Implementing Partner







Case Study

for Plastic Innovation Challenge

Bioreform

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Startup Summary



Date of Incorporation Apr 16, 2021



Headquarters Hyderabad, India

The Founder



Mohammed Azhar Mohiuddi, is a 24-year-old firstgeneration student entrepreneur, Civil Engineering graduate, and the Founder & CEO of BioReform Pvt Ltd. Combining his technical background with a passion for innovation, Azhar has successfully raised angel investment and aspires to be India's "Green Engineer" in the years ahead.

The Solution

BioReform addresses one of the most pressing global challenges: single-use plastic pollution. The company manufactures biodegradable and compostable bags, made from corn and biopolymers, which are not only ecofriendly but also affordable, functional, and scalable. These bags decompose within just 180 days, unlike conventional plastic bags, which take hundreds of years to break down. These bags not only degrade rapidly but also turn into compost that enriches the soil, contributing positively to the environment.

By providing affordable, durable, and renewable alternatives to plastic, BioReform is tackling a major environmental issue head-on. Their bags are 20-30% more affordable than alternatives like paper, cloth, non-woven, and jute bags, making them an accessible option for businesses looking to reduce their plastic consumption while maintaining cost-efficiency.



Introduction

BioReform manufactures 100% Eco-friendly Biodegradable and compostable GreenyBags made from corn and biopolymers which are 20-30% affordable than paper, cloth, non-woven & jute bags

Products/Services Provided

Biodegradable & compostable bags





BIOMEDICAL WASTE BAGS

GARBAGE BAGS

Value Proposition

BioReform's bags offer several unique advantages

Material Innovation: Unlike traditional paper and cloth bags, BioReform's bags are water-resistant, thermal durable, printable & brandable, leak proof and do not require additional plastic linings, making them a truly sustainable alternative.

Economic Viability: Costing 20-30% less than conventional paper and cloth bags, BioReform makes sustainability accessible to businesses and consumers without increasing financial burdens.

Scalability & Customization: The company customizes its biodegradable bags based on industry needs, with sizes ranging from small carry bags to industrial-grade waste disposal solutions.

Scalable Solution: With a global requirement of 150 million tons of alternative bags per year, BioReform's product is highly scalable to meet global demand.

Potential Use case for the Hospitality Sector

BioReform offers customized biodegradable and compostable bags tailored to these unique needs:

Food Packaging: Paper bags often fail due to their lack of water resistance, leading to spills and customer dissatisfaction. Many restaurants using paper bags face financial losses due to refunds issued by food delivery platforms for damaged packaging. BioReform's waterresistant biopolymer-based bags eliminate this issue while being cost-effective.

Trash Bags: Hotels and restaurants generate large quantities of waste, including food scraps, kitchen waste, and oils. BioReform provides leak-proof, durable trash bags capable of carrying up to 50 kg, ensuring proper waste containment while being compostable.

Storage Solutions: Food is stored in plastic bags inside refrigerators in many kitchens. BioReform's biodegradable food storage bags offer a sustainable replacement that is thermally durable and toxin-free.

Scalability and Customization: BioReform customizes bag sizes and capacities based on hospitality industry needs. For example, Taj Resorts Goa required largecapacity waste disposal bags, which BioReform successfully developed to carry up to 45-50 kg of waste per bag.

PLASTIC RAISED BY NATURE Congie Pi Zaitoon Al Soud Ň GreenyBags **Food Packaging Pouches** W-CUT Carry Bags with Branding

with Branding

D-CUT BAGS

Pilots

Project

• India

BioReform conducted a 1 month pilot with the hospitality industry in Goa, in collaboration with **Climate Collective and AIC-GIM**

Industry needs

- > The need to replace single-use plastic bags with biodegradable alternatives
- An urgent demand for eco-friendly and cost-effective solutions.
- Compliance with environmental regulations regarding plastic use.

Outcomes

- > Through collaborations with premium hospitality brands, such as Taj Resorts Goa and Mojigao Resort, BioReform has made the hospitality sector its primary consumer, accounting for 90% of its consumers
- > I initially, these hotels started with 10-15 kg of biodegradable bags per month. Over time, demand increased to 200 kg per month, demonstrating strong adoption and continued use beyond the pilot phase.
- > Secured key partnerships with Taj Resorts Goa and Mojigao Resort, both of which adopted GreenyBags for their operations.

Quantified climate and social impact

Plastic Bags Replaced

million in 8 Indian cities and 2 international cities within 3 years.

Waste Reduction

BioReform's compostable bags decompose in 180 days, reducing landfill waste.

Microplastic Prevention

BioReform bags biodegrade fully, preventing microplastic contamination.

Cost Savings

BioReform offers a durable, biodegradable alternative at a lower price than paper or cloth bags

Carbon Footprint

Reduced by using plant-based materials instead of petroleumbased plastics.

Support for India's Plastic-Free Mission

Aligns with government regulations for a singleuse plastic-free future

Long term goals and target

Scaling Operations: Expand production to meet growing demand for biodegradable packaging across industries.

Diversification: Expanding product range beyond bags to include biodegradable cutlery, films, and packaging materials.

Global Expansion: Explore contract manufacturing and international markets to enhance accessibility of eco-friendly alternatives.