



Sustainable Manufacturing and
Environmental Pollution



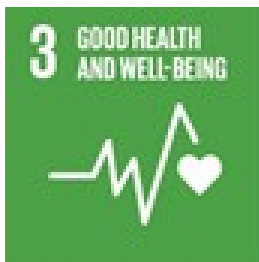
Geodome Project

Affordable Domes for Affordable Homes





Geodome Project



PROBLEM STATEMENT:

- Inadequate and slow provision of safe and sustainable housing during and after disasters.
- High demand for rapidly deployable and eco-friendly housing solutions for affected communities.
- Limited community engagement and input in the design and implementation of disaster relief housing.
- Environmental impact due to the use of unsustainable materials in conventional disaster relief shelters.

SOLUTION

- Immediate Shelter: Quick assembly for immediate shelter in disaster areas.
- Sustainability: Eco-friendly materials for minimal environmental impact.
- Community-Centric: Tailored solutions with local community involvement.
- Cost-Effective: Affordable alternative to traditional housing.
- Resilience: Durable designs withstand environmental challenges.
- Versatility: Adaptable structures for various purposes beyond housing.



Product Market Research

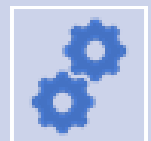
Current Option



High Cost(1800/sqft)



Longer Time to Delivery (6 months)

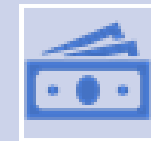


Complexity of Assembly

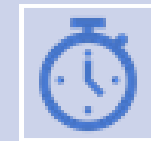


Long Supply Chain

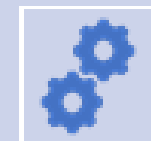
Geodesic Domes



Low Cost(1500/sqft)



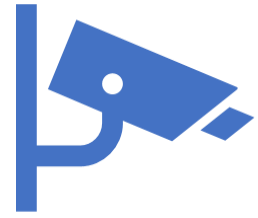
Short Time to Delivery(30 days)



Ease of Assembly



Short Supply Chain



Iterative BUSINESS MODEL

1. Collect & Verify

1. Gather HDPE plastic waste from communities and verify quality.
2. Set up sorting to ensure only suitable material is used.

2. Collaborate & Exchange

1. Partner with large-scale manufacturers for trade agreements.
2. Swap HDPE waste for finished plastic products.

3. Innovate & Produce

1. Utilize acquired plastic products (HDPE) in manufacturing.
2. Create diverse products using recycled HDPE material.

4. Market & Distribute

1. Develop compelling marketing strategies for recycled products.
2. Reach out to potential customers and establish distribution.

5. Sustain & Expand

1. Embed sustainability practices throughout the process.
2. Evaluate impact, consider growth opportunities, and expand.

Revenue:

- Area: 1000 square feet
- Rate: 1500 NPR per square foot
- Revenue = Area \times Rate =
1000 sq ft \times 1500 NPR/sq
ft = 1,500,000 NPR



Costs:

- Construction Materials: 600,000 NPR
- Labor: 650,000 NPR
- Miscellaneous Expenses: 100,000 NPR

Total Costs = Construction Materials + Labor + Miscellaneous Expenses = 600,000 + 650,000 + 100,000 = 1,350,000 NPR



Geodome Project

Target Customer:

- Demographics: Individuals and families affected by natural disasters, humanitarian organizations, and disaster relief agencies.
- Characterization: People seeking rapid and sustainable housing solutions in disaster-stricken areas, organizations focused on disaster relief efforts.

Marketing Approach:

- Tailored outreach to disaster-stricken regions through partnerships with local NGOs and humanitarian agencies.
- Online and social media campaigns to raise awareness and educate potential customers on the benefits of our disaster relief housing.



नेपाल सरकार

जलवायु परिवर्तन न्यूनीकरण तथा अनुकूलन राष्ट्रिय कार्यान्वयन योजना

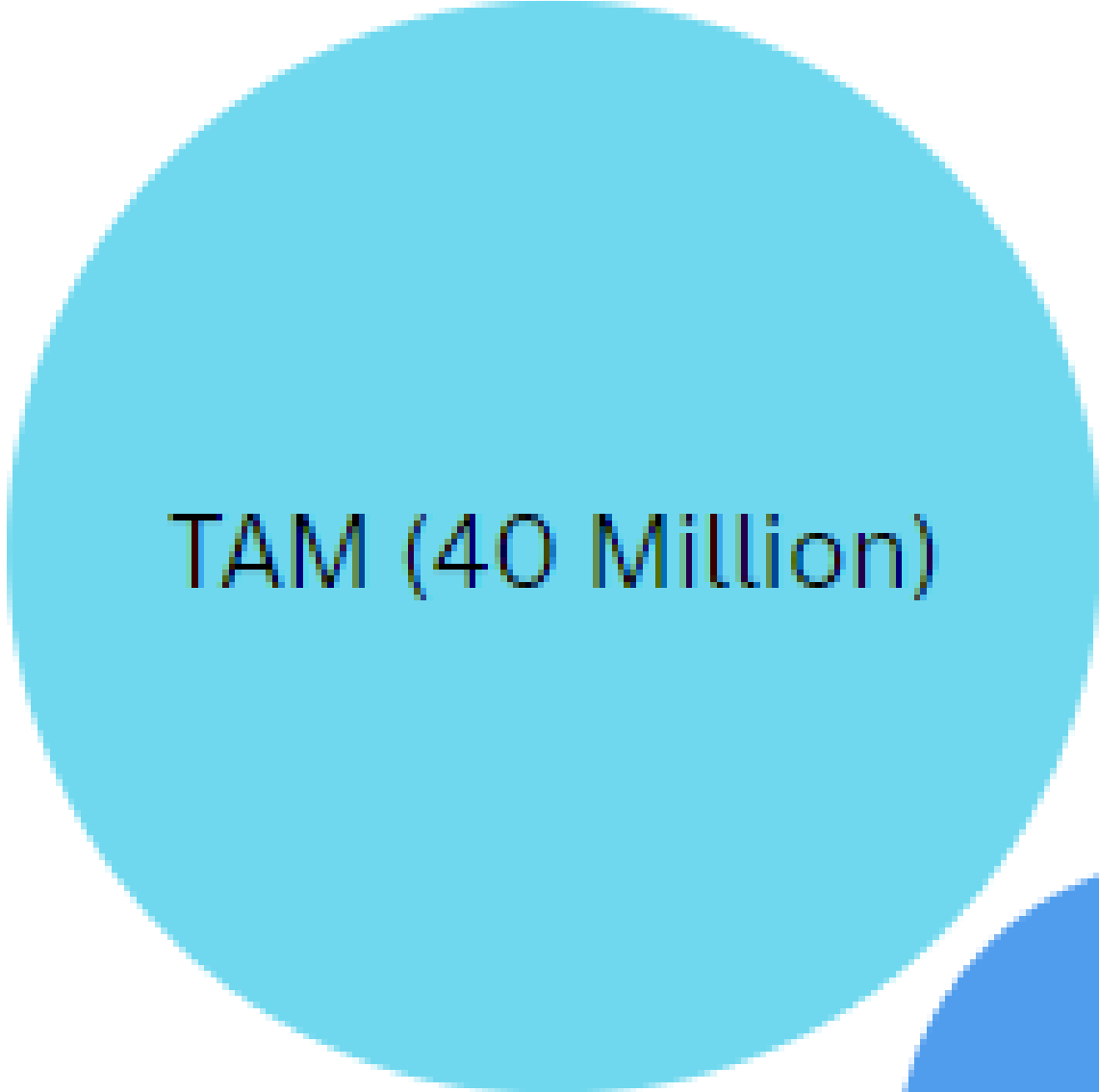
[Nationally Determined Contribution (NDC) Implementation Plan]

(नेपाल सरकार, मन्त्रिपरिषद्को मिति २०८०।०४।१६ को
निर्णयबाट स्वीकृत)

<ul style="list-style-type: none">ऊर्जा बचत हुने भवनहरूको नवीकरण र नयाँ निर्माण कार्यलाई नवीनतम विधिहरूबाट प्रोत्साहन गर्ने (सहुलियतपूर्ण ऋण, ऊर्जा दक्षता/स्वेत प्रमाणपत्र प्रणाली)।	<ul style="list-style-type: none">कम्तीमा ३० प्रतिशत नयाँ भवनहरूले ऊर्जा-बचतका योजनाहरू अपनाएका हुनेछन्।	सङ्घीय मामिला तथा सामान्य प्रशासन, सहरी विकास मन्त्रालय, स्थानीय सरकार	२०२३-२०३०	३०,०००.०
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Market DATA: USD

Total Addressable Market



Serviceable Attainable Market



Serviceable Obtainable Market





Competitors:

Awning Global Pvt. Ltd. sell at 2600 NRS sq./ft

Getaway Camps Pvt. Ltd. sell at 2800 NRS sq./ft

1

Cost of Plastic

2

Cost/Time
Training of
Workforce

3

Cost/Time of
Raw Material
to finished
product

Our
Advantage

Localized Advantage

Cost of finished Connector- (117 per kilo to 170 per kilo)

- Lower cost of equipment required- (2 Lakhs-6 Lakhs)
- No training for Workforce required in handling HDPE
- Barter with Pipe Manufacturers for recycled plastic for finished product

Traction

- Raw Materials for Recycled Plastic-Mapping Ongoing
Environmental Mitigation of Recycling-Completed
- Skilled Workforce-Completed
Customer Base Identification-Identified Disaster Recovery
- After Sales Service Modeling-Completed
Finance For Project-Assessment Ongoing
-
-









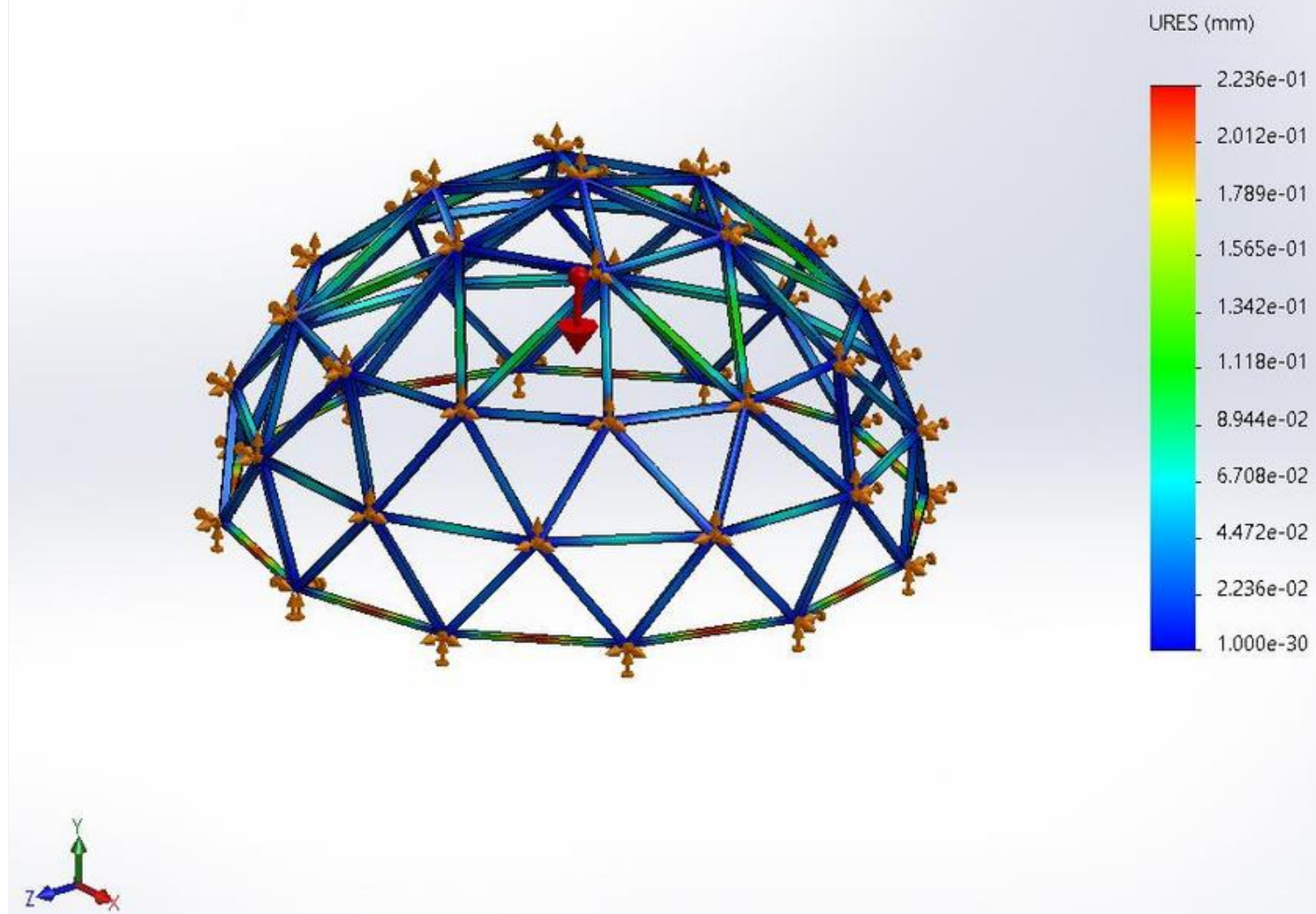
Material Resource Partne

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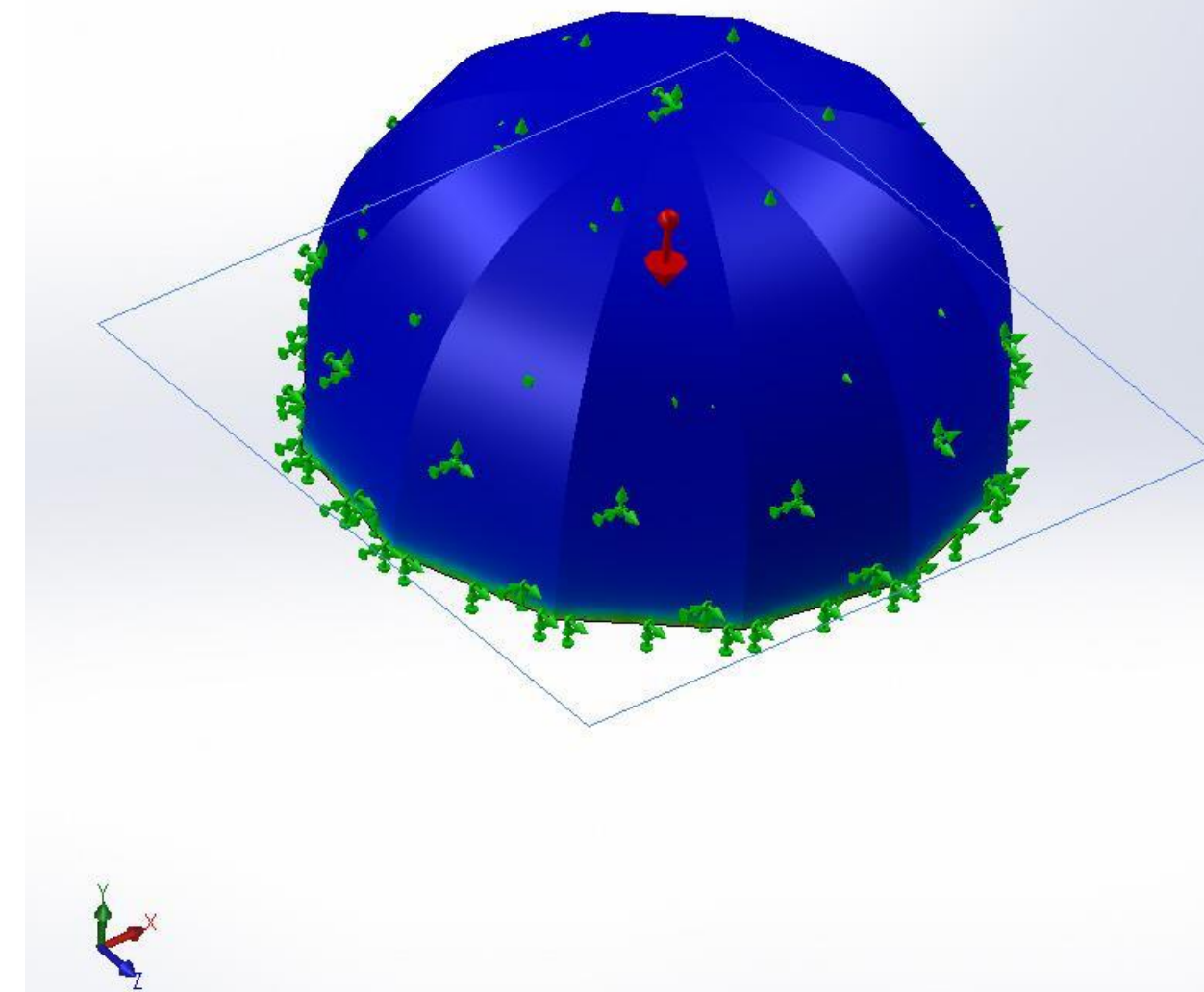
- Dil Bahadur Gurung,
+9779761782929
- Location: Kavre,
• Panchkhal
- Type of Plastic: PET,
• LDPE, HDPE
- Daily Supply Claimed: 500 kg



Model name: dome Solidworks analysis part
Study name: Static 5(-Default-)
Plot type: Static displacement Displacement1



Model name: dome Solidworks analysis part
Study name: Static 4(-Default-)
Plot type: Static nodal stress Stress1



Our Progress by Team Effort:

- Customized Size Based Design Template-Completed by **Gunjan Ghimire**
- Structural Analysis-Ongoing by **Ramiz Bhattarai**
- Design of Struts and Joints-Completed by **Bishwa Bista**
- Loading of Geodesic Domes and National Building Codes Assessment-Ongoing (**Team Effort**)
- Site Work: Ongoing by **Riwaj Subedi and Prashil Neupane**
- Machinery Identification-Completed by **Shoban Mishra**
- Material Specification-Completed by **Shoban Mishra**
- Material Resource Partner-Identified by **Riwaj Subedi**
- Large Scale Manufacturing Partner-Completed by **Shoban Mishra**

Our Ask

15 Lacs NPR for First
Installation and
machinery tools.