

Thinking "Out of the Box:" Up-cycling for Planet, People and Profit

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Jeffrey S Gould, New York University Trustee and former publishing and printing proprietor, was curious. In his travels around the country and on the west coast of his home state, Florida, he saw thousands of steel containers stacked, rusting, and to all intents and purposes, abandoned. Gould discovered that there were over 12 million containers throughout the world beached at ports and depots after their decade of life sailing the high seas was over, due to maritime regulations.

A long-time environmentalist, Jeffrey was offended by the waste, but intrigued by the business opportunity. What if he could upcycle these containers into useful products? He could buy them and create a business at scale. And thus the idea for PortAble was born.

PortAble aims to repurpose these containers into ShelTainers (emergency/temporary housing) Medtainers (emergency/temporary medical facilities, StorageTainers and WallTainers (highway sound barriers). At 8000 pounds and 40 feet in length, the containers are built to last another 10 years or more and can be purchased from vendors at \$1,800-\$2,400 apiece.

Jeffrey looked to his alma mater, NYU, for help. There, he recruited a Tandon-graduate engineer and a current undergraduate, Jarrett Lash, to be on his team. Together they have explored different business models, created architectural plans, scouted manufacturing sites, and begun the outreach to potential customers.

PortAble's North Star is to solve humanitarian and environmental challenges. Gould believes "In life and business, timing is everything. The time is now for this business model." As the U.S. deals with increased extreme weather events brought on by climate change, upcycled shipping containers can provide far better housing for displaced Americans than FEMA trailers. They can also provide transitional housing for the homeless (over 500K Americans and counting) and others in need. The MedTainers and StorageTainers can also be brought to emergency sites. During the current COVID-19 pandemic, the National Guard is helping hospitals to build temporary buildings for patient surges. Gould's MedTainers will provide a much more convenient option.



The design for the ShelTainer allows this affordable housing to exist off grid. It is run on solar power and has 4-5 days of energy stored, and has its own septic sewage system, HVAC, and water supply. The innovative unit has two bedrooms, a living/dining/kitchen area and a bathroom. It also has a fold out deck and awnings that protect the windows when the container is transported and then deployed. As in the first part of their life, the containers can be easily and quickly shipped, trucked or flown to their destinations. The ShelTainer can be used and reused for at least seven years, which contrasts with the 6-18 month operating time of a FEMA trailer (which are sold after use at auction for as little as \$100 each, a fraction of the initial price).

A FEMA trailer costs taxpayers approximately \$65K-\$70K for up to only 18 months of use. PortAble is planning to offer the ShelTainers at approximately \$100K each for seven years of use; a bargain with energy efficiency and a low carbon footprint.

The PortAble products can also be used by insurance companies and homeowners on a "fractional" model basis when repairs are being performed on a home. Typically, insurers pay over \$10K in hotel costs for a small family for two months while they are out of their home. The ShelTainer can be brought to the homesite (more convenient for the landowner) and rented by the insurance company at a lower cost than the hotel. StorageTainers can be used to temporarily store homeowner belongings and will have solar panels with HVAC.

Smart tech is also part of the picture; using a smart tablet, the energy use and health of occupants will be monitored as needed, with the data provided to the occupant and the owner. Telemedicine has been booming during the pandemic, and PortAble's ShelTainer and MedTainer will enable a comprehensive health response plan.

When requesting triage or medical attention, individuals will fill out a health questionnaire using triage algorithms for health services that allows for quick and accurate labeling of individuals as "green, yellow, and red" in terms of health threat, and then automatically schedule an appointment via telemedicine that could lead to a visit to a MedTainer unit, if needed. The technology will help manage the flow of individuals to the MedTainer units preventing surges, so health professionals can provide better quality care.

There is no end to the types of container configurations that can be created. Jeffrey's nineyear old daughter, Maxine, loves animals and legos, and built a model VetTainer. Gould states; "this is actually a brilliant idea from a child, given how many domestic pets are displaced during fires, floods, and hurricanes." As for the WallTainers: there is a federal mandate to build concrete sound attenuation barriers along many U.S. highways. Concrete has a massive carbon footprint, in fact, according to think tank Chatham House, cement causes about 8% of the world's carbon dioxide emissions. The production of a mile-long, 24-foot high concrete sound wall can emit over 46,000 lbs of CO2. Furthermore, current sound abatement walls cost on average \$42 per square foot to install. Instead, Jeffrey and Jarrett propose to repurpose unused shipping containers--132 units comprise a mile—saving on cost and carbon. Moreover, installing solar panels on top of the WallTainers will generate power which can go to the local grid. And, they can create EV charging stations for the growing number of electric vehicles roaming the highways.



There are two business models: the first is full ownership by the client, who will own the products with a maintenance contract, the second is a "fractionalized" program, where the products are leased, delivered and retrieved as needed.

Each year, government agencies spend billions of dollars on temporary housing solutions for people displaced by natural disaster or experiencing homelessness. The PortAble team plans to focus their marketing on supporting government agencies as well as businesses engaged with disaster relief and temporary housing, such as the home insurance industry. Under development are plans for a franchise model to increase the rate of leasing opportunities across the nation.

Heading into 2021, Jeffrey and Jarrett are optimistic about the opportunity to create multiple solutions that help people, governments, business, and the environment – all through the lowly freight container. But they face a steep road ahead. They first need to persuade government agencies, insurers, and others, that this is a viable, environmental and economical option.

Case Questions:

Where should Jeffrey and Jarrett focus their business development efforts? On FEMA? On local health agencies? On insurers? Others?

How do they best pitch the products? What kind of a marketing narrative would you develop?

Are there other big scale ideas for the upcycling of containers that PortAble has missed?

Are there other innovations that could improve the environmental and societal impact of the products that PortAble should consider?