

# KUO · Air & Environment

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## KUO

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**Country:** ?? Colombia · Bogotá **Category:** Air & Environment **CT Taxonomy:** CT-WA-003 — Recycling & Materials Recovery **Impact Areas:** Circular Economy **Stage:** Prototype **Team Size:** 3.0 **Funded:** False

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## Elevator Pitch

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SIGR is an AI-powered smart waste bin that automatically classifies recyclable, organic, and non-recyclable waste using computer vision, reducing misclassification by 30%+ and enabling circular economy models in urban institutions.

## Climate Problem

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Only 43% of Bogotá's 4M annual waste tons are recycled, though 70%+ is recyclable. Poor source separation is the main cause. SIGR automates classification using AI, directly reducing landfill overflow and greenhouse gas emissions.

## Solution

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SIGR combines computer vision and embedded AI to automatically identify and sort waste into 4 categories in real time, including a 'possibly recyclable' compartment. It reduces human error, improves material purity, and generates waste analytics data.

## Revenue Model

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Revenue from device sales (\$3-8M COP/unit), monthly SaaS dashboard subscriptions (\$200-500K COP), and commercialization of high-purity classified materials through partnerships with certified recycling companies.

## Target Market

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Universities, schools, shopping centers, and public institutions in Colombian and Latin American cities that generate high waste volumes and need efficient, tech-driven waste management solutions to meet sustainability goals.

## Social Impact

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Indigenous Peoples, People Living in Extreme Poverty, Women

## Demand Evidence

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Interviews with facility managers at universities and malls confirm willingness to pay for automated waste solutions. Colombia's Law 2184/2019 mandates source separation, creating regulatory pressure that drives institutional demand for SIGR.

## Competitors

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Competitors include ZenRobotics, Greyparrot, and local manual sorting services. Unlike high cost foreign solutions, SIGR is affordable, modular and built for Latin American contexts, with no direct AI powered competitor currently operating in Latin America

## Founder Expertise

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Three 7th-semester Computer Science students and AI research group directors at Universidad El Bosque. Combined expertise in AI development, project management, and environmental impact. Built and validated SIGR prototype through active academic research.

## External Support

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SIGR was developed at Universidad El Bosque (Bogotá), with academic validation, institutional backing, and an active application for \$2.000 million COP in research funding from Colombia's Ministry of Science and Technology (Minciencias, Conv. 976).

## Team

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CEO & Project Manager: strategy and operations. CTO: AI model development and hardware integration. CCO: environmental impact assessment and community engagement. All three co-lead technical research and prototype validation at the university lab.

# Founder

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Samuel Hoyos

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Revisión #1

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