FIT ANALYTICS (SNAP INC.)

Case Study: Research, product, service & content design for a machine-learning (ML) garment size recommendation utility (2019)

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fitAnalytics Snap Inc. ares

Locations: Berlin (DE), Chicago (IL, US)

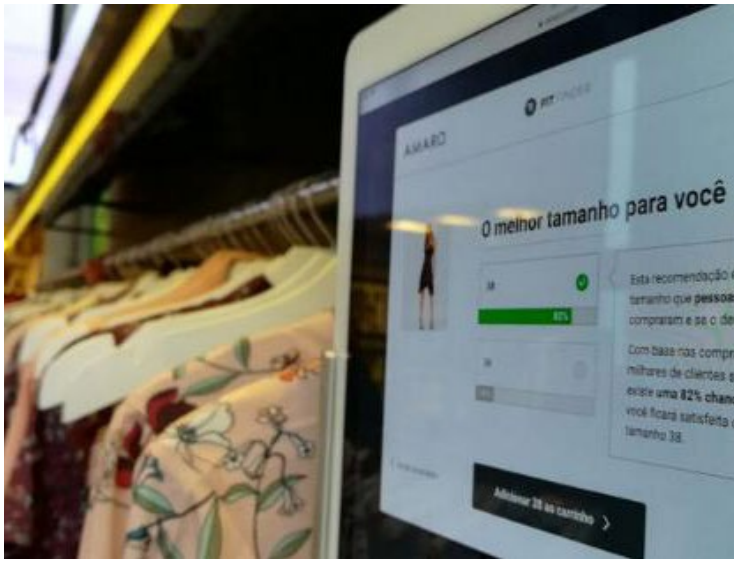
Fit Analytics is a retail tech company that utilizes AI and machine-learning (ML) to help retailers reduce purchase return costs by guiding online shoppers to find the correct garment size via AI-driven recommendations.

In time, the company rebranded as SNAP INC AR Enterprise Services (ARES) after being acquired by SNAP INC. However as of April 2023, Fit Analytics demerged from SNAP INC and continued operating independently.

Over 250 global top apparel companies use Fit Analytics / SNAP INC ARES solutions to boost conversions, help buyers find the right garment fit, and reduce returns. Brands include Oak + Fort, Princess Polly, ASOS, Helly Hansen, Puma, Patagonia, Simons, and Hugo Boss among others.

Links:
https://fitanalytics.com
https://ares.snap.com

ARES AR Mirrors



Fit Finder at Amaro (BR) used on a touchpad in-stores to reduce fitting room queues

Challenge

Mark & Spencer (M&S), a client that leveraged Fit Analytics' ***'Fit Finder'*** (a garment size recommendation tool), required a solution tailored to reduce returns for the bra garment. Shoppers often face uncertainties when buying this garment online notably due to size and fitting variations between brands.

Goals

As the first Designer and Researcher at Fit Analytics I was responsible to manage and delivery this project timely. More importantly, Fit Analytics back then was unfamiliar with UX research practices and the reliance on subject-matter experts. Thus, the goals consisting in the following:

- Delivering a concept design by leveraging research, data, design best practices, and machine-learning while adhering to requirements (business, client).
- Taking advantage of the competitive landscape.
- Demonstrate stakeholders the benefits UX research and the reliance on subject-matter experts add to the value proposition.

Role

Product, Service & Content Designer, User Researcher, Project Management

Timeline

9 months (2019 - 2020)

Team

The project involved continuous coordination with stakeholders and teams comprising:

- CTO
- Data scientists
- ML Engineers
- Design director
- Head of engineering
- Developers
- QA
- SME

PRODUCT OVERVIEW

How it works...

t, code or brand

Sign in 0

Brands Flowers & Plants Gifts Christmas Food & Wine Sale Inspire Me M&S Bank

end £60 | Free returns for online orders | Free store collection

Image placeholder

BODY BY M&S

Body Soft™ Wired Full Cup T-Shirt Bra A-E

£20

★★★★½ 1599 reviews

COLOUR Black

Sale Sale Sale Sale

SIZE

30	B	C	D	DD	E	
32	A	B	C	D	DD	E
34	A	B	C	D	DD	E
36	A	B	C	D	DD	E
38	A	B	C	D	DD	E
40	A	B	C	D	DD	E
42	A	B	C	D	DD	E

Size guide Fit guide

1

Add to bag

Find in store Notify Me

RETAILER LOGO BRA FINDER Privacy

FIND YOUR SIZE & STYLE

Answer a few simple questions to get matched with the best bras for your unique body shape and personal preferences.

Let's Go!

RETAILER LOGO BRA FINDER Privacy

MATERIAL

Select your preferred material, or simply choose 'No Preference':

MOSTLY NATURAL FIBERS

MOSTLY SYNTHETIC FIBERS

NO PREFERENCE

RETAILER LOGO BRA FINDER Privacy

OK, Marks & Spencer. A few more questions about this bra...

WHAT SIZE IS YOUR BRA?

American sizes

Bust					Cup				
28	30	32	34	36	AAA	AA	A	B	C
38	40	42	44	46	D	DD	E	F	G
					GG	GGG	J		

Continue

SHOPPER DATA

"age":	"32"
"height":	"168 cm"
"weight":	"68 kg"
"belly":	"flat"
"hips":	"average"
"fit preference":	"loose"

PRODUCT DATA

"productID":	"alioop_528812"
"brand":	"Alioop"
"gender":	"F"
"style":	"Pocket Tee"
"availableSizes":	"XS, S, M, L"
"salesRank":	"135"
"returnRate":	"12.15%"

Responsibilities

In summary, key responsibilities included:

- Project management
- Research and discovery
- Competitive benchmarking
- Recruiting a subject-matter expert
- Workshops and facilitation with data scientists and ML engineers
- Content design and data annotation
- Design (concept, service) and deliverables
- Experiment design and evaluation
- Accessibility audit (Level AA)

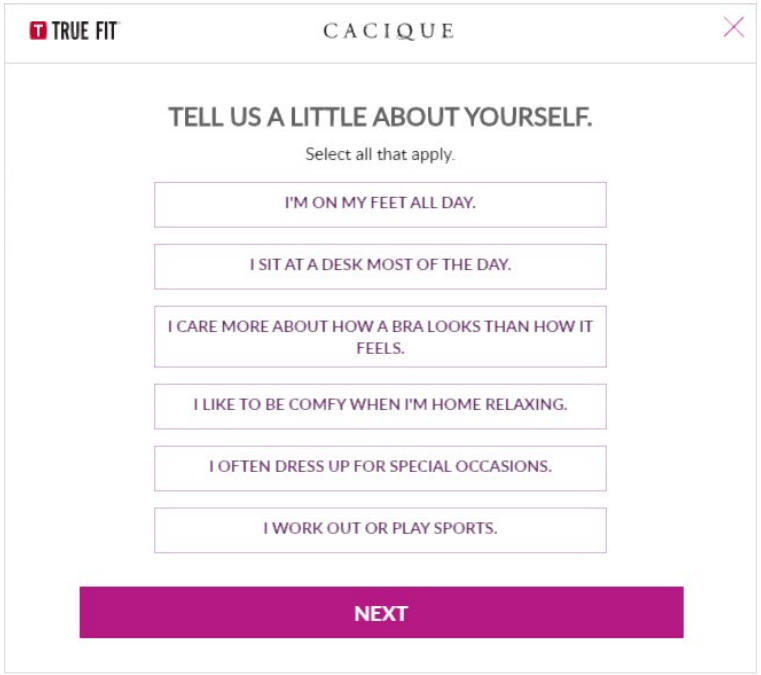
Steps

01. Discovery
02. Ideation & content strategy
03. Concept design, data annotation & rationale
04. Experiment design & evaluation
05. Results
06. Reflection & conclusion

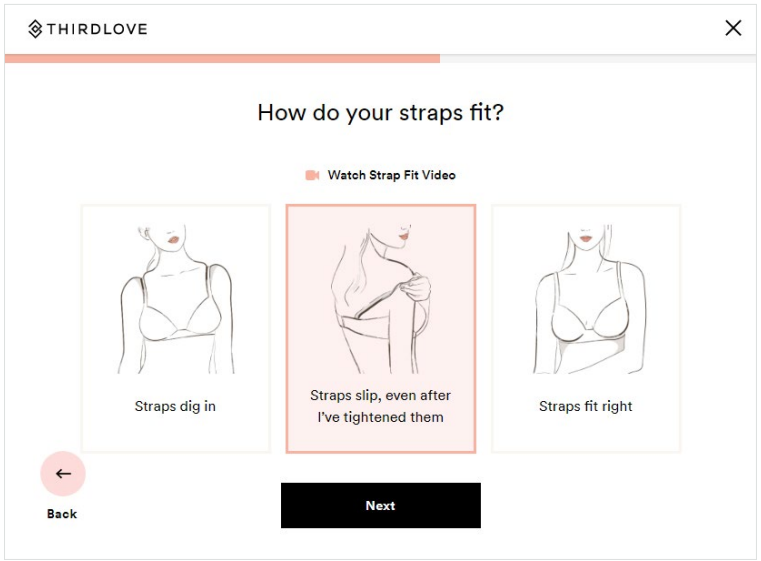
Discovery

1

True Fit



Thirdlove



Discovery

Given the project's uniqueness and challenges, it was imperative to run an investigation to get a general understanding about:

- The garment dynamics (e.g., categories, built, material)
- Factors influencing purchasing-decisions
- Competing solutions in the market

This discovery phase enabled me to determine the most suitable methods for both the generative and iterative research stages, paving the way for developing preliminary design concepts.

Competitive-benchmarking

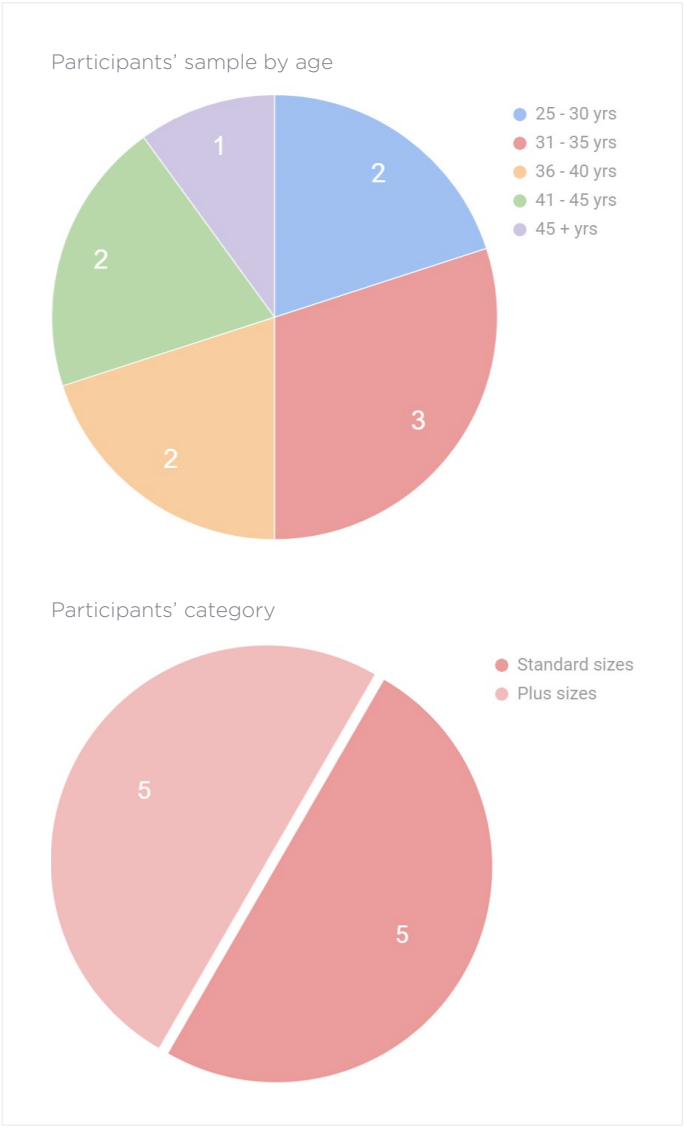
I benchmarked the only two competitors in the market being True Fit and ThirdLove. An in-depth competitive-comparative evaluation and a SWOT analysis was performed resulting in a . This analysis provided a comprehensive overview of:

- How recommendation systems work
- Features and functions
- Content design

COMPETITIVE BENCHMARKING

Both competing solutions were carefully assessed. The process involved reviewing both solutions screen by screen, question by question, and feature by feature to learn about their strengths and weaknesses.

TRUE FIT (COMPETITOR 1)		THIRD LOVE (COMPETITOR 2)	
SCREEN	**QUESTIONS & ANSWERS**	**SCREEN**	**QUESTIONS & ANSWERS**
Brand & size	Size charts by country, Band size, Cup size, Brand selection (inc. search bar)	Brand & size (of your everyday bra)	3 visual options for: Band size, Cup size, & Brand
Bra style & coverage	3 visuals given for: low, medium, and full coverage	How old is the bra?	Less than 6 months, 6-12 months, 1-2 years, more than 2 years
Cups fit	3 visuals given for: Gaps, Right fit, & Overflows	Cups fit	5 visuals given for: Gaps (a lot), Gaps (a little), Right fit, Overflow (a little), & Overflow (a lot)
Band fit	3 visuals given for: Digs in, Right fit, & Rides up	Band fit	3 visuals given for: Band rides up, Band too tight, & Band is comfortable
Bra age	2 options: Less than a year, One year older	Hook	3 visuals given for: Tight hook, Middle hook, & Loose hook
Describe breast shapes	3 options: Shallow, Average, & Full	Straps fit	3 visuals given for: Digs in, Slips, & Straps fit in
Preferences	4 options: Wire-free, Unlined (no padding), & None of the above	Do you always wear this bra (tentative size already proposed by the utility)	Yes always, or, No sometimes different size
Tell us a bit about yourself	I am on my feet all day I sit at a desk most of the day I care more about how a bra looks than how it feels	What other size do you sometimes wear (this shows up if user selects 'no' on previous screen)	Band size, Cup size, & Brand



Participant Observations

Ten female participants (n=10) were randomly recruited to understand the challenges they encounter while shopping online, for instance:

- Factors influencing their purchasing decisions, using the 'master-apprentice' approach and think-aloud techniques
- Pain points that undermine the purchasing decision process

For ethical reasons, I involved a female colleague to handle gender-specific questions throughout the interviews and observations.

N.B. A pilot study was conducted before running these sessions to see if this research setup makes sense.

Notable Findings

After running an inductive thematic analysis, I observed that:

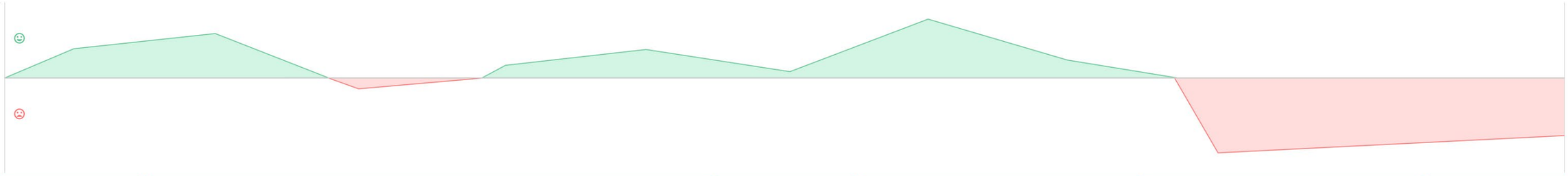
1. *"Participants prefer shopping via brick-and-mortar stores to ensure they get the right garment in terms of size, pricing and quality"*
2. *"Participants devote time reading buyer reviews, while comparing garments alongside specifications side by side"*
3. *"Contrastingly, participants are confident buying brands already acquainted with"*

The discoveries were translated into presentable charts, personas, empathy maps, experience maps, and service-centric deliverables (next pages) so these could guide us in making informed decisions throughout the design and development stages.

I created several **customer journey maps** to outline the entire process buyers go through to achieve their goal of finding the perfect garment in terms of size, style, fit, material, quality, and price. These maps were based on behaviors observed using the 'master-apprentice' approach, which involved watching how users search for suitable garments.

CUSTOMER JOURNEY

Bra garment selection, purchasing, and returns *(based on persona #8)*

STAGES	AWARENESS			CONSIDERATION			PURCHASE		ACTION		LOYALTY / RETENTION
JOURNEY *(Steps)*	ONLINE EXPLORATION	GARMENT CATALOG BROWSING	GARMENT DETAIL PAGE	GARMENT COMPARISON	GARMENT SELECTION	SHOP POLICY EVALUATION	GARMENT PURCHASING (CHECKOUT)	SHIPPING & DELIVERY	GARMENT TRY-OUT	RETURNS (REFUNDS OR EXCHANGE)	LOYALTY / RETENTION
USER ACTIONS	• General online browsing and exploration by filtering results from search queries • Browsing retailers customer is familar with • Browsing other retailers the customer never bought garments from • Reading reviews and ratings (trust factor) • Checking social media for social proof (e.g. customer feedback)	• Garment catalog browsing by brand (e.g. M&S, Missguided, ASOS, CK...), style, design, material, quality and pricing • Filtering findings by means of product filtering utilities (e.g. by size, color, price...) • Browsing additional catalogs owned by other retailers • Bookmarking favorite garments	• Checks garment imagery • Learns about the garment specifics (e.g. built, material, quality and use cases) • Checks the physical traits of the model wearing the garment (e.g. height, bust size, weight...) • Buyer reviews reading	• Comparison of selected garments owned by the same retailer • Comparison of more garments owned by other retailers • Brand comparison • Skimming through product details for informed decision-making	• Customer thinks about whether to buy the garment with the fear of wrong size / fit besides possible mismatch between price and quality (inconsistency, doubt & low confidence) • Wonders if Shipping & Returns policy is favorable • Commits to purchase item	Customer reads the following prior purchasing: • Delivery time and fees • Return policy (this varies by retailer) • Shipping policy • Refund policy • Exchange policy	• Customer account registration (if new user) or account login (returning user) • Method of delivery (e.g. priority mail) selection • Confirms billing and shipping addresses • Reviews order and costs • Order purchasing and payment	• Checks order and delivery status / progress via own online account (retailer's site) and post's (e.g. courier) tracking page • Collects item from delivery person • Unpacking	• Garment assessment and quality inspection • Garment try-out	• Filling the printed returns label (supplied by retailer in the package) • Submitting a returns request online • Packs garment and sends it back by post (for free or for a fee, subject to the retailer's return policy)	Customer may: • Buy again from the same retailer (subject to how the product exchange or refund was handled) • Leave reviews (good or bad) on website, reviews sites (e.g Trustpilot) or social media • Word of mouth
TOUCHPOINTS *(Examples)*	Desktop / mobile; Search engine; Retail websites; Buyer reviews; Social media	Retail website(s); Filtering utilities; Bookmarking; Buyer reviews; Social media	Product detail page (PDP); Garment description; Buyer reviews; Imagery; Other assets (e.g. videos)	Browser & tabs; Comparison; Description summary; Add / remove from comparison	Product detail page (PDP); CTA - Add to cart; Shopping cart	Terms pages; Delivery fees / fees	User account / sign-up; Shopping cart; Order review; Payment page; E-mail	E-mail; User account; Courier tracking; Delivery service; Package pick-up	Package; Garment; Courier tracking; Delivery service	Printed return labels; Returns request (online); Customer care; Package (re-packed)	Retailer website; Reviews; Social media; Survey / NPS by retailer
CUSTOMER EXPECTATIONS	• Obtaining a general understanding of what garments are available in terms of design, style and use cases (e.g. daily use, sports...) • Hoping to find and select the right online retailer • Trust and confidence to retailer	• To find the right garment in terms of desired criteria (e.g. style, design, material...) • Deal and discount hunting (value for money)	• To learn about the garment before purchasing • To ensure whether other buyers were pleased with the garment • To determine whether there is a match between price and quality	• Weighing pros and cons between selected garments • Assessment of built, material, style, quality, durability, and pricing • To reach a final decision on which garment to purchase	• Full assurance and confidence about own selection • To purchase and receive the desired garment • Match between price, quality and durability • Value for money	Customer learns about / if • Delivery process, duration and fees • The garment can be returned in case if the size and fit are incorrect • Returns are free of charge or not • How long it takes for a refund or product exchange	• To use the ideal delivery method • To ensure that the order	• To ensure the item is en route without undue delays, and not stuck (e.g. customs) • Hoping the item doesn't have to be returned for an exchange or refund	• Hoping that the garment is 'as described' on the retailer's website in terms of quality, etc. • Hoping the garment fits and feels well on body • Hoping the item doesn't have to be returned for an exchange or refund	• Hoping the item does not get lost while in transit • Hoping no delays will take place (i.e. the retailer takes longer to process the return) • Hoping to receive a new product in time (e.g. requesting a different size) • Alternatively hoping to receive a refund timely	• Garment is as described (e.g. in terms of size, fit, support, and quality) • (optional) Faster returns processing
BACKEND (TECH) PROCESSES *To identify technical issues and opportunities for further scalable improvements (e.g. feature request)*	• Mainly SEO and SERP related processes (as these affect the way pages are displayed in accordance to the customer's search queries)	• e-Commerce platform provides results according to search and filtering criteria • Additional garments suggested to customer in accordance to search criteria (a persuasive serendipitous element)	• The technical processes are simple because product pages are static • The only exception to this rule is when product pages display interactive elements for e.g. 3D / 360 product viewing, and video reels	• The comparison utility presents various products next to each other (in columns) with summarized information • Options to add a new product, or, removing an existing product from the comparison list are given to the customer	• Product added in shopping cart • Price and quantity are computed	• Specific static pages owned by one or more retailers are loaded within the customer's browser	• Order specifics (e.g. quantity, shipping price, VAT, total price) computed • Order placement registered within the system • Order and payment confirmation plus invoice sent to customer via e-mail • Remaining items in stock - updated • Warehousing pinged with new order • Customer's online (retailer) account updated with the order (pending progression prior packing)	• Order progress (packaging and shipping) updated within customer's online account • E-mail notification with status update generated and sent to customer • Courier / delivery progress and tracking (logistics) updated	• N/A	• A request of product return and / or exchange registered on customer's account by the same customer • Logistics / warehouse confirms that product is received successfully and notifies customer • Progress of new order, or refund updated within customer's online account (i.e. in order history) • Customer care logs customer query / interaction (e.g. via e-mail or online chat)	• Reviews website (e.g. Trustpilot) approve customer reviews automatically or manually (i.e. when somebody does a proof reading before approving the review) • Retailer sends a survey to rate experience (e.g. survey combined with NPS)
EMOTIONAL STATE *(Assumptive, hypothetical)*											
CHALLENGES & PAIN-POINTS	• There are many brands and retailers. Because of that, the customer is presented with too many options • Inconsistencies - there is always a size variation between retailers (e.g. a Size M from Retailer #A equates to a Size S from Retailer #B)	• The customer is often confronted with inconsistent descriptions varying between product-to-product, and, retailer-to-retailer selling the same product • Often, the customer feels there is not enough information regarding key garment characteristics such as: material, durability, breathability, built and support • Garment material, style and quality do not always match with the price (i.e. poor material quality - high price) • Product detail page - little to no information about the model wearing the garment (i.e. physique, height, weight, bust size...) • Shipping can be expensive (especially overseas, and subject to import duties when ordering out of own economical zone) • Buyer reviews can be misleading *Because of these issues, (most) customers would prefer buy from a 'brick-&-mortar' store and to seek consultation from a 'Bra Fitter' (Domain Expert)*				• Retailers have own returns policies • Some DO NOT accept returns • Others accept returns so long the package is unopened (i.e. garment not tried)	• Although the purchasing moment feels like an accomplishment, some doubts and anticipation remains on whether the customer will receive the right product in terms of size, fit, and quality ***(N.B. This feeling is omitted if the customer orders the garment from a brand / retailer she already wears, or is familiar with)*** • Additionally, the customer would hope that the delivery won't be delayed		• Customer is disappointed about the purchase (e.g. because of wrong size / fit) • Assuming returns are accepted, the customer would have to re-pack the garment, send it back and demand a garment replacement or a refund • Alternatively, if returns are not accepted, the customer have no choice but to spend money again to buy another garment; unless this time she decides to visit a "brick-&-mortar" store for guaranteed peace of mind	• Customer may refrain from purchasing online again • Customer may refrain purchasing from a specific retailer (subject to product accuracy and overall experience) • Retailer is at risk at receiving a negative review • For returned items - the retailer must re-pack and re-stock item back to catalog
OPPORTUNITIES *(Making CX better)*	• Often, customers buy online because of convenience and wider product range plus options to choose from • Clearly there is room to delivery personalized CX (n.b. a new product was eventually announced)	• Consistent information is needed so to maximize overall customer satisfaction and experiences (CX) as these help at fortifying decision-making (based on accurate information) and 'call-to-action' after addressing KPIs. • Room for opportunity to enhance experiences based on KPIs (e.g. quality garment description, photography, accurate reviews, consistency...) • Clearly, a mechanism that tackles brand-size variation (e.g. Size S from Brand #A equates to Size M from Brand #B) is strongly required • There is also a room for opportunity to change customers' behaviors and attitude towards garment online shopping (we must find means to enhance user trust) • There is nothing we can do about shipping costs. However, we found out that most customers worry less about shipping costs so long they receive the right garment in terms of quality and fit				• Returns will become obsolete so long customers receive the right product that is consistent with what is described in the product (garment) detail page (PDP) • Having a utility powered by a trained machine-learning algorithm shall help customers at making informed decisions and bypass brand variations, size inconsistencies and related discrepancies • Customer trust and confidence in online shopping will increase overtime (an opportunity to positively alter customers' attitude, behaviors and perception towards garment online shopping) • Customer won't be afraid of ordering a garment brand she is not familar with, because the utility by Fit Analytics will solve issues relating to cross-brand discrepancies • Additional opportunities to deliver personalized, accurate, informative, consistent, and positive experiences to the customer by harnessing the power of technology, machine-learning, and artificial intelligence (AI)				• Customer will be happy to do online purchases again from the same, or, other retailers • The retailer won't receive negative reviews based on product discrepancies • The retailer won't have to re-pack and re-stock the online catalog

MASTER-APPRENTICE APPROACH - Reported observations & patterns

STEPS	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
Visiting a bra retail website of own choice	○	●	●	●	●	●	●	●	●	●
Browsing product catalog extensively	●	●	●	●	●	●	●	●	●	●
Visiting & browsing other retailers' websites	●			●	●			●	●	●
Opening various garment detail pages in separate browser tabs	●		●	●		●		●		●
Comparing 2+ garments next to each other (in separate tabs)			●	●		●	●	●	●	●
Reading garment specifications	●	●	●	●	●	●	●	●	●	●
Zooming garment photos	●	●		●		●	●		●	●
Reading about model wearing garment (e.g. height, weight)	●	●	●		●	●		●	●	
Reading buyer reviews	●		●	●			●		●	●
Matching garment price with quality	●	●	●	●	●	●	●	●	●	●
Checking for available discounts	●			●	●					
Checking delivery costs	●	●		●	●				●	●
Checking return policy	●	●		●	●	●	●	●	●	
Bookmarking 1 or more product pages		●				●			●	●
Hesitation before adding to basket or checking out	●	●	●	●		●	●	●	●	●

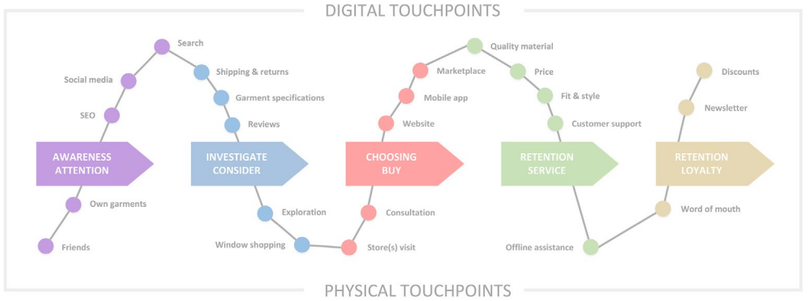
MASTER-APPRENTICE - Reported participants' hesitation towards bra online shopping

SUB-THEME	ISSUE	RANK *
DISAPPOINTMENT	Wrong size, fit or style	9
DISAPPOINTMENT	Poor quality (not worth the price)	9
DISAPPOINTMENT	Garment different from photos	7
LOGISTICS	No returns allowed / buyer must pay shipping for returns (subject to location)	5
LOGISTICS	Slow shipping (subject to participants' location)	3
ERROR	Retailer sent wrong item	3

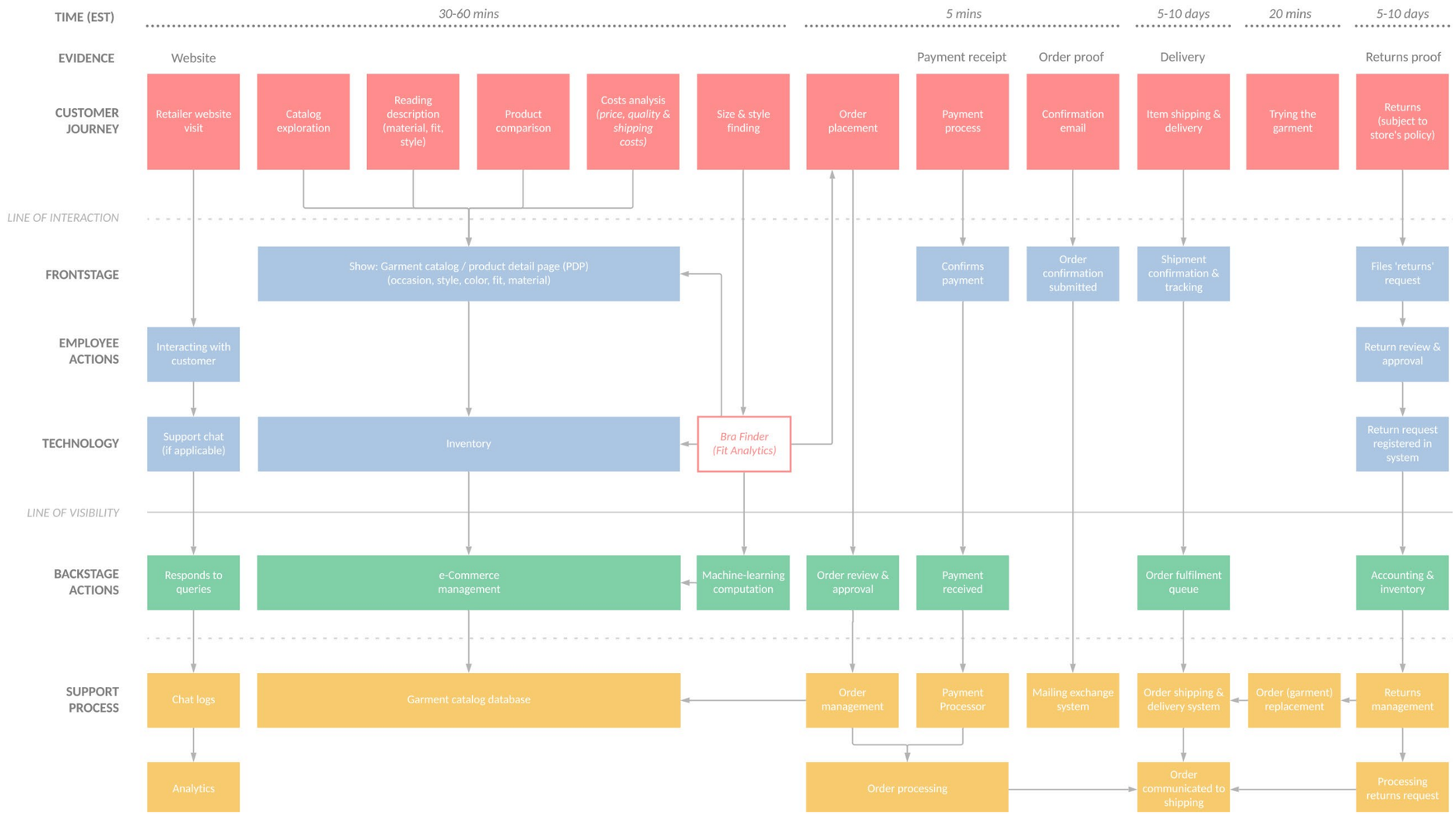
* RANK: how many participants expressed similar concerns

Examples of a primary & secondary persona

A journey highlighting physical and digital touchpoints influencing the participants' decision process pre- and post-purchase.



Various empathy maps were established to gain a deeper insight into the users (personas) and their way of thinking before obtaining the garment.



A **service blueprint** was created to tackle complex scenarios and touchpoints, illustrating how our product integrates into these contexts. This blueprint helped identify:

i) pain points associated with each touchpoint, and
ii) the relationships between service components, people, and processes.

A business proposition canvas to identify actors, activities, costs, revenues, etc., to help us solidifying the value proposition for this novel product.

Key Partners

M&S

Retail & leading brands *(partnering with Fit Analytics to provide retail data & business intelligence to fortify the garment database)*

Key Activities

R&D
Retailer partnerships
Requirements analysis
Market research & segmentation
Trade fairs & events

Key Resources

e-Commerce platforms (web & mobile)
Product hosting (e.g. AWS)

Value Propositions

Reduction on garment returns
High conversions
Reduction on overhead expenses
Guaranteed buyer satisfaction
Data, analytics & intelligence
Product Personalization
Powerful machine-learning algorithms
Product maintenance and upgrades
Support

Customer Relationships

Personal assistance
E-mail support
Technical support
Integration
Phone assistance
On-site assistance

Channels

Retail e-Commerce (web & mobile)
In-store application usage (via a digital tablet device)
Supply (stock) management
Reverse logistics

Customer Segments

B2C
Women (buyers)
B2B
Bra garment retailers
Sports bra retailers

Cost Structure

The (operational) costs are split across the following:

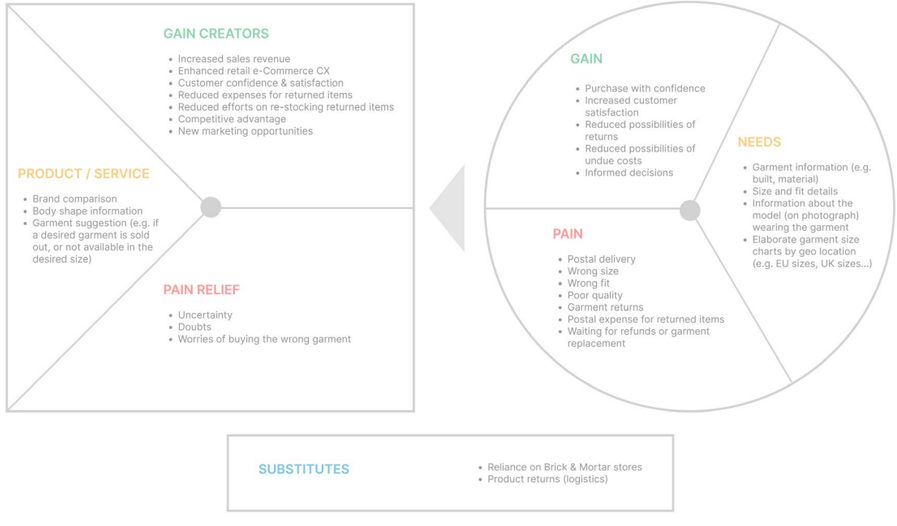
Research (user, competition)
Product design, testing & iterations
Development & staging
Quality Assurance (QA)
Data science
Garment database management
Business intelligence
Product hosting

Revenue Streams

These include, but not limited to:

Tier subscription
API integration
White label solutions
Personalized product customization

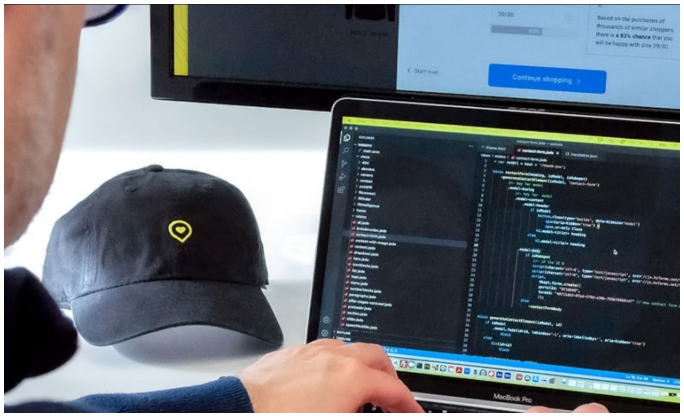
After coding the findings, a value proposition canvas was created so to identify the product and the service value into discrete parts.

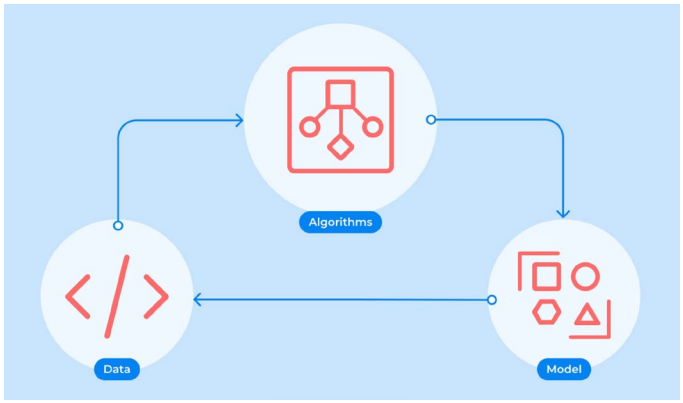


Ideation &
Content Strategy

2

The subject-matter expert & 2 data scientists





Process

I teamed up with data scientists, QA, the design director, and the subject-matter expert (whom I recruited) to brainstorm and define:

- The **user data types** required by the machine learning algorithm to learn and then generate accurate garment size recommendations.
- The **key questions** we needed to incorporate into the product's UI to effectively gather information from users before providing tailored recommendations.

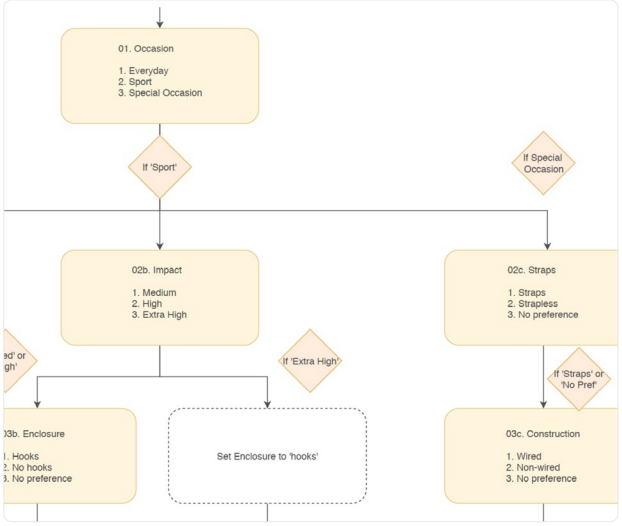
At its core, the success of the ML algorithm depends on diverse datasets, including human body measurements, garment styles, and brand-specific details, allowing it to learn and produce highly accurate sizing recommendations.

SIDE NOTE:

While employing a user-centered design (UCD) approach is standard in our practice, data scientists and ML engineers had requirements that challenge traditional UX due to the distinct nature of AI and ML technologies. Adopting a pragmatic approach, we utilized a 'data-scientist-centric' method to align business, ML, and user requirements. This strategy streamlined the large language model (LLM) training process, ensuring the delivery of accurate recommendations to customers efficiently.

Card sorting (arranging UI content in a logical sequence)

SCREENS	OPTIONS
INTRO SCREEN	
OCCASION	> Sports
MATERIAL	Cotton / Spandex / Micro-fiber / no preference
COVERAGE	Low / Standard / Full
SHAPES	'show breast shapes here
BUST / CUP SIZE	'size selector module'
AGE OF BRA	'define age of current bra'
BRAND COMPARISON	
BRAND	Brand selector *(brand names, logos, etc)*
TYPE	Criss-cross / Tank top / Racerback
CONSTRUCTION	Encapsulation / Compression / Combined *(encapsulation + compression)*
	Notes: Encapsulation & combined types contain breast cups. Compression type is more like a standard shirt
IMPACT	Low / Medium / High
	Notes: Impact is about the type of sport e.g. Yoga is low impact. Cycling is high impact
STRAPS	Tight / Perfect / Loose
BAND	Tight / Perfect / Loose
CUPS	Tight / Perfect / Loose
	***IMPORTANT:** Only show cups for 'encapsulation' or 'combined' construction types*
RESULTS (END)	



Drafting a happy path (flow)

Content design & data annotation

Together, we identified the data and information we required from the buyers (users) so to ensure the product's algorithm generates accurate garment size recommendations.

We then translated these data types into a set of jargon-free questions. To enhance the user experience, we ran a **card sorting exercise** to arrange the questions into a logical sequence that makes sense from a user / conversational standpoint.

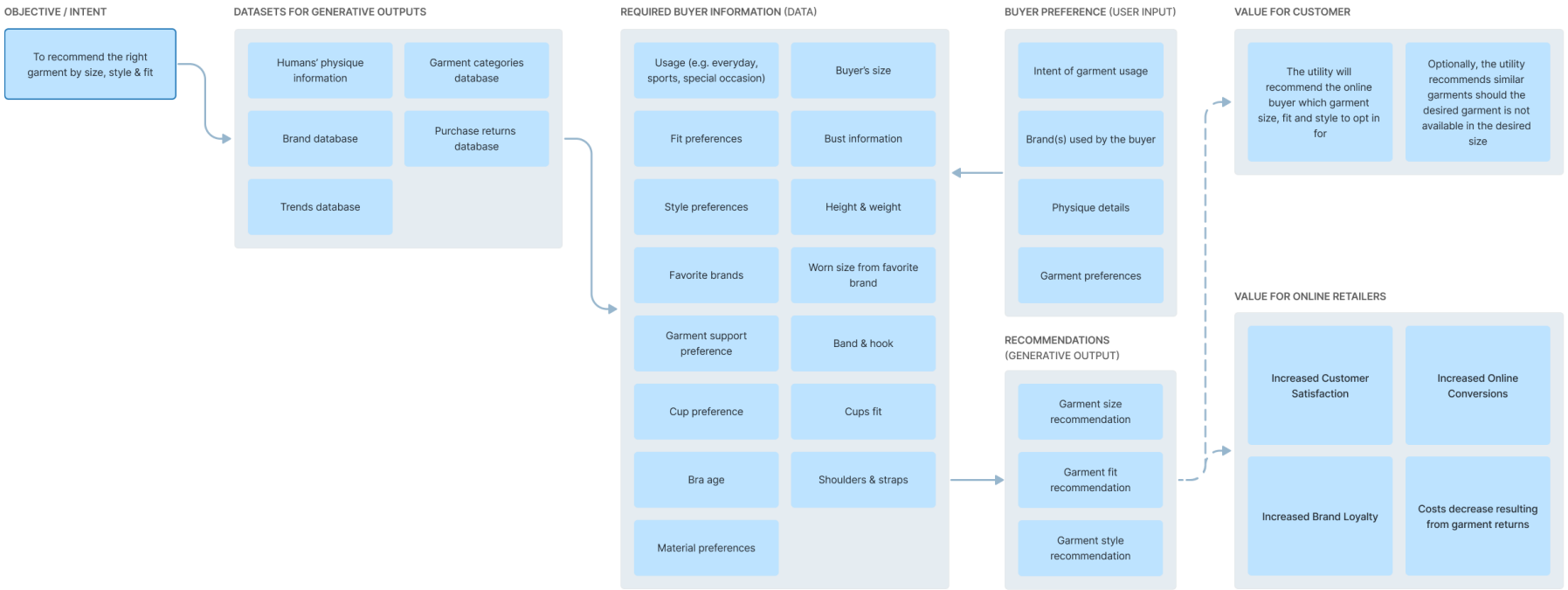
Lastly, we established **3 happy paths (flows)** based on the most sought use cases (according to data), being: *'everyday use,' 'special occasions,'* and *'sports.'*

CONTENT DESIGN & DATA ANNOTATION

Content design for 1 (out of 3) happy path by garment category

ONBOARDING #1	Purpose & occasion	Wire construction	Cup construction	Material	ONBOARDING #2	Brand selector	Size of bra brand	Bra age	Band size	Hook	Cups	ONBOARDING #3	Breast shape	Shoulders & straps	Height & weight	Generated recommendations
	Start by choosing the type of bras you are looking for	What level of wire support are you looking for?	What degree of padding are you looking for?	Select a preferred material for your bra		What do you wear? *Tell us a brand of a bra you currently wear*	What size is your bra? *Tell us a brand of a bra you currently wear*	How old is your current bra? *The longer you wear the bra, the looser the band gets. I bought X brand...*	How about the band? *The band should lie across your back without digging in or riding up...*	Which hook do you wear this bra on? *I normally use...*	How do the cups fit? *Your breast tissue should be contained within the cups with no bulging. Cups fit as follows:*		*Breast shapes vary from person to person and can impact the bras we recommend you*	*When you wear the garment with straps, do the straps often dig in or slip from your shoulders?*	*Height and weight are an important factor in determining suited bra types*	*Based on the information you provided, we recommend...*
Find your size (start)	Everyday use	Wired	Padded bras	High natural fibers	Lets talk sizing	7x popular brands displayed	Bust size selector	In the past 3 months	The band digs in	Tightest hook	Cups bulge	Body type	10x breast shape images displayed	Often dig in	Height	Size and style recommendation
	Sports	Non wired	Pushup bras	High synthetic fibers		Call-to-action to load more brands	Cup size selector	3-6 months ago	The band fits right	Middle hook	Just right			Usually fit securely	Weight	
	Special occasion	No preference	Non-padded bras	No preference				More than 6 months ago	The band arches up	Loosest hook	Cups gape			Often slip from shoulder		
			All bra types													

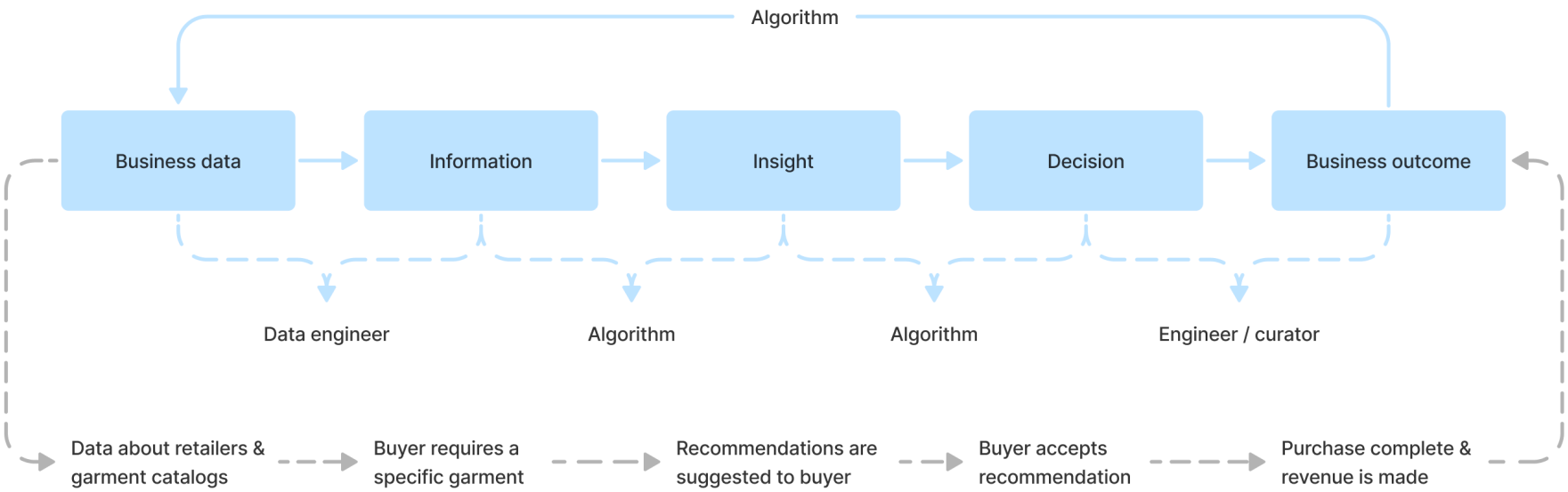
Plotting the ML model logic & data annotation



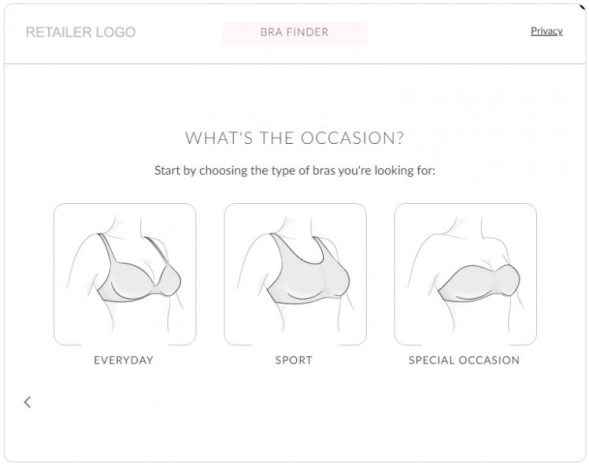
FOR CONTEXT ONLY

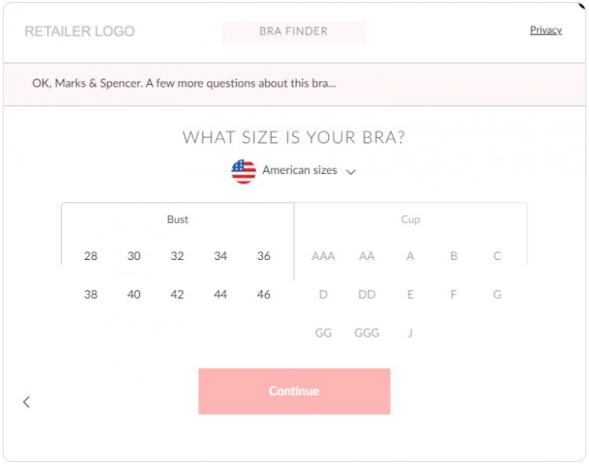
Understanding ML recommendation systems

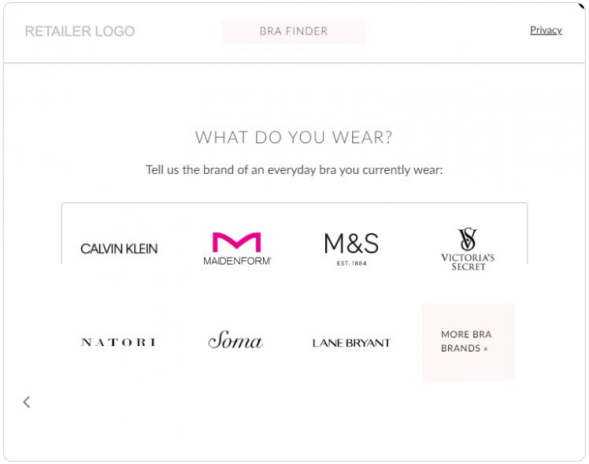
Machine-learning recommendation systems operate with minimal human intervention (Human on the Loop, HOTL). Consequently, language models must be meticulously trained to provide accurate recommendations for buyers. Partnering with data scientists and ML engineers was essential to ensure the project's success.



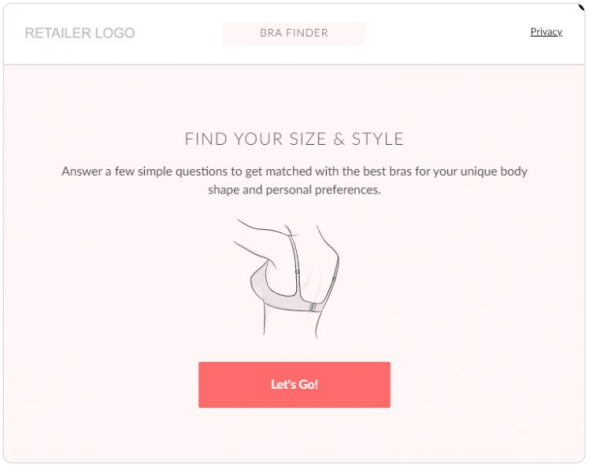
Design
& Rationale

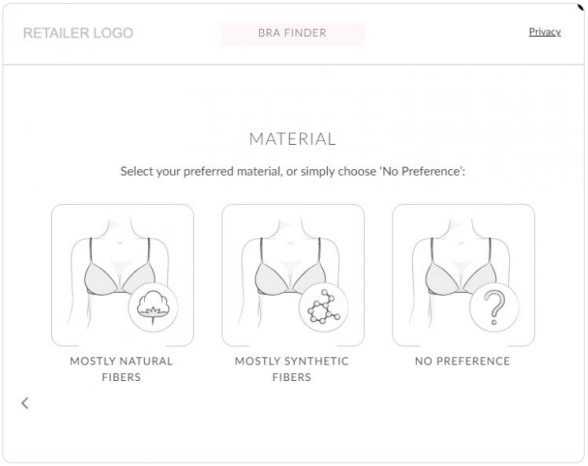






Selected UI designs





Design

Initial low-fidelity concepts were created for 3 established happy-paths (flows) being: everyday use, special occasions, and sports usage.

Following a peer review involving developers, data scientists, QA, and the subject-matter expert, these concepts were refined into high-fidelity designs and a prototype.

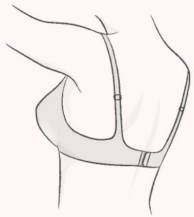
These were presented to key stakeholders for final feedback and approval.

Various UI for the mobile viewport

BRA FINDER

FIND YOUR SIZE & STYLE

Answer a few simple questions to get matched with the best bras for your unique body shape and personal preferences.



Let's Go!

Privacy

This service, controlled by Snap Inc., aims to reduce returns and waste by helping you find your size and style as well as cutting out ads that do not match, learning from your and others' shopping data.
Privacy.

Feedback

BRA FINDER

WHAT'S THE OCCASION?

Start by choosing the type of bras you're looking for:

EVERYDAY

SPORT

SPECIAL OCCASION

BRA FINDER

IMPACT

What kind of athletic activities will you be doing in this bra?

MEDIUM IMPACT

HIGH IMPACT

VERY HIGH IMPACT

BRA FINDER

Next, 80/C. A few more questions about this bra...

HOW OLD IS YOUR CURRENT BRA?

The longer you wear a bra, the looser the band gets...

I bought this Next bra...

IN THE PAST 3 MONTHS

3-6 MONTHS AGO

MORE THAN 6 MONTHS

BRA FINDER

CONSTRUCTION

What level of wire support are you looking for?

WIRED

NON-WIRED

NO PREFERENCE

Next, 80/C. A few more questions about this bra...

HOW DOES THE BAND FIT?

The band should lie straight across your back, without digging in or riding up.

The band...

DIGS IN

FITS RIGHT

ARCHES UP

BRA FINDER

SHOULDERS & STRAPS

When you wear a garment with straps (bra, top, evening dress, etc), do the straps often dig in or slip from your shoulders?

OFTEN DIG IN

USUALLY FIT SECURELY

OFTEN SLIP OFF

LET'S TALK SIZING

Think about an everyday bra you wear. In the following screens, we'll ask you a series of questions about this bra in order to calculate your perfect size in your new bra.

Let's Go!

Next, 80/C. A few more questions about this bra...

WHICH HOOK?

Which hook do you wear this bra on?

I normally use...

TIGHTEST HOOK

MIDDLE HOOK

LOOSEST HOOK

LAST QUESTION!

YOUR HEIGHT & WEIGHT

Most women don't know that height and weight play are an important factor in determining what bra types are best suited to them!

HEIGHT cm in

1 6 5

WEIGHT kg lbs

0 7 0

Show My Results

WHAT DO YOU WEAR?

Tell us the brand of an everyday bra you currently wear:

M&S next PRIMARK Sainsbury's Triumph George. TESCO MORE BRA BRANDS »

Next, 80/C. A few more questions about this bra...

HOW DO THE CUPS FIT?

Ideally, your breasts should be comfortably contained within the cups, with no bulging.

Cups fit as follows...

TOO TIGHT

JUST RIGHT

TOO LOOSE

BRA FINDER

Based on the information you provided, we recommend...

Sport
Non-wired
Very High Impact
Hook

Extra High Impact Non Wired Sports Bra A-E

36C

Shop This Bra

More recommended bras:

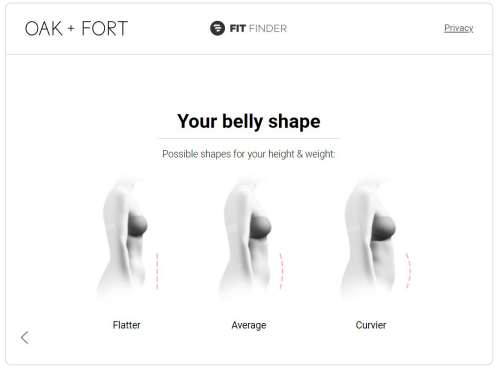
BRA FINDER

ALMOST DONE!

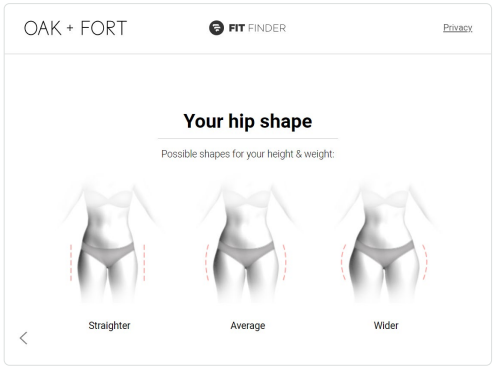
BODY TYPE

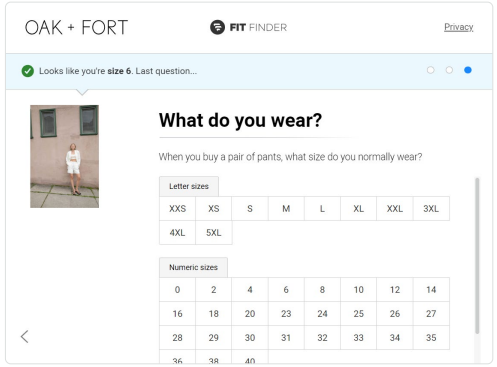
Your unique body shape helps determine your best fit. These final three questions will help match you to the best-fitting bras.

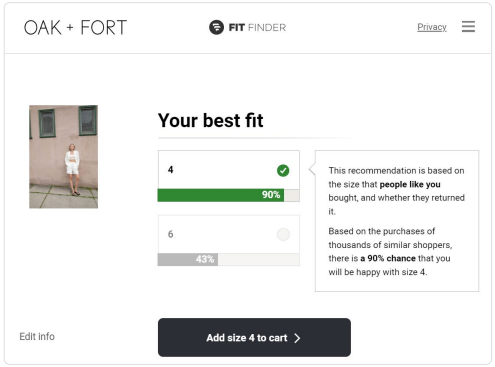
Let's Go!



Fit Finder live on OAK+FORT







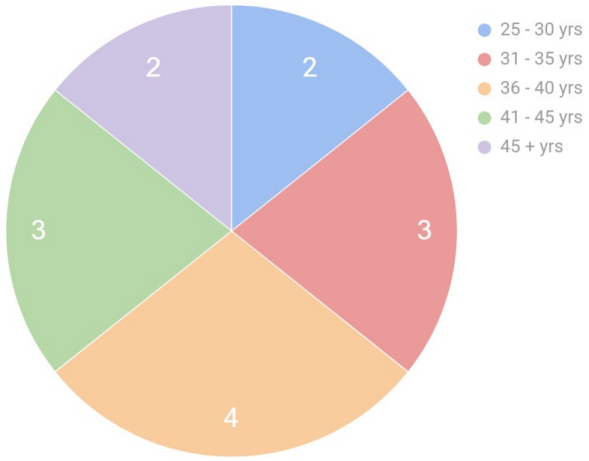
Design Rationale

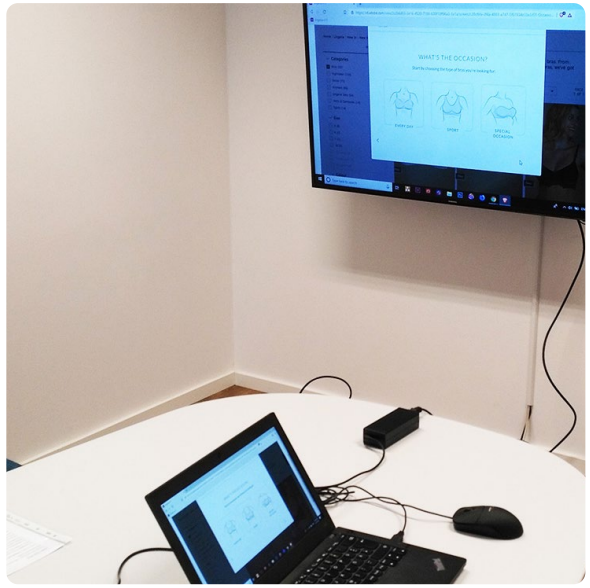
The UI design for the new product (bra finder) is modeled after Fit Finder, the parent product tailored for upper-, and lower-body garment sizes. We adopted its structure for several reasons:

- **Visual & structural consistency** across products
- **Rigorous testing** – Previous discoveries by third-party agencies consistently shown Fit Finder to be intuitive and user-friendly.
- **Competitive analysis** – A competitive study where 15 participants tested 3 competing solutions revealed a strong preference for Fit Finder.
- **SUS & NPS scores** – Past survey studies yielded a high perceived ease of use and usability scores along with a moderately high Net Promoter (NPS) score for Fit Finder.

Evaluation

4





Evaluation

Lastly, I recruited 14 participants (n=14) spanning various age groups to validate the product. This sample included:

- Seven participants (n=7) who had previously engaged in the discovery phase. They were invited back to confirm that their expectations were fulfilled.
- Seven participants (n=7) who were new to sizing recommendation tools, selected to gather unbiased insights.

This evaluation aimed at assessing the:

- Overall perception towards Bra Finder
- Understandability and learnability
- Perceived relevance
- Journey length (via a task completion assessment)
- Design and structure quality

Two participant groups arranged for the 'within-subjects' experiment

GROUP 1

(n=7)
Participants exposed to competing solutions *(True Fit, Third Love)* during the discovery phase

Participants	n	Test sequence
	2	*Everyday, Sport, Special Occasion*
	2	*Special Occasion, Sport, Everyday*
	2	*Sport, Special Occasion, Everyday*
	1	*Special Occasion, Everyday, Sport*

GROUP 2

(n=7)
Participants who never tried garment size recommendation tools

Participants	n	Test sequence
	2	*Everyday, Sport, Special Occasion*
	2	*Special Occasion, Sport, Everyday*
	2	*Sport, Special Occasion, Everyday*
	1	*Special Occasion, Everyday, Sport*

Experiment design

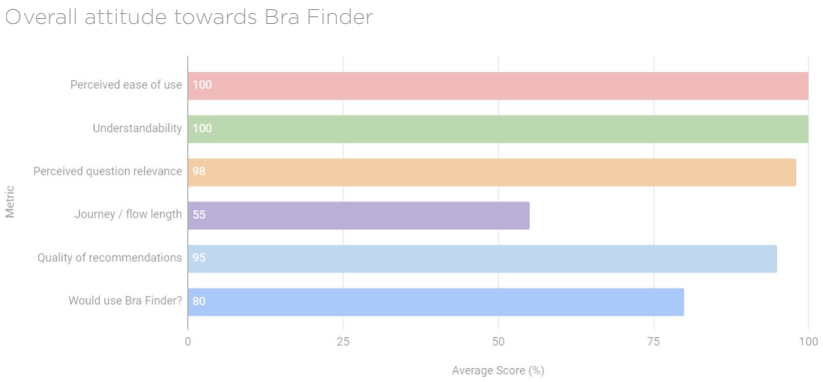
Considering the diversity within these samples, I opted for a **'within-subjects'** experimental design for the validation process. This choice arose from my interest in examining potential differences between participants who had experience with similar (competing) tools and those who had no prior exposure to such solutions.

Setup

The evaluation setup with each participant consisted in:

- Semi-structured interviews
- Three task-based scenarios based on the 3 established flows coupled with think-aloud protocols
- A survey study via a questionnaire we devised to assess journey length and the questions' relevance
- Concluding discussion (i.e., impression, opinion, & final thoughts)

Results



Scoring of questions: 1-5 (5 is high)
Participant 1

Bra fitting issues	None in particular
Length of user journey	Found length of questions 'just right'

Included question	Ease of use	Perceived relevance
Occasion	5	5
Material	5	5
Wire	5	5
Padding	5	5
BC Brand	5	5
BC Size	5	5
BC Straps	5	5
BC Band	5	5
BC Cup	5	5
BC Which hook?	5	5
BC Age of bra	5	5
Shape of breast	5	5
Height/Weight	5	
Excluded question	**Ease of use**	
Category	5	
Coverage	5	
Impact for Sports Bra	5	
Do you always wear same bra size?	5	
Do you wear different bras for different occasions	4	
Other missing questions		
Results screen format	Liked it, preferred approach whe	
Other	Would expect material question options for sports bras	
Comparison: Third Love	Pros: feedback copy. 5 options fo Cons: too much reading. Somewh	
Would be receptive to more 'educational' product	Yes, but would not buy a size tha	

Input	Sample values (1-3 examples, NOT the full list)	Relevant to...	UX ease of use	UX perceived relevance	FP relevance guess	Feed support (M&S)
Material	cotton, no preference	Target item	5	5	Unknown (SME contradicted user study)	5
Coverage	low / standard / full	Target item	5	4	?	1
Compression (sports bra only)	low / med / high	Target item	not measured	not measured	Ask about impact level instead: 4	5
Breast shape	full on top, east-west	Body	4	3.2	4	-
BC- Size	32-A	BC Item	4.5	4.6	5	5

Results

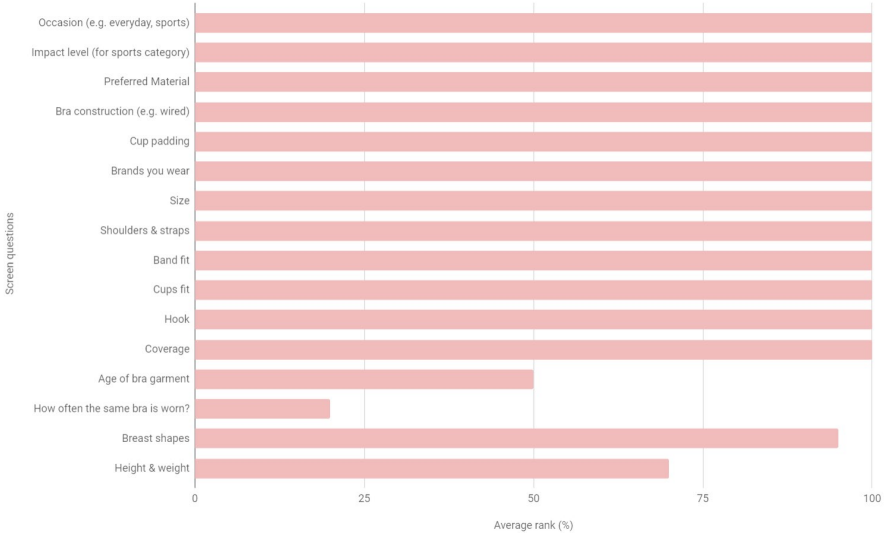
Participants reported a positive experience with Bra Finder, highlighting its user interface (UI), content quality, ease of use, learnability, and the usefulness of its size and fit recommendations.

The seven participants involved in the discovery phase confirmed that their needs were effectively addressed.

Several participants recognized us as ‘experts,’ particularly acknowledging our attention to gender-related requirements, which underscored the value of involving a subject matter expert.

Lastly, no discernible differences were observed between the two groups of participants.

Perceived questions relevance



Perceived relevance

Participants found the questions highly relevant to the purpose to obtain accurate size recommendations. Several participants described the quality of questions as *'spot on'* and *'meticulous.'*

Journey length

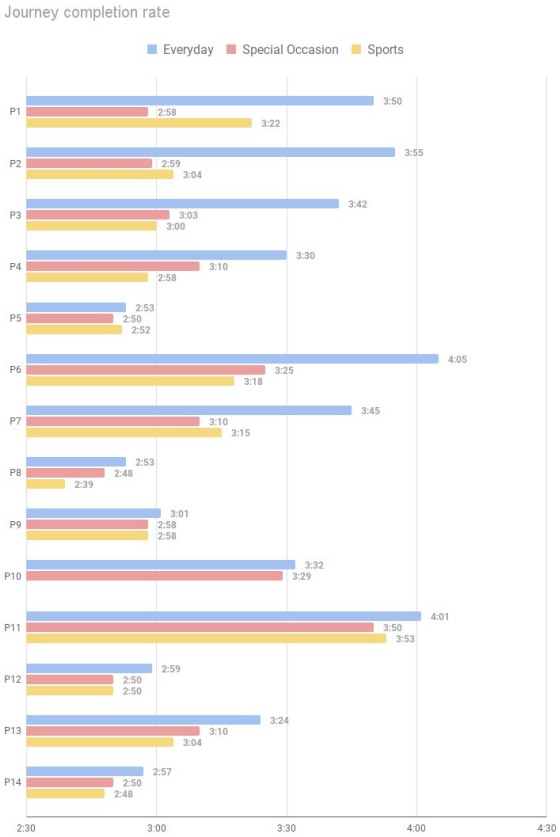
Participants were administered three task-based scenarios (i.e., finding a garment while using the bra finder).

Given our concerns regarding the journey length, I measured the **'time on task'** and **'time to first success'** for each scenario to obtain an indication on how long it would take for the user to generate recommendations.

Using the **'retrospective' think-aloud protocol**, participants were asked to verbalize experiences after completing each task. I used this method to prevent distortions on the quantitative findings.

Participants took longer to complete the first task, however they completed subsequent tasks faster, suggesting that users would spend less time using the product after an initial exposure.

Task ompletion rates measured in minutes



6

Reflection

The main achievements and lessons learned from this project revolved around: i) effectively demonstrating to stakeholders the value of UX research and the importance of leveraging subject-matter experts to enhance the value proposition; and ii) gaining extensive insights into machine learning, facilitated by the collaboration with exceptional data scientists and ML engineers.

Conclusion

The product was launched on the M&S UK website in 2019, resulting in a notable rise in online purchases and a decrease in returns by approximately 85%, according to client reports.

Around May 2023, M&S transitioned to a competing solution after Fit Analytics was acquired by Snap Inc. However, it was observed that the competing solution closely resembled the model originally developed by Fit Analytics.

Below is a link to the Adobe XD prototype (managed by Fit Analytics):

https://xd.adobe.com/view/2c2b6453-3e1b-4520-7188-630f13ff96a3-5a1a/screen/00409e44-8747-4367-8098-69447fb9bd1c