



Case Study

for Plastic Innovation Challenge

Saltech

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Startup Summary



Date of Incorporation
June 20, 2018



Headquarters
Gandhinagar, Gujarat, India

The Founder



Aditya Shukla's journey began in 2017 after graduating with a degree in Mechanical Engineering. During an internship at a startup focused on agricultural farm mechanization, he was introduced to the challenges of waste

management while living in Ahmedabad. During daily commutes, he noticed the large waste mountain, Piranha, a massive dump site just 10 km from the city center. This, combined with the national conversation around waste management sparked by the Swachh Bharat Mission, inspired the idea of starting a business focused on resource recovery and waste valorization. Motivated by the growing interest in sustainable waste management and recycling technologies, Aditya initially started a small recycling project.

Team

Saltech team is comprised of

8 administrative staff members, and around **9 workers** in Production team. They have **3 women** in their team.

Introduction

Technology solution for recovering solid waste materials.

Products/Services Provided

High-performance composite materials for industrial based products, construction-based products, wood replacement products, plastic replacement products. Current products include construction materials like, paver blocks, pavement tiles, roof shingle, interlocking bricks, manhole cover, drainage covers, etc.



The Solution

Saltech offers polymer composite technology that turns waste materials like single-use plastics, construction and demolition debris, industrial mineral, aggregate, and ash wastes into sustainable polymer composite materials to form construction-based materials like pavement tiles, blocks, bricks, roof shingles, boards, etc.

Value Proposition

Innovating Products & Production: The solution helps to convert disposal costs for waste liabilities to profits & their recycled composite material combines the best properties of both concrete and plastics making it an ideal alternate building material.

Recovering Value: They extract maximum value out of post-consumer used mix / low-value packaging plastics (MLP, BOPP, PE, PS, PP, HM etc.) and industrial waste (Quarry Dust, Casting Sand, Fly/Bottom Ash, C & D) which has no afterlife use and disposal is the only option

Transforming Consumption: They provide novel climate positive composite material alternative to traditional concrete with high-performance properties at an affordable price. This helps to increase their portfolio sustainability by adopting green products.

Potential Use case for the Hospitality Sector

- Their solutions are highly relevant to the **hospitality sector, enabling eco-friendly infrastructure** with renewable energy integration. Sustainable construction products like **tiles and pavers** can enhance hotels, resorts, and public spaces, reducing their **carbon footprint** while offering aesthetic appeal. They have conducted installations across public infrastructure and universities, validating their effectiveness.
- Saltech is also looking at adding **sustainable furniture developed & designed using single use plastic waste** and other waste materials, which can be used in hospitality sectors.

Quantified climate and social impact

Waste Diverted

500+

metric tons, including 200+ tons of plastic.

CO₂ Mitigated

2,831

metric tons

Water Conserved

51,694

liters

Products Installed

210,000+

sq. ft. of composite materials.

Pilots

1

Royal Enfield

Marine Litter Plastic Waste Processing Pilot with DOW Chemicals India

Mumbai, Ahmedabad

Industry needs: Addressing the challenge of processing marine litter plastics which are typically high in silica content and contaminants. Overcoming the issue of recyclers rejecting contaminated materials. Finding ways to convert marine waste into useful products.

Outcomes: Production & installation of paver blocks made from marine-litter plastics collected from various locations such as Sanjay Gandhi National Park, Versova Beach, Dana Pani Beach, and Mithi River cleanup. These blocks are still in good condition.



2

Project

Solar integrated pavement tiles

Ministry of New and Renewable Energy, New Delhi

Industry needs: To be India's first carbon negative building having Indian Green Building Council Green pro certificate.

Outcomes: Regular cleaning of the pavement is required for attaining better performance of the solar panels.

3

Project

Installation of sustainable pavement tiles

Pandit Deendayal Energy University (PDEU), Gandhinagar, Gujarat

Industry needs: Reducing environmental impact by using green alternatives for urban infrastructure & low carbon footprint.

Outcomes: Around 70,000 square feet of green products ie. pavement tiles have been installed in the university.

Long term goals and target

- By 2030, Saltech aims to recycle **1.5 million tons of waste annually**, mitigate **4.93 million tons of CO₂ emissions**, and create **15,000+ green jobs** globally.
- Their vision is to **redefine waste** as a valuable resource, driving sustainability in construction, energy, and infrastructure sectors.