

SOCIAL ENTREPRENEURSHIP ASSIGNMENT

Business Plan Document: Circular Economy Business Model for Upcycling Plastic Waste into Eco-Friendly Tiles

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1. Executive Summary

Plastic waste is a global environmental crisis, with millions of tons improperly disposed of every year. Our business aims to combat this issue by adopting a circular economy approach. By upcycling plastic waste, particularly PET and HDPE plastics, into eco-friendly tiles, we deliver a sustainable solution to waste management. These tiles are durable, cost-effective, and versatile, catering to residential, commercial, and industrial applications.

This plan outlines our strategy to establish a scalable and impactful business that minimizes environmental degradation while generating value from waste.

2. The Market Problem

2.1 The Plastic Waste Crisis

- **Overflowing Landfills:** Plastic waste is accumulating in landfills worldwide, creating space and contamination issues.
- **Ocean Pollution:** Plastic debris pollutes oceans, harming marine ecosystems and entering the food chain.
- **Recycling Limitations:** Current recycling methods are inefficient, with only 9% of plastic waste globally recycled effectively.
- **Environmental Persistence:** Plastics take hundreds of years to decompose, posing long-term environmental risks.

2.2 Industry Challenges

- **Construction Sector Gaps:**
 - Conventional tiles use energy-intensive materials (e.g., ceramic, stone).
 - Growing demand for eco-friendly and affordable alternatives remains unmet.
 - **Consumer Trends:** Increasing awareness and preference for sustainable building materials, particularly in urban areas.
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3. Our Solution

3.1 Eco-Friendly Tiles

- **Product Features:**
 - Made from recycled PET and HDPE plastics.
 - Highly durable and resistant to wear and tear.
 - Versatile applications: flooring, wall cladding, interior and exterior décor.
- **Key Benefits:**

- Reduces plastic waste, addressing landfill and pollution issues.
- Offers a cost-competitive alternative to traditional tiles.
- Long-lasting performance ensures customer satisfaction.

3.2 Value Proposition

- **Environmentally Friendly:** Contributes to a greener planet by diverting plastic waste from landfills and oceans.
 - **Cost-Effective:** Lower production costs allow competitive pricing.
 - **Durable:** Products made with high-quality recycled plastics outperform traditional materials in longevity.
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4. Business Model

4.1 Value Creation

The business model revolves around creating value from waste through a circular approach:

- **Reduce:** Minimize waste generation by redirecting plastics to production.
- **Reuse:** Extend the lifecycle of materials by integrating them into new products.
- **Recycle:** Transform post-consumer and industrial plastics into high-value tiles.

4.2 Key Activities

1. Plastic Waste Collection:

- Partner with local waste collectors, households, and businesses to secure a consistent supply of PET and HDPE plastics.

2. Processing and Production:

- Sorting, cleaning, shredding, melting, and molding plastics into tiles.
- Stringent quality control for durability and aesthetic appeal.

3. Distribution:

- Engage construction companies, retailers, and online platforms to deliver tiles to end-users.

4. Community Engagement:

- Educate communities about sustainable waste management practices.

4.3 Key Partnerships

- **Waste Management Organizations:** Ensure steady and diverse waste supply.
- **Recycling Centers:** Enhance sorting and cleaning efficiencies.
- **Construction Firms:** Expand the market and application of eco-friendly tiles.

- **Local Authorities:** Support waste collection and regulatory compliance.

4.4 Revenue Streams

- Direct tile sales to construction companies and individual customers.
- Retail partnerships for bulk and niche market access.
- Licensing technology or processes to third-party manufacturers in other regions.

4.5 Cost Structure

- Initial setup costs: Machinery, workforce training, and facility development.
 - Operational expenses: Waste collection, cleaning, and energy for production.
 - Marketing and logistics: Advertising campaigns and supply chain management.
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5. Market Validation

5.1 Industry Insights

- **Construction Sector Feedback:**
 - Positive reception for innovative and sustainable building materials.
 - Significant demand among eco-conscious firms aiming to meet green building certification standards.
- **Consumer Preferences:**
 - Surveys indicate increasing homeowner interest in sustainable alternatives.
 - Eco-conscious materials, like recycled tiles, align with modern interior design trends.

5.2 Competitive Analysis

- **Advantages Over Competitors:**
 - Lower production costs due to upcycled raw materials.
 - Strong environmental and sustainability narrative.
 - Versatility in design options, including custom textures and finishes.
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6. Detailed Production Process

6.1 Step-by-Step Workflow

1. **Collection:** Plastic waste is sourced from households, businesses, and local recycling centers.
2. **Sorting & Cleaning:**

- Waste is sorted by type (e.g., PET, HDPE).
- Impurities like labels and non-plastic materials are removed.

3. **Shredding & Melting:**

- Shredders reduce plastics to small granules.
- Melting machines convert granules into a uniform liquid.

4. **Molding & Finishing:**

- Molten plastic is poured into molds to create tiles of desired shapes and sizes.
- Finishing processes include polishing, coloring, and quality testing.

6.2 Sustainability Practices

- Use of renewable energy in production facilities.
 - Water recycling systems in cleaning and sorting stages.
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7. Marketing and Sales Strategy

7.1 Target Audience

- Construction companies and contractors.
- Homeowners seeking eco-friendly materials.
- Businesses with sustainability initiatives.

7.2 Sales Channels

- Direct sales to construction firms.
- Retail partnerships with home improvement stores.
- E-commerce platforms for broader reach.

7.3 Promotion Plan

- **Awareness Campaigns:** Highlight environmental benefits of using eco-friendly tiles.
 - **Showcasing Prototypes:** Displaying products at trade fairs and exhibitions.
 - **Social Media Engagement:** Leveraging platforms to attract eco-conscious consumers.
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9. Scalability and Growth Plan

- **Phase 1:** Establish local production and sales channels.
- **Phase 2:** Expand to regional markets with increased production capacity.
- **Phase 3:** Diversify product lines to include tiles with specific industrial applications.

- **Phase 4:** Replicate the model in other countries with similar waste challenges.
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10. Call to Action

We invite you to:

1. **Invest in Sustainability:** Partner with us to fund a greener future.
2. **Collaborate for Change:** Help us expand the reach of eco-friendly tiles globally.
3. **Join the Movement:** Promote sustainable practices by choosing our products.