



DIVIDE

Urban Cycling Collection

KODI WHITFIELD

A group of cyclists is riding down a city street. The street is lined with buildings and parked cars. The cyclists are wearing various clothing, including jackets and backpacks. The word "MISSION" is overlaid in large, thin, white letters across the center of the image. Below the word, there is a horizontal line and a paragraph of text.

MISSION

Create a collection of apparel for urban cyclists that overthrows the divide. Expressive street style punctuated through function.



The Urban Cyclist. Aged 21-35. Defined by their geographic proximity to a large urban center. This person uses their bike as more than a means of transportation to and from work. Instead, they use their bike as a vehicle to transport them through their daily lives. Perhaps out of frustration for the current public transportation system, the urban cyclist rides freely and independently. My consumer is a cyclist who is not reliant on any existing infrastructure and is equally as comfortable within the confines of a bike lane as they are amongst the stampede of automobiles. The relationship between cyclist and their bike must be more than that of man and machine. Their bike is part of who they are. The bike is something that can propel them to go farther and faster, coursing through the city, premeditated yet reactionary. They can also go slow, gaining an appreciation for their environment and establishing a connection to their city along their route.

The *Untitled* collection fits within a lifestyle. One representing activity and community in an urban setting. This person knows the back streets and the shortcuts like the back of their hand. A fearless individual who balances style and function. For the messenger the bike is their work, their livelihood. For the commuter, their bike is their way to work. For both, it is a part of their identity.

WHO



The urban cyclist can be identified by three things: what they wear, what they ride, and what they carry. The goal of this project is to create a collection of items across the areas of

apparel, footwear, and equipment. The items will be crafted to fit the performance needs of the rider and branded to satisfy the aesthetic demands.



GARB

The user avoids the restriction of all apparel associated with road cycling and the entire get up. No to spandex, no to bibs, no to jerseys and hell no to chamois. The minimal gains in aerodynamics do not trouble the rider who is concerned with being comfortable and looking stylish. There is increasingly more crossover between cycling apparel and everyday wear as fashion infiltrates the cycling world. The leaders in the market for cycling apparel specialize in technical apparel or carefully crafted functional but traditional garments. Levi's is a participant in the market with their commuter line. Chrome has increasingly captured market share as they have moved into the apparel space using the same rugged and indestructible look of their messenger bags. Giro,

traditionally a hard goods company in cycling, has also migrated into the apparel space with a collection of t-shirts, pants, and shorts. Lastly, brands such as Rapha and Mission Workshop are creating technical apparel in more familiar silhouettes. Footwear in the market is driven by the existing technology for securing the foot to the frame. Whether the rider uses clipless pedals, straps, cages, or platform pedals, will determine what shoes he or she wears. Today, the market is being flooded with hybrid options. Brands such as Chrome, Quoc Pham, and DZR are creating clipless shoes in a disguised form.

MACHINE

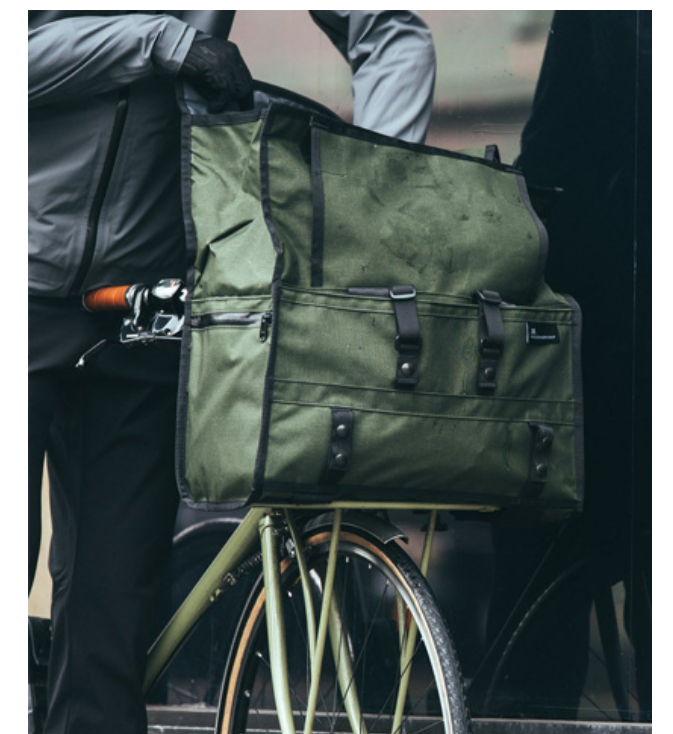
Often times, the easiest way to tell different kinds of riders apart is by what sort of bike they ride. The urban cyclist is traditionally a single speed rider. The low

maintenance and affordability of fixed gear and single speed bikes have attracted bike messengers, college students, and commuters alike. The largest difference between road cyclists and urban commuters is not only the number of gears. The costly high performance road bikes segment the market of riders, resulting in factions of riders and an animosity towards those unlike themselves. Urban cyclists are a more youthful and diverse population than their road cycling counterparts.

PACK

Depending on the weight and number of items being carried, the urban cyclist has a variety of methods for transporting everything. The most common pack is the messenger bag. Employed by cyclist of the profession, messengers were used to carry parcels that need to be delivered under short notice. "In New York, messengers routinely carry advertising proofs, videos and film, architectural blueprints, model portfolios, contracts, and legal documents" (Kidder 351). The form of the carrying pack is largely influenced by the shape and size of the items being transported. Today, cyclists use larger rolled packs that are carried on their back to accommodate the rectangular shape of laptops.

Other ways luggage and parcels are transported via bike involve some sort of racking system. Dry bags, racks, and baskets are additions to the geometry of the frame to make transporting heavier items more ergonomic.



PDX

WHERE

NYC

Two cities have distinguished themselves in the cycling world. Portland and New York City. Whether it is because of their cycling infrastructure, number of participants, or cycling culture, these two cities are becoming or may already be known as the Cycling Meccas.

In the entire United States, cycling has taken a rise in cycling participation and the market has reflected that same growth. In 2016, Sports Market Analytics, a service of SBRnet used to capture market size and sport participation, estimated there were 36.2 million cyclist in the entire U.S. The number of frequent cyclist, those who bike more than 110 days per year, was recorded at 4.9 million.

The largest growth of cycling in the most recent decade has been in the work commute sector. The U.S. Census Bureau reports a 60% increase in the number of people who biked to work from 2000 to 2012.

The League of American Bicyclists reported that there were 863,979 cyclist commuters in 2016. Although the national average of cyclist commuters has dropped to 46% since 2012, there are states that are continuing to witness a massive conversion of people into cycling.

863,979
cyclist commuters
in 2016

Portland, Oregon, known to some as Biketown, is considered the national leader in Bike Friendly Commuting. Of the major cities in the United States, Portland has the highest percentage of commuters traveling by bicycle at 6.3%. Portland has also distinguished themselves with over 400 miles of bike paths and bike lanes included alongside traffic. The infrastructure supporting

Portland's cycling community has made cyclists safer as well.

Cross walks and stopping zones are painted green to raise driver and pedestrian awareness to cyclist at intersections. This use of infrastructure and planning allows Portland cyclists to successfully cohabitate roads and sidewalks while being neither automobile or pedestrian. What is interesting to note is that regardless of the privileges granted to cyclists, there is still a strong willingness of cyclists every where to believe they own the city and all its roads.

New York City is known as the home of the messenger cyclist. The heavily congested traffic and public transportation make cycling a desirable option for the fearless. Unlike Portland, New York City lacks the expansive bike infrastructure of protected bike lanes and streets. However, due to its large population, the 1.2% of commuters that travel by bike total nearly 50,000. Cycling as a mode of transportation continues to grow popular in the entire state of New York. The League of American

Bicyclists categorize the state as having experience between 70% and 100% growth over the last decade. New York City alone has shown a 46% growth in the last 5 years.

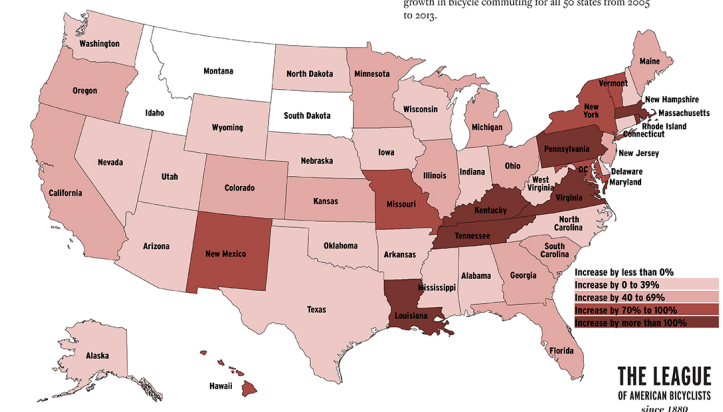
Other cities where cycling participation is growing are San Francisco, Chicago, Philadelphia, Washington, D.C. and Los Angeles.

At first glance, San Francisco would seem to be the commuting cyclist nightmare. However, the hill dominated terrain of the city on the bay hasn't deterred cyclist. The city ranks as the third largest city the highest share of cycling commuters.

At 3.9%, 19,429 people commute by bike to and from work. The other reason San Francisco is recognized as cycling power is because of the established apparel, equipment, and bike companies. Leaders in the industry across the different categories are headquartered or founded in San Francisco.

Chicago is the hybrid the hybrid of Portland and New York. The cycling infrastructure resembles that of Portland. Although it is not

BICYCLE COMMUTING GROWTH BY STATE

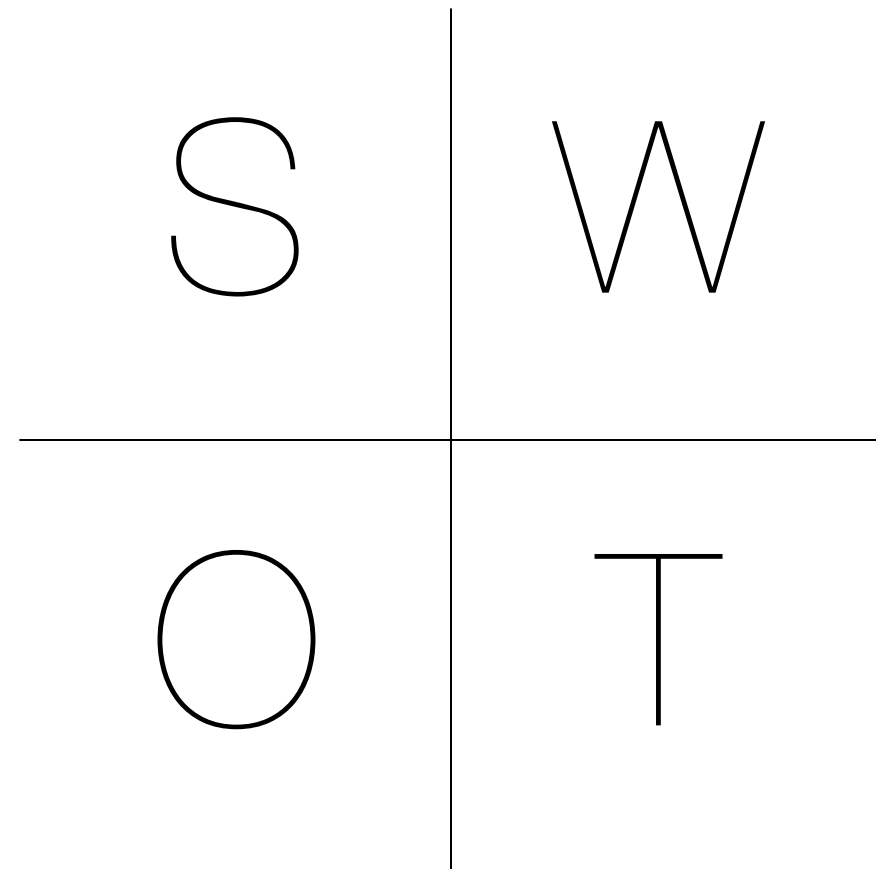


as extensive, Chicago has shown an effort to become a bike commuter friendly city. The shore of Lake Michigan is met with miles of bike lane that divert and detour throughout the more densely populated areas of the city center. Chicago ranks second as largest commute share of cities with a population over one million people. 1.7% of the entire population commutes via bike, producing nearly 23,000 cyclists.

Los Angeles, Philadelphia, and D.C. are cities on the rise. Cycling participation in these cities is on a steady increase. All three benefit from a densely populated metropolitan area. In most cases, heavily populated urban areas persuade city livers to seek out alternative

means of transportation in an effort to avoid traffic. All three cities benefit from having a population that is growing younger in age. As more young adults and emerging professionals move to these cities, it is expected that the participation in cycling will grow as well.

In choosing the target consumer for this capstone, The decision to further research New York City and Portland will provide a unique opportunity to create a collection of product that embraces the juxtaposition. Attitude meets performance. Style meets function.



STRENGTHS

The biggest and most identifiable strength is that the market is growing. Not only is the performance cycling industry expanding, the commuter and urban cyclists population is increasing. Another strength is that the collection can be seasonal. The product demands of the consumer are driven by the geographical location and the associated environment. The entrances into the market are vast. If designed carefully, there is a high probability that the cycling collection will be versatile and appropriate for adaptation into other neighboring markets. Creating items that can be used by the commuter who travels by foot, bike, and public transportation.

WEAKNESSES

The biggest weakness is that the biking industry features a high barrier of entry given the cost of equipment. The associated items with cycling are typically very expensive as well. Consumers are buying technical and performance driven items that are intended to last longer than preferred marketing timelines. Cycling is also very infrastructure dependent. The cities and states where cycling is popular is a direct result of a conscious effort by the state to increase cycling participation.

OPPORTUNITIES

There is an opportunity to create a new apparel and equipment category. No longer are fashion and technical apparel divorced in the market. There is a chance for cycling clothing to influence the business world as more people are commuting by bike. As urban centers become more densely populated, people will seek out alternative means of transportation such as cycling. The cycling industry features limited competitors. The companies who produce items within the different categories were able to do so due because of a loyal consumer and relaxed limited competition.

THREATS

The largest threat is that the cycling market is homogenous. The start up cost make it prohibitively expensive to begin cycling and commuting to work. The cycling community lacks diversity and is culturally closed off. "African-Americans had the lowest rate of biking to work at 0.3 percent" (US Census Bureau). As cities and populations grow and become more congested, there will be a wave of associated changes in transportation demands, potentially eliminating cycling all together.



MARKET STANDARDS

Before designing the collection for the urban cyclists, we must first understand the current market offerings. The cycling market features technical fabrics and fashionable silhouettes. Standards for bag design have risen as bags are increasingly well built, using specialized fabrics and materials that make the product very robust and durable. The footwear market is growing increasingly more complex. Crossovers in silhouettes have gained considerable traction. Clipless shoes disguised as traditional oxfords, sneakers, and pimsles are becoming preferred by the urban cyclist. The following pages will describe the materials and manufacturing processes used in the industry.

APPAREL



Rapha
Wool Coat - \$610
Wool-Poly blend + DWR
Gilet Nylon and Poly Fill

The cycling apparel industry has a few standards. Those standards are driven by material and the environment. Depending on where the cyclist is biking, the number of layers and the materiality chosen is certainly affected. The market standard for apparel and manufacturing can be acquired by reviewing the product of the leaders in the industry. Rapha, Mission Workshop, Chrome, and Levi's were all examined.

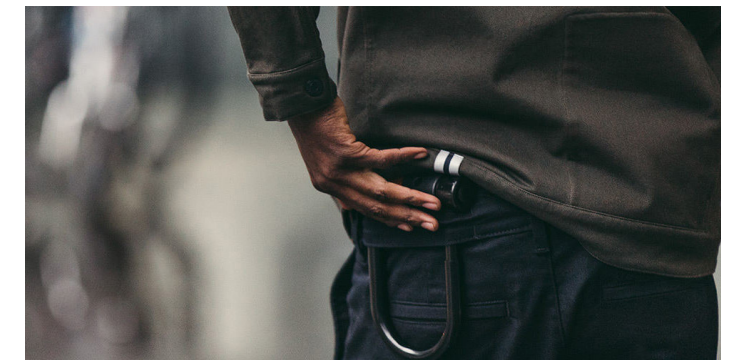
Rapha was founded in London in 2004. Since their conception, the company has specialized in performance cycling apparel. The brand has since moved into urban cycling as their consumer base has grown into the U.S. and around Europe. Their product prioritizes function and performance and includes a vast selection of cycling bibs, jerseys, and kits. In recent years, Rapha expanded

their product line and began producing city apparel. The company produces baselayers and t-shirts, overshirts, jackets, vests, raincoats, trousers, and shorts. There is an obvious standard in producing the most quality apparel, whether it is technically driven or relaxed wear. The garment construction for many of their pieces are cut and sewn. However, there is an apparent focus on functionality as a majority of the garments feature hidden pockets, multiple gussets, and ventilation for thermo-regulation and breathability. Materials used in their garments are worsted wool, nylon, polyester insulation, cotton, and spandex.

The founders of Mission Workshop founded Chrome Industries in 1994. It wasn't until 2009 when Mission Workshop was founded in San Francisco. The company started in the equipment industry

with a focus in cycling bags and packs. Since their conception the focus has been in quality crafted items that feature highly engineered fabrics. Their product line features traditional silhouettes like pea coats, hoodies, and collared shirts. The brand uses merino wool, waxed canvas, Polartec Fleece insulation, nylon, polyester, and cotton in a few of their more popular items. Garment construction is typically cut and sew. A few of their lower priced items are treated with a DWR finish. However, there are a few garments like the Styрман topcoat that are truly special. The topcoat uses Schoeller_c_change fabric, merino lining, and is sonic welded before being taped for waterproofing.

Like many other brands, Levi's is finding a way to incorporate one of the more traditional fabrics into functional cycling apparel. Denim has continued to be improved, making it a desirable material for the cycling community. Levi's commuter line uses 4-way stretch cotton denim blends that are then post treated for water resistance.



Top to Bottom

Mission Workshop
The Eiger WX - \$685
Waxed Canvas

Levi's
Commuter 511 - \$118
Stretch Woven

Chrome Industries
Storm Cobra 2.0 - \$200
Twill Nylon

EQUIPMENT



Left to Right

VX Cordura
HT500 Woven Nylon
Waxed Canvas

Cycling equipment has some very simple demands. It must be sturdy, durable, and sleek. Leaders in the cycling industry started out by creating bags and packs for messenger cyclists. There is now an entire silhouette of bags under that same name: the messenger. The bags and packs are meant to integrate seamlessly with the body whether on bike or on foot. A variety of strap configurations and multiple ports for attachment to frame have made the bag and pack area a large market in the cycling world.

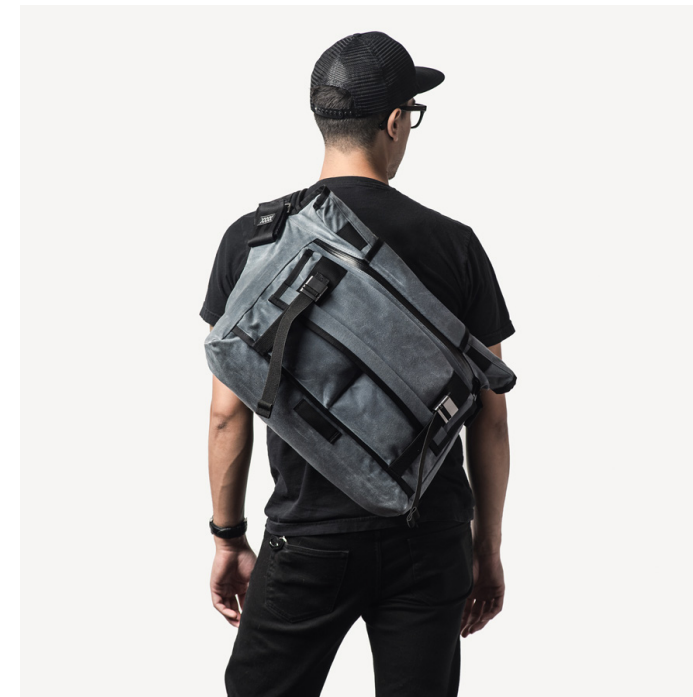
Industry standard has driven bags to become rugged and waterproof. Constructed out of high performance fabrics, bags are built to last. Leaders in the market such as Chrome, Mission Workshop, Timbuk2, and Ortlieb have created cycling bags using 1000D Nylon, Cordura, and Waxed Canvas. While

some companies specialize in panniers, all of them produce standard silhouettes: messengers, backpack, roll packs, rucksacks and hip bags.

Following waterproofness, the next most popular feature incorporated into bag design is visibility. Whether stowed on the person or the frame, bags have been made to help promote biker safety amongst automobiles. For this reason, a lot of bags and packs are finished with reflective lining or tape. Some brands use reflective fabric in their construction as well.

Lastly, a lot of bag construction has been driven by technology. The form and silhouette of bags can be directly traced to the current shape of the technology being carried. Laptops and books are rectangular, and shoes are just oblong and awkward.

The most disruptive brand to participate in the space is Freitag. Founded by Daniel and Markus Freitag in 1993, the two set out to create lasting goods from recycled truck tarpaulins. The very first bag was constructed from truck tarp, bike inner tubes, and seat belts. Today, Freitag is internationally recognized for good design and exemplary upcycling.



Left Top to Bottom

Mission Workshop
The Monty - \$255
Waxed Canvas

The Transit Duffel - \$245
HT500 Woven Nylon

Right Top to Bottom

Chrome Industries
Kadet Messenger - \$100
500 x 200d Nylon

Freitag
F151 Victor - \$340
Used truck tarpaulins, bike
inner tubes, seat belts

FOOTWEAR



DZR
H20 - \$179
Leather, taped seams,
DWR Finish, Nylon Shank

Urban cyclist tend to wear whatever is comfortable. A lot of the footwear used outside of the competitive cleats and shoes are standard sneakers. Whether a rider decides to ride clipless or using conventional platform pedals can impact their footwear selection. Toe cages are known as the first mechanisms to secure the rider's foot to the pedal. The reason for this was simple. The more contact throughout the pedal stroke increases the amount of power transfered to the crank. More power transfered equals higher speeds. The evolution of cleated shoes have allowed competitive riders to maximize their performance. The cleated shoes are typically constructed with a stiff nylon or carbon plate in the forefoot. That rigidity and stiffness optimizes power output.

Although the advancements in cycling

footwear are significant, urban cyclists don't have the same needs as the competitive riders. Sure cycling to and from work is done as fast as possible, but comfort is a greater concern. The cyclist who do prefer to use clipless shoes still have to transport the shoes that will be worn throughout the day. For this reason, companies like DZR, Chrome, and Quoc Pham have created hybrid shoes that are SPD compatible, yet possess a fashionable silhouette.

The construction for urban cycling shoes are like that of the shoes they are inspired from. Some use welt construction for the traditional inspired shoes, whereas others use sport industry standard strobels and contact cement bonding. Material selection is limited to natural and synthetic leathers as most shoe companies try to create water resistant footwear options.

Footwear companies that don't regularly participate in the cycling industry are starting to take notice as well. Vans is one brand of note to take their original silhouettes and apply different material finishes to make them more compatible for cycling use. Converse has done the same with some of the more classic silhouettes that have been adapted for better weather resistance. Although this strategy isn't a full crossover into the cycling market since the shoes can only be used for toe cages and flat pedals, it is certainly a rise in competition for the cycling dedicated brands.



Left

Quoc Pham
Urbanite High Top - \$179
Leather, nylon shank, EVA
midsole

Right Top to Bottom

Chrome Industries
Truk Pro Bike Shoe - \$95
Box canvas nylon upper,
vulcanized construction

Converse
Waterproof High Top - \$120
Nubuck Leather, bootie
construction, vulcanized

RESEARCH PLAN



Retail, trends, cyclists, and product are critical sources for understanding the design direction for the capsule. The goal is to land at a concrete understanding of where the market stands today and how it can be pushed further.





The best way to understand product is to go out to retail stores. Situated in Portland is one of the leaders in the cycling community. Chrome Industries is headquartered in Portland and has a retail storefront downtown in the alphabet district.

Rapha has a corporate office in NW that will help understand cycling club culture as well as urban commuter.

Product is also endless supply at the vast number of cycling shops in town. Two shops of particular focus will be West End Bikes and River City Bicycles. Both stores have allocated large amounts of space and inventory to cycling apparel, equipment, and accessories.

Timbuk2, the San Francisco based bag company, has a storefront in the Pearl district.

Another store of interest is Nau. Formerly rooted in cycling apparel, Nau almost exclusively produces technical apparel for everyday wear. It will be valuable to see how the brand approaches their garment construction and markets towards their consumer.

Lastly, REI will be useful in evaluating product from a nonbiased performance perspective as employees will have knowledge of various different brands carried in the store.

The retail research stage will terminate on January 31.

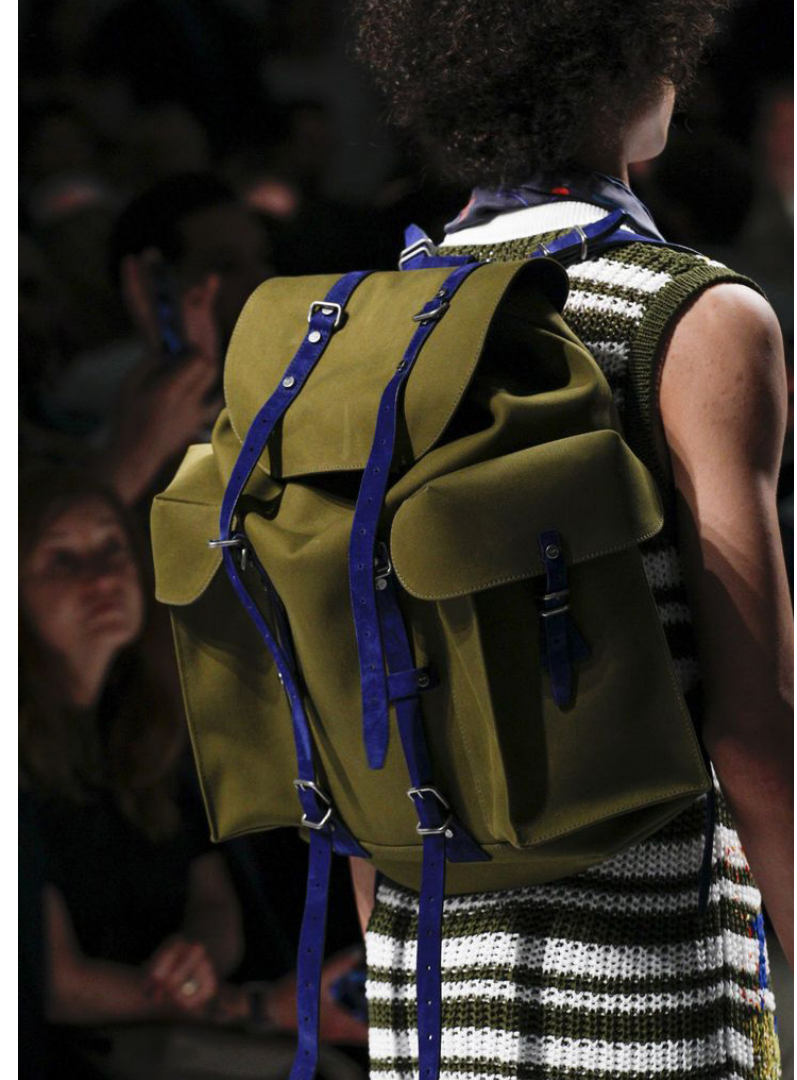
With Portland being a mecca for cyclists, there will be plenty of people to talk with about their experience cycling. The goal is to learn more about the urban cyclist lifestyle. Things such as average distance of commute, miles spent riding their bike per week, preferred brands, apparel, and essential carries will help to profile the intended user for the capstone design.

Another consumer of interest are bike messengers. Within Portland, there are at least 4 courier services of interest: Magpie, All Star Messenger, Mercury PDX, and Cascade Courier.

The greatest benefit to the capstone project will come from outsider perspective as well. It is important to reach out to cyclist in different geographical regions of the US and perhaps of the world to see

how cycling is incorporated into everyday life. New York is a place of interest. So is the Netherlands, where biking is ubiquitous. The different countries, regions, and cities will create a diverse background of perspective and involvement with cycling. Thus creating the most provocative design for the capstone.

The user research stage will end February 21.



TRENDS

Color, material, graphic, and form trends will be gathered using a combination of WGSN, cycling magazines, and retail research.



Trend research will end on February 28



FIELD RESEARCH



Ramon

Ramon works retail at Chrome industries in Portland, OR. As an avid lover of track and fixed gear bikes, Ramon has been instrumental in understanding the underground culture of fixed gear freestyle in Portland. The greatest takeaway from meeting Ramon is that his bike is more than just a welded frame on two wheels. Instead, his bike means much more to him than anyone could think. This was surprising given that his bike isn't very complex and certainly doesn't look very expensive. Little did I know, there in lies the difference between my target consumer and the larger cycling market. Urban cyclists like Ramon do not need to spend outrageous amounts of money on their bike, let alone the clothes they wear to ride them. For Ramon, cycling is a lifestyle, not an expensive hobby. A way of life, a past time, a means of transportation, a way to make friends, a way to express himself.



West End Bikes is a local bike shop located in the Pearl District. The store sales frames, apparel, and gear.

Mark Ontiveros | Sales Manager



As the manager of the sales team at West End, Mark is very knowledgeable about product. He has directed me to certain brands such as Rapha, Mission Workshop, Velocio, and many more. He is a cyclist himself and commutes to and from work. He also rides during his free time on the weekends. Mark emphasizes his preference in apparel that allows him the ability to transition from the bike to his job. "The clothes I commute in should be sweet to ride in and nice enough to wear all day."



Caviar is a food courier service. Caviar's fleet of delivery specialists includes cyclists as well as drivers. Given Portland's size and infrastructure, it is no wonder that there are countless cyclist working for the company.

Craig | Bike Delivery

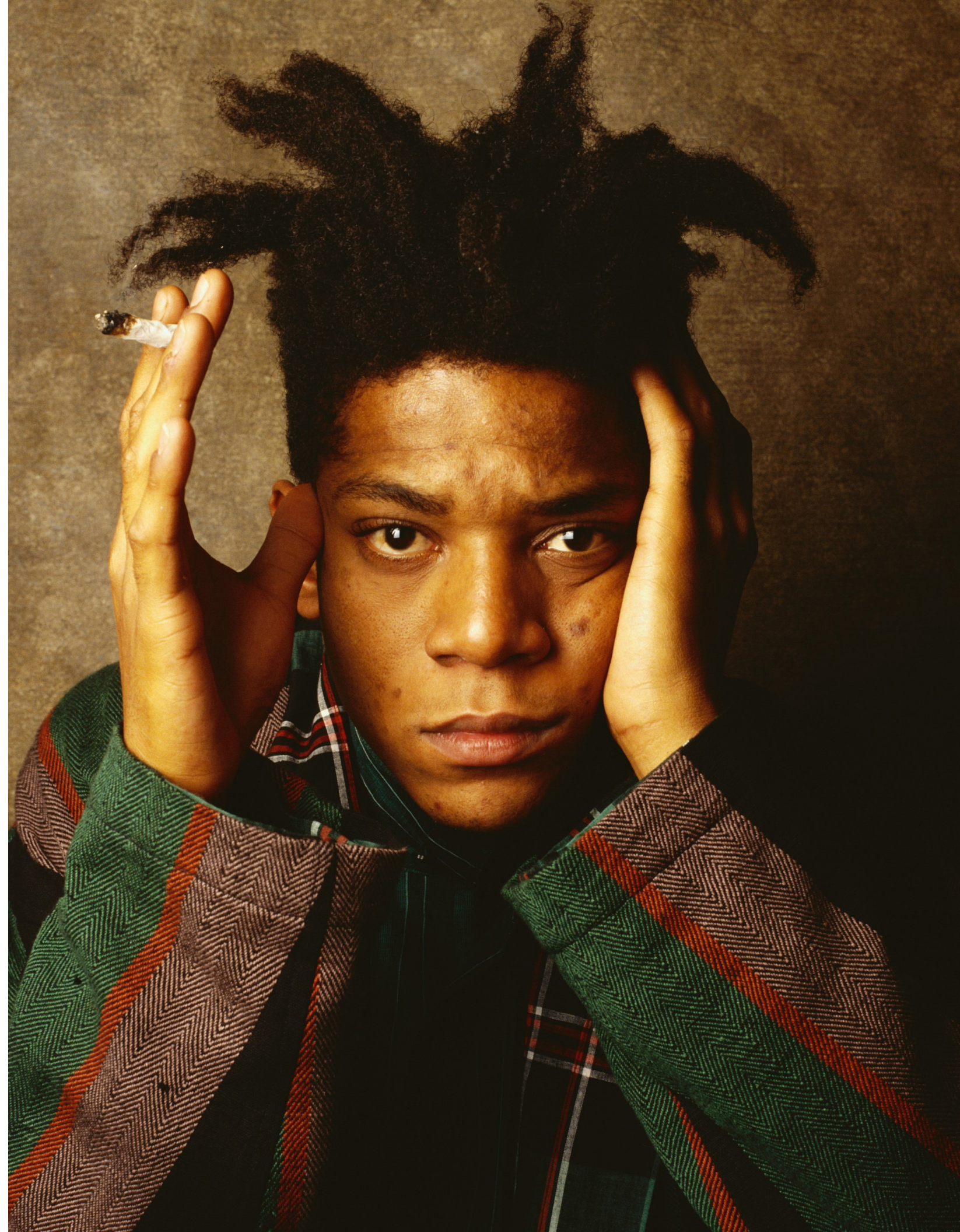


400 miles a week. 15 deliveries a day, 25 on a good day
That goretex stuff is bullshit, Make something breathable,
Rain gear can make you too hot. Rides bikes because
he enjoys the freedom. The exercise. Keeps you healthy.
Likes being his own boss. A lot of bike messengers had
refused to do food for a long time. Messengers were
usually for documents that couldn't be shared digitally.
But now that technology has improved, messengers
are kind of dying out. Food is a way to keep doing what
your doing and make money. Food carrying stuff for
caviar is huge. The bag is a large rectangular refrigerator
bag. Orange. Reflective tape. Still has almost been hit.
Safety is about visibility and making yourself visible. He
rides in all black "to absorb heat" but it isn't the most
visible. Uses a light generator on his bike. Has been told
that the light prevented him from being hit. Color helps
visibility. But also just not being stupid

DESIGN

INSPIRATION

New York Street Artist Jean-Michel Basquiat is a large source of inspiration for the aesthetic and mood of this collection. His work inspires me to create a body of work that is self expressive and critical of the assumptions associated with cycling.





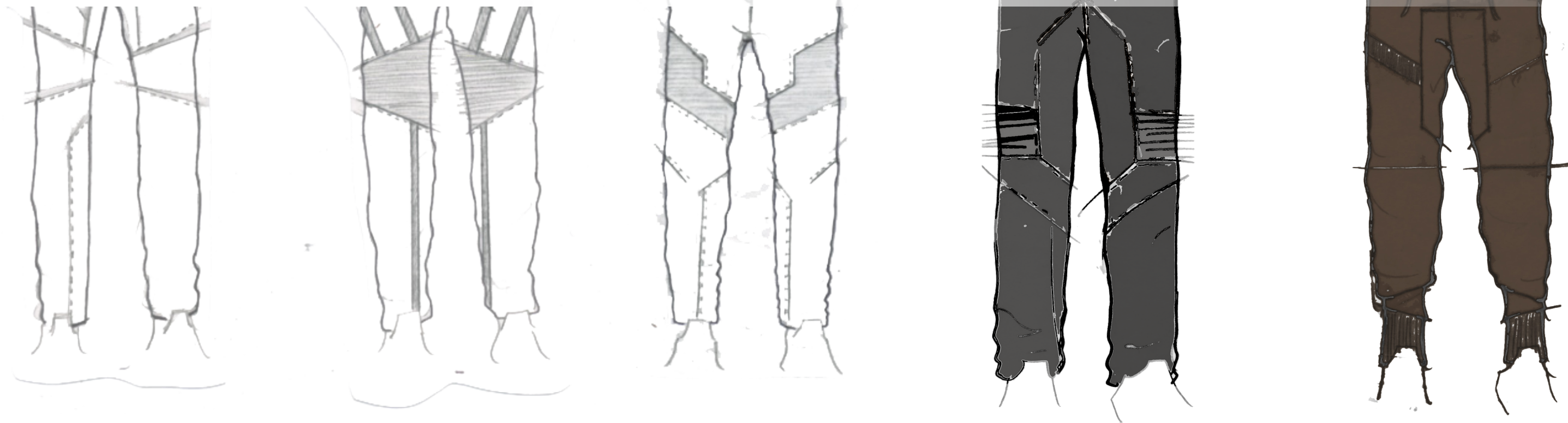


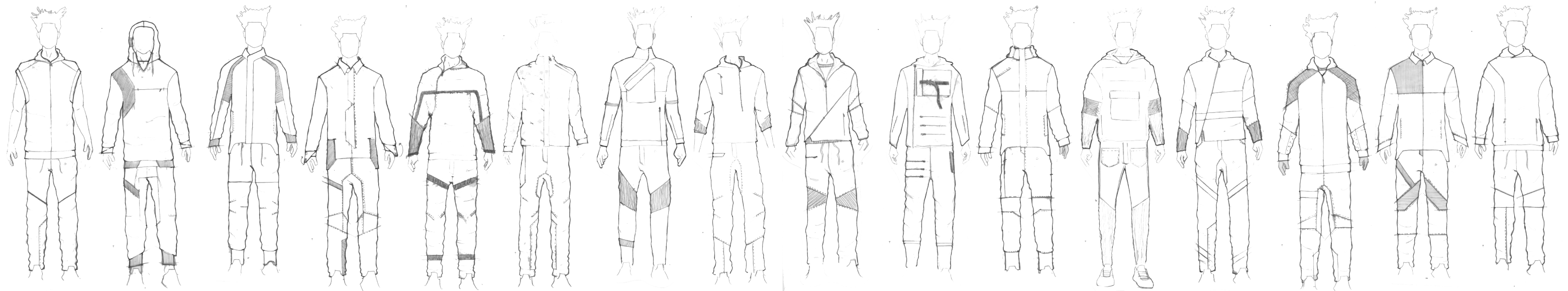
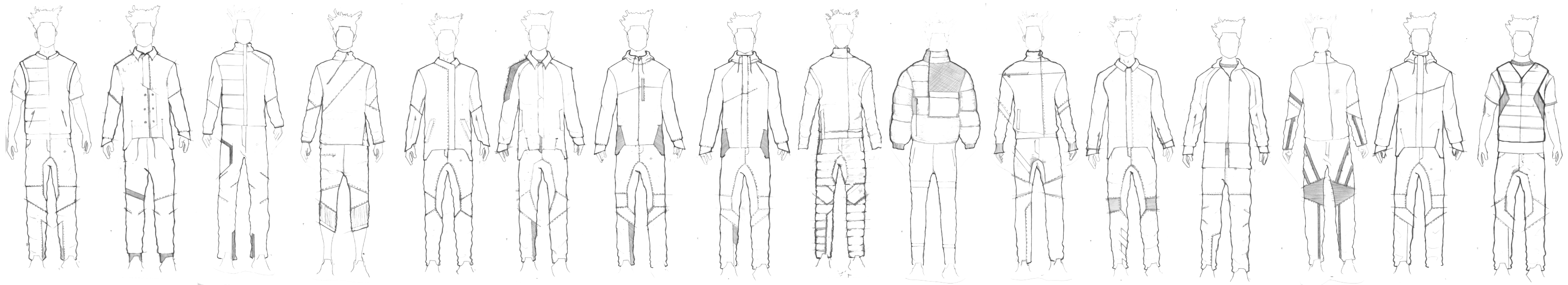
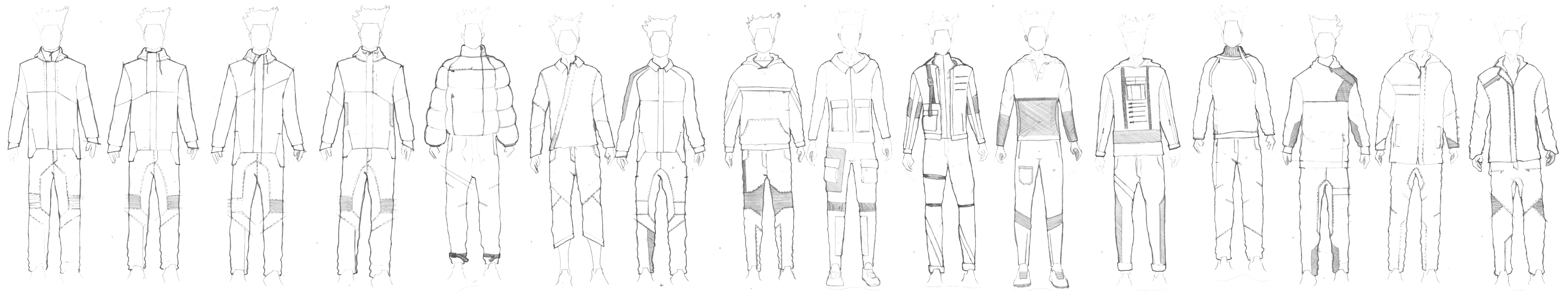
TYPOGRAPHY

As a typography study I attempted to recreate the writing of Jean-Michel. I found the deliberate and expressive line work in his art to be attributed to how he holds his paint brush. Channeling the passion, emotion, feelings, and sensations of painting and biking resulted in a mood of words and expression to design the collection around.



PROGRESSIVE SKETCHES







UNTITLED

COLLECTION

UNTITLED 1

The collection is named and numbered using an untitled convention similar to the work of my inspiration Jean Michel. This neo-expressionism applied to clothing allows the work to speak for itself. It becomes both intuitive and abstract. Only the true followers and enthusiasts of the *Divide* brand commit the name to memory and the garment to their identity.

FEATURES & BENEFITS

- Scapula Ventilation
Integrated ventilation for thermoregulatory cooling on the back
- Pieced Reflective
Deliberately placed reflective trim for easy visibility
- Articulated Hem
Split hem for leg mobility. Dropped in the back for coverage

MATERIALS & SEAMS

Waxed Canvas
3M Scotchlite Reflective Material
Polyester Mesh

French Seams and Top Stitch*
* = where indicated



UNTITLED 2

FEATURES & BENEFITS

- Abrasion Resistant Shoulder
Infused abrasion resistant panel for messenger bag transport
- Pieced Reflective
Deliberately placed reflective trim for easy visibility
- Storage
Zipper secured pockets placed for easy access while on bike

MATERIALS & SEAMS

Polyester Ponte Knit
3M Scotchlite Reflective Material
Laminated Twill Fleece

Surged Seams and Top Stitch*
* = where indicated



UNTITLED 3

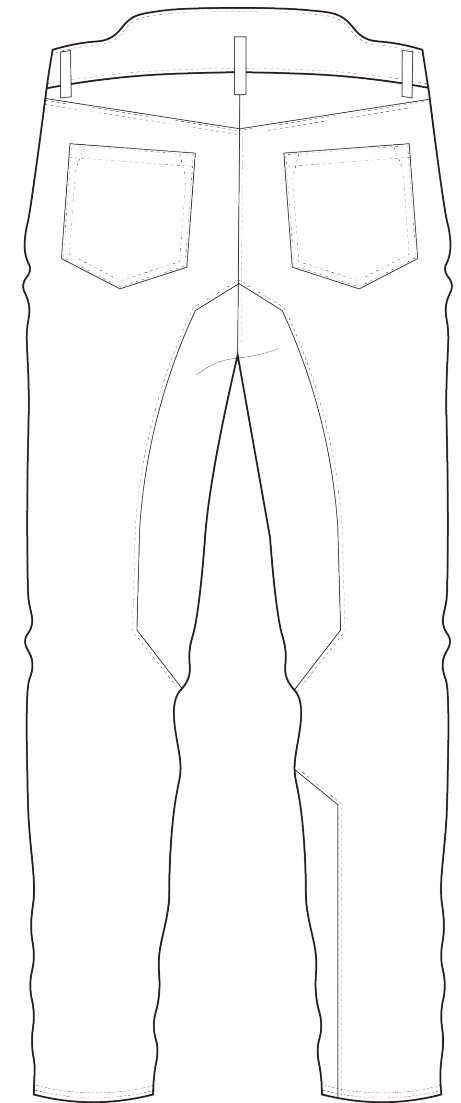
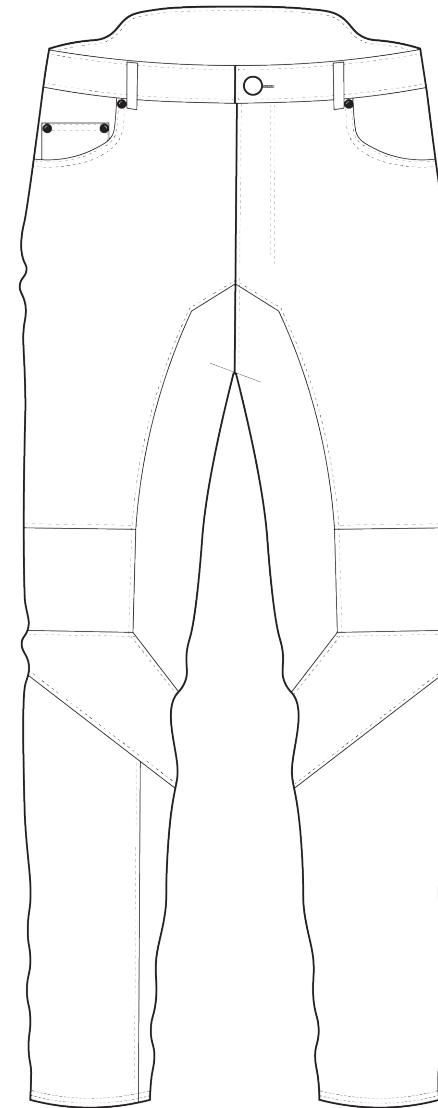
FEATURES & BENEFITS

- Chain Guard
Drive side leg features a guard against chain abrasion and snagging
- Leg Gusset
Infused gusset for mobility and fit
- Waistband Rise
Altered for back coverage and fit

MATERIALS & SEAMS

Stretch Denim (95% denim, 5% lycra)
Nylon Ripstop
Merino Wool Pockets

Straight Stitch, Flat Felled, Surged and Top Stitch*
* = where indicated



UNTITLED 4

FEATURES & BENEFITS

- Pieced Reflective

Deliberately placed reflective trim for easy visibility

- Storage

Zipper secured pockets placed for easy access while on bike

- Waistband Rise

Altered for back coverage and fit

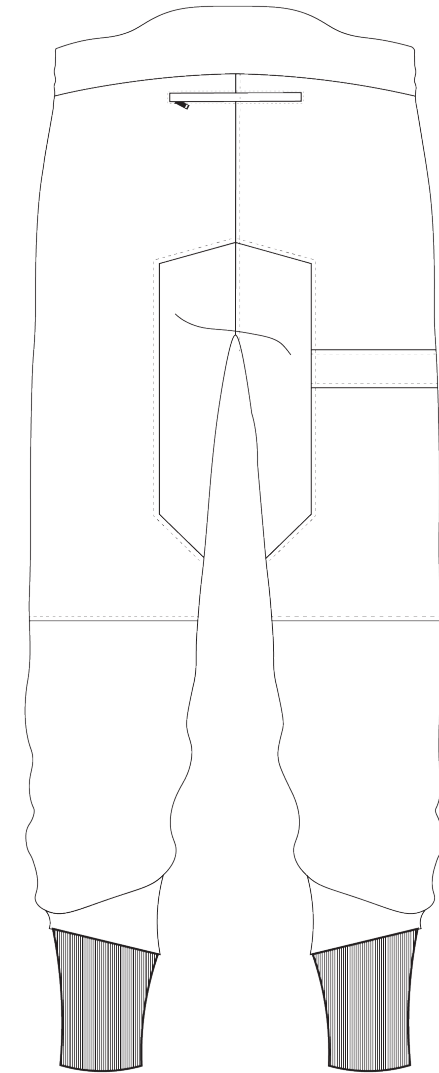
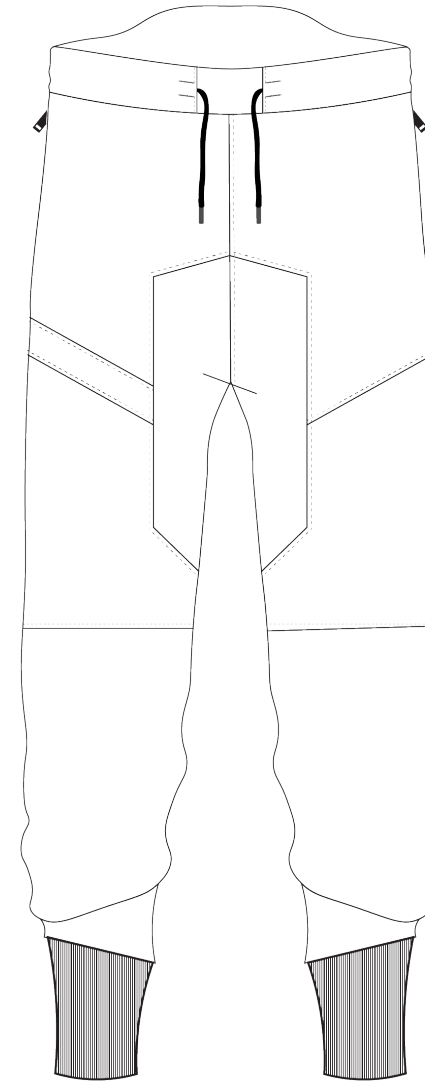
MATERIALS & SEAMS

Polyester Ponte Knit

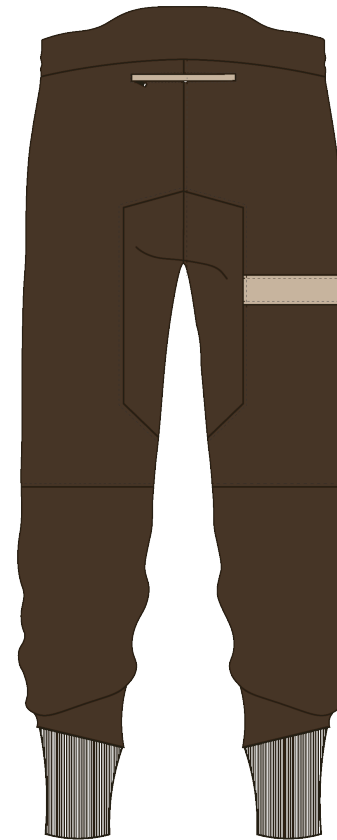
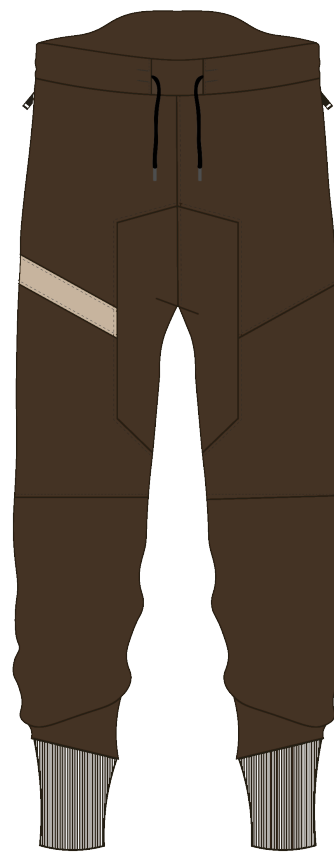
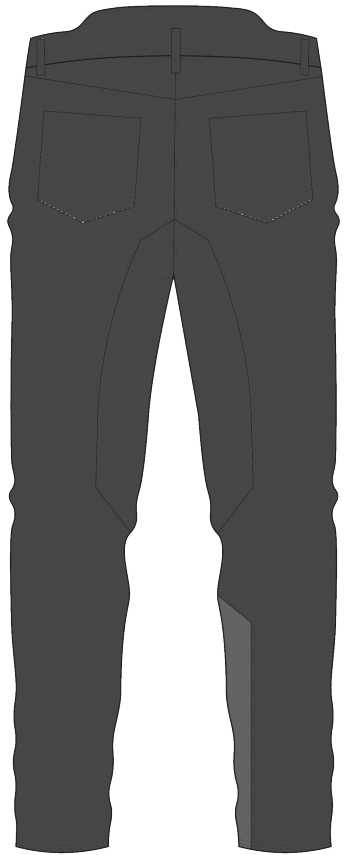
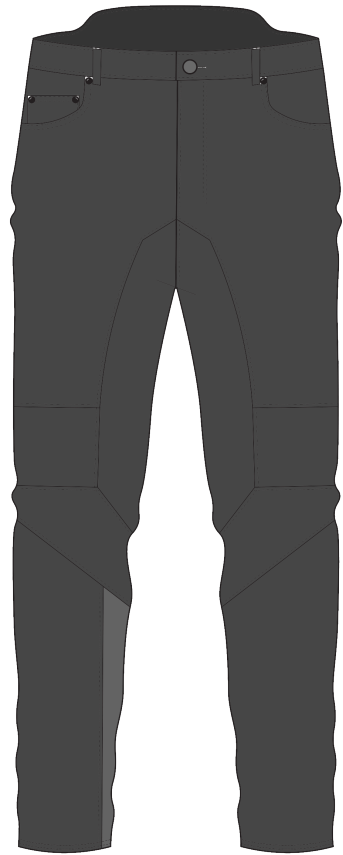
3M Scotchlite Reflective Material

Surged Seams and Top Stitch*

* = where indicated



COLORWAYS



×

Clad in concrete,
adorned in asphalt, this
look asserts the user
into their environment,
blending style and
function in a muted color
and fast silhouette.

×





×

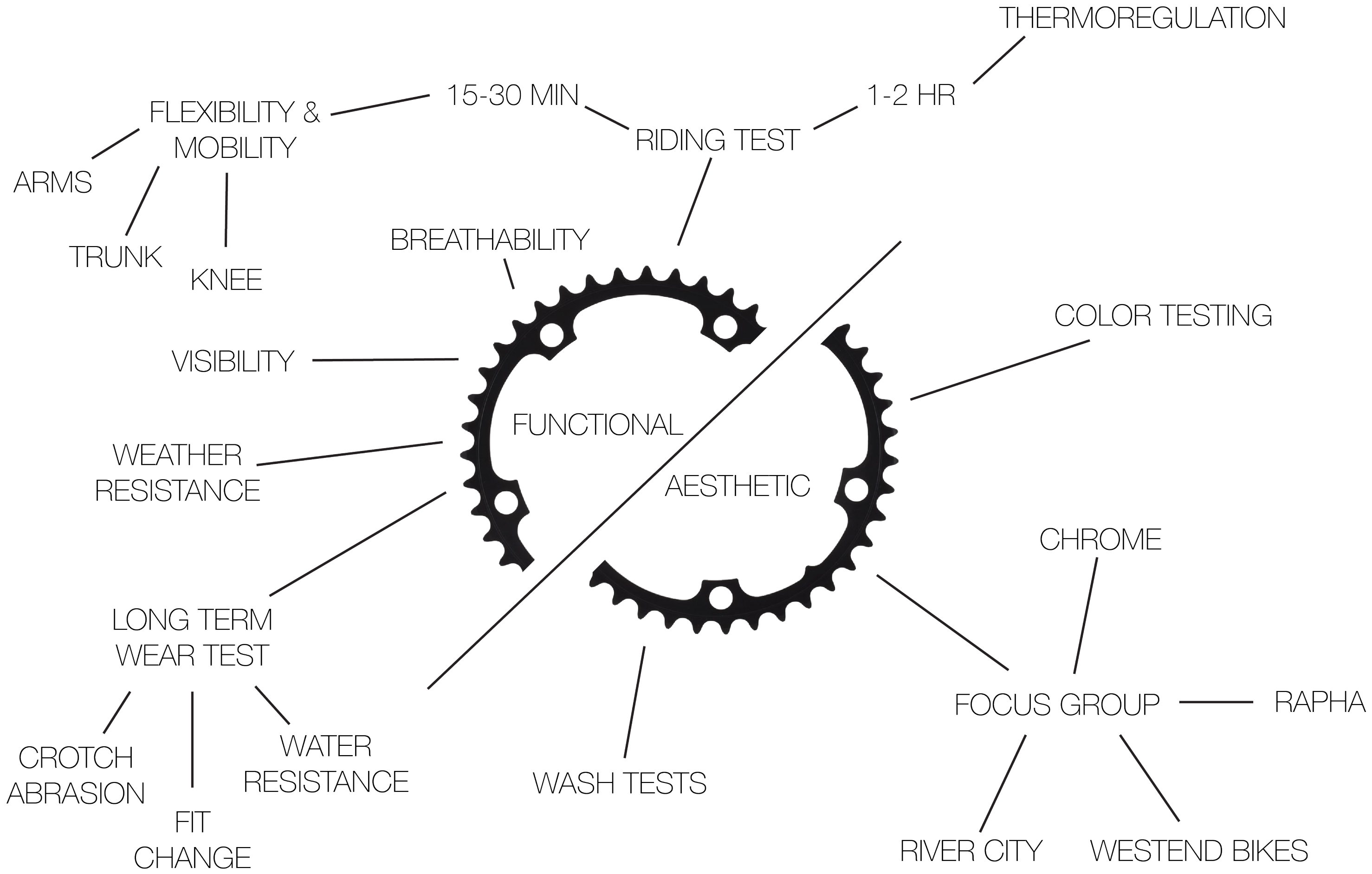
Rusted gold and coffee
brown like the skin of
Egyptian Pharaohs.
Combining royal
aesthetic and function
into a superior look.

VALIDATION PLAN



The collection and its design will be validated through a series of functional performance tests. The primary areas of focus are mobility, thermoregulation, and weather resistance. In addition to the performance tests, the collection will be validated through the collection of qualitative feedback on the aesthetics of the apparel and their function.





IN DEPTH TESTING PLAN

The in depth testing plan details the intended purpose for conducting testing to validate the collection.

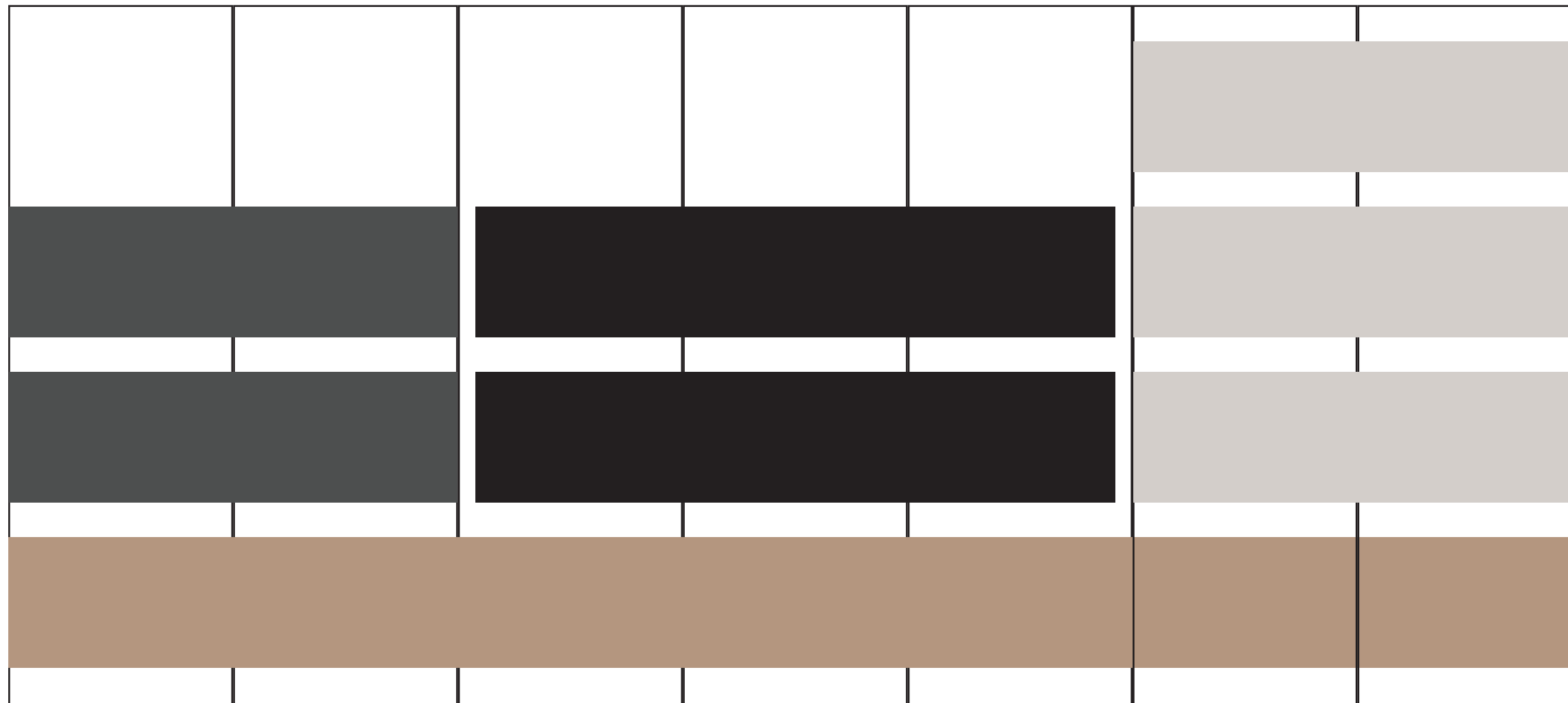
The sample size of the collection will be a U.S. L for the sweatshirt/jacket components. The sample size for the pants and jeans will be a U.S. M or the equivalent in waist and inseam measurements.

The ideal number of participants in the riding portion of testing would be include one rider (subject) and myself as the observer. 3 sessions of the environment ride tests will be conducted to analyze the mobility and ease of use of the constructed garments. Video recordings will be made to document the observed stretch and strain with the garment as the rider changes through the various riding positions. Those riding positions are measured in terms of spinal degree alignment. Relaxed (90°), athletic (60°), and aggressive (30°) will all be observed during the field testing.

Other observations that will be charted and recorded during the riding tests concern breathability and thermoregulation. I am hoping to record qualitative feedback with regards to the rider's personal comfort and ability to quickly thermoregulate.

Lastly, focus groups will be key in gathering the necessary qualitative feedback to validate the aesthetics of the collection. The focus groups represent an assembly of retail participants, frequent riders, and corporate employees at Rapha.

S M T W T F S



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SPECIAL THANKS

Mom
Teddy Ballgame
Susan
Thomas
All the wonderful people at Modern Domestic
Amanda from the Duck Store
Brittany
...
And all the other people I'm leaving out

