
METAMORPHIC DESIGNS



MEET THE TEAM

Founders of Metamorphic Designs



Jack



Aaron



Antonio



Meta



Cyrus



Sophya

METAMORPHIC DESIGNS MISSION STATEMENT

*“Metamorphic Designs is looking to create a functional prototype for a table with the capacity to become **both a coffee table and full-sized dining table**, primarily targeting college students and city-dwelling consumers living in small apartments; emphasizing **ease of transport, ease of use, style, and affordability**”*

01

BUSINESS OPPORTUNITY



MARKET RESEARCH



8x

Number of times the average American under 40 will move

Source: FiveThirtyEight.com

292 sq ft

Approximate size of average living space per capita in cities

Source: RentCafe.com

6% annual growth

Expected growth of global small space furniture market



Source: Future Market Insights

COMPETITIVE LANDSCAPE

01 cosimates



- Confusing assembly instructions
- Low for a dining table

Source: Amazon.com

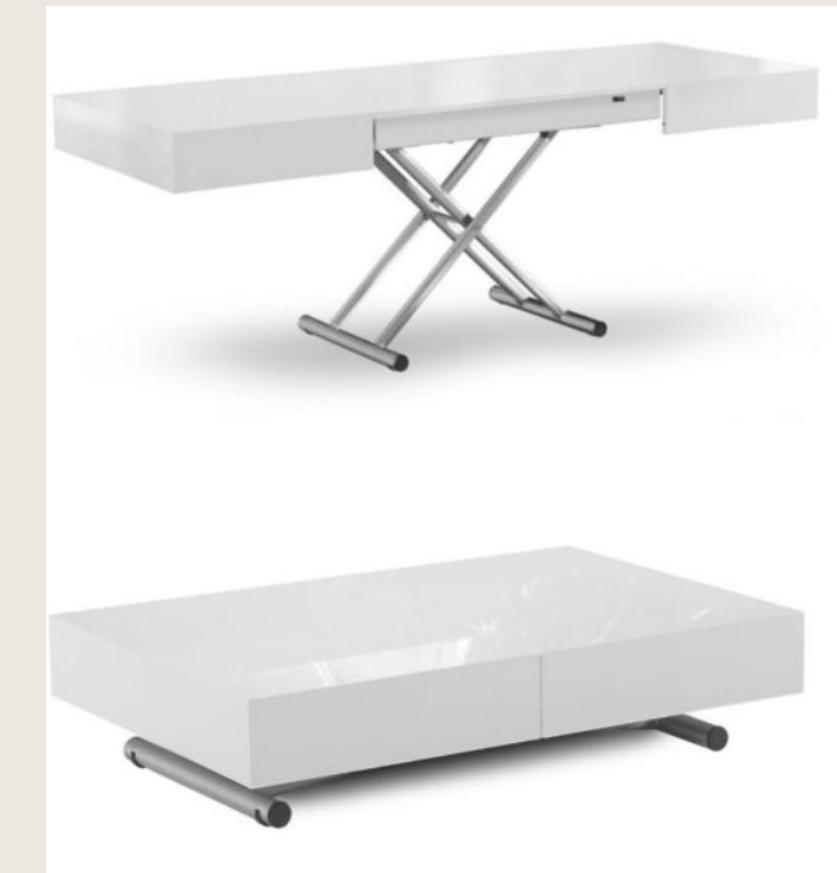
02 VINGLI



- Fragile, flimsy, cheap feeling materials
- No full dining table functionality

Source: Amazon.com

03 Expand Furniture



- \$1995 retail price (ON SALE)
- Minimal coffee table functionality

Source: expandfurniture.com



CUSTOMER NEEDS

01 USABILITY

Ease of use, Ability to expand/contract easily once built.

02 COST

Should be as affordable, if not cheaper, than competitors.

03 STYLE

Desirable visual appearance,
Quality Materials

04 EASE OF ASSEMBLY

In-home assembly possible quickly with common hand tools..

05 TRANSPORTABILITY

Should be able to be transported during moving easier than competitors.

Key Partners		Key Activities		Value Propositions		Customer Relationships		Customer Segments	
Manufacturers who can produce the coffee table efficiently and cost-effectively		Design/development of coffee table, manufacturing production of coffee table Marketing/promotion of coffee table through online/offline channels. Distribution, logistics management to get the coffee table to customers.		What value do we deliver to the customer? What kind of customer persona is helping to serve? What kinds of products and services are we offering to our Customer Segment? What is the main message we want to give?		Responsive customer service to answer questions and address concerns. Social media and email marketing to keep customers engaged and informed about new products and promotions.		College students and city residents	
Online retailers and furniture stores who can sell the coffee table to their customers		Key Resources		What key resources in our Value Proposition are required? Our distribution, channel or customer relationship?		Channels		Cheap furniture market	
		- Skilled designers and engineers to create and develop the coffee table. - Manufacturing facilities and equipment to produce the coffee table. - Marketing and advertising resources to promote the coffee table. - Strong supply chain and logistics management to get the coffee table to customers.		1. Long-lasting durability, space saving compactness, modular flexibility, affordable pricing, customer Limited space, budget constraints, changing needs, quality and durability concerns, functional and practical furniture solutions Starter bundles for small spaces, customization bundle for design enthusiasts, budget-friendly bundle for cost-conscious shoppers, after sales services bundle for quality-conscious customer Space optimization, budget friendly, flexible and adaptable, practicality and functionality		-Website, social media pages, online marketplaces like Amazon and Walmart, and some physical stores -Website integrated with social media pages, online marketplaces, and physical stores -Analytics tools used to track customer behavior across different channels -Focus on digital channels, given their scalability and lower overhead costs -Creating a community around our brand on social media -Providing a cohesive and personalized shopping experience for our customers.		People who seek innovation in furniture Multi-purpose furniture market	
Cost Structure		Design and development costs. Manufacturing and production costs. Marketing and promotion costs. Distribution and logistics costs. Ongoing maintenance and support costs.			Revenue Streams	Sales of the coffee table through online and offline channels. Potentially, licensing fees for the design and technology of the coffee table.			

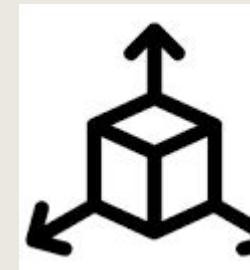
BUSINESS MODEL CANVAS

PRODUCT SPECIFICATIONS



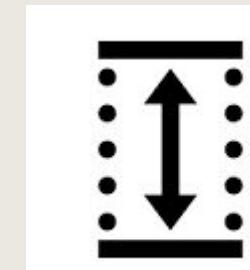
WEIGHT

40-50 LBS



DIMENSIONS

15 X 36 X 24 INCHES



FULL EXPANDED HEIGHT

28 - 30 INCHES



COST TO CONSUMER

\$100-200 USD



MAX LOAD

200-250 LBS



TRANSITION TIME

< 5 MINUTES



MATERIALS

Wood composite, aluminum fittings



ASSEMBLY TIME

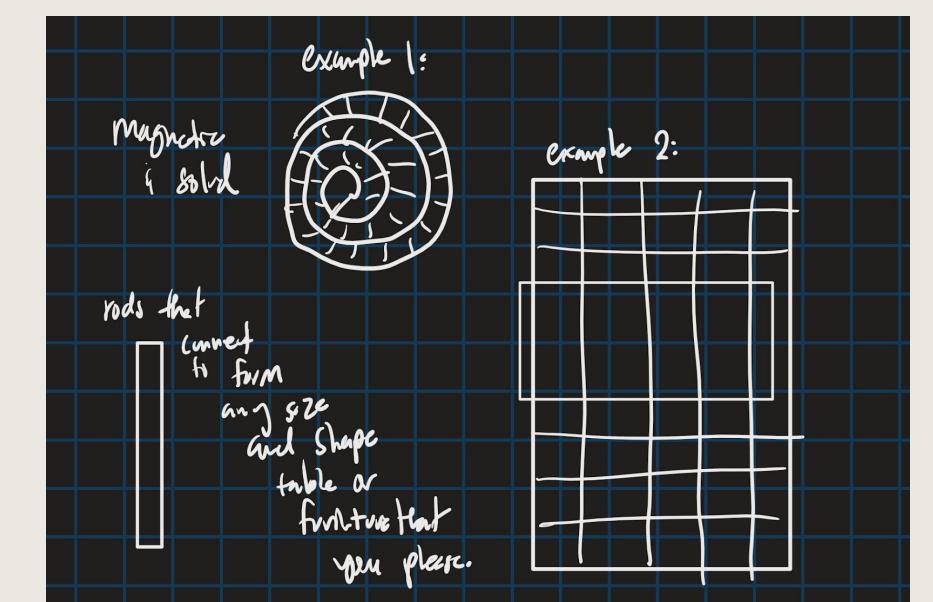
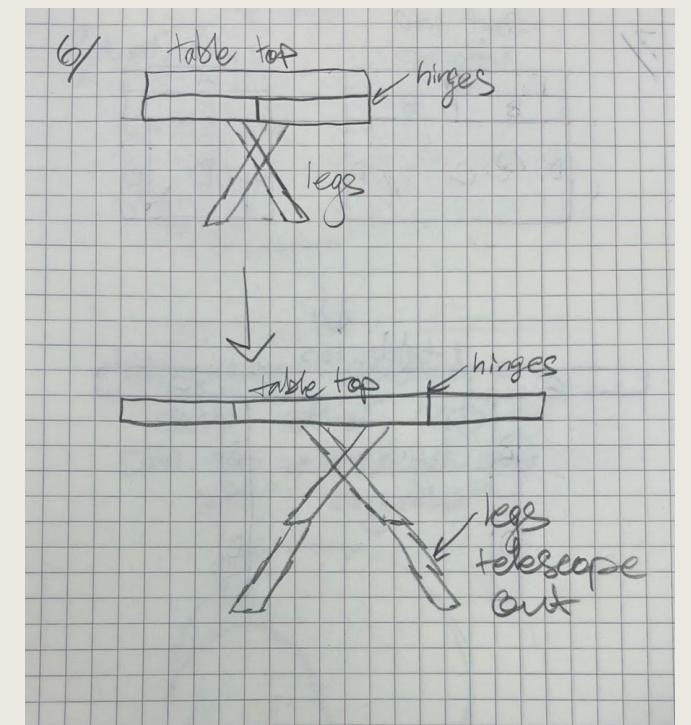
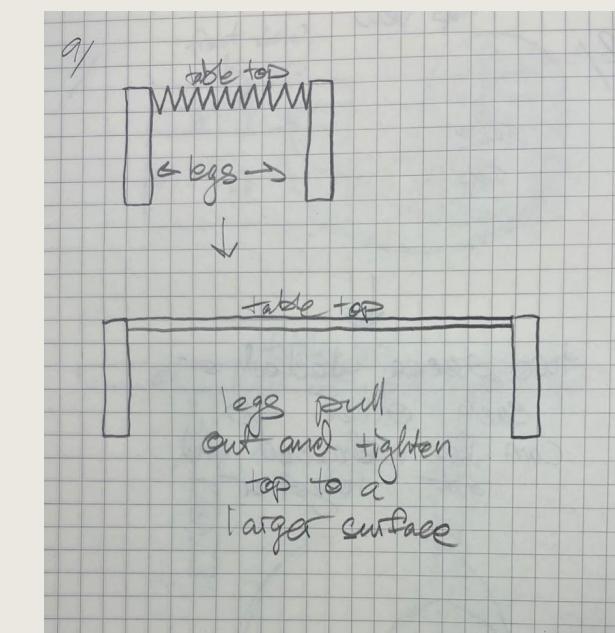
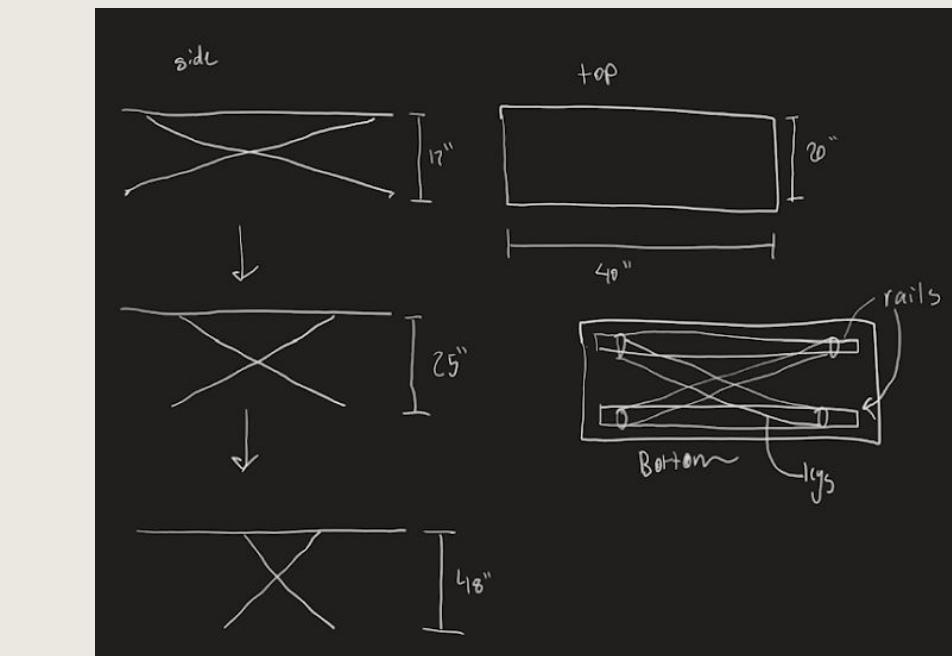
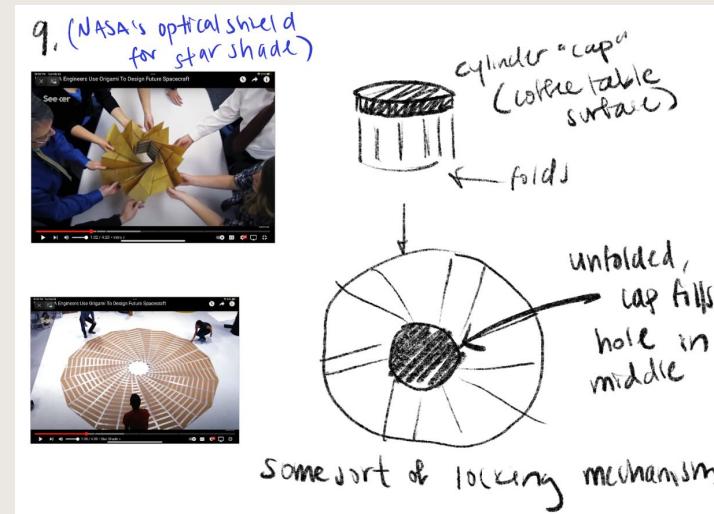
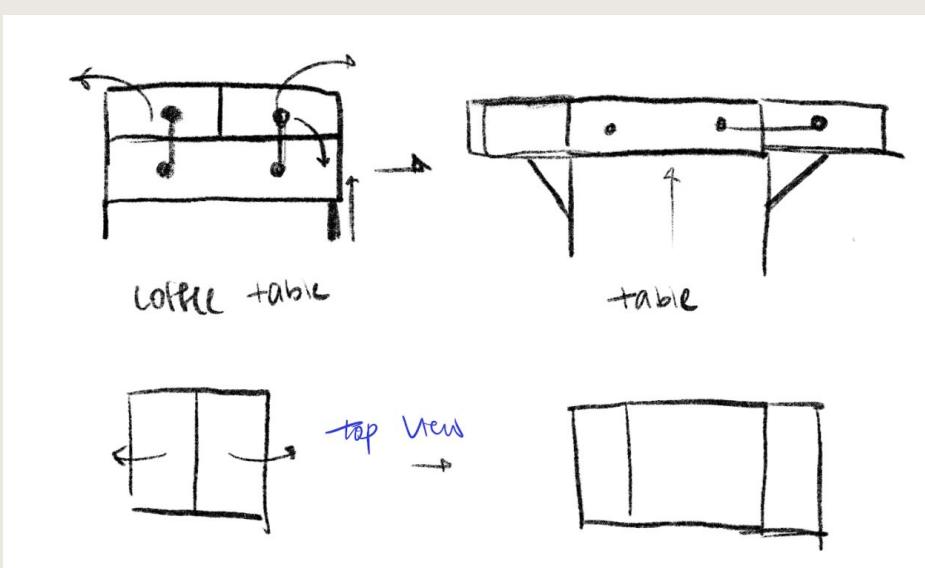
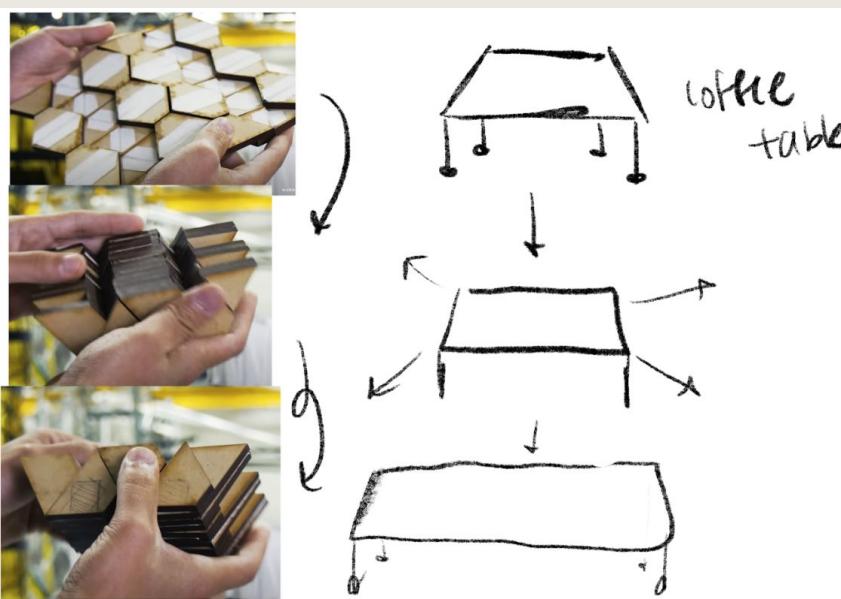
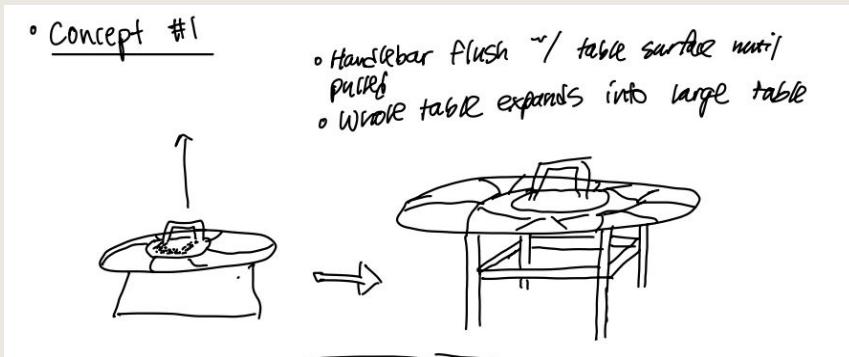
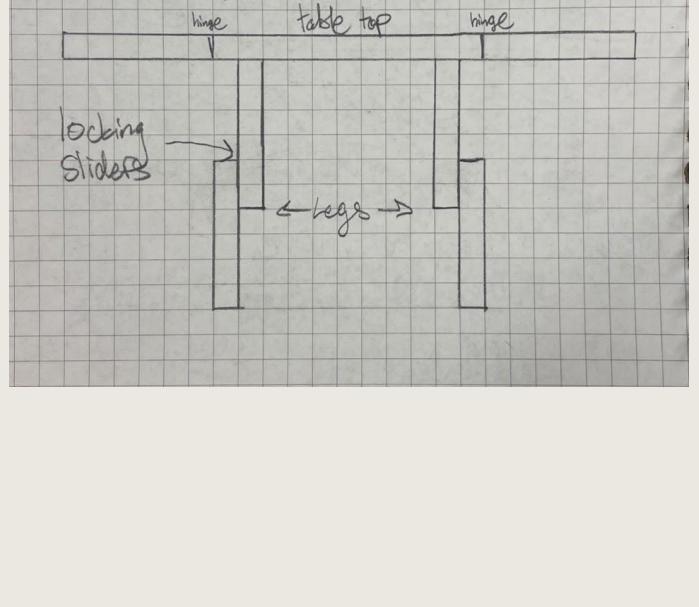
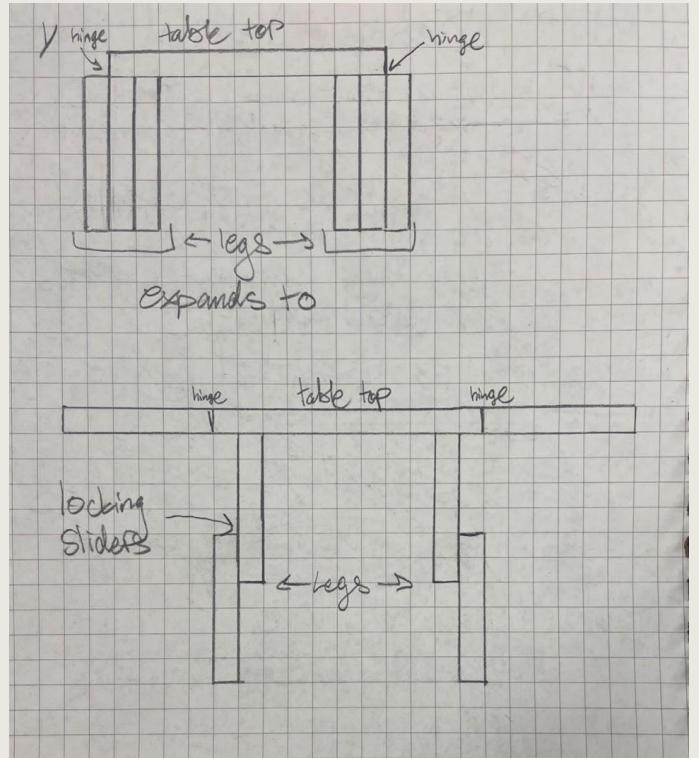
< 1 HOUR

02

CONCEPT SELECTION



BRAINSTORMING PHASE



IDENTIFYING CRITERIA



*FOR USE IN
SCORING
CONCEPTS IN
SELECTION
PROCESS*

USABILITY - 26%

AESTHETICS - 15%

MANUFACTURABILITY - 22%

EASE OF ASSEMBLY - 13%

SPACE EFFICIENCY - 16%

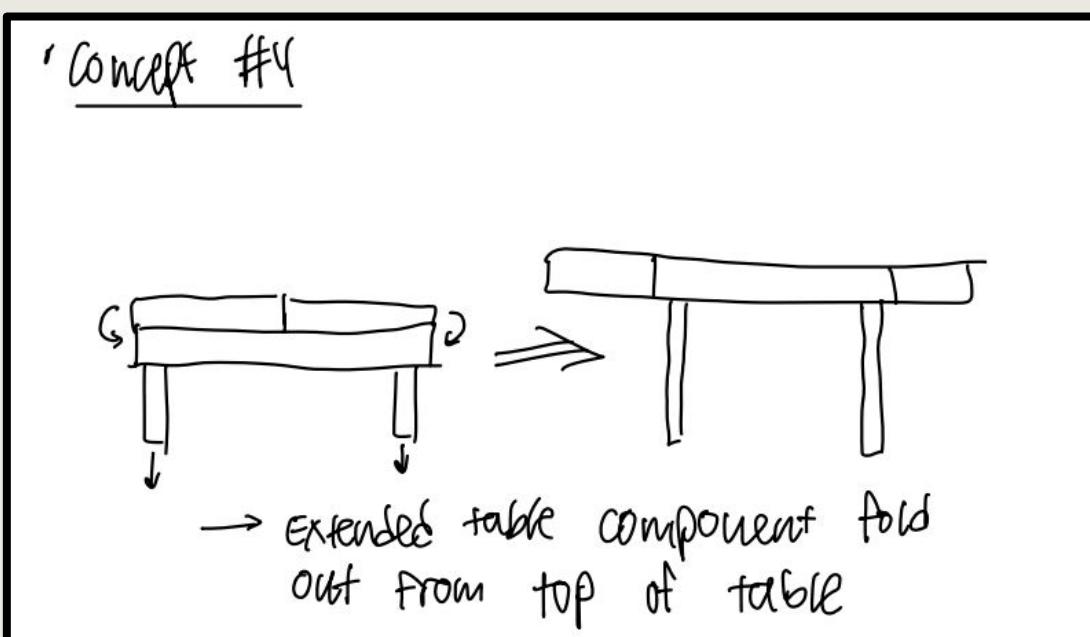
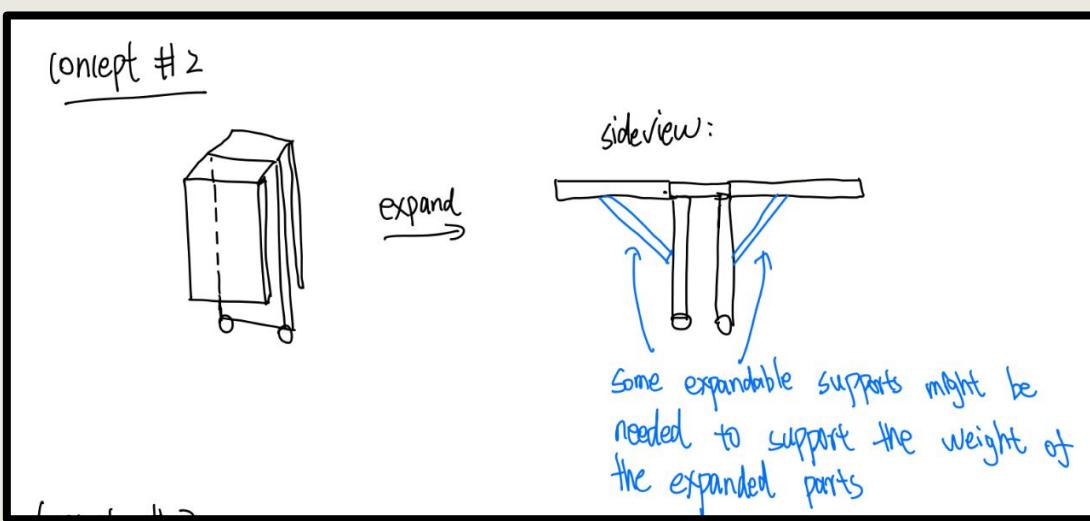
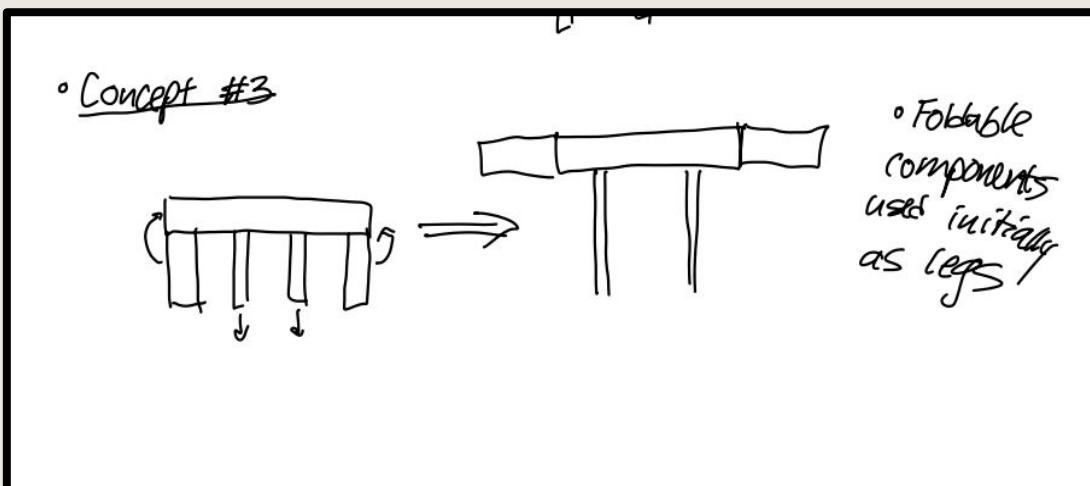
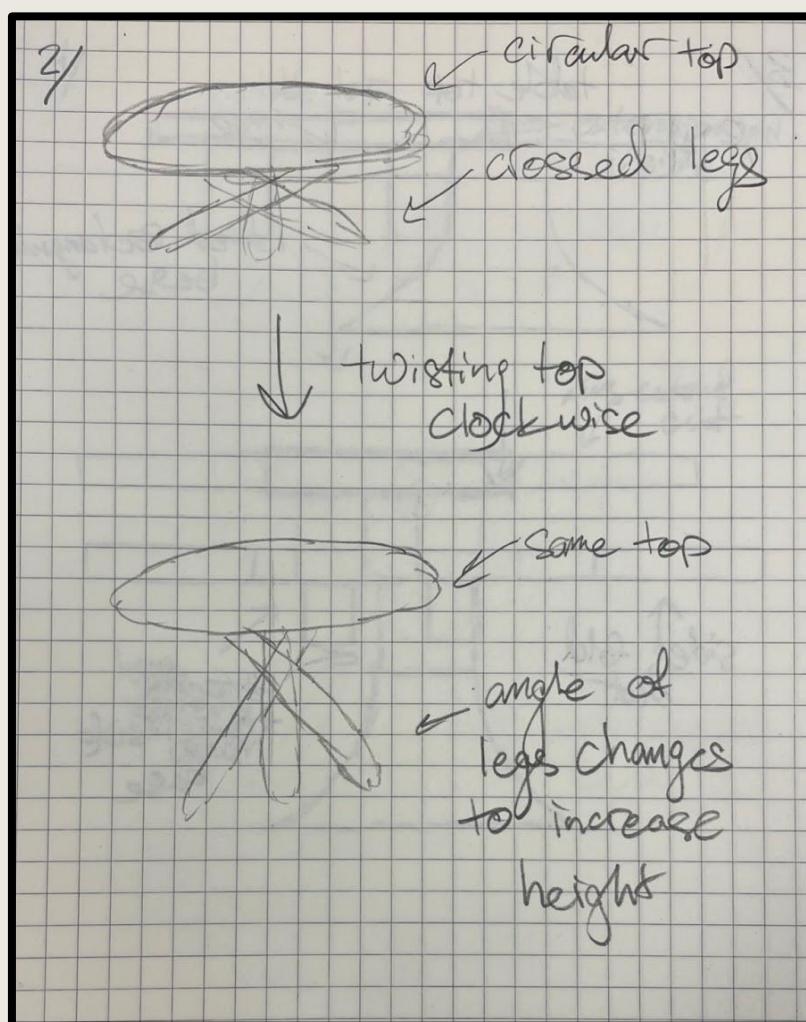
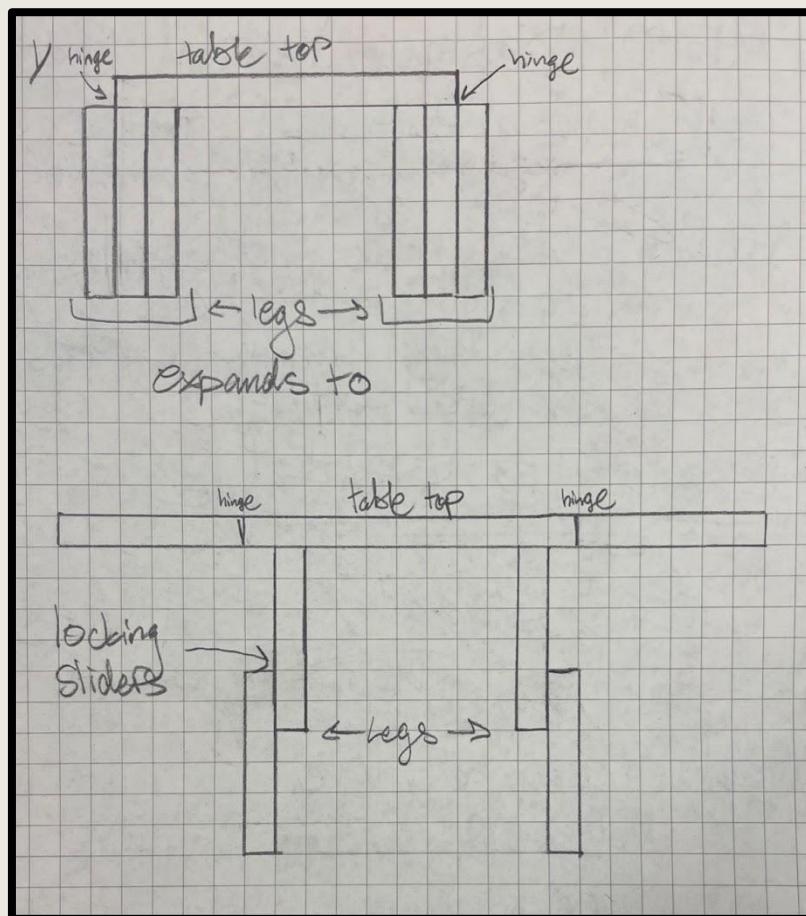
TRANSPORTABILITY - 8%

Ideas	Manufacturability (Aaron, Sophya, Antonio, Jack, Meta, Cyrus)						Usability (Aaron, Sophya, Antonio, Jack, Meta, Cyrus)						Space Efficiency/ Compact (Aaron, Sophya, Antonio, Jack, Meta, Cyrus)						Transportability (Aaron, Sophya, Antonio, Jack, Meta, Cyrus)						Aesthetic (Aaron, Sophya, Antonio, Jack, Meta, Cyrus)						TOTAL SCORE			
Weight (%)	0.22	0.22	0.22	0.22	0.22	0.22	0.26	0.26	0.26	0.26	0.26	0.26	0.16	0.16	0.16	0.16	0.16	0.16	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.15	0.15	0.15	0.13	0.13	0.13	0.13	0.13	
AS1	1	1	1	1	1	1	1	1	1	1	1	0	0	-1	1	-1	-1	-1	-1	-1	-1	0	0	0	1	-1	-1	0	0	1	0	1	2.01	
AS2	1	0	0	0	0	-1	1	0	1	0	0	1	1	1	1	1	1	1	-1	0	0	-1	-1	-1	0	0	-1	1	-1	-1	0	1.01		
AS3	1	1	-1	0	-1	0	0	1	0	0	1	1	1	1	1	-1	1	1	-1	0	0	-1	-1	-1	1	1	1	0	0	1	-1	0	1.18	
AS4	0	0	0	0	-1	-1	1	-1	1	-1	0	1	1	1	1	-1	1	1	-1	0	-1	0	-1	0	1	1	0	1	1	-1	-1	0.19		
AS5	1	1	1	0	1	1	1	1	1	0	-1	0	0	1	1	0	0	-1	1	-1	0	0	0	0	0	1	1	-1	1	0	0	2.11		
AH1	-1	1	0	0	1	1	1	0	0	1	1	0	0	0	1	1	0	0	1	-1	1	1	-1	1	0	0	1	1	1	1	1	0	2.57	
AH2	0	0	-1	-1	-1	-1	1	-1	1	0	1	0	0	0	1	1	0	1	0	0	-1	0	-1	0	1	0	1	-1	-1	0	-1	-1	0.06	
AH3	1	1	1	1	1	1	1	0	1	1	1	1	1	-1	1	1	1	1	0	-1	-1	0	0	0	1	1	1	-1	0	1	1	1	0	4.07
AH4	1	-1	0	-1	1	0	1	0	1	0	1	1	1	-1	1	1	0	1	0	0	-1	0	1	0	0	0	1	-1	0	0	0	1.52		
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MZ1	-1	-1	0	1	1	1	0	0	1	1	1	1	1	0	1	1	1	1	0	0	-1	-1	1	1	1	1	-1	0	-1	1	0	0	1	2.48
MZ2	-1	0	-1	0	1	0	1	-1	1	1	1	1	1	0	0	0	1	1	0	-1	0	1	1	1	-1	1	0	1	0	0	0	1	0	1.85
MZ3	0	-1	-1	-1	1	-1	0	-1	-1	-1	0	1	1	-1	1	1	1	1	0	-1	0	1	1	1	1	0	0	1	1	-1	0	0	0.27	
MZ4	1	1	-1	0	-1	1	0	0	0	0	-1	0	-1	1	1	1	1	0	0	0	-1	0	1	1	1	1	-1	-1	-1	0	-1	0	0.5	
MZ5	0	-1	0	0	1	0	1	0	0	0	1	-1	0	-1	0	1	1	1	1	0	0	0	1	1	1	1	0	0	-1	1	1	1	0	1.6
SM1	0	1	1	-1	-1	0	0	1	1	1	0	1	1	1	1	0	1	0	1	0	1	0	1	0	0	-1	-1	0	1	1	0	-1	0	2.06
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CX1	1	1	1	0	1	1	1	-1	1	0	1	1	0	-1	0	0	0	-1	0	0	-1	0	0	0	0	-1	1	0	1	1	0	1	1.85	

DECISION MATRIX

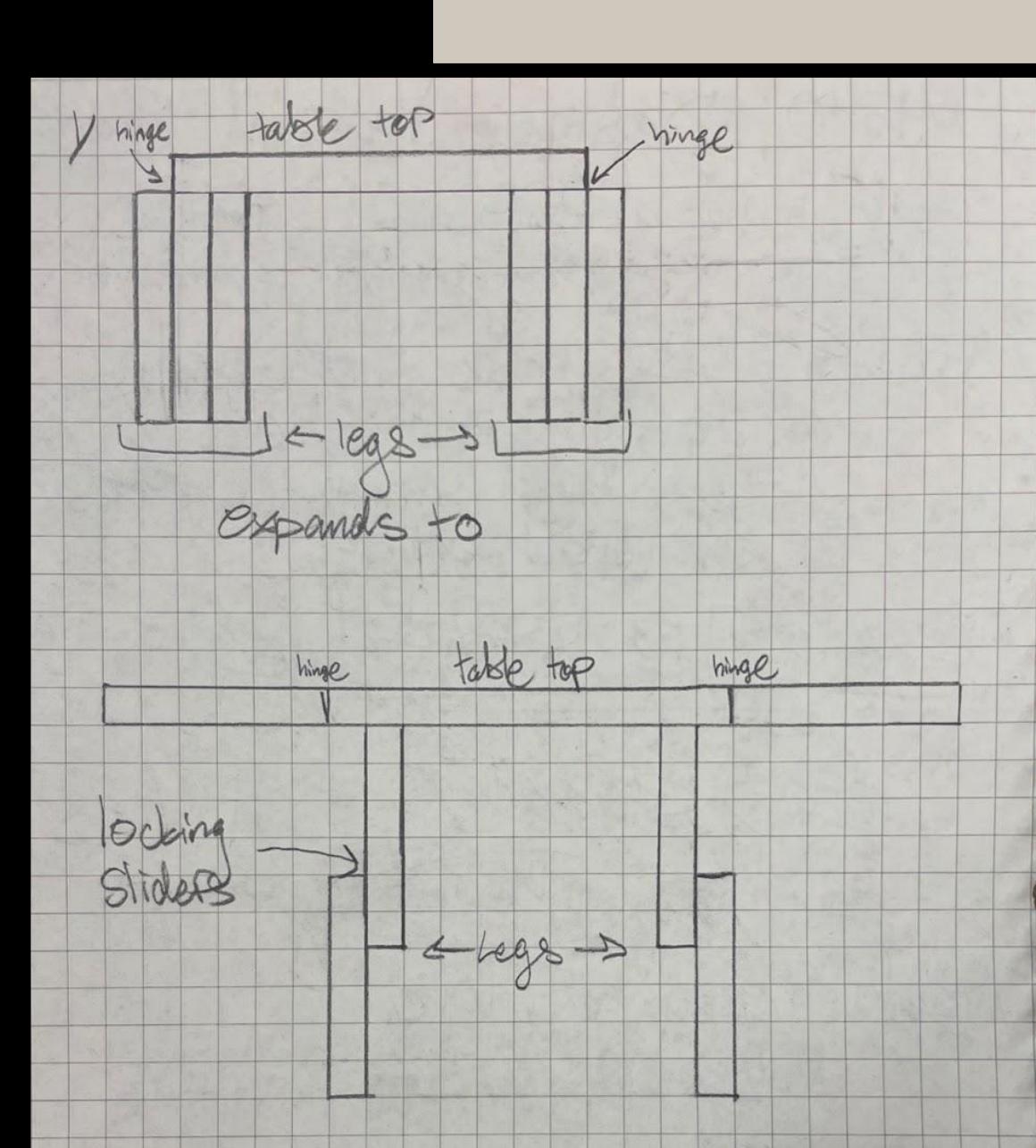
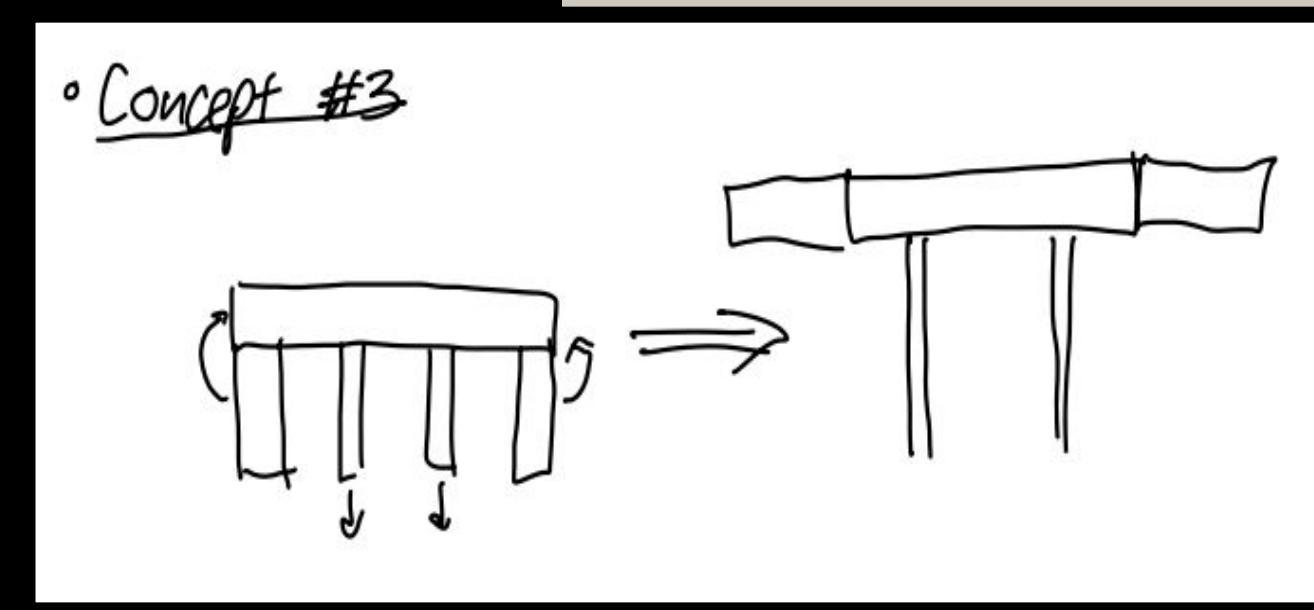
SCORES OF (-1) (0) (1) GIVEN TO EACH CONCEPT BY ALL MEMBERS FOR EACH CRITERIA

TOP CONCEPTS



Gathered from the five top scoring concepts on decision matrix

FINAL CONCEPT SELECTION



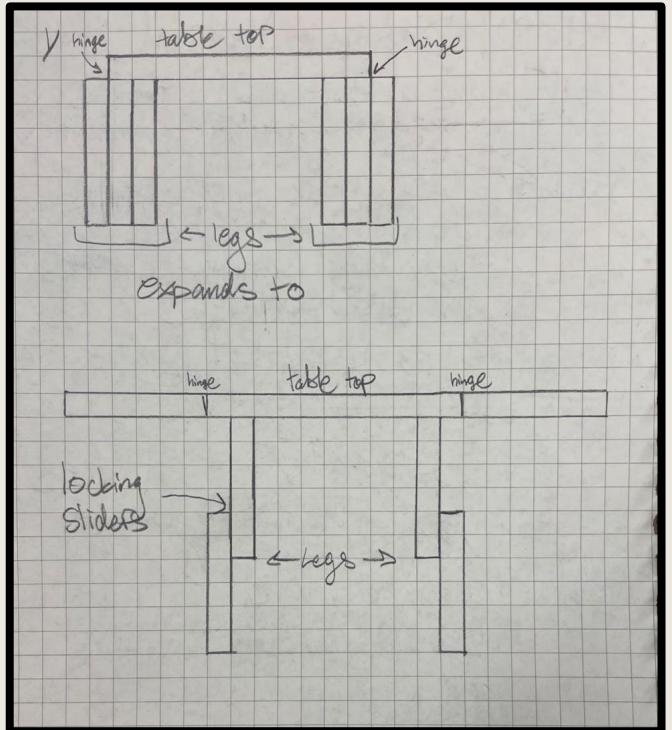
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FINAL CONCEPT DEVELOPMENT

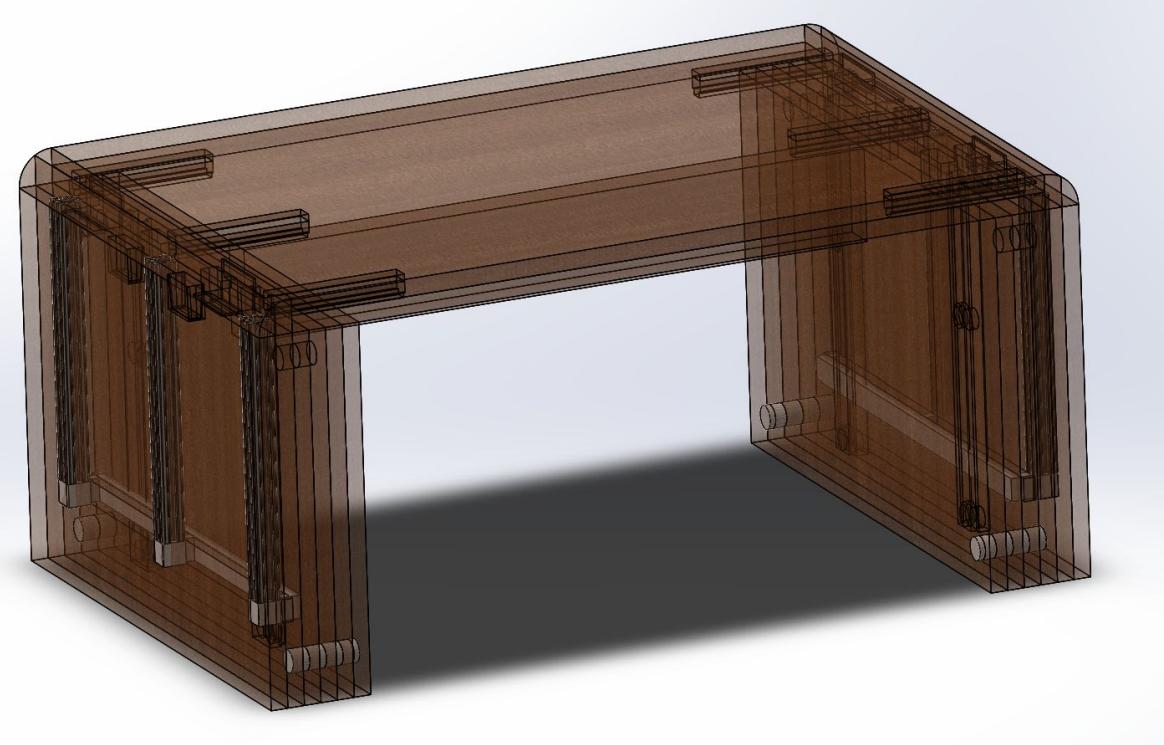


CAD MODELING

REFERENCE SKETCH



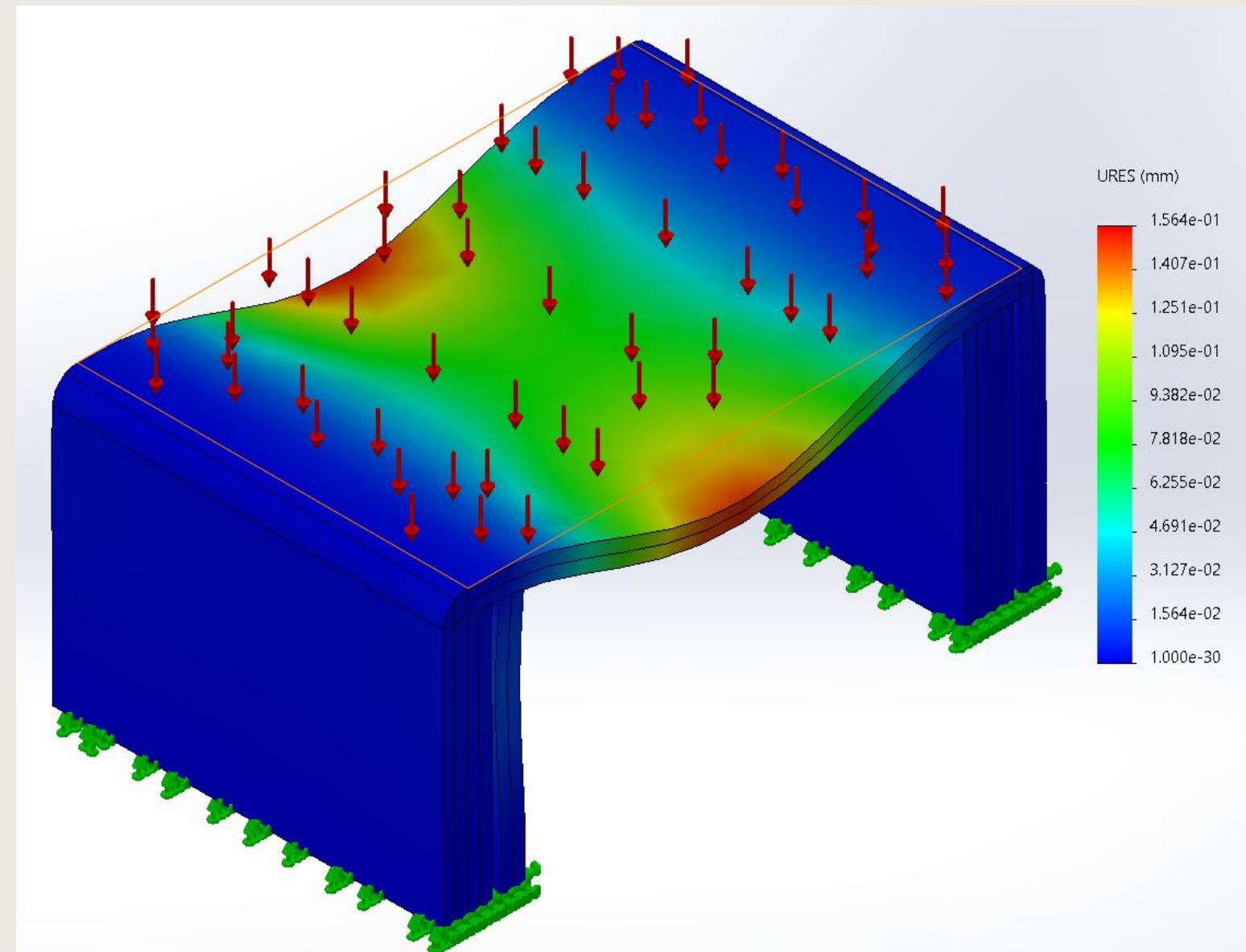
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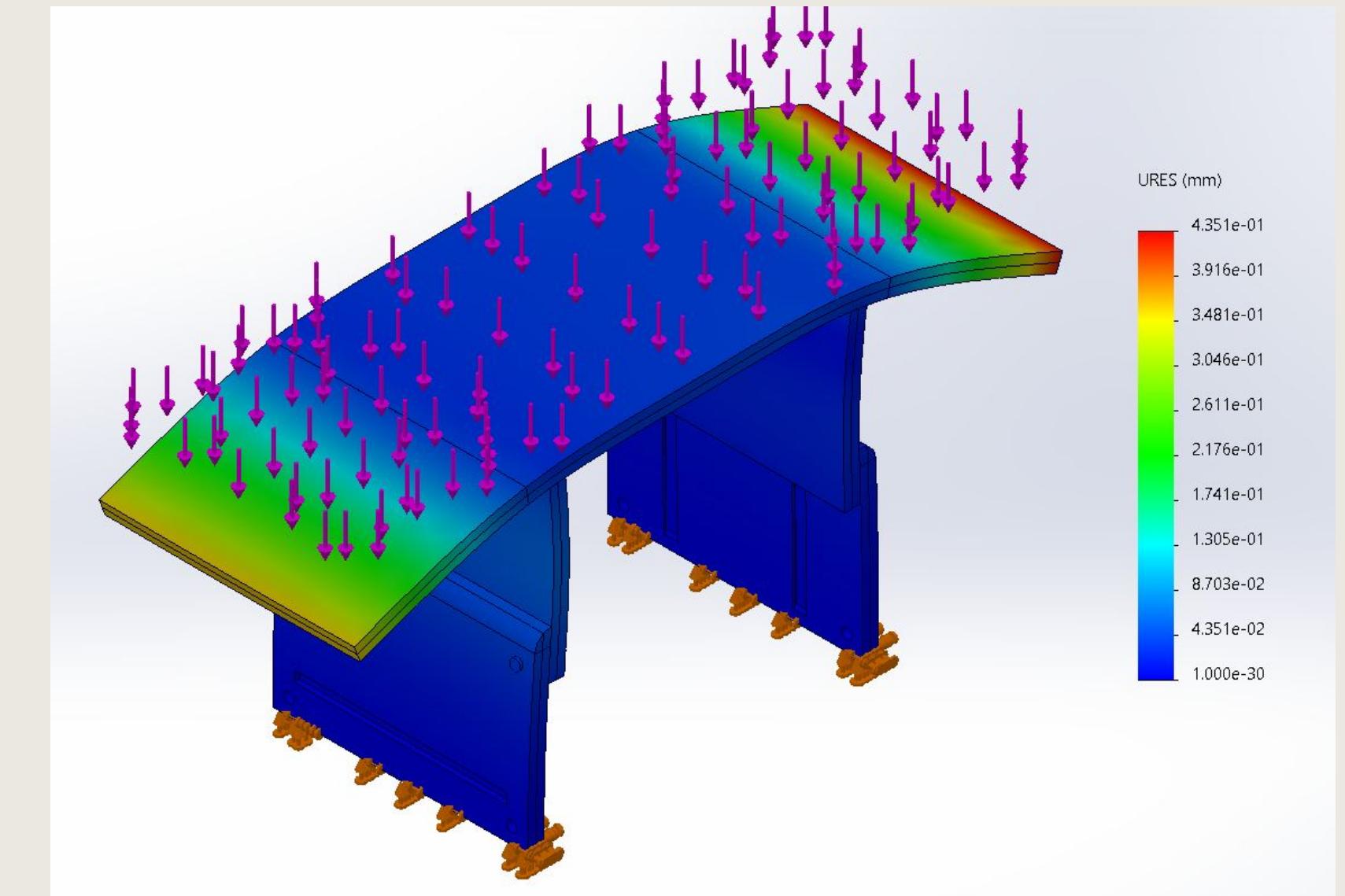
EXPANDED



FEA ANALYSIS



APPLIED PRESSURE : 2 PSI
MAX DISPLACEMENT : 0.155 MM



APPLIED FORCE: 500 LBS TOTAL
MAX DISPLACEMENT: 0.435 MM

PROTOTYPES

PRELIMINARY PRODUCT PROTOTYPE



DEMONSTRATION PROTOTYPE *PROGRESS AS OF 05/03/23*



REFERENCES

<https://fivethirtyeight.com/features/how-many-times-the-average-person-moves/>

<https://www.rentcafe.com/blog/rental-market/market-snapshots/apartment-space/>

<https://www.futuremarketinsights.com/reports/small-space-furniture-market#:~:text=Small%20Space%20Furniture%3A%20Market%20Overview,value%20of%20US%24%206%20Billion.>

https://www.amazon.com/product-reviews/B09RWJVHCT/ref=acr_dp_hist_2?ie=UTF8&filterByStar=two_star&reviewerType=all_reviews#reviews-filter-bar

https://www.amazon.com/VINGLI-Coffee-Storage-Hidden-Compartment/dp/B09B9YLQ8N/ref=sr_1_30?keywords=coffee+table+converts+to+dining+table&qid=1683075148&sr=8-30&ufe=app_do%3Aamzn1.fos.f5122f16-c3e8-4386-bf32-63e904010ado

<https://expandfurniture.com/product/box-coffee-to-dining-table/>

THANK YOU FOR YOUR TIME!

WE WILL NOW ANSWER ANY QUESTIONS

