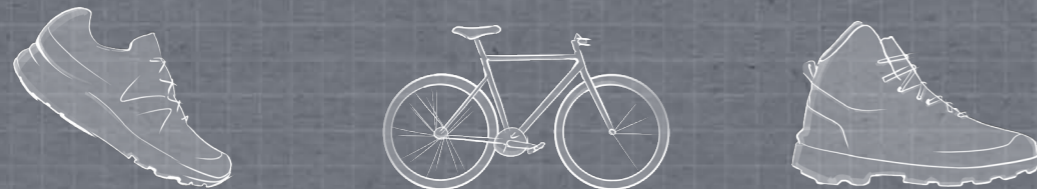


3 JACKETS...



1 MODULAR
JACKET
SYSTEM



THE RESEARCH QUESTION AND ASSOCIATED AIMS OF THIS RESEARCH ARE:

TO WHAT EXTENT CAN MODULAR DESIGN BE CONSIDERED AN APPROPRIATE METHOD FOR COMBATING OVER-PRODUCTION AND OVER-CONSUMPTION IN THE OUTDOOR CLOTHING INDUSTRY?

AIM 1: TO UNDERSTAND IF MODULAR DESIGN THEORY COULD RESULT IN LESS MATERIAL CONSUMPTION BY BRANDS AND USERS; IF IT WAS USED TO CREATE AN ALTERNATIVE TO ACTIVITY SPECIFIC WATERPROOF JACKETS BY DESIGNING A CONFIGURABLE WATERPROOF JACKET THAT CAN ADAPT TO THE UNIQUE REQUIREMENTS OF EACH ACTIVITY. THE ACTIVITIES, IN THE CASE OF THIS RESEARCH, ARE RUNNING, CYCLING, AND HIKING.

AIM 2: TO UNDERSTAND IF USERS WOULD CONSIDER USING A MODULAR WATERPROOF JACKET THAT IS DESIGNED TO ENABLE MULTIPLE ACTIVITIES. IN THE SPECIFIC CASE OF THIS THESIS, RUNNING, CYCLING, AND HIKING.

THIS PORTFOLIO OF WORK SUMMARISES AND CURATES THE APPROACH, CREATIVE DEVELOPMENT AND LEARNINGS ACCUMULATED DURING THE PROCESS.

KEY:

"ANNOTATION" - POSITIVE OBSERVATIONS - TO BE CARRIED FORWARD

"ANNOTATION" - NEGATIVE OBSERVATIONS - TO BE ACTIONED

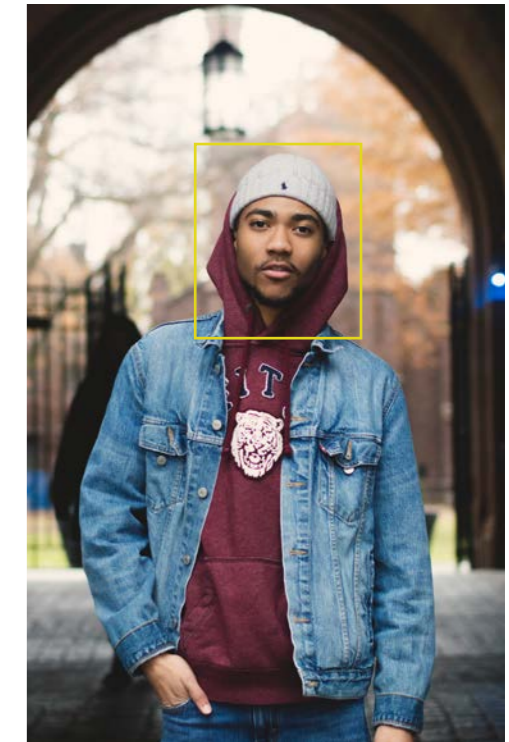
"TEXT" - ACTIONS, REFLECTIONS, CORRELATION TO METHODOLOGY + NEXT STEPS

MERGING
STYLE + PERFORMANCE



WHAT ARE THE
REQUIREMENTS
FOR DIFFERENT
MODES OF
TRANSPORT?

WALKING, RUNNING, CYCLING?



URBAN
ADAPTABILITY



TASTEFUL VISIBILITY

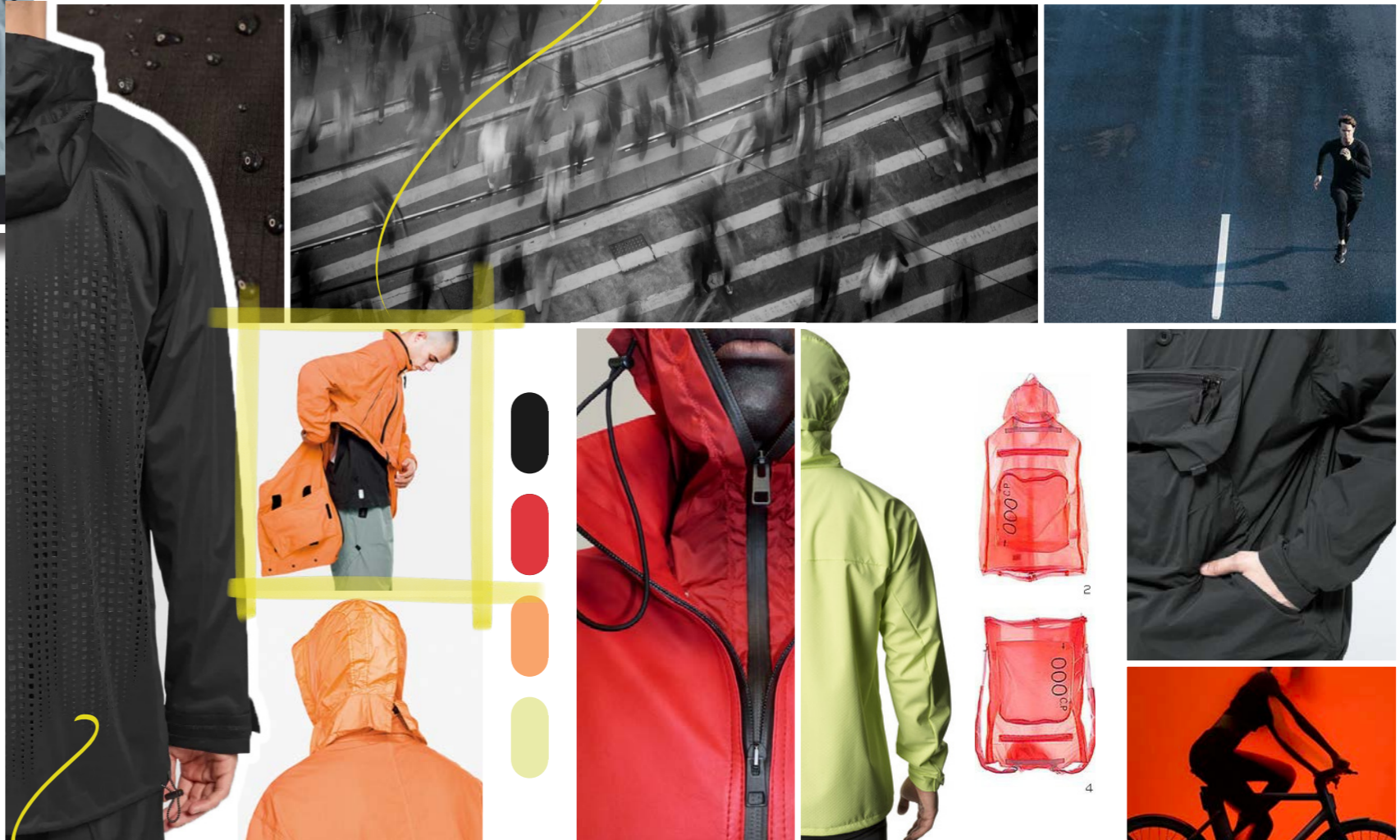
MAXIMISED
ADJUSTABILITY

INTEGRATED
FEATURES
+
PROTECTION.

“PERSONAS PUT A FACE ON THE USER - A MEMORABLE, ENGAGING, AND ACTIONABLE IMAGE THAT SERVES AS A DESIGN TARGET” (PRUITT & ADLIN, 2006).

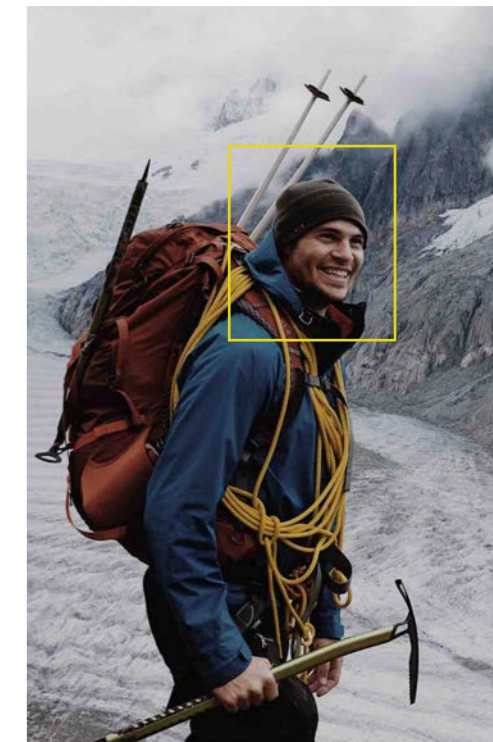
TO SUPPLEMENT THE USER EMPATHY MAPS THAT I CREATED IN SEMESTER 1, I HAVE CREATED A SERIES OF MOOD BOARDS THAT GATHER AND COLLATE EXAMPLE GARMENTS AND PRODUCTS THAT ARE AVAILABLE TODAY AND THAT HAVE BEEN DESIGNED TO ENABLE ACTIVITIES AND MEET THE NEEDS OF THE USERS PERSONAS THAT I HAVE PRODUCED.

THESE MOOD BOARDS WERE USED AS A REFERENCE TOOL FOR ME TO MOVE INTO THE NEXT STAGE OF THE DESIGN PROCESS: IDEATION.

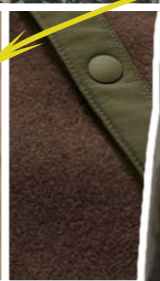


INNOVATIVE
BREATHABILITY.

WATERPROOFING IS CRITICAL FOR SAFETY



PACK-USE GUARANTEED



ACCESSORY STORAGE SOLUTIONS ARE AN INTERESTING SOLUTION SPACE.

MOUNTAINEERING REQUIRES VARYING FUNCTIONALITY DEPENDING ON THE ACTIVITY.

EARTHLY COLOUR PALETTES.

DISCREET TRIMS THAT OFFER USER ADJUSTABILITY + PERSONALISED FIT...

HIKING / MOUNTAINEERING HARD SHELLS MUST BE PHYSICALLY PROTECTIVE + DURABLE...

VARIOUS MATERIALS

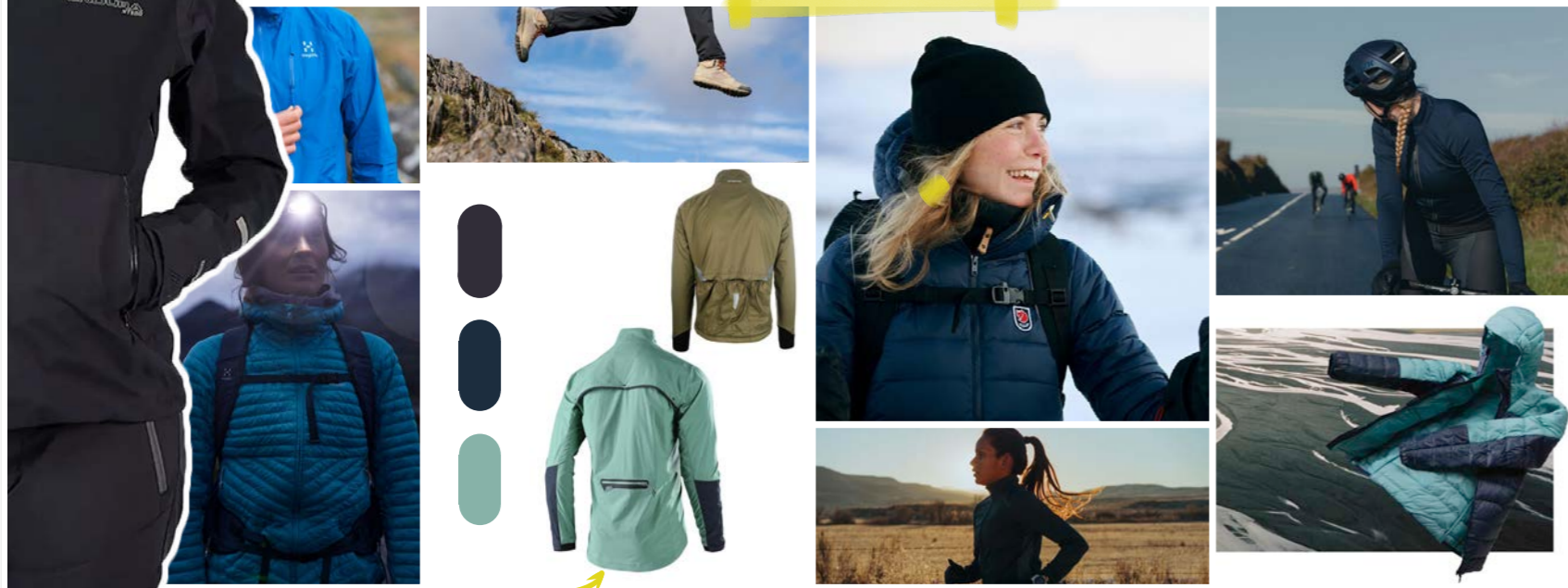
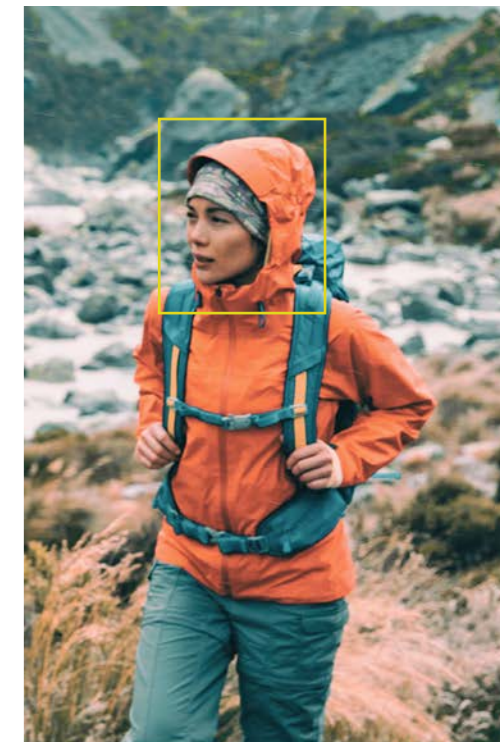


CONSIDERABLY BRIGHT + VISIBLE

CARRYING KIT IS A BIG PART OF THE JOB.



OFTEN REQUIRED FOR NON-PHYSICAL ACTIVITIES.



VARYING ENVIRONMENTS

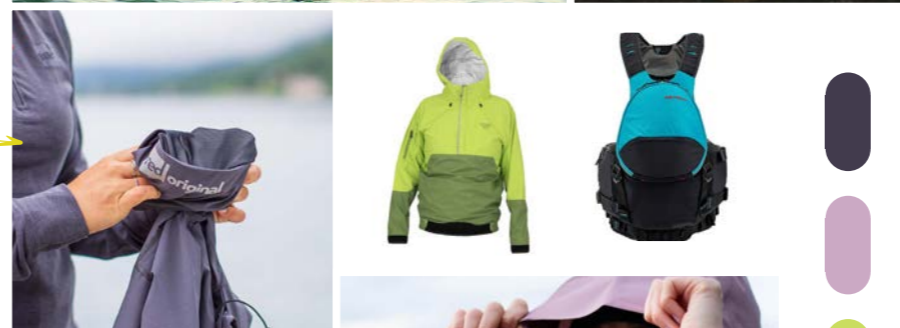
REGULAR EXPOSURE TO SALT WATER



MUTED TONES

WHAT COLOURS ARE DESIRED?

VERSATILITY IS REALLY APPRECIATED + SACRIFICE AFTER!



REMOVABLE PANEL ON FRONT & REAR.

THIS ENABLES THE USER TO CONFIGURE THE GARMENT TO SUIT DIFFERENT WEATHER CONDITIONS OR ACTIVITIES.

ZIP CLOSING SYS. IS UNUSUED BUT COULD BE EXPOSED.



THE UPPER BACK IS INTENTIONALLY FREE OF FEATURES TO PREVENT ANY DIS COMFORT WHEN WEARING BACK-SACKS.

EXAMPLES OF REAR MODUES

Running



Cycling



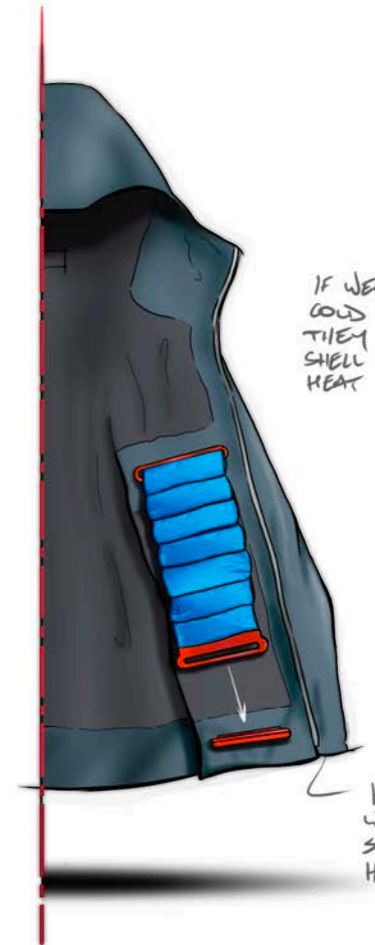
POCKETS COULD BE REMOVABLE.

"HEAT PACK" IS STORED AND MOUNTED IN CHEST POCKETS.

CONVENTIONAL SHELL CONSTRUCTION IS UNUSUED BUT MORE INNOVATIVE CONSTRUCTION / JOINING TECHNIQUES COULD BE EXPLORED.



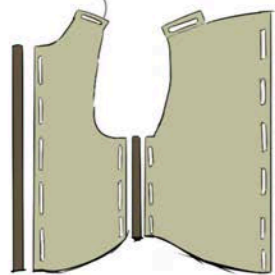
IF WEARER BECOMES COLD, THEN THEY OPEN SHELL & EXTEND HEAT PACK.



HEAT PACK WOULD BE SECURED ON HEM.

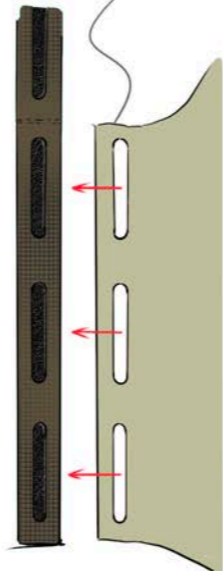
USER CAN SWAP PANELS IN OR OUT IF THEY BECOME WORN OR BROKEN.

THIS IS AN EXAMPLE OF HOW THE GARMENT COULD BE CONSTRUCTED



ALL PANELS ARE BONDED USING VELCRO WEAVING MACH.

EACH PANEL IS SECURED BY ATTACHING VELCRO WEAVING.



PULL-OVER VEST GILET STORED IN REMOVABLE FRONT POCKET.

COULD BE INSULATIVE, OR REFLECTIVE, HIGH VIS ... OR BOTH.



VEST PULLED AWAY, CONCEALED.

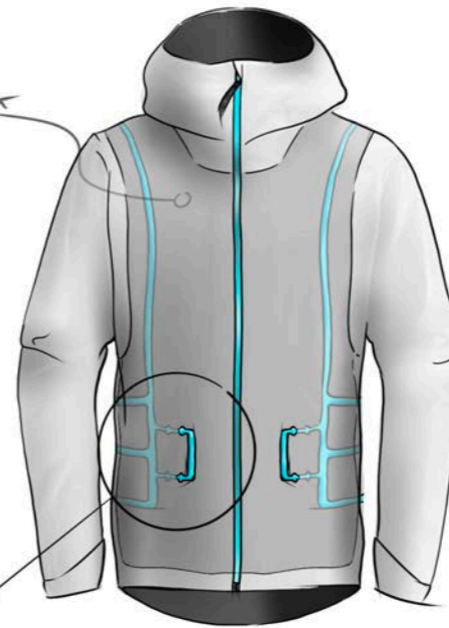
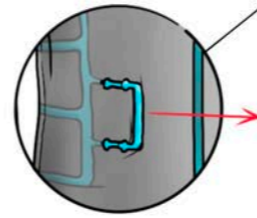
CENTRAL PANEL IS REMOVABLE.
AN INSULATIVE MODULE COULD BE REPLACED WITH A MESH, MIGHT BE BREATHABLE, MODULE.



UPPER SHELL IS A VERY SIMPLE CONSTRUCTION.
IT PROVIDES PROTECTION TO KEY AREAS, SHOULDERS & HEAD.
IT USES LESS MAT. THAN CONVENTIONAL SHELL CUT.

INNER GILET TRAPS ADJUSTMENT COMPONENT.
PREVENTS USER FROM GETTING TANGLED IN IT.

USER PULLS TOWARD TO TRANSFORM FIT & ADJUST.



ADJUSTMENT COMPONENT WILL NEED TO BE RETAINED.
REMOVABLE LOOPS ON GILET & SHELL?

STRADDLING SOME FOR USER COMFORT
WILL IT BE UNCOMFORTABLE?

HOOD REMOVABLE & FULLY ADJUSTABLE.

EXAGGERATED STORM FLAP ENSURES WATER-PROOFING.

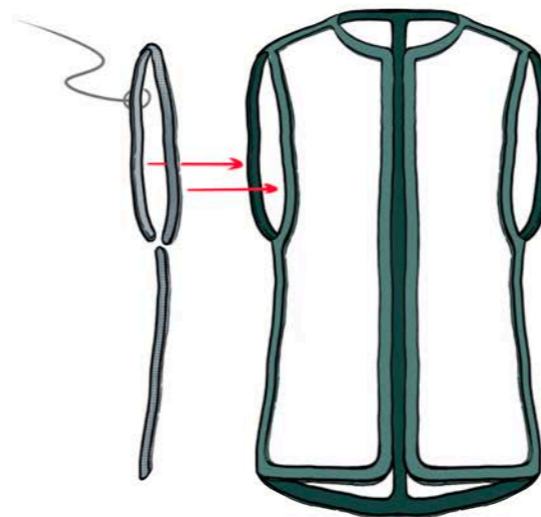
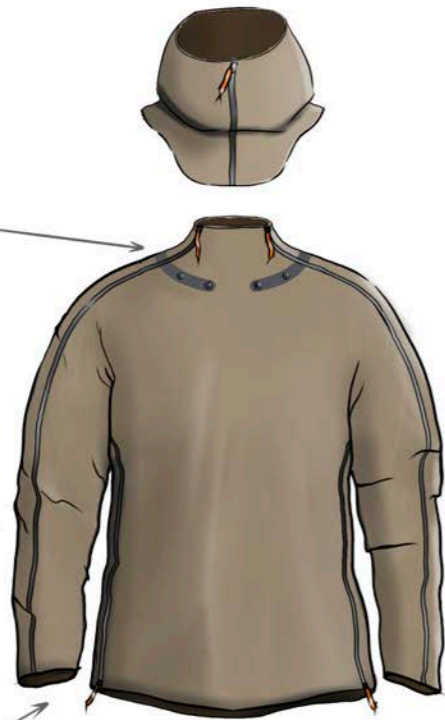
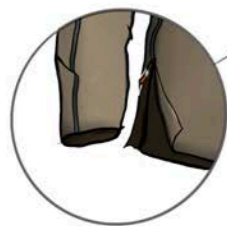
FRONT & REAR FREE OF FEATURES FOR MAX COMFORT.

AN INTERNAL FRAME WILL BE BUILT UPON USING PANELS & SECURING STRIPS.

THE INTERNAL FRAME IS CONCEALED BY THE PANELS & STRIPS.

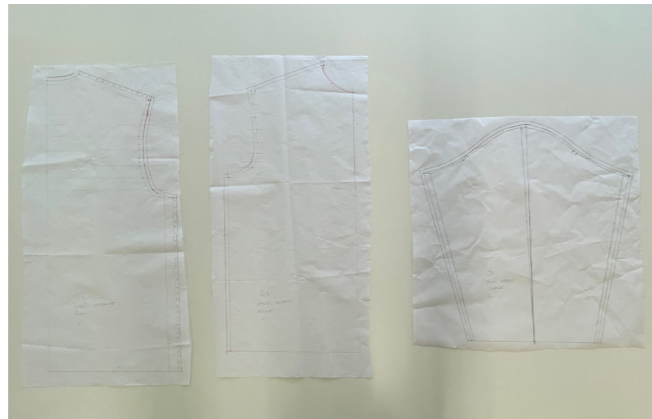
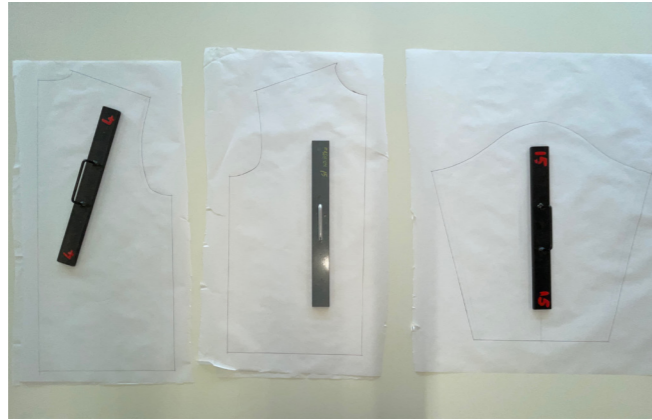


FRONT & REAR ARE DETACHABLE.
THIS ENABLES EASY REPLACEMENT AND USER DISASSEMBLY.



SHELL TOILE DEVELOPMENT

- REFERENCED 'MENS OVERSHIRT BLOCK' [G5]
- GRADED FROM MED > LRG
- MATERIAL: CALICO



THE SIDE SILHOUETTE APPEARS TO BE MORE ALIGNED WITH A TYPICAL FIT FOR A SHELL JACKET.

THIS REGION CAN BE USED TO DEVELOP AND UNDERSTAND MODULE PLACEMENT AND FEATURES.

ARMS ARE OVERSIZED TO ALLOW MOVEMENT.

THEY WOULD NEED TO BE REDUCED CONSIDERABLY TO BE ACCEPTABLE FOR ANY OF THE ACTIVITIES BEING CONSIDERED.



THIS TOILE WAS TO BE BUILT TO BE ADAPTED AND TRANSFORMED INTO A PATTERN THAT WOULD SATISFY THE OUTER SHELL ELEMENT OF THE MODULAR SYSTEM.

THE CONCEPTS OUTLINED IN THE PREVIOUS SLIDES, FOR THE MOST PART, ARE BUILT AROUND A WATERPROOF SHELL. THIS LAYER IS A VITAL COMPONENT AS IT PROTECTS THE USER FROM WATER INGRESS AND PREVENTS HYPOTHERMIA IN COLD CONDITIONS.

THE INTENT WAS TO BUILD THIS, THEN TEST VARIOUS MODULES TO UNDERSTAND FEEDBACK FROM USERS AND PERFORMANCE.

ARTEFACT ANALYSIS_

ONCE BUILT, IT WAS CLEAR THAT THE AMOUNT OF WORK REQUIRED TO TRANSFORM AND UPDATE THE OVERSHIRT BLOCK INTO A REFINED SHELL FORM, WOULD BE CONSIDERABLE AND WOULD SINK TIME AWAY FROM THE MAIN FOCUS OF EXPLORING MODULARITY WITHIN OUTDOOR GARMENTS.

I ANALYSED EXISTING GARMENT ARTEFACTS TO GAIN INSPIRATION FOR FEATURES THAT ENABLE FREE RANGE OF MOVEMENT & INTRODUCE ADDED FUNCTIONALITY (FROSCHAUER & LEUGER, 2016).



REMOVABLE NECK GUARD

ARTICULATED ARMS + ELBOW PROTECTION.



REMOVABLE INSULATION LAYER W/ ZONAL BREATHABILITY



DURABLE POCKETS

COLLAPSIBLE PANEL TO REDUCE FABRIC GATHERING.



SUPER STRETCH FOR UNREST MOVEMENT



REMOVABLE INSULATIVE LAYER.



COLOURED, HIGHLIGHTED, U.I. FEATURES.





THIS WOULD BE DOUBLED IN WIDTH IF THE 'FRONT MODULE ZONE' DIDN'T HAVE A CENTRE-FRONT ZIP.

THIS IS XXL... WHAT REAL ESTATE WOULD AN XS ALLOW?

THIS REGION WILL LARGELY BE COVERED BY A BACK-PACK → IF USED FOR HIKING.

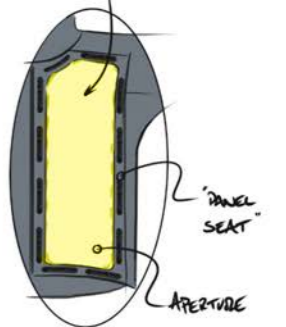
IF MODULES ARE TO BE USED IN THIS AREA, FININGS MUST NOT BE UNCOMFORTABLE FOR THE USER!

THIS DECORATIVE PANEL ISN'T FUNCTIONAL. IT COULD EITHER BE REMOVED OR COVERED.

SIDE SEAMS BEING VERTICAL AND PARALLEL IS HELPFUL.

THIS ALLOWS USE OF THE FRONT MODULE ZONE.

TO ALLOW FOR TESTING DIFFERENT FRONT PANEL MODULES



AS WEARED THIS SHOULD PROVIDE AGAIN REAL ESTATE

MAY WANT TO MAKE THESE SEAMS VERTICAL.

AFTER CARRYING OUT ARTEFACT ANALYSIS AND SHELL DESIGN DEVELOPMENT. I IDENTIFIED THE EXISTING ARTEFACT THAT IS DISPLAYED ON THIS PAGE.

I SELECTED A MONTANE HIKING JACKET AS THE MOST SUITABLE EXAMPLE TO REPLICATE AND USE AS MY BASIS FOR MOVING FORWARD TOWARDS A MODULAR GARMENT, AND INTO THE SAMPLING SECTION OF THE 'PARALLEL PROTOTYPING' PHASE OF DEVELOPMENT (DOW, ET AL., 2011).

EXISTING JACKET ANALYSIS #1_

I CONTINUED THE METHOD OF ANALYSING ARTEFACTS DESIGNED SPECIFICALLY FOR CYCLING, HIKING AND RUNNING TO UNDERSTAND THE MATERIAL, AESTHETIC, FUNCTIONAL AND INTERACTIVE QUALITIES OF THE PRODUCTS (HANINGTON & MARTIN, 2021).

I APPRECIATE THAT THIS EXAMPLE ONLY REFERENCES ONE PRODUCT PER CATEGORY, BUT IT CONTRIBUTES TO MY KNOWLEDGE OF TYPICAL FEATURES AND REQUIREMENTS OF THE JACKET TYPES.

ENDURA [URBAN LUMINITE]

£114

CYCLING

DISCREET
POCKET.

NO HOOD!



REFLECTIVE
PANELLING.



VENTILATION

FRONT
POCKETS

ELLIPTICAL
HEMLINE

WAIST
ADJUSTMENT.

RAB [KANGRI GTX]

£270

HIKING

EXAGGERATED
NECK FUNNEL.

DEEP
FRONT
POCKETS



LOW
REAR
HEM.

VENTILATION.



RONHILL [FORTIFY]

£115

RUNNING

1 x CHEST
POCKET

RAGLAN
SLEEVES

LOW
REAR
HEMLINE

REFLECTIVE
DETAIL.

GROWN
ON
ARTICULATED
SLEEVES.

ELLIPTICAL
HEMLINE.

FIT
ADJUSTABILITY



EXISTING JACKET ANALYSIS #2_

THIS PAGE SUMMARISES THE ANALYSIS OF THE PHYSICAL CHARACTERISTICS AND FEATURES ON 3 JACKETS OFFERED BY THE SAME BRAND/MANUFACTURER. THIS WAS DONE TO ENSURE THE DESIGN ETHOS/APPROACH WAS AS CONSISTENT AS POSSIBLE, WHICH WOULD HIGHLIGHT THE DIFFERENCES BETWEEN EACH ACTIVITY TYPE.

DECATHLON [RAIN JACKET]

£70

CYCLING



HELMET COMPATIBLE HOOD.

RUGGED SHOULDER PANELS

BONDED REFLECTIVE DETAILS.



VENTILATION

EXTENDED REAR HEM [FIXED]



REAR POCKET

DECATHLON [RAIN JACKET]

£80

HIKING



FIT ADJUSTABILITY.



FITTED SHAPE

DEEP FRONT POCKETS.



RAGLAN.

ARTICULATED SLEEVES.

DECATHLON [RAIN JACKET]

£70

RUNNING



REFLECTIVE DETAILING



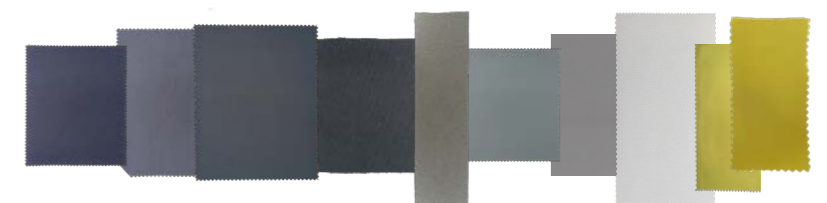
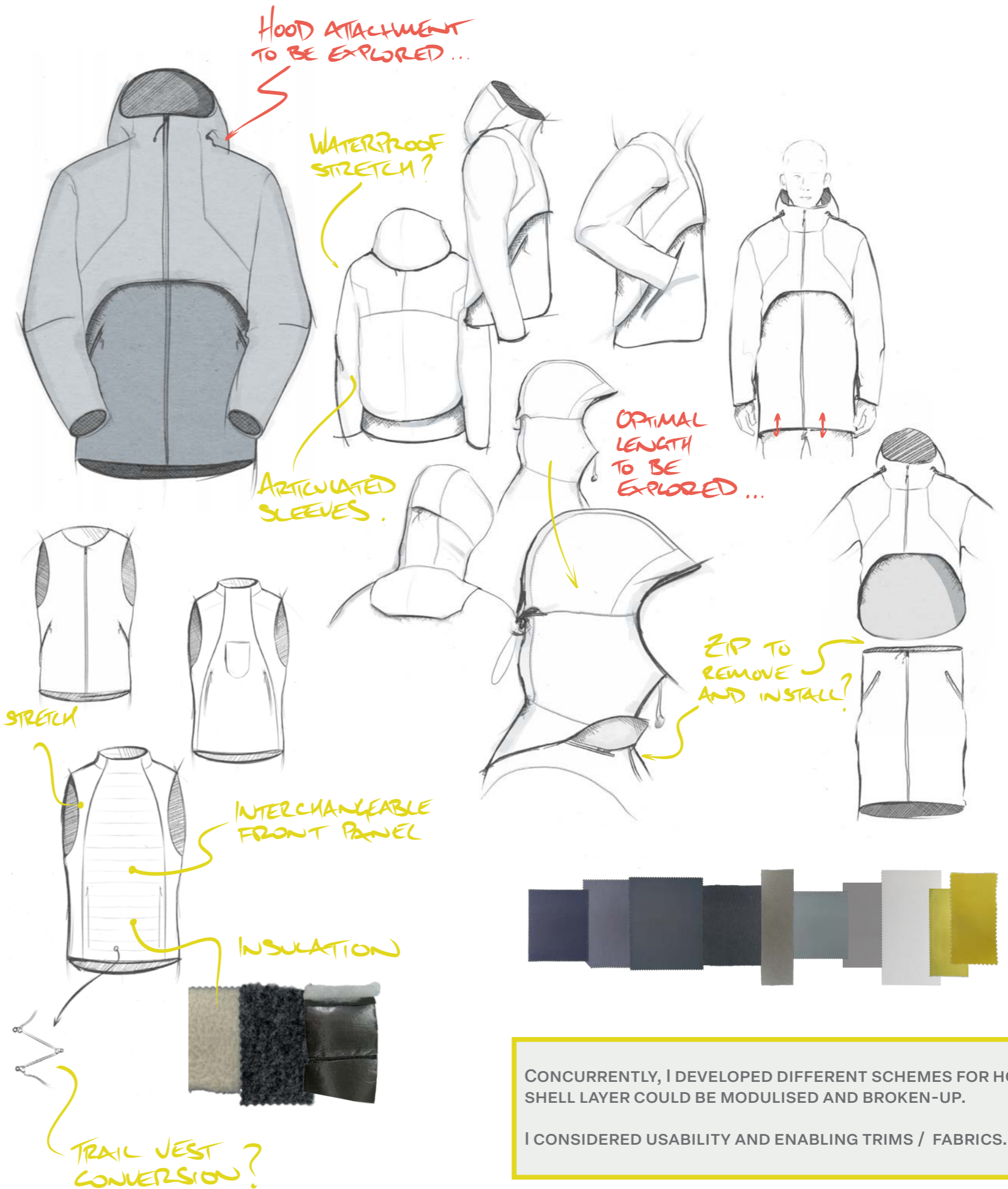
LOW-PROFILE, CONDENSED FIT



CAPTURED ELASTANE



NO ARTICULATION!



CONCURRENTLY, I DEVELOPED DIFFERENT SCHEMES FOR HOW THE SHELL LAYER COULD BE MODULISED AND BROKEN-UP.
I CONSIDERED USABILITY AND ENABLING TRIMS / FABRICS.

CONCEPT A - LOW FIDELITY PROTOTYPE

TO UNDERSTAND FEASIBILITY, A LOW FIDELITY PROTOTYPE OF CONCEPT A WAS BUILT AND EVALUATED.



SO THAT THE FEASIBILITY CAN BE UNDERSTOOD, THE SIDE SEAMS ONLY WILL BE BUILT + EVALUATED.

SIMPLE BODICE



COTTON WEBBING

VELCRO

CALICO



SIMPLE IMPLEMENTATION - COULD BE REFINED!

KIT PARTS:



INTERFACED @ 4 POS'N.



STEP ①



STEP ②

BULK HERE COULD BE UNCOMFORTABLE.



PANELS EASILY SEPARATED WITH LITTLE MOVEMENT.

VISUALLY LOOKS DISCREET

THERE IS AN ELEMENT OF INTEREST AND POTENTIAL IN THE DIRECTION, BUT MOST PROBABLY NOT FOR 'PERFORMANCE' APPAREL. THE CHALLENGES OF SEALING THE SEAMS AND ADDRESSING BULK WOULD BE TOO GREAT.

CONCEPT E - LOW FIDELITY PROTOTYPE

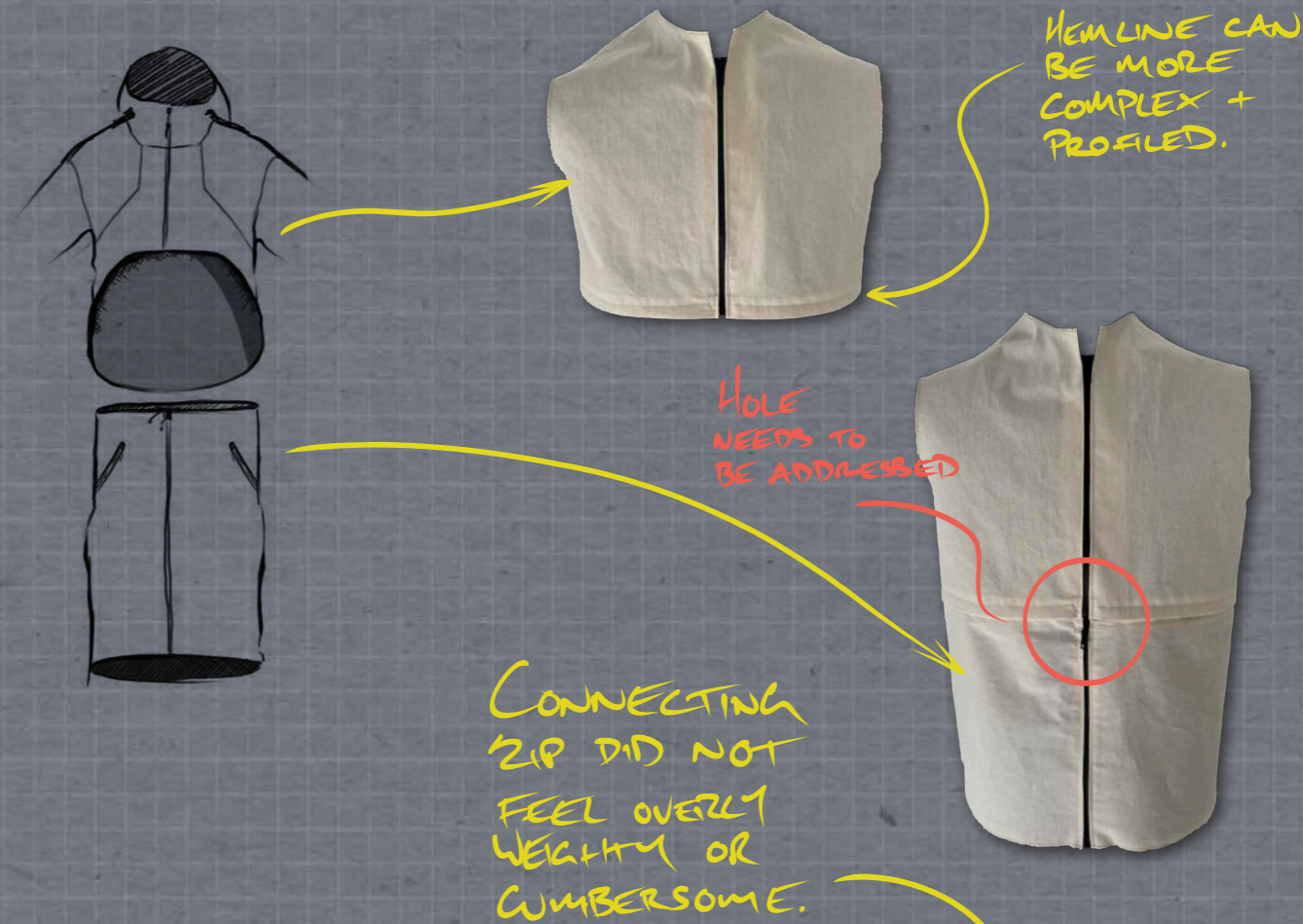
SIMILARLY, THIS PROVIDES AN OVERVIEW OF THE CREATION OF THE FEASIBILITY PROTOTYPE FOR 'E'.



UNDER GILET TO BE CONSIDERED LATER ...



CALICO



2 ZIP SEQUENCE FELT INTUITIVE.

TWO VERSIONS OF THIS PROTOTYPE WERE PRODUCED TO EVALUATE THE CENTRAL MODULE CONNECTION.

VERSION 1: 3X 30CM ZIPS

VERSION 2: 1X 122CM ZIP

MODULE ATTACHMENT COMPARISON

VERSION 1:



3x COLOUR CODED ZIPS MADE ALIGNING THE LOWER MODULE STRAIGHT - FORWARD.

TO CLOSE ZIPPERS CENTRALLY, THE OUTER ZIPS HAD TO BE VERTICALLY ASYMMETRIC.



GAPS FORM @ SPACE BETWEEN ZIPPERS.

TIME CONSUMING TO ATTACH ALL 3 ZIPPERS.



PULLER IS UNCOMFORTABLE WHEN WEARING A BACKPACK.



VERSION 2:



ATTACHING THE LOWER MODULE WAS EASY, COLOUR - CODED FEATURES COULD MAKE IT EVEN EASIER ...

LAYING THE JACKET FLAT LIKE SO WAS MOST USABLE.



MUCH FASTER USER OPERATION ONLY MAKING 1 ZIP



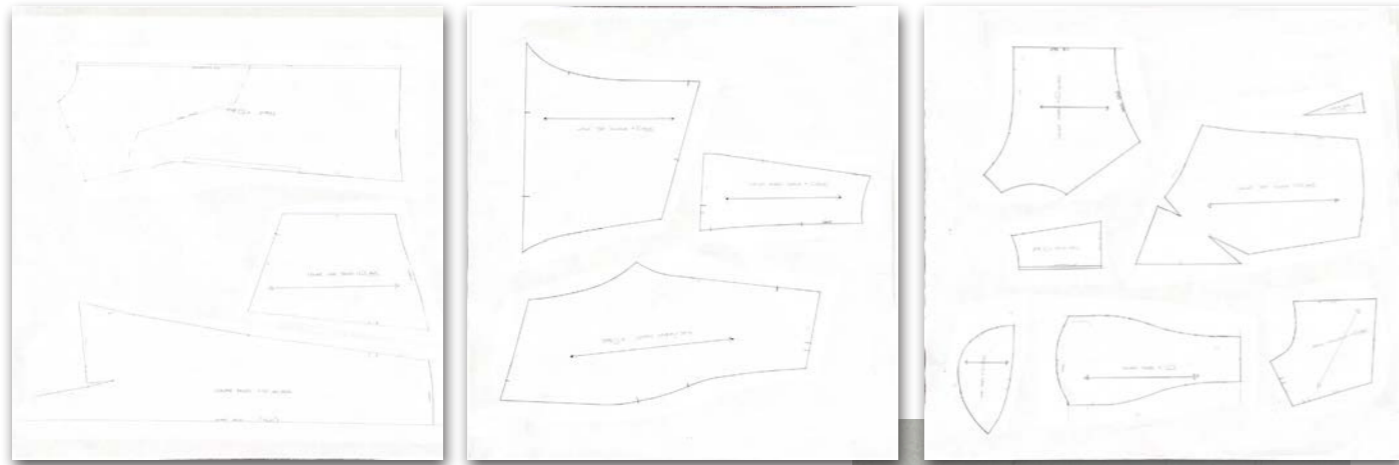
THE INITIAL EVALUATION AND COMPARISON OF BOTH OPTIONS FOR THE CONNECTION RESULTED IN A BETTER OUTCOME FOR VERSION 2. IN ADDITION TO USABILITY BENEFITS, COMFORT WAS ALSO VASTLY IMPROVED, ESPECIALLY WHEN WEARING A BACKPACK.

VERSION 2 WILL BE TAKEN FORWARD AND DEVELOPED FURTHER, WITH THE AIM OF PRODUCING A PROTOTYPE, IN LIKE MATERIALS, THAT CAN BE TESTED WITH USERS.

INITIAL TOILE CONSTRUCTION

THE SHELL TOILE, THAT REFERENCED THE EXISTING MONTANE JACKET, WAS BUILT AND ANALYSED TO INFORM THE FUTURE DESIGN DIRECTION OF THE MODULAR SHELL.

ELEMENTS THAT WORK WELL ARE IDENTIFIED, AS ARE ELEMENTS THAT COULD BE IMPROVED.



GROWN ON SLEEVES
- CAN THESE
BE ADJUSTED
AND SIMPLIFIED?



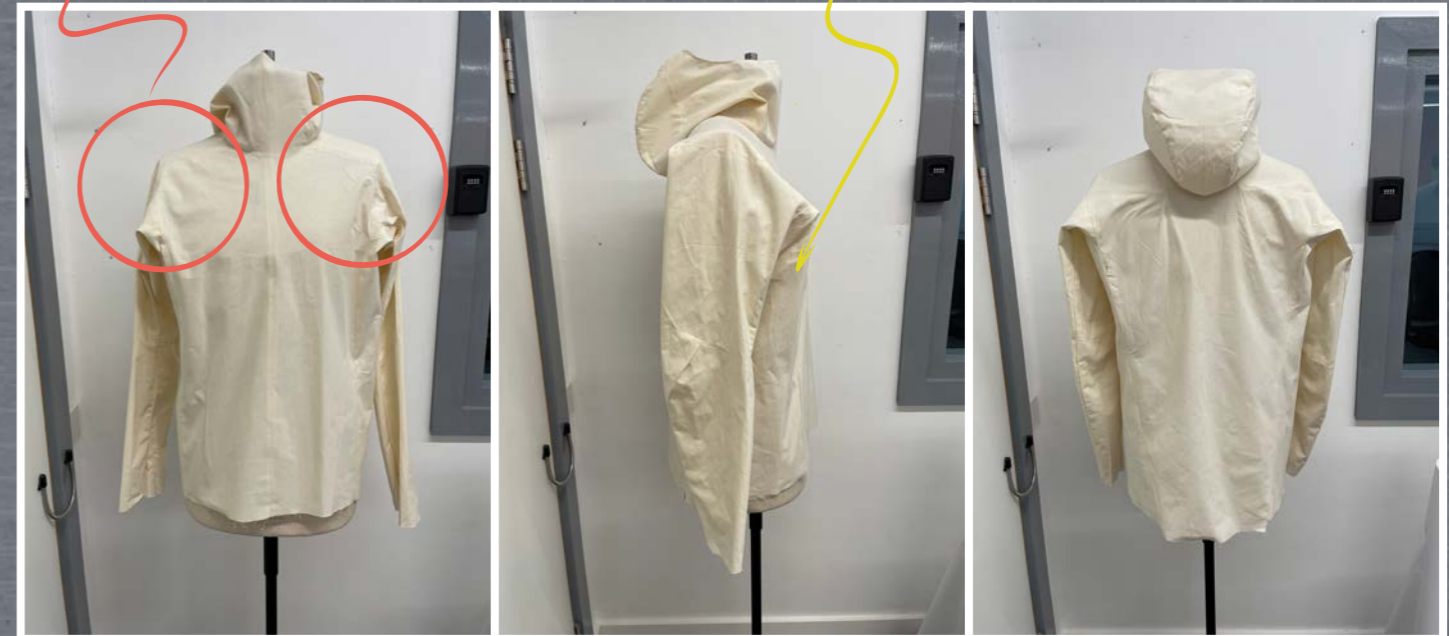
DARTS
COSMETIC,
REMOVE.

ADJUST
HOOD
CONSTRUCTION.

ENABLE FINE
ADJUSTMENT.

CONSIDERABLE
MATERIAL
GATHERING
UNDER ARMS.

BODY SHAPE,
FRONT + BACK
IS GOOD.



RUNNING

CYCLING

HIKING

PERSPIRATION
AREAS

HIGH DEGREE
OF MOVEMENT

JACKET
RIDING UP

KEY RAINFALL
REGION

Pack
ZONE

HEAT
LOSS

VALUABLES
STORAGE

VENTING
+
BREATHABILITY

REMOVABLE
HOOD

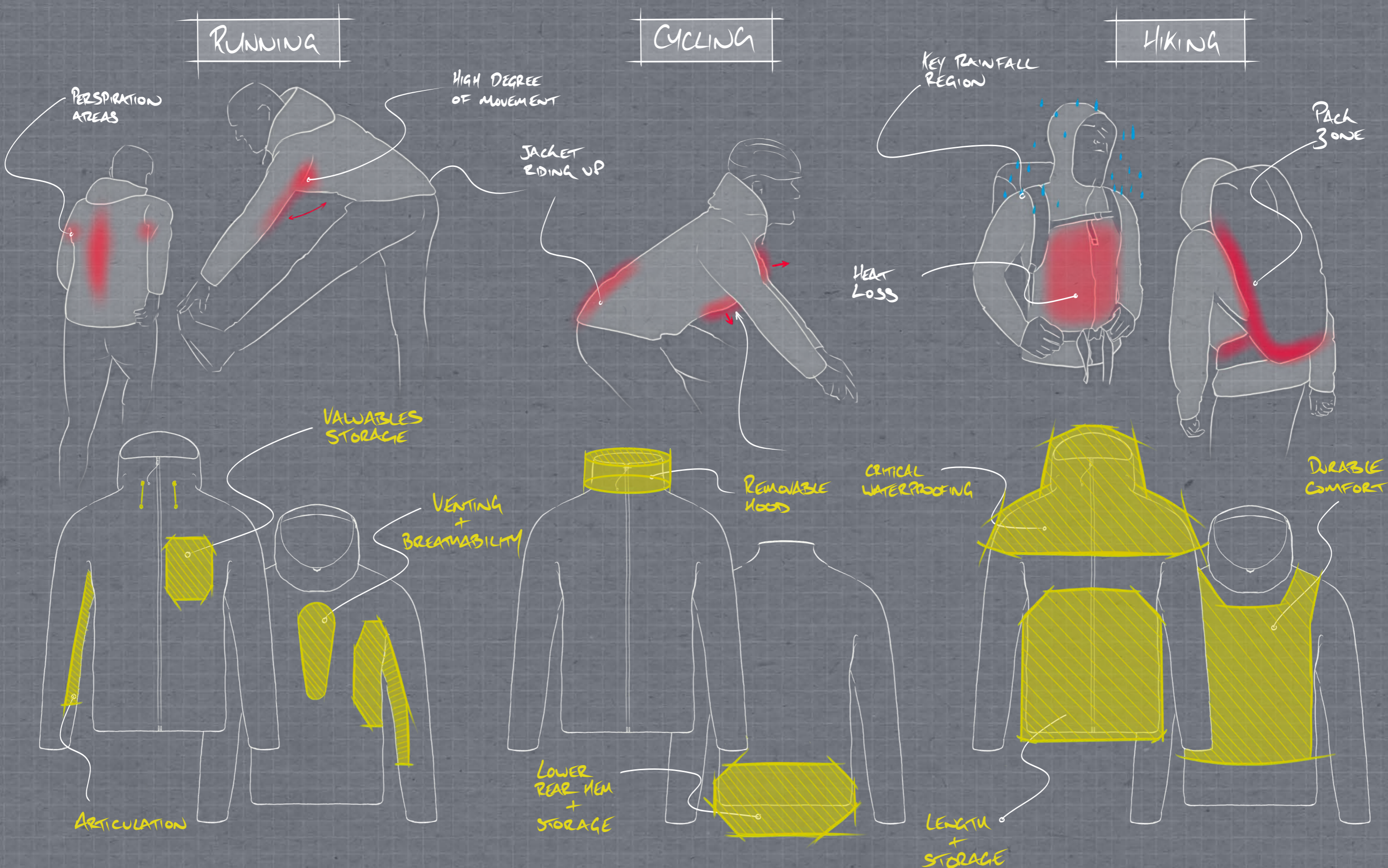
CRITICAL
WATERPROOFING

DURABLE
COMFORT

ARTICULATION

LOWER
REAR
HEM
+
STORAGE

LENGTH
+
STORAGE

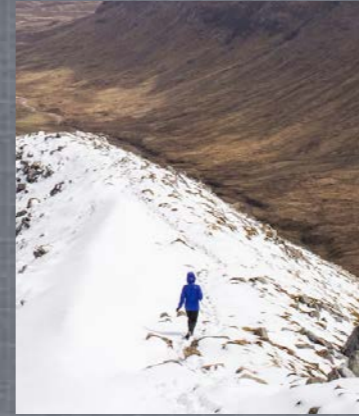




RUNNING

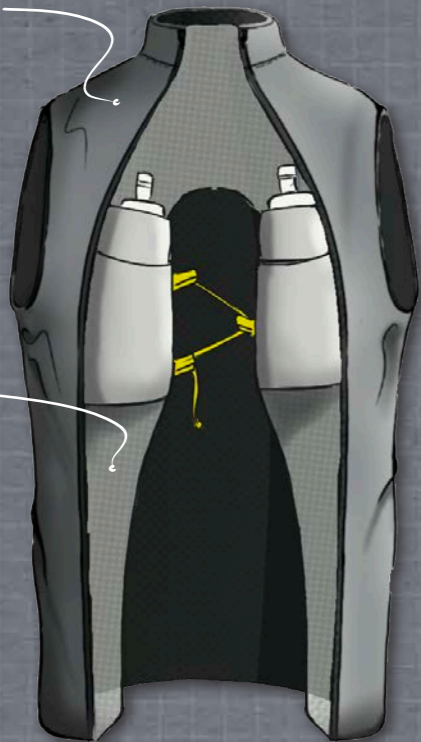


CYCLING



HIKING

INTERNAL GILET LAYER



CENTRAL PANEL COULD BE SWAPPED W/OUT TO INTRODUCE:

- STORAGE
- BREATHABILITY
- INSULATION
- ETC ...

ZIPS

REMOVABLE HOOD TO SUIT:

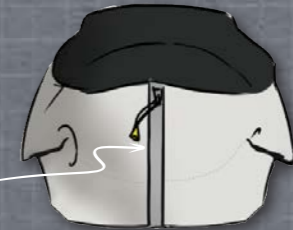
- CYCLING
- DRY RUNNING
- ETC ...

ACCESSIBLE CHEST POCKETS



EXPOSED INNER GILET

HIGH NECK HOOD



DURABLE, WATERPROOF UPPER



LENGTH EXTENDING LOWER

UTILITY POCKETS



SHAPE TOILE - DESIGN + MAKE_

TO ACHIEVE THE MODULE BREAK-UP IN THE 3-TIERED CONCEPT, THE MONTANE SHELL HAD TO BE ADAPTED TO CREATE A REMOVABLE HOOD, AND TO INTRODUCE A SPLIT IN THE MAIN BODY.

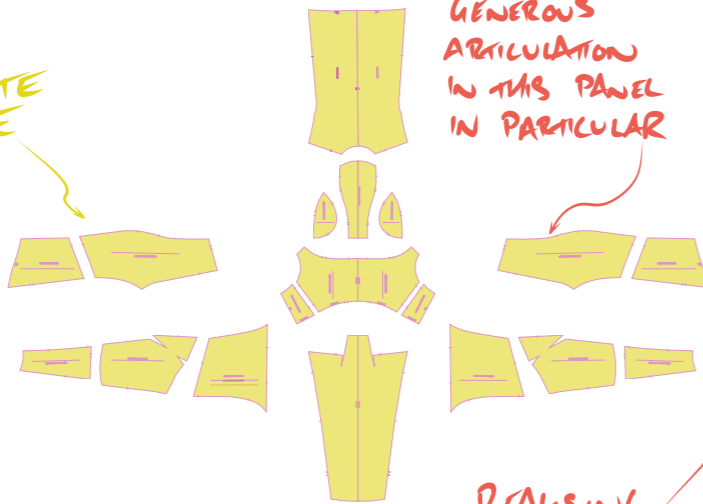
COMPLETE MONTANE PATTERN

GENEROUS ARTICULATION IN THIS PANEL IN PARTICULAR

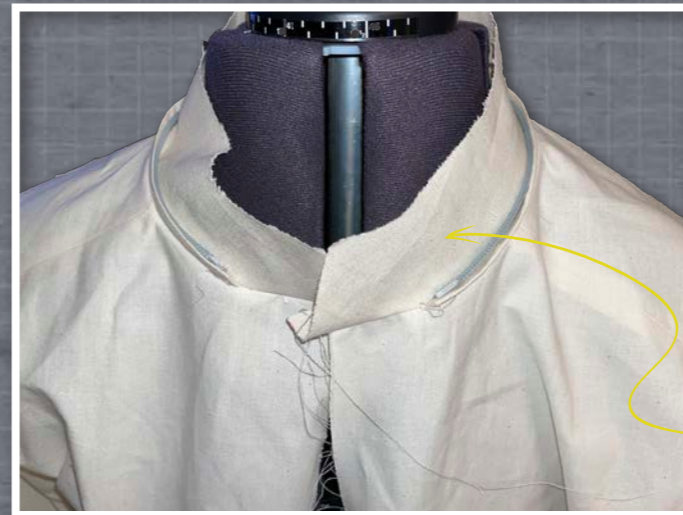
OVERLAPPING SECTIONS INDICATE 3D FORM

27CM

PHYSICAL REALISATION OF BODY SPLIT WAS OPTIMISED TO SMOOTH CURVE - FOR VISUAL REASONS + EASE OF ZIP ATTACHMENT.



REALISING ZIP POSITION AND LOWER MODULE AS IT IS SKETCHED WOULD RESULT IN EXCESSIVE FABRIC USE.



- THIS SEAM HAD TO BE SEWN IN TO STAGES.
- NEED TO UNDERSTAND IF THIS WAS AN ERROR.

- FACING ADDED AROUND HOOD PERIMETER WORKED WELL.
- SIZED CORRECTLY + SEWING WAS STRAIGHT FORWARD.

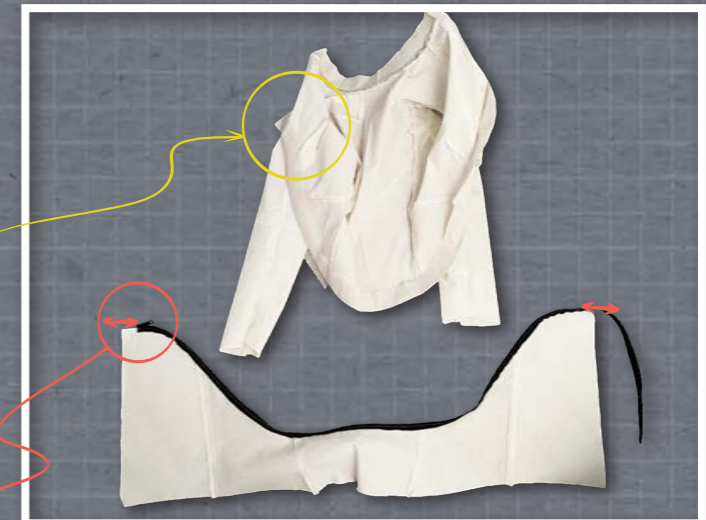
- THIS FACING DIM COULD BE INCREASED BY 2CM TO INCREASE HOOD/COLLAR OVERLAP (IMPROVED W/PROOFING).

- 50CM ZIPPER SEWN INTO COLLAR SEAM.
- EASY TO SET IN.
- CONCEALING FLAP ALSO IN LAY-UP.

- HEM LINE + FACING WAS INITIALLY DIFFICULT TO SEW FLAT.
- PINNING + BASTING HELPED.

5cm FACING INTRODUCED TO CONCEAL ZIP + ACHIEVE WATER-PROOFING

CARE HAD TO BE TAKEN TO ALIGN ZIPPER LENGTH CENTRALLY ON THE BODY.

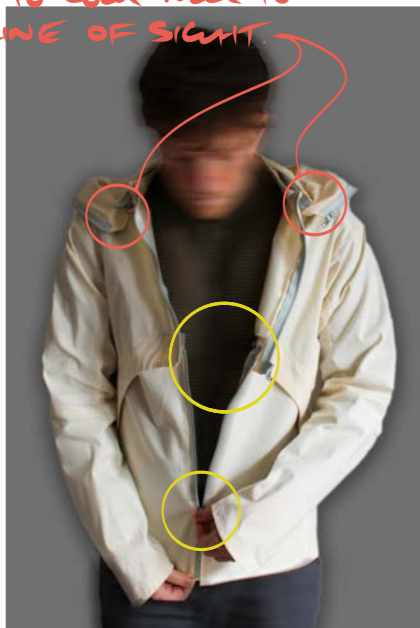


THE CONSTRUCTION PROCESS POSED SEVERAL CHALLENGES AND REQUIRED CAREFUL CONSIDERATION FOR THE ASSEMBLY PROCESS. A SERIES OF ASSEMBLY INSTRUCTIONS WERE CREATED THAT WILL BE REFERRED TO MOVING FORWARD.

SHAPE TOILE - REVIEW_

BOTH BODY MODULE ZIPS ARE EASY TO OPERATE.

HOOD C.F. ZIP DIFFICULT USER OPERATION, AS YOU NEED TO LOCK NECK TO GET LINE OF SIGHT.



HOOD OVERLAP TO BE INCREASED BY 1cm.

[FACING MOD.]

THIS CHAMFER DETAIL IS WORKING WELL. IT TIES IN NICELY W/ THE NECKLINE PROFILE.

HOOD SHAPE APPROPRIATE AND ISN'T NEGATIVELY AFFECTED BY MODULE ENABLING FEATURES.

PATTERN NEEDS TO BE ADJUSTED TO PREVENT "NOSE". BOTTOM OF ZIP IS BEING FORCED OUT, AWAY FROM THE BODY.



TIERED ZIPS AREN'T TOO HEAVY.

ALSO LOOK MINIMAL + CLEAN!

HOOD REQUIRES ADJUSTMENT IN BOTH AXES.



THIS EXCESS FABRIC NEEDS TO BE ADDRESSED

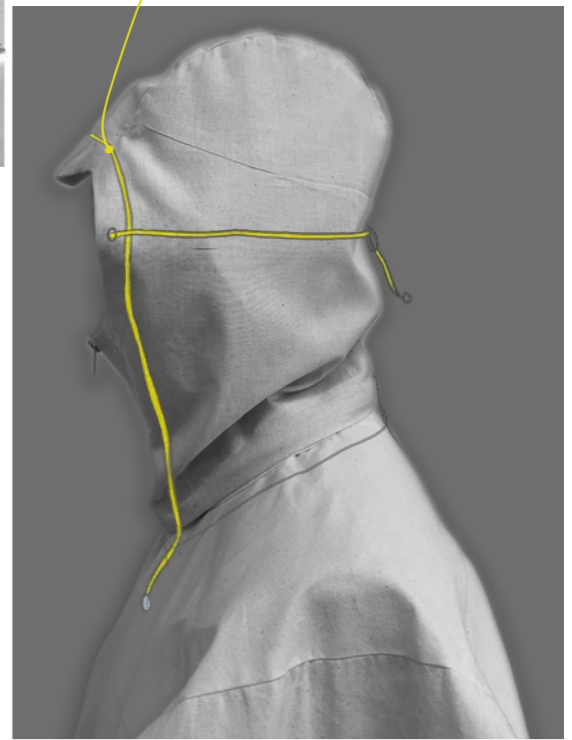
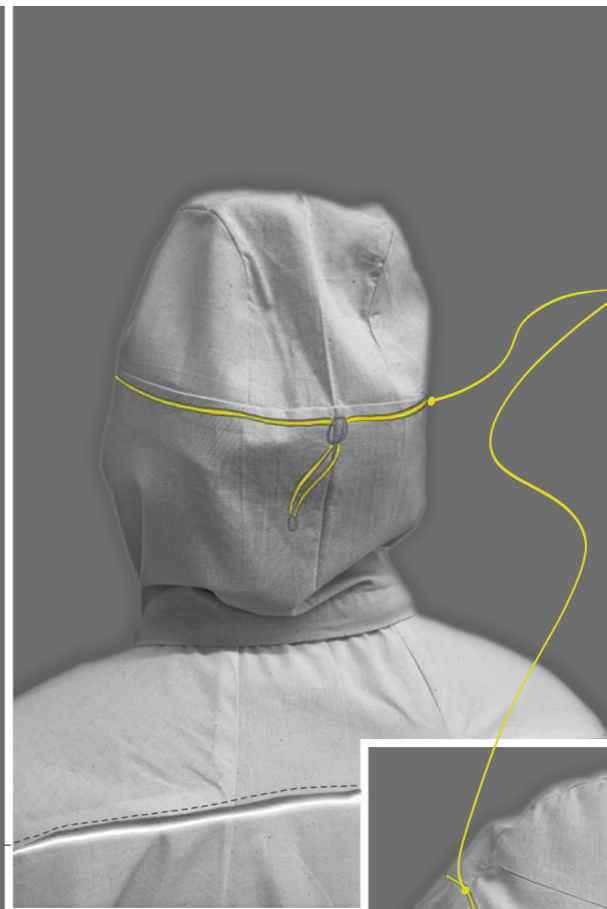
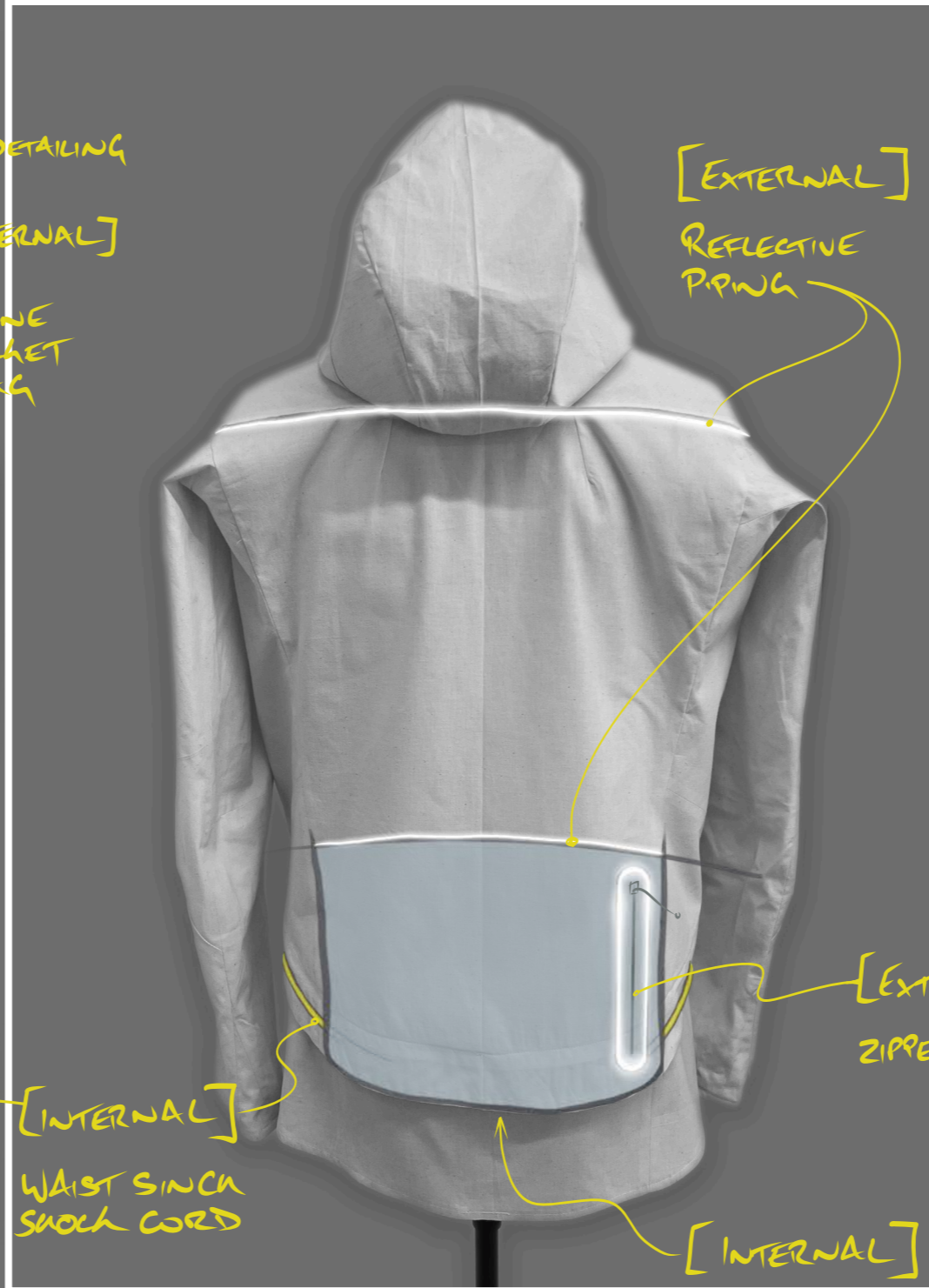


LIKELY DUE TO SEWING ERROR, THESE REAR FEATURES ARE TOO PRONOUNCED AND LOOK UNTIDY.

DARTS IN THIS POS'N OFFER LITTLE BENEFIT WHEN IT COMES TO FIGURE SHAPING.

OPPORTUNITY FOR FEATURE PLACEMENT.

THE LEARNINGS, POSITIVE AND NEGATIVE, WILL BE INCORPORATED INTO THE 1ST PROTOTYPE THAT WILL BE CONSTRUCTED USING REALISTIC MATERIALS.

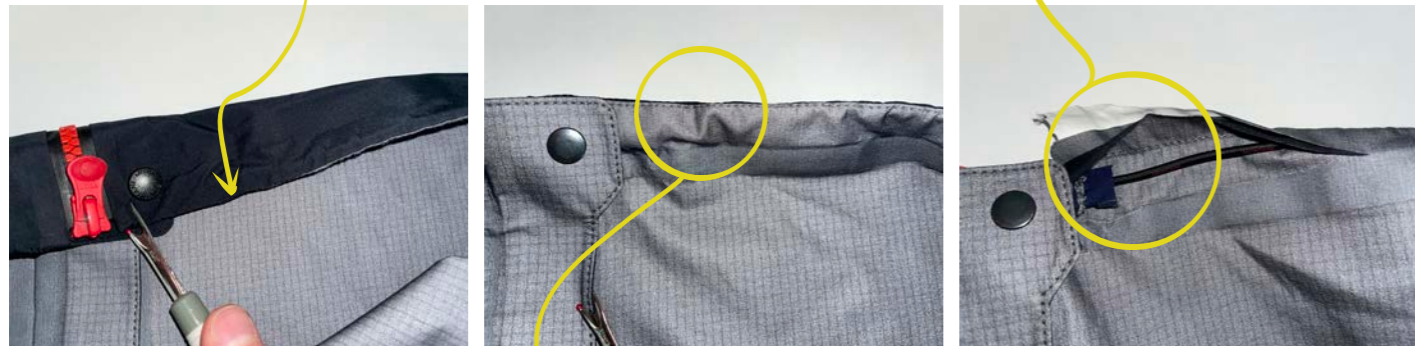


THE DESIGN UPDATES OUTLINED ON THIS PAGE WILL BE IMPLEMENTED IN THE 1ST "MANUFACTURING INTENT" PROTOTYPE. THIS PROTOTYPE WILL BE USED TO CARRY OUT USER TESTING FOR EACH OF THE THREE DISCIPLINES.

FABRIC TESTING + REVIEW_

TO CREATE THE 3-TIERED 'HIKING' CONFIGURATION, A RANGE OF 3, POTENTIALLY SUITABLE, FABRICS WERE SOURCED AND EVALUATED BASED ON QUALITY, WEIGHT AND PROCESSING.

THIS SEAM USED THROUGHOUT



SHOCK CORD CAPTURED IN HEM.

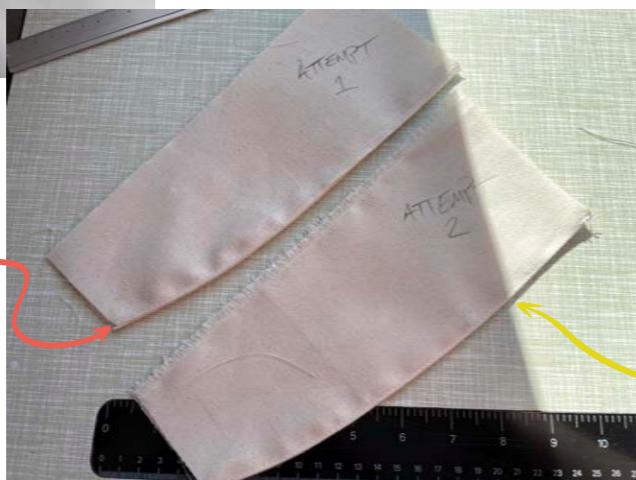
SEALING TAPE SEWN INTO HEM.



STRETCH MAKES THIS VERY DIFFICULT TO SEW.



UNEVEN STITCHES, SEAM NOT OPENED COMPLETELY.



2ND ATTEMPT NEAT + CONSISTENT

SAMPLE 1:

3L SOFT-SHELL

COMPOSITION UNKNOWN

APPROX 120 GSM

SAMPLE 2:

3L SOFT/HARD-SHELL

COMPOSITION UNKNOWN

APPROX 140 GSM

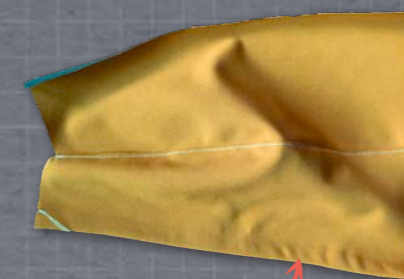
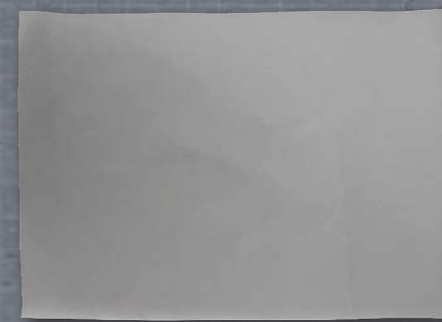
SAMPLE 3:

3L HARD-SHELL

COMPOSITION UNKNOWN

APPROX 160 GSM

HEAVY FOR RUNNING



MINOR PUCKERING

MAJOR 'RODING'

INCREDIBLY CLEAN + CONSISTENT FINISH.

FOR THE FIRST PROTOTYPE USING REALISTIC/FINAL FABRICS, I PLAN TO USE 'SAMPLE 3', AS IT IS DURABLE AND EASY TO SEW. FOLLOWING THE FIRST PROTOTYPE BUILD, I MAY CHANGE FABRIC, AS THE COLOUR AND WEIGHT A POTENTIALLY NOT PREFERABLE.

**RUNNING
CONFIGURATION:**

**CYCLING
CONFIGURATION:**

**HIKING
CONFIGURATION:**



- LIGHTWEIGHT HOOD
- REFLECTIVE DETAILS
- VALUABLES POCKET
- STRETCH LOWER MODULE
- BREATHABLE LOWER MODULE

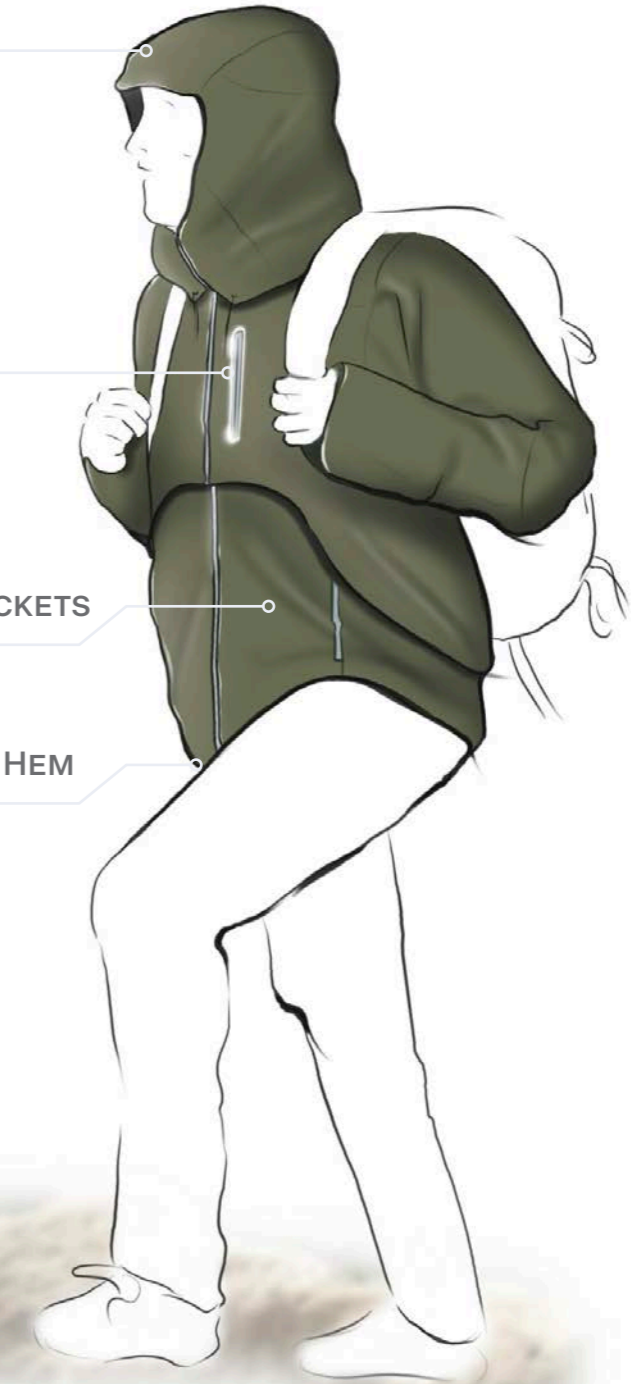


HELMET COMP. HOOD

VALUABLES POCKET

DEEP UTILITY POCKETS

DROPPED FRONT HEM







RUNNING

CYCLING

HIKING



REMOVABLE HOOD W/ ELASTIC OPENING + REINFORCED PEAK

WATERPROOF PHONE STORAGE POCKET

2 ANTI-BOUNCE STORAGE POCKETS

ADJUSTABLE HEM

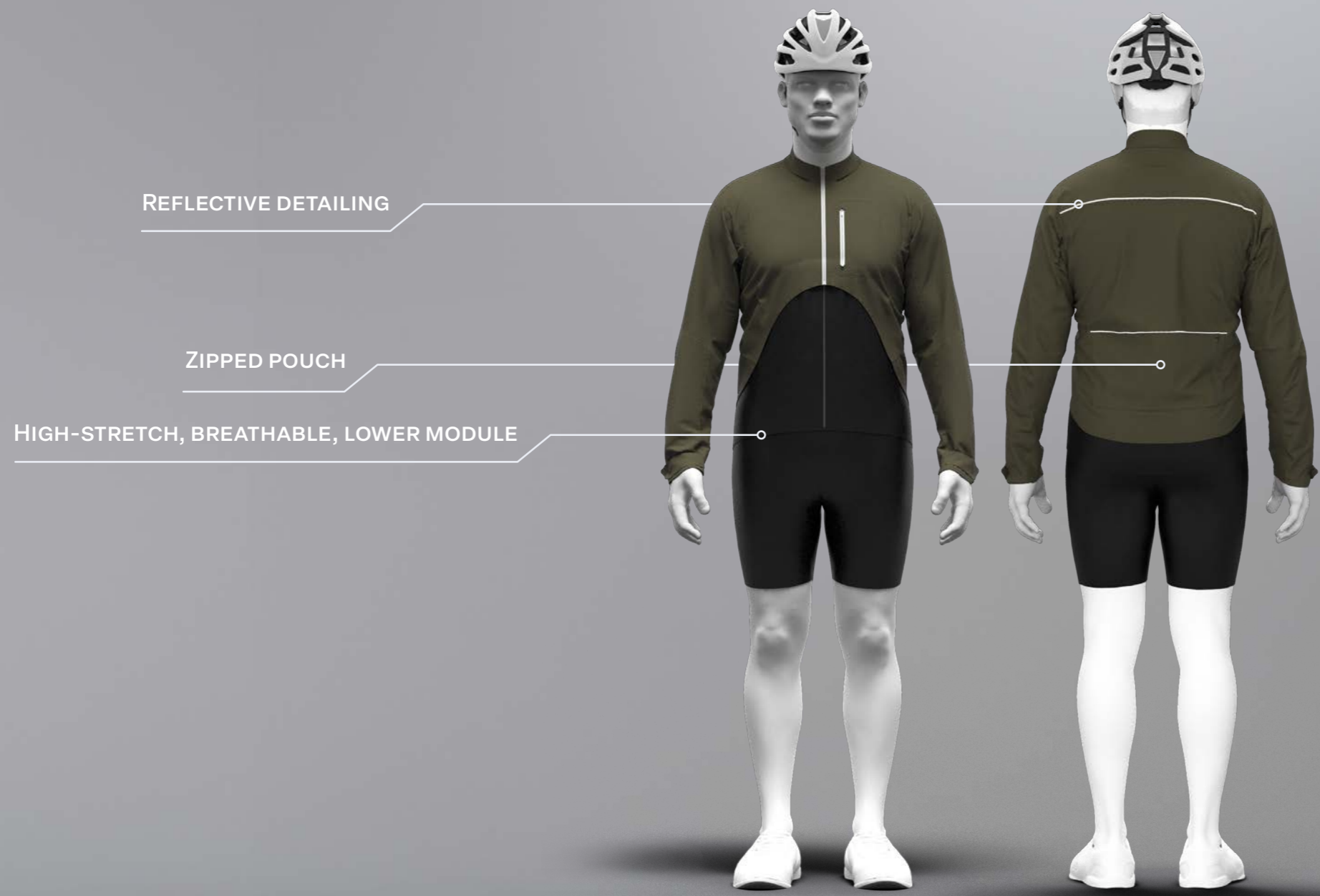
RUNNING



3L FABRIC
160 GSM
28,000 HH
10,000 MVTR



2.5L FABRIC
100 GSM
10,000 HH
35,000 MVTR



REFLECTIVE DETAILING

ZIPPED POUCH

HIGH-STRETCH, BREATHABLE, LOWER MODULE

3L FABRIC
160 GSM
28,000 HH
10,000 MVTR

90% POLYESTER
10% ELASTANE
125 GSM

CYCLING

FULLY ADJUSTABLE HOOD

FACE PROTECTION

2 DEEP UTILITY POCKETS

DROPPED HEMLINE



3L FABRIC

160 GSM

28,000 HH
10,000 MVTR

HIKING

PROTOTYPE 1 - REVIEW_

THE ANNOTATED FEATURES ON THIS PAGE HIGHLIGHT THE IMPROVEMENTS THAT ARE REQUIRED ON THE FIRST PROTOTYPE.

ZIP LOOKS CLUNKY, EXPOSED AND IS 3 LAYERS (NOT W. PROOFABLE)

WATERPROOF MATERIAL REQUIRED!

LACK OF DROP ON REAR OF COLLAR WHEN MAKES IT DIFFICULT TO ASSEMBLE.

UPPER + LOWER PATTERN SIZE OUT →

REDUCE C.F. UPPER WIDTH 34 1cm PER SIDE.



NOT ORGANIC ENOUGH.



LATERAL ADJUSTMENT REQUIRED ON HOOD.

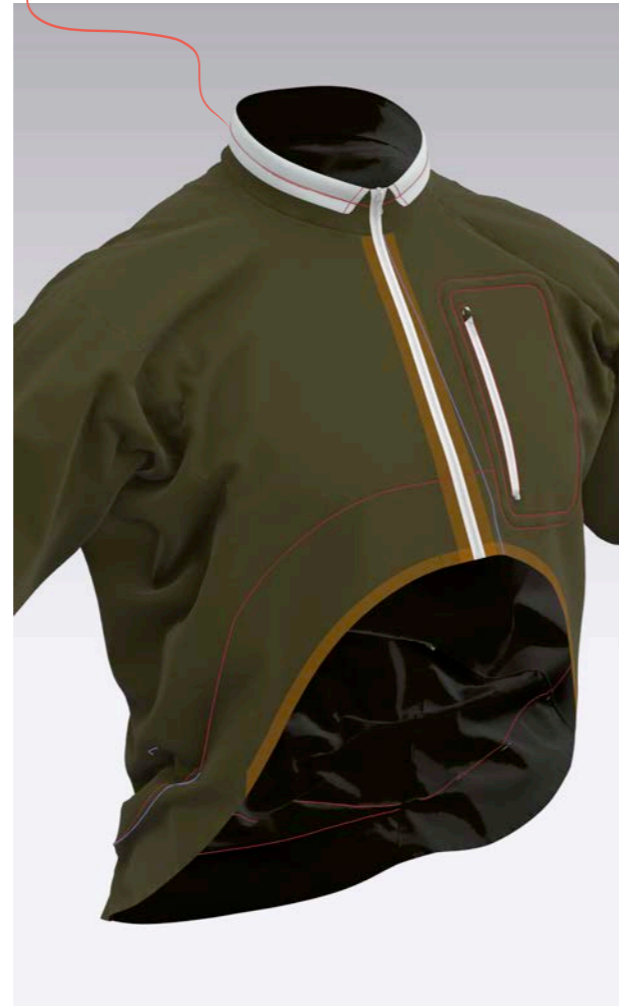


HOOD HEIGHT CAN BE REDUCED, HELMET ACCOM. NOT REQUIRED.

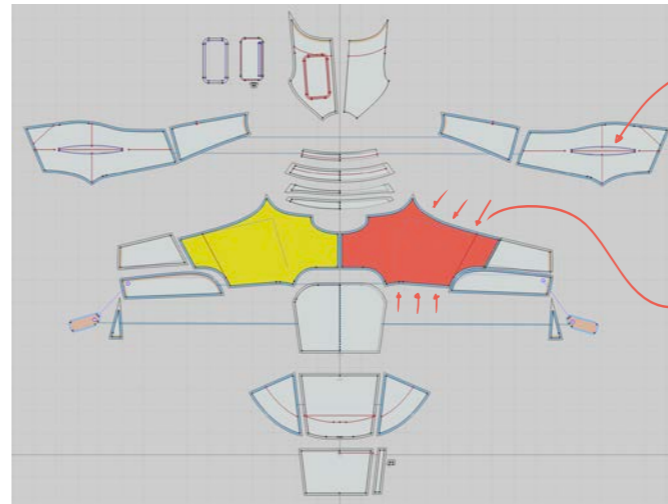
PLACEMENT + SIZE IS USABLE.



ADJUSTABLE SUEDE CORD IS TOO HEAVY FOR RUNNING CONFIG.



ZIP CONCEALED UNDER THIS FLAP. - MUCH CLEANER!



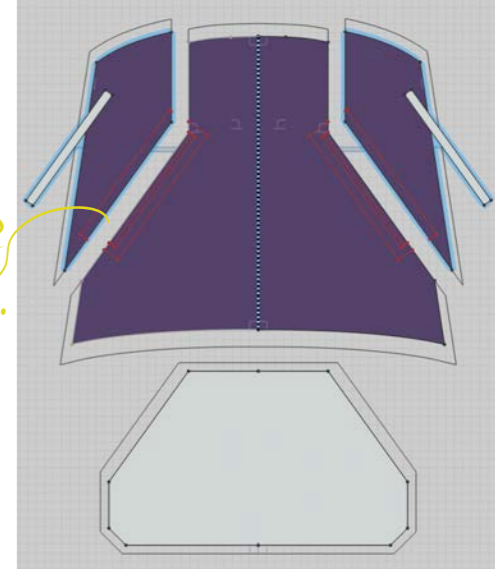
DID NOT INCLUDE IN FINAL DESIGN.

REMOVED MATERIAL FROM THESE EDGES TO TIGHTEN ARM FIT.

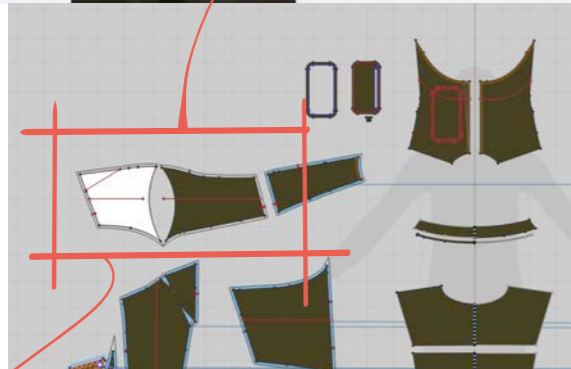
SEAM INTRODUCED TO MAKE POCKET INSTALL EASIER.



TAKE ON A BAGLAW SADDLE SEWE

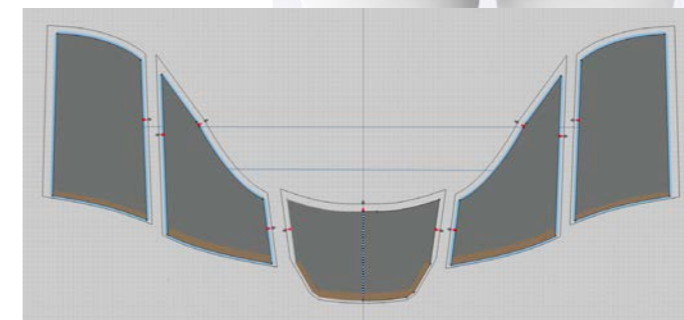
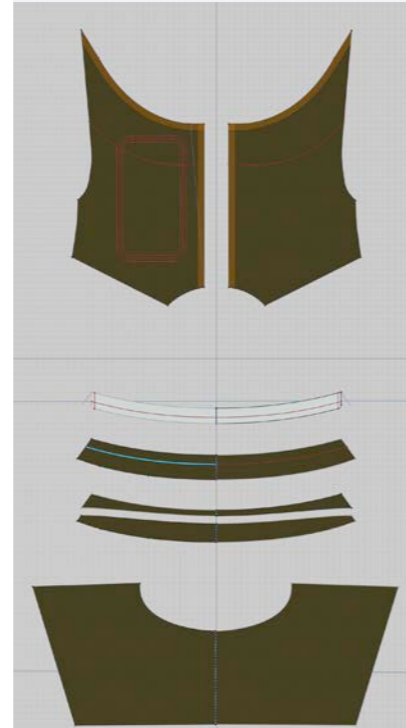


PROFILED REAR HEM ON "CYCLING" LOWER MODULE!



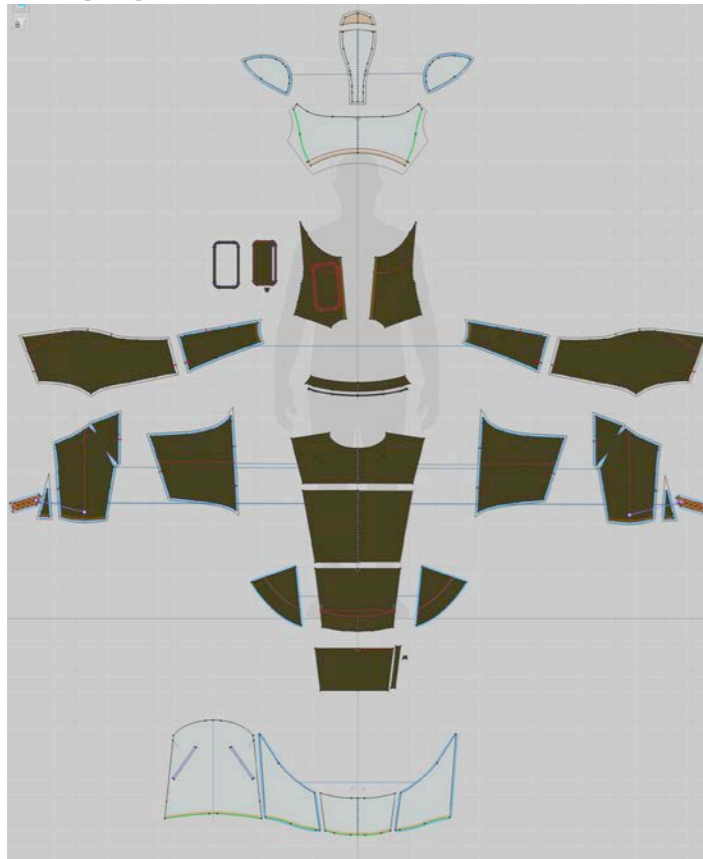
CONSIDERED WAYS OF REDUCING ARM LIFT / EXCESS MATERIAL UNDER ARM.

INITIAL ATTEMPTS, LIKE ONE REQUIRED WERE CLUMSY + LIMITED OPTION OF MAKING VENTILATION ZIPS.

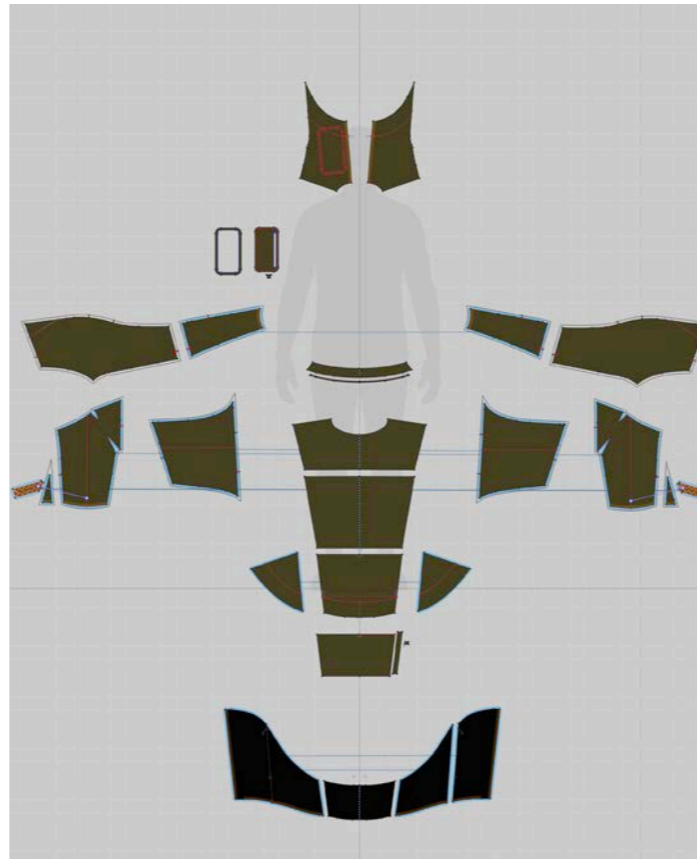


THE PATTERN LAYOUTS FEATURED ON THIS PAGE VISUALLY DOCUMENT THE UPDATES AND IMPROVEMENTS THAT WERE MADE TO THE 2ND PROTOTYPE ITERATION, BASED ON FEEDBACK.

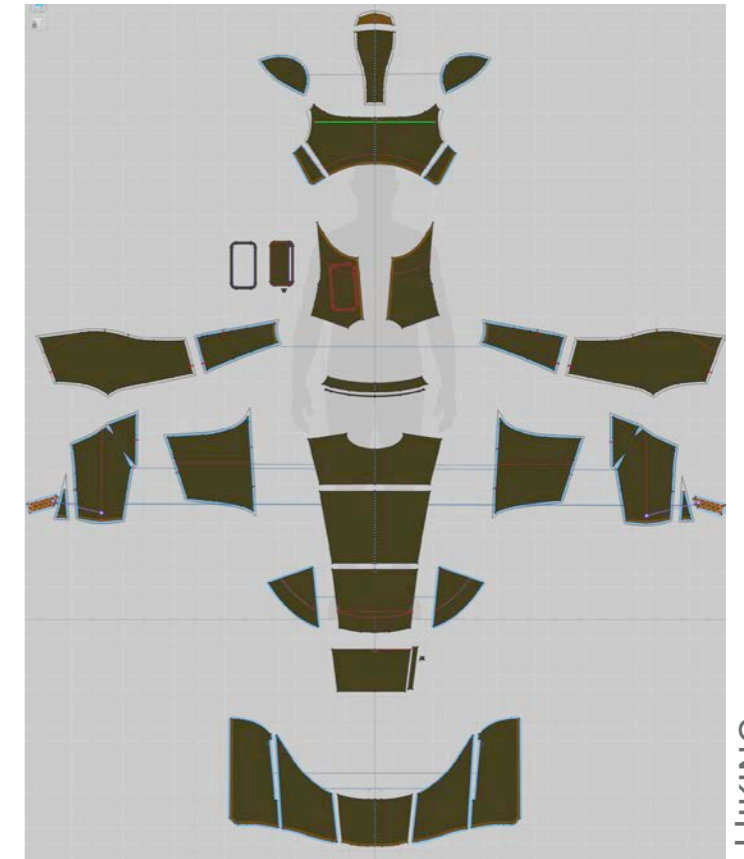
PROTOTYPE 1



RUNNING

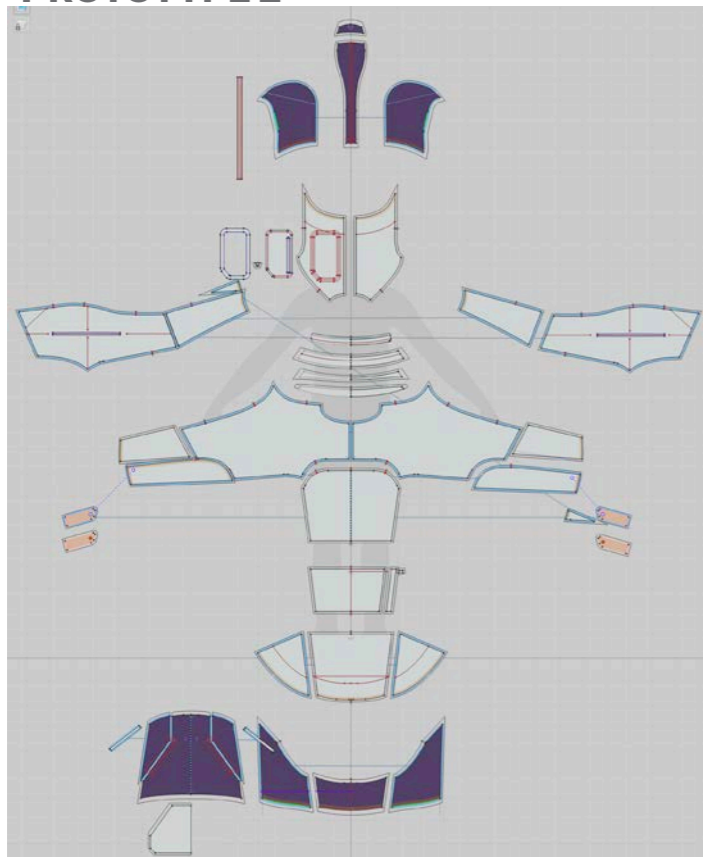


CYCLING

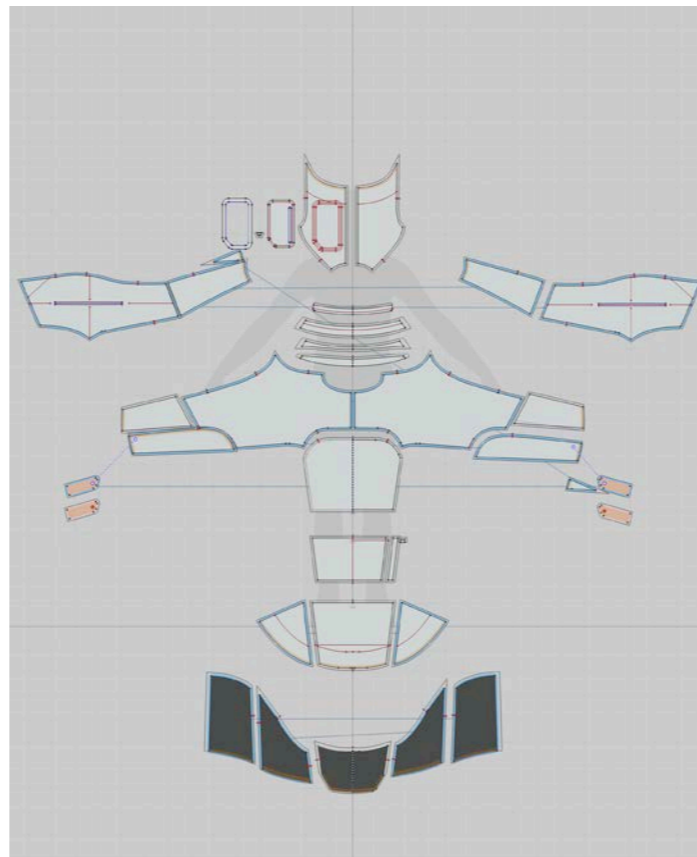


HIKING

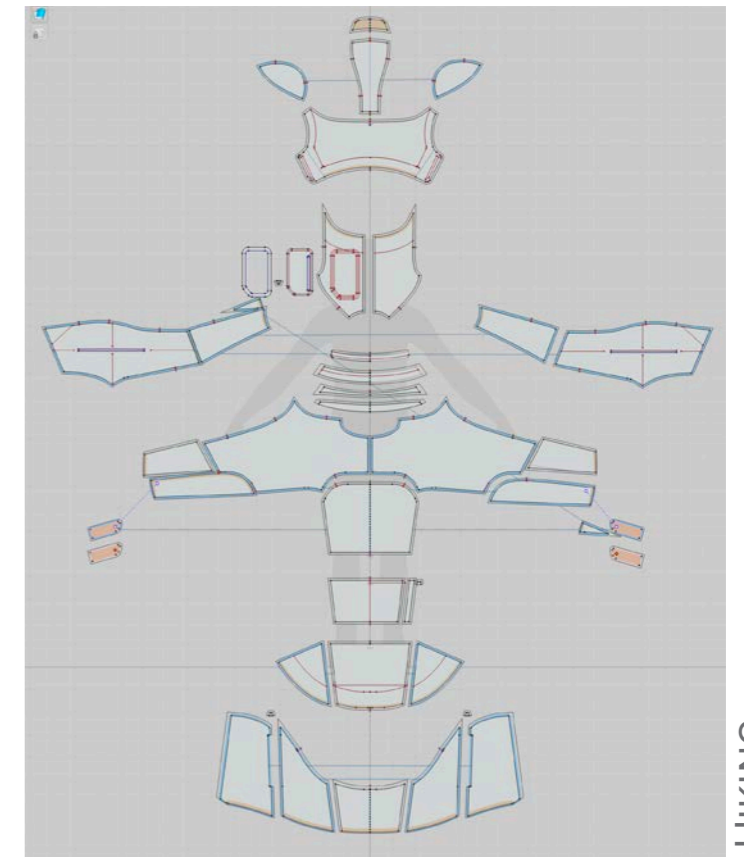
PROTOTYPE 2



RUNNING



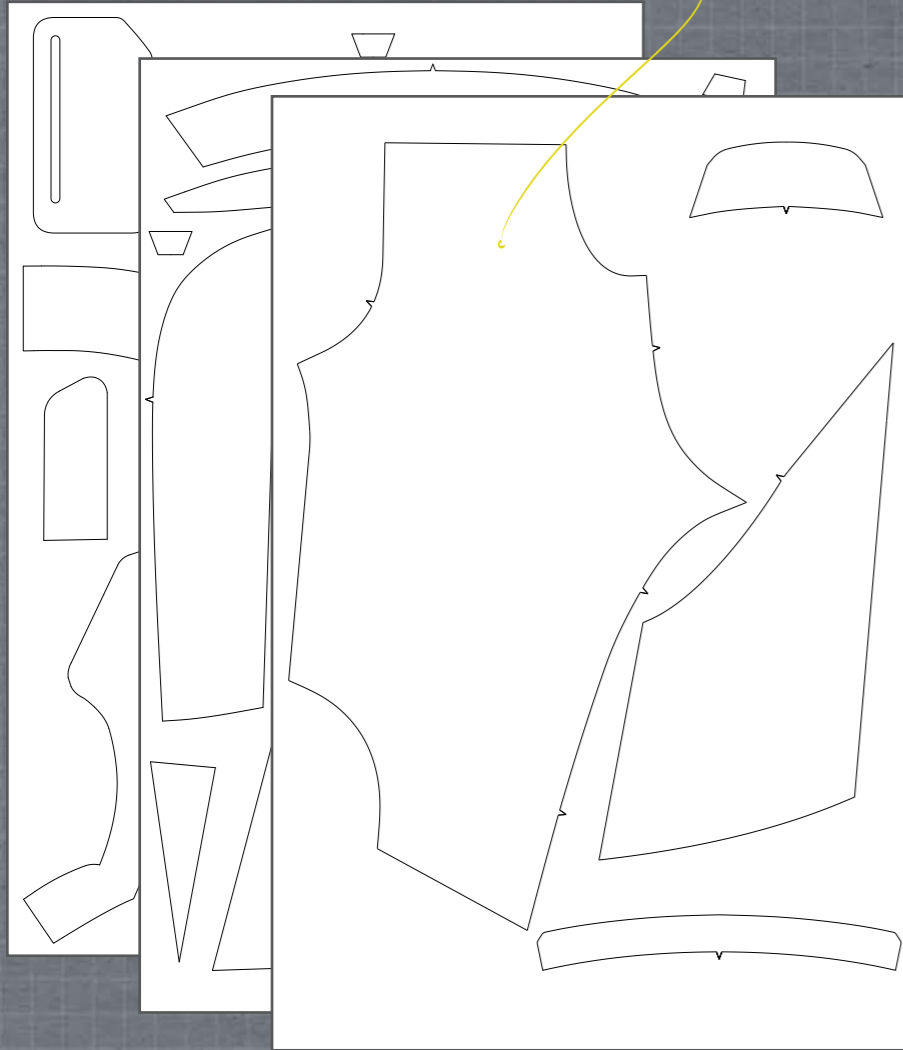
CYCLING



HIKING

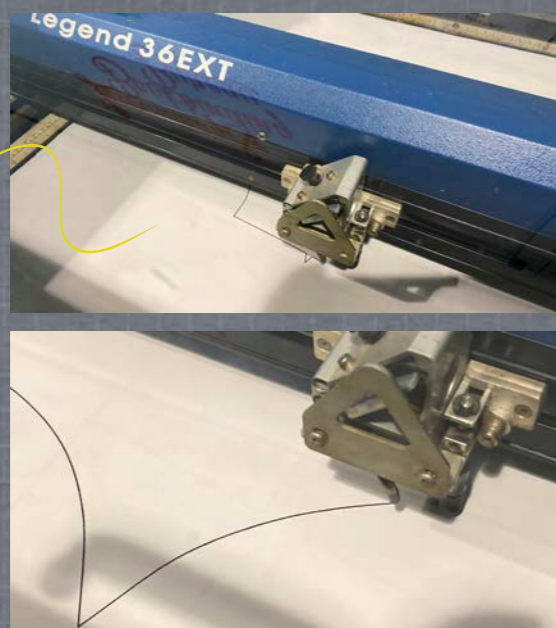
KEY AREAS + FEATURES_

All PATTERN PIECES
COLLATED ONTO 600 x 900
BOARDS



All PIECES
LARGER CUT.

SEAMING
EDGES.



SYSTEM COMPONENTS + USABILITY



ZIP INTERFACE



ZIP INTERFACE





RUNNING





RUNNING





CYCLING





CYCLING





HIKING





HIKING



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