

Categorie Premio	Accessibilità	Sostenibilità	Qualità della vita
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<b>Product Name</b>	Folded Bamboo House		
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**Description of innovation social values**

- product category
- formal and functional features
- problems solved by innovation
  - user
  - field of application

**FOLDED BAMBOO + PAPER HOUSE**

Temporary shelters for earthquake's homeless  
 After a magnitude 7.9 earthquake struck central China last May, killing 69,000 people, injuring hundreds of thousands and leaving millions homeless, the government is planning an extensive reconstruction project that includes building more than 1.5 million temporary homes, which are expected to last two or three years. Hundreds of Chinese factories that make tents and temporary buildings are maximizing their production for the sake of the earthquake survivors, many of whom lost everything.  
 The central feature of our project is the development of a temporary shelter for the homeless people, a kinetic structure that exhibits characteristics of umbrella and folded fans, with the potential of arranging themselves into various contexts and dwelling requirements. We named it as *Bamboo + paper House*, a self reconstructive structure for instant installations, which, according to the changing internal requirements and site topography, can produce potentially infinite scenarios.

**Description of technical features**

- operations
- technology

Rather than using the industry mass production to generate uniform dwellings, the Folded Bamboo House uses a simple kinetic structure made by bamboo, a kind of bottom-up assembling of complex adaptive systems that self-regulate, in opposition to top-down overarching principles. The straight bamboo poles are used to create ruled surfaces-helicoid, hyperbolic paraboloid and hyperboloid of revolution. The result of Folded Bamboo House is a reflection of the logic of fold versus unfolds, self-construction versus de-construction, permanent structure versus mobility.

**Dimensions**

20 feet by 20 feet. The characteristic of the Folded Bamboo House heavily relies on the umbrella structure's open angle and the spatial relations of each rib

**Materials**

As the fastest growing plant, Bamboo reaches full height in one growth spurt of about two months.

**Certifications**

Ming Tang. LEED AP. USGBC  
 Dihua Yang. LEED AP. USGBC

**Benefits for environment**

Thick bamboo poles are 2-3 times stronger than comparable size of wood timber. Bamboo can be harvested in 7 years versus 10-50 years for softwoods and hardwoods, yielding up to 20 times more than wood. It produces greater biomass and 30% more oxygen than a hardwood forest on the same area, while

**Benefits for human being**

. The Folded House is transported to site and modified by the social, economic and culture requirements of the user. With this user customized system, the house can react to external stimuli and be transformed with a short time responding to the light, wind or temperature change.