



SUPPLYFRAME
DESIGNLAB
HACKADAY PRIZE 2020

CalEarth

Humanitarian Aid

The Mission

CalEarth develops and educates the public in self-made, environmentally sustainable building designs. Houses anyone can build with their own two hands, using locally available earth, sandbags and barbed wire, that also meet modern-day standards.

SuperAdobe architecture is a powerful tool in the fight against the global housing crisis. The education provided by CalEarth has empowered hundreds of people to also start humanitarian projects for those in need.

The Work

Projects like the [Pegasus Children's Project](#) in Nepal in 2006 provided housing to 90 children and their caretakers and withstood the 7.6 earthquake in 2015. The [Langbos Children's Home](#) in South Africa, provides care and support for vulnerable children in the Langbos community.

The [Baninajar Refugee Camp](#) on Tehran/ Iraq border enabled the refugees from Southern Iraq, as the eventual inhabitants, to build the shelters alongside trained UN personnel in the Baninajar refugee camp in Khuzestan, Iran. CalEarth has provided the tools and training to many communities who needed immediate housing after a crisis.



Open Challenge

Modular Add-Ons for SuperAdobe Domes:

The global housing shortage currently encompasses 20-40 million refugees and displaced persons, as well as hundreds of millions more who live in substandard or slum housing. Environmental challenges and the acceleration of natural and man-made disasters mean this shortage will only become more severe.

While the CalEarth SuperAdobe structures meet the essential needs for communities facing housing crises, many of these structures could be outfitted with hardware add-ons to better support long-term dwellers, allow them to customize their homes according to their needs, and ultimately help them feel more comfortable and provide them with a more dignified living experience.

This challenge seeks designs for modular add-ons that seamlessly mount or fit into CalEarth's dome housing models in the categories of connectivity, power harvesting, lighting, heating, and water storage.