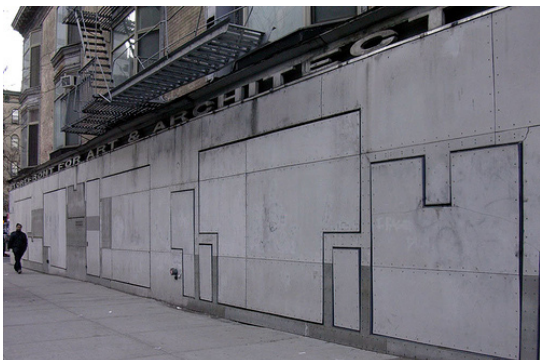
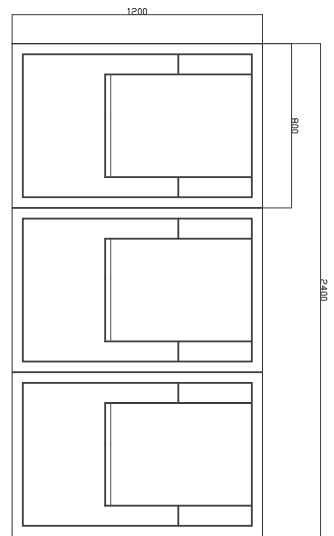




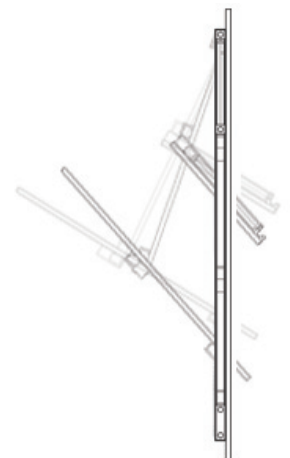
The OFS Hotseat 3 chair design competition allowed for design exploration at an intimate and tactile scale with focus on detailing as well as usability. The competition guidelines required that wood be used as the primary material in order to achieve an aesthetic and innovative product able to balance functionality with versatility while maintaining sensitivity to environmental sustainability. Also under consideration was the application of technology into design and production to allow for large scale manufacturing.

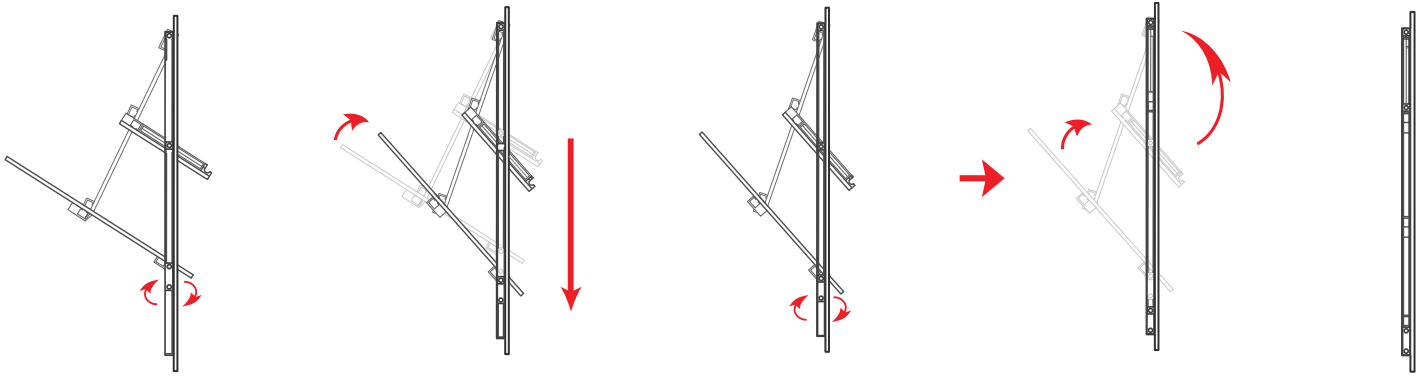


Early design ideas focused on reduction of waste in manufacturing. Although thought was given to the idea of using recycled materials it was determined that more benefit could be gained through maximizing standard materials already in production. This gave light to an idea about transforming a single piece of a material into something that could provide flexibility and functionality. Inspiration came in the form of Steven Holl's New York Storefront, an architectural precedent. Simple rotations of wall segments opens the entire storefront wall engaging the street with thresholds at varying heights and opening on varying axis allows a range of different functions to be served. Light transmission, counter space and physical passage all become possible through very simple mechanics. With this project as precedent it became evident that for the chair to be a success it would need to fully capitalize on the potential of minimal cuts to a standard piece of plywood. This strategy allowed for three chairs to be created from one standard sheet of 4'x8' plywood cut quickly and accurately with a precision bed CNC router, reducing costs all around, a great selling point for mass manufacture.



The chairs mechanics revolve around a simple premise of every junction either sliding or pivoting. These joints come together to create a system, where when any single member is moved that movement is carried throughout the rest of the chair. In order to lock this system in any given place along its range of motion a dowel under the seat must be rotated. This dowel has bolt ends on either side that feed into nuts trapped within slots on the side of the chair. Thus turning the dowel tightens the bolt member creating friction, which seizes the system. The placement of this element was a matter of discussion as it determines whether the chair can be operated from the seated position. The final placement was deemed the best for operability, as a person is able to lift their weight off the seat while turning the dowel to such a degree that motion is possible without the complete collapse of the system.



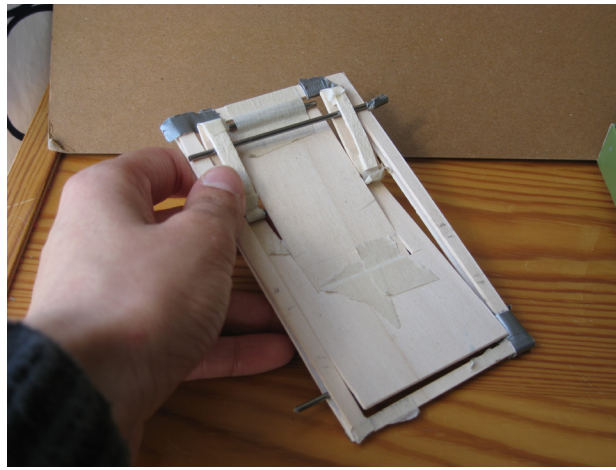
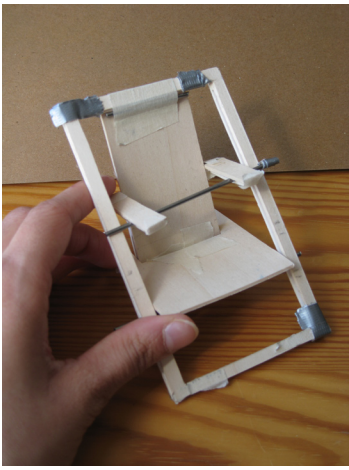


It was obvious that the capability of this chair to collapse into a flat plane created storage benefits and ease of transportation. For this reason the chair was refined into a deck chair. The deck chair was originally designed for cruise ships in order to provide guests with comfortable seating that could be easily stowed away when not in use. The deck chair is now a staple commodity at hotels and resorts as well as cruise ships. This was therefore the target market.

With a focus as to the market for the chair further exploration could occur in terms of the design. Features such as sitting low to the ground in order to be able to rest your drink down, having a range of motions from reclined to upright in order to allow people to relax or just converse and enjoy the scenery, as well as worrying about how materials would react and feel as a result of extended sun exposure.







An element to the design which was never fully realized was the incorporation of a breathable fabric that would stretch into a tensile form when the chair was in the open position. This would work by having the fabric attached to the end of the seat as well as the top of the back support, while having certain critical points tied to the deepest part of the seat. This would not only create a more ergonomic form for the comfort of the occupant but would also allow an airspace between the person and the chair. This would allow adequate ventilation to stop the sticking of skin to the chair as well as helping to keep the seat cool and comfortable in the warmth of the sun. Ventilation is common in deck and lounge chair design however is usually achieved through perforations in the back and seat of the chair. One benefit to the use of fabric would be the flexibility of the material to stretch while the chair is in the closed position, while from the tactile experience the feeling of fabric is more comfortable for lounging than a solid material. The use of this tensile fabric would be an addition to the chair easily attached or removed, this would allow for ease of cleaning as well as the possibility of personalization for hotels or cruise ships that could print their logo onto the fabric.

Detailing for the chair was intended to reflect its minimal massing strategy in an attempt to create an elegant and simple looking chair that was able to achieve a full range of flexibility and comfort through the complexity of an easy to use mechanism.

