

► **RESEARCH 4-22**

The Problem Proprioception The Environment **Baseline Products Baseling Testing**

► PROBLEM STATEMENT 23-25

Product Line Technologies

► DESIGN PROCESS 26-38

Sketching Prototyping **Testing**

TECH PACKS 39-47

Footwear Sleeve Sock

- ► PACKAGING 48
- ► PHOTOGRAPHY 49-51
- ► VALIDATION 52
- ► PRODUCT OUTCOMES 53





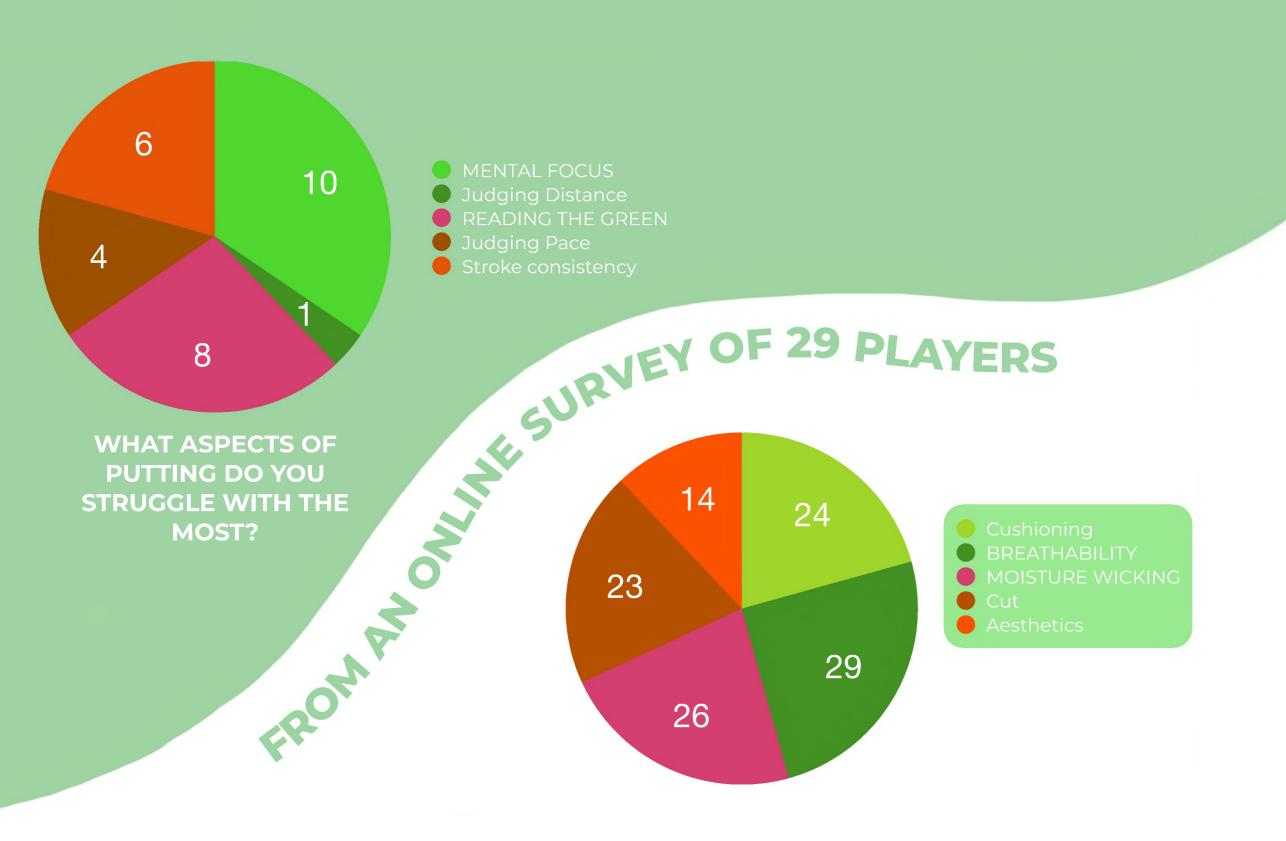


My mission as a designer is to combine my passion for sports with my engineering knowledge to innovate smart, beautiful solutions that excite and motivate athletes to get out and play.

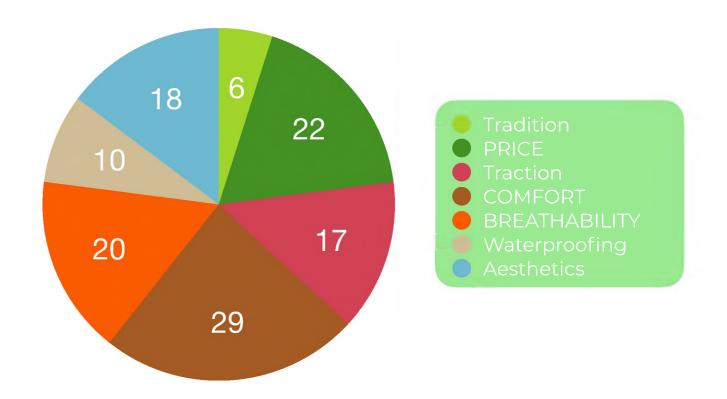
I want to be remembered as a designer who created beautiful, thoughtful products that challenged the constraints of traditional sport.

"





FROM AN ONLINE SURVEY, 21/29 PLAYERS SAID THEY REGULARLY USE TRAINING AIDS TO IMPROVE GOLFING PERFORMANCE.



83% OF UK PLAYERS HAVE NEVER WORN COMPRESSION SLEEVES

VS

60% OF US PLAYERS HAVE NEVER WORN COMPRESSION SLEEVES



76% OF UK PLAYERS WOULD NOT BE INTERESTED IN SLEEVES THAT PROVIDE SENSORY FEEDBACK

VS

33% OF US PLAYERS WOULD NOT BE INTERESTED IN SLEEVES THAT PROVIDE SENSORY FEEDBACK

89% OF PLAYERS WOULD BE INTERESTED IN SHOES THAT IMPROVE PUTTING PERFORMANCE.

THOSE THAT WERENT INTERESTED WERE CONCERNED USING THEM ON THE COURSE WOULD FEEL LIKE CHEATING.









HEIGHTEN

PROPRIOCEPTIVE EXPERIENCE

INCREASE POSITIONAL AWARENESS

IMMERSE

PLAYERS INTO THEIR ENVIRONMENT

IMPROVE

PERFORMANCE















G/FORE MG4+ TRUE LINKSWEAR FEEL OG

UNDER ARMOUR
GOLF PERFORMANCE
SOCK

TRU SOX 3.0 THIN

UNDER ARMOUR HEAT GEAR SLEEVE FOOTJOY SUN SLEEVE

\$185

\$145

\$9

\$49.97

\$11.99

\$30









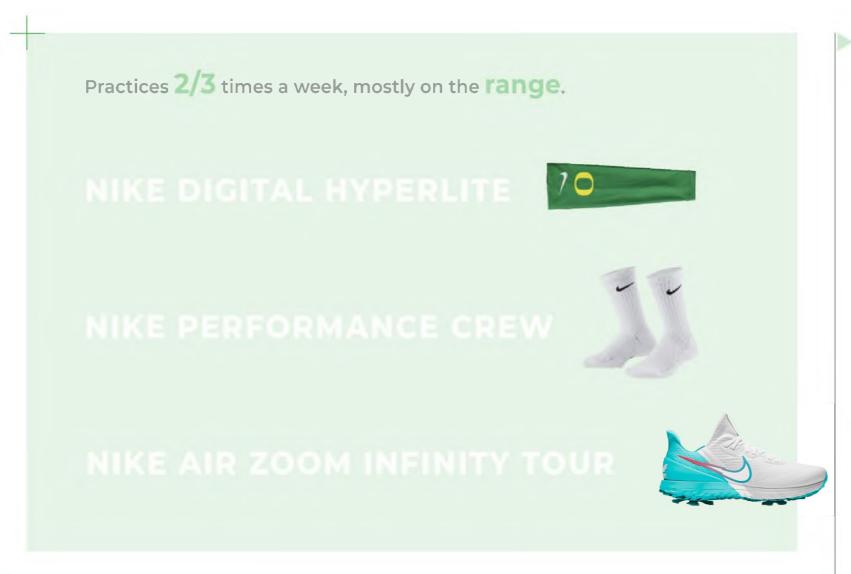




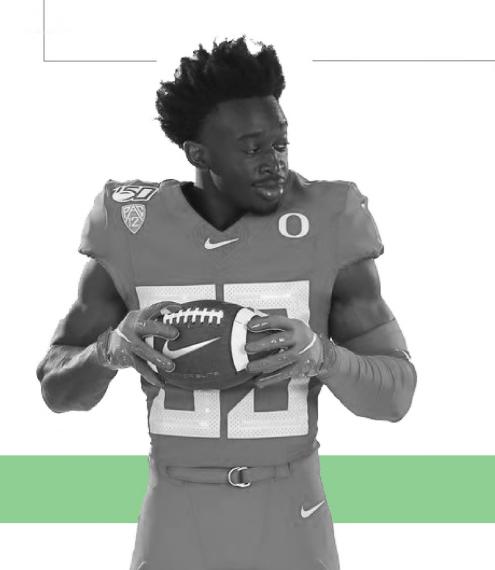








JORDAN 22

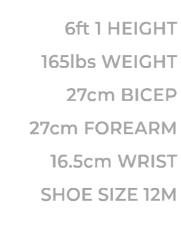


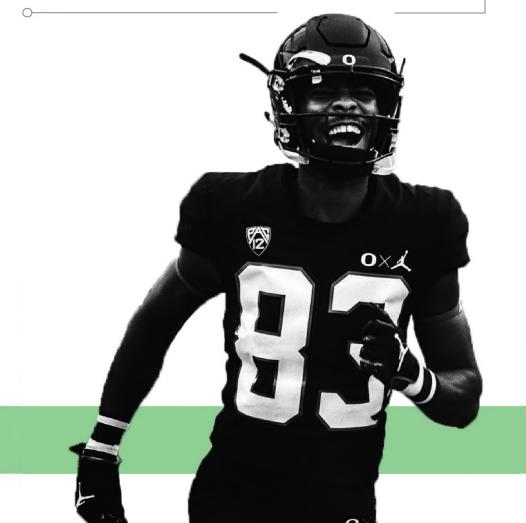
HEIGHT 6ft 1
WEIGHT 205lbs
BICEP 34cm
FOREARM 33cm
WRIST 17.5cm
SHOE SIZE 12M

HIGH COMPRESSION SLEEVE

BOMBAS SOLID ANKLE SOCK

NIKE AIR ZOOM TIGER WOODS





AJ 24

PLAYER STATS

COMPETITOR PRODUCT TESTING



ON THE RANGE $\,\hookrightarrow\,$



ON THE GREEN -

TESTING METHOD

STEP 1

- Players are blindfolded and asked to put on products.

STEP 2

- Blinfolds are then removed and the players are asked to warm up on the putting green.

STEP 3

- As they are warming up around the green, they are asked to rate varous features of the products out of 10.

STEP 4

- Their responses are noted down.

STEP 5

- The player then moves to the driving range to warm up and the questions are repeated.

STEP 6

- The player swaps products and the process is repeated.

"Foot feels locked down and very stable, but provides slight resistance on the left lateral side during swing follow through"

"Midsole feels like an **Orthopedic insole**, different, but not uncomfortable"

"I like the stiffness of the shoe, it makes it **Very responsive**"

"A bit like a **nurses shoe** and very vanilla"

"Feels like a **Cloud** on your foot, like the sole forms around your foot"

"My foot feels very planted during the swing, but the upper still moves with the shoe"

"Doesn't feel like a golf shoe, feels like a **track shoe**"

"It feels like it's wide in the wrong places"

"Would be great on the green, but might not want to walk 18 holes in it"

"Looks like an old mans shoe"



COMFORT

STABILITY

GROUND FEEL

FIT

TRACTION

STIFFNESS

CUSHIONING

AESTHETICS

TRUE OG FEEL



AESTHETICS





THE RESULTS

RANGE

PUTTING

"I think it's got really good cushioning just not in the right places"

"I really like the **Support under the arch**"

"I'm not sure if it's the shoe, but I kinda Want more cushioning on top of my foot, the tongue is digging in"

"I think it looks very athletic"

"Feels like there's an uncomfortable stitch under the toes"

"It's a **strange sensation** putting them on, but after a while you barely feel them"

"There is no cushioning, I can feel everything"

"It looks kinda yellow, but I don't really care how it looks"

UNDER ARMOUR SOCKS

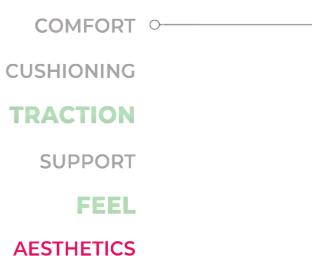


TRACTION

FEEL

CUSHIONING SUPPORT **AESTHETICS**

TRUSOX 3.0 THIN





THE RESULTS

RANGE

PUTTING

"It doesn't feel like it's doing much, but it's very comfortable"

"Feels like an accessory without purpose"

"Makes me feel like an old man"

"I feel like I would want to take it off after an hour"

"The material feels so soft, like it feels like it's not there"

"It gives a little **more support** than the other sleeve"

"I can feel slight compression, but with no restriction"

FOOTJOY SLEEVE

"It feels like it's actually doing something"

UNDER ARMOUR SLEEVE







THE RESULTS

RANGE

PUTTING



ON THE GREEN ~

TESTING METHOD

STEP 1

- Players take 3 putts from specified spot at 3 feet, 6 feet, 9 feet.

STEP 2

- Take note of how many putts are sunk and the position from where putts are taken.

STEP 3

- Videos of the putting stroke will be taken for every putt.

STEP 4

- Players the takes 5 putts from random spots around 12 feet from the hole, making sure to carry out a green reading procedure before each putt.

STEP 5

- Take note of line accuracy and the distance the ball finishes from the hole.

STEP 6

- Ask player how easy they felt it was to read the green and line up





JORDAN 22



On average, both players achieved more correct answers when wearing the TRUE linkswear shoes and TRUsox.

They also determined their answers on average, 7s faster when wearing these products.





TEST 1



TEST 2 [∞]

TESTING METHOD

STEP 1

- Players take 3 putts from specified spot at 3 feet, 6 feet, 9 feet.

STEP 2

- Take note of how many putts are sunk and the position from where putts are taken.

STEP 3

- Videos of the putting stroke will be taken for every putt.

STEP 4

- Players the takes 5 putts from random spots around 12 feet from the hole, making sure to carry out a green reading procedure before each putt.

STEP 5

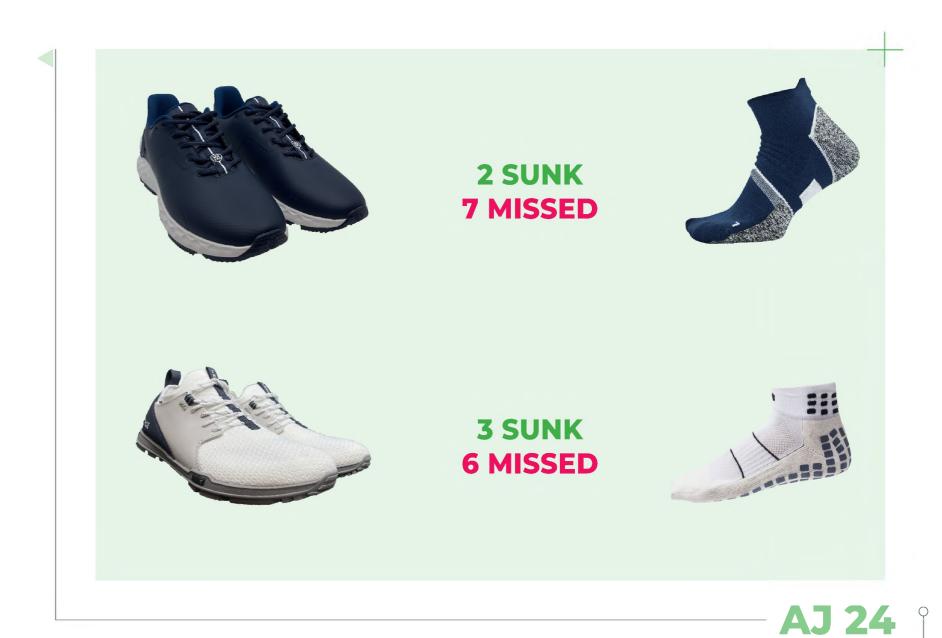
- Take note of line accuracy and the distance the ball finishes from the hole.

STEP 6

- Ask player how easy they felt it was to read the green and line up

PUTTING PERFORMANCE





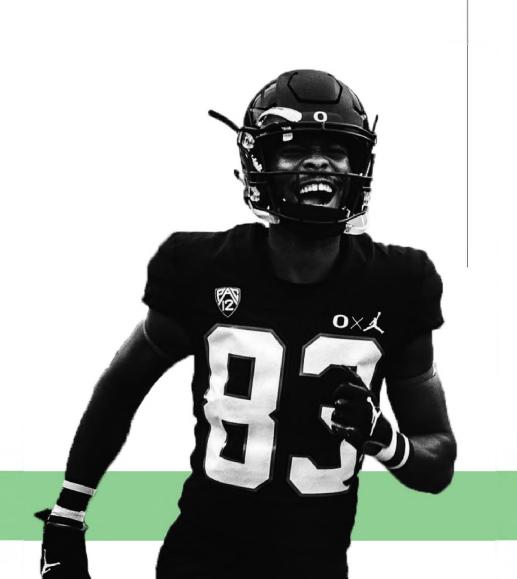
JORDAN 22



AJ sunk more putts when wearing the TRUE linkswear shoes and TRUsox.

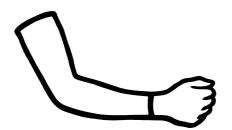
Jordan sunk more putts when wearing the G/Fore shoes and UA socks.

However, both players said it felt easier to read the the line of the putts when wearing the TRUE linkswear shoes and TRUsox.



TO DEVELOP A COLLECTION OF SHOES AND SLEEVES FOR GOLFERS THAT WORK TOGETHER AS A TRAINING AID TO HEIGHTEN PROPRIOCEPTION BY INCREASING AWARENESS OF THE TERRAIN CONTOURS AND MUSCULAR MOTION OF THE BODY, THUS IMPROVING GOLFING PERFORMANCE







GOLF SHOES

A PAIR OF SHOES DESIGNED TO INCREASE AWARENESS OF THE TERRAIN CONTOURS THROUGH HEIGHTENED PROPRIOCEPTION

COMPRESSION SLEEVES

A PAIR OF SLEEVES DESIGNED TO INCREASE MUSCULAR AWARENESS AND ENCOURAGE **BEST GOLFING FORM**

SOCKS

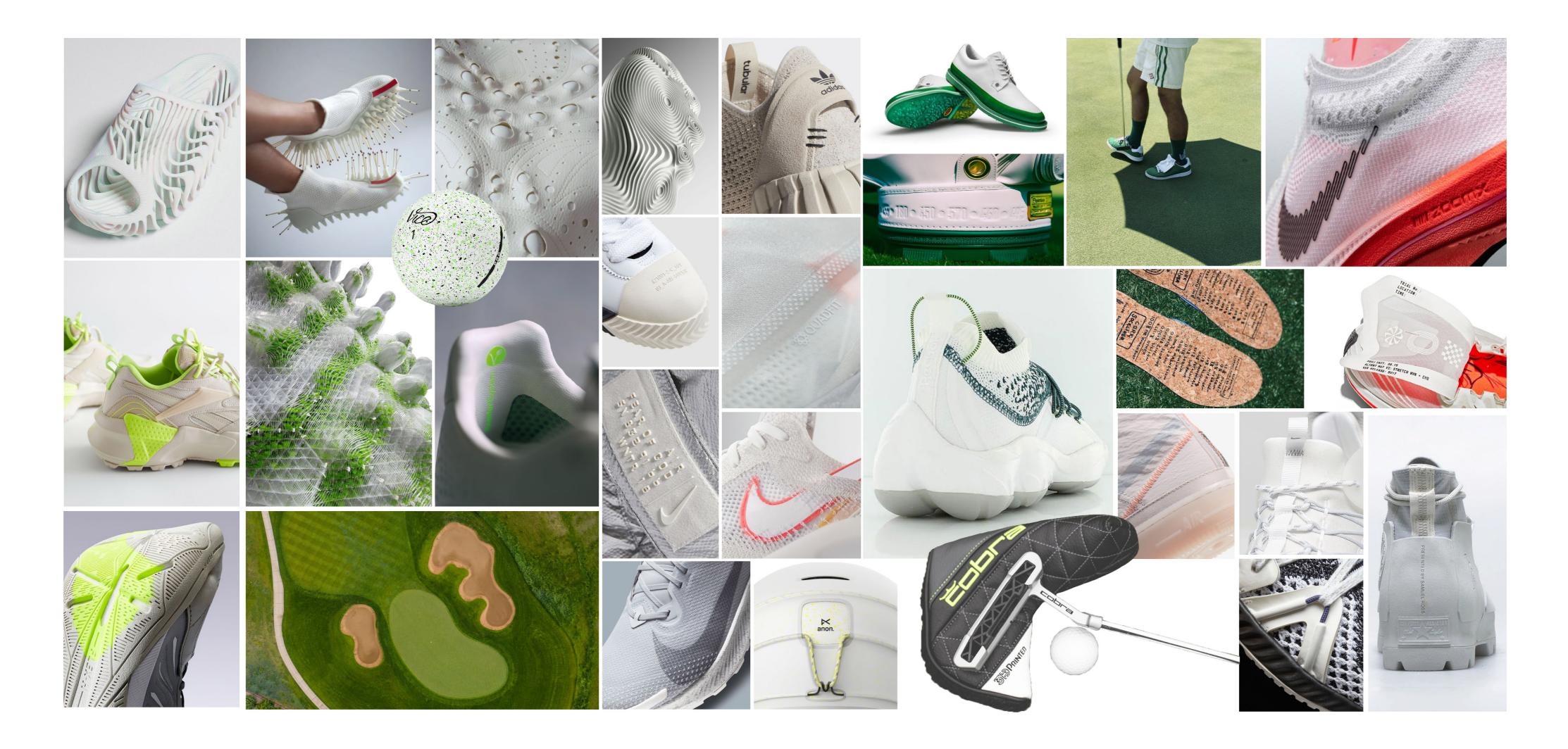
A PAIR OF SOCKS DESIGNED TO LOCK IN THE FEET AND FURTHER ENHANCE THE PROPRIOCEPTIVE TECHNOLOGY OF THE SHOES

AURA-CEPTION TECHNOLOGY

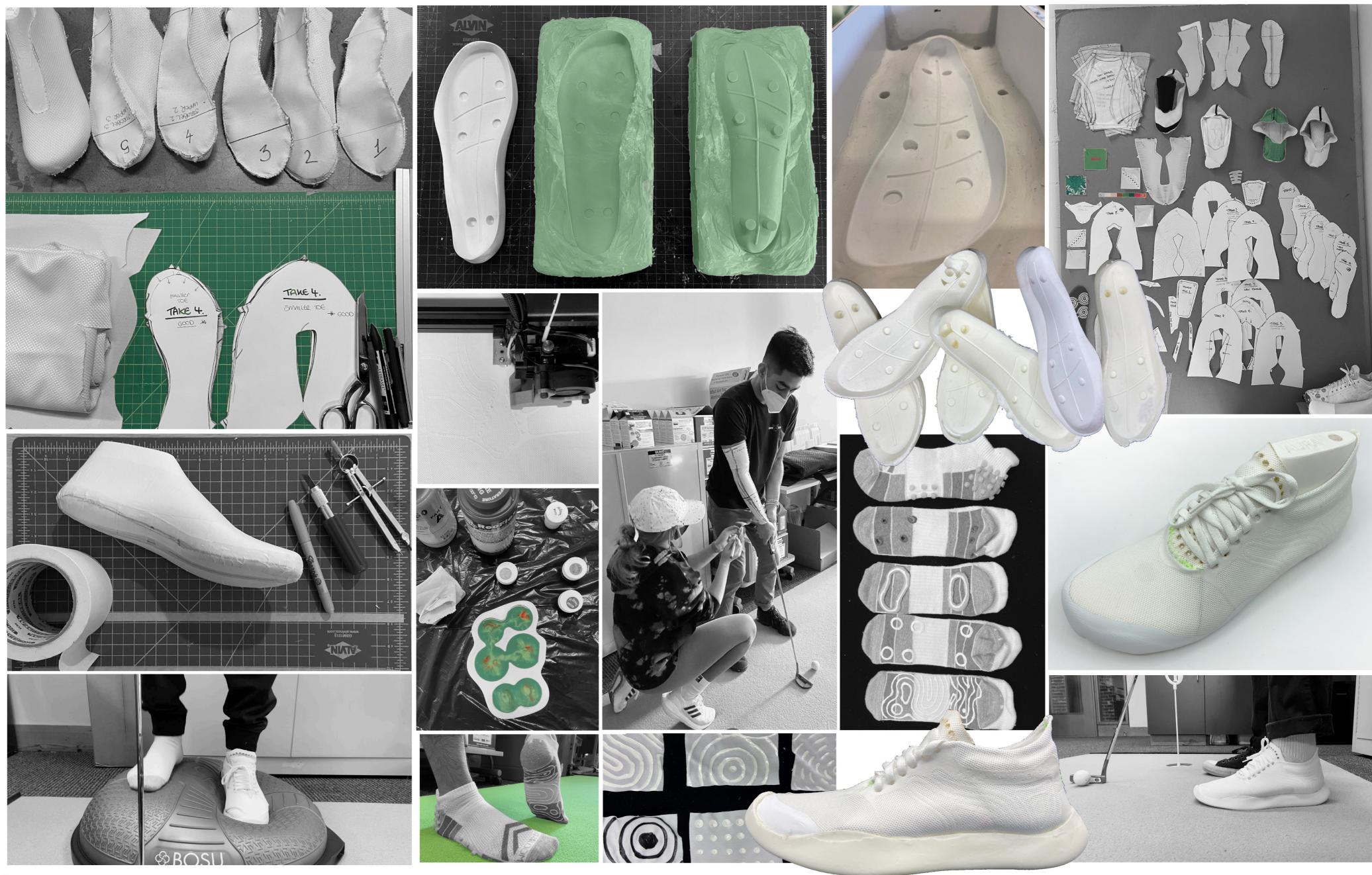
AN INSOLE SYSTEM DESIGNED TO IMPROVE A PLAYERS PROPRIOCEPTION THROUGH POINTS OF STRATEGICALLY APPLIED PRESSURE.

MORPH TECHNOLOGY

A TEXTURIZED STRUCTURE SYSTEM DESIGNED TO PROVIDE BOTH SUPPORT AND SUBTLE TACTILE FEEDBACK TO THE PLAYER.













User was blindfolded and then asked to rate the features of the prototype shoe on a scale of 1 to 10.







GROUND FEEL SCORE INCREASED WHEN PODS WERE ADDED, BUT **COMFORT SCORE WENT DOWN SLIGHTLY.**

It was felt the pods did further enhance the experience. They could be felt over the forefoot, but not as much on the heel.

"The pods definitely made a difference, I could really feel them over the forefoot, but the heel was pretty numb"

"I can feel there is a texture on the insole, but I can't tell what the pattern is"

"I feel like you get used to the sensation of the insole and the pods over time, they don't bother me at all"









User was blindfolded and then asked to step on a cluster of small objects. The user had to guess how many objects were under their foot.

AURA SHOE WITH PODS		
NO. OF OBJECTS	GUESS	
9	9	
6	5	
4	4	

G/FORE SHOE	
NO. OF OBJECTS	GUESS
7	6
10	8
5	3
5	3

TRUE LINKSWEAR SHOE		
NO. OF OBJECTS GUESS		
7 7		
5 5		
7 7		

AURA SHOE WITHOUT PODS		
NO. OF OBJECTS	GUESS	
5	4	
4	3	
8	8	

"It was so much harder when wearing the G/FORE shoes, I could feel so much more with the AURA shoe"

"I could feel almost everything through the AURA sole, but it still feels so cushioned"

"I can feel even more through the True linkswear shoes"

USER WAS MORE ACCURATELY ABLE TO DETERMINE THE NUMBER OF OBJECTS BENEATH THE AURA SHOE THAN THE G/FORE SHOE.

The AURA shoe could feel more than the G/FORE, but less than the True linkswear. It also took less time to determine the number of objects when wearing the AURA shoes.









User was asked to perform a series of dynamic movements to assess balance and stability performance.

AURA SHOE WITHOUT ZEPHYR TECH

AURA SHOE WITH ZEPHYR TECH





STABILITY BALL PUTT





OLF SWING





USER WAS VISIBLY MORE STABLE WHEN PERFORMING THE MOVEMENTS IN THE SHOES WITH INTEGREATED ZEPHYR TECHNOLOGY

The Zephyr technology made the shoes significantly more stable and kept the foot more locked in place during dynamic movements. The heel still felt a little unstable but this is a result of the midsole design, not the upper.



"Oh yeah, I feel so much more secure when wearing the shoes with the Zephyr tech."

"The heel is still a little unstable, but overall my foot feels a lot more locked-in while I'm swinging."

"It makes a big difference, you notice it immediately."







SPD 2022

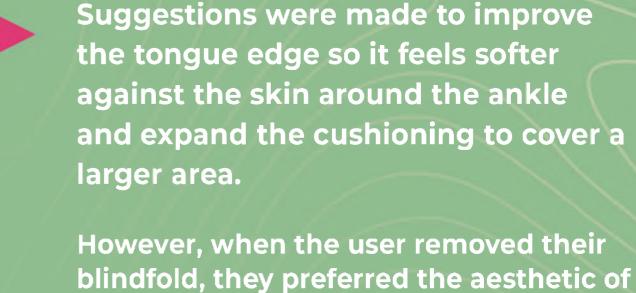
Users were blinfolded and 4 competitor tongue designs were integreated into the AURA shoes and tested against the prototype design. They were aksed to rate each product feature on a scale of 1 to 10.

THE USER FOUND THE PROTOTYPE TONGUE MORE BREATHABLE AND COMFORTABLE THAN MOST OF THE COMPETITORS.









the competitor products.













"I like how low profile the tongue is. It cushions my foot from the laces but you barely know its there."

"I think the cushioning could expand more to the sides and up the top of the tongue."

"I'm not sure I like seeing my sock through the holes."





User was blindfolded and then asked put on the AURA shoes and rate the features of each sock on a scale of 1 to 10.



TRACTION WAS FOUND TO BE SUPERIOR FOR BOTH PROTOTYPES. 'FEEL' WAS THE BEST FOR PROTOTYPE 2, BUT PROTOTYPE 1 WAS THE MOST COMFORTABLE.



It was felt that proto 2 allowed for the most 'feel' beneath the sole of the foot and that proto 1 reduced 'feel' significantly, but was more comfortable.

Tradeoffs between 'feel' and comfort will be analyze to determine the most optimal design.

"The traction makes a huge difference, I feel so locked-in."

"The foam makes it hard to feel anything, I think its reduced feel by like 50%."

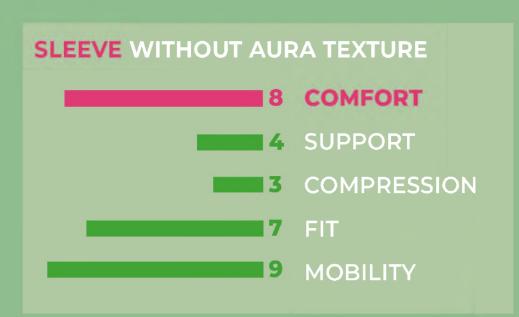
"I think the nubs around the ankle are a little much with the shoe. I don't think they are necessary."

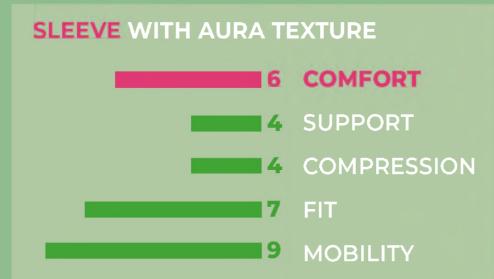






User was blindfolded and then asked put on the sleeves and rate the features of each product on a scale of 1 to 10.





THE SLEEVE WITHOUT THE AURA TEXTURE WAS MORE COMFORTABLE BUT ALL OTHER FEATURES REMAINED THE SAME ACROSS THE PRODUCTS.

The AURA texture on the inside of the sleeve could be felt very lightly. It was thought that a more pronounced texture might be necessary.



"The sleeve feels so seamless, like it's barely there when there's no stuff on the inside."

"I can definitely feel the texture, it's a strange sensation, but I think I would get used to it."

"I would need to wear it for longer to see if it becomes uncomfortable or disappears"





User was blindfolded and asked to putt while wearing different sleeves. They were then instructed to try keeping their wrists stiff and repeat the exercise.

SLEEVE WITHOUT AURA TEXTURE

SLEEVE WITH AURA TEXTURE





INSTRUCTION





USER FELT THEIR STROKE WAS MORE CONSISTENT WHEN AURA TEXTURE WAS ON TO THE INSIDE OF THE SLEEVE.

It was felt that the AURA texture helped the user keep their arms in a more consistent position. This could be a result of the placebo effect as the user was aware at this point what the sleeve was trying to achieve.



"When I can feel the texture it makes me more aware of what my arms are doing."

"The texture gives me something to focus on. I think some people might find it distracting though."

"Maybe the sleeve should come down over the hand a little more, I think that might help."







Ultrasonic humidifier was placed on top of the swatch and vapour was allowed to flow down and over the material.

ZEPHYR MATERIAL SWATCH



THE AURA ZEPHYR TECH ALLOWS VAPOUR TO PASS THROUGH KNIT BETWEEN 3D PRINTED RIBS.



SYNTHETIC LEATHER MATERIAL



NO VAPOUR IS ABLE TO TRANSMIT THROUGH THE SYNTHETIC







SHOES DESIGNED TO PROVIDE SUBTLE TACTILE STIMULATION TO INCREASE AWARENESS OF THE TERRAIN CONTOURS, AND HENCE IMPROVE PUTTING PERFORMANCE.







DESIGN PAGE	SEASON: SUMMER 2024
DESIGN PAGE	SEASON. SUMMER 2024

SAMPLE SIZE:

MEN'S

COLOUR REFERENCE:







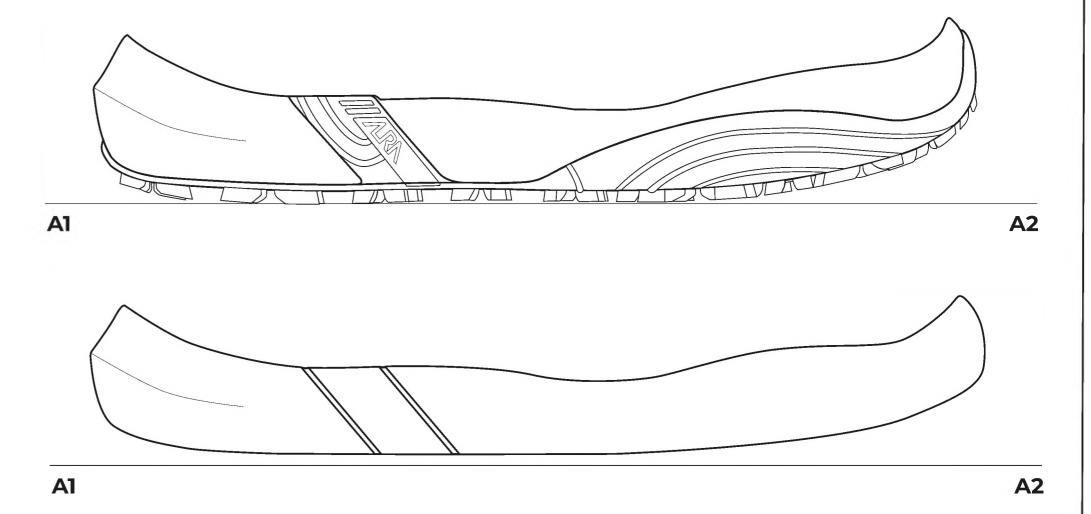
DESIGNER: JEMMA BROWN

STYLE: 01 GOLF SHOE - RIGHT FOOT

PANTONE P 179-1C PANTONE P 179-2C PANTONE P 179-4 C PANTONE P 179-4 C PANTONE P 19-9 C













TOOLING SEASON: SUMMER 2024

STYLE: 01 GOLF SHOE - RIGHT FOOT

MEN'S

SAMPLE SIZE:

COLOUR REFERENCE:





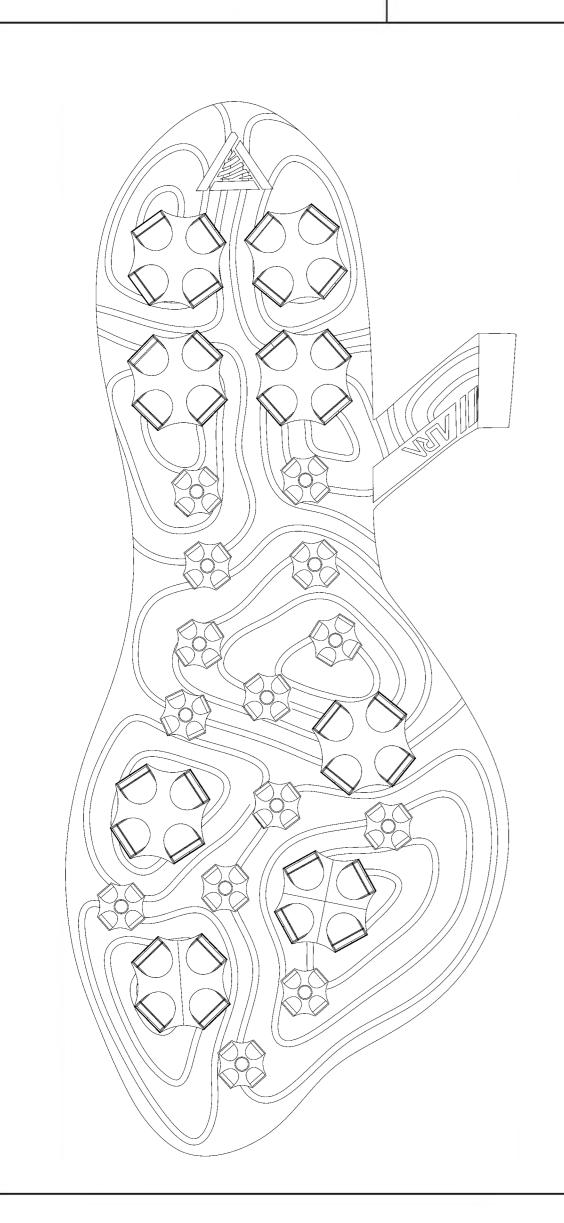


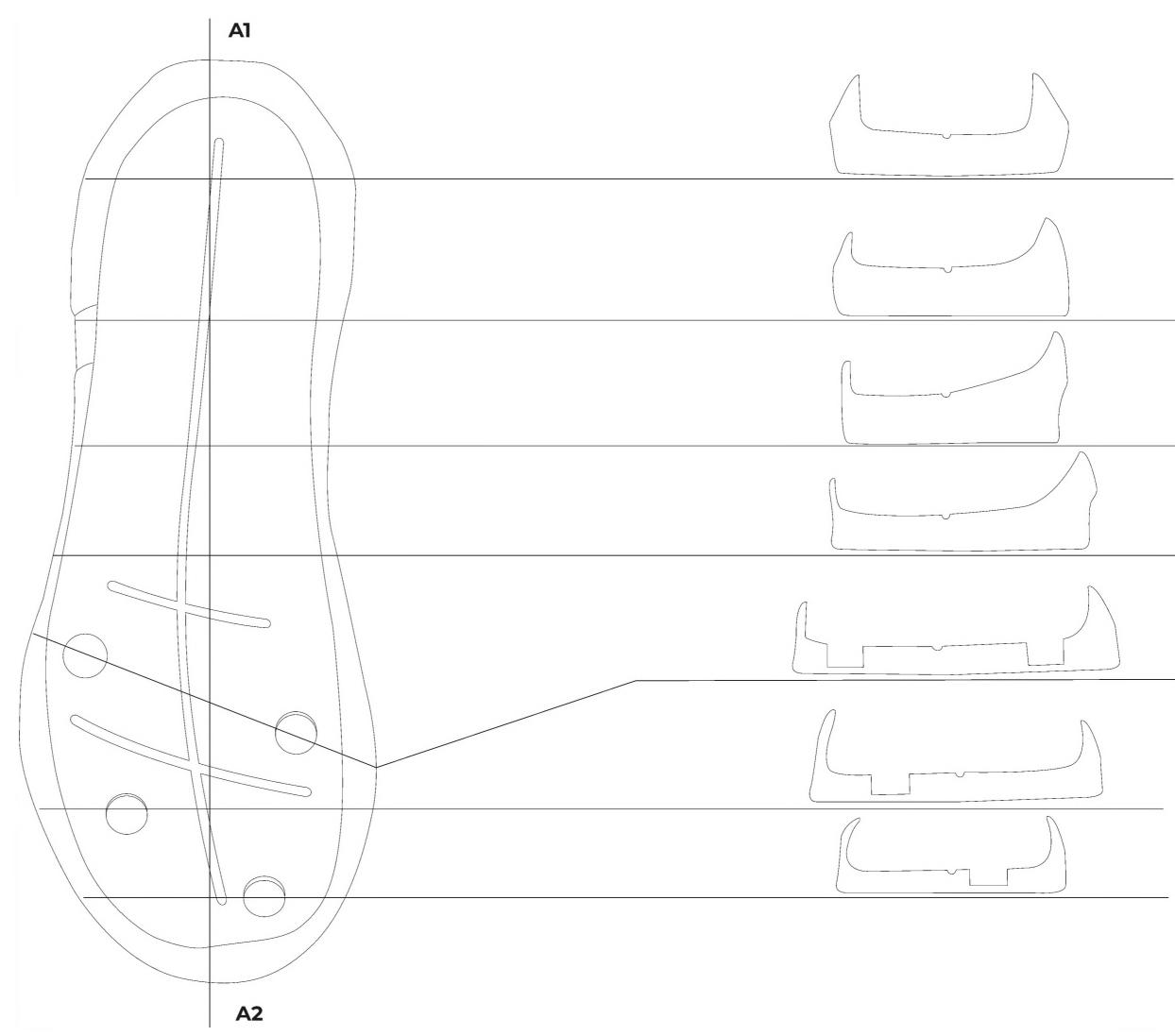


DESIGNER: JEMMA BROWN

PANTONE P 179-1C PANTONE P 179-2C PANTONE P 179-4 C PANTONE P 179-4 C PANTONE P 19-9 C



















GRAPHIC DETAILS

SEASON: SUMMER 2024

SAMPLE SIZE:

MEN'S S YARN REFERENCE:





DESIGNER: JEMMA BROWN

STYLE: 01 SLEEVE - RIGHT ARM

PANTONE P 179-1C

PANTONE P 179-2C

PANTONE P 179-4 C

PANTONE 802C

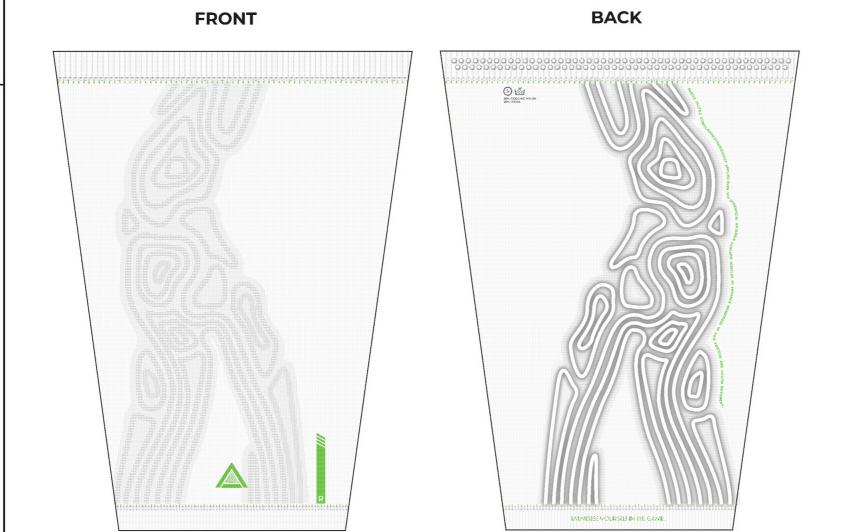
MATERIAL: 80% NYLON,

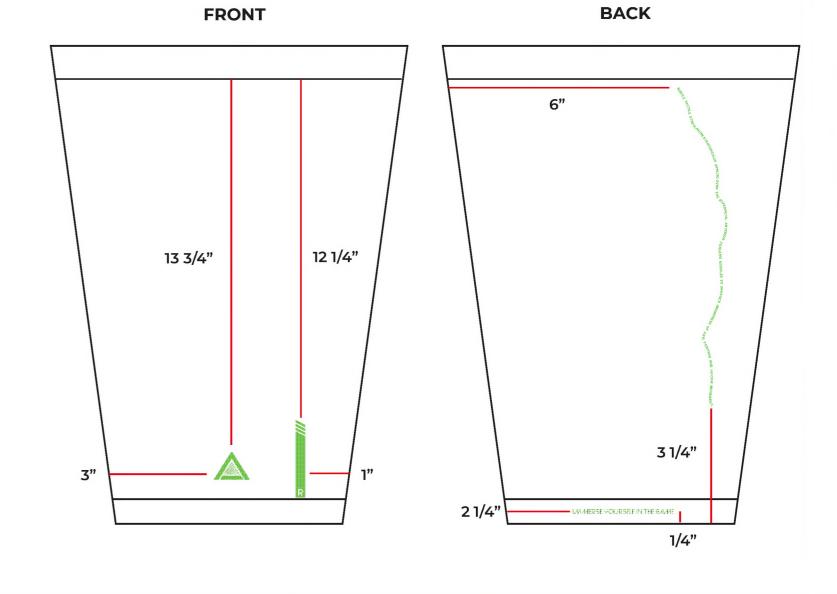
20% SPANDEX

FACTORY: N/A

THREADS:

GRAPHICS NYLON SPANDEX, 70D, BRIGHT GREEN







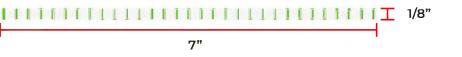
4. TEXT ON THE BACK
OF SLEEVE

APPLIED OVER THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM MUSCLES TO ENHANCE AWARENESS OF THE SUPERFICIAL ANTERIOR FOREARM FO





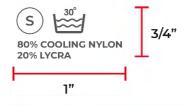
5. GREEN RIB STRIPE IN BREAK BETWEEN CUFFS AND SLEEVE BODY



3. TEXT ON THE BACK OF THE BOTTOM HEM

MMERSE YOURSELF IN THE GAME.. I 1/5"

6. PRINTED INFORMATION GRAPHIC



SOCKS DESIGNED TO WORK IN TANDEM WITH THE SHOES TO FURTHER HEIGHTEN THE AURA PROPRIOCEPTION TECHNOLOGY AND INTERLOCK WITH THE INSOLE TO KEEP FEET IN PRIME POSITION.



	DESIGN PAGE STYLE: 01 SOCK - RIGH DESIGNER: JEMMA B		SAMPLE SIZE: MEN'S 9	YARN REFERENCE: PANTONE P 179-1C	PANTONE P 179-2C	PANTONE P 179-4 C	PANTONE 802C
MATERIAL: 68% POLYESTER, 21% NYLON 6% COTTON 5% ELASTANE FACTORY: N/A	FRONT		BACK		NECK WIDTH 2 3/4"		
HEM: COMPRESSION RIB							n'
ZONE 1: LOW COMPRESSION						3"	
ZONE 2: MEDIUM COMPRESSION					LENGTH 8"	<u> </u>	
ZONE 3: MORPH ANTI-SLIP TEXTURE					T 1/2"		
	FRONT		BACK		COLOURWAY I WHITE/LIME		
					COLOURWAY 3: LI	ME/WHITE	ARA A



























THANK YOU FOR LISTENING

