



MAUKA
ENERGY

Commercialization

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BA 468



01

Customer

02

Competitor

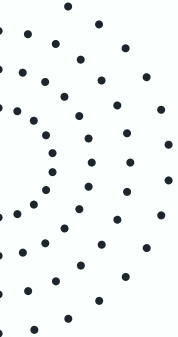
03

Market

04

Commercialization





01

Customer



Key Question Explored

1

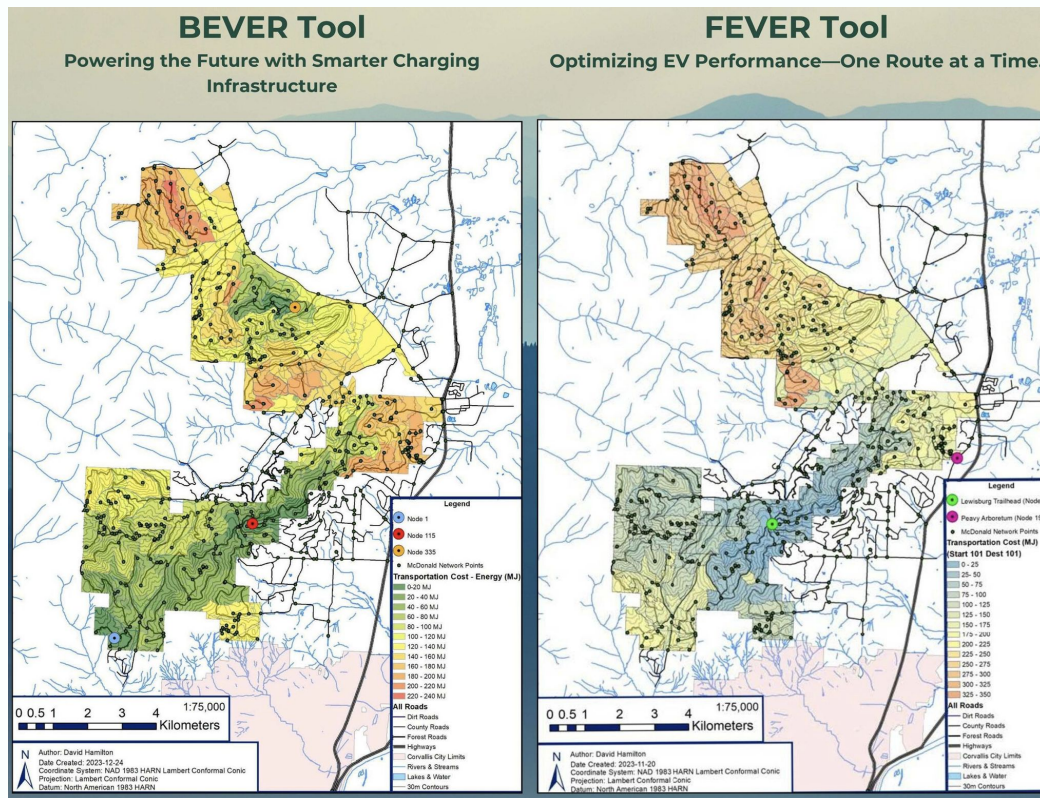
How could Mauka Energy's tools support your growth?

2

What adjustments would approve adoption?

3

If Mauka wanted to expand into another industry (Mining, Garbage), what should they know?





Positive Validation & Limitation Noted



1

"Useful for planning-phase decisions" (charger placement, EV procurement).

2

"BEVER could help if our range needs increase."

3

"Unique terrain-aware modeling fills a gap in EV tools."

1

"Less useful for daily operations in flat, final-mile routes."

2

"Standalone tool may not replace our current systems (FACTS, Google Maps)."



Insights



1. Licensing Model

"No subscriptions!"

Strong preference for **one-time purchase** with adjustable parameters.

2. Integration Needs

Embed with existing platforms (Daimler's MyGarage, FACTS system).

3. Use Case Fit

Highest value in **planning stages** (buying trucks, placing chargers).

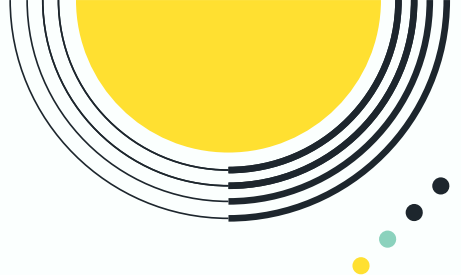
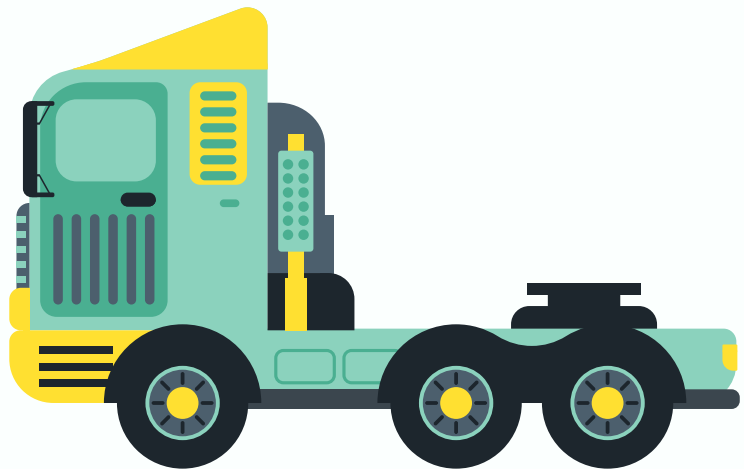
"Nice-to-have" for operations, not a "must-have."

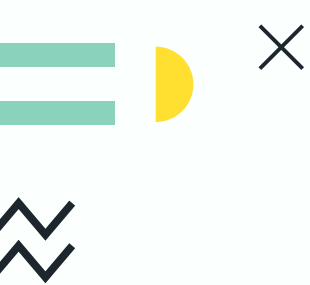




02

Competitor





Market Overview

1

**Growing EV fleet
management market
driven by commercial
electrification**

2

**Increasing demand
for specialized EV
routing solutions**

3

**Rising emphasis on
sustainability and
energy efficiency**

4

**Trend toward
integrated fleet
management
platforms**



Major Categories of Competitors

Major Mapping Platforms

Google Maps,
TomTom, Apple Maps

Specialized EV Routing Solutions

PTV, NextBillion.ai,
FarEye

Fleet Management Software

Geotab, Samsara,
Motive, Webfleet

Energy Management Solutions

AMPECO, Driivz,
ChargePoint

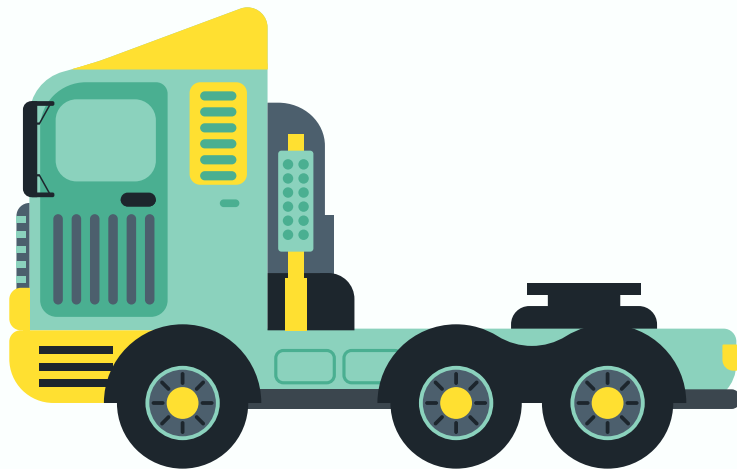
Mining/Waste Sector Solutions

Caterpillar, Komatsu,
Hexagon Mining



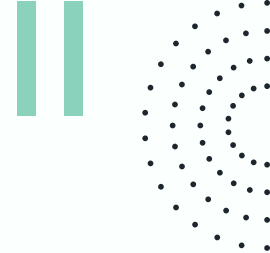
2.1

Major Mapping Platform Competitors





Google Maps Platform



Offerings

Routes API, Navigation
SDK, Last Mile Fleet
Solution

Strengths

Global coverage,
real-time traffic, route
optimization API

EV Features

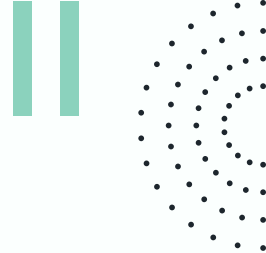
- Eco-friendly routing (green leaf indicator)
- EV charging station integration
- Battery level estimation

Limitations

- No dedicated truck mode
- Limited regenerative braking optimization
- Optimizes for time/distance, not energy recapture



TomTom



Offerings

Routing APIs, Map SDKs, truck-specific solutions

Strengths

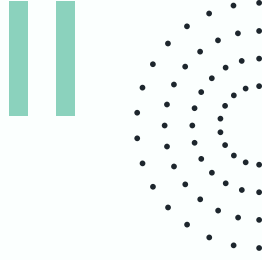
Commercial vehicle focus, matrix routing

EV Features

- Long Distance EV Routing API with charging stops
- Consumption modeling and range estimation
- Truck maps with restrictions (height, weight, toll)

Limitations

- No public mention of regenerative braking optimization
- Focus on range/charging rather than energy recapture



Apple Maps

Offerings

Consumer mapping,
CarPlay integration

Strengths

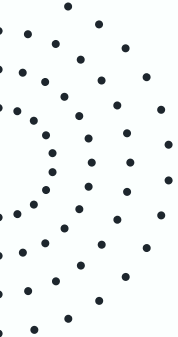
Seamless device
ecosystem integration

EV Features

- EV routing with charging stops
- Battery level estimation for compatible vehicles

Limitations

- Less business/fleet oriented
- No truck-specific routing
- No regenerative braking consideration



2.2

Specialized Fleet/EV Routing Competition





PTV Logistics



1

Digital twins of 400+ vehicles for accurate consumption modeling

3

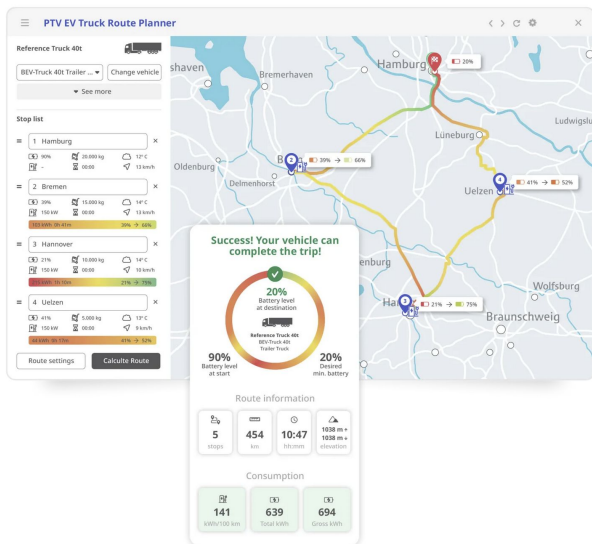
Eco Performance Award winner, German EPA

2

Considers payload, weather, altitude in routing

4

Limited focus on energy recapture through regenerative braking





NextBillion.ai

1

**Flexible routing API
for EV fleets**

2

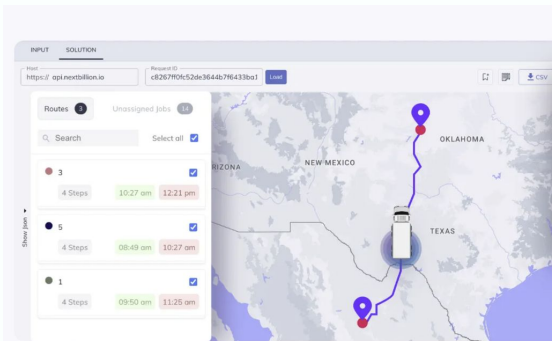
**Smart charging stop
integration**

3

**Truck-compliant
routes with vehicle
dimension
consideration**

4

**Less specialized for
industrial applications**



```
curl --location 'https://api.nextbillion.io/optimization'
--header 'Content-Type: application/json'
--data '{
  "options": {
    "routing": {
      "mode": "truck",
      "truck_size": "200, 210, 600",
      "truck_weight": 5000,
      "traffic_timestamp": 1702607400
    }
  },
  "locations": {
    "id": 12,
    "location": [

```


FarEye

1

**AI-powered routing
with real-time
adaptability**

2

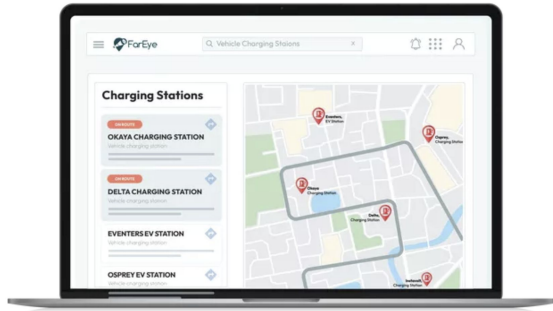
**Green-fleet routing
options**

3

**Energy consumption
monitoring**

4

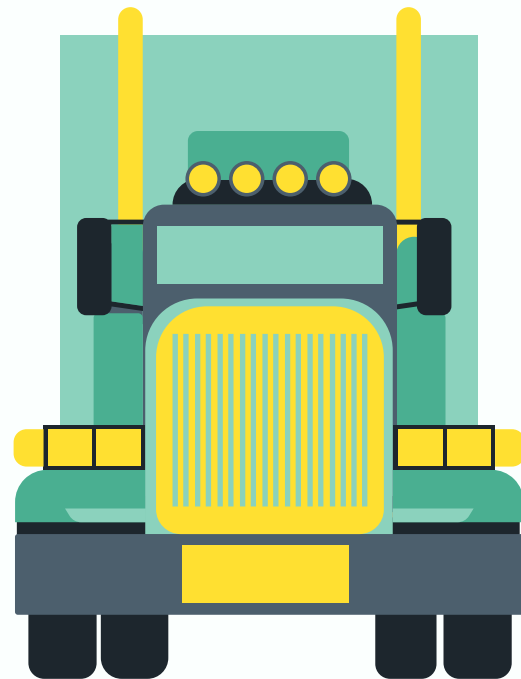
**No specific mention of
regenerative braking
optimization**





2.3

Mauka Energy's Competitive Advantages





Competitive Advantage

Algorithm Innovation

Bellman-Ford algorithm enabling true energy optimization with negative-weight edges

Regenerative Focus

Explicit consideration of energy recapture on downhill segments

GIS Integration

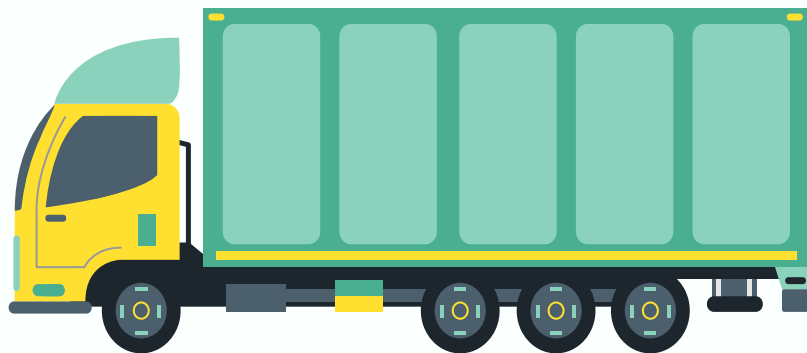
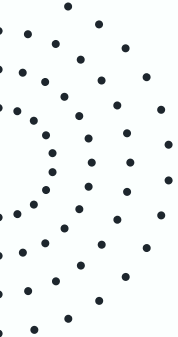
Advanced terrain and elevation mapping capabilities

Industry Adaptation

Specialized for heavy-duty vehicles in challenging terrain

Proprietary Technology

Patented solutions for both electric and hybrid vehicles



03

Market Analysis





Key Mega Trends & Opportunities

North American Heavy-Duty EV Market

Effect

Companies adopting
hybrid/EV fleets.

Opportunity

Demand for
cost-efficiency
solutions.

Electric Mining Fleets

Effect

Lateral market
expansion.

Opportunity

R&D and partnership
potential.

Electric Waste Collection Trucks

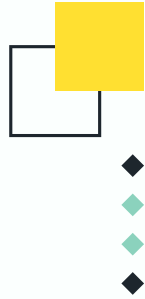
Effect

Lateral market
expansion.

Opportunity

R&D and partnership
potential.

Potential Market Size



Market Segment	TAM	SAM	SOM
Heavy-Duty EV Market	\$1.6B	\$160M	\$16M
Electric Mining Fleets	\$627.6M	\$62.76M	\$627K
Waste Collection Trucks	\$210M	\$21M	\$210K
TOTAL	~\$2.1B	~\$244M	~\$17M

Sales & Profit Projections



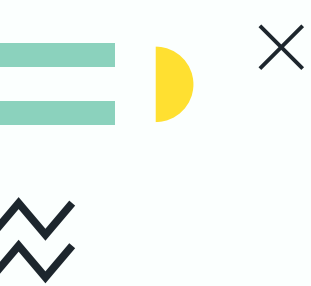
Year	% Market Capture	Net Sales	Est. Profit
2030 (Y1)	1%	\$168K	\$8.4K
2031 (Y2)	3%	\$504K	\$50.4K
2032 (Y3)	5%	\$840K	\$126K
2034 (Y5)	10%	\$1.68M	\$420K



04

Commercialization





Target Market Segment

Beachhead

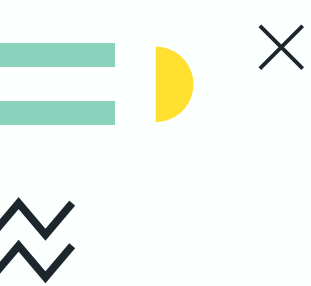
Focus initial efforts on stop-dense fleet operations like ports, utilities, airports, and municipalities where regen braking is still effective.

Reasoning

These sectors face regulatory pressure and operate vehicles with repetitive, short-range, high-frequency braking patterns ideal for Mauka's tools.

Secondary Markets

Long-term expansion includes logging, mining, construction, and urban delivery, where energy-optimized routing can still create operational value.



Business Model Options

B2B SaaS

Primary revenue stream should be a tiered SaaS subscription model with access to cloud tools or APIs.

OEM

A secondary channel is embedding Mauka's software into EV OEM onboard systems through strategic partnerships.

Consulting

Offer consulting services for large clients needing integration, route mapping, and optimization support.



GTM Strategy



Demonstration and Pilots

Launch 2-3 pilot projects in key sectors like ports and utilities to validate savings with real-world data.

2025-26

Commercial Rollout

Deploy cloud-based platform with onboarding, training, and free trials to drive initial adoption.

2026-27

Scaling Strategy

Expand through OEM and telematics partnerships, while entering Canadian and European markets.

2027-28



Partnership and Funding Strategy

Relationships

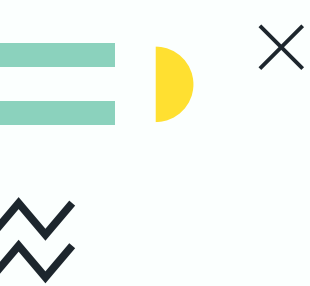
Pursue deeper ties with OEMs, utilities, port authorities, and municipal agencies as co-development and client partners.

Grants

Seek funding through DOE grants, SBIR programs, and cleantech VC firms that value GHG impact metrics.

OSU

Use academic partnerships (e.g. OSU) to publish case studies and validate performance for credibility in sales.



Risks and Mitigation

Competitor Entry

Competitors like may enter the space, but Mauka's patented use of regen braking and negative edge weights is a key differentiator.

Skepticism

Client skepticism is expected. Pilot-based case studies should be used to demonstrate ROI and validate value.

Sales Cap

Limited sales capacity may hinder early growth. Partnering with consultancies or accelerators can offset this while hiring a go-to-market team.

Mauka Energy Milestone Chart

