

# The Future of Urban Forestry is Data-Driven.

Revolutionizing Urban Greening  
with AI and Geospatial Intelligence.

ReLeaf

# Our Cities are Overheating. Manual Planning Can't Keep Up.



## Urban Heat Crisis

Urban heat islands increase temperatures by 1-3°C, impacting public health.



## Escalating Flood Risk

Lack of vegetation and poor drainage intensify urban flooding.



## Poor Air Quality

City pollution remains a major public health threat.

## The 'Old Way' is Broken

Traditional tree planting relies on slow, expensive, and subjective manual surveys.

✗ Time-consuming: Weeks or months per location.

✗ Costly: \$5,000 - \$10,000 per manual survey.

✗ Ineffective: High failure rates due to poor, data-deficient site selection.

# From Weeks of Guesswork to **35 Seconds** of Precision.

ReLeaf is an intelligent, production-ready platform that identifies optimal tree planting locations with scientific accuracy.



## Satellite & Aerial Analysis

NDVI vegetation detection, shadow mapping, and building footprint analysis.



## Data-Driven Scoring

A proprietary 100-point algorithm to prioritize the most impactful locations.



## AI Ground-Level Validation

Street View analysis using a 14-point assessment framework.



## Actionable Visualization

Delivers a 6-panel analysis map with clear, actionable insights.

# **Weeks of Manual Work → 35 Seconds of AI Analysis**

# Our 4-Step Automated Intelligence Pipeline



## Location Search

(2 seconds)

User queries a location (e.g., 'Menara LGB TTDI'). AI geocoding delivers precise GPS coordinates.



## Aerial Analysis

(15-20 seconds)

Processes satellite imagery, NDVI, shadow maps, and street networks. The 100-point algorithm identifies and scores critical planting zones.



## Ground Vision Analysis

(12-15 seconds)

Gemini AI analyzes Street View imagery against a 14-field assessment (tree count, health, obstacles).



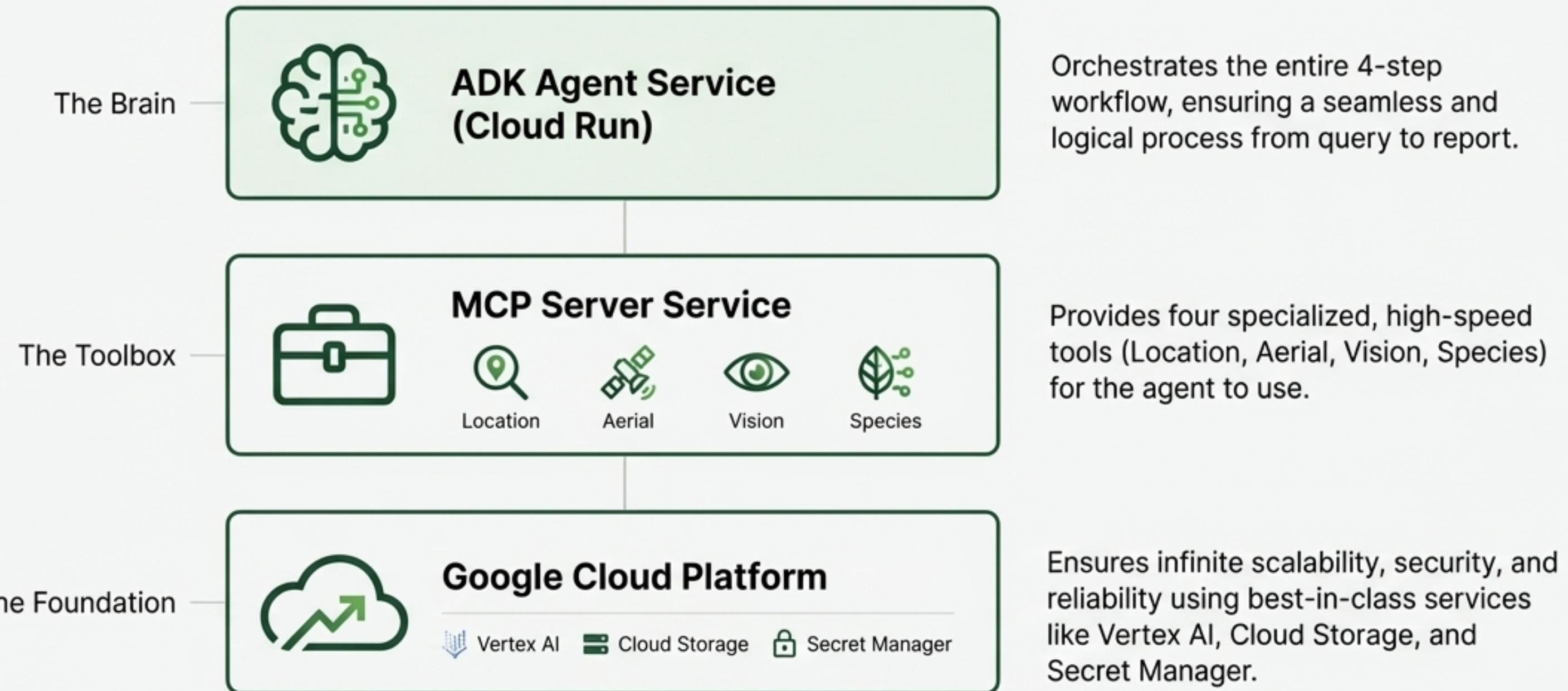
## Recommendation & Visualization

(1 second)

Provides climate-specific species recommendations from a Malaysian tree database. Generates a final 6-panel map.

**Total Time:  
30-35  
Seconds  
Per Location**

# A Secure, Scalable Foundation Built for Enterprise.



## Enterprise-Grade Security

IAM-based authentication, prompt injection protection, and secure API key management via Secret Manager.



## GDPR Compliant by Design

No personal data is collected or stored.



## Built to Scale

Auto-scales from 0 to 800+ concurrent analyses on Cloud Run.

# Smarter AI, Not More AI. Our Hybrid Model is **14x More Cost-Effective.**

We use the right model for the right task.



## Computer Vision

Proven computer vision (NASA-standard NDVI, HSV shadow detection) delivers **\$0 cost and 100% accuracy.**



## Gemini Vision AI

We use Gemini Vision AI only for complex, nuanced tasks where it excels.

## The Payoff

This multi-AI strategy avoids the high cost and 'black box' problems of AI-only solutions.

Metric	Computer Vision (for Aerial)	Gemini Vision AI (for Ground)
Accuracy	100% (deterministic)	85-90% (non-deterministic)
Cost	<b>\$0</b> (no API calls)	\$0.0001 per image
Scientific Validity	NASA-standard, reproducible	Black box

**Competitors using AI for everything are 10-30x more expensive.**

# Proof in Production: Menara LGB, Kuala Lumpur

## 6-Panel Analysis Map



- 5 critical priority zones** identified with scores of 80-100.
- 245 m<sup>2</sup>** of total plantable area mapped.
- 65% vegetation deficit** quantified in the area.
- 8 existing trees** detected and assessed via Street View.
- 20+ new, climate-appropriate trees** recommended.

### Performance Metrics

**Total Time:** 35 seconds

**Total Cost:** \$0.0115

# A \$73.4 Billion Global Market Demanding a Modern Solution

**\$73.4B**

Global Urban Forestry  
Market by 2030

**\$622B**

Smart City Technology  
Market by 2027

**\$50B+**

Annual Carbon Offset  
Credit Market

## Target Markets



Municipal Governments



Urban Developers



Environmental Consultancies



NGOs & Foundations

**Driving Forces:** Climate resilience planning, ESG reporting, flood mitigation, and regulatory drivers like the EU Green Deal (3 billion trees by 2030).

# A Scalable SaaS Model with High-Margin, Recurring Revenue.

## 1. Pay-Per-Analysis

**Price:** \$5-10 per analysis

Ideal for pilots and small projects.

**400-800x markup on cost.**

## 2. Subscription Plans

- **Starter:** \$500/mo (100 analyses)
- **Professional:** \$2,000/mo (500 analyses)
- **Enterprise:** \$10,000/mo (Unlimited)

## 3. Government Contracts

**Price:** \$50k - \$500k annual contracts.

Includes white-labeling and consulting.

## Future Revenue Stream

- **Data Licensing:** Sell aggregated urban forestry datasets and API access.

**Key Financial Highlight:** **90%+ Gross Margin** on subscription revenue.

# Engineered for Massive Scale and Unbeatable ROI.

## Scalability & Margin

Scale to Zero, Scale to Infinity

Our Cloud Run architecture auto-scales from 0 to 800+ concurrent requests with no upfront costs. Performance is constant.

Cost Breakdown (per 1,000 analyses)	
Maps API	\$11.00
Vertex AI	\$0.50
Cloud Compute & Storage	\$1.70
<b>Total</b>	<b>\$13.20</b>

**Sell at \$5,000 → 99% Gross Margin**

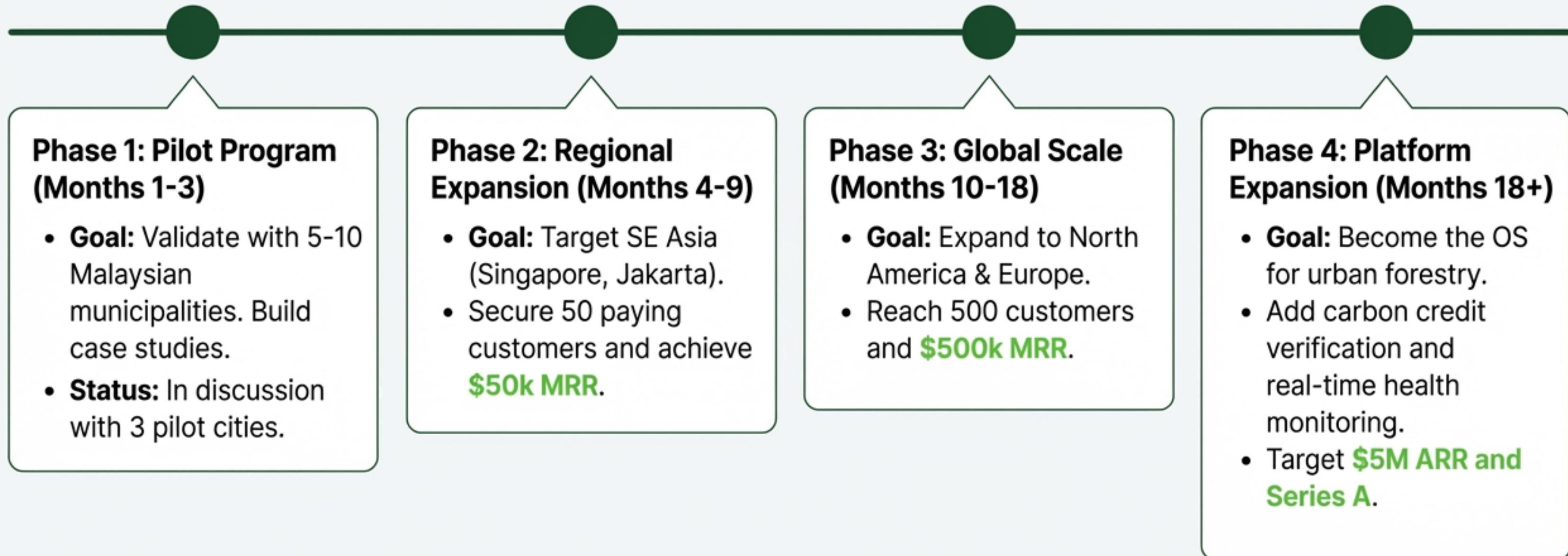
## Customer ROI

A Staggering 99.5% Cost Reduction



**\$999,500 in direct savings for cities**

# From Local Pilots to Global Leadership in 18 Months.



# We've Already Proven the Technology, Economics, and Demand.

## Product Development

- Fully functional MVP deployed on Cloud Run.
- Validated on 10+ real-world locations.
- Complete 4-step AI workflow operational.

## Technical Validation

- 35-second analysis time confirmed.
- \$0.012 cost-per-analysis confirmed.
- Auto-scaling tested up to 50 concurrent requests.

## Market Validation

- Positive feedback from urban planners in Kuala Lumpur.
- 3 pilot city partners identified and in discussion.

## Our Next 6 Months

 Complete 5 pilot city programs.

 Onboard 50 paying customers.

 Achieve **\$50,000 MRR**.

# The Right Team to Bridge AI Innovation and Urban Planning



## Technical Leadership

Deep expertise in AI/ML, Google Cloud Platform (Vertex AI, Cloud Run, ADK), and geospatial analysis.

Proven ability to ship production-ready systems.



## Domain Expertise

Background in urban planning and environmental science.

Established partnerships with municipal governments and NGOs.

## Ecosystem & Advisors

 Google Cloud for Startups

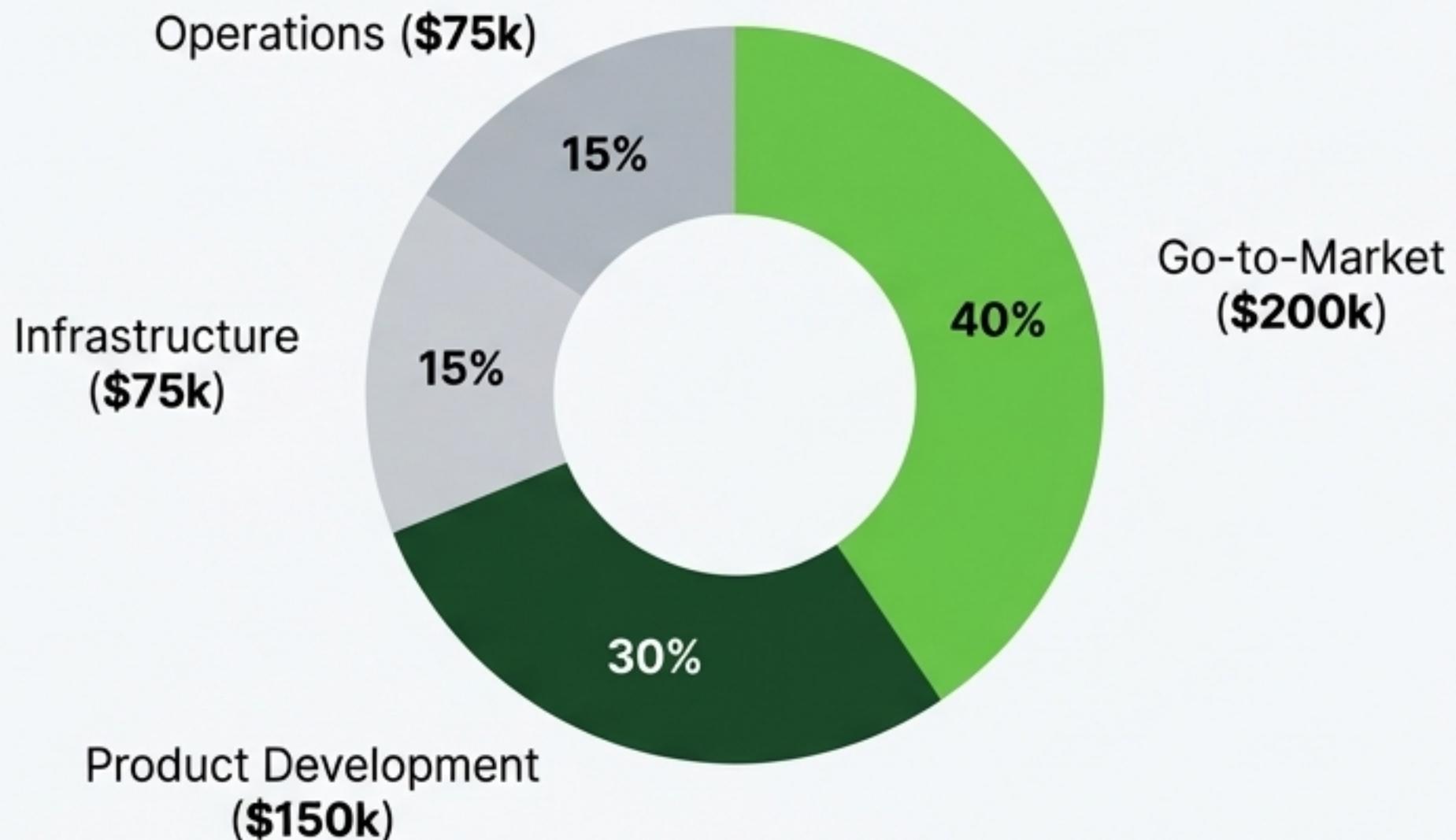
 OpenStreetMap

 Malaysian Forestry Department

**We uniquely combine the technical and domain expertise required to win this market.**

# Seeking \$500,000 to Accelerate Our Path to Market Leadership.

## Use of Funds

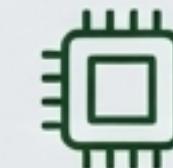


What This Achieves: A 12-month runway to reach **\$50k MRR** and readiness for a Series A round.

## The Window is Open Now



**Climate Urgency:** Paris Agreement and UN goals are driving billions in government spending.



**Tech Maturity:** Gemini 2.0 and Google ADK make this possible now at low cost.



**Regulatory Drivers:** ESG is now mandatory; EU & US are investing heavily in green infrastructure.

# Join Us in Building the Operating System for Urban Climate Resilience.

## The Vision



### Today

The best tool for optimal tree planting.



### Tomorrow

A platform for real-time urban forestry management (health monitoring, carbon verification, biodiversity).



### Future

An AI-powered climate resilience platform for all urban nature (green roofs, wetlands) that predicts and models climate adaptation.

**To enable the planting of 1 billion trees in cities worldwide by 2030.**

Email: mydrsgdtgti@deloitte.com

GitHub: [github.com/Ryuujiw/dt-hack](https://github.com/Ryuujiw/dt-hack)

**Let's build the future of urban forestry together.**