

# Next Generation Prize

North America  
Temporary festival structure using recyclable building components

Providence, Rhode Island  
United States

Authors  
David Getty  
Stephanie Getty  
Matthew Jacobs

For one week each fall, in celebration of the Jewish holiday of Sukkot, elemental and temporary festival structures are built in alleys, yards, rooftops and balconies all across the globe. For the duration of the holiday the pious use these structures as a sacred space in which to share meals, entertain, sleep, meditate and rejoice. In 2010, an open architectural competition was announced challenging participants to rethink and re-imagine what is not only a long standing religious phenomena but one of the oldest ongoing building traditions. Our winning scheme was 1 of 650 entries submitted representing over 40 different countries. In September of 2010 we, along with 11 other teams, constructed and displayed our sukkahs in Union Square Park in New York City.

When the custom was in its infancy, sometime around 800 BCE, the concept was simple; to erect and live in a temporary "booth" or sukkah, with at least two and a half walls that enclosed enough space for at least one person (preferably many), and have a roof constructed of organic materials that can shield the inhabitant(s) from the sun by day and focus their gaze on the heavens by night.

What started as a simple dictate has evolved into complex and at times legalistic "building codes" that range from the practical, the structure should be built to withstand the wind, to others as seemingly unbelievable as those in Hammurabi's Code. While the rules have nothing to do with limb-for-a-limb or a life-for-a-life they do dictate which animals, both living and dead, the structure can be built with or upon. The structure can be built on a camel's back or walled in by live elephants or even recently deceased whales. Nearly every aspect of the structures siting, size, program, materials and structural properties have been delineated. Constraints that at first may seem ridiculous take on new meaning when considered in the context from which they came. For travelers of yore, accustomed to traversing the desert on quasi-architectural camel saddles or in mounted palanquins, the consideration of whether it was permissible to build a sukkah on camel's back seems less absurd. (As for the dead whale, we have not been able to rationalize that.) But, what the fantastical rules clearly demonstrate and encourage is resourcefulness; a critically relevant theme for Architects and building practitioners today. Whether it is a camel, a stand of reeds, or a nearby lumberyard, building with what is readily available is often most efficient and is a self reflexive gesture of thanksgiving for what material possessions one does have.

Ostensibly built to stand for only seven days the structures truly exist as part of a 3000 year continuum; no other act of architecture is so temporary and so permanent, so new and so ancient. The traditions strength is built on these and similarly paradoxical concepts. The original intent was to commemorate and recall the structures the Israelites built while wandering in the wilderness during the Exodus from Egypt. Today the focus is less on the recollection of an event, but dwelling on and in the underlying and often contradictory ideas of transience and permanence, past and future, mobility and rootedness, vulnerability and security. The holiday is a time to ceremoniously practice homelessness. For us and the rest of the architects and designers in the competition, regardless of religious conviction, the design of a sukkah offered a rich environment to explore and experiment with concepts critical to the discipline; albeit ones rarely addressed in typical architectural projects.

Our entry into the project was through the materials, not only because much of our architectural interests lie there, but because, of the long list of esoteric rules surrounding the sukkah, the majority deal with material properties. Of those, the most salient deal with the specific features of the roof. Practically, the roof is required to shade the inhabitants from the sun without blocking a view to the stars. Symbolically the roof mediates the relationship between the inhabitant and the heavens. The threshold between the self and the cosmos requires a porosity that both protects and

exposes. To accomplish this, custom dictates that the roof be an aggregate of individual modules of organic material or Schach, not to exceed four handbreadths (14-16 inches) in width. Befitting a structure rife with contradiction, the material had to be simultaneously substantial and diminutive.



The concept of using shims as a complete structure began in jest while working on another project that required excessive quantities of the scrap wood wedges leading us to jokingly consider the possibility of building a whole structure out of them. Shims are one of the most ubiquitous materials on any job site or workshop and unsurprisingly we had some lying around while experimenting with possible sukkah construction materials. This most plebeian material when considered a primary building block rather than a means of correcting construction mistakes took on new meaning and relevance in the context of the sukkah requirements. Over the length of the shim (approximately four handbreadths) it tapers from a 1/4" to nothing thus fulfilling the dimensional and many conceptual requirements. After multiple experiments we found that by alternating and overlapping the thick portion of the shim we could create a straight column with the narrow ends fingering outward, tapering to nothing. When combined, the units could create the floor, walls and roof creating a practical and poetic scrim. While the individual shims remained recognizable, in aggregate the 10,000 scrap-wood wedges created a structure with unique spatial qualities and embodied many of concepts that before seemed too contradictory to manifest in physical form. The affect the material and the building system had on the space created an atmosphere that supported and enlivened the program. Hours before we were to remove the structure from Union Square our team gathered in the sukkah, as is customary, to share a meal. Despite the frantic hustle outside, the rich scent of cedar and the rhythmic play of light across the undulating surfaces created a sense of intimacy in our booth just steps from Park Avenue.

Sukkah building is first and foremost a communal activity; an architectural endeavor meant to unite families, friends and strangers through a common act of construction. Over the course of one weekend a quarter of a million people passed through the Union Square and what we heard and saw was inspiring. We met people, much like ourselves, who prior to the competition knew little or nothing at all about sukkahs and we also met those who have never known a time without them and both found inspiration and common ground amongst the structures. The sukkahs' became many things to many different people. We saw zealots proselytizing, rabbis teaching, detractors protesting, opportunists pedaling watches, black spectacled onlookers discussing Miesian principles, but most importantly we saw people of all ages, races and creeds reaching out, seeking a better understanding of the architectural, religious and societal significance behind the sukkahs. Just as the individual sukkah is a framework for religious practice the competition became a stage for public dialogue on religious, social and environmental issues.

As Architects, builders and citizens we understand homelessness and vulnerability are more than just themes; they are reality for millions of people across the globe. Union Square Park is by day one of the busiest squares in Manhattan and by night a haven for transient and homeless populations. Before the two day public exhibition came to a close our sukkah had been sold with proceeds donated to a New York City organization that provides support and advocacy for the cities' homeless as well as those in disaster stricken Haiti. At 8x8 (ft) our sukkah is ninety-four percent smaller than the average American home while in most

of the world it would seem spacious even for a small family, facts not lost of many whom we spoke with. Before being transferred to its new owner the sukkah was relocated to a gallery at the American Institute of Architects, Center for Architecture in New York City. The change of venue offered a chance to represent the project in a new context. To those in the building profession the concept of using the humble shim as module for construction was all the more radical. As an Architectural exhibition the focus was largely on the spatial qualities created by the shim system. For three months it provided a quiet space for staff and visitors to meet, eat, and talk before being moved and erected permanently in a private backyard.

Six months after we settled the sukkah into its permanent home we began the application process for The North American Holcim Awards. The requirements of the application required us to consider and concretise the many notions of sustainability we directly or indirectly addressed and incorporated in the design and construction of sukkah. While the system was developed specifically for the sukkah structure the ideas are applicable to a range of architectural issues. Inspired by the resourcefulness of the camel-back sukkah builders, we sought to redefine a common material. Inexpensive, durable and made from waste products, the cedar shims system we developed can create micro climactic conditions inside the structure that can mitigate dramatic temperature fluctuations. Within 64 square feet of wall the stacks of shims exposed 650 square ft of surface area (a 900% increase over traditional wall) which hygroscopically produced cooler temperatures during the midday sun and warmer temperatures when the stars were above. We found this to mark a specific trajectory of material practice that could be developed further to reduce heating and cooling demands within the built environment.

Like the wandering Israelites, our sukkah construction marked a time of transition. On the cusp between our academic training and professional practice we built then assembled, disassembled and transported the sukkah between four separate sites in three states. Along the way the structure was scrutinized by our peers, professors, rabbis, and practicing Architects. Each offered nuanced insights grounded in their unique vantage point allowing us to adjust our trajectory and enhance the subsequent iterations. The project confirmed and solidified our creative process, our commitment to craft, our interests in materiality, building systems, and a belief that any building, tradition or technology can be reimagined, renewed and restructured to meet the changing needs of its inhabitants and the social, economic and ecological environment.

As Winston Churchill Said, "First we shape our buildings, then they shape us." The project offered a unique opportunity for us as students and young professional to translate our ideas into built form. The experience allowed us to test and distill a new form of material practice that will continue to shape our work. Ultimately we recognize that innovation lies in the ability to rethink and re-imagine current and past ideologies. Sustainability as a practice is at the forefront of architectural discourse and akin to the sukkah; it is an iterative process that evolves over time. The knowledge gained, however incremental, should be shared collectively as a means to progress our common beliefs and impact not only ours, but future generations.