



BRYANT JIMÉNEZ | THESIS 2022



BRYANT JIMÉNEZ

UO Graduate with degrees in Architecture, Digital Arts and Romance languages

I WANT TO INNOVATE AND IMPROVE ATHLETE PERFORMANCE IN SPORTS

POST GRADUATION

I want to pursue Performance Footwear Design either through sample making or 3D Footwear Design



CONVERSE REINVENT



COPA SPEEDHACK

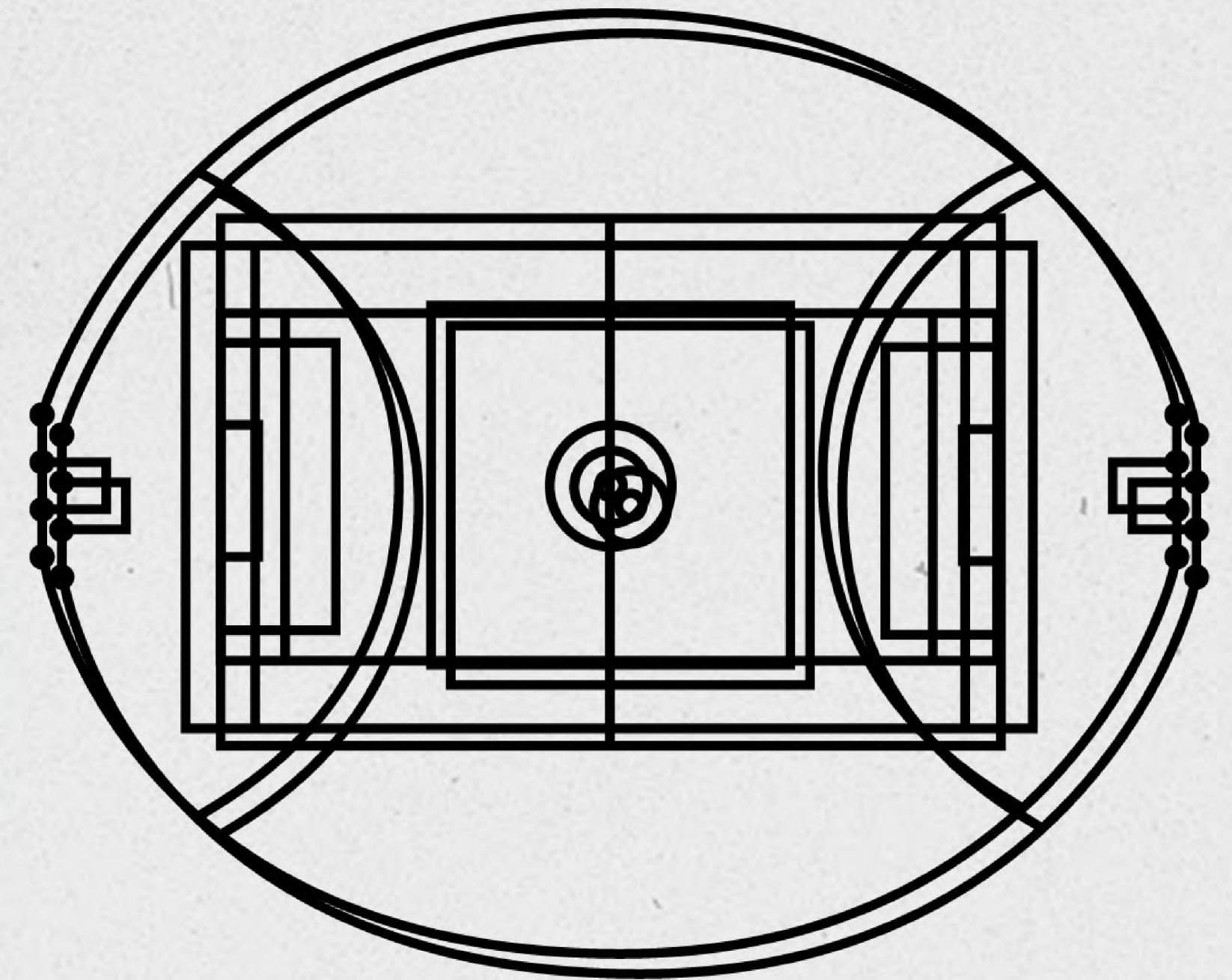


FUTSAL TRACTION

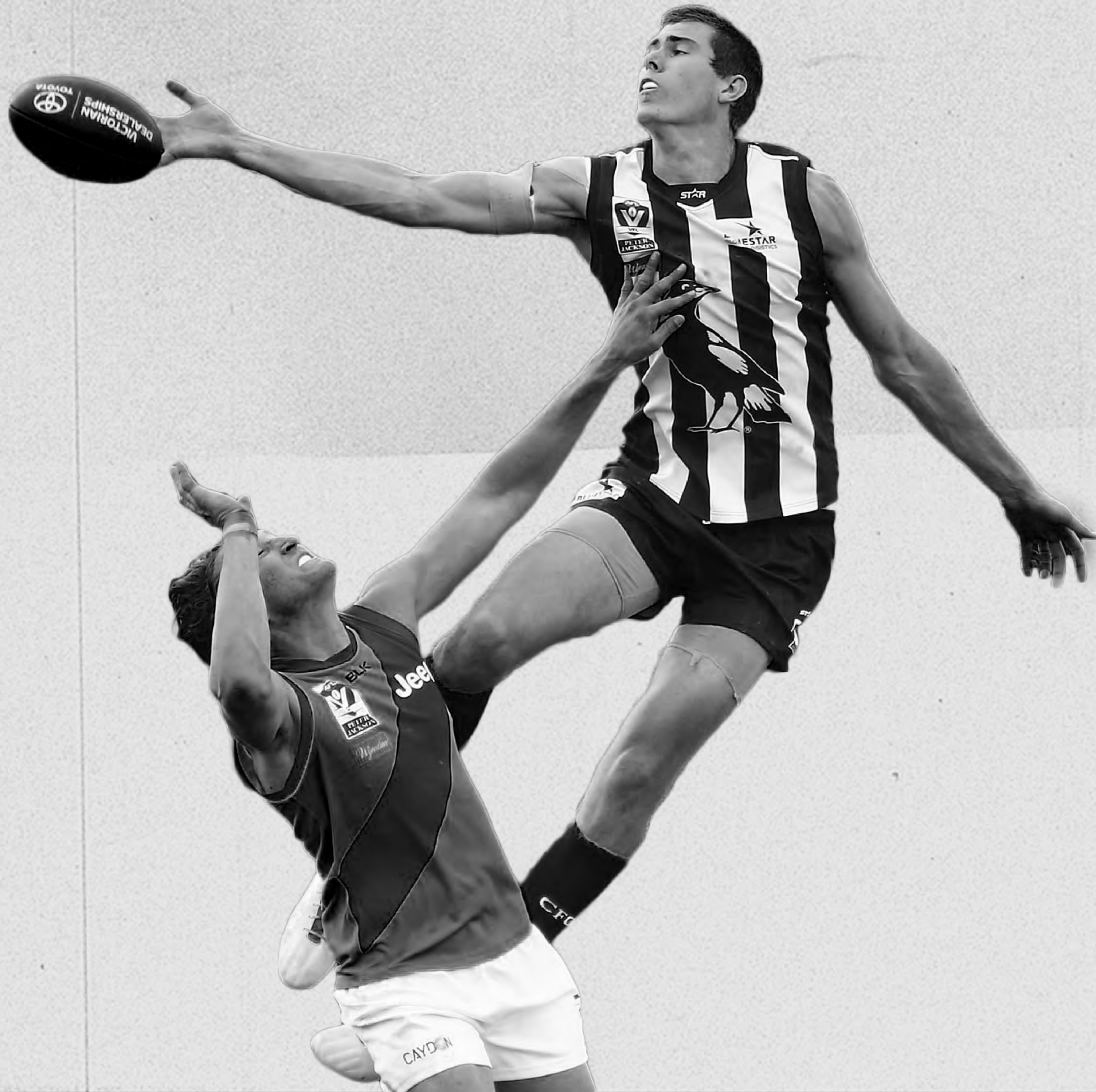


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WHAT IS AUSTRALIAN RULES FOOTBALL?



AUSTRALIAN RULES FOOTBALL
AUSTRALIAN RULES FOOTBALL



RUCKMAN

Defensive Giants

Average Height 6'5" +

Aerial Collisions

	CAR	13	3	81	Q3
	MEL	9	7	61	01:30



TAL TAL TAL TAL TAL TAL TAL TAL TAL TAL TAL TAL

TAL Life Insurance TAL Life Insurance TAL Life Insurance

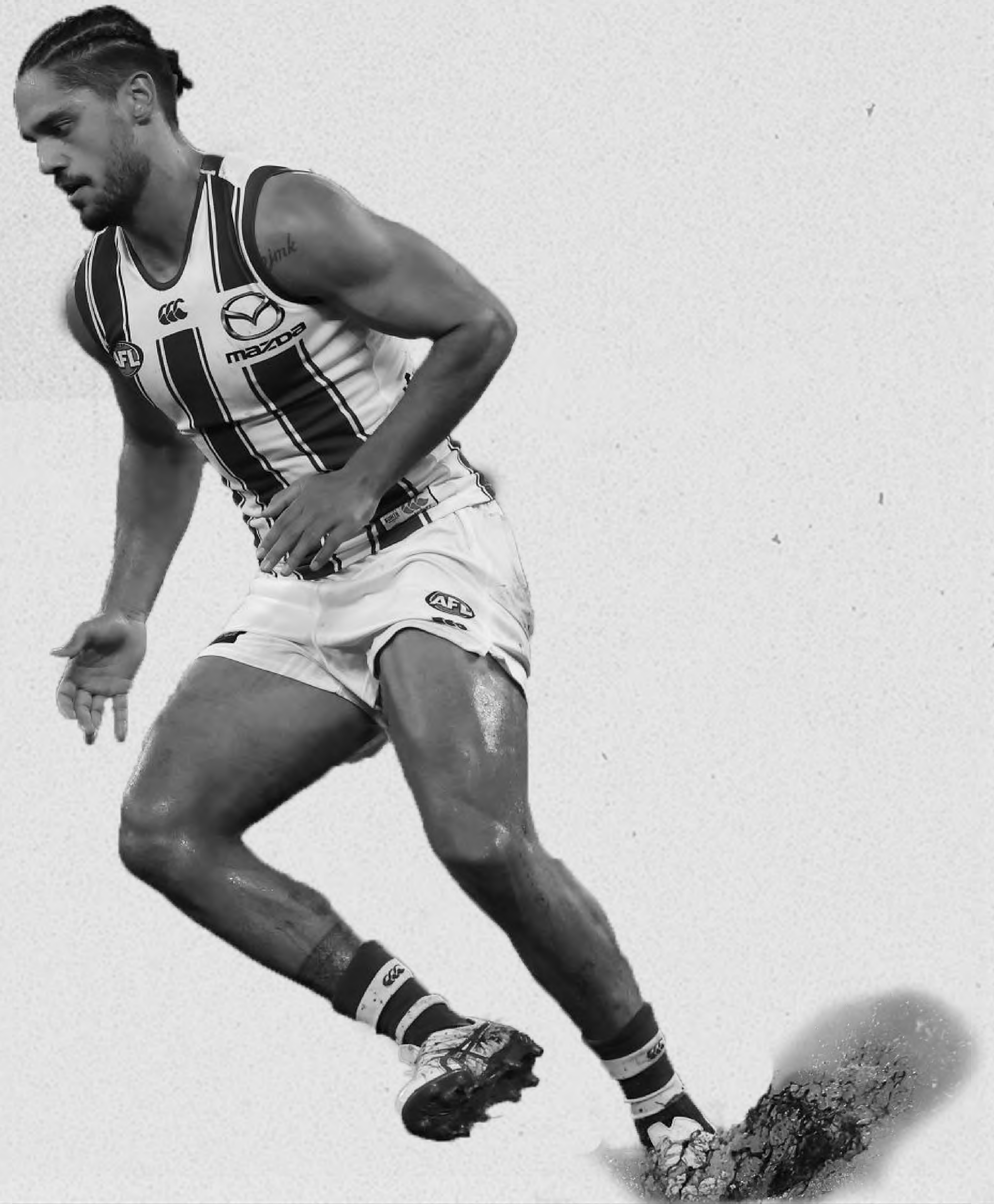


ROVER

Recovers possession

Longest Average Game Distance



Most Versatile Movement



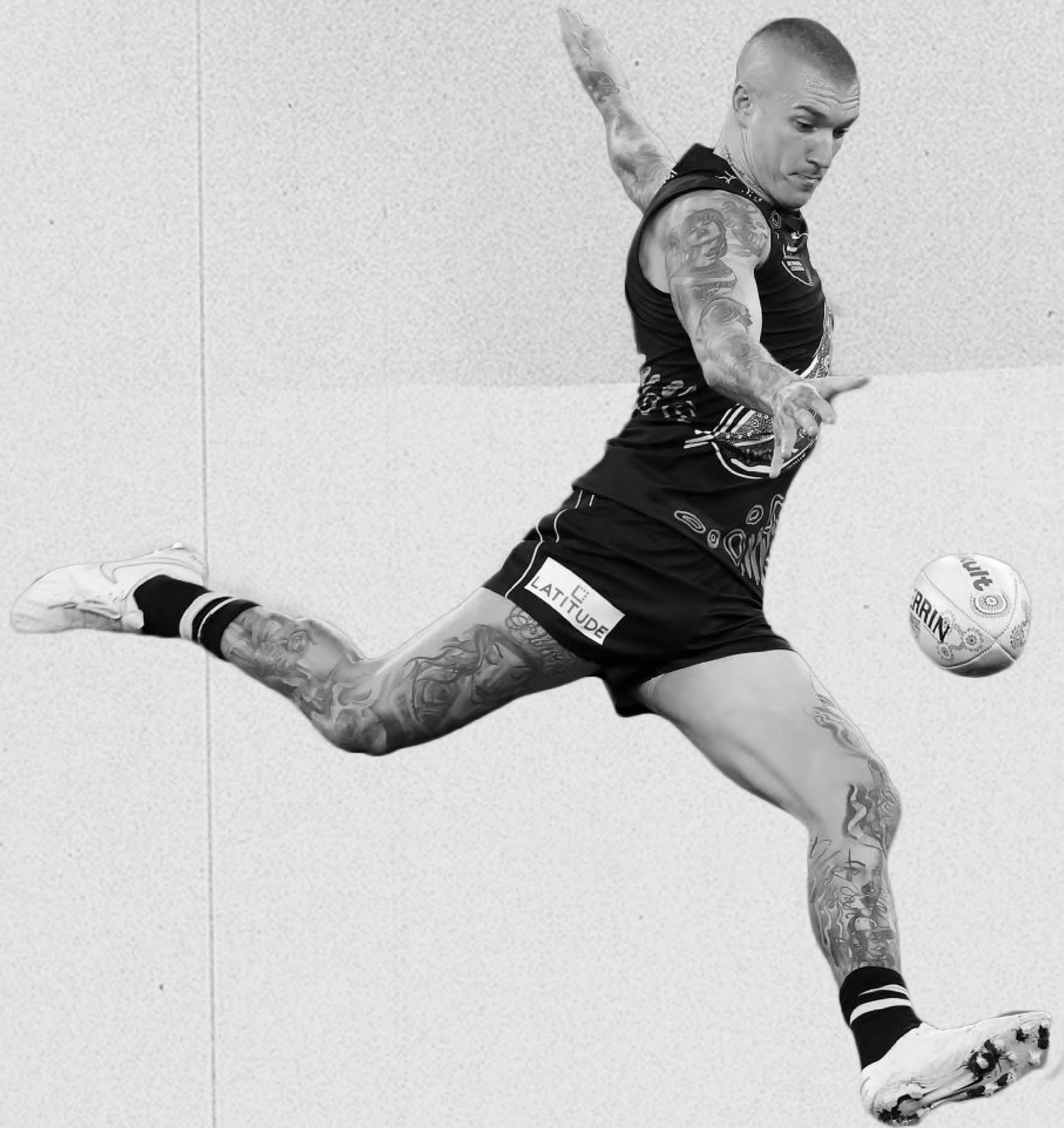
	CAR	13	3	81	Q3
	MEL	9	7	61	01:07





	WB	3	6	24	Q2
	BRI	6	3	39	14:01





FORWARD

Primary Goalscorer

Most Dynamic Movement

Sprints between 30-60M



SYD

4

5

29

Q2



NM

1

2

8

10:30

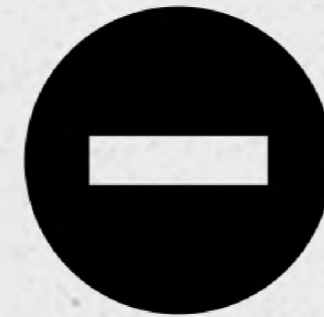




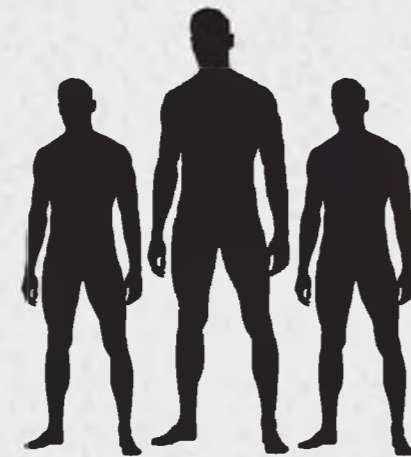
CURRENT PROBLEMS



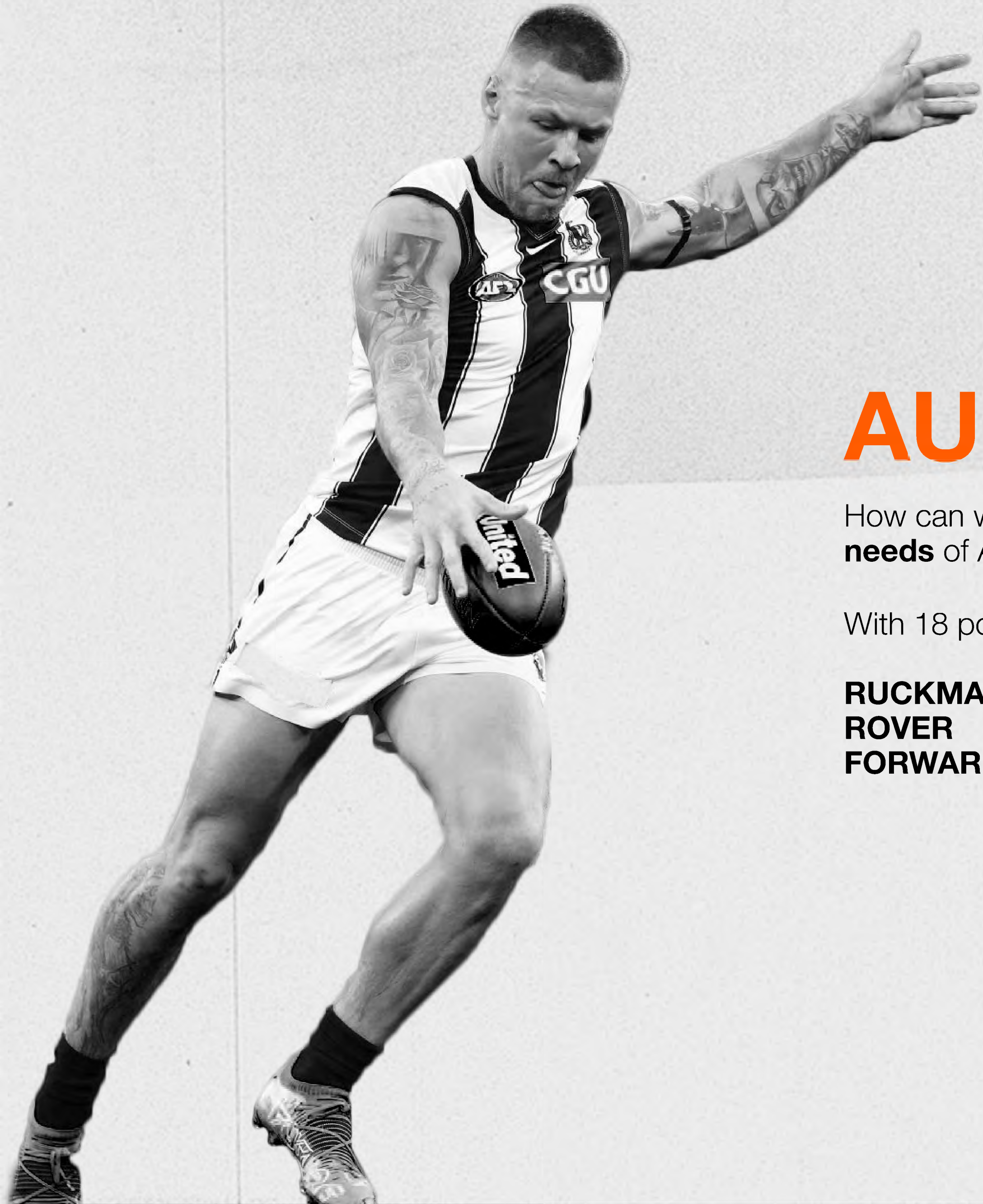
Unlike other popular cleated sports, **only two boot manufacture produce a dedicated boot design**



Despite being a **1.2 billion dollar industry** players have to **resort to sporting football cleats as workarounds** due to available solutions not meeting their performance needs



With **only 152 players in the Australian Premiership** is prime for concept runs of cleated footwear



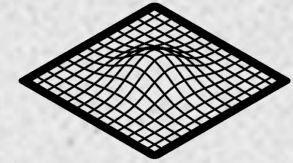
AUSSIE RULES FOOTBALL

How can we apply **additive manufacturing to address the positional needs** of Australian Football athletes

With 18 positions, the key roles observed are:

RUCKMAN
ROVER
FORWARD

POSITIONAL NEEDS



LIGHTWEIGHT

Using 3D printed upper components and 3D lattice midsole to allow for easier acceleration



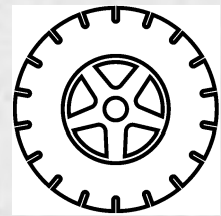
ROVER / FOLLOWER



FORWARD



RUCK / RUCK-MAN



TRACTION

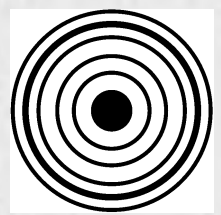
Developing new stud configurations and shapes to improve forward momentum and reduce foot strain



ROVER / FOLLOWER



RUCK / RUCK-MAN



ACCURACY

Redesigning the upper construction to improve kick distance and accuracy with new ball shape



FORWARD

HAVOC PRINT

Upper + Last Form + Lacing System

30% REDUCED WEIGHT



BLR SOLEPLATE

Soleplate + Studs

WITHIN 10% TRACTION OF COMPETITORS

PRCSN-STRIKE

Tongue + Upper

WITHIN 15% ACCURACY



ATHLETE INSIGHTS



Tom Snee
6'4"
198 Lbs.
11-11.5 US
R-Foot Dominant
Footy Copa Mundial
Football Nike Tiempo



Jeff Melanson
6'2"
178 Lbs.
11-11.5 US
R-Foot Dominant
Adidas Predator



Race Malhum
6'3"
190 Lbs.
11.5 US
R-Foot Dominant
Nike Mercurial



Joshua Rambert
5'9"
180 Lbs.
9.5 US
L-Foot Dominant
Flyknit Mercurial



Will Hutchinson
6'4"
197 Lbs.
11 US
R-Foot Dominant
Nike Tiempo



Haki Woods Jr.
6'5"
200 Lbs.
11.5 US
R-Foot Dominant
Nike Vapor

01 FIT/SIZING

02 AESTHETICS

03 TRACTION

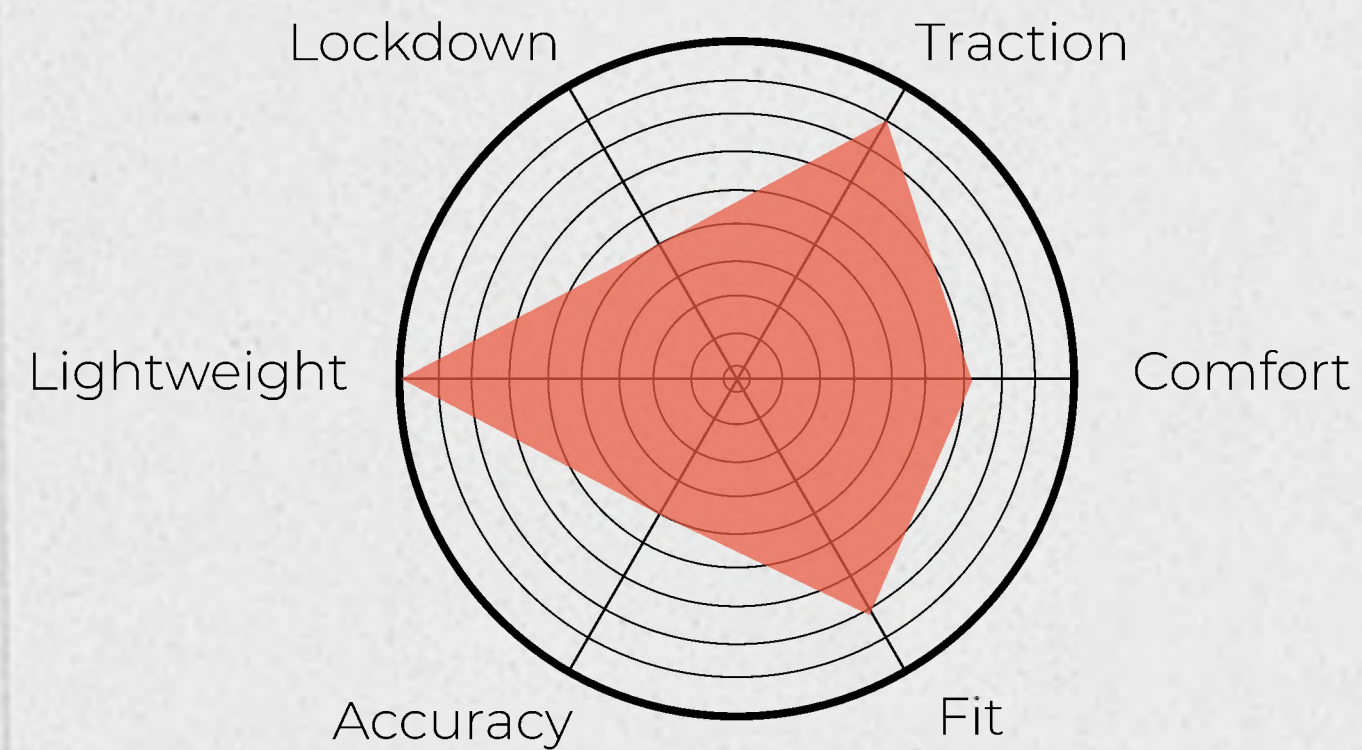
04 KICKING ZONE

05 COMFORT

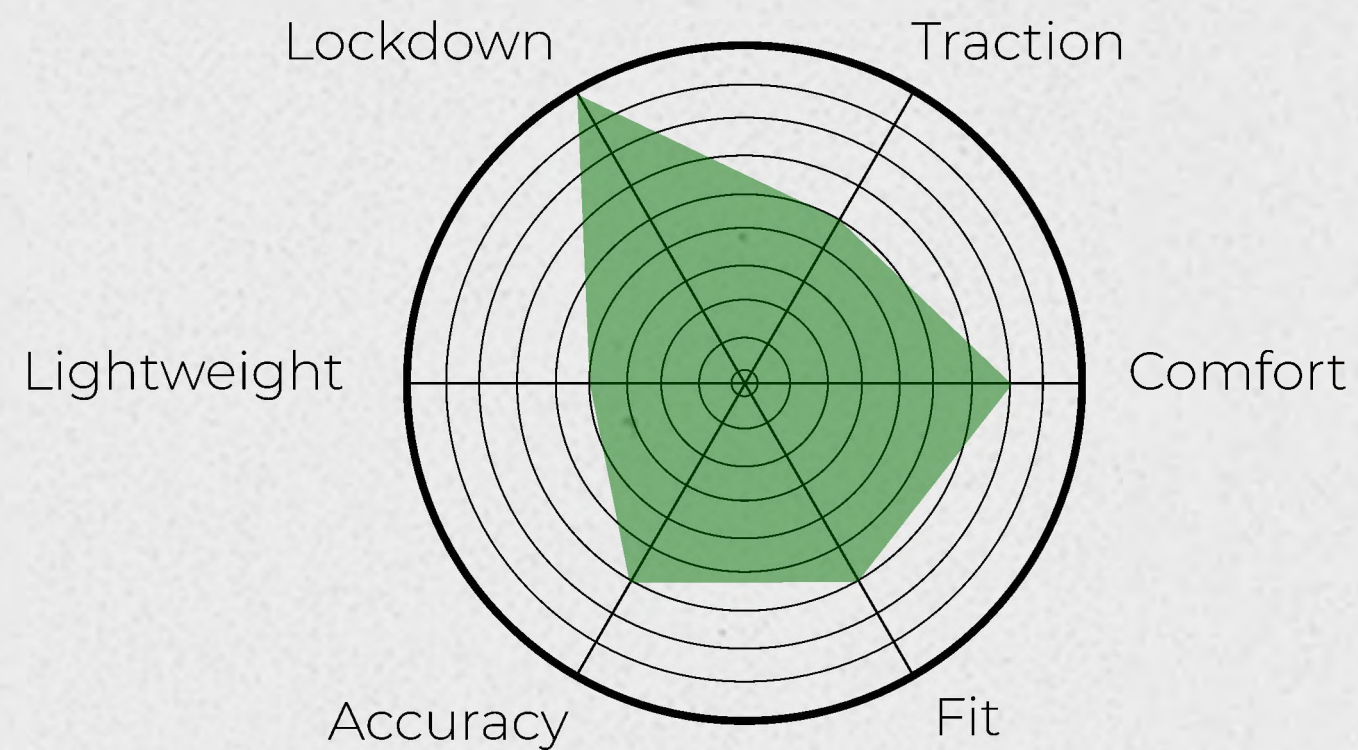
“THERE’S NOT MANY OPTIONS BESIDES FOOTBALL BOOTS...BUT THEIR TOO NARROW FOR US BIGGER GUYS”

ALL OF THE SYNTHETIC OPTIONS LACK PADDING IN THE TOE BOX

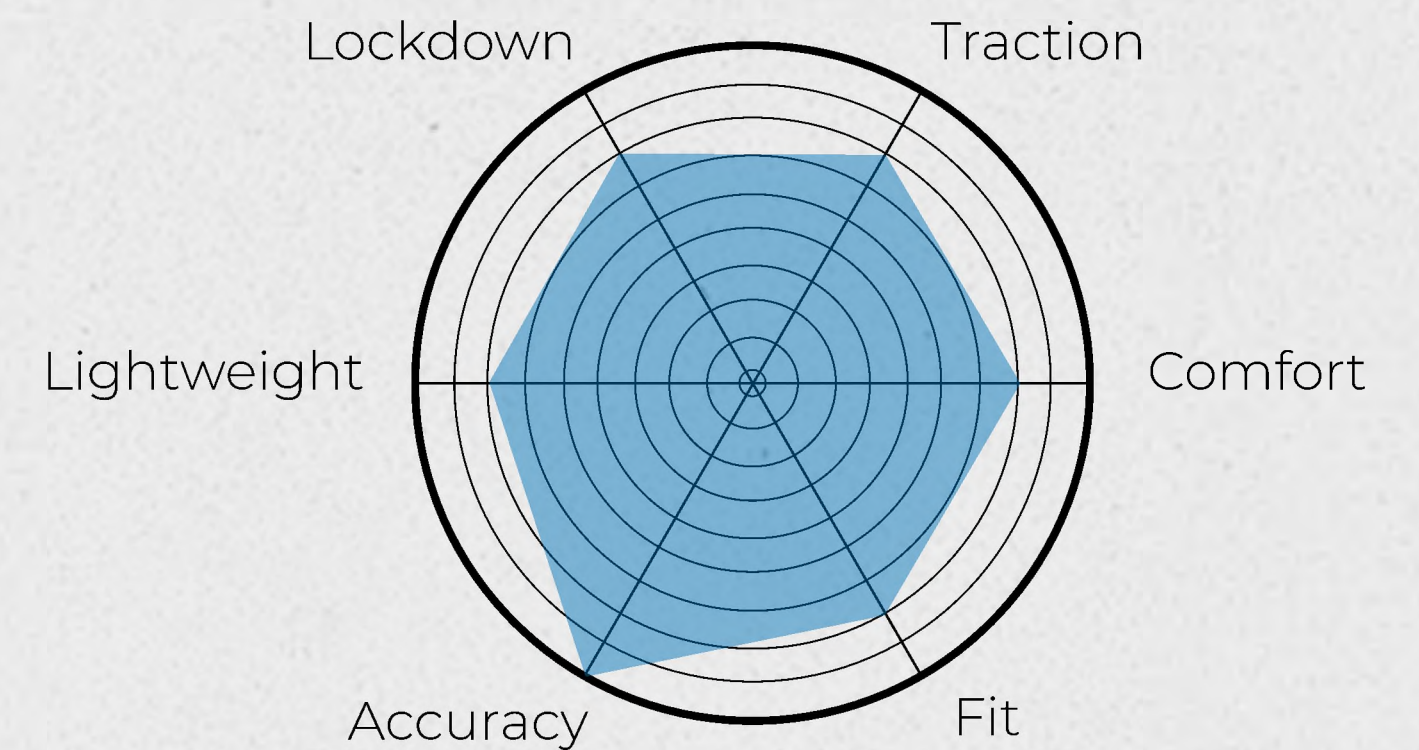
ALL THOSE TEXTURES DON’T DO ANYTHING FOR US, WE’RE NOT DOING FANCY TRICKS WITH OUR FEET



ROVER

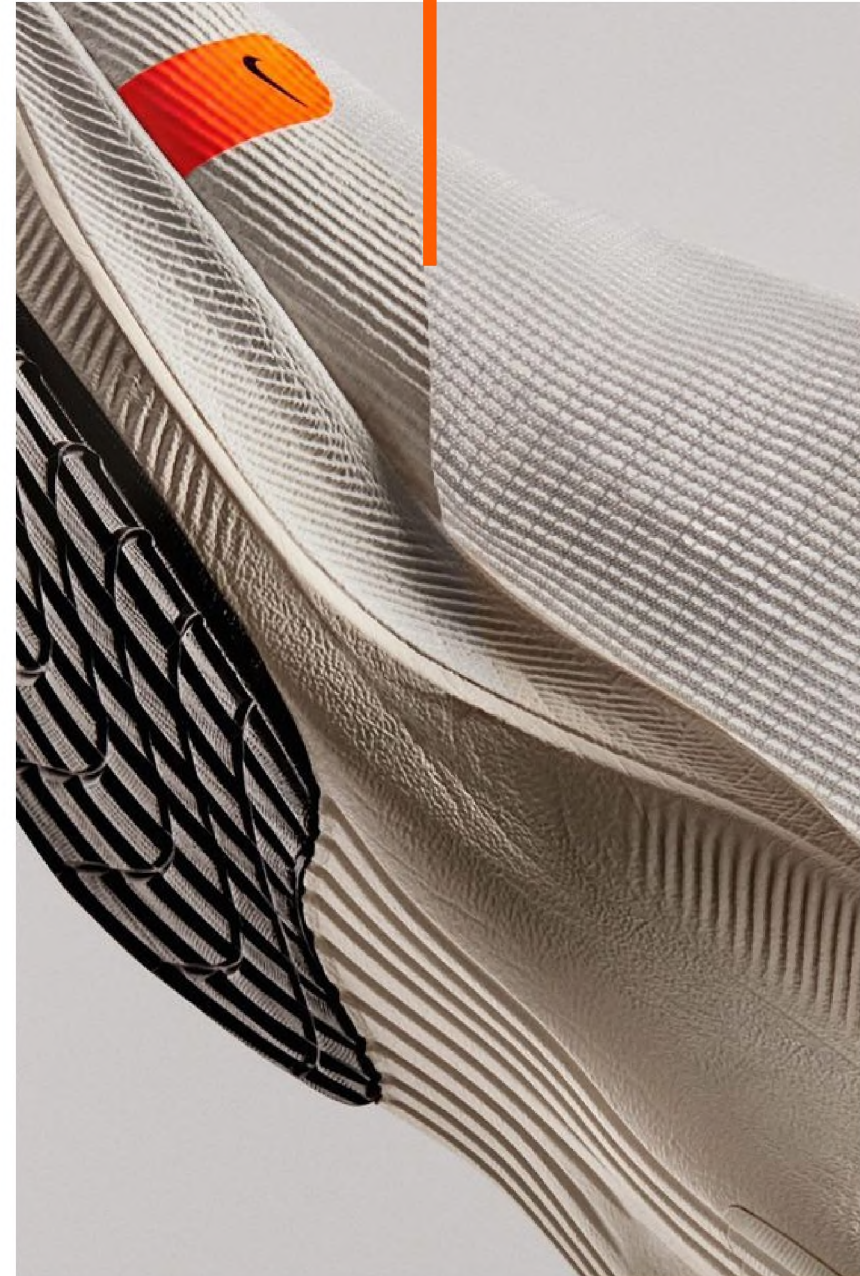


RUCKMAN

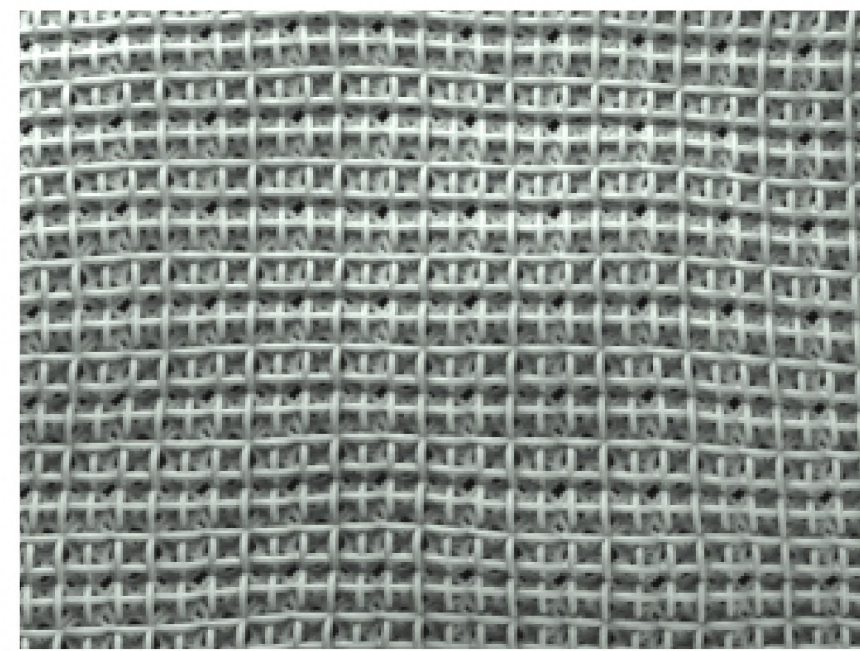
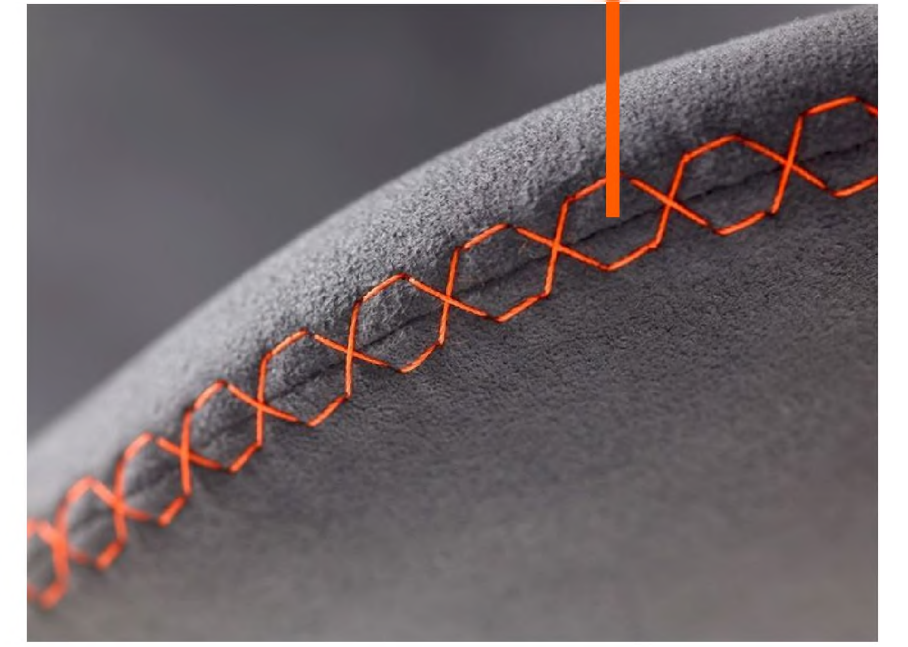


FORWARD

SPOT COLOR

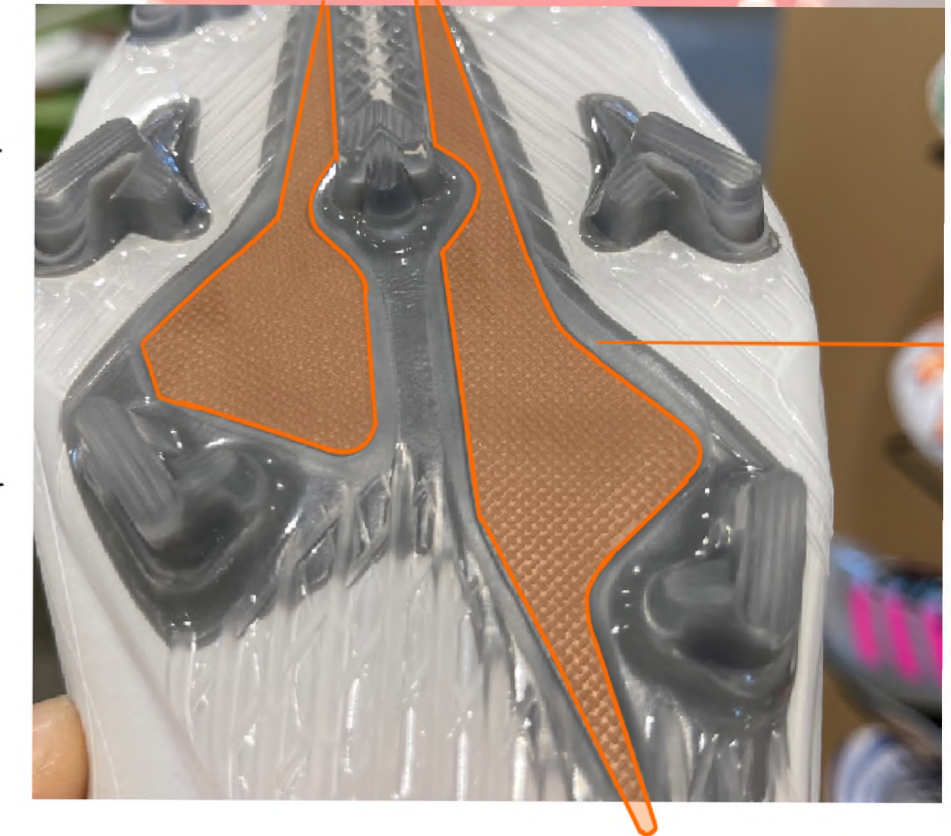
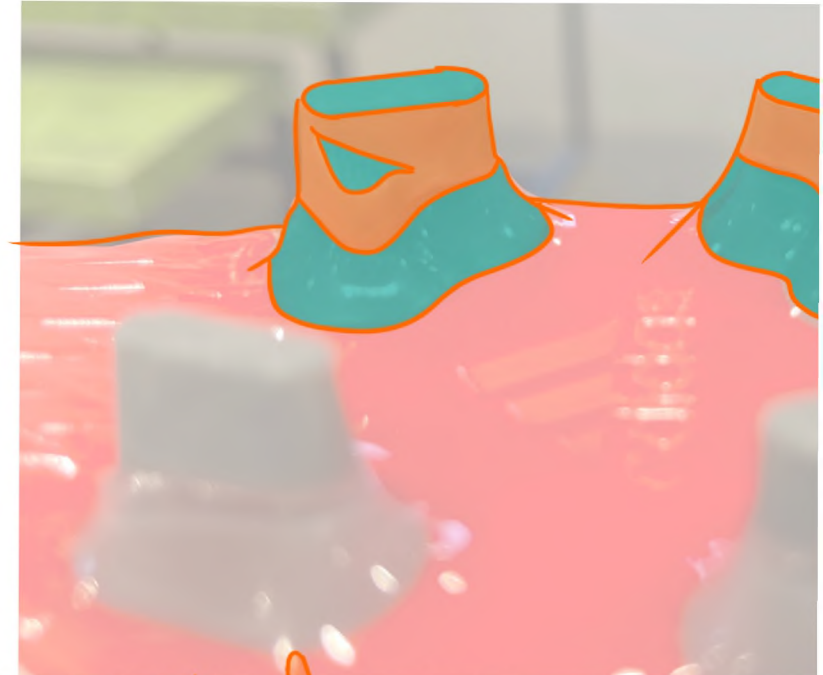
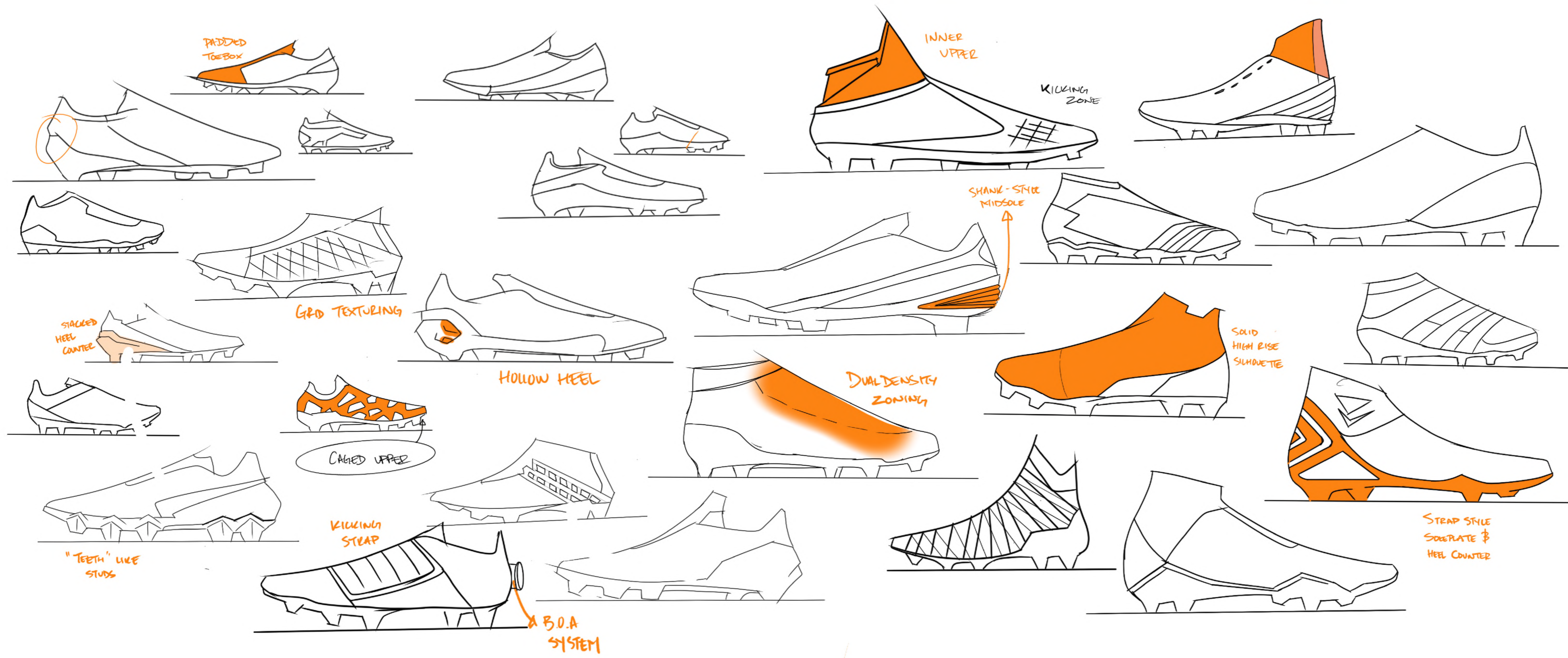


STITCHING ACCENT

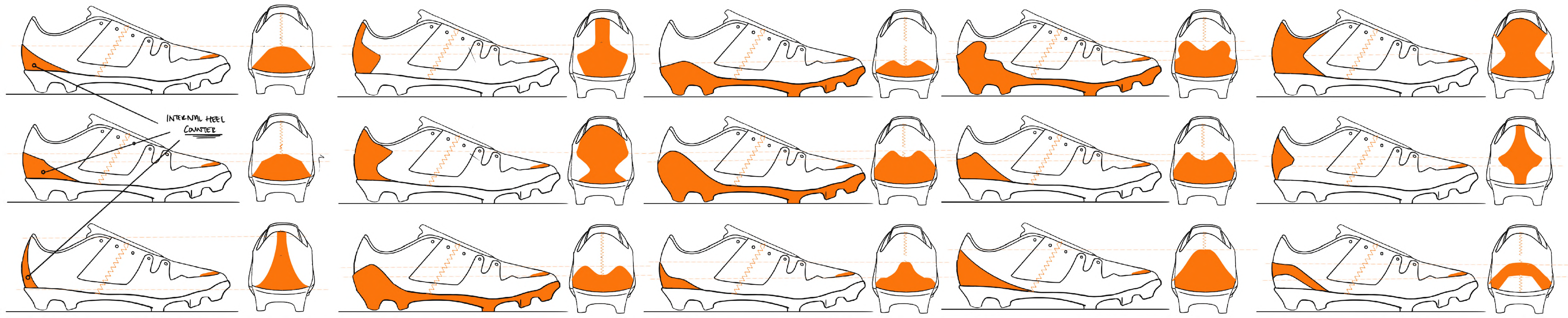
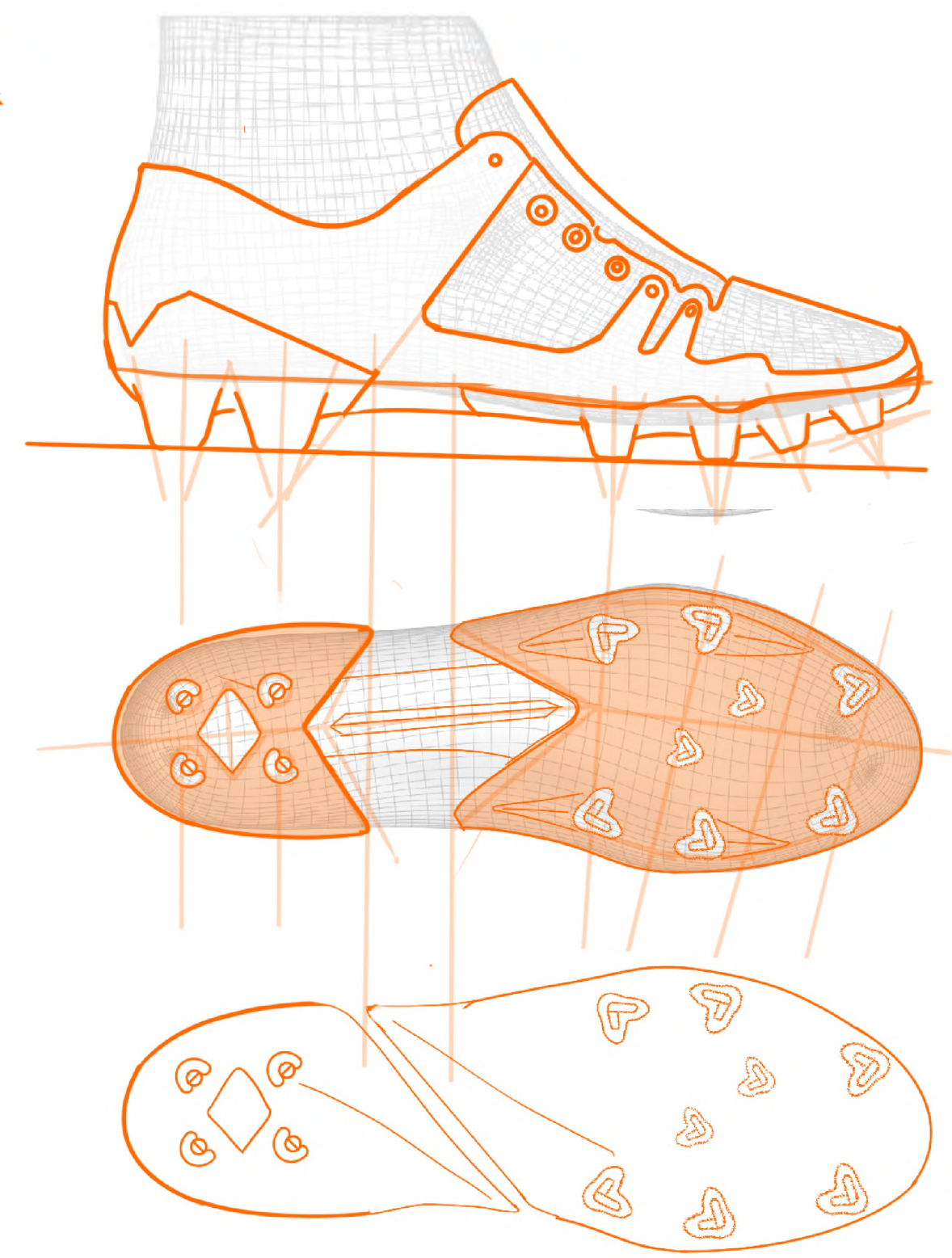
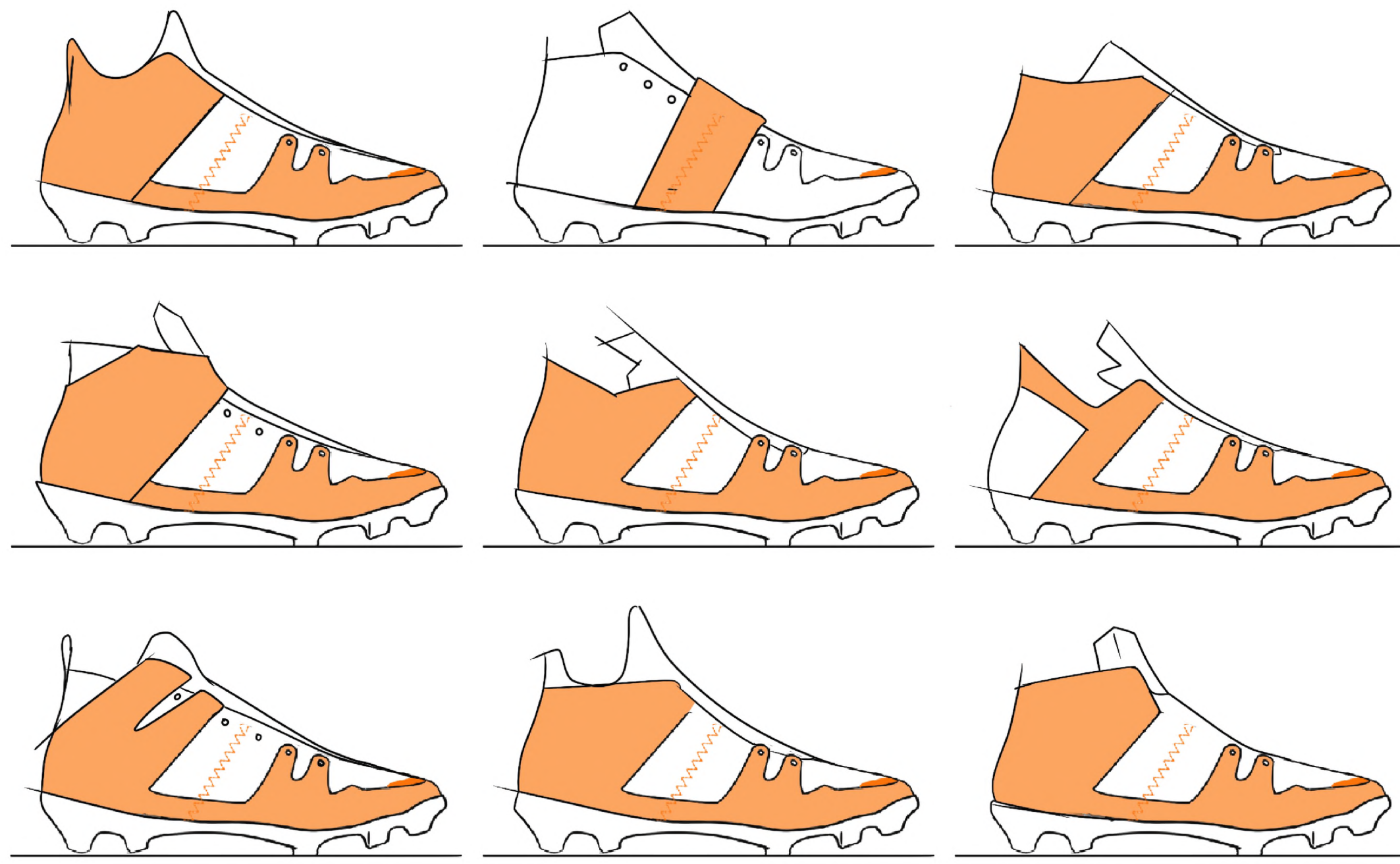


PERFORATIONS

TRANSPARENCY

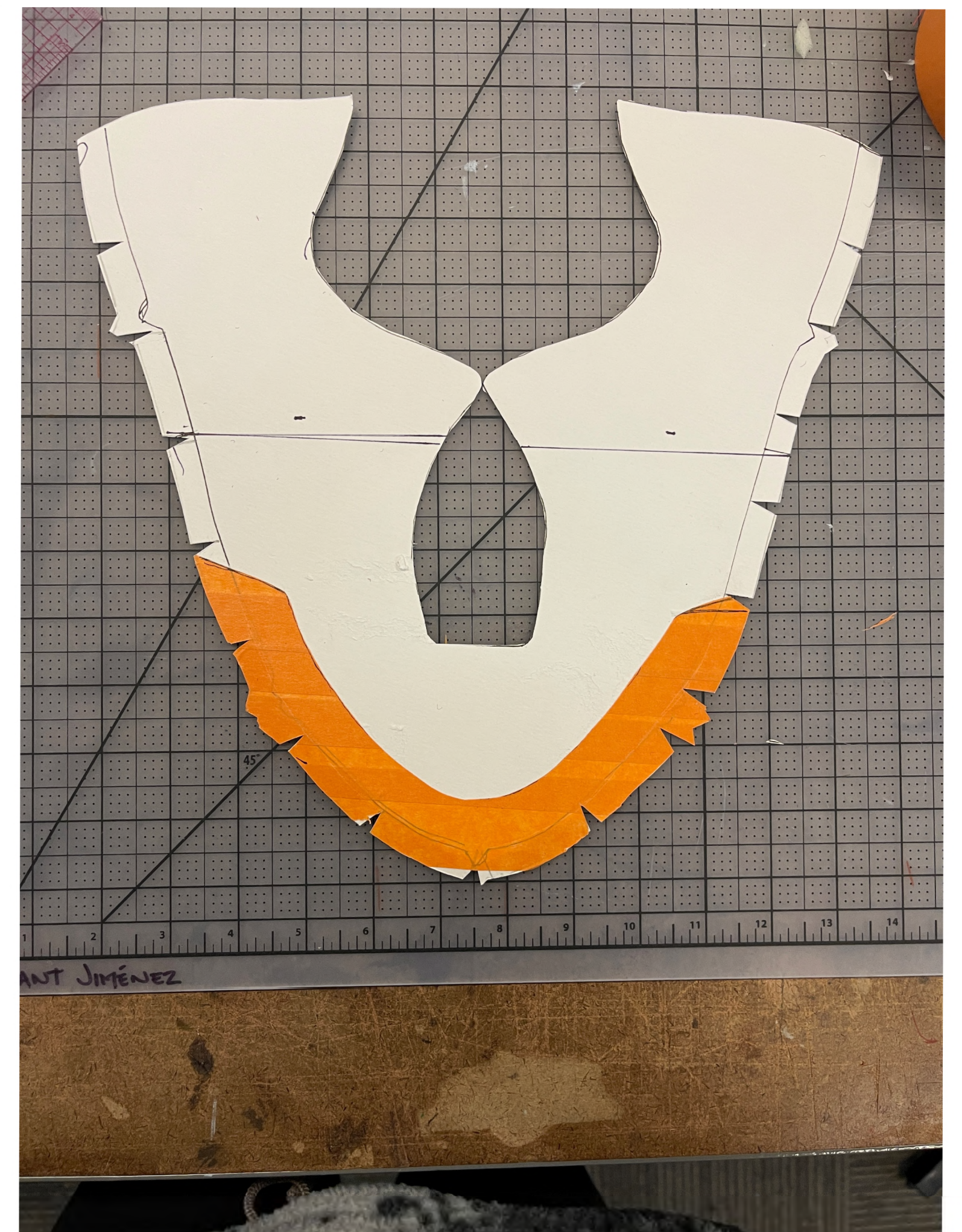


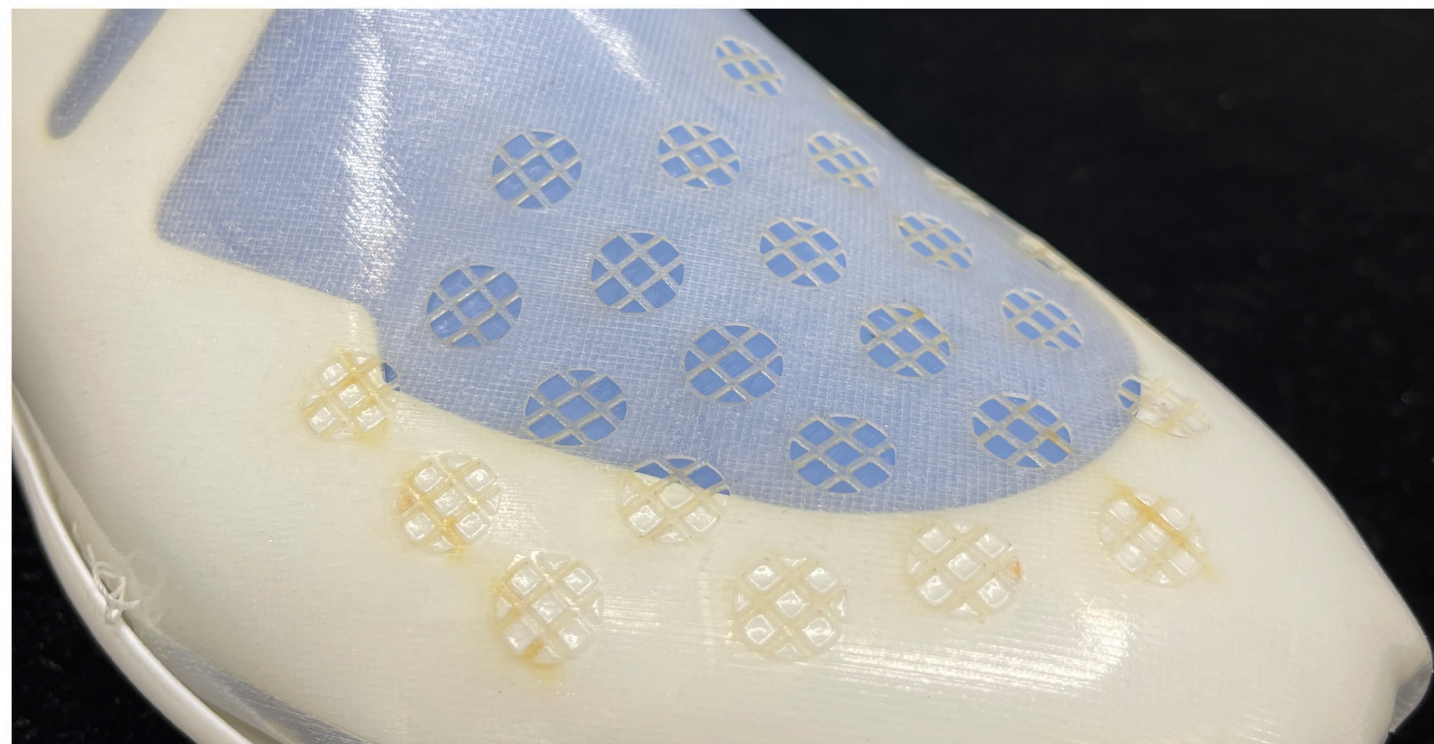
SUPPORT
ACROSS
ANKLE + BRIDGE



INTERNAL HEEL
COUNTER

PROTOTYPES



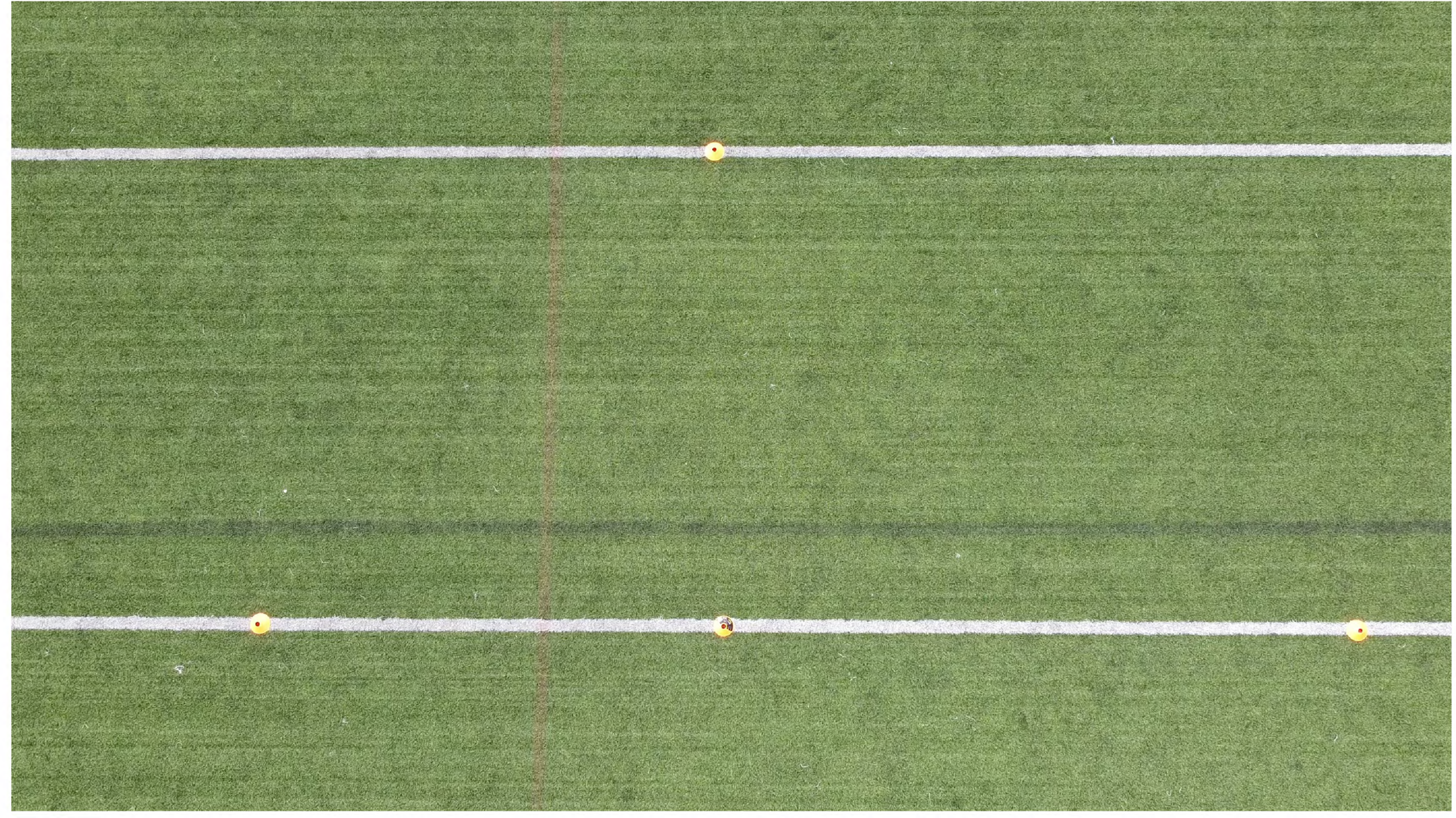






TESTING





KEY OUTCOMES

SILHOUETTE

PERFORATIONS

**MULTI DIRECTIONAL
TRACTION**

PADDING

AMELIA ARUNDALE

BIOMECHANIST/PLAYER

Wrote a dissertation on the biomechanics of Aussie Rules Football and then worked with the AFL-W League

“

THE IMPACT ABSORPTION FROM THE KICKING PAD ... WOULD ALLEVIATE THE STRESS SEEN FROM DROP PUNT STYLE KICKS...THE SILHOUETTES ALLOW FOR DYNAMIC MOVEMENT AND THE RUCK MANS LANDINGS

”





HAVOC

ROVER

INTERNAL FOAM LINER
FOR INCREASED PROTECTION

REINFORCED PADDING ON TONGUE
FOR ENHANCED KICKING
PERFORMANCE

VAMP PERFORATIONS
FOR INCREASED BREATHABILITY

TPU OUTER SHELL
FOR BETTER FIT

TPE INNER UPPER
FOR INCREASED STRUCTURE AND
LOCKDOWN



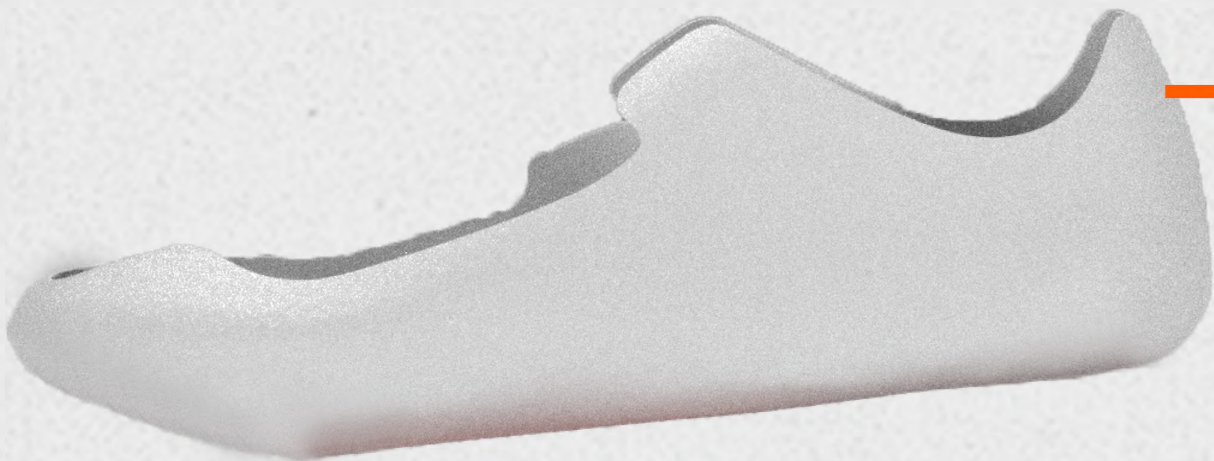
FORWARD



TPE ENGINEERED KICKING PAD
FOR MORE POWERFUL AND PRECISE
SHOT ON TARGET



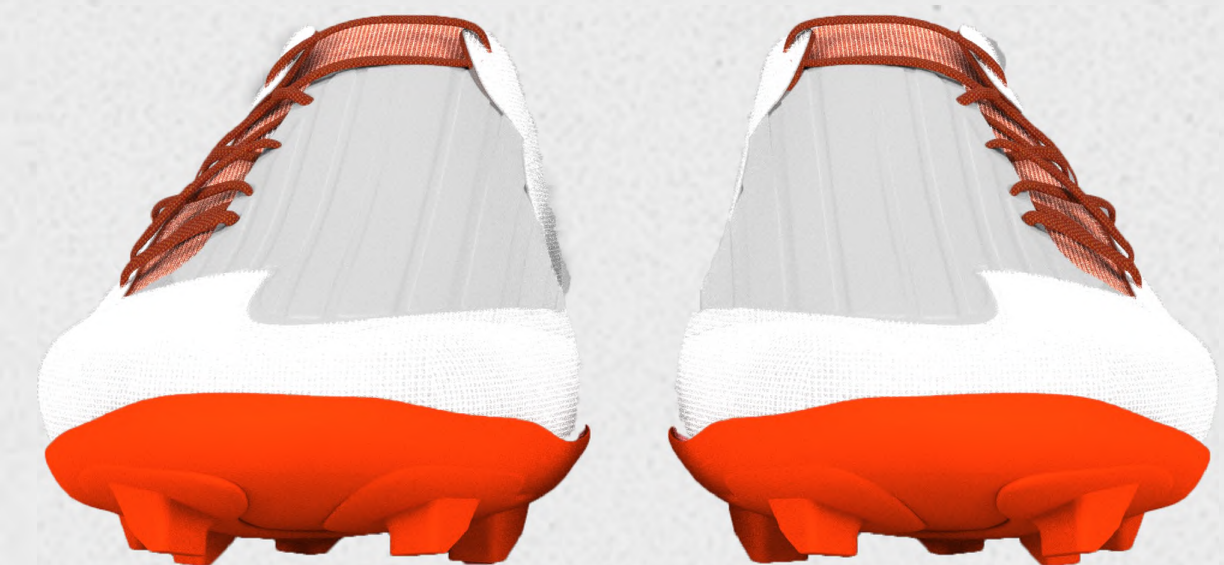
TPE INNER UPPER
FOR INCREASED STRUCTURE



TPU OUTER SHELL
FOR BETTER FIT



INTERNAL FOAM LINER
FOR INCREASED PROTECTION



RUCKMAN

MID TOP SILHOUETTE
FOR INCREASED LOCKDOWN

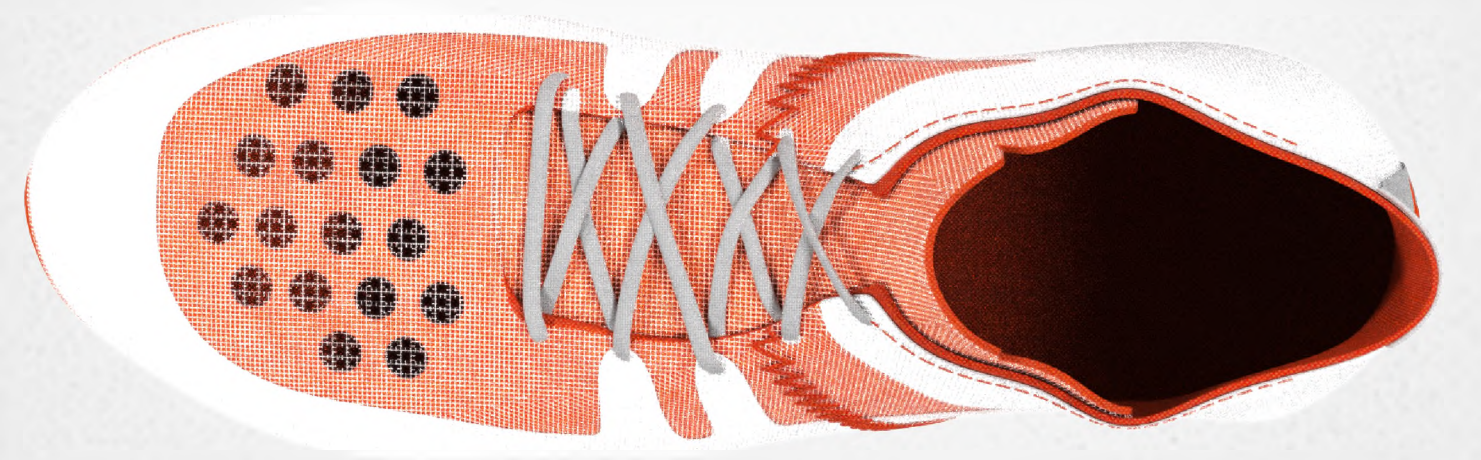
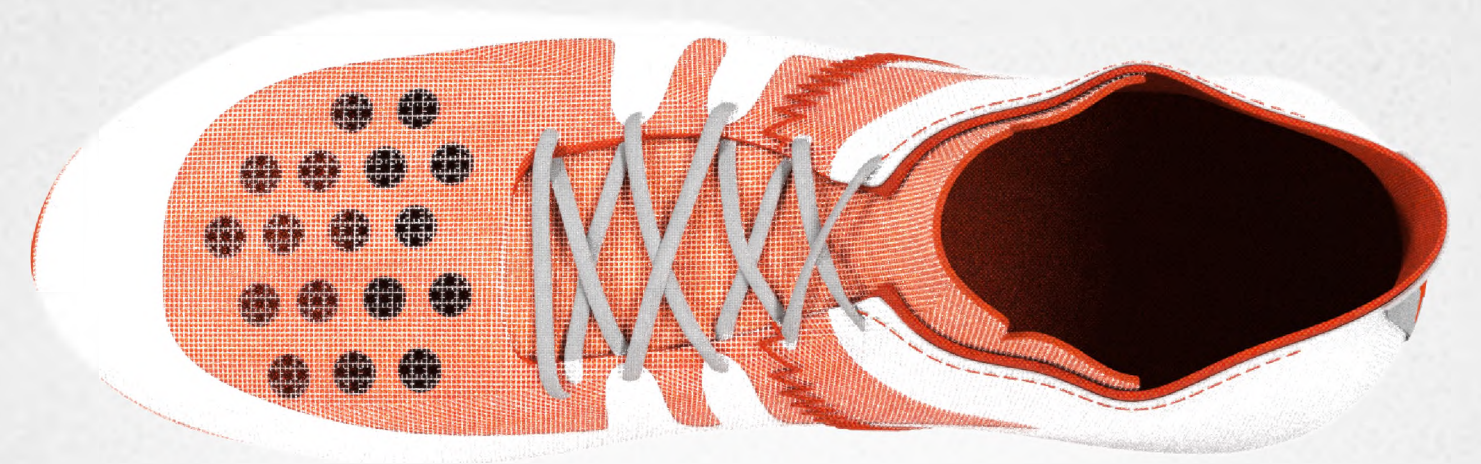
REINFORCED PADDING ON TONGUE FOR
ENHANCED KICKING PERFORMANCE

VAMP PERFORATIONS
FOR INCREASED BREATHABILITY

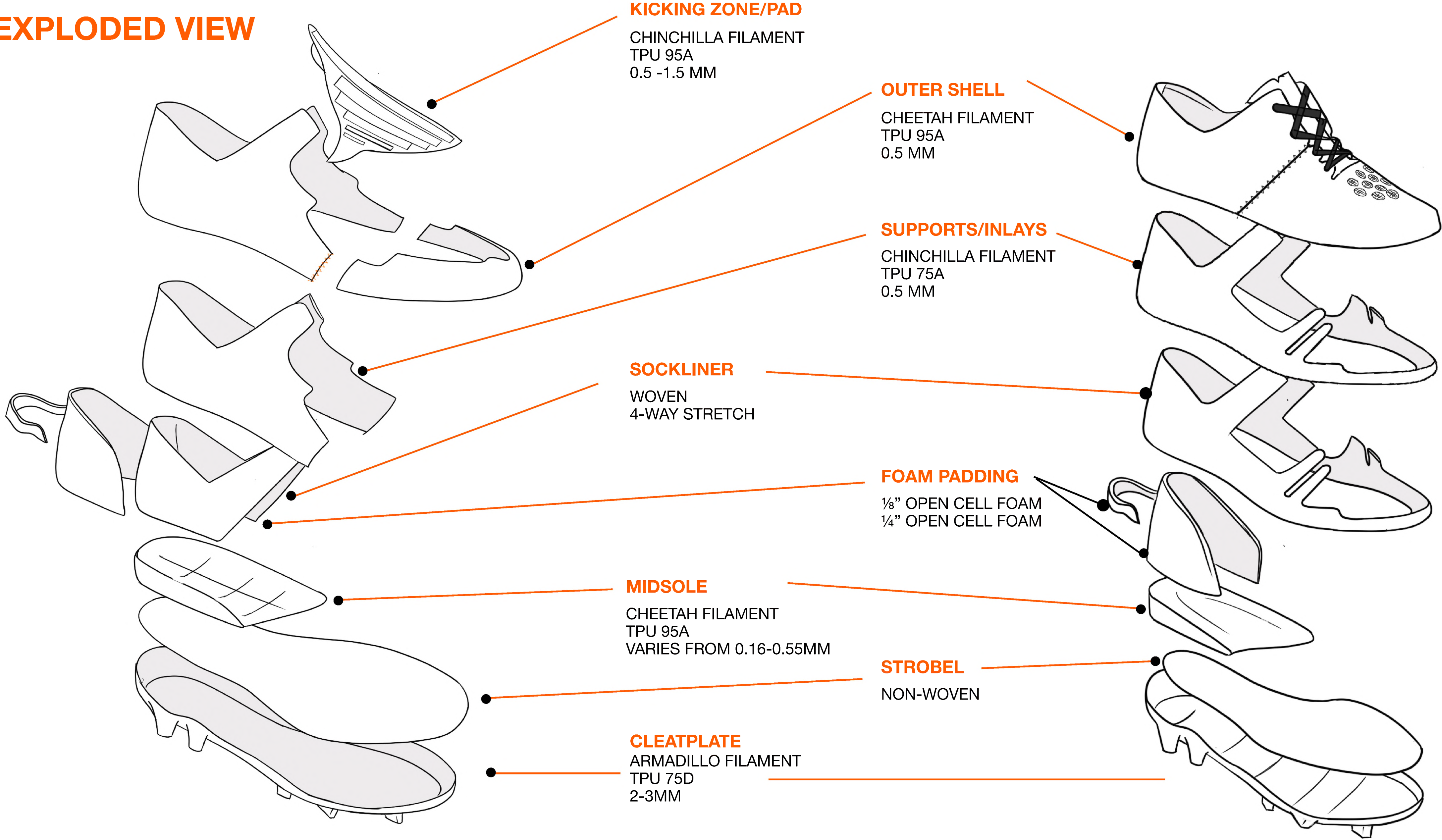
TPU OUTER SHELL
FOR BETTER FIT

TPE INNER UPPER
FOR INCREASED STRUCTURE AND
LOCKDOWN

INTERNAL FOAM LINER
FOR INCREASED PROTECTION



EXPLODED VIEW











THANK YOU



SPECIAL THANKS

***NATHAN SCHULTZE
AMELIA ARUNDALE***

