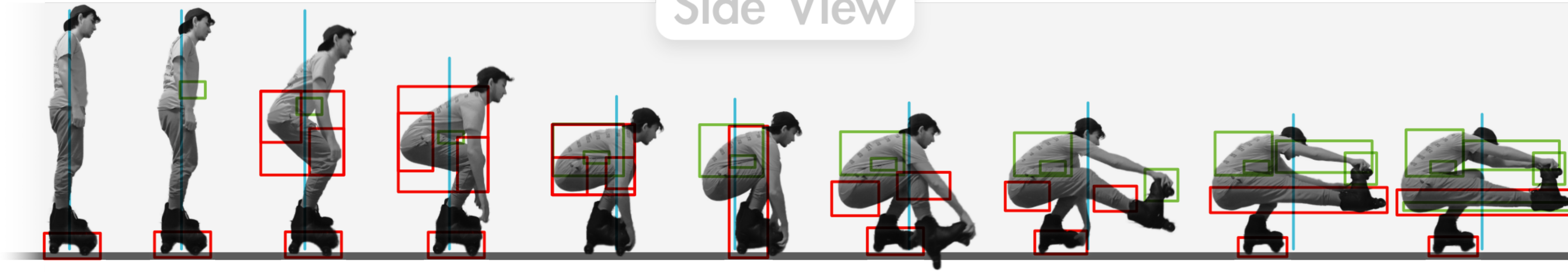
Spatial Bodies in Motion

"Rolled Flat"

"Shoot the Duck"

Side View



Elements

Weight Points

Areas where weight is being "put on" to create the base balance, as powered by gravity

+

Tension Points

Areas where tension is used to suspend body parts in higher planes to support lower, typically suspended, parts

=

Center of Gravity

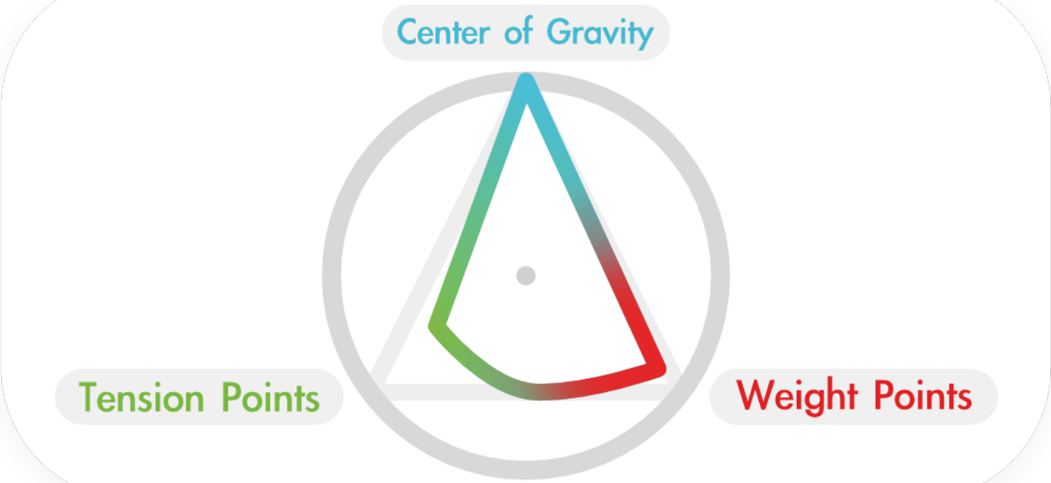
The conceptual vertical line that acts as the datum for which tension and weight are balanced around, but not necessarily symmetrical

"Shoot the Duck"

Elemental Strengths

Interaction

Notice how the weight element isn't maxed out. That's because there's an aspect of "lightness" where you push/lift your weight off the ground via tension and vertical expansion. This helps establish a balanced center of gravity by equalizing your gravity-pulled weight distribution.



Note Each white ● in the left corner of each depth box signifies that the box in question is ●(3") deep

"Shoot the Duck"

Box Warehouse

Selection Process

Elemental boundaries and depth are the two umbrella aspects of what compose the motion boxes. With the "Shoot the Duck" activity in question, many motion boxes translate over layers of frames, and thus there is a redundancy of repetition that needs to be eliminated.

Here's a simple breakdown on what qualifies a box to be included in the final composition:

› Motion boxes that are found in only one instance are automatically included for the final

› Motion boxes that are found in multiple instances sustain the following conditions:

- The first and last motion boxes of a series are automatically included for the final
- All motion boxes found in the middle of the series are excluded unless their depth value deviates from the end motion boxes by a value of one full circle or greater
- If a series contains three or less motion boxes and their depth values have a difference of half of circle or less, one box may be chosen to represent the series in place of the two end points and any potential middle points.

"Shoot the Duck"

Box Warehouse

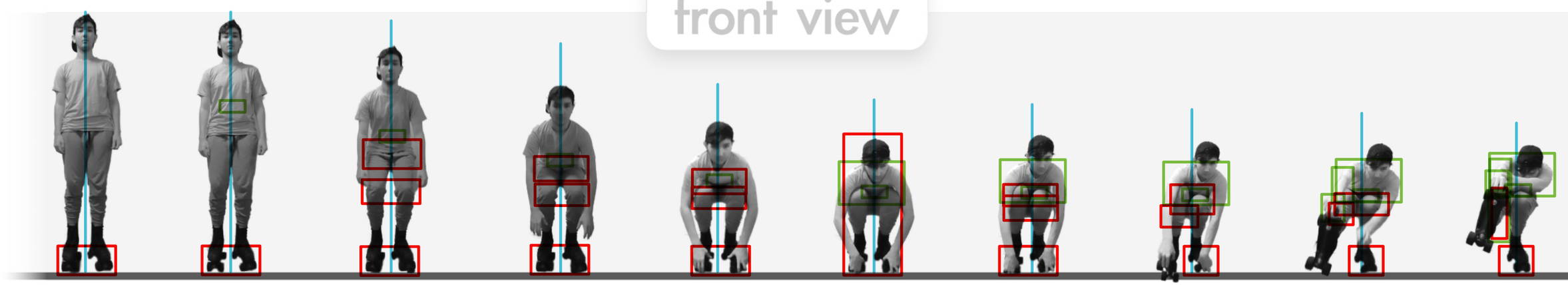
Size Matters

The front view graphics below provide additional depth insight of the three elements that comprise this roller skate trick, the majority of which translate over to this view 1:1.

Without the wheels though, skates are useless! They are the essential to having this trick work, and thus the average front view width of any given wheel was used to generate the scaling of this environment in a proportional manner.

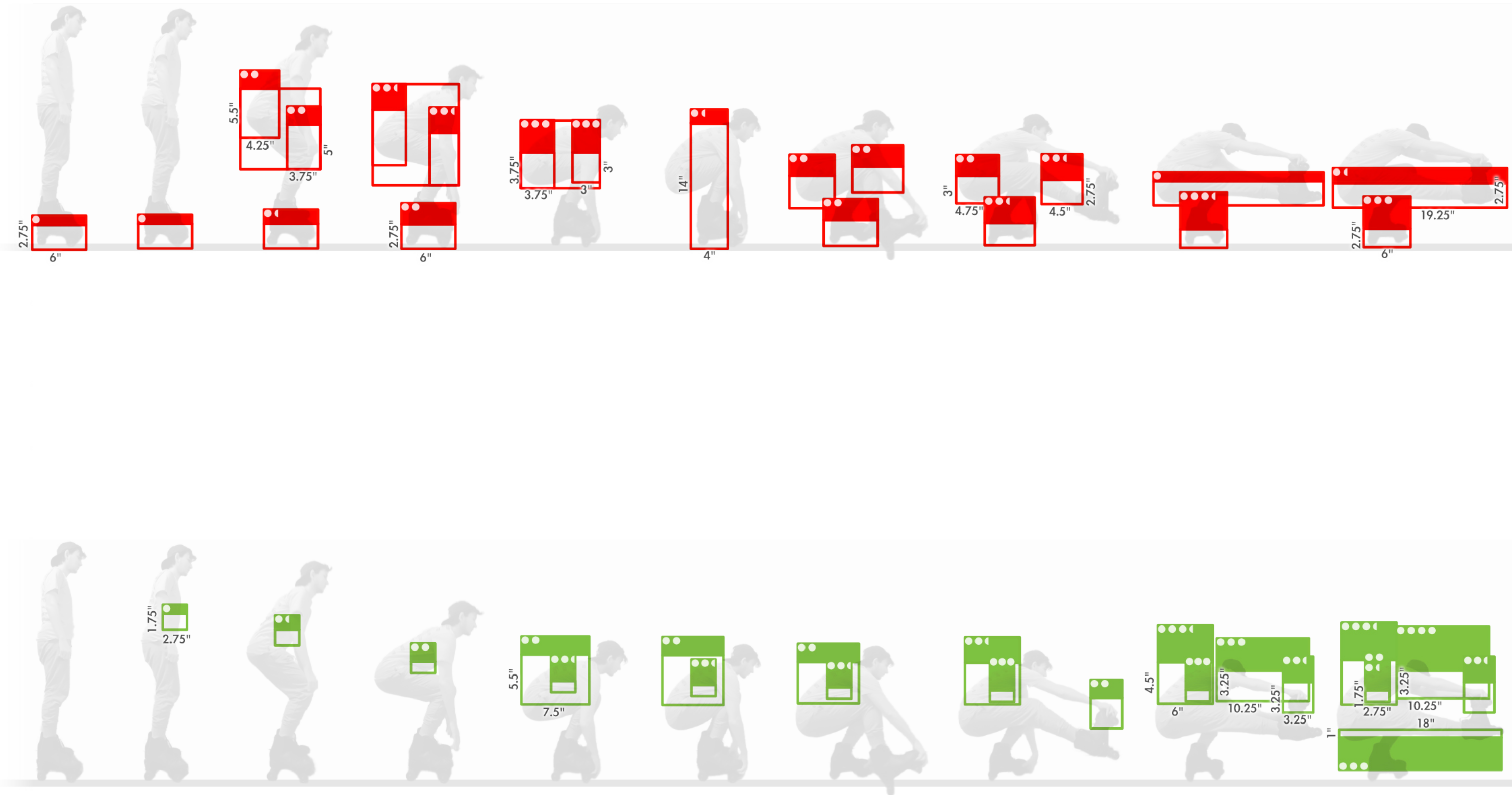
Each wheel is ~0.093 pixels wide. The width and height of each box, which are proportionally marked by the amount of physically visible or conceptually visible area they take up, were then divided by this value to achieve the balanced volumes of each of the hollow motion boxes.

front view



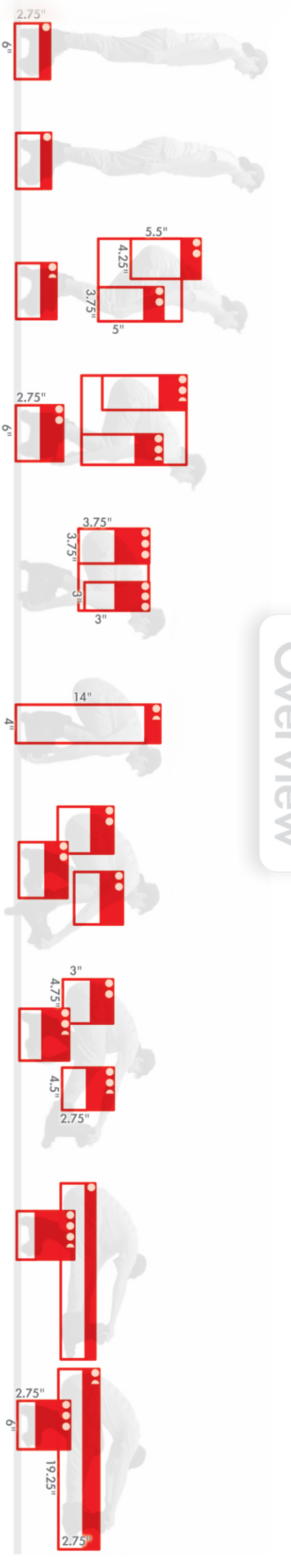
Box Warehouse

"Shoot the Duck"



"Shoot the Duck"

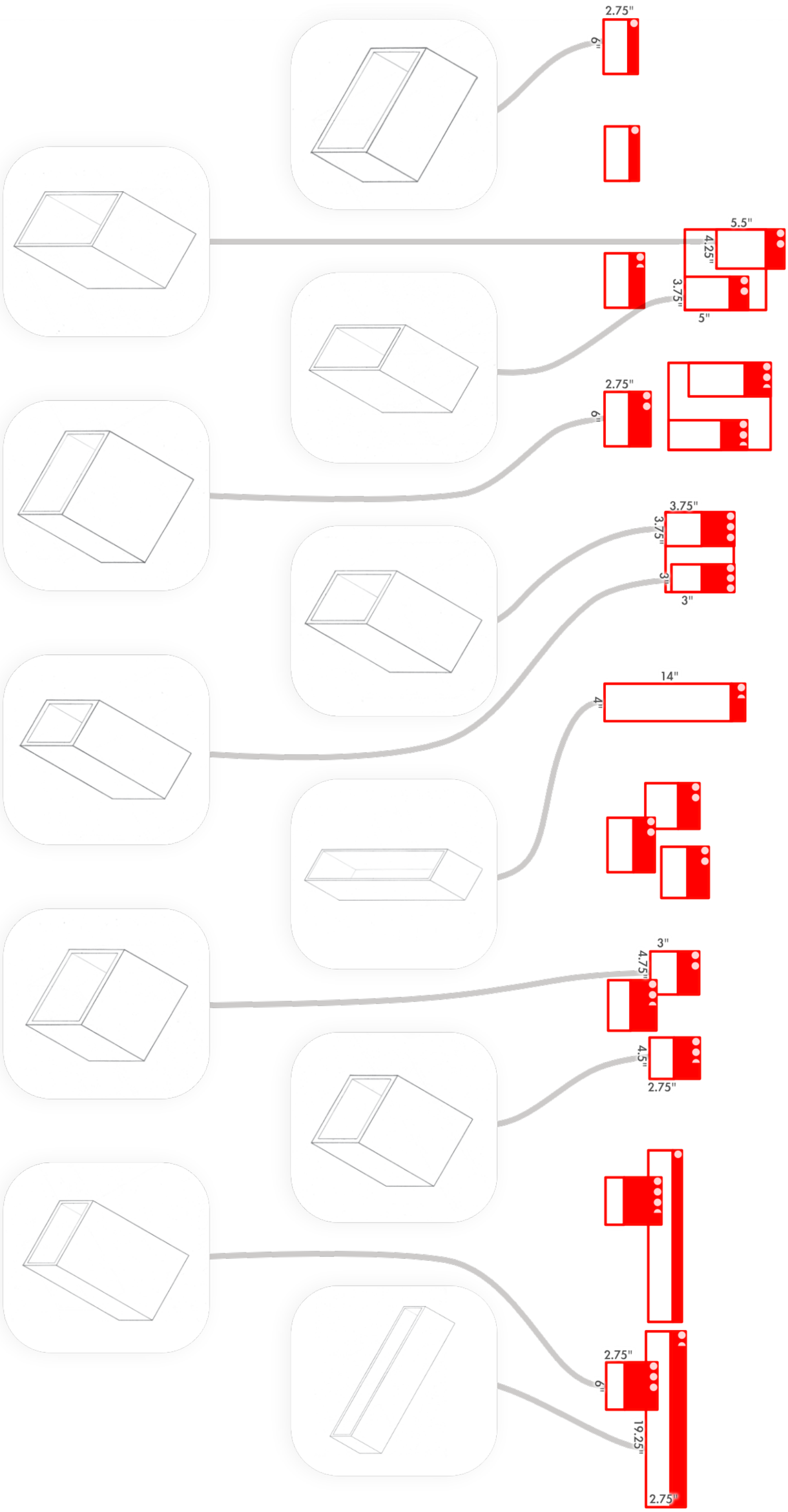
Series



Overview

Weight Boxes

"Shoot the Duck"

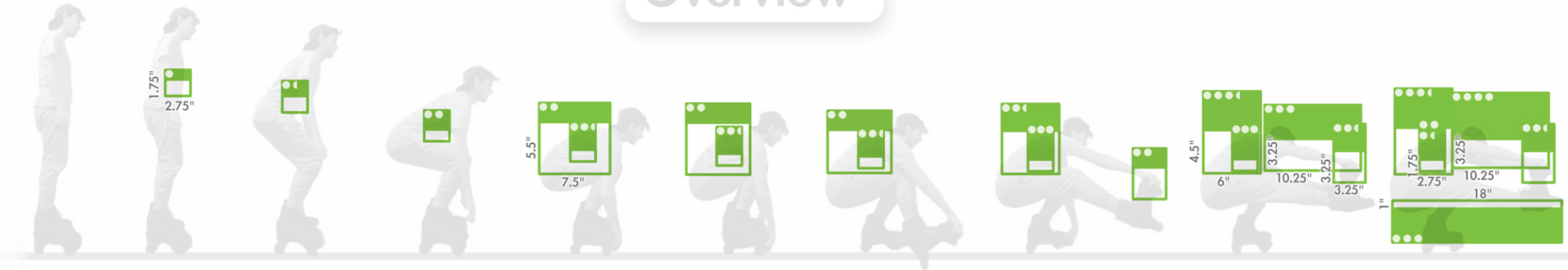


Weight Boxes

"Shoot the Duck"

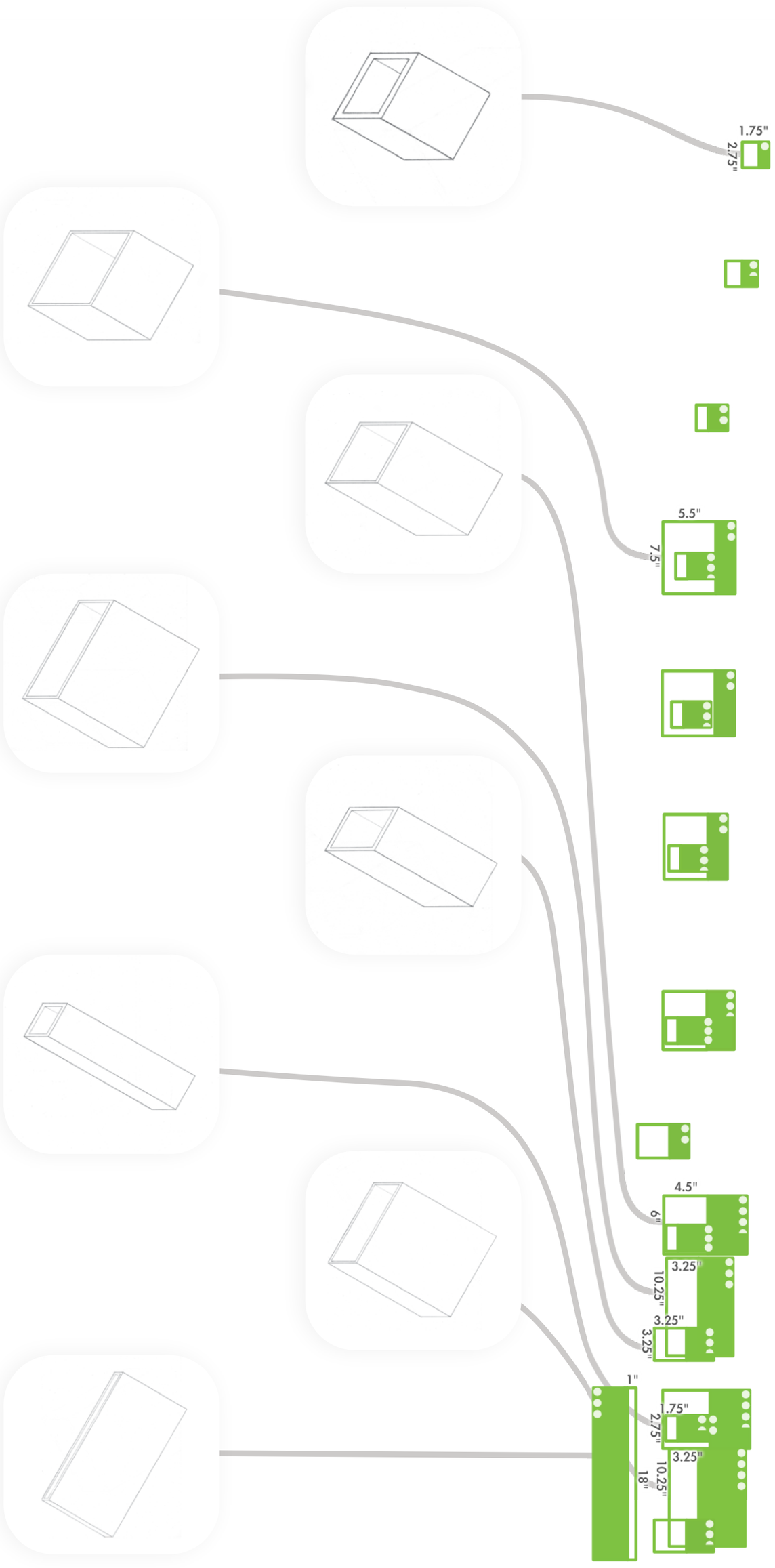
Tension Boxes

Overview



Series

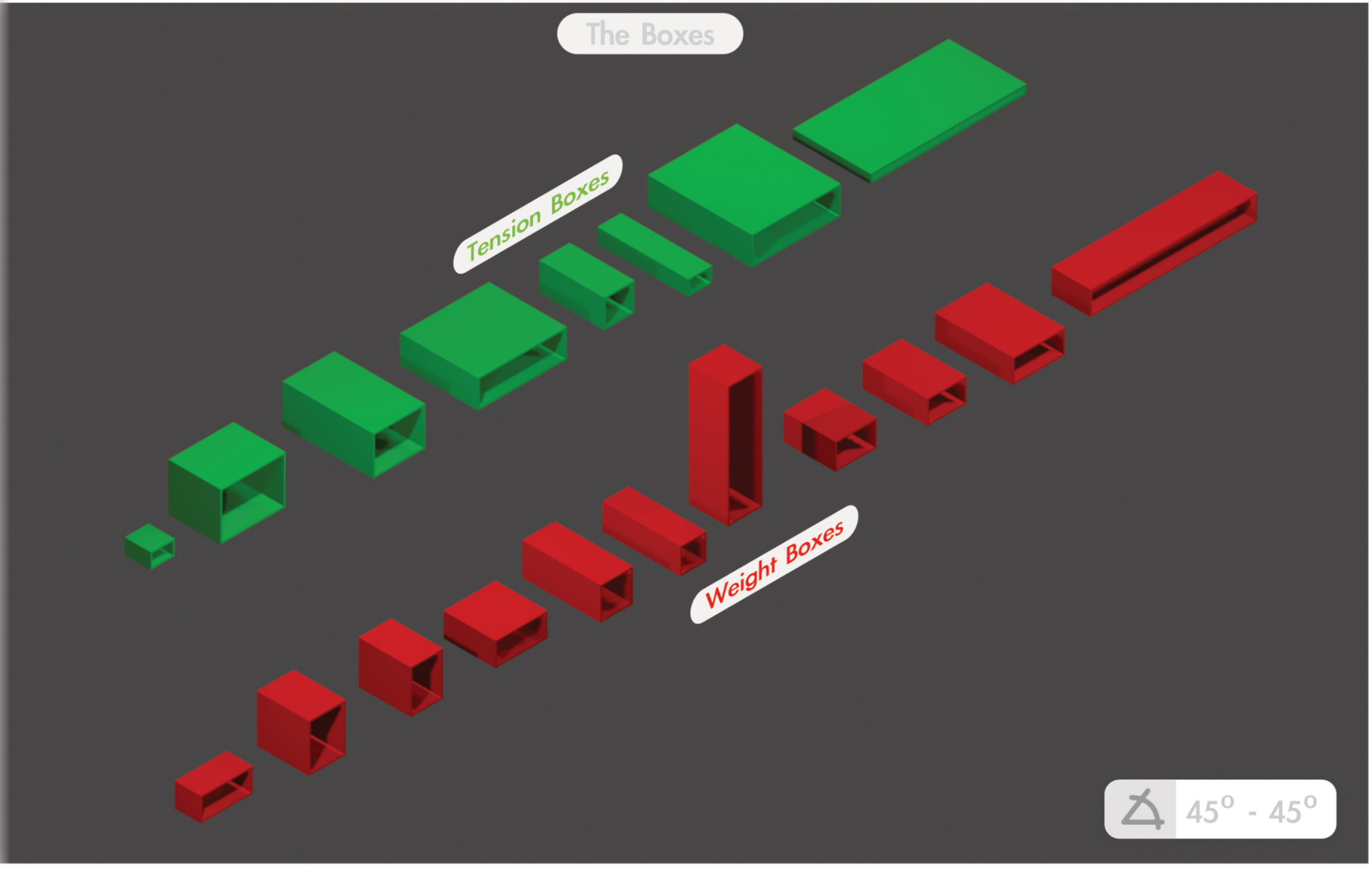
"Shoot the Duck"



Tension Boxes

"Shoot the Duck"

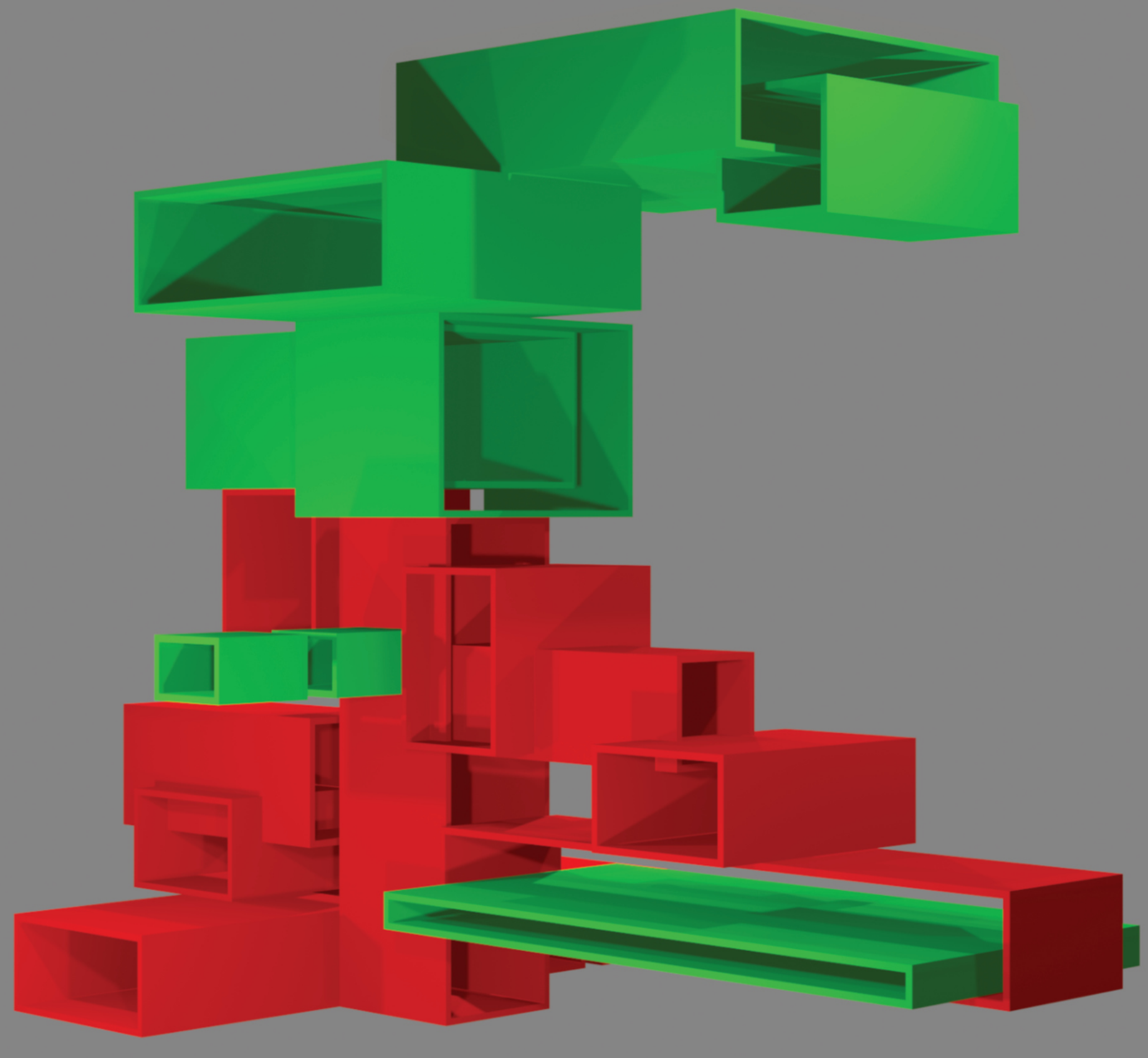
Box Warehouse



"Shoot the Duck"

Virtualization

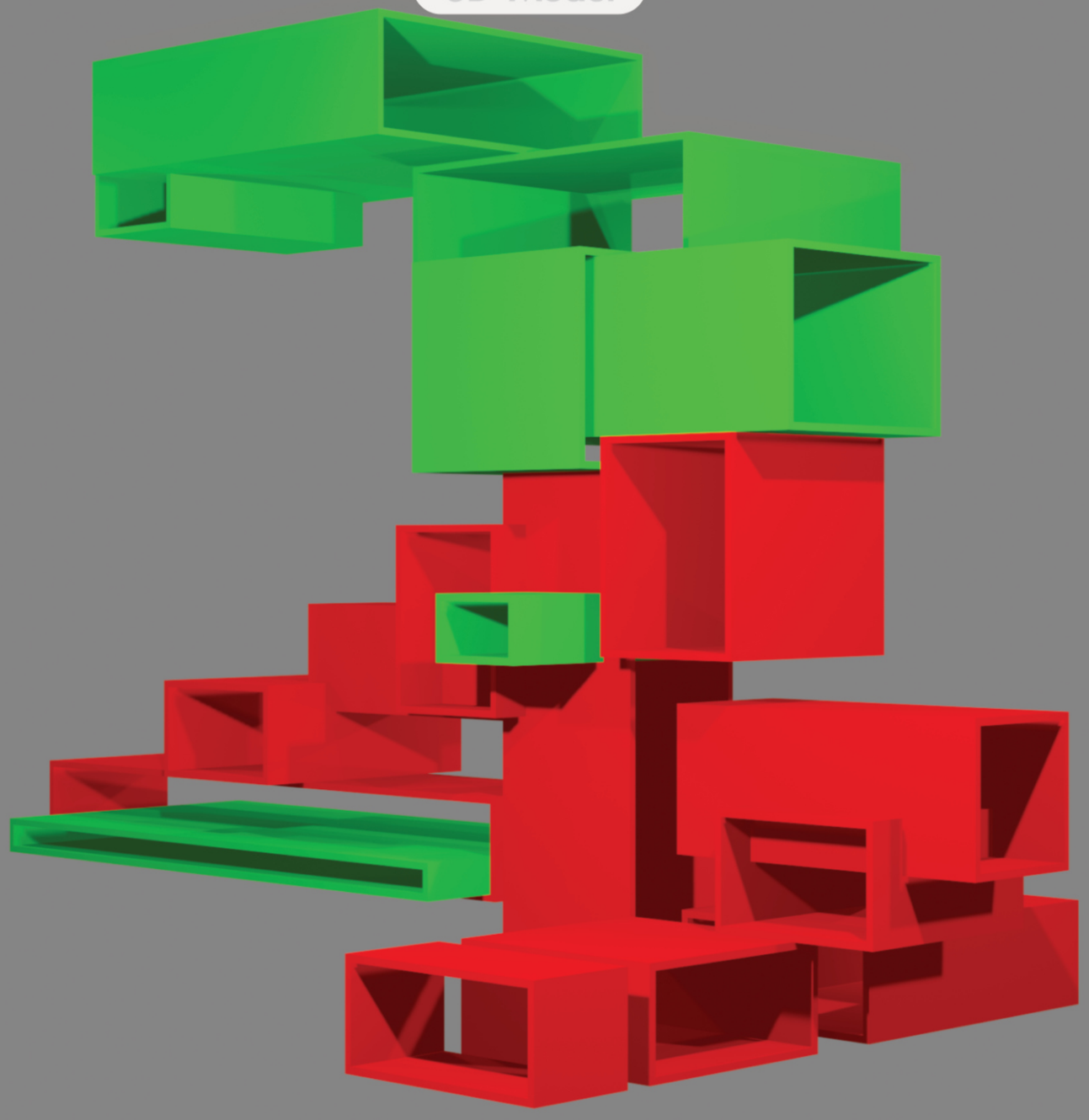
3D Model



"Shoot the Duck"

Virtualization

3D Model



"Shoot the Duck"

Virtualization

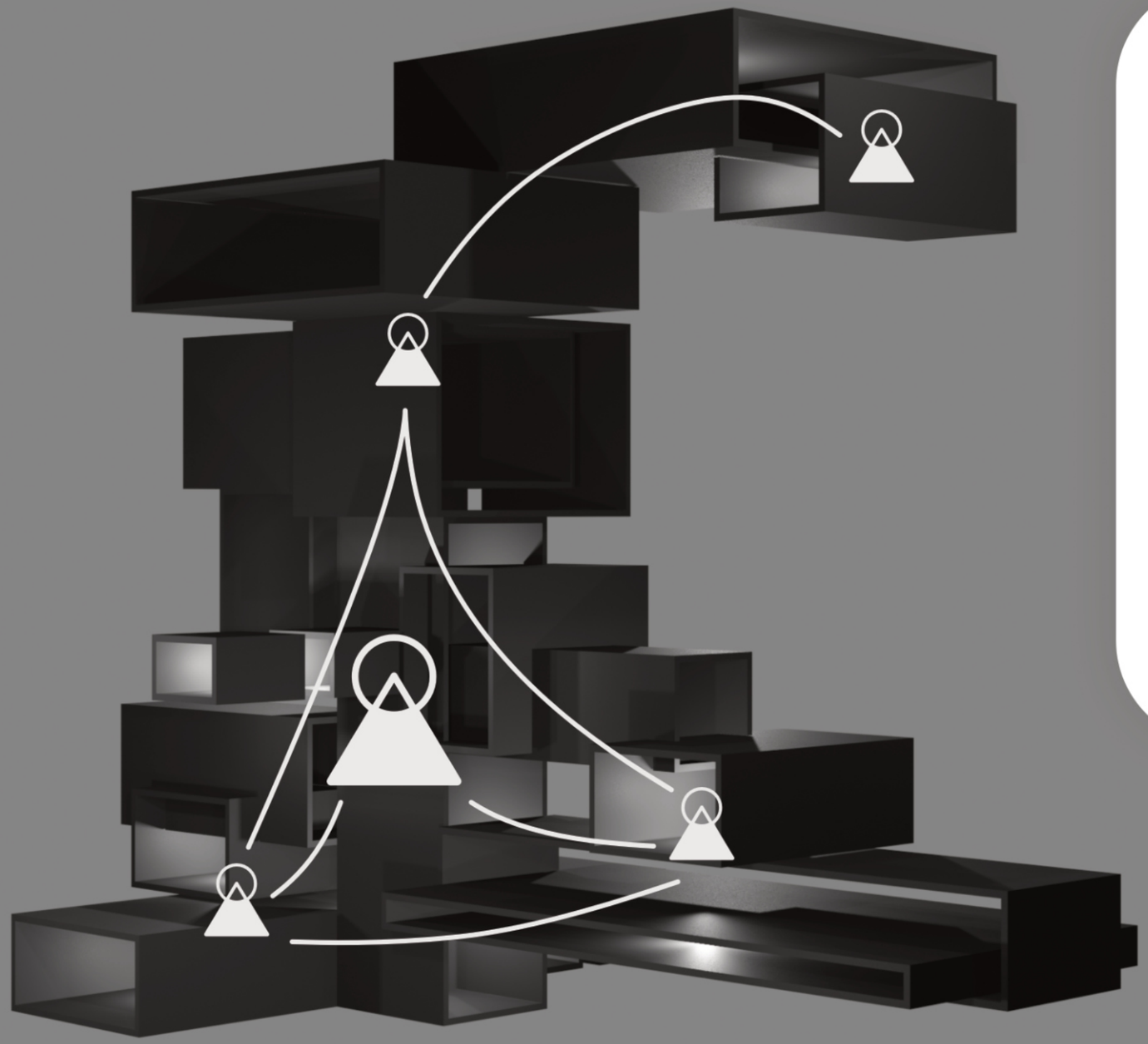
3D Model

Foam Core

"Shoot the Duck"

Key Points

3D Model



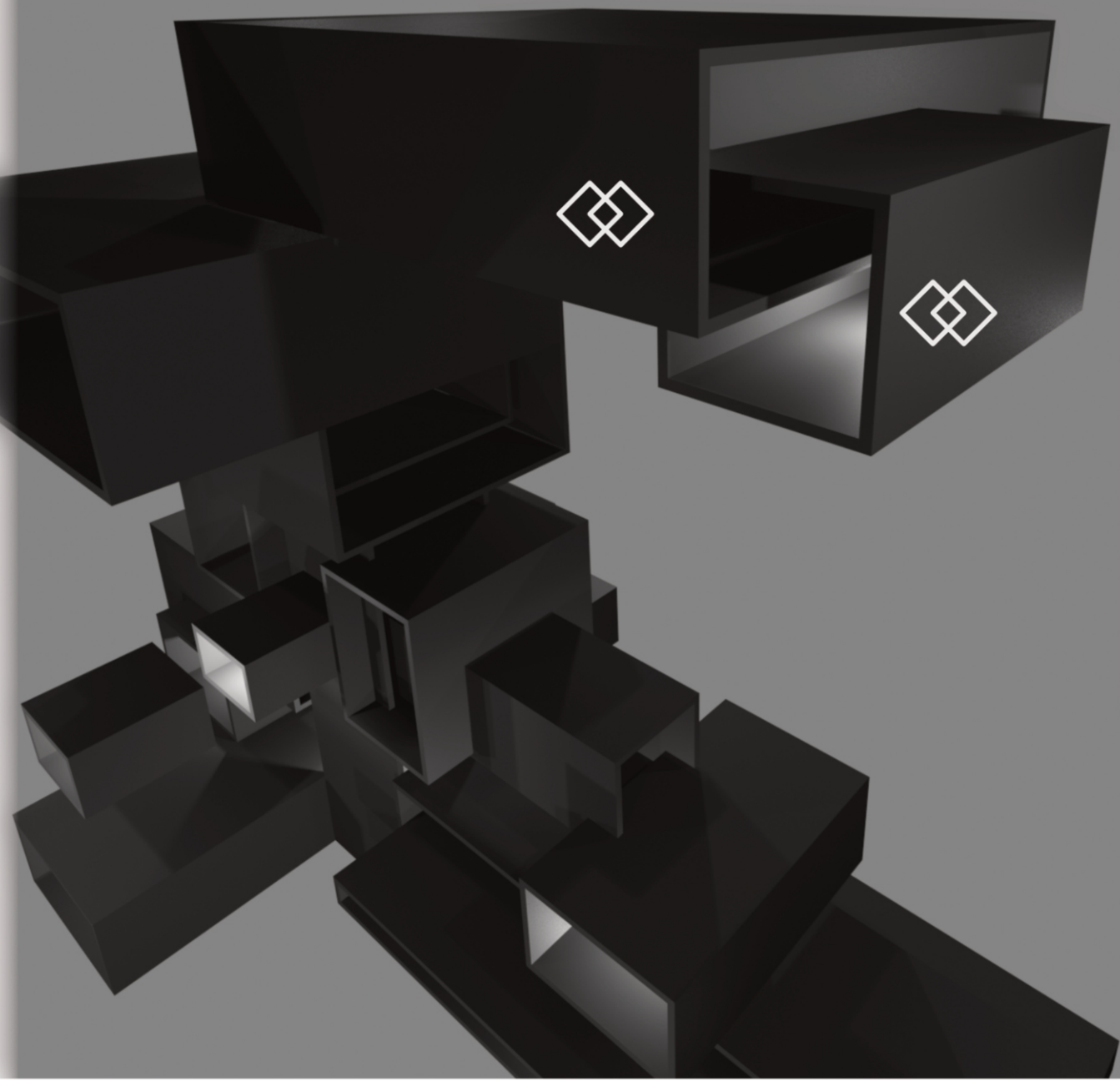
Hierarchy

Your attention should naturally be drawn to first look at the the busy cluster of boxes in the "middle" of the composition. This occurs because there is a lot of visual information located in that region for your eyes and brain to decode.
From there, your eyes should divert either left or right to one of the two focusses, then the opposing focus, and finish at the "hanging peak" by traveling further up and to the left

"Shoot the Duck"

Key Points

3D Model



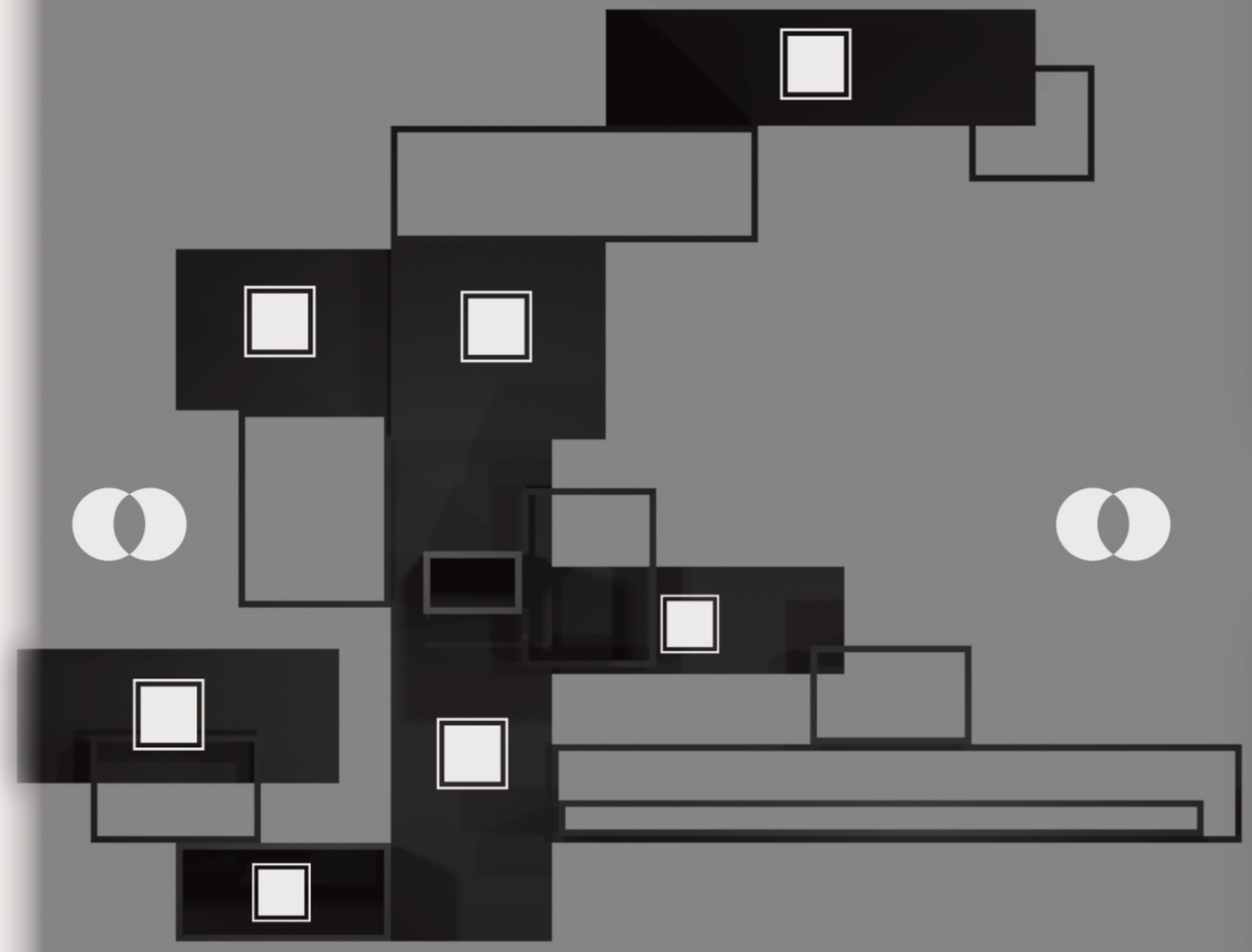
Why the Peak?

The hanging box you see to the right correlates to the tension box of one's hands on the toe stop during the trick, and the box it hangs off of is the corresponding arm tension. Unless you are accustomed to it, if you were to suddenly let go of your toe stop during the final ending position, the built up tension in your arm and hands would rapidly cascade downward, causing your suspended leg to quickly slam to the ground, likely making you fall over, but for sure ruining the trick.

"Shoot the Duck"

Key Points

3D Model



Ortho. Front

Non-highlighted Highlights

By having these seven boxes oriented perpendicular to the twelve remaining ones, they are naturally highlighted against the other seemingly hollow boxes in this view, the previous 45° angle view, and each of their respective corresponding views 180° opposite.

Visual Balance

Even though there are physically more boxes on the designated right side of the composition, the cluster of "highlighted" boxes on the middle to left balance the visual distribution of weight.

"Shoot the Duck"

Key Points

3D Model

Ortho. Top

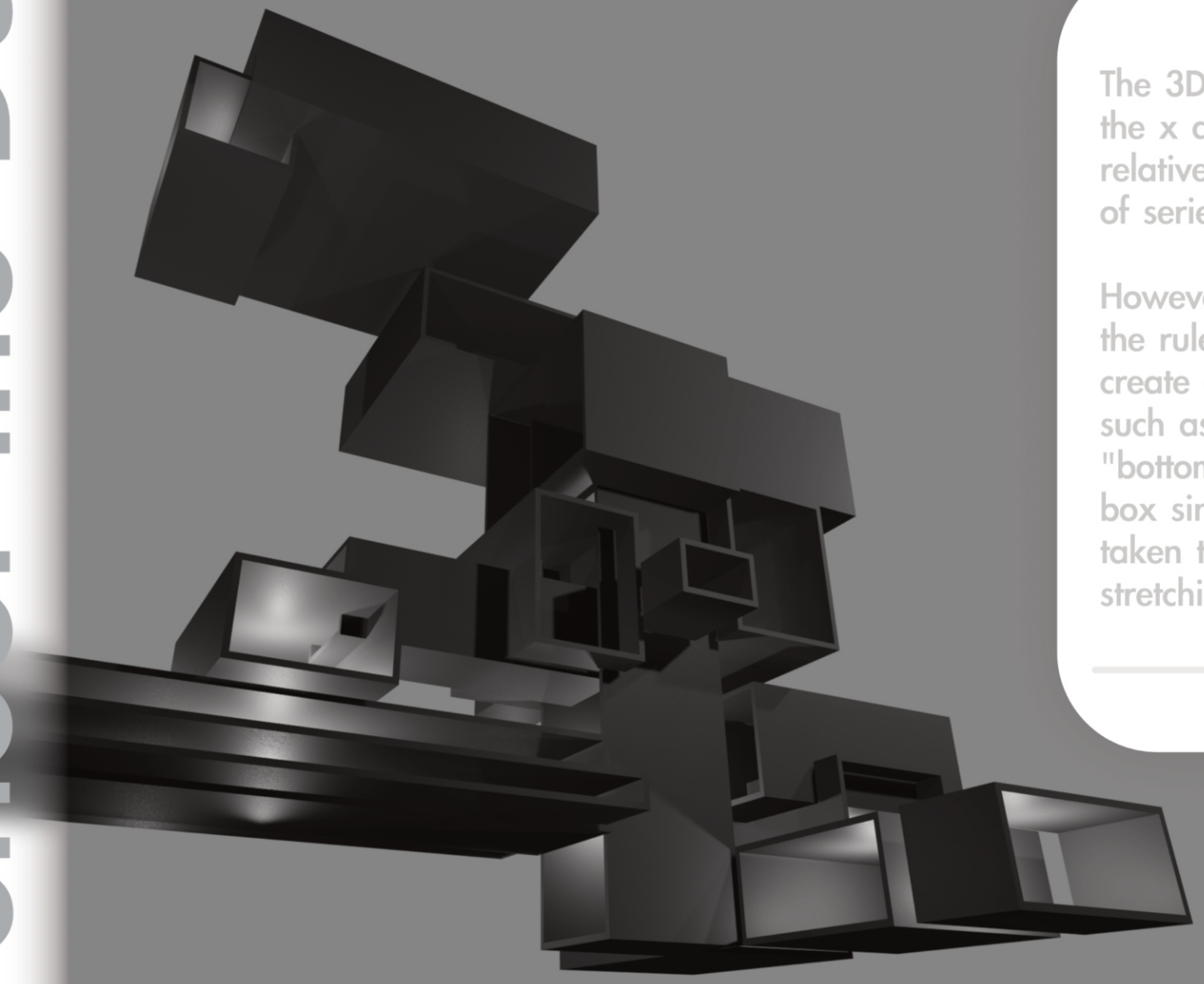
Depth Balance

Overall, the composition is very well-balanced on its y-axis of depth, as the majority of the boxes are based around an imaginary, symmetrical x-axis datum. The boxes evenly stick out to create physical balance by the order of gravity.
One outlier remains, though: the first, lower level arm tension box that sticks out leftward the most in this orthographic view. While the rest are quintessentially balanced, this one sticks out further as a direct reflection of the fact that one's second arm does not reach for their toe stop until the very end, whereas the first is sustained throughout about half of the move and is largely responsible for being able to post your leg out so far in the first place

"Shoot the Duck"

Key Points

3D Model



Spatiality

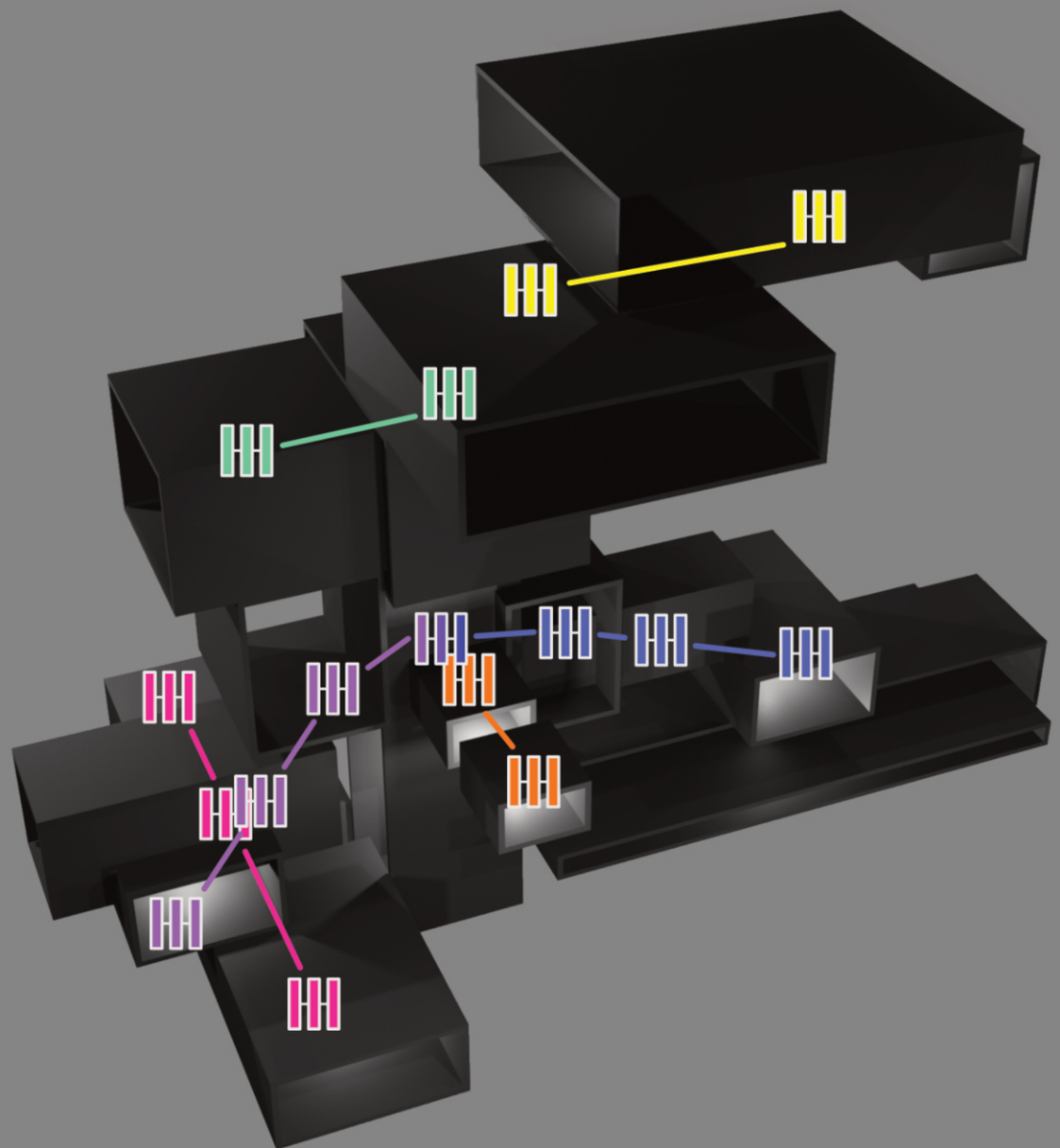
The 3D arrangement of the motion boxes in the x and z axises is dependent on the relative x and y locations and overlapping of series from the original 2D box outlines.

However, these are not strict guidelines, as the rules are bent in some instances to create a sense of additional importance, such as the highest arm tension box whose "bottom" sits atop the previous arm tension box since the tension is quite literally being taken to a whole other level by moving to stretching two arms out instead of just one

"Shoot the Duck"

Key Points

3D Model



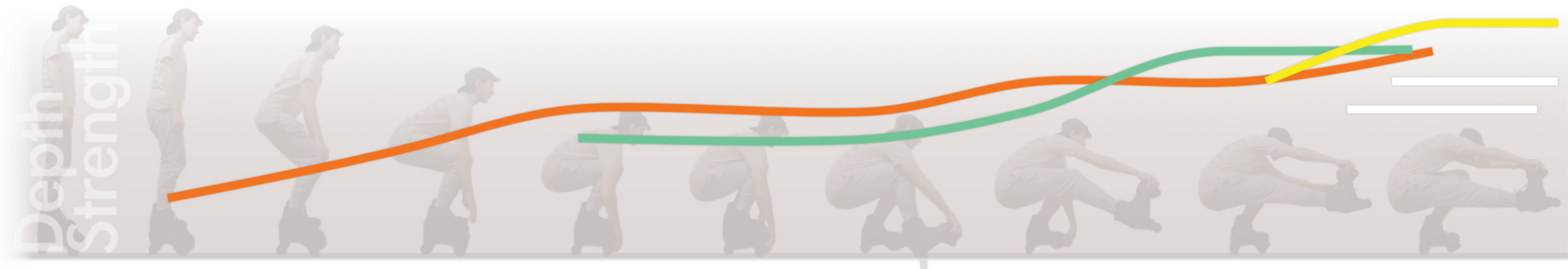
The Six Series Synthesis

The development of this composition's many series also plays a core role in inflecting the 3D location and spatial arrangement of boxes that are linked together.
In this case, series are presented with a linear physical relationship in mind. Many of the series, those of which that are lengthier and most of which contain more than two boxes, implement a sense of pausing by having its middle box turned perpendicular to the remaining surrounding ones. These middle boxes are chosen as they represent the "outlier" boxes that deviate from the typical beginning and end boxes of each respective series by 3" or more in their depth quality

"Shoot the Duck"

Key Points

Reference



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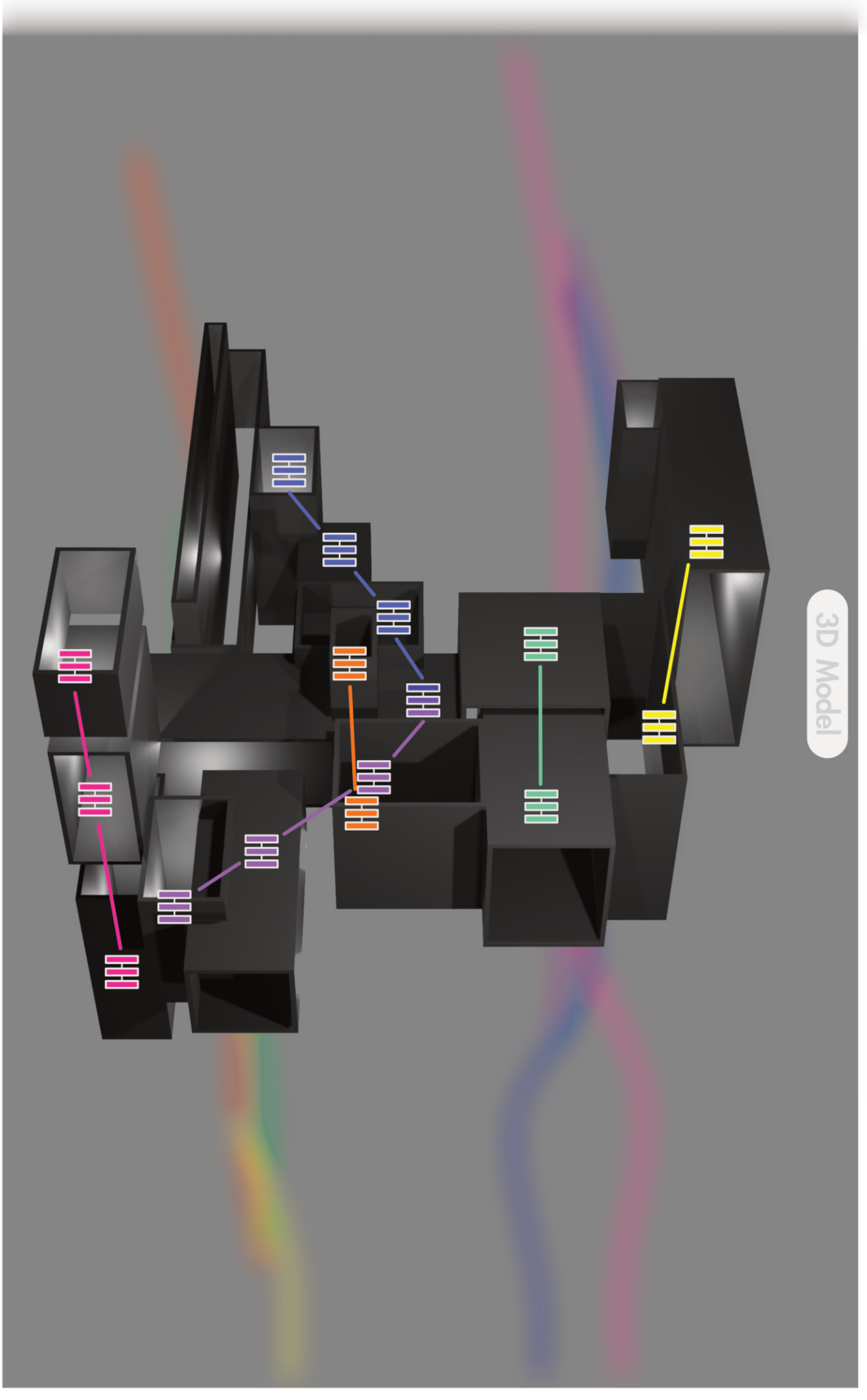
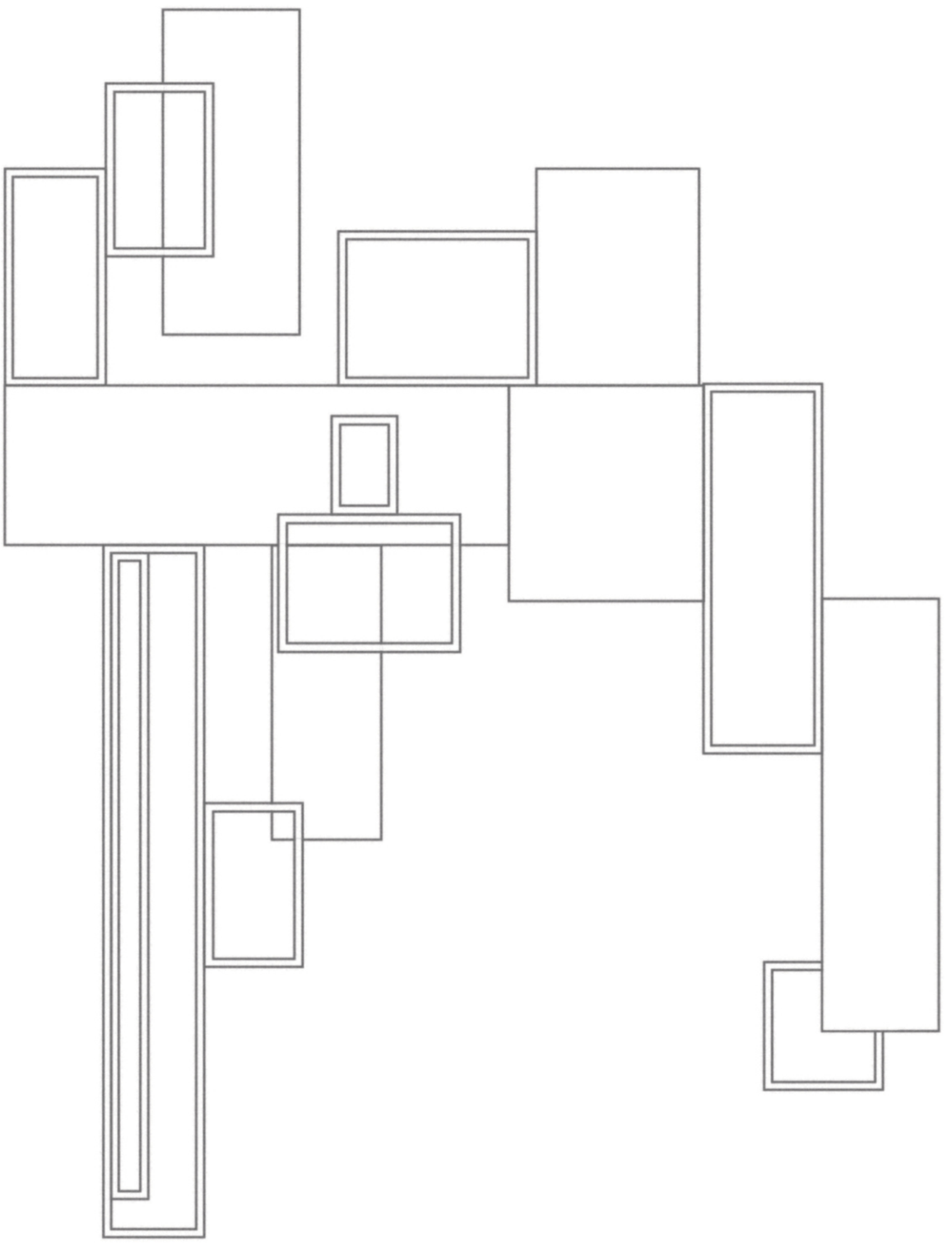


"Shoot the Duck"

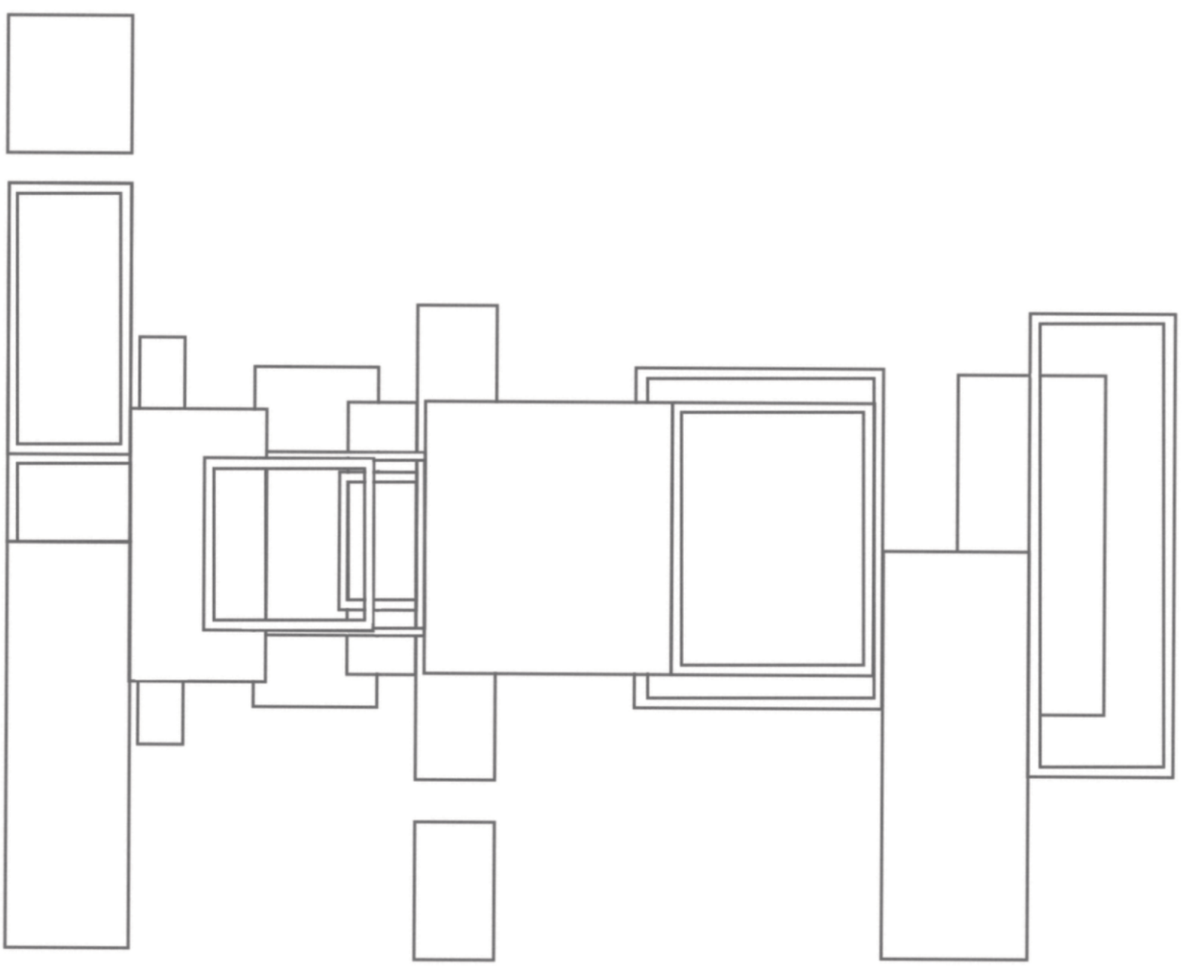
Ortho. Front



Drawings

"Shoot the Duck"

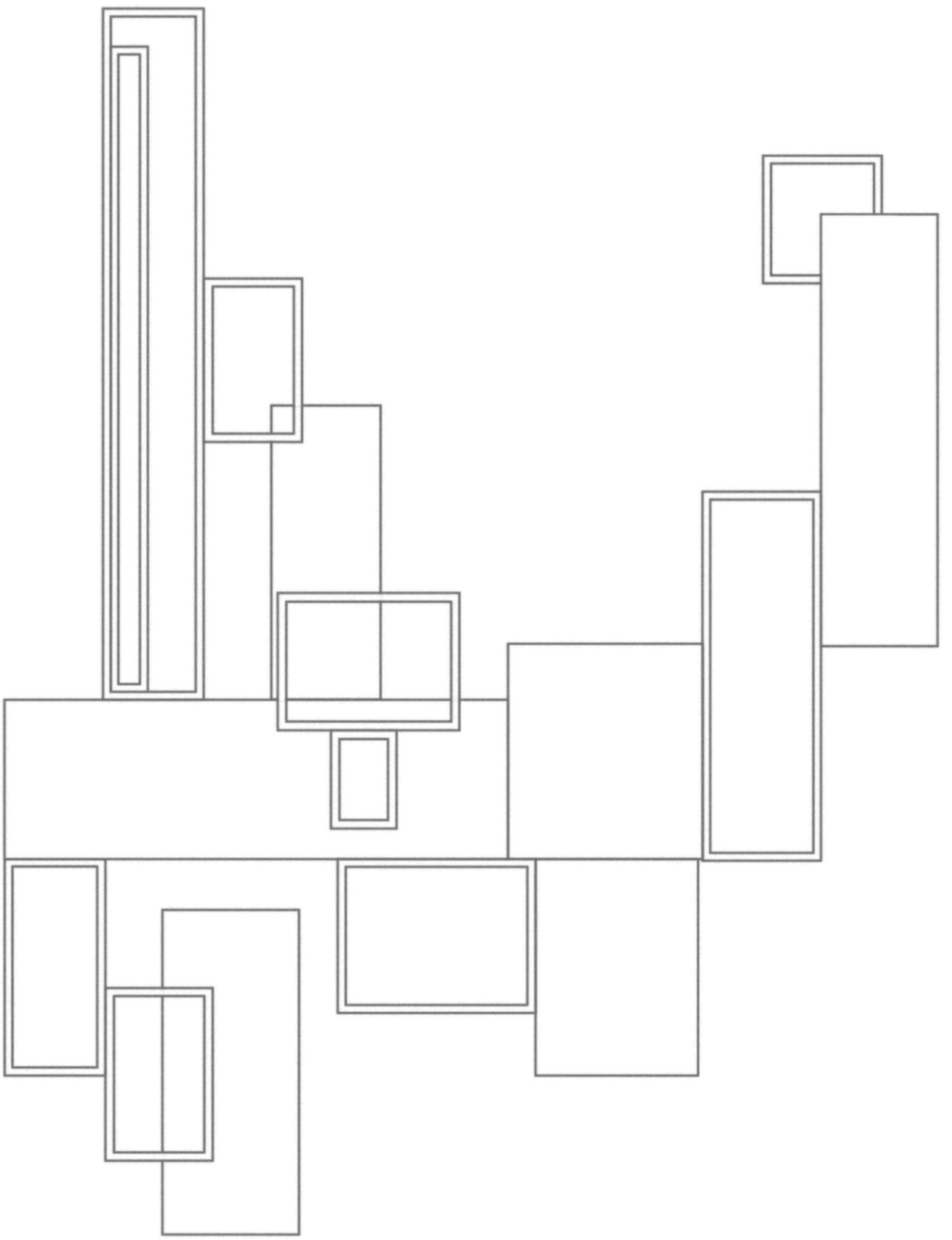
Ortho. Left



Drawings

"Shoot the Duck"

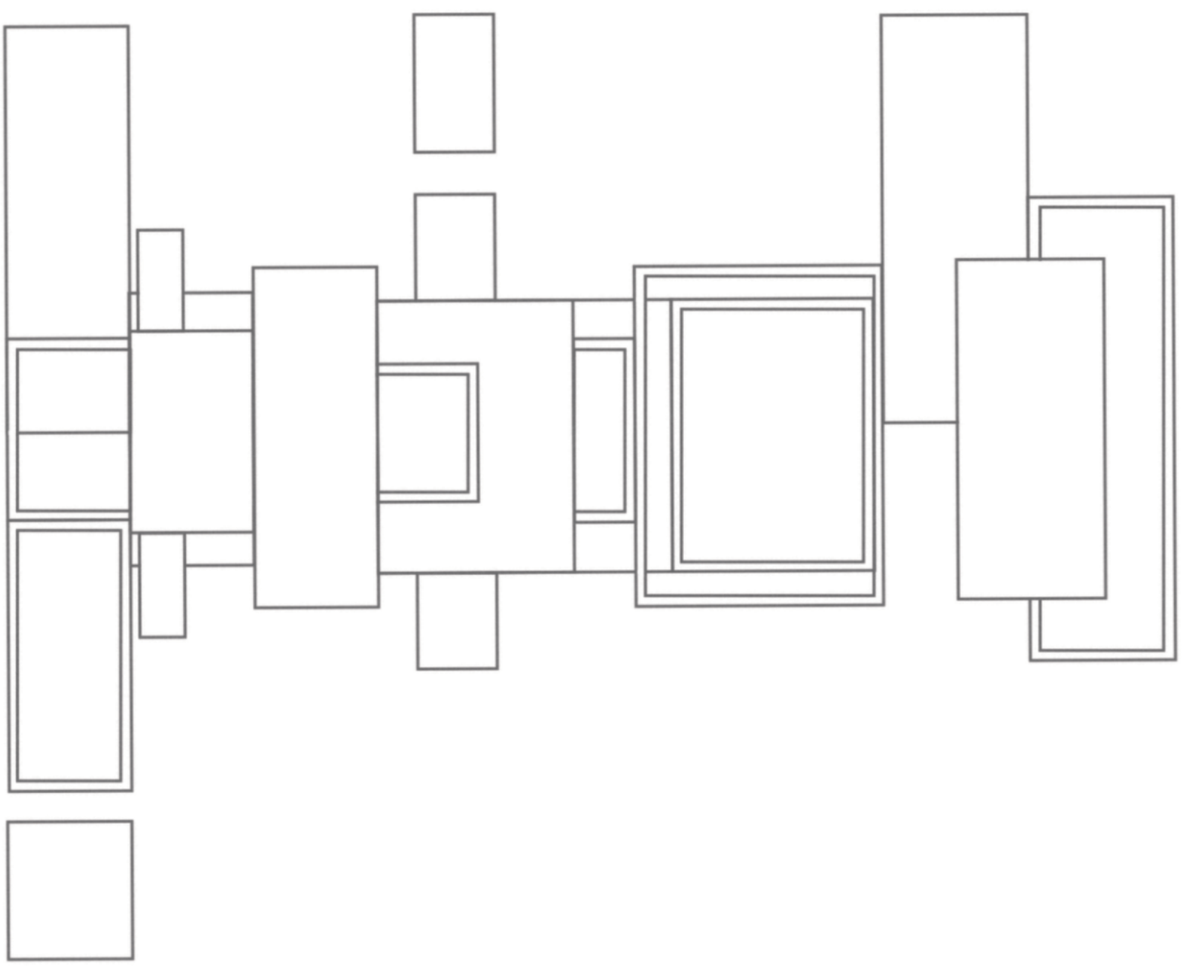
Ortho. Back



Drawings

"Shoot the Duck"

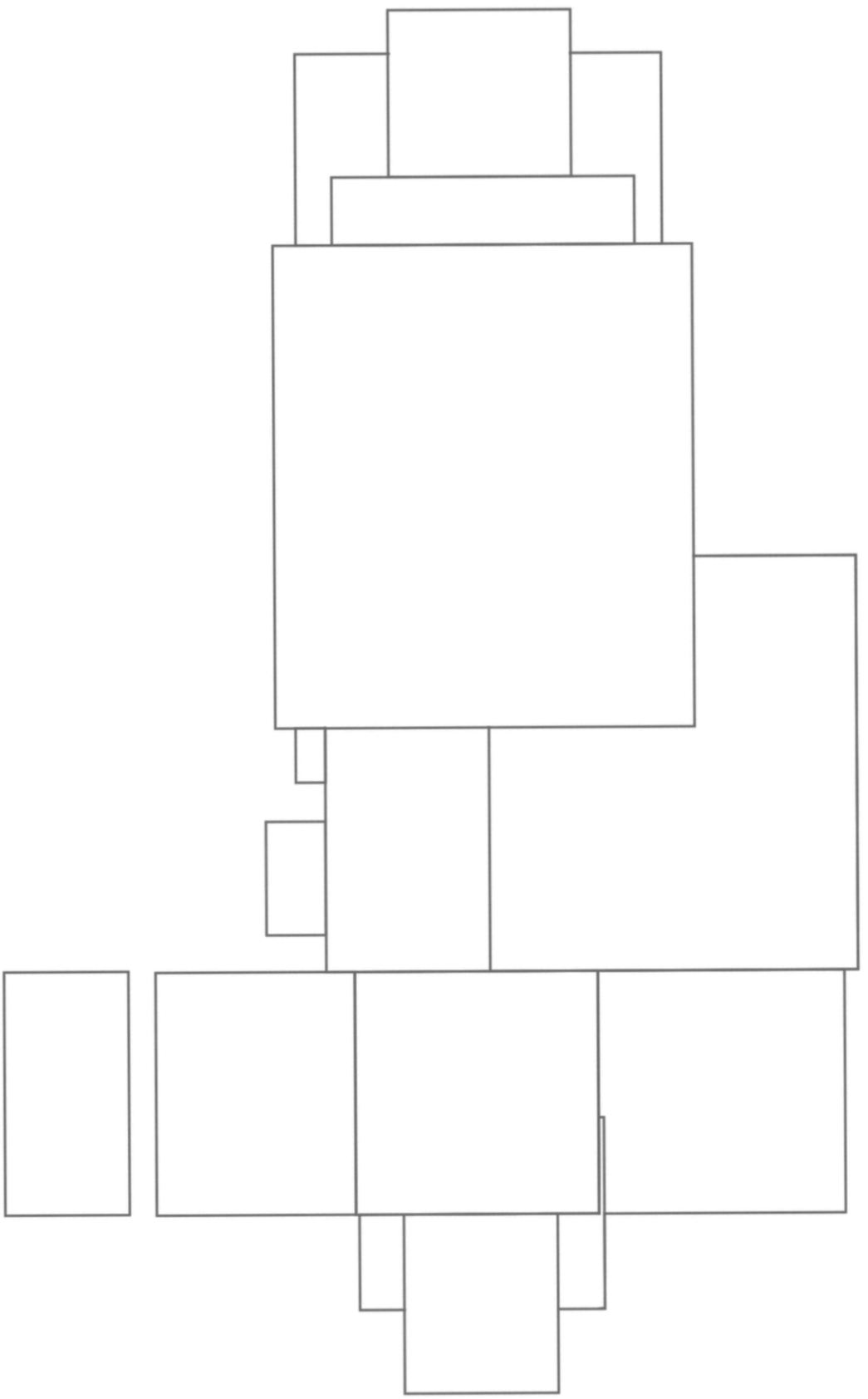
Ortho. Right



Drawings

"Shoot the Duck"

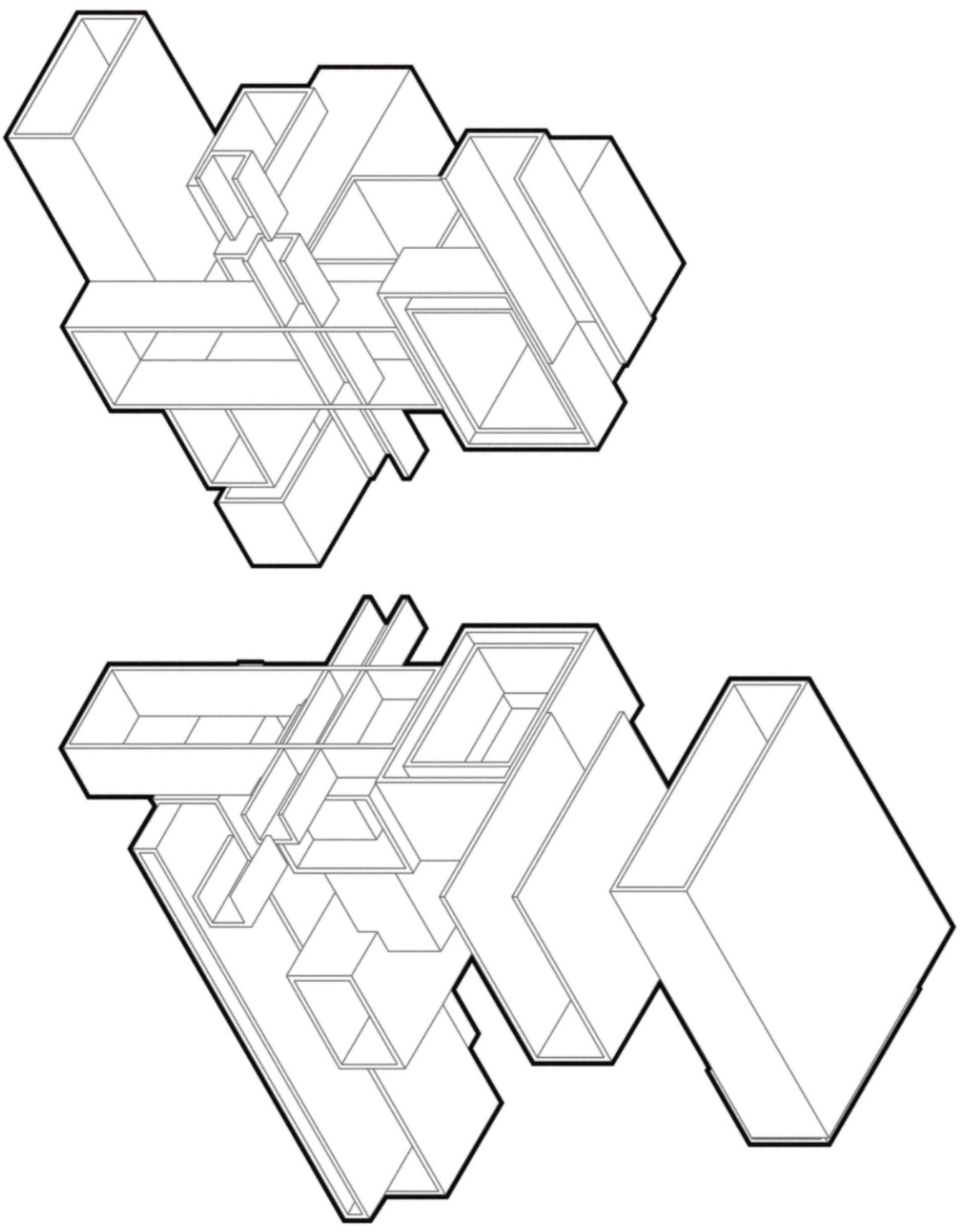
Ortho. Right



Drawings

"Shoot the Duck"

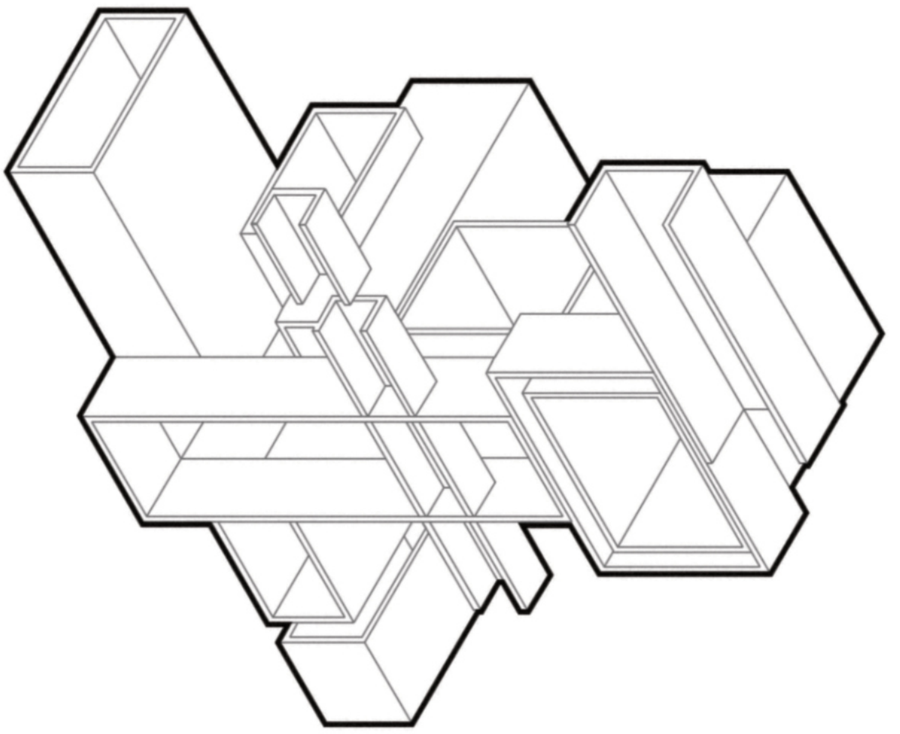
Ortho. 45° - 45° Section



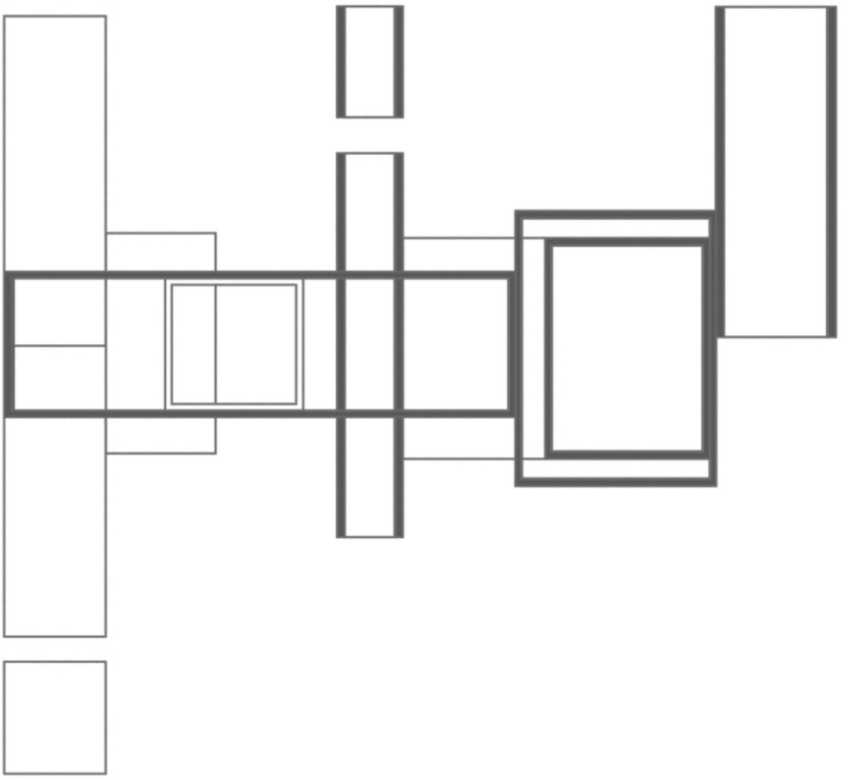
Drawings

"Shoot the Duck"

Left Section

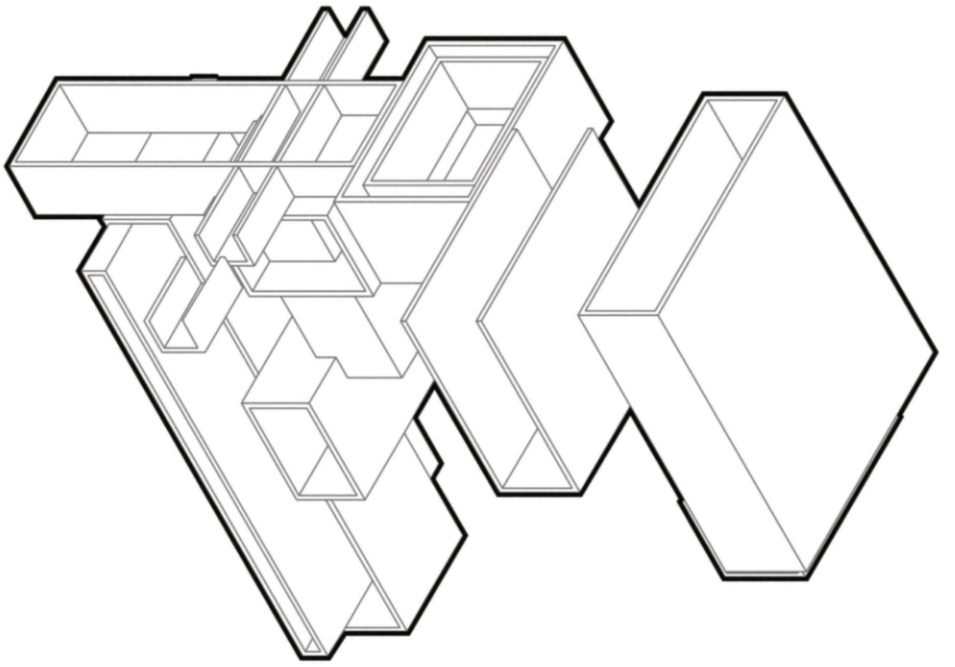


Drawings

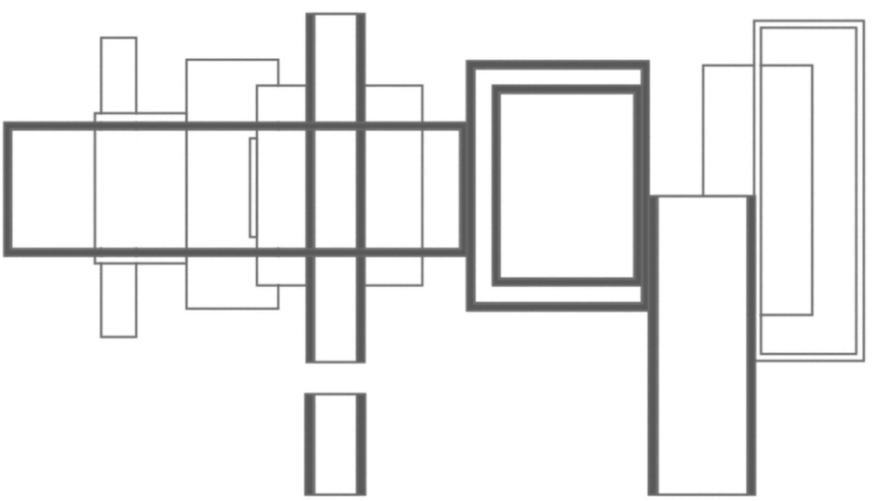


"Shoot the Duck"

Right Section



Drawings



"Shoot the Duck"

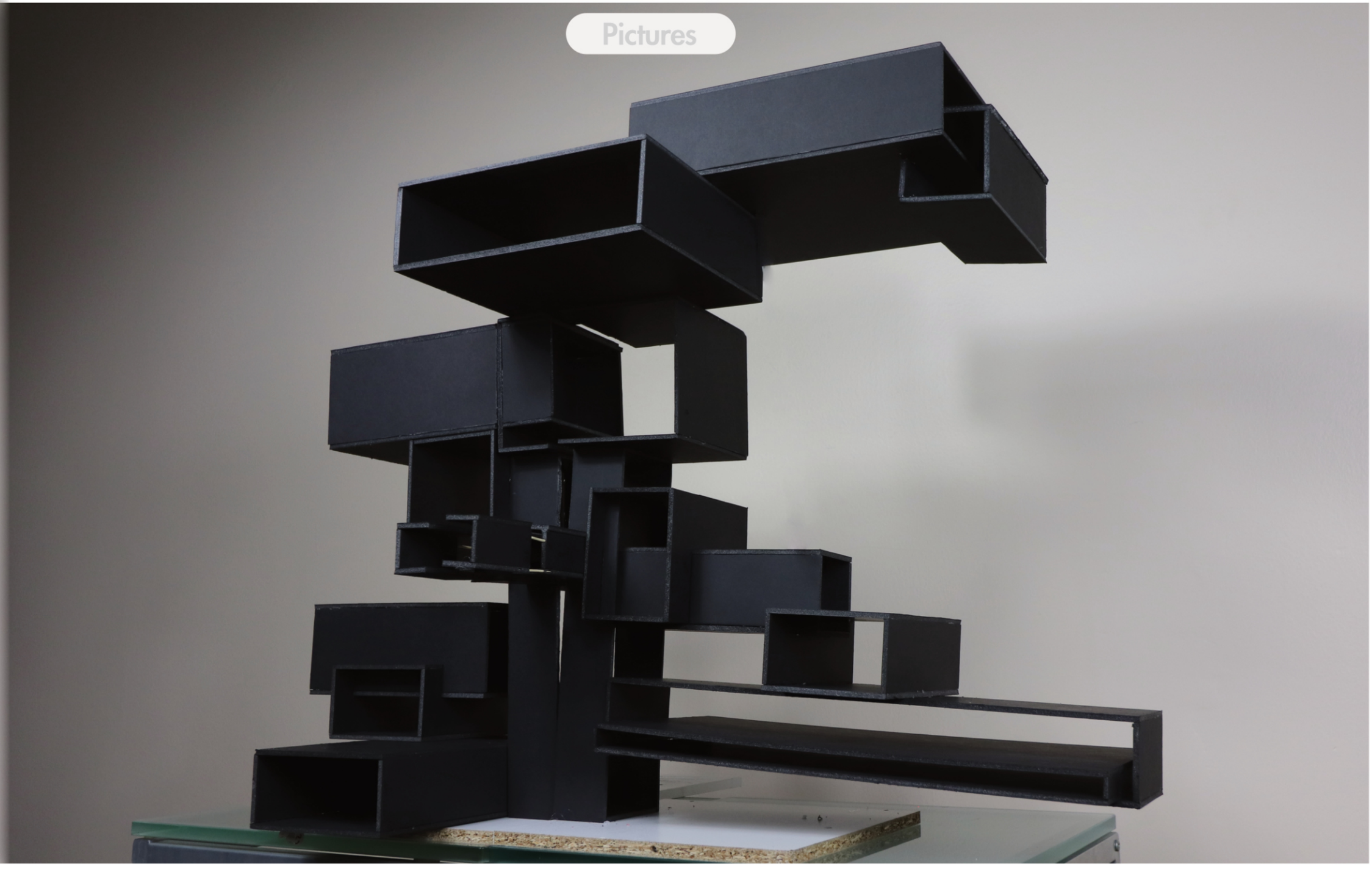
Tangibles

Pictures

"Shoot the Duck"

Tangibles

Pictures



"Shoot the Duck"

Tangibles

Pictures

"Shoot the Duck"

Tangibles

Pictures

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Ariel Levy