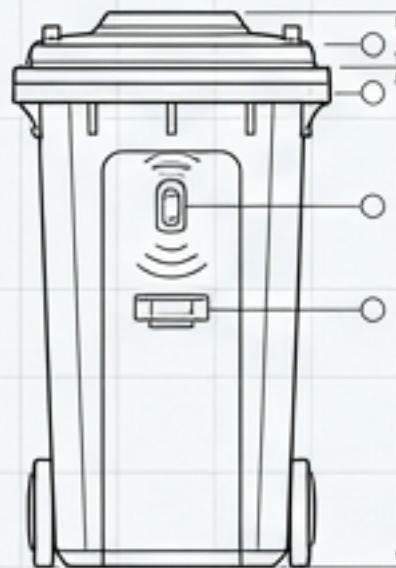
~\$2,270



Revenue Streams

1. Hardware Sales (One-time)
2. SaaS Subscription (Recurring)
3. Data Monetization (Anonymized waste flow)
4. Advertising (Digital screens)

The Future is Data-Driven Sustainability



Smart Efficiency:
20% reduction in collection costs.

Active Engagement:
Transforming passive residents into active participants.

Systemic Resilience:
From reactive cleanup to AI-predicted management.

BinGenie eliminates the Compliance Blind Spot to build the smart cities of tomorrow.