

Autonomous Litter Collection — The Next Step for AI City Vision

01 — THE CHALLENGE

BEEAH has set the benchmark for smart waste management in the MENA region — from the AI City Vision system on collection vehicles to the world's first fully AI-driven headquarters. BEEAH Tandeef operates city-scale cleaning across Sharjah and beyond. Yet street-level litter collection remains the last major cleaning operation untouched by automation. Across the UAE, thousands of workers perform litter picking on foot in extreme heat — covering parks, waterfronts, and public plazas manually. This gap is exactly what CleanWalker was built to close.

02 — OUR SOLUTION

CleanWalker is the world's first commercial quadrupedal litter-collecting robot, purpose-built for Gulf conditions:

- **AI vision** trained on 25,000+ litter images detecting 20+ categories autonomously
- **Operates in temperatures up to 45°C** with multi-shift capability (20+ hours/day)
- **Quadrupedal locomotion** navigates uneven terrain, curbs, and mixed surfaces
- **Fleet management dashboard** with real-time monitoring and AI City Vision integration potential

No new infrastructure required — collected waste integrates with existing collection routes.

03 — PILOT PROPOSAL — 10 UNITS, 6 MONTHS

Deployment zones: Al Majaz Waterfront, Al Qasba Canal, and Sharjah Corniche

KPI	TARGET
Litter items collected per unit/day	Tracked & reported weekly
Coverage per shift	2,000-4,000 m ² /hr per unit
System uptime in Gulf conditions	>90%
Integration with BEEAH collection routes	Coordinated handoff to Tandeef teams
Public engagement & media coverage	Measured across social + press

04 — VALUE PROPOSITION

1.5-2.5

FTE OFFSET PER UNIT

40-60%

COST REDUCTION AT SCALE

RaaS

ROBOT-AS-A-SERVICE MODEL

Zero

HARDWARE OWNERSHIP REQUIRED

A Sharjah pilot positions BEEAH as the first operator of a commercial quadrupedal litter robot in the Middle East — a global first with immediate media impact ahead of GITEX and smart city showcases.

We'd welcome a 20-minute call to discuss pilot scope, AI City Vision integration, and deployment timeline.
Pilot details: cleanwalkerrobotics.com/pilot

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