

# CUBISSEMBLE

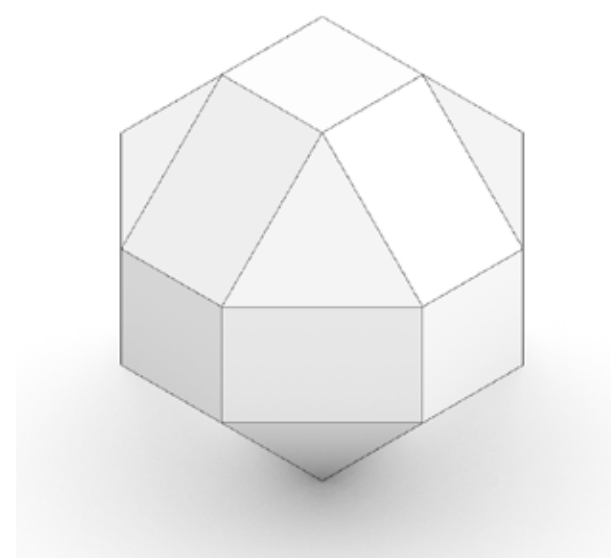
## VISION

REUSABLE LOAD BEARING MODULAR & DEPLOYABLE STRUCTURES, FORMFIND CUSTOM SHAPES WITH MODULES

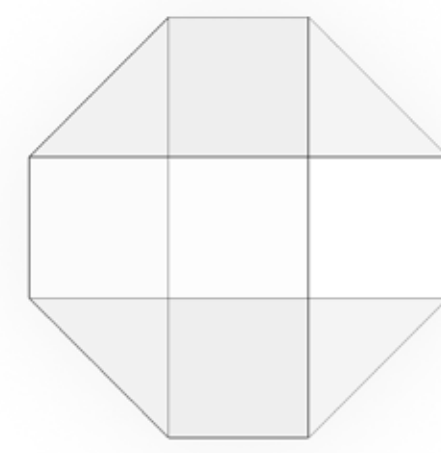
## CONCEPT

ASSEMBLE PRIMITIVE VOLUMES OF RHOMBICUBOCTAHEDRON TO IMITATE A MESHED SURFACE. VOLUMES ARE DEPLOYABLE AND CONNECTABLE.

## RHOMBICUBOCTAHEDRON



ISOMETRIC VIEW



TOP VIEW

## CUBE



## PRISM



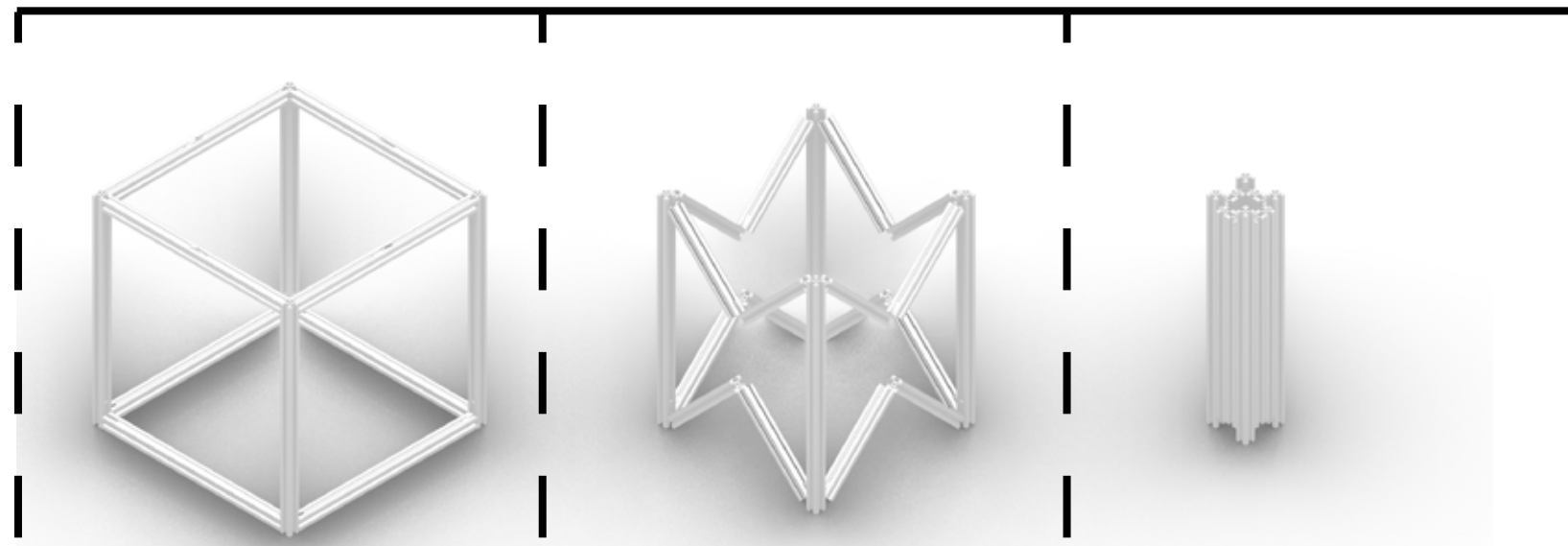
## PYRAMID



ISOMETRIC VIEWS

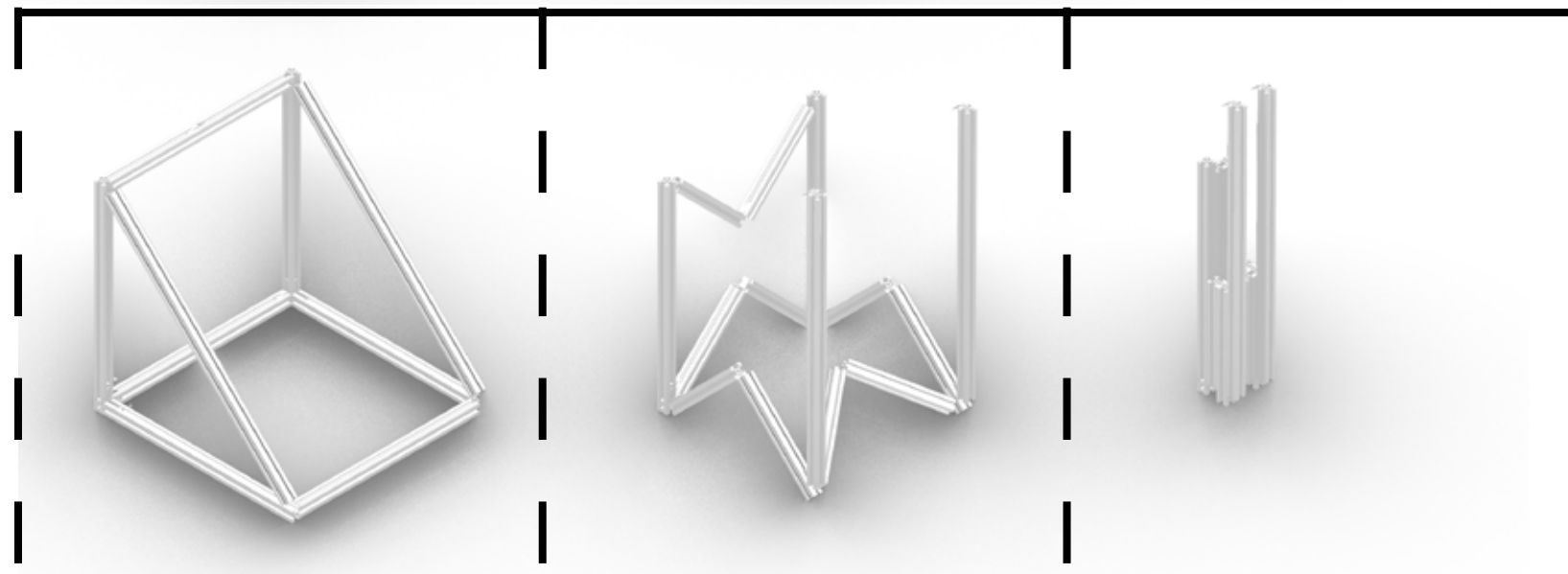
### CUBE V1

Locked Movement  
Profile 20x20L B-Type Groove 6 :  
4 x 40 cm, 16 x 17,6 cm  
24 x Profile inserted hinges



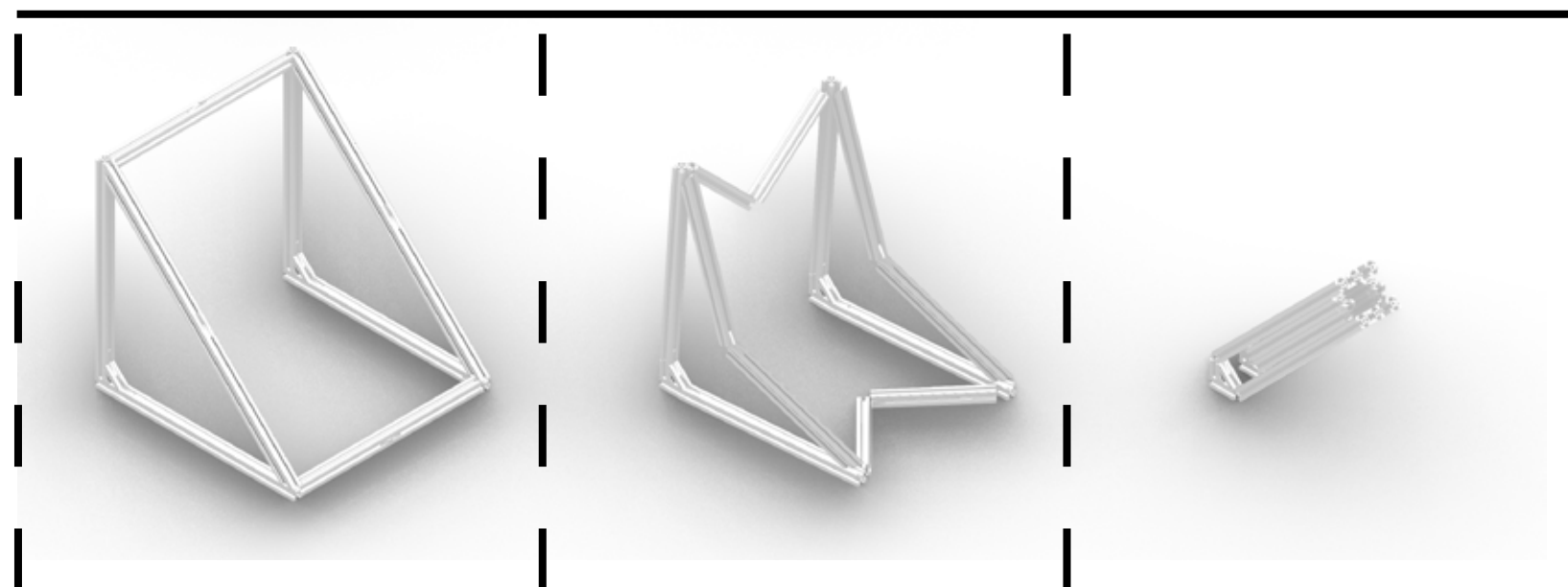
### PRISM V1

Unlocked Movement  
Profile 20x20L B-Type Groove 6 :  
2 x 40 cm, 6 x 17,6 cm, 2 x 20 cm,  
2 x 54 cm (beveled 2 sides)  
17 x Profile inserted hinges



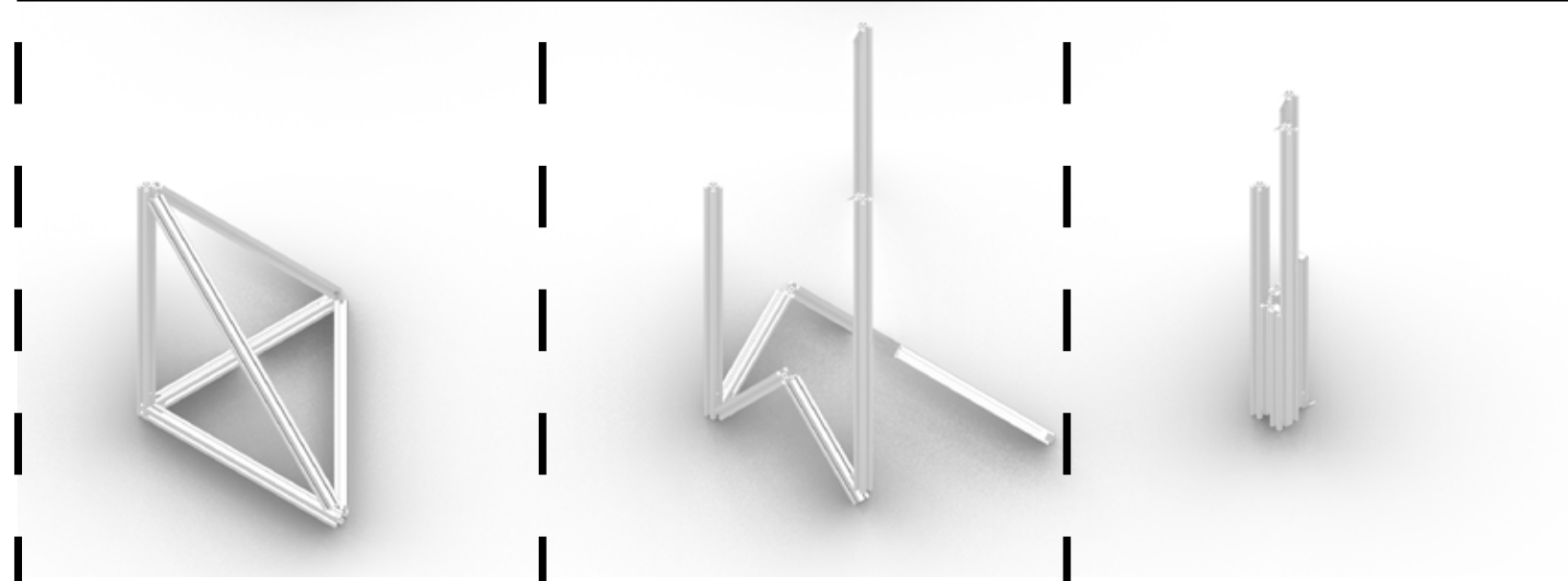
### PRISM V2

Locked Movement  
Profile 20x20L B-Type Groove 6 :  
4 x 35,2 cm, 2 x 4,8 cm, 2 x 2,8 cm, 4 x 17,6 cm,  
4 x 26,8 cm (beveled 1 side),  
2 x 4 cm (beveled 2 sides)  
16 x Profile inserted hinges



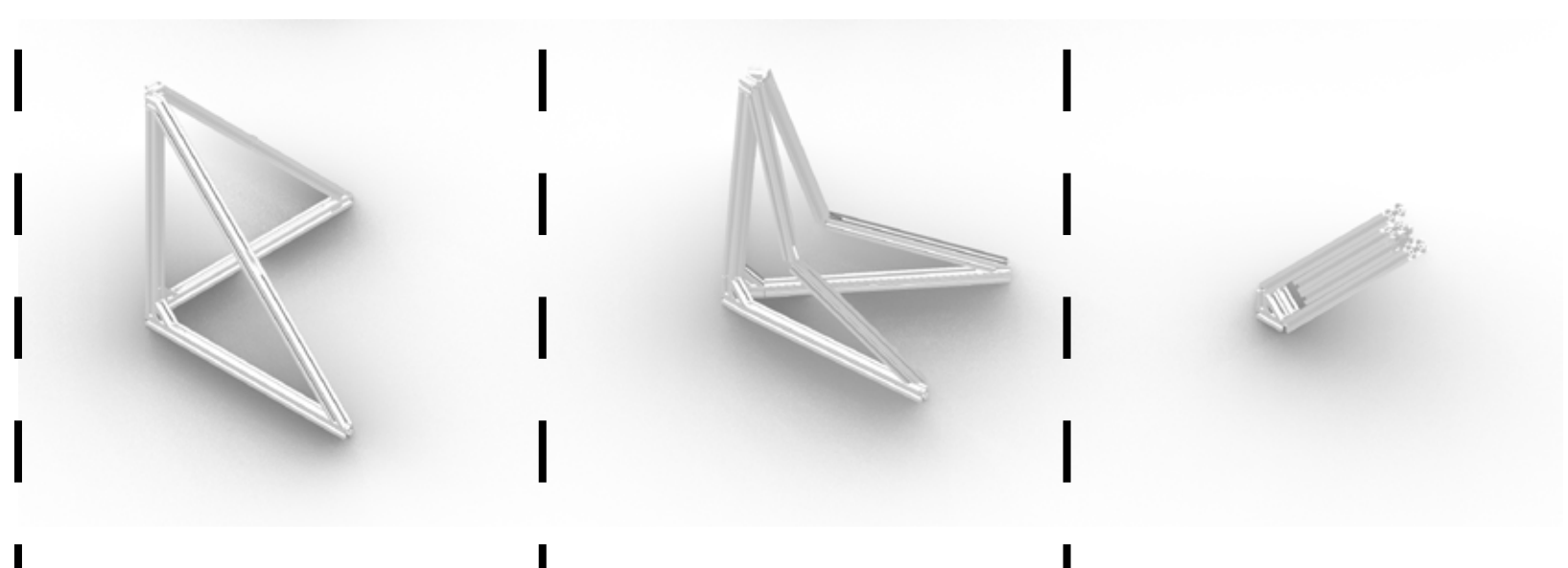
### PYRAMID V1

Unlocked Movement  
Profile 20x20L B-Type Groove 6 :  
1 x 40 cm, 2 x 17,6 cm, 2 x 20 cm,  
2 x 25 cm + 2 x 54 cm (beveled 2 sides),  
11 x Profile inserted hinges



### PYRAMID V2

Locked Movement  
Profile 20x20L B-Type Groove 6 :  
2 x 35,2 cm, 2 x 33,2 cm, 2 x 2 cm, 2 x 4,8 cm,  
2 x 2,8 cm, 4 x 26,8 (beveled 1 side),  
2 x 4 cm (beveled 2 sides)  
12 x Profile inserted hinges

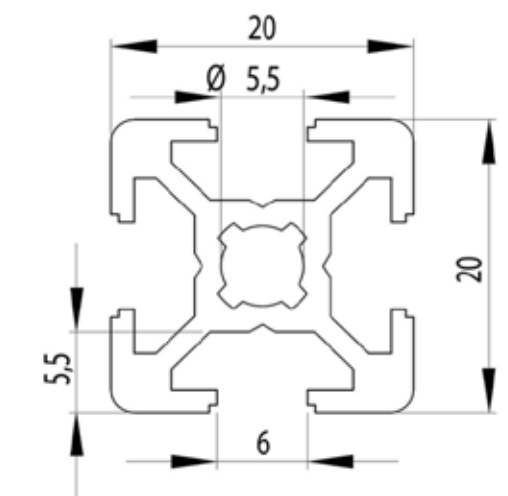


DEPLOYED

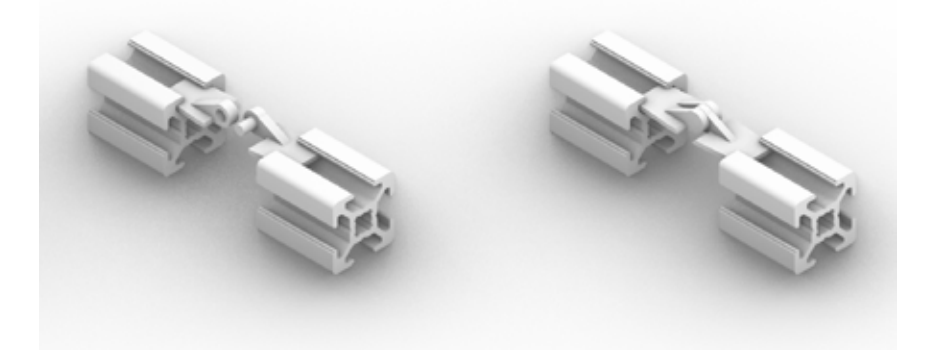
MOUVEMENT

FOLDED

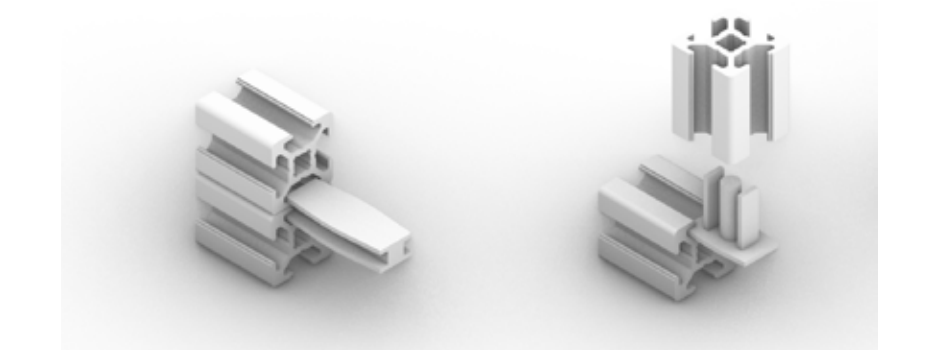
Profile width = 1/20 of 40 cm  
(case study) span.  
Profile 20x20L B-Type Groove 6



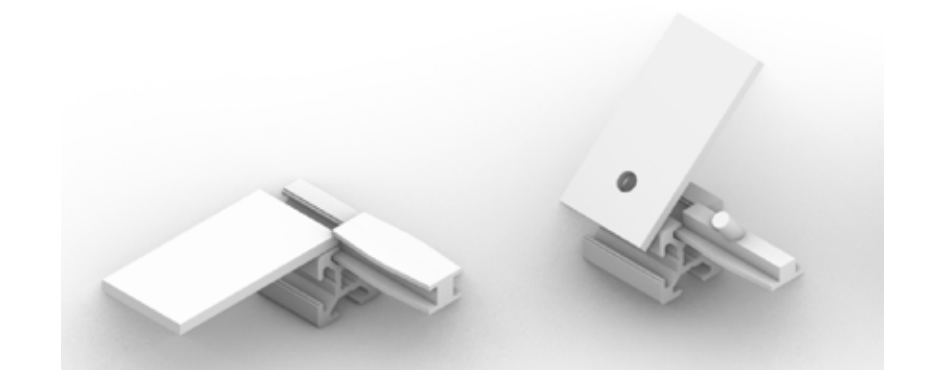
HINGES



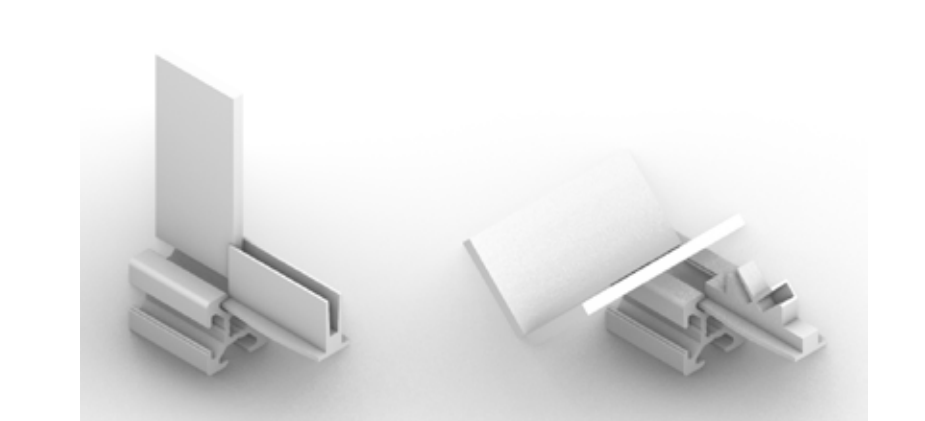
PROFILE INTERCONNECTIONS



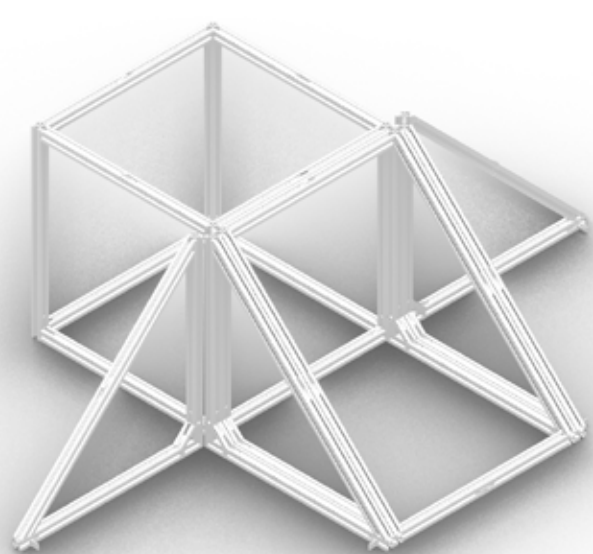
PROFILE OUTERCONNECTIONS



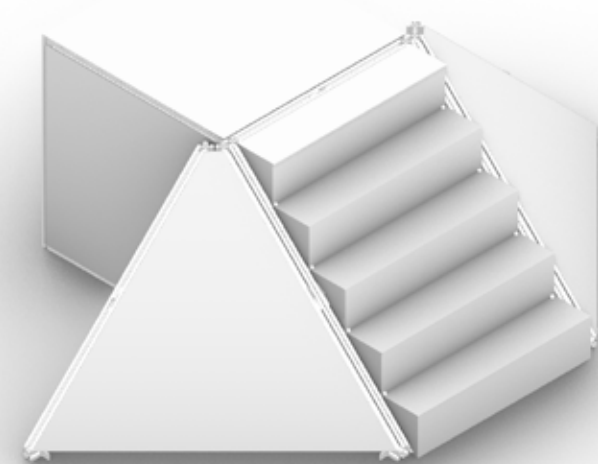
PROFILE OUTERCONNECTIONS



## EXAMPLE OF PODIUM



MODULE ASSEMBLY



PANELS ADDITION FOR RIGIDITY & SURFACE FINISH

## PARAMETRIC DESIGN

DEPLOYMENT MOVEMENT DETERMINATION OF EACH MODULE, INTERCONNECTIONS BETWEEN MODULES, FORMFINDING OF ASSEMBLY BASED ON GEOMETRY INPUT, EXTRACTION OF MODULE SCHEDULES & MATERIALS

## CONCLUSION

CONCEPT MODULES ALLOWS FOR THE CREATION OF ANY ASSEMBLY BASED ON INPUT GEOMETRY. REDESIGN NEEDED FOR WEAK HINGES, MORE STRUCTURAL BRACING NEEDED. FURTHERMORE EXPLORE MODULES INTERCONNECTIONS TO EFFICIENTLY TRANSFER LOADS