



OUTSIDE-IN
Heritage Museums and Gardens



OUTSIDE-IN

Outside-In is a winning proposal for the Secret Shelters Exhibition at the Heritage Museum and Gardens in Sandwich, MA, installed for the summer of 2015 by IKD, a design firm based in Cambridge, MA operating at the intersection of art, architecture, material, and making.

Inverting the traditional relationship of a typical tree bench, where one sits with their back to the tree, *Outside-In* instead refocuses the viewer's attention toward the Heritage's cherished tulip tree, creating an intimate space between the viewer and what is being viewed.

Outside-In inverts our usual experience of wood construction. One of the tree's most recognizable characteristics, the bark, remains visible but is rotated to face inward in the same fashion as the orientation of the installation. The "outside-in" configuration of the bark allows for the utilization of the already cut edge of the waste slab to create the finished edge of each TwMU, or Timber waste Modular Unit (patent pending).

Outside-In was created entirely from waste resulting from the manufacturing and processing of commercial timber products. Waste wood trimmed from logs in the normal milling process as they are rough sawn into lumber, is then cut, rotated, and reassembled to form *Outside-In*'s basic structural unit.

Traditionally when a tree is processed into building material, approximately 38% of the processed log is waste that is then used in the creation of low-quality secondary wood products. TwMU aspires to maximize this renewable resource and divert this waste material, instead upcycling it into a viable building product, with the added benefit of locking additional atmospheric carbon within the fibers of the material rather than allowing its re-release into the environment.

ikd

Team Leader
Yugon Kim

Team Members
Yuki Kawae
Steven Hien
Tomomi Itakura

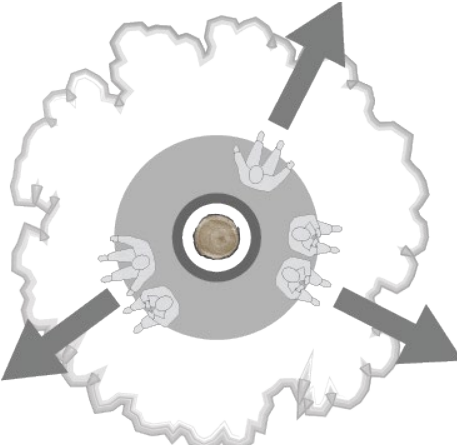
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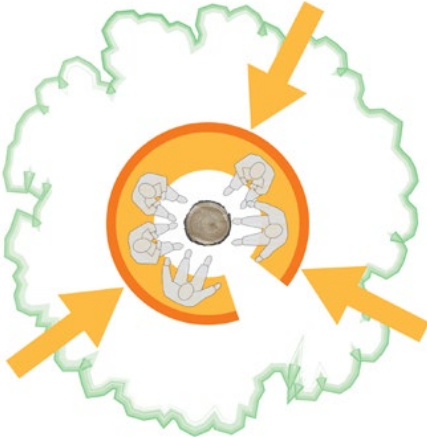
OUTSIDE-IN CONCEPT



TRADITIONAL BENCH
Seating faces OUT



OUTSIDE-IN
Seating faces IN





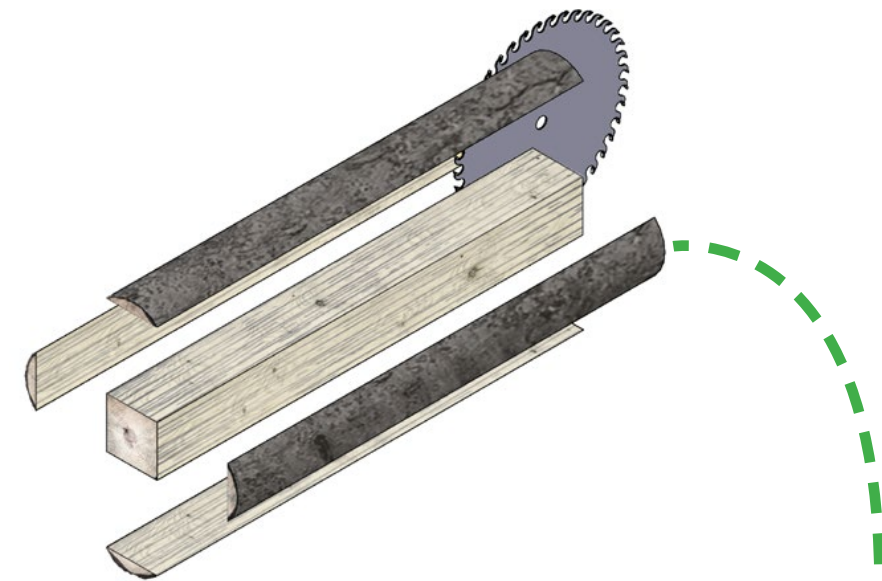


OUTSIDE-IN CONSTRUCTION

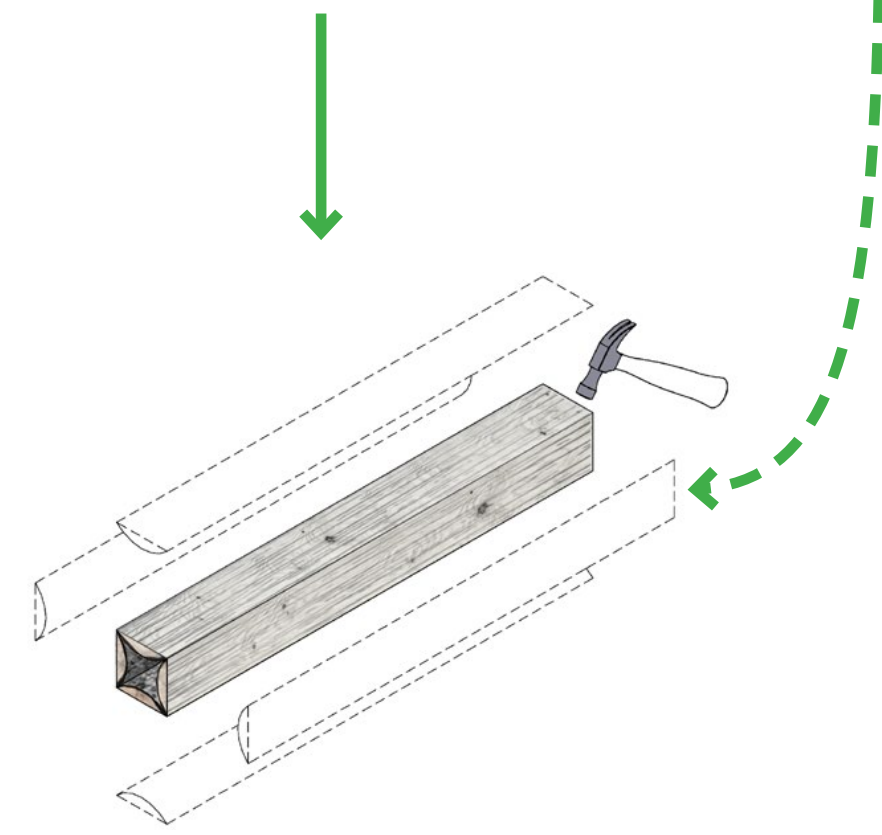
TwMU (Timber waste Modular Units)[™] CONCEPT patent pending

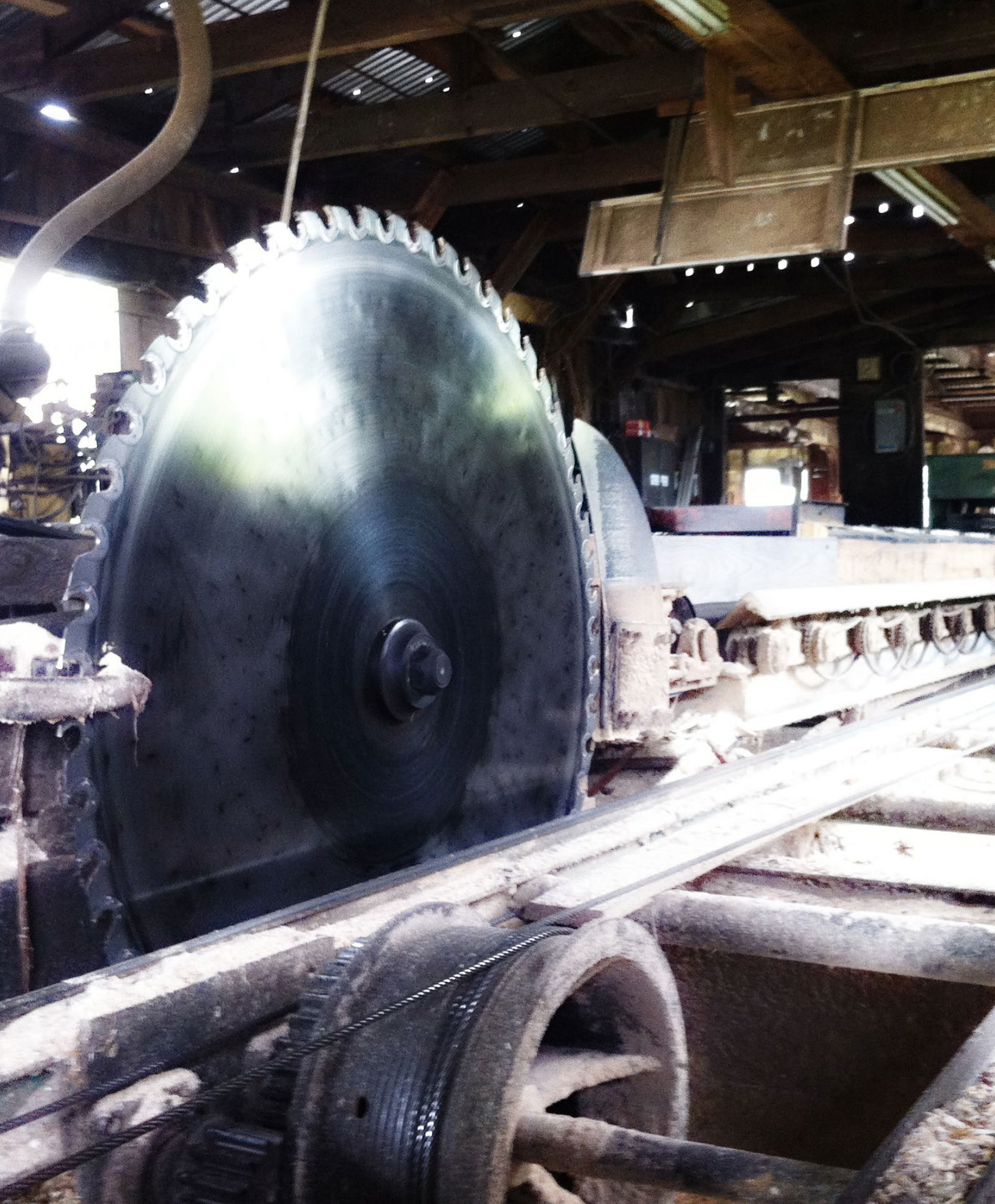


WASTE FROM PROCESSED LOG
Bark faces OUT

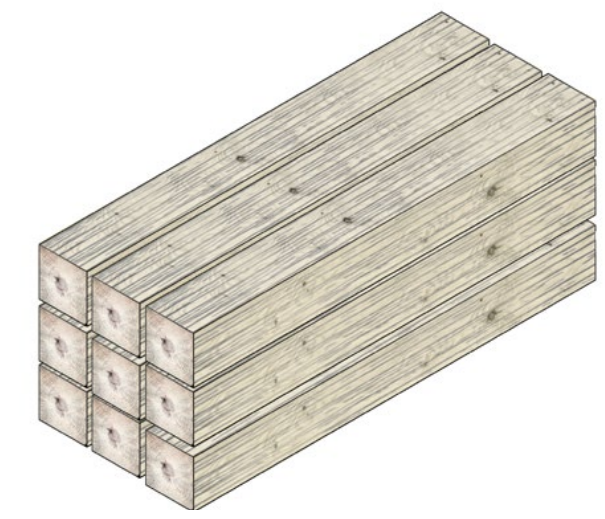
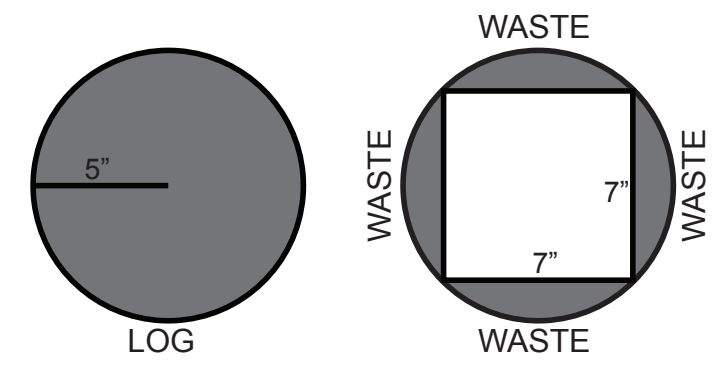


TwMU[™]
Bark faces IN





UPCYCLING WASTE



TIMBER



WASTE

The operation of making structures from waste is a process critical to the economical mass production of buildings and the long-term health of our planet. The processing of wood into lumber results in substantial waste. Roughly 38% of a processed log is waste and not used for building material. TwMU is an investigation on how to utilize this abundant but unused resource in a new modular format currently not available with timber.

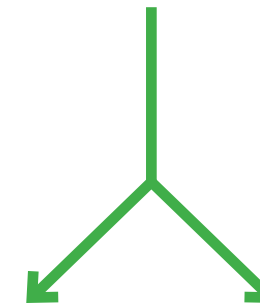


EFFICIENT DESIGN



MAXIMIZING RAW MATERIAL RESOURCES

The development of TwMU increases the material output of a tree by two times, resulting in a more efficient utilization of the resource, a necessity in material production as raw resources are becoming more scarce.



LOW EMBODIED ENERGY

Utilizing the shared cut edge in the processing of traditional dimensional timber to create the finished edge of TwMU results in less energy required in the creation of the product.

FABRICATION PROCESS







SUPPORT:

HERITAGE
museums & gardens

Windy Hill Farm
RI SawMill



Artisan's
ASYLUM