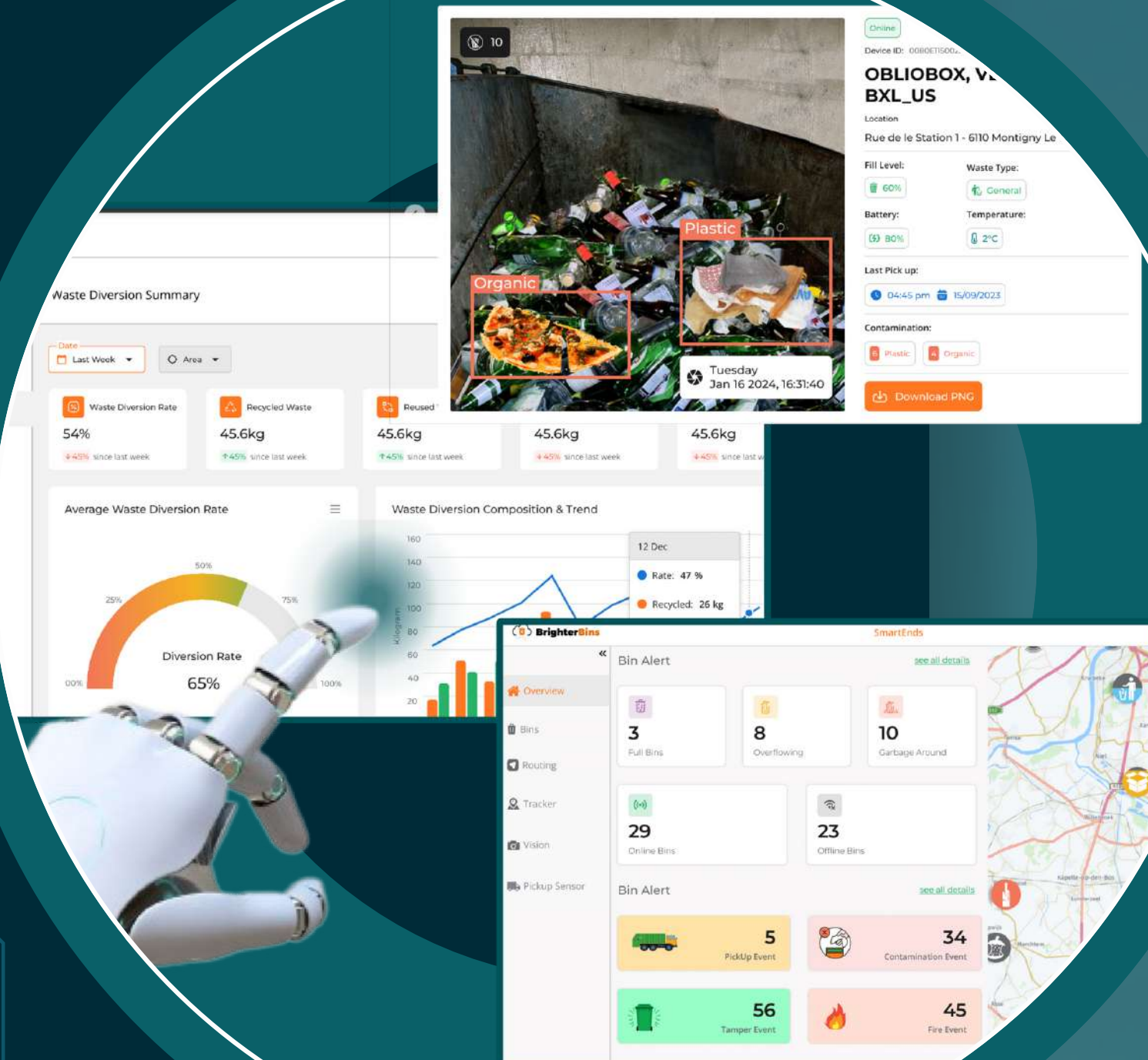




Transforming Waste Management with AI-Driven SaaS Solutions



noman@smartends.com

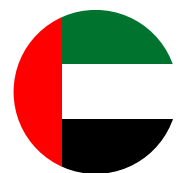
WHO WE ARE

- **Real-Time Insights & Data Optimization:** From bin to backend.
- **End-to-End Coverage:** Waste generation, collection, classification, and recycling.
- **AI-Powered Monitoring Platform:** Fill levels, contamination & material types.
- **Smart Tracking:** Real-time location, alerts, and asset visibility.
- **Sustainability & ESG Reporting:** Drive impact & compliance with actionable data.

Office Locations



BELGIUM



DUBAI

Manufacturing Locations



VIETNAM



CHINA

R&D Centers



PAKISTAN



INDIA



Innovating Since
2017



AWARDS



- **2023:** DELOITTE EMEA FAST 500 AWARD.
- **2022:** DELOITTE FAST 50 AWARD.
- **2021:** SCALE UP OF THE YEAR AWARD.
- **2020:** DELOITTE RISING STAR AWARD.

OUR CUSTOMERS



100K+

Devices

150+

B2B Customers



Washington (USA), Wisconsin, Toronto, Westminster, Wolverhampton, Edinburgh, Dubai, Riyadh, Stockholm, Taipei, Singapore, Sydney, Lisbon, Madrid, Paris, London

OUR CUSTOMERS

EDINBURGH THE CITY OF EDINBURGH COUNCIL	suez
TELUS	quatra
monmouthshire sir fynwy	Cloud Clarity
Fife COUNCIL	
Cyngor Abertawe Swansea Council	IEG
TORONTO	
Google	seenons
Alliot Technologies	ALSO
Egbert Taylor	
streetspace	machinestalk
CITY OF WOLVERHAMPTON COUNCIL	Sheffield City Council
connexin	
قطر كool QATAR COOL	smarttve
PAPREC	mangostone
etisalat and	WAVsmart
IANIC	invitech
وزارة البلديات والإسكان Ministry of Municipalities and Housing	olleco
حكومة دبي GOVERNMENT OF DUBAI	Biomotorai Waste2Biofuels

INEFFICIENT WASTE MANAGEMENT

Increases Costs & Emissions



CURRENT ISSUES:



**79% waste is lost in landfills
due to contaminations.**



**Too high collection costs
- €1200/bin/year.**



**1.6 billion tonnes of CO2
emissions/year globally.**

IMPACT:

These problems lead to **30% - 50%** increased operational costs and environmental damage.

(Source: Frost & Sullivan)



CUTTING-EDGE SOLUTIONS

Transform Waste Management & Recycling



1



BrighterBins

Optimal route planning based on sensor data.

2



VISNLINE

Contamination Detection & Image/Video Analysis



1

BRIGHTERBINS SOLUTIONS

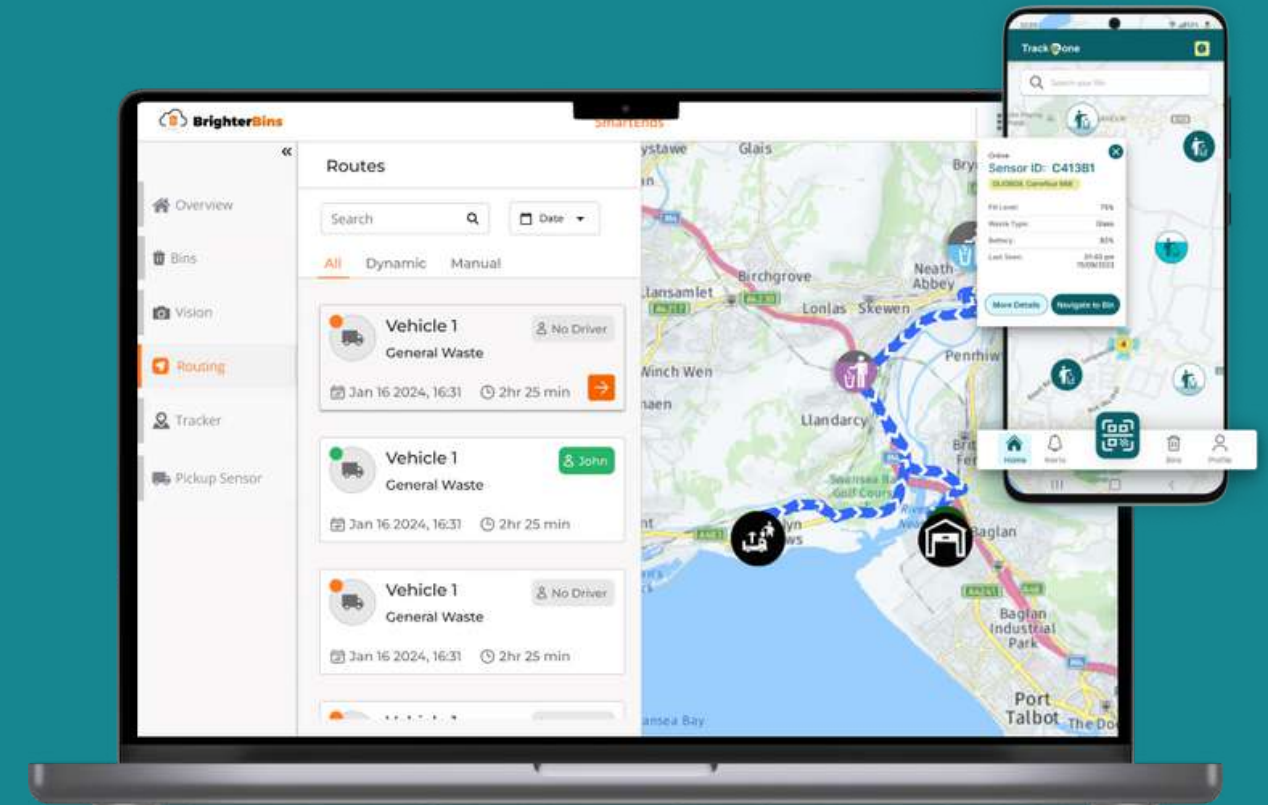
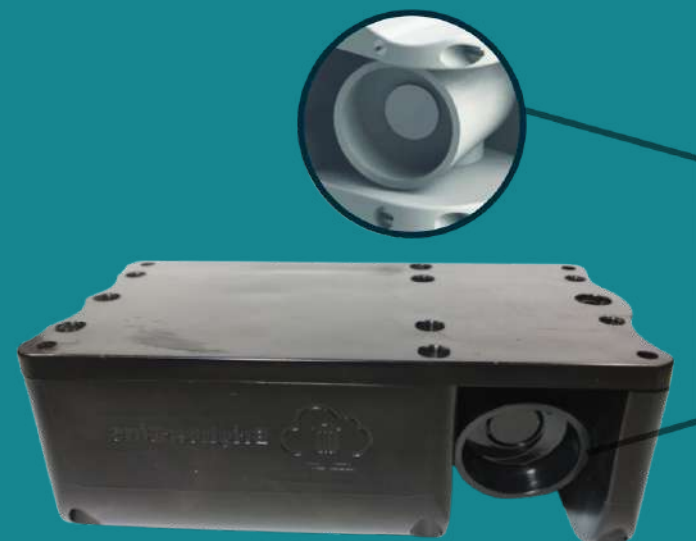
100K+ bins equipped in the field - Ready to Scale.

Fully Developed:

Focuses on route optimization and fill level sensors.

Ready for Mass Production:

No additional development needed.



BRIGHTERBINS TECHNICAL SPECIFICATION



DIMENSIONS

130mm x 70mm x 53mm

VARIANTS

Ultrasonic | TOF

DURABILITY

IP67 Casing
Operational -25 °C to +60 °C

POWER

8 Years Battery life
Non-rechargeable lithium battery

COMMUNICATION

LoRaWAN | BLE | SigFox | NB-IOT |
LTE-CATM1



EASY INSTALLATION & CONFIGURATION



Fits all types & sizes of Bins,
Manholes and Cylinders



Easy Two Step Installation



Easy Configuration and
Provisioning



WHY CHOOSE BRIGHTERBINS?



Operational Savings:

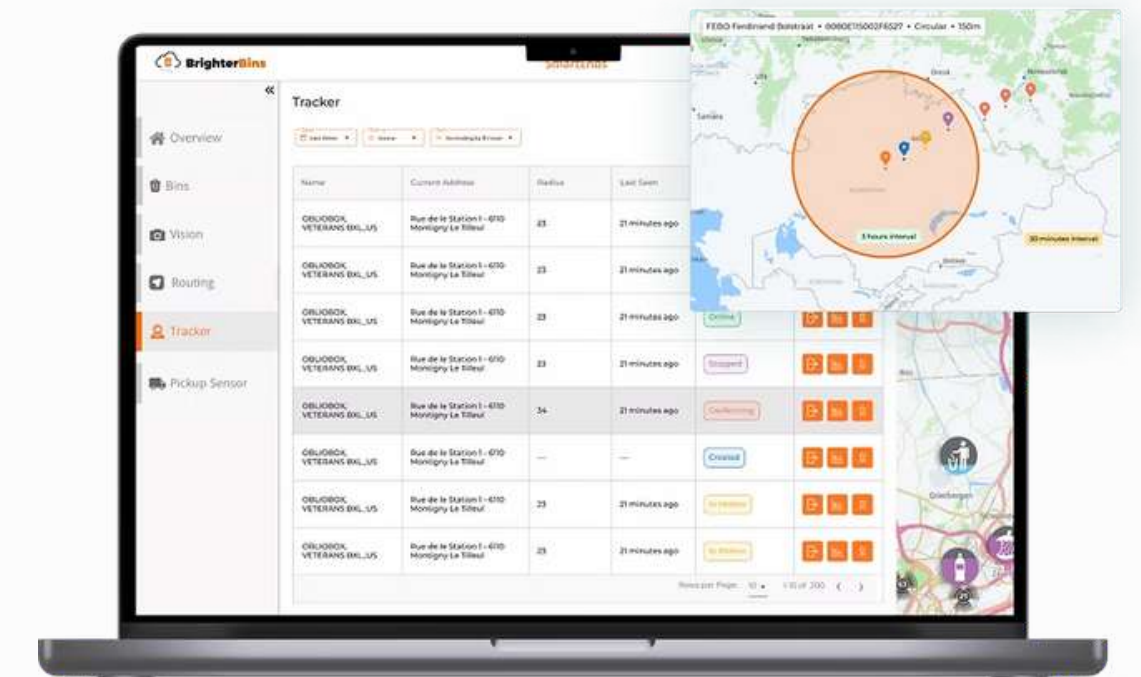
- Lower fuel use and manpower hours
- Reduce bin overflows, cleaner streets
- Intuitive dashboard & mobile app for easy control

User-Friendly & Scalable:

- Simple to use for teams and drivers
- Scalable for cities, businesses, and industries
- Seamless integration with existing systems

Sustainability Leadership:

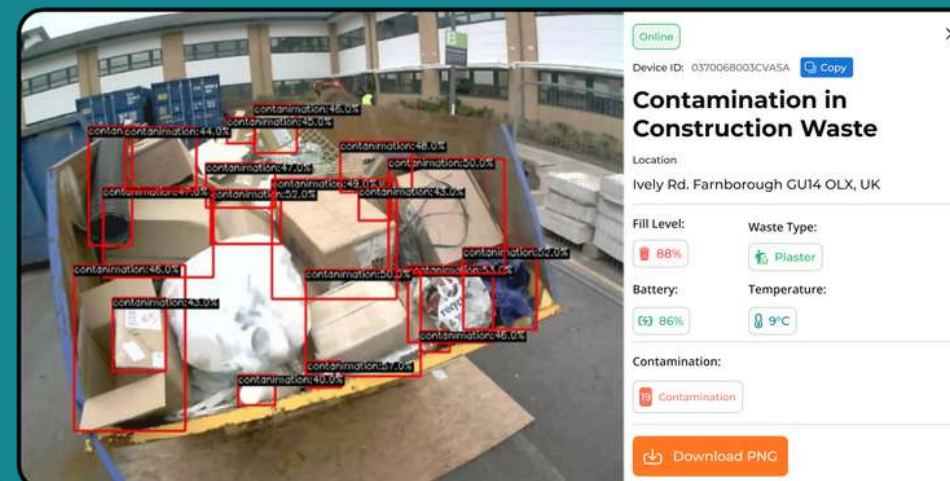
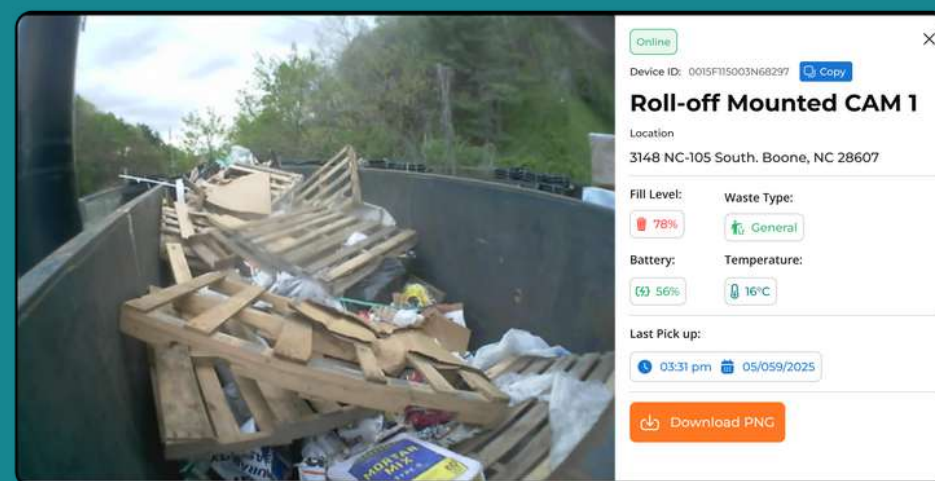
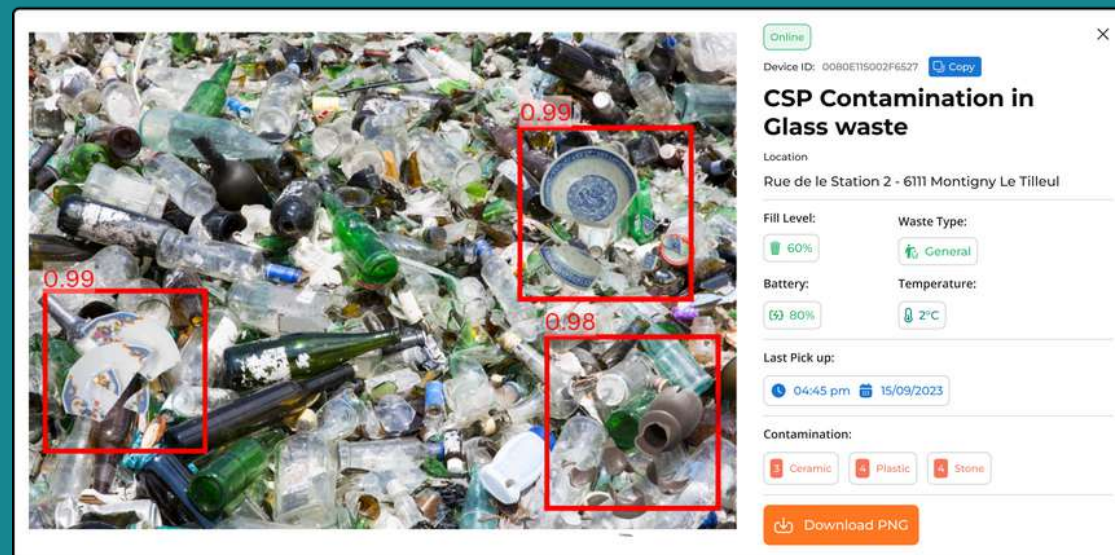
- Achieve measurable ESG goals
- Support zero-waste and carbon reduction targets
- Position your brand as an environmental leader



2

VISNLINE SOLUTIONS

AI-Powered Image Analysis Technology



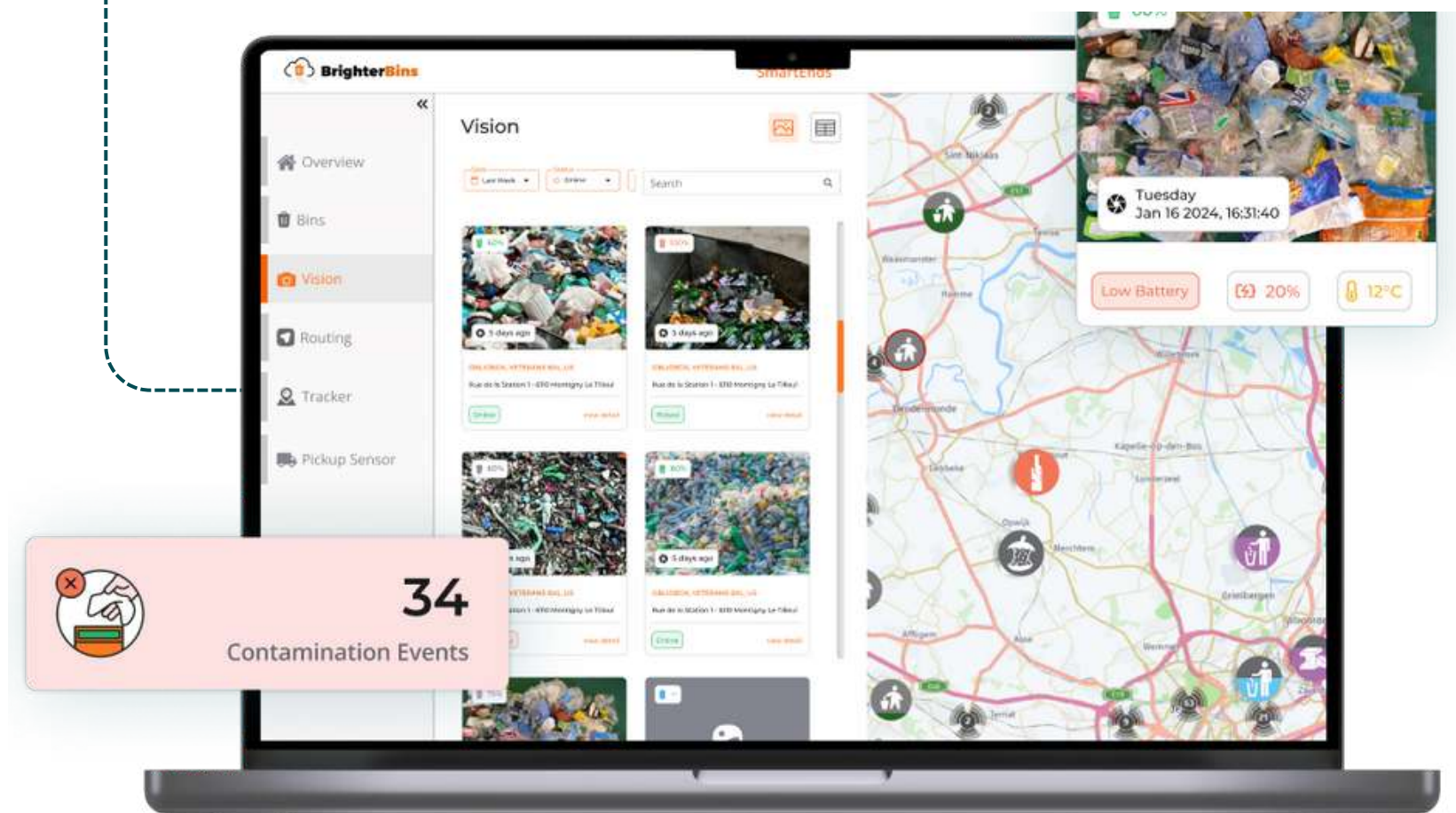
SMARTENDS VISNLINE



Advanced AI-Powered Waste Monitoring

AI- Powered Cameras

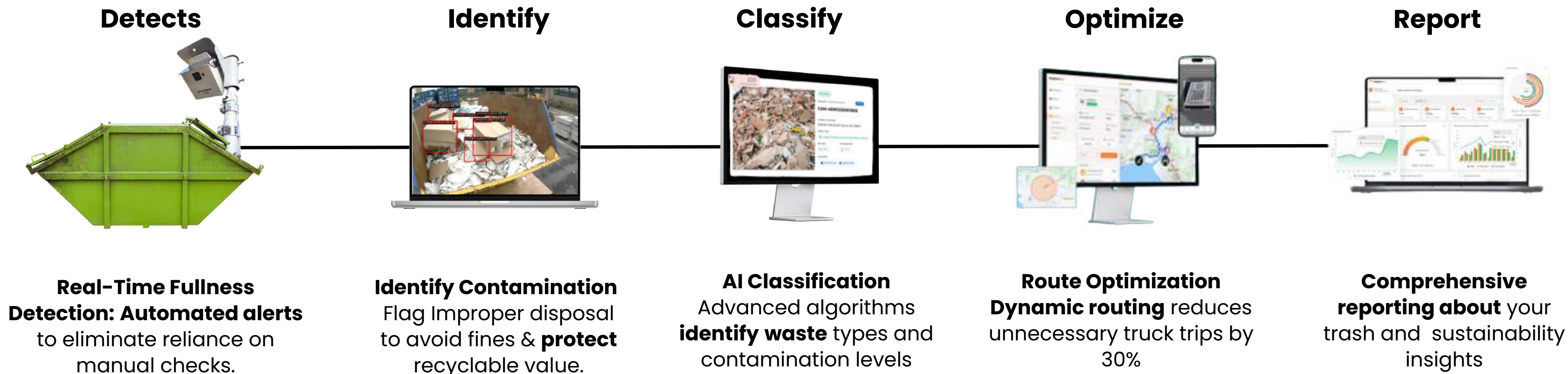
- Detects fill level, contamination, and waste type using image & video analysis
- Provides real-time monitoring with data updates every minute
- Delivers 95% accuracy in contamination detection
- Tracks container location with built-in GPS
- Sends real-time alerts for pickups and contamination
- Fully integrated with route optimization for smarter collection



VALUE SYSTEM



Every container becomes a smart asset through our 5-step AI process



PROVEN RESULTS

25%

increase in recycling revenue

40%

reduction in contamination issues

30%

fewer unnecessary pickups

PRODUCT DIFFERENTIATION



The most integrated Vision AI tool –One product many applications

CONTAINERS:

Waste Room Monitoring in
Corporate offices &
Campuses



OUR CLIENTS:



BENEFITS:

**Fill Level + Pick Up Alert +
Waste Labelling**

Stable Industrial containers
Pole-mounted AI



WORKING FOR THE FUTURE

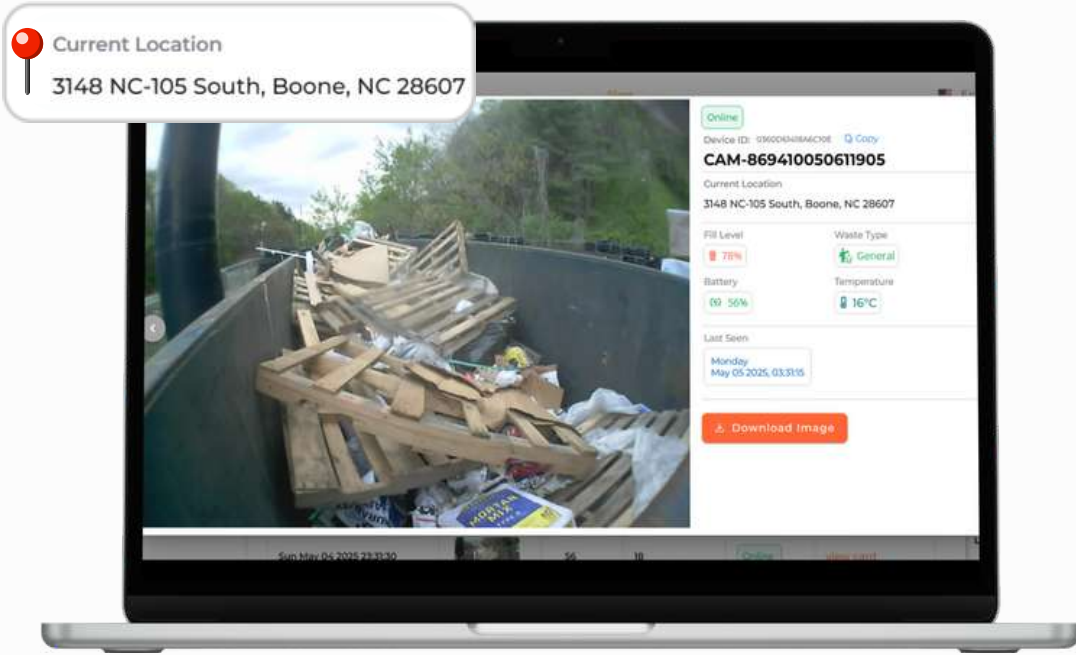
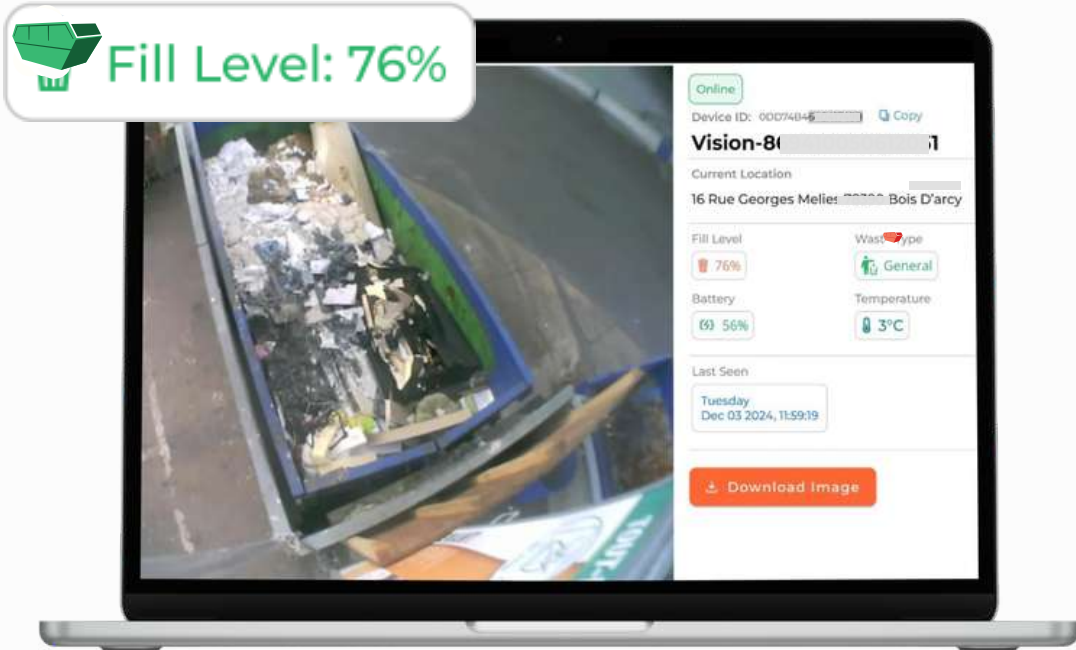
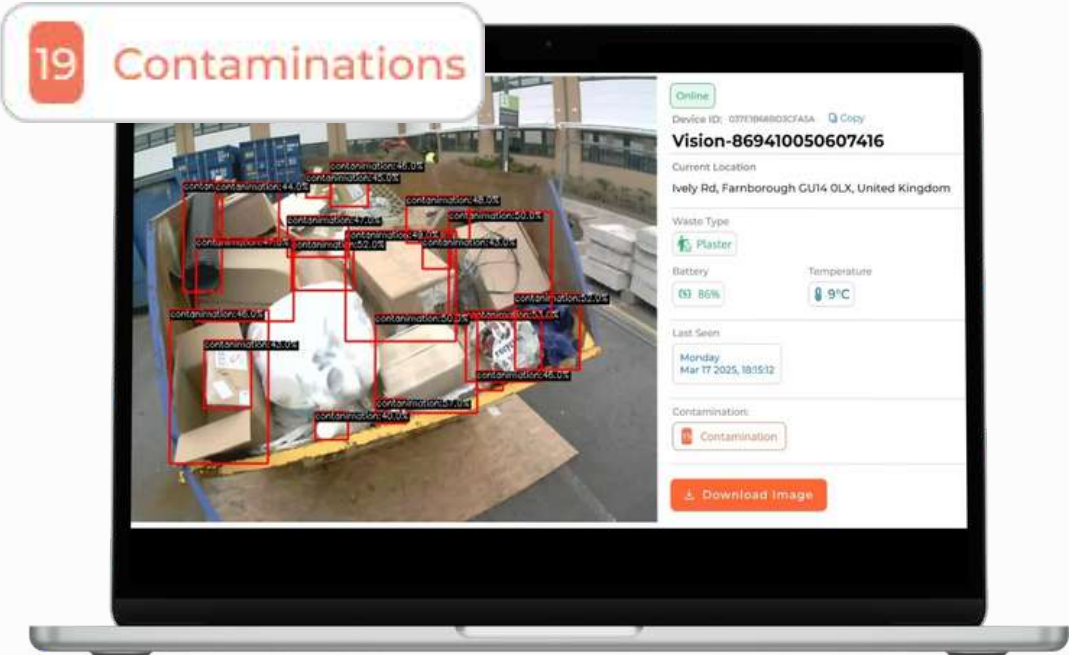
**Fill Level + Pick Up Alert +
Waste Labelling**

Moving Truck
Container-mounted AI



**Fill Level + Pick Up Alert + Invoice +
GPS data + Waste Labelling**

REAL-TIME SKIP MONITORING



Increased Purity:

- High purity in recycled materials.
- Higher quality outputs.



Cost Savings:

- **30%** reduction in collection costs.
- Reduction in penalties due to contamination



Real-Time GPS Tracking

- Real-time GPS tracking for container visibility
- Enables quick response to location changes

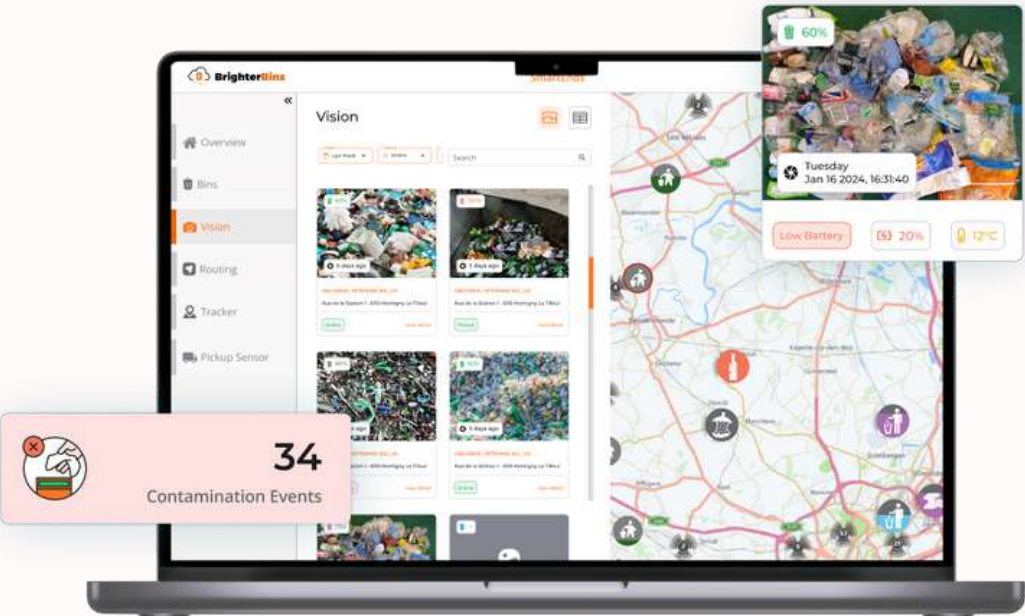


VISION AI ASSISTED C&D WASTE RECYCLING



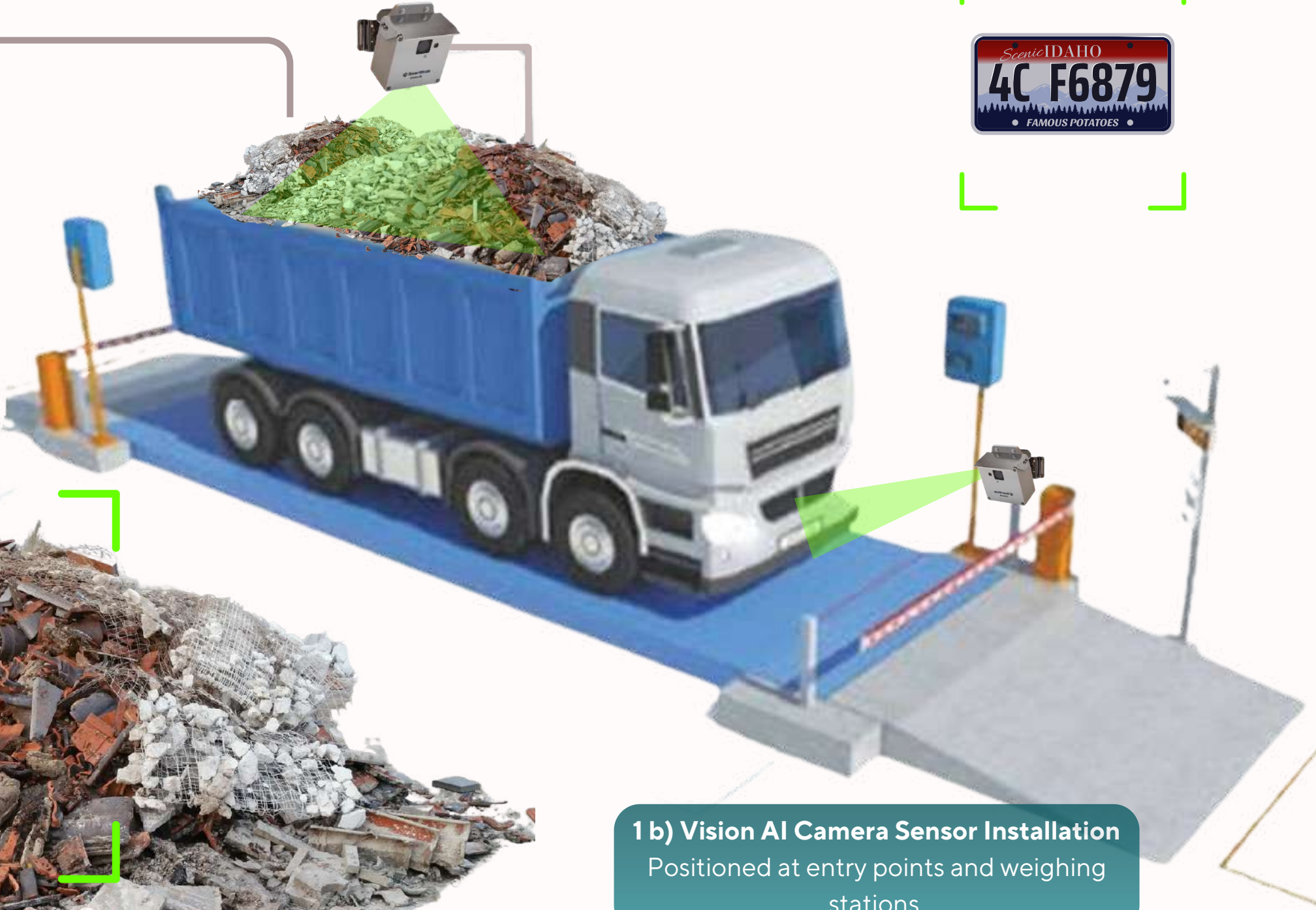
3) Mobile App Integration

Automated alerts enable quick decisions on contamination and collection.



1 a) Vision AI Camera Sensor Installation

Captures waste type and vehicle data in real-time.



2) Real-Time Data Transmission

AI analyzes images and sends results to the ERP system.

1 b) Vision AI Camera Sensor Installation

Positioned at entry points and weighing stations.

VISION AI TRUCK CAMERA SYSTEM



Pilot & Validation:

- Deployed with select US partners
- Initial testing in real-world bin conditions

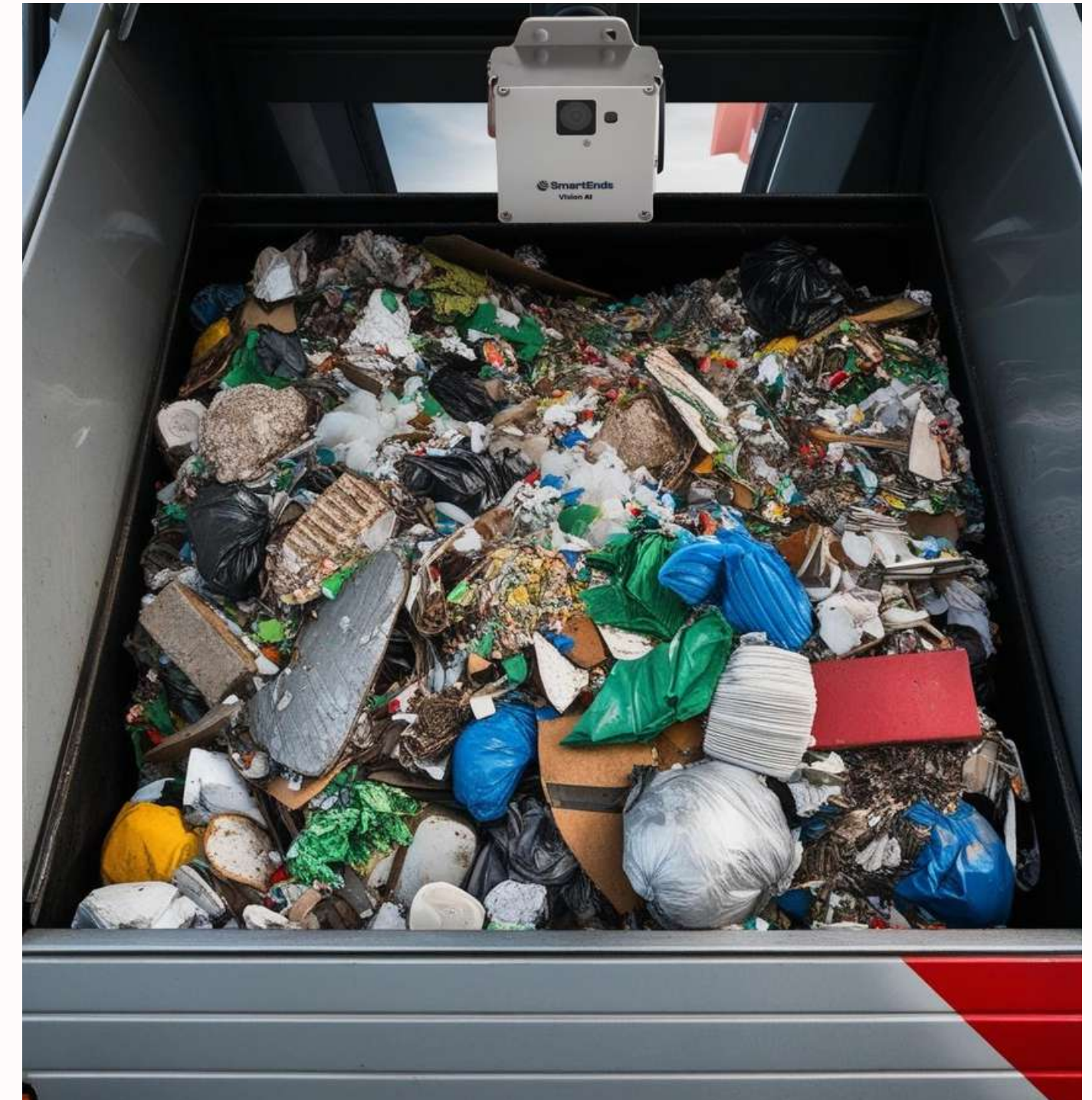
Features:

Powered by BrighterBins Sensors

- Advanced location tracking
- Improved in-bin lighting for image accuracy
- Enhanced AI for detecting waste materials & contamination

Recycling Impact:

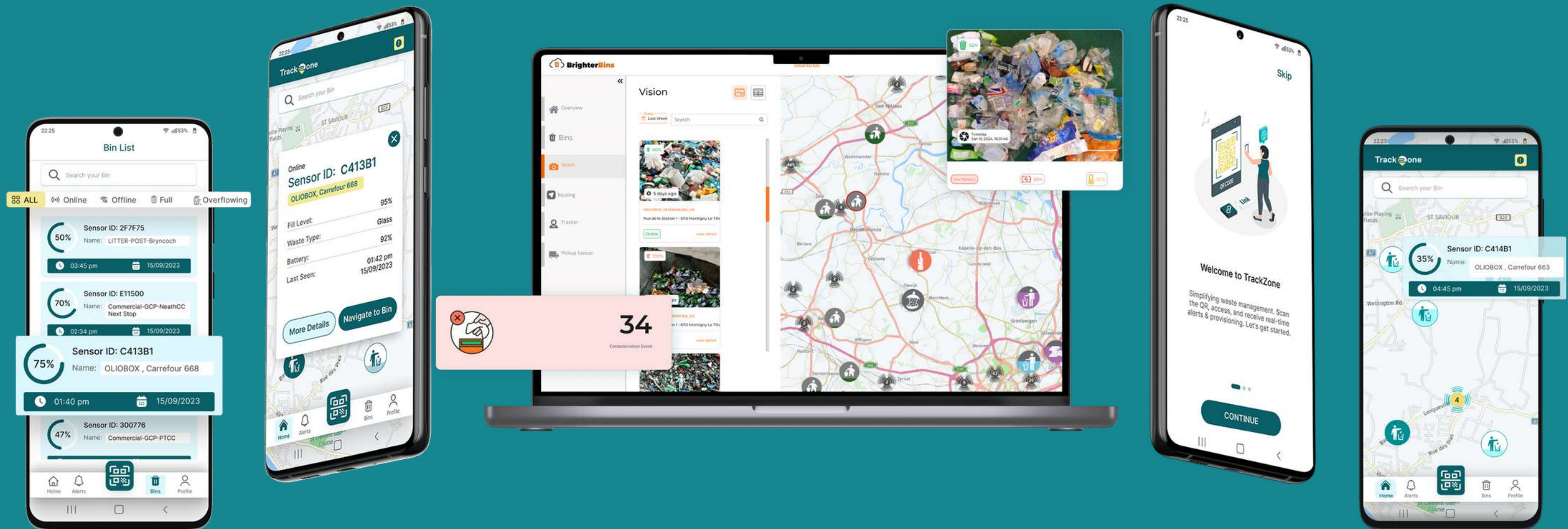
- Higher purity in collected recyclables
- Fewer missed or wasted trips
- Reduced contamination → Better material recovery
- Drives smarter circular economy at scale





TRACKZONE SOFTWARE PLATFORM & APP

From Data to Action – Smarter Waste Management.

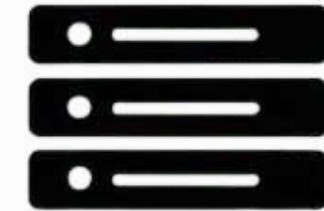


TRACKZONE SOFTWARE & APP

(CLOUD & ON-PREMISE)



CLOUD



ON PREMISE

Platform Overview:

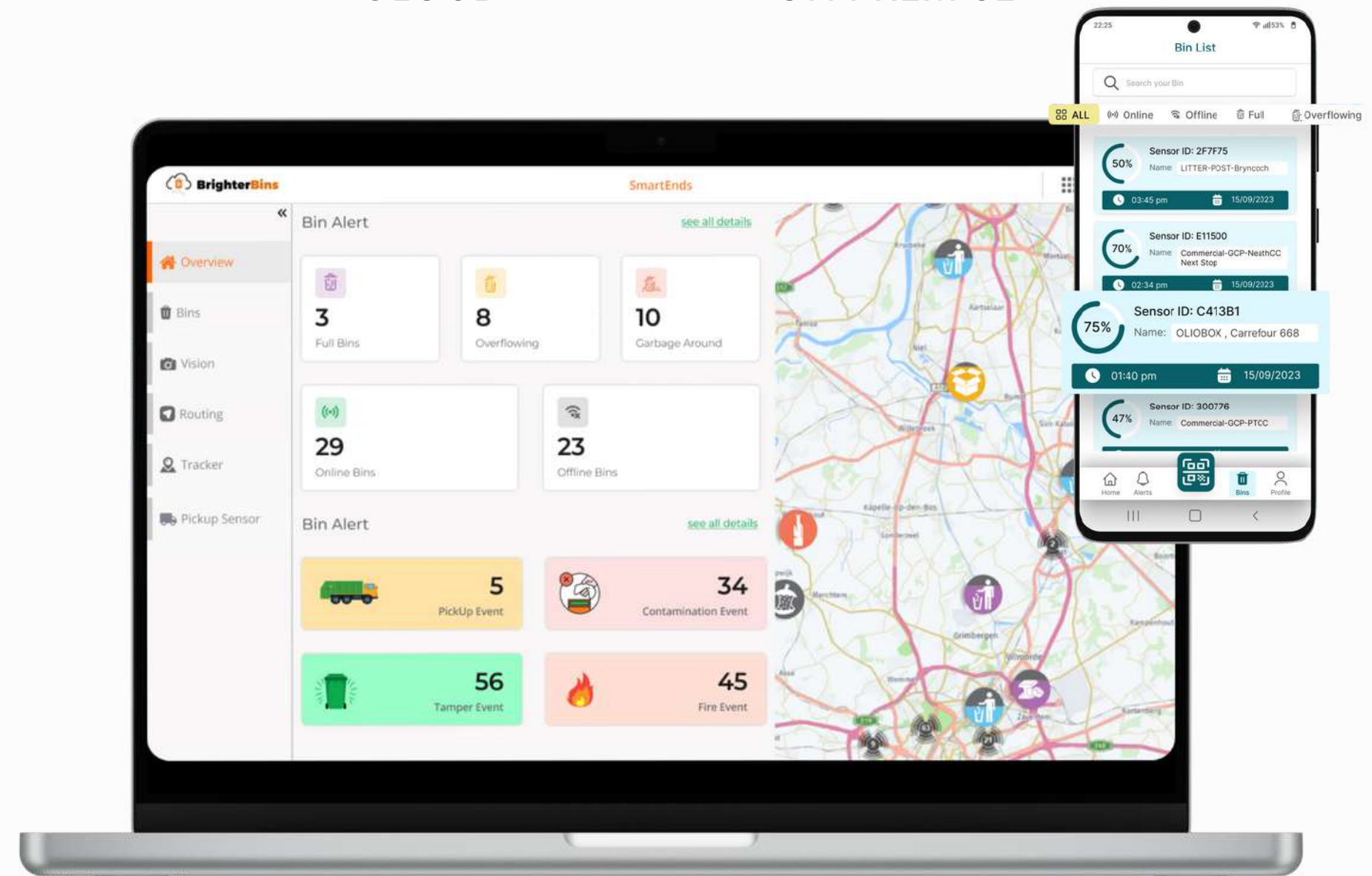
A smart IOT Applications management platform

Purpose:

Support of a wide variety of focused IOT Applications while enabling sustainable practices.

Key Deliverables:

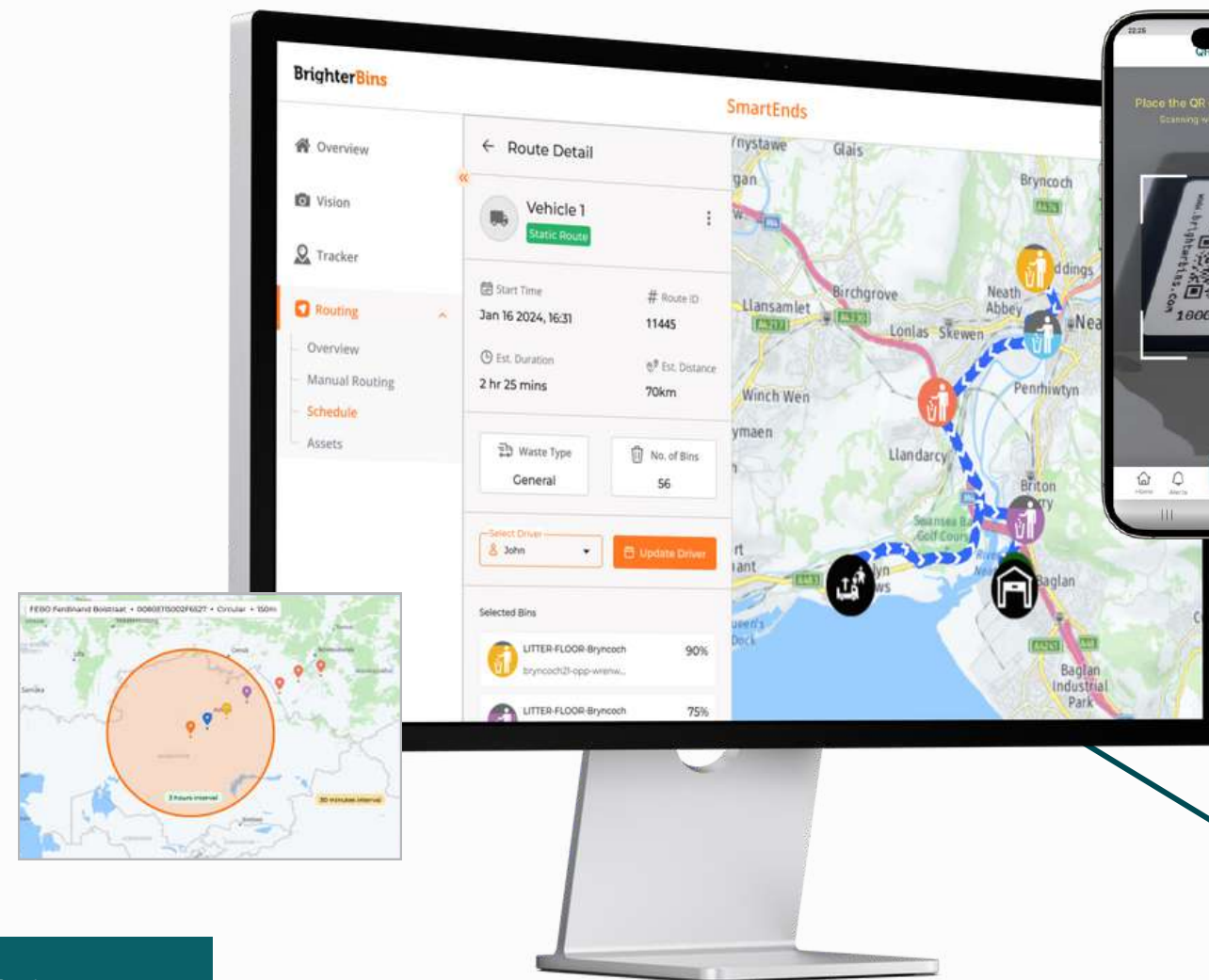
- Real time monitoring and alerts/notifications
- Automated route optimization.
- ESG tracking and reporting tools.



TRACKZONE ADVANCED FEATURES



BrighterBins combines IoT sensors, cloud analytics, and mobile connectivity to create a smarter, more efficient waste collection system.



Route Optimization:

Static Route | Dynamic Route based on real-time bin data

Real-Time Monitoring:

Fill levels of bins | Temperature
Battery Level | Real time GPS Location

Alerts & Notifications:

Fill Level Notification | Fire Alert
Bin Tampering Alert | Pickup Alert

Data Analytics:

Operational KPIs | Historical Performance Trends

Cost Reduction:

Save up to **45%** on logistics and collection costs

Why It Matter

Reducing CO₂ emissions, minimizing overflows, and enhancing ESG compliance.

REAL-TIME MONITORING & ALERTS



Get real-time data analytics & alerts to make more efficient and informed decisions.

Real-Time Monitoring:

- Fill Levels
- Location Monitoring
- Temperature level
- Battery Level

Alerts & Notifications:

- Fill Level Notification
- Fire Alert
- Bin Tampering Alert
- Pickup Alert



TRACKZONE MOBILE APPLICATION



Driver & Field Team Features:

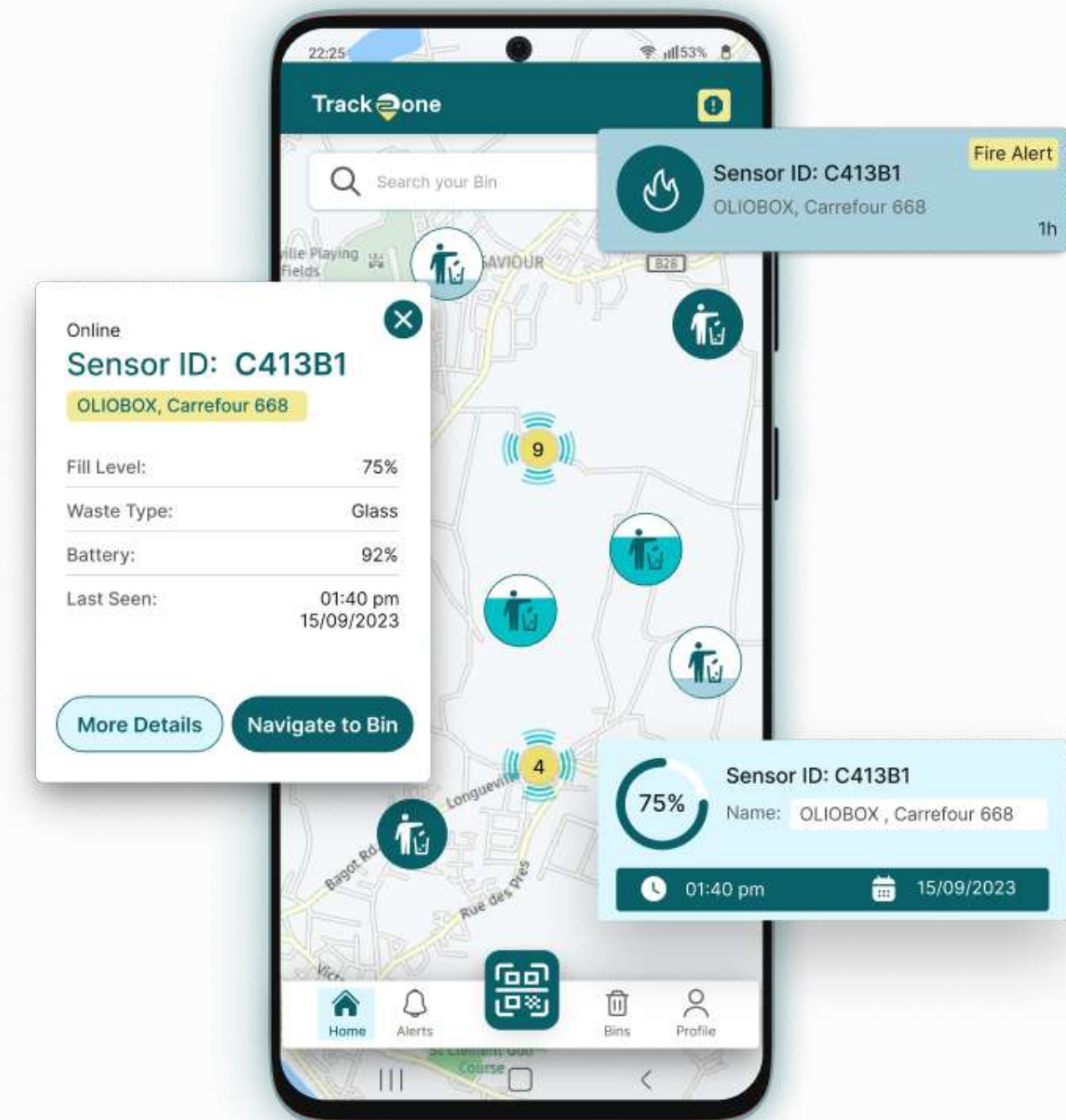
- Optimized route dispatch directly to drivers
- Real-time bin scanning and provisioning via QR codes
- Navigation & task updates for efficient execution
- Instant alerts: Fire, fill, pickup, tampering
- Report issues directly from the field
- Continuous sync with backend system

Manager Benefits:

- Track all driver activity in real-time
- Push updates, changes, or new pickups instantly
- Monitor KPIs for cleaner, faster decision-making

User-Friendly & Scalable:

- Designed for cities, commercial operators, and industrial waste managers.



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