

Case Study 2: EDV-01 Emergency Shelter

From: <http://inhabitat.com/8-innovative-emergency-shelter-designs-for-when-disaster-hits/>



This high-tech shelter is a product of Diawa Lease and is about the size of a shipping container, though it can double in height with a flick of a switch. It can sustain itself without any outside resources for up to a month by catching and reusing water, and generating electricity with a sizable solar array. The EDV-01 can be transported by truck or helicopter to areas in need. Bunk beds and an office desk are built in. The lower portion has a shower and a bio toilet, a small kitchen, storage for supplies, and equipment. A unique aspect of this shelter is its pixelated skin that can light up and serve as signage, providing critical emergency information to people in the community.

Related Information

1. EDV-01: Robotic Emergency Shelter is Entirely Self-Sufficient

From: <http://inhabitat.com/edv-01-robotic-emergency-housing-unit-is-entirely-self-sufficient/>

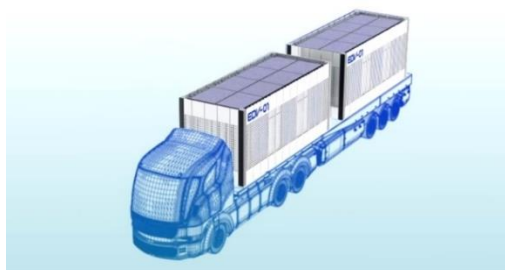
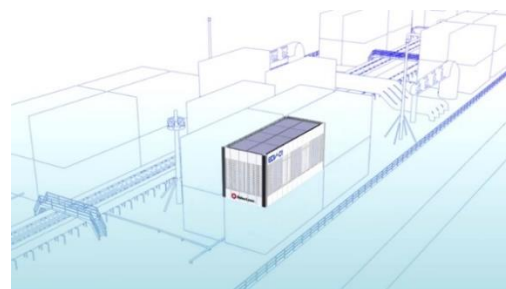
Japan just unveiled the future of emergency housing in the form of the Emergency Disaster Vehicle, or EDV-01. The innovative design is fully-automated, capable of automatically doubling its size, and can be transported to anywhere you can set a shipping container. Developed by Diawa Lease, the shelter is a paragon of high-tech Japanese engineering — call it an emergency shelter robot.



The 10-ton container-sized unit can travel by ship, truck, or even helicopter. Set the EDV-01 down and it quickly transforms into a full-service shelter for medical aid, storage, logistics, or whatever you can think of. Hydraulic pads can level it quickly on uneven ground. Once set, an outer skin raises to create a full-sized second story. Solar electric panels cover the roof and one side of the building, enabling it to be self-sufficient. Other self-sufficiency measures include a system that collects water condensation, a hydrogen

electrolysis system, and satellite dish.

Inside is a sink and shower with a waterless toilet accessible by a separate outdoor room. The rest of the lower half looks to be for storage and on-board equipment. A ladder provides access to the second story, which is a large room with a desk at one end and a couple bunks at the other. The design features a perforated skin reminiscent of Virginia Tech's Lumenhuas, and it's every bit as transportable to boot. Check out this action-packed video to learn more.



2. FIRST PHOTOS: Solar-Powered Transforming EDV-01 Emergency Shelter Unveiled!

From: <http://inhabitat.com/solar-powered-transforming-edv-01-emergency-shelter-can-sustain-itself-in-any-situation/>

Daiwa Lease just sent us the first photos of their new transforming EDV-1 shelter, which can be set on any terrain, doubles in size with the flick of a switch, and can sustain itself without any outside resources for up to a month by catching and reusing water and generating electricity with a sizable built-in solar array. The container sized emergency shelter can be deployed anywhere a truck or helicopter can travel, and its pixelated skin can even light up to serve as signage and provide critical information during emergencies.

The high-tech shelter is designed to provide a sustainable source of vital resources on-site. Four hydraulic legs quickly stabilize the structure on rugged terrain, and an outer wall rises to create a second story, providing shelter in less than five minutes. Bunk beds and an office desk are built-in as well.

The lower section stores a shower and bio toilet, a small kitchen, storage for supplies, and equipment. Solar cells built into the roof and walls feed lithium-ion batteries, and the building is supplemented by a fuel cell. Water is also created by a condensing atmospheric moisture that can provide up to 20 liters a day.

The skin is perforated to allow diffused light into the upper story, and built-in LEDs can indicate visual information for miles. The developers see the EDV-1 used as an anchor for emergency hospitals, temporary tent cities or logistical support — but for now it will be the centerpiece of Little Tokyo Design Week which begins on July 14th in Los Angeles.





Daiwa House Exhibit Box Daiwa