Abstract

The Setty Family Applied Engineering Challenge tasked my project group with designing a temporary shelter specifically for refugees in Eastern Europe to be used by governments, municipalities, and humanitarian agencies that is cost effective, portable, sustainable, and provides all necessary domestic needs. After months of research and design, we have developed the Poly Shelter; an eight-person structure erected to provide comfortability and safety to those in need. Poly Shelter is designed to withstand the harshest of climates, provide exceptional insulation, and incorporate a rainwater collection system sufficient enough to support each unit. Poly Shelter proves itself to be an economically viable solution to the perpetual worldwide refugee crisis. Its innovative walls, comfortable interior climate, and water management systems will improve countless refugee’s quality of life throughout the world. Designed to weather the worst climates in Eastern Europe, it could prove as the next breakthrough in solving the current massive refugee crisis.

Keystone Words: Refugee Shelter, Mechanical, Sustainability, Design, Application