

IUCEE Student Chapter Competitions 2026 - Project Proposal

Project Title:

NuovoBag: Reducing Single-Use Plastic Bags in Street Vegetable Markets.

IUCEE Chapter & Team Details:

Chapter: Anurag University IUCEE Student Chapter (AUISC)

Team Name: Nuovo

Team Members:

Boda Anji Reddy	Mechanical Engineering	4 th Year
Police Sreeja	ECE	4 th Year
Nalleboina Prasanna Lakshmi	Data Science	3 rd Year

Faculty Mentor: Dr. D.Narendhar Singh, Associate professor ECE, Anurag University. **Gmail:** narendarsinghece@anurag.edu.in

Selected SDG Targets:

SDG 12 – Responsible Consumption and Production

Target: By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.

SDG 14 – Life Below Water

Target: Reduce plastic waste leakage into water bodies and protect marine life.

Problem Definition:

Hyderabad produces ~325,000 kg of waste daily, of which 67,000 kg is plastic waste. Single-use plastic carry bags contribute nearly 20% of this waste. Vegetable vendors use these bags because they are cheap and convenient. However, they cause significant environmental pollution, microplastics, and health hazards.

Cycle of single use plastic bag

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Proposed Solution – NuovoBag:

NuovoBag aims to reduce single-use plastic bag use by at least 40% by 2030 in Hyderabad's vegetable markets.

How it works:

- Partner with existing bio-compostable bag manufacturers to supply affordable alternatives.
- Fund production through brand sponsorship and CSR advertising printed on bags.
- Vendors receive bags at the same price as plastic bags.
- Bags act as moving billboards, creating 20,000–30,000 brand impressions per vendor per month.
- In the long term, establish an in-house manufacturing unit for direct local production and jobs.

Opportunity

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How the Solution Works:

Inputs: Funding, sponsorship, manufacturing partnerships, vendor onboarding.

Activities: Partner with brands for ads, produce eco-friendly bags, distribute to vendors, monitor impact.

Outputs: Reduction in plastic bags, increased use of biodegradable bags, vendor adoption, sponsorship revenue.

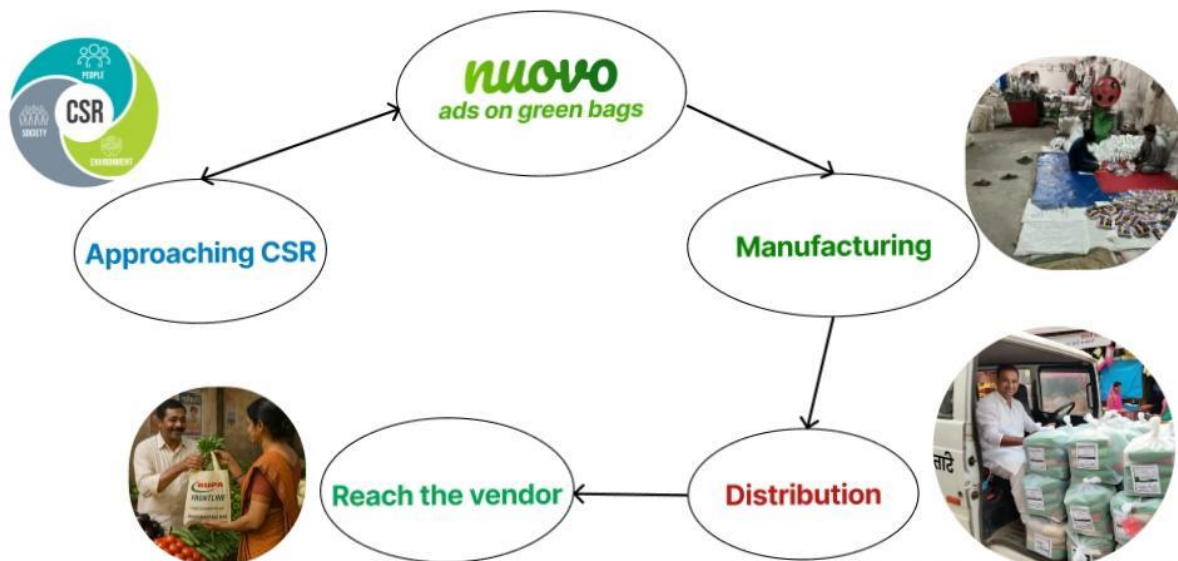
Outcomes:

1. **Short-Term:** Awareness and initial reduction in pilot markets.
2. **Medium-Term:** Achieve 40% reduction by 2030.
3. **Long-Term:** Scalable, sustainable model for other cities.

Proof of Concept:

- **Vendor Validation:** 96% of local vegetable vendors surveyed are willing to switch to bio-compostable bags if the cost remains the same as plastic bags.(Source: ICLEI South Asia 2019).
- **Consumer Validation:** An internal survey of families and buyers shows 90% support for this switch.
- **Manufacturer Commitment:** We are already spoken with certified bio-compostable bag manufacturers, who are ready to supply the required bags as soon as the initial advance payment is made.
- **Pilot Ready:** The pilot plan aims for an initial batch of 5,000–10,000 bags to test adoption and gather feedback.
- **Revenue Model:** Each bag generates 20,000–30,000 monthly brand impressions per vendor, validating the sponsorship-based funding model.

Go - To Market Strategy



Project Timeline:

Phase	Timeline	Activities
Pilot	0-3 Months	Approaching brands, vendor onboarding, partnerships with manufactures, distribution.
Feedback & Iterate	2-3 Months	Collect vendor and customer feedback. Expand sponsorship deals. Optimize supply chain with manufacturers.
Scale Up	6-24 Months	Extend the project to more markets in Hyderabad. Sign more sponsors. Increase monthly bag volume. Build strong vendor network.

Our Plan

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Alignment with IUCEE Mission:

Supports sustainability, resource efficiency, and eco-friendly practices; fosters collaboration and innovation; creates practical impact; ready to demonstrate at ICTIEE 2026 IASF.

Support Requested:

Mentorship: Guidance on optimizing the sponsorship/ad model, finalizing vendor onboarding strategies, and scaling the distribution network.

Prototype Showcase: Guidance prepare and present a working prototype at IASF ICTIEE 2026.

We believe NuovoBag directly addresses SDG 12 and SDG 14 with measurable, scalable impact and look forward to IUCEE's support.

Team Lead Contact:

Boda Anji Reddy - +91 8367463908

23eg503a36@anurag.edu.in