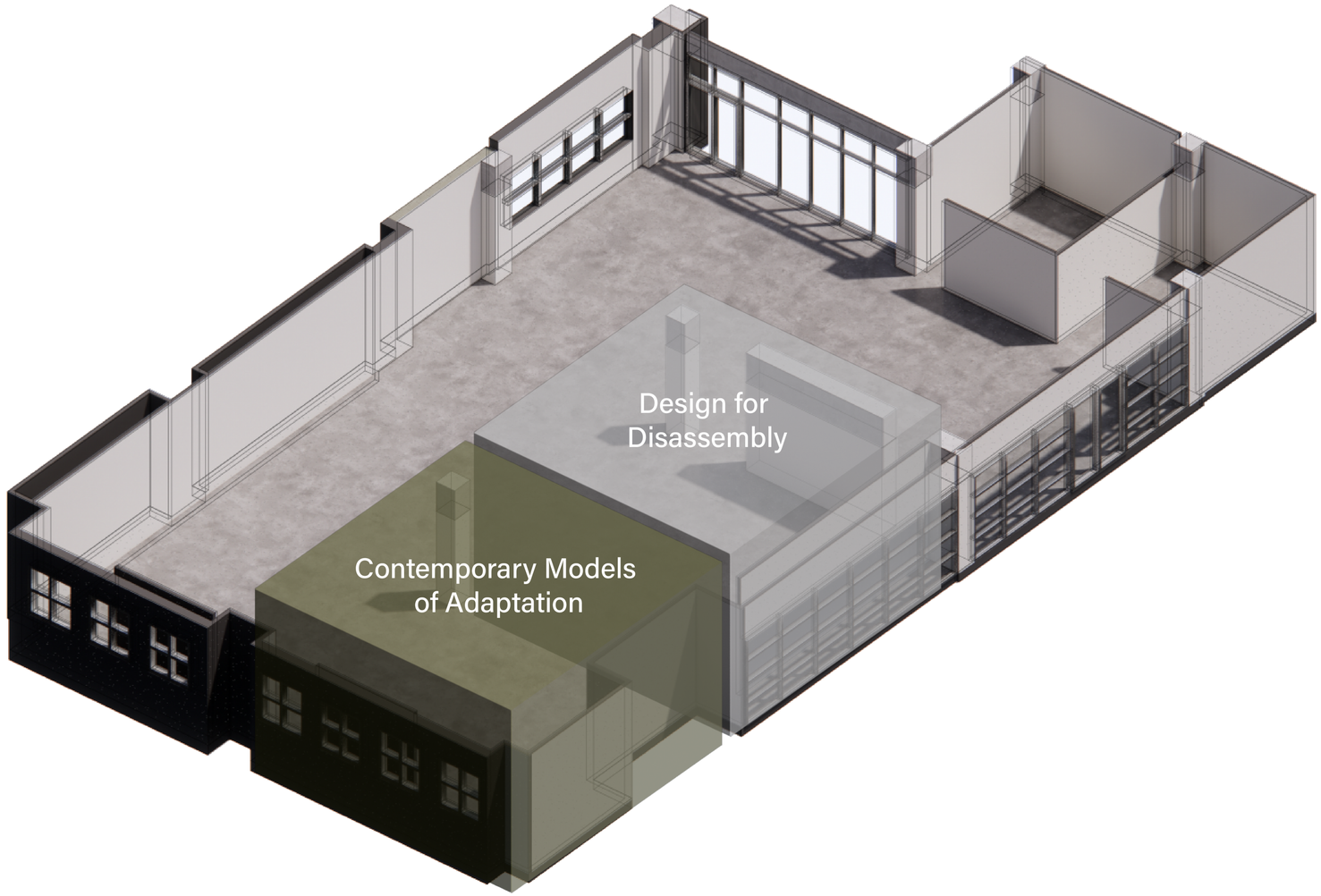
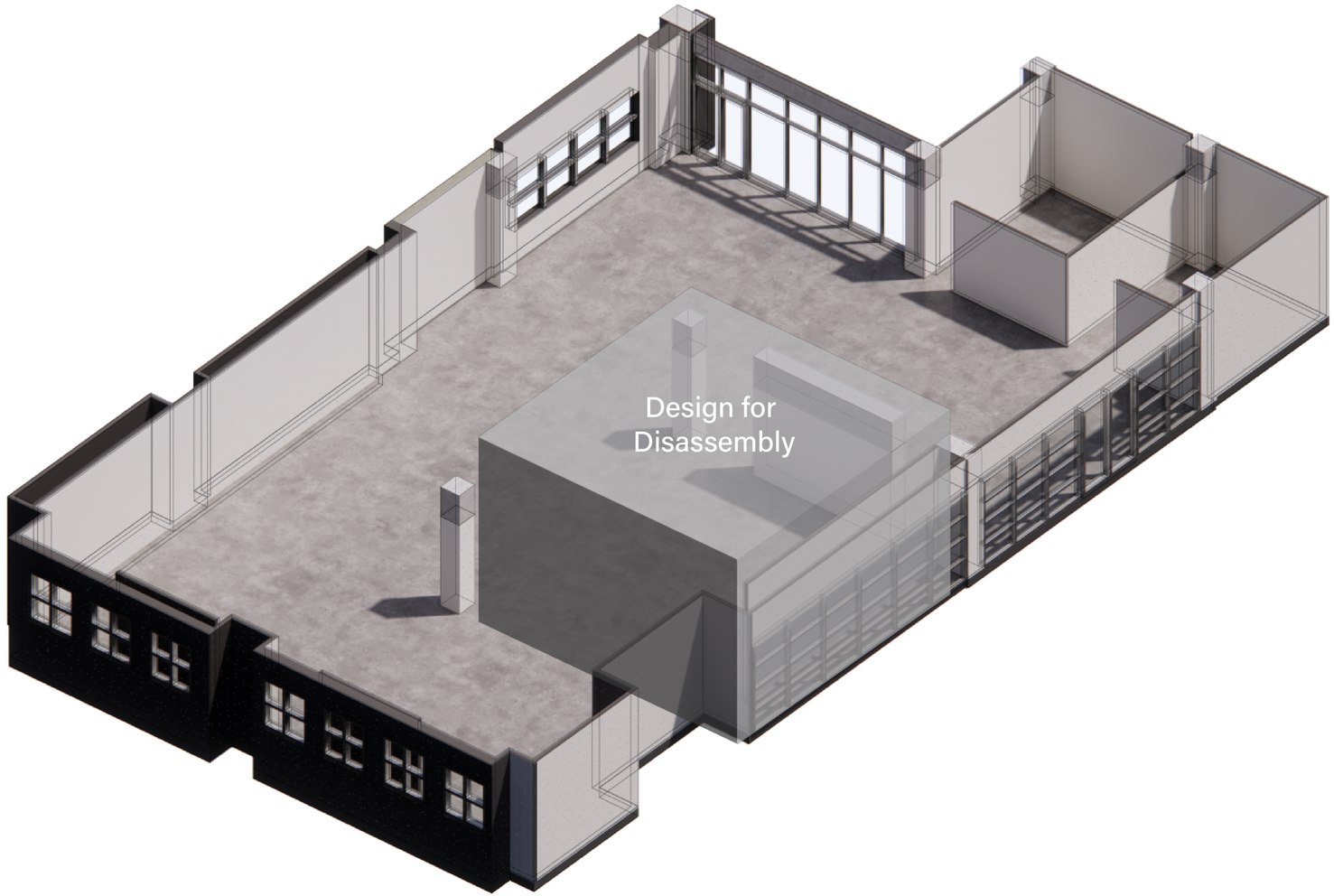
05 / DESIGN FOR DISASSEMBLY


Design for
Disassembly
Contemporary Models
of Adaptation


Design for
Disassembly

Design for Disassembly (DfD) is the design of buildings to facilitate future changes and dismantlement (in part or whole) for recovery of systems, components and materials. This ensures the building can be recycled as efficiently as possible at the end of its lifespan. Rather than ending up in a landfill, materials should find their way back into the “reduce, reuse, recycle” loop.

DfD involves understanding the structure’s complete life-cycle and making provisions for the reuse of its parts in order to reduce both the consumption of resources and pollution.

Re-Source Exhibition / Lanza Atelier

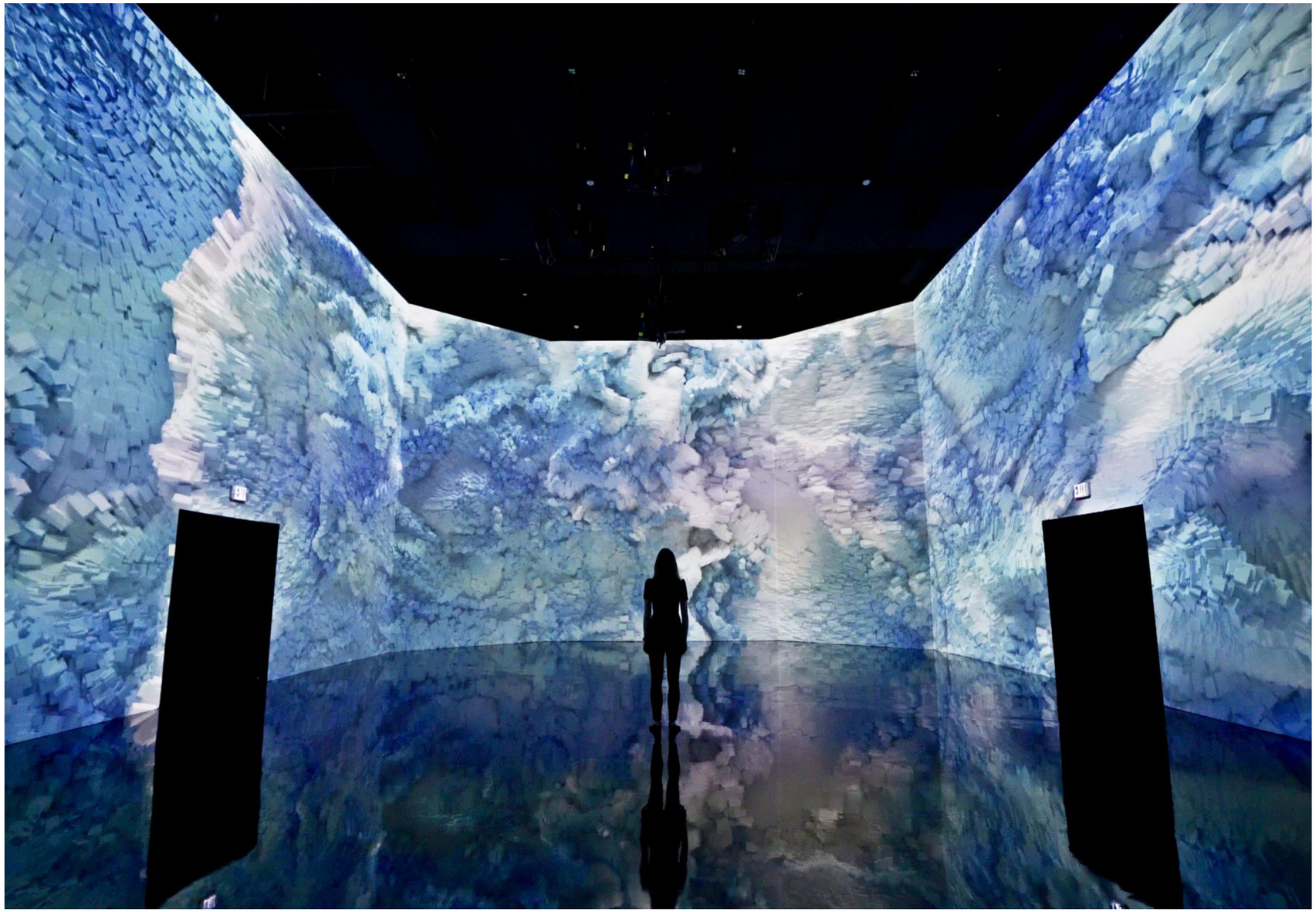
NEW YORK, NEW YORK
NOVEMBER 2021

Architecture studio Lanza Atelier has lined an art exhibition in New York with plywood tables and stools in varying sizes, which can be disassembled, flat-packed and distributed among visitors at the end of the show.

These are used to display 26 works from emerging architects and designers, composed entirely from leftover materials found in Storefront's storage spaces. When visitors purchase an artwork from the show, they will also be able to take home the furniture piece on which it was displayed in a bid to extend its lifespan.

"We wanted to propose an exhibition design that could have an afterlife," Lanza Atelier founding partner Isabel Martínez Abascal told Dezeen. "This means that the pieces work together as a whole but can then be distributed and become something else."

– Dezeen



Infinite Spaces / Refik Anadol Studio

ISTANBUL, TURKEY
OCTOBER 2019 - OCTOBER 2020

Infinite Space is a collection of works that seeks to cleanse the doors of perception with the tools available to twenty-first-century artists. The exhibition explores memories and dreams through the mind of a machine by using data sets ranging from human memories, photographs of Mars, cultural archives and sea surface activity as data sculptures and paintings. These artworks are then displayed using immersive projection.

Our exhibit imagines a future where you can **pack up your house and move it**, a future where your home becomes your key to climate challenges. It allows visitors to physically explore this dynamic mode of thinking by projecting endless possibilities around them, and inviting them to build and manipulate these habitats in innovative ways to create a true community of climate citizens.


magine a future in which
can pack up your house
it with you.
ssembly
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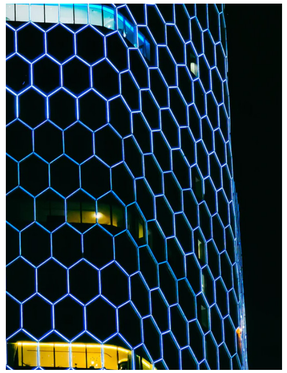
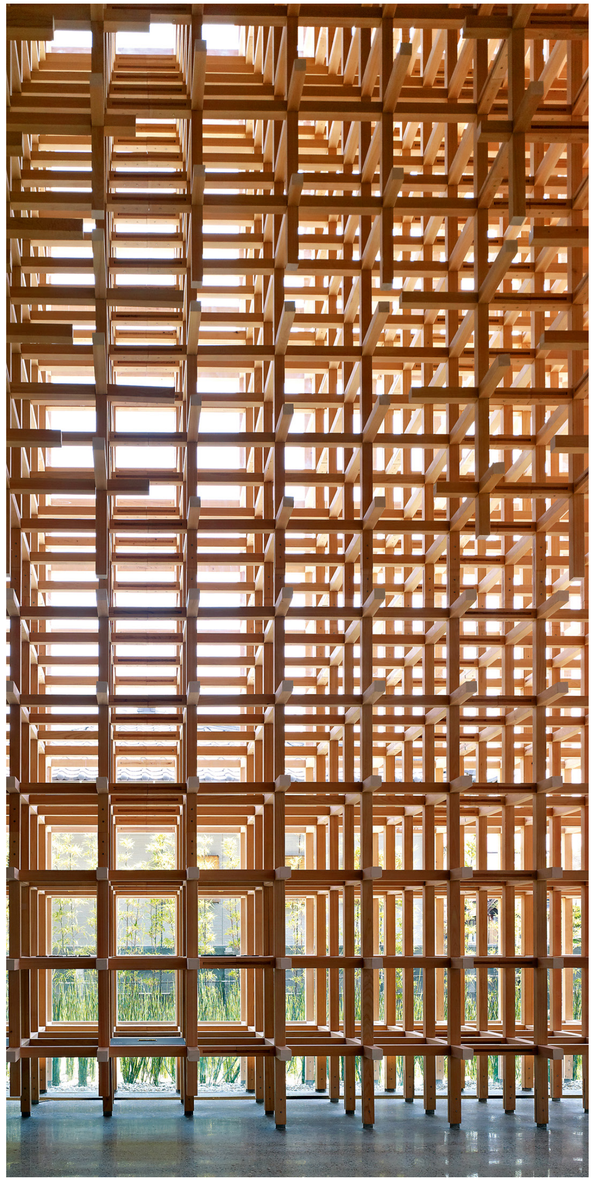
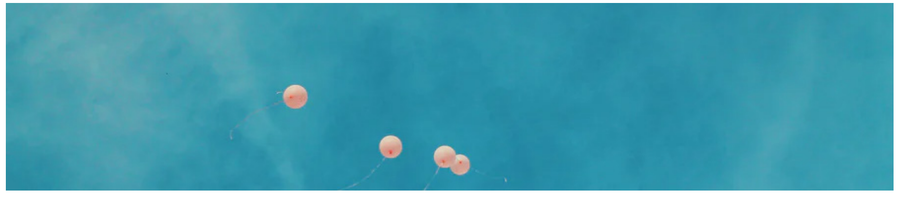
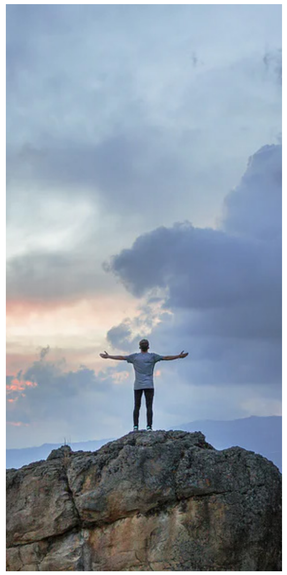
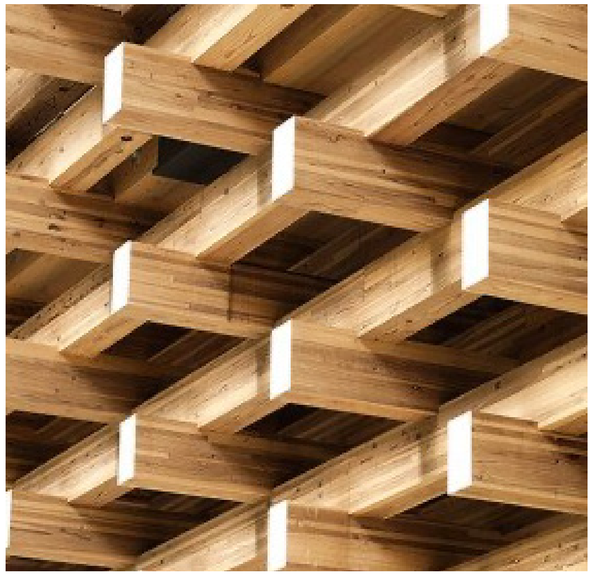
ROOM 05 / DESIGN FOR DISASSEMBLY

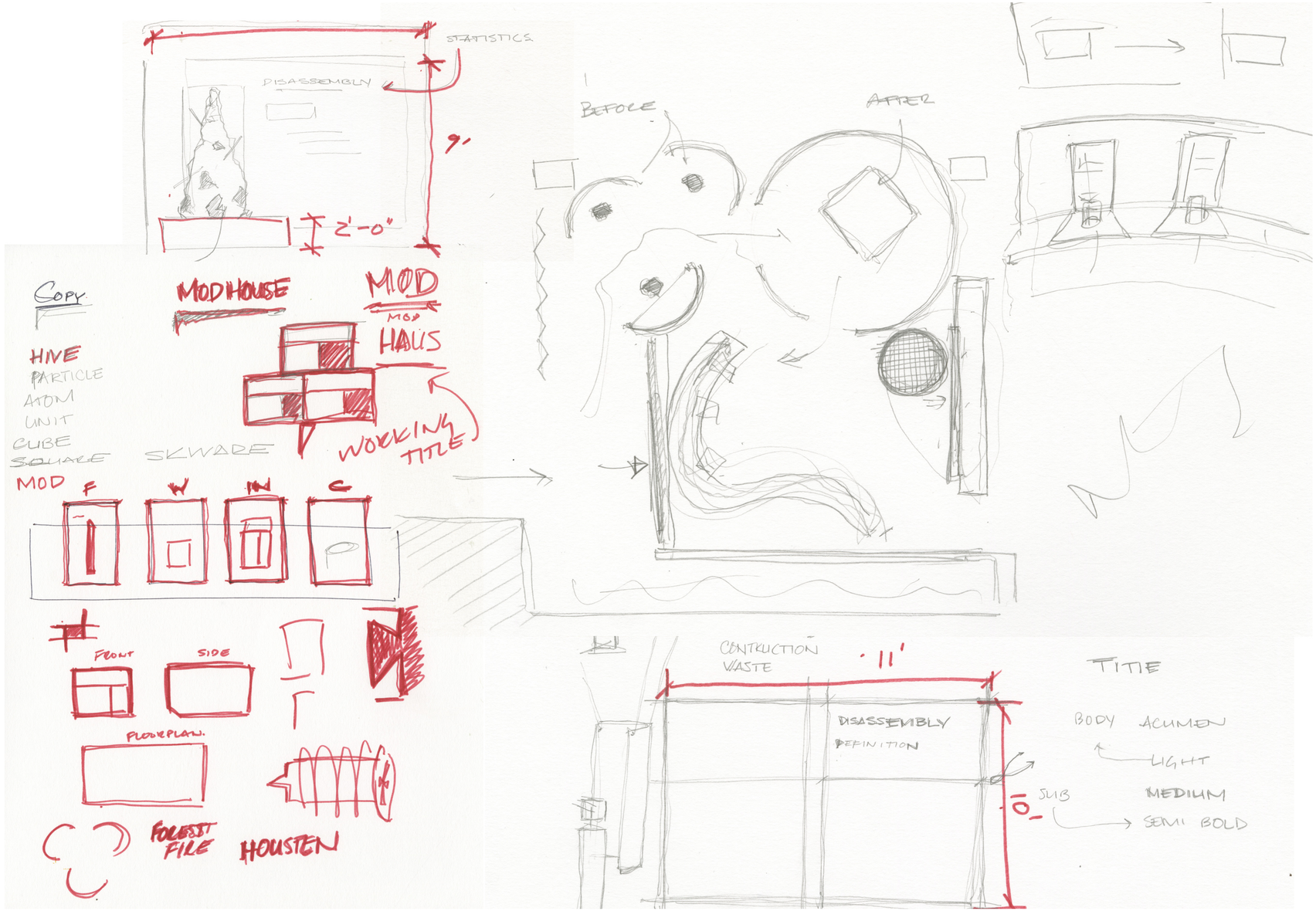






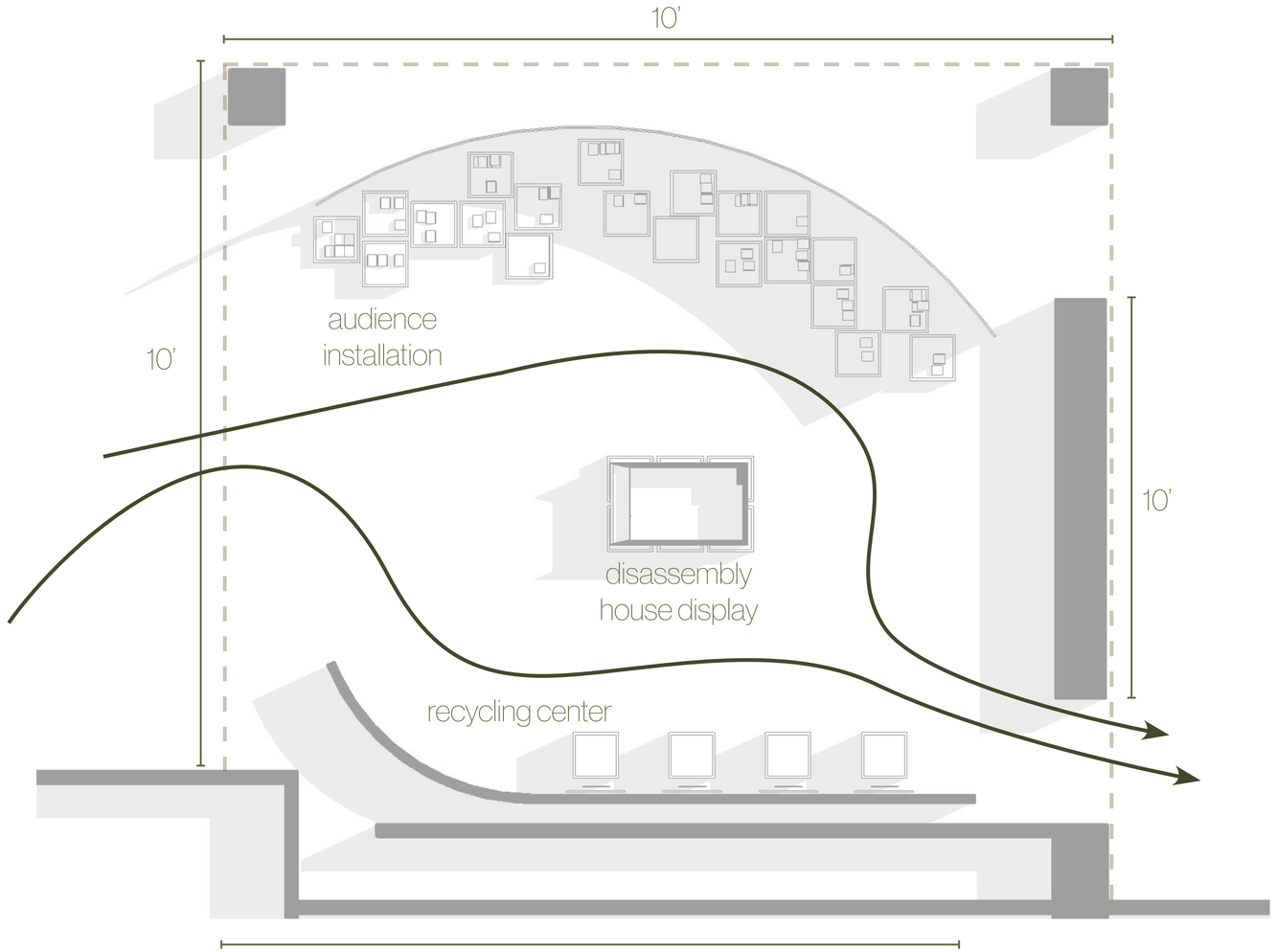






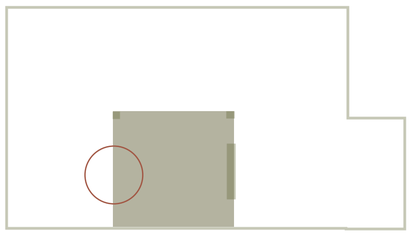
Ideation sketches explore different ways of deconstructing and demonstrating the concept of design for disassembly.


Imagine a future in which
you can pack up your house
and take it with you.


10’
10’
10’
audience
installation
disassembly
house display
recycling center

As the audience enters the space they are presented with a choice **to move their house into the projected environment** or to **disassemble it.**

floor graphic acts as wayfinding: move or disassemble.

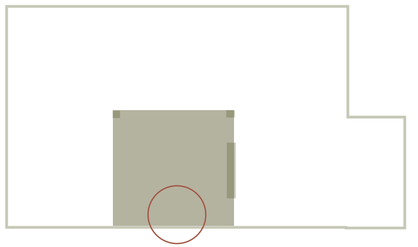


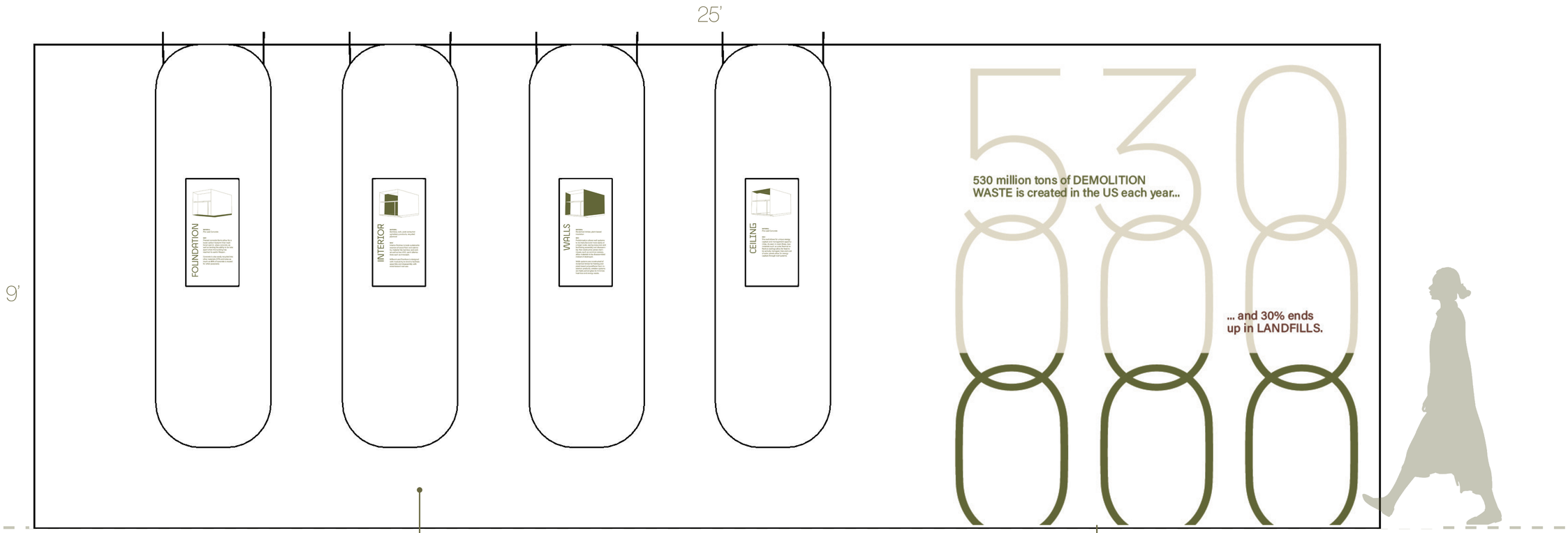
Within the **recycling option** visitors can learn a bit more about the materials and construction techniques used to create homes designed for disassembly as they recycle their houses.

infographic vinyl sticker visualizes waste

backlit panels made of naturally dyed linen (strong & organic)

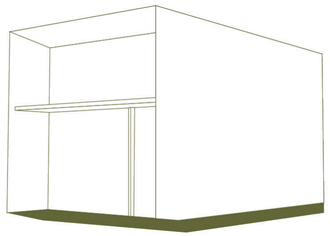
recycle drop bins constructed from birch wood





1ft x 2ft panels explain why
the house uses certain materials

infographic visualizes
demolition waste created in
the US each year

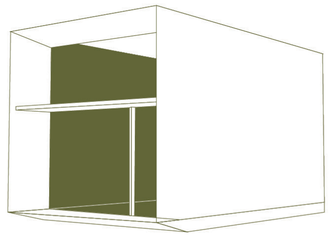


FOUNDATION

MATERIAL
Pre-cast Concrete

WHY
Precast concrete forms allow for a lower carbon footprint than traditional cast-in- place concrete, as well as lending the ability to be take apart when the building has reached its useful lifespan.

Concrete is also easily recycled into other materials (EPA estimates as much as 80% of concrete is reused for other purposes).

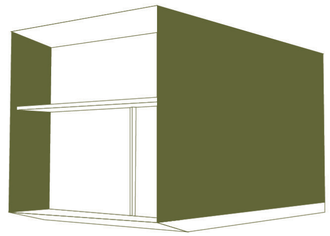


INTERIOR

MATERIAL
Bamboo, cork, post-consumer upholstery products, recycled plywood

WHY
Interior finishes include sustainable sources of wood floor and cabinetry material like bamboo and cork as well as low-VOC, paint alternatives such as limewash.

Millwork and Furniture is designed with modularity in mind to facilitate assembly and disassembly with mind toward next use.

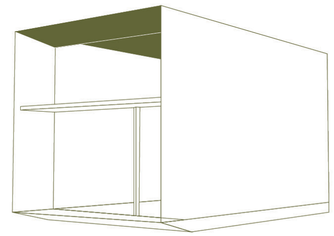


WALLS

MATERIAL
Reclaimed timber, plant-based insulation

WHY
Prefabrication allows wall systems to be manufactured more easily at a larger scale, saving resources and facilitating assembly and disassembly. Non destructive joinery techniques, such as common screws, allow materials to be disassembled instead of destroyed.

Walls systems are constructed of reclaimed timber for framing and plant-based polyurethane foam insulation products, window systems are triple pained glass to minimize heat loss and energy waste.



CEILING

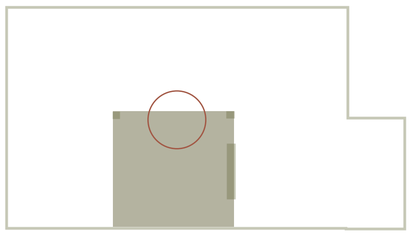
MATERIAL
Pre-cast Concrete

WHY
The roof allows for unique energy capture and management opportunities. As seen in room three, new materials such as solar thermal reflective coatings allow for heat to be actively managed. Size and cost of solar panels allow for energy capture through roof systems

smallest type sizeat 32pt is easily readible and in compliance with ADA standards

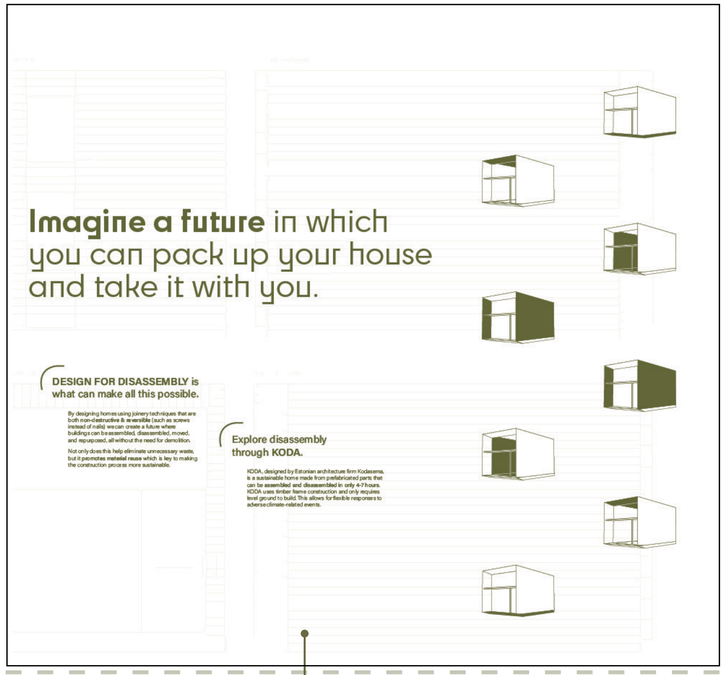
Within the "**Move" option** visitiors have the ability to place their homes in the projected environment.

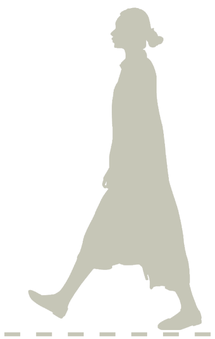
infographic vinyl sticker introduces disassembly topic and credits architects



20’

10’





projection of environment

graphic messaging explains design for disassembly in more detail and credits the architects who designed the disassembly house

birch wood recycling bins allow visitors to disassemble and recycle their houses

scale house shows real
materials that would be
used for actual construction


Imagine a future in which you can pack up your house and take it with you.
DESIGN FOR DISASSEMBLY is what can make all this possible
530 million tons of DEMOLITION WASTE is created in the US each
INTERIOR
FOUNDATION