Slum Housing in Dharavi, India

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Problem

- Dharavi is densely populated, extremely urban
- Poor sanitation
- Poor infrastructure
- Limited accessibility to roads
- Copious amounts of waste
- Poor ventilation in homes
- Limited bathrooms

Context

- Dharavi is extremely diverse with a strong sense of community
- Population of 1,000,000
- Hot, humid climate
- Large recycling business
- Individuals typically work and live out of the same space
- Commercial district for toxic work
- Humanitarian efforts have failed in the past due to lack of communal consideration
- Communal bathrooms are public
- Poor air quality

Design Strategies

- **Re-blocking**: a process that involves spatial reconfiguration of shacks in informal settlements.
- One building dedicated to a communal bathroom per unit of seven homes
- **Biodigester** to generate energy from waste
- **Incremental housing**: allows individuals to make choices on their housing design
- **Plastic bricks**: made from waste materials and stronger than regular concrete
- **Awning** that extends from the roof and faces the center of the street
- Roof and front window for cross ventilation

Conceptual Design

- **Re-blocking**: a process that involves spatial reconfiguration of shacks in informal settlements.
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Materials

- Plastic Bricks – 0.40-0.90 per brick. Made of 20% plastic waste and 80% foundry waste (sand and dust)
- Biodigester – Around $150 for each family unit
- Sheet metal for roofing – Recycled material
- Wheat shade mesh for awnings – Around $200 per unit

Sources:


