INSIGHTS REPORT

BIOTEXFUTURE
TRANSITION LAB

CONSUMER INSIGHTS ON BIO-BASED PRODUCTS

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FAU x Symanto – 18.11.2022

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1. **KEY INSIGHTS**

2. **METHODOLOGY**

3. **RESULTS**

4. **DASHBOARD**

5. **OUTLOOK & IMPLICATIONS**

The goal of this study was to **find out how people think and talk about bio-based (textile) products on social media**. By using Artifical Intelligence to analyze the data, **consumer motivations, important product attributes as well as consumer segments** could be identified.

KEY INSIGHTS

AS PART OF TRANSITIONLAB 2, WE LOOKED INTO OVER 250.000 SOCIAL MEDIA POSTS TO ANALYZE WHAT PEOPLE SAY ABOUT BIO-BASED PRODUCTS

Key insights Research Symanto x FAU

- Sustainable Fashion accounts for almost 20% of all comments in the overall fashion industry. The number of comments on Sustainable Fashion trends **increased throughout the past 3 years**.

- Besides bio-based textiles (incl. vegan leather, algae fabrics, mushroom leather), the **main trends in Sustainable Fashion** are ethical fashion (also called "slow fashion"), natural & organic fabrics, recycled fashion and fair fashion.

- **Social media, incl. Twitter, Instagram and TikTok,** are driving the Sustainable Fashion trend. In particular, **TikTok** with a growing number of comments on ethical fashion in 2022.

AS PART OF TRANSITIONLAB 2, WE LOOKED INTO OVER 250.000 SOCIAL MEDIA POSTS TO ANALYZE WHAT PEOPLE SAY ABOUT BIO-BASED PRODUCTS

Key insights Research Symanto x FAU

- **Top brands** in Sustainable Fashion include Lucy & Yak, Everlane and Reformation. VEJA is the most discussed brand in bio-based textiles.

- **Quality** and **price** are the main product aspects discussed in connection with sustainable fashion. While quality is mainly mentioned positively in relation to bio-based textiles, price is the main source of complaints for all sustainable fashion products.

- Sustainable fashion is largely a **trend on social media**. Particularly, it relates to ethical fashion. However, the main motivation behind the conversations on bio-based textiles, is saving the environment.

METHODOLOGY

IN THE METHODOLOGY, THE DATA WAS FIRST COLLECTED, THEN ANALYZED USING AI, AND FINALLY COMPILED

Methodology

Data collection	▶	**AI assisted analysis**	▶	**Reporting**

Data collection

- Publicly accessible data

- Wide range of social media & review sites

- Data cleaning process to eliminate "noise"

AI assisted analysis

- AI (Natural Language Processing) based text analytics modules to extract topics & sentiment at highly granular level

- Human assisted optimization of language model, if needed

- Advanced text analytics modules to extract metrics such as Brand Love, Brand Recommendation, etc.

Reporting

- Extract relevant, meaningful results

PSYCHOGRAPHICS USE VARIOUS CONVERSATIONS, CLUSTERS THEM, AND THEN ENRICHES THEM WITH THEMES AND INTERESTS

How psychographics work

Various conversations around Brand & Competitors

Psychographic* clustering

action
emotional
experience
fact
rational
information
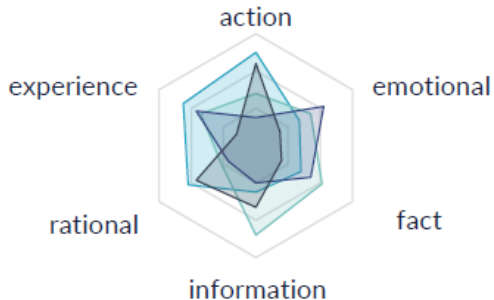
Enriching clusters with topics and their interests

- What they talk about
- Sentiment
- Likes & Dislikes
- Emotions
- Other brands
- Preferred channels
- Etc.

*Based on Carl Gustav Jung Personality traits & Schulz von Thun communication theory

THE DATA WAS COLLECTED FROM REVIEWS, FORUMS, SOCIAL MEDIA OF LARGEST PRODUCERS FOCUSED ON BIO-BASED TEXTILES AND SUSTAINABLE FASHION

Data source & time span

Channel Distribution (total no. of posts: 274.571)

Time span: January 2019 – June 2022
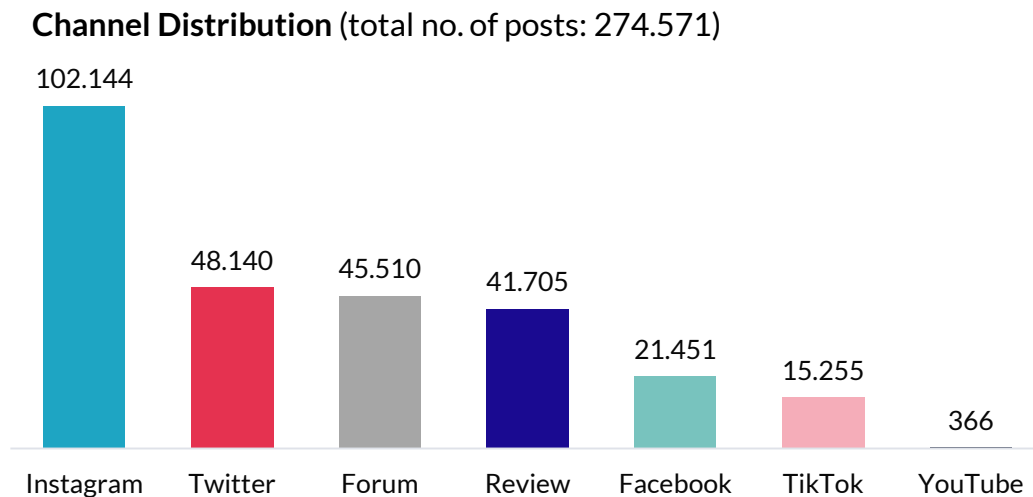
N: 274.571 conversations between 01/01/2019 - 16/06/2022

THE DATA WAS COLLECTED FROM REVIEWS, FORUMS, SOCIAL MEDIA OF LARGEST PRODUCERS FOCUSED ON BIO-BASED TEXTILES AND SUSTAINABLE FASHION

Data source & time span

Data collected

THE AMOUNT OF COMMENTS ON SUSTAINABLE FASHION AND BIO TEXTILES INCREASED THROUGHOUT THE PAST THREE YEARS PERIOD

Time span & trend overview

Conversation volume on Sustainable Fashion, # of posts
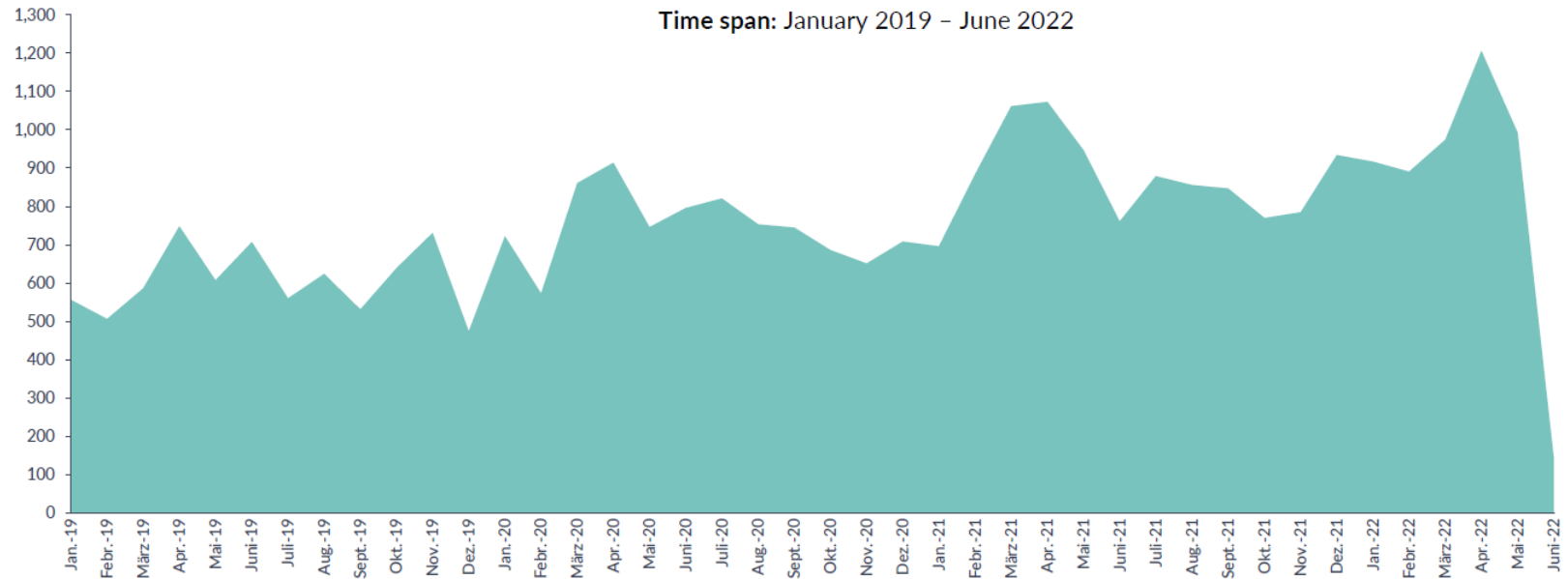
Time span: January 2019 – June 2022

N: 31.865 conversations featuring Sustainable Fashion between 01/01/2019 - 16/06/2022

RESULTS

1. DATA OVERVIEW

NEXT TO BIO-BASED TEXTILES, ETHICAL OR RECYCLED FASHION ARE ALSO BIG TRENDS ON SOCIAL MEDIA

Top trends in fashion (1 / 2)

Ethical Fashion
Responsible Consumption
Slow Fashion
Clothing Rental

Natural Fabrics
Cotton
Linen

General Sustainable Fashion
Comments on sustainable fashion, which cannot be allocated to any of the categories

Recycled Fashion
Recycled fabrics
Circular design

Bio-Based Textiles
Biodegradable fabrics
Algae, bamboo, corn, hemp
Lyocell, Tencel

Fair Fashion
Ethically made clothes
Fair Trade

Vegan Leather
Corn, pineapple, banana, cactus leather, mushroom leather

Support Local
Supporting local businesses
Shop local

Organic Fashion
Organic materials

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BIO-BASED TEXTILES IS THE MOST FREQUENTLY MENTIONED FASHION TREND IN THE COLLECTED DATA

Top trends in fashion (2 / 2)

Trends mentioned, % of number of mentions

Bio-Based Textiles — 28%   *Mentions of Bio-Based Textiles incl. Algae Fabrics*

Ethical Fashion — 20%

General Sustainable Fashion — 16%

Natural Fabrics — 10%

Vegan Leather — 8%   *Mentions of Vegan Leather incl. Mushroom Leather*

Recycled Fashion — 8%

Organic Fashion — 6%

Fair Fashion — 3%

Support Local — 2%

In total, 59.394 mentions of themes were identified & analyzed
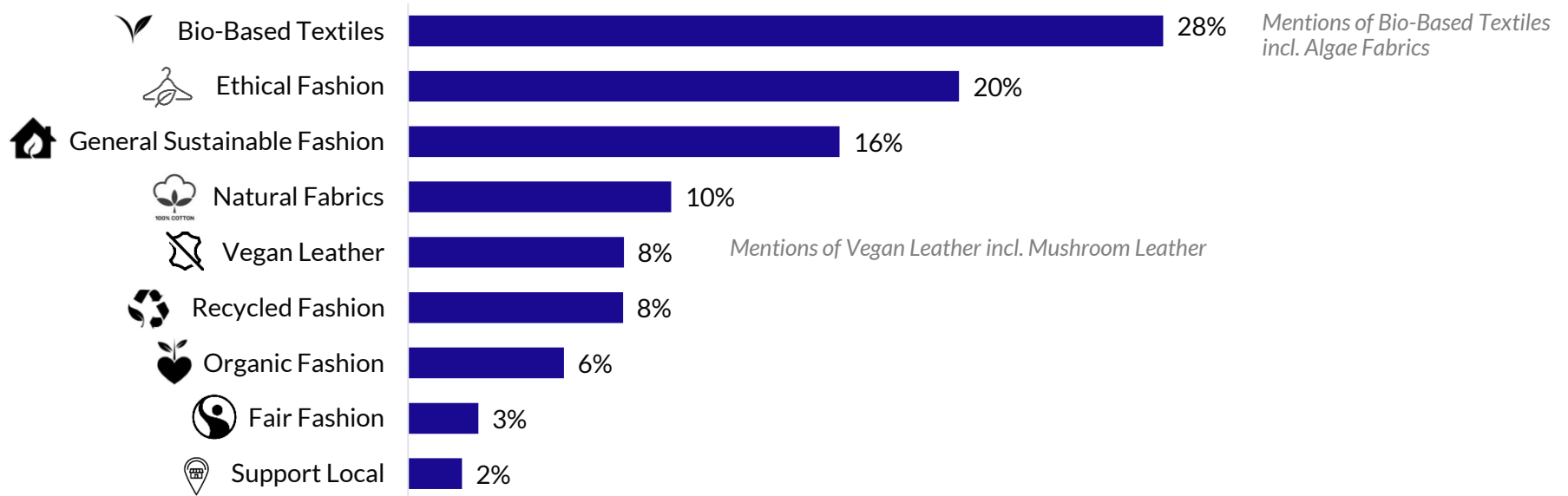
WHEN PEOPLE TALK ABOUT ETHICAL FASHION, THEY ALSO NEGATIVELY COMMENT ON "FAST FASHION" OPPOSED TO THE "SLOW FASHION" TREND

Net sentiment – High level overview

Discussion Sentiment for Sustainable Fashion, % of total messages
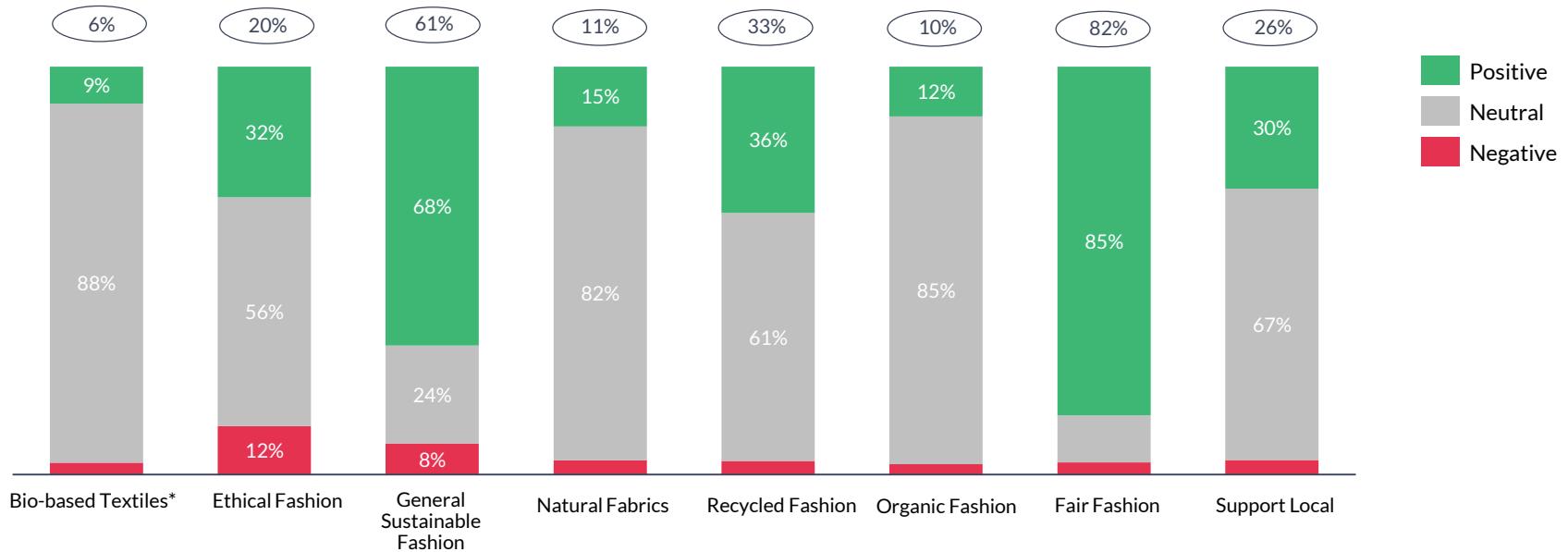
	Bio-based Textiles*	Ethical Fashion	General Sustainable Fashion	Natural Fabrics	Recycled Fashion	Organic Fashion	Fair Fashion	Support Local
(net)	6%	20%	61%	11%	33%	10%	82%	26%
Positive	9%	32%	68%	15%	36%	12%	85%	30%
Neutral	88%	56%	24%	82%	61%	85%		67%
Negative		12%	8%					

Legend: Positive (green), Neutral (grey), Negative (red)

In total, 59,394 mentions of themes were identified & analyzed

*Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics

17 % OF ALL POSTS IN THE FASHION INDUSTRY MENTION SUSTAINABLE FASHION, IN PARTICULAR ETHICAL FASHION

Sustainable fashion in fashion industry

Share of Sustainable Fashion mentions in the Fashion industry
% of conversations

17%

■ Posts mentioning Sustainable Fashion

■ Other posts

83%
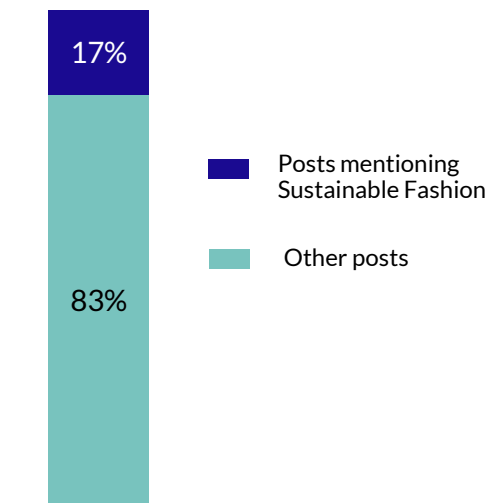
Share of Fashion trends mentions in the Fashion industry
% of conversations

Ethical Fashion	8%
Natural Fabrics	5%
General Sustainable Fashion	4%
Recycled Fashion	2%
Bio-Based Textiles	2%
Organic Fashion	1%

N: 187.441 conversations in fashion industry overall (UK)

*Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics

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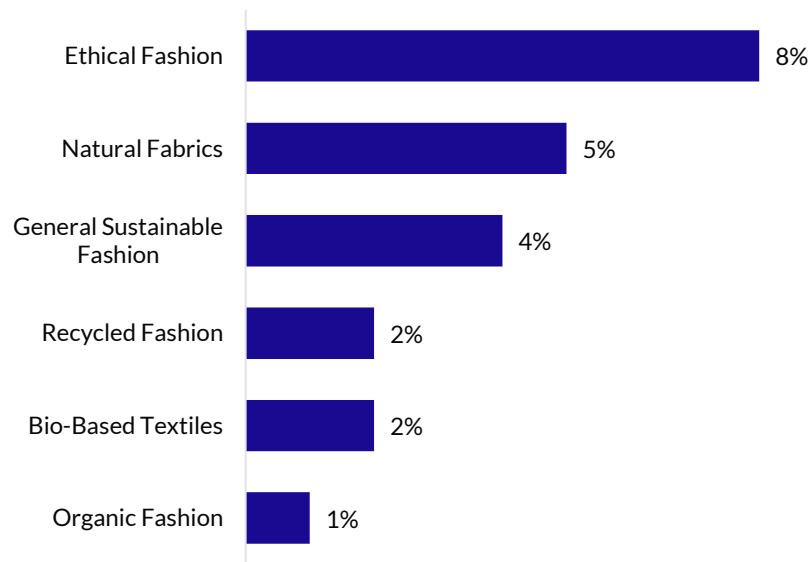
BIO-BASED TEXTILES ARE MOST OFTEN MENTIONED IN FORUMS AND ON INSTAGRAM. ETHICAL FASHION IS HIGHLY DISCUSSED ON TIKTOK

Data sources in sustainable fashion

Data sources for Sustainable Fashion comments

Category	Facebook	Forum	Instagram	Review	TikTok	Twitter	YouTube
Bio-based Textiles*	1%	32%	28%	21%	2%	15%	1%
Ethical Fashion	1%	32%	10%	4%	41%	11%	
General Sustainable Fashion	2%	28%	18%	19%	20%	13%	
Natural Fabrics	4%	56%	11%	17%	1%	12%	
Recycled Fashion	3%	22%	19%	26%	22%	8%	
Organic Fashion	2%	22%	38%	16%	17%	6%	
Fair Fashion	2%	32%	12%	15%	23%	16%	
Support Local	3%	50%	15%	10%	9%	14%	

Legend: ■ Facebook ■ Forum ■ Instagram ■ Review ■ TikTok ■ Twitter ■ YouTube

N: 31.865 conversations on Sustainable Fashion

*Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics

ON TIKTOK, COMMENTS ON SUSTAINABLE FASHION ARE RISING, WHILE ON INSTAGRAM, COMPARED TO THE LAST FEW YEARS, THEY ARE FALLING

Trend analysis overview: Sustainable fashion

Sustainable Fashion comments in different channels over time

N: 31.865 conversations featuring Sustainable fashion between 01/01/2019 - 16/06/2022

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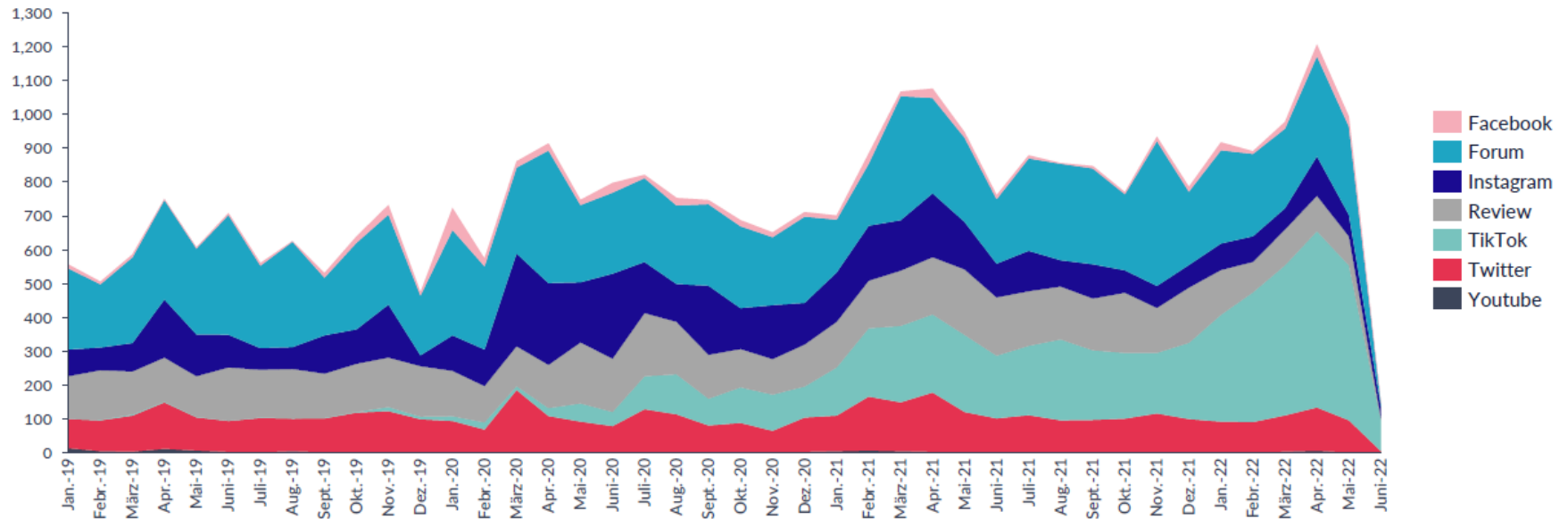
ETHICAL FASHION IS DRIVING THE TREND FOR SUSTAINABLE FASHION ON TIKTOK

Trend analysis overview: Ethical fashion

Ethical Fashion comments in different channels over time

N: 8.565 conversations featuring Ethical fashion between 01/01/2019 - 16/06/2022

2. BRANDS

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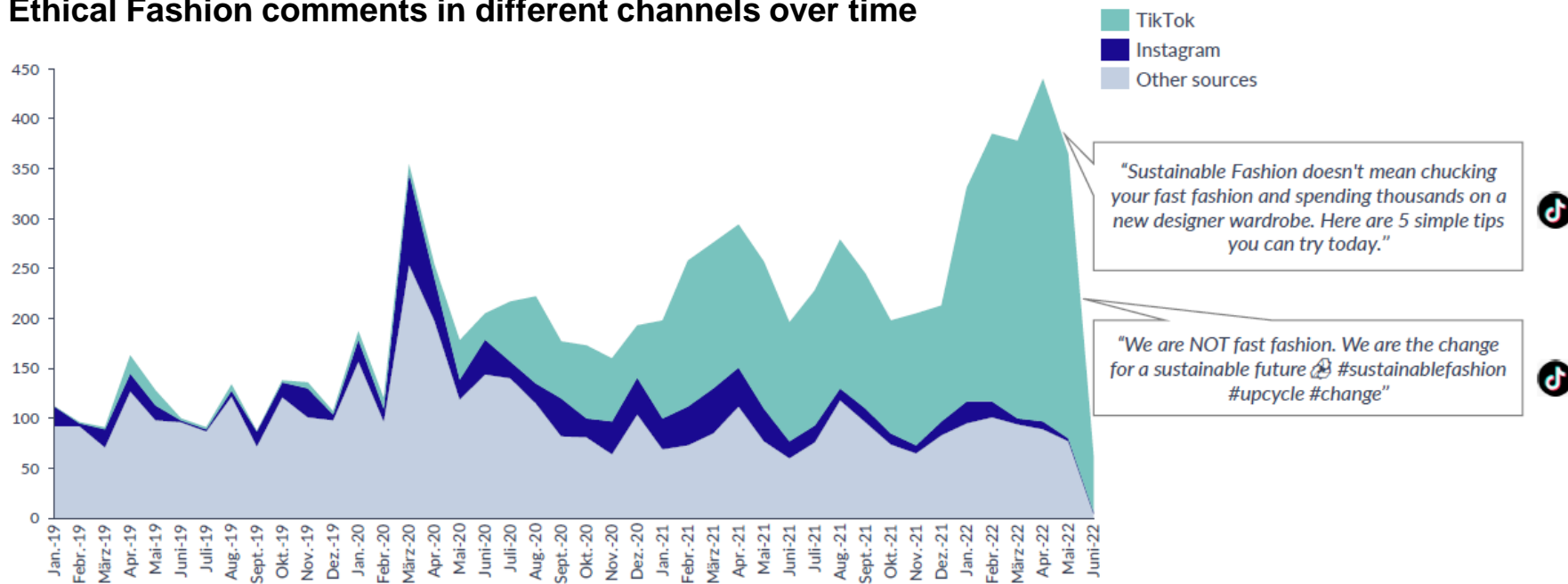
LUCY & YAK IS A LEADER IN TERMS OF VOLUME OF CONVERSATIONS AND IT ALSO HAS A VERY POSITIVE NET SENTIMENT

Top 10 brands in sustainable fashion

Brands overall

Brand	Volume
Lucy & Yak	23%
Everlane	22%
Reformation	16%
Eileen Fisher	10%
Tentree	10%
VEJA	8%
PANGAIA	4%
miomojo	1%
Bamford	1%
United By Blue	1%

Net Sentiment

Brand	Net Sentiment
Lucy & Yak	31%
Everlane	10%
Reformation	8%
Eileen Fisher	23%
Tentree	26%
VEJA	25%
PANGAIA	29%
miomojo	45%
Bamford	0%
United By Blue	23%

N: 274,571 conversations
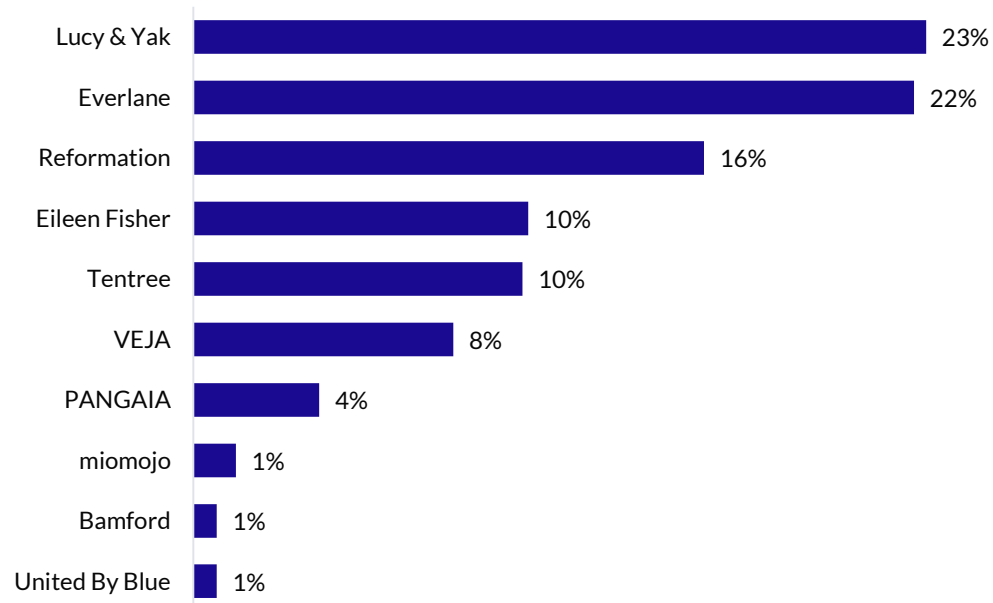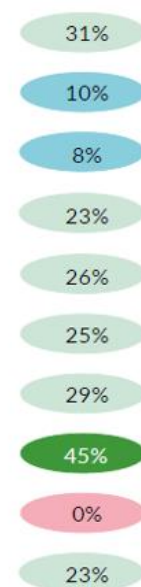
EVERLANE IS THE BRAND WITH THE GREATEST CONNECTION TO ETHICAL FASHION AND VEJA IS THE MOST DISCUSSED BRAND IN BIO- BASED TEXTILES

Top 7 brands in ethical fashion and bio-based textiles

**Distribution Ethical Fashion comments
for top 7 brands**
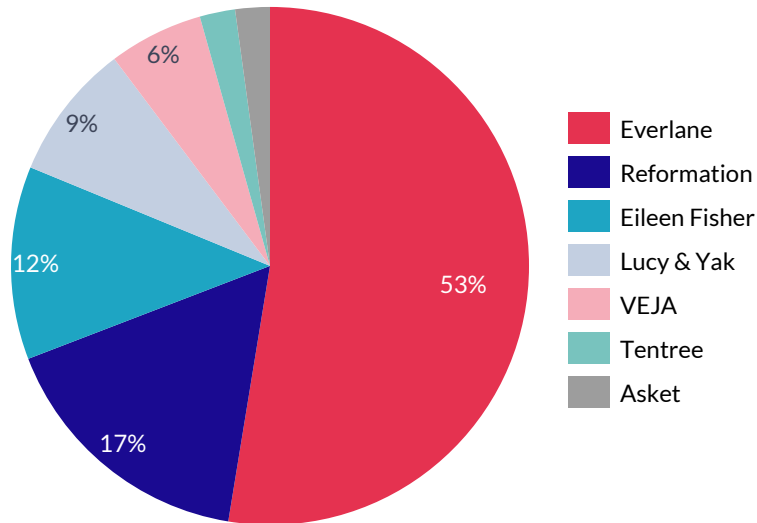
**Distribution Bio-Based Textiles* comments
for top 7 brands**

Legend (Ethical Fashion):
- Everlane — 53%
- Reformation — 17%
- Eileen Fisher — 12%
- Lucy & Yak — 9%
- VEJA — 6%
- Tentree
- Asket

Legend (Bio-Based Textiles):
- VEJA — 32%
- Everlane — 23%
- Eileen Fisher — 13%
- Reformation — 11%
- Tentree — 10%
- miomojo — 5%
- Lucy & Yak — 5%

N: 187.441 conversations in fashion industry overall (UK)

*Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics
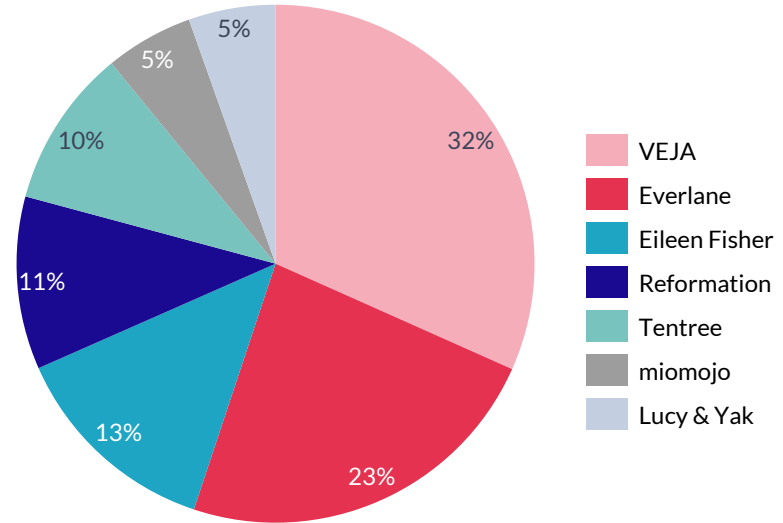
3. MOTIVATIONS

THERE ARE SIX DIFFERENT MOTIVATIONS BEHIND SUSTAINABLE FASHION

Motivation behind sustainable fashion

Environment
Impact on the environment
Emissions
Biodiversity

Animal welfare
Animal protection
Animal rights
Cruelty free production

Ethics
Ethical supply chain
Fair wages and good working conditions

THERE ARE SIX DIFFERENT MOTIVATIONS BEHIND SUSTAINABLE FASHION

Motivation behind sustainable fashion

Health impact
Impact on skin and body

Innovation
Innovative products and production

Trend
Sustainable fashion is a trend on social media
Influencers / Bloggers

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SUSTAINABLE FASHION IS LARGELY A TREND IN FASHION OVERALL, WHICH IS DRIVEN BY SOCIAL MEDIA

Motivation behind sustainable fashion

Trends mentioned, % of number of mentions

Trend	37%
Environment	34%
Ethics	17%
Health Impact	5%
Animal Welfare	4%
Innovation	4%

"How to save the planet from the mass market? Why we all need to buy less? Eco friendly fashion is a newest trend!"

"Let's go! Let's try to be the generation that helped save the earth instead of it dying and us along with it. Let's be the example to follow!"

"I'm super excited to show you my new outfit! It's made from all natural fabrics"

In total, 420.377 mentions of motivations were identified & analyzed

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WHEN PEOPLE TALK ABOUT BIO-BASED TEXTILES, THEY ALSO POSITIVELY MENTION THEIR IMPACT ON THE ENVIRONMENT

Motivation behind bio-based textiles

Trends mentioned, % of number of mentions

Trend	%
Environment	52%
Trend	20%
Innovation	8%
Health Impact	8%
Ethics	7%
Animal Welfare	6%

"Mushroom leather could be the key to #SustainableFashion. It is environmentally friendly, #vegan friendly, and some of it is being produced right here in #WesternAustralia!"

"Thank you for coming up with innovative solution for alternative to leather . As a consumer , I am constantly looking for products that are cruelty free and ecologically sustainable . I already own 2 of your sneakers that are eco friendly and made of non leather materials . I wish other fashion companies also follow suit with your vision ."

In total, 11.229 mentions of motivation were identified & analyzed

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JOY IS THE EMOTION, WHICH IS EXPRESSED MOST OFTEN IN CONNECTION WITH SUSTAINABLE FASHION

Positive emotional drivers behind sustainable fashion

Positive emotional drivers in sustainable fashion comments

Legend: Amazed | Love | Trust | Joy

Category	Amazed	Love	Trust	Joy
Sustainable Fashion Overall	20%	5%	17%	58%
Bio-Based Textiles*	31%	6%	20%	43%
Vegan Leather	35%	2%	22%	41%
Natural Fabrics	16%	16%	24%	45%
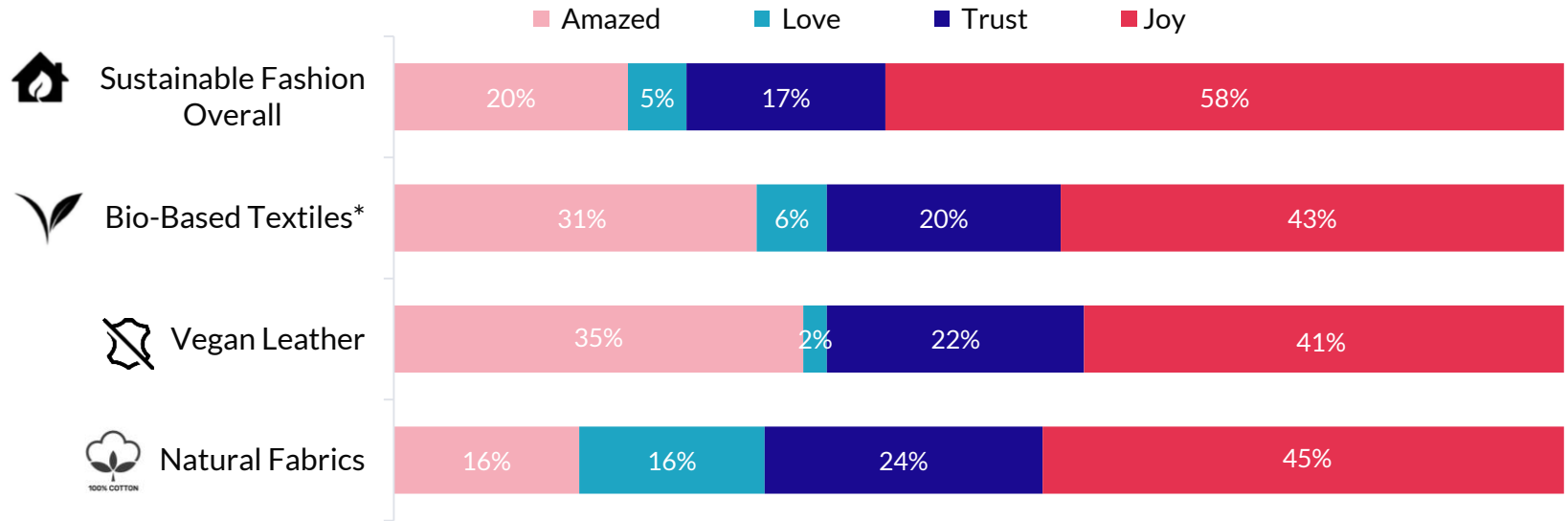
In total, 9.660 mentions of themes were identified & analyzed

*Mentions of Bio-Based Textiles incl. Algae Fabrics

WHEN TALKING ABOUT ETHICS AND ENVIRONMENT PROTECTION PEOPLE ALSO EXPRESS TRUST

Emotions behind motivations

Emotions behind motivation comments

Legend: ■ joy ■ amazed ■ trust ■ love ■ disgust ■ sad ■ distrust ■ anger

	joy	amazed	trust	love	disgust	sad	distrust	anger
Trend	55%	15%	9%	6%	8%	5%	1%	
Environment	37%	16%	20%	4%	17%	5%	2%	
Ethics	25%	12%	33%	4%	14%	4%	4%	4%
Health Impact	45%	7%	18%	2%	22%	2%	2%	1%
Animal Welfare	34%	5%	7%	9%	36%	4%	5%	
Innovation	32%	46%	7%	2%	8%	2%	3%	
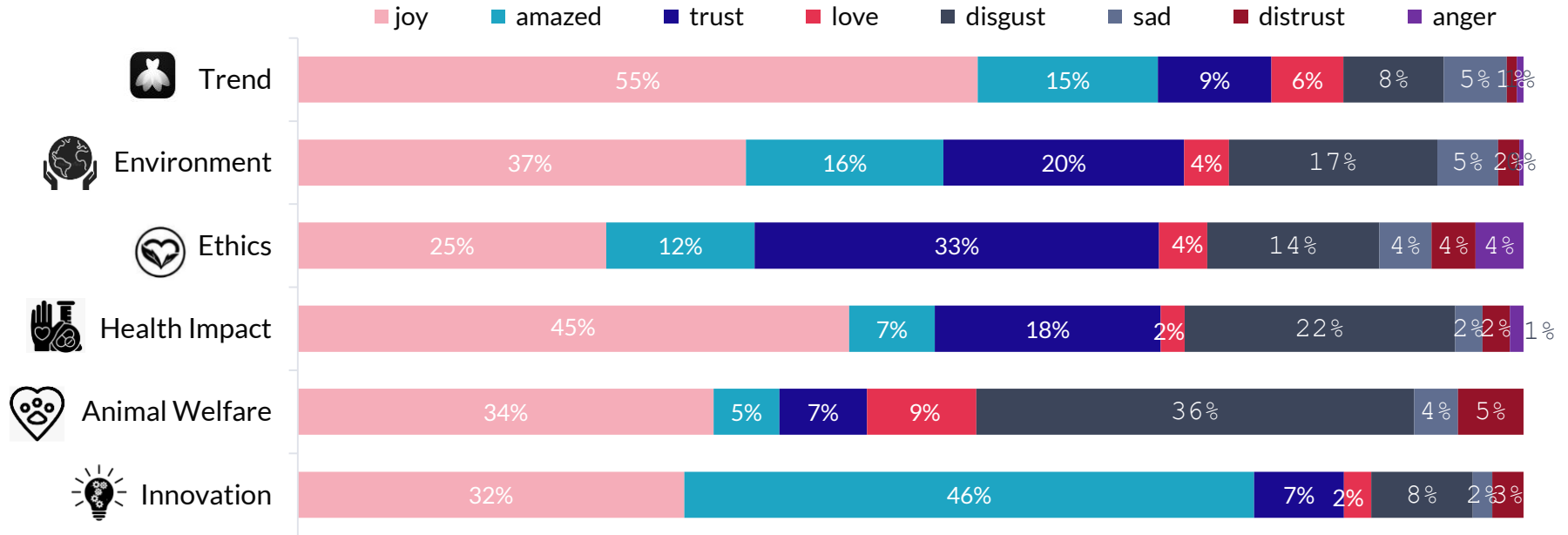
In total, 9.288 mentions of themes were identified & analyzed

4. TOPICS

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BIO-BASED TEXTILES, INCL. TENCEL AND OTHER PLANT-BASED FABRICS, ARE MOST FREQUENTLY MENTIONED IN THIS ANALYSIS

Bio-based textiles: Topics Deep Dive

Distribution Bio-Based Textiles topics

- Bio-Based Textiles in General
- Vegan Leather
- Mushroom Leather
- Algae Fabrics

Words Bio-Based Textiles topics
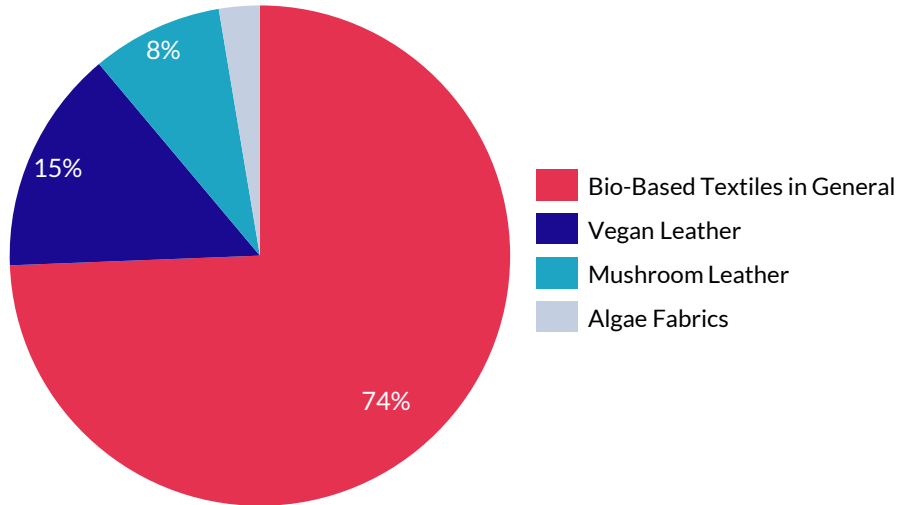
In total, 21.245 mentions were identified & analyzed for Bio-Based Textiles topics

WHEN PEOPLE TALK ABOUT BIO-BASED TEXTILES, THEY POSITIVELY MENTION THE QUALITY OF THE FABRICS

Topics mentioned in connection with bio-based textiles

When they talk about Bio-Based Textiles, they also talk positively on other topics

RENEWABLE
ENVIRONMENTALLY FRIENDLY
GOOD QUALITY #NATURAL
RECOMMEND   DURABLE   HIGH QUALITY
FRIENDLY
SECOND HAND
CHEAP   BREATHABLE INNOVATIVE

RESISTANT   NATURAL   FLEXIBLE
CREATIVE   HEALTHY
AFFORDABLE   SECURE

COMFORTABLE

STYLISH   #ECOFRIENDLY
WATERPROOF   BETTER THAN
FAST DELIVERY

When they talk about Bio-Based Textiles, they also talk negatively on other topics

CLIMATE CHANGE
INTERACTIVE   ORGANIC WASTE
PETROLEUM   FADED
WRINKLED   EXPENSIVE   PRICE MATCHING
POLLUTION   CHEMICALS FOOD WASTE

PLASTIC FRAGILE

POLLUTING   SYNTHETIC   PRICEY
ALLERGIC   FAST FASHION   HARMFUL
NO VEGAN   MORE EXPENSIVE PESTICIDES
NOT SUSTAINABLE   BROKEN
BAD FOR THE ENVIRONMENT

In total, 21.245 mentions were identified & analyzed for Bio-Based Textiles topics

*Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics
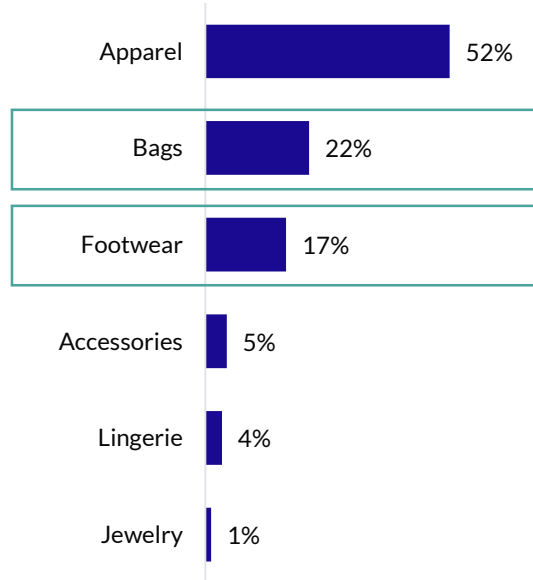
IN MOST CONVERSATIONS ON SUSTAINABLE FASHION PEOPLE MAINLY MENTION APPAREL

Products mentioned in connection with sustainable fashion

Products in connection with Sustainable Fashion all topics

Category	Value
Apparel	70%
Footwear	13%
Bags	8%
Accessories	4%
Lingerie	3%
Jewelry	2%

Products in connection with Bio-Based Textiles

Category	Value
Apparel	52%
Bags	22%
Footwear	17%
Accessories	5%
Lingerie	4%
Jewelry	1%
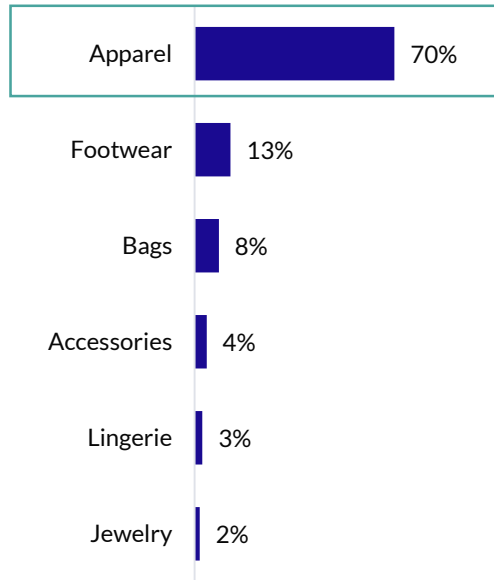
Products in connection with Organic Fabric

Category	Value
Apparel	75%
Lingerie	8%
Footwear	7%
Bags	4%
Accessories	3%
Jewelry	2%

In total, 39.333 mentions of product categories were identified & analyzed

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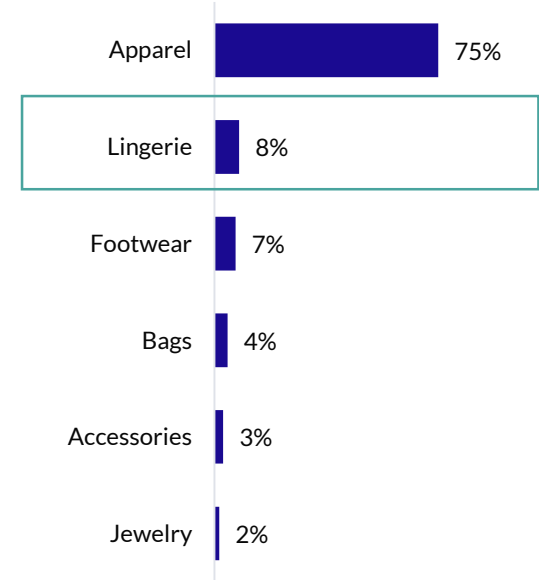
NATURAL FABRICS AND BIO-BASED TEXTILES ARE MAINLY PRAISED FOR THEIR QUALITY

What product aspects people praise when they discuss sustainable fashion

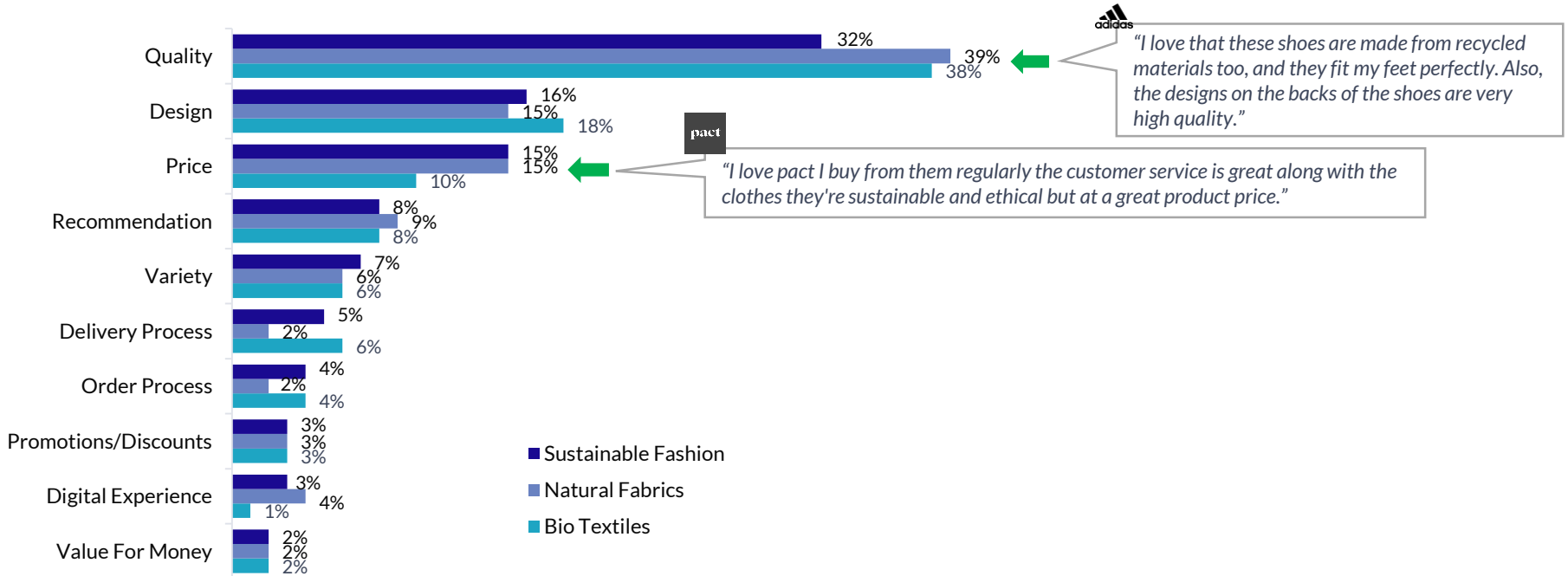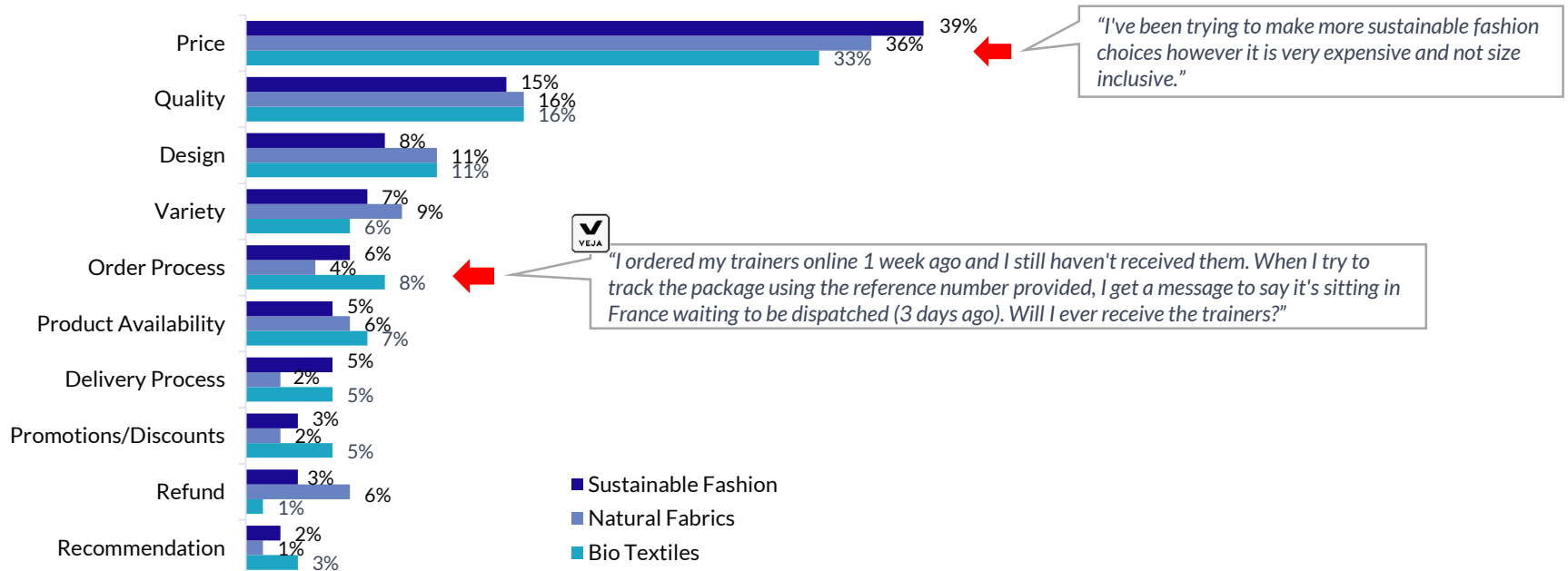Positive Comments on Product Aspects in connection with Sustainable Fashion overall, Natural Fabrics and Bio-based Textiles

adidas
"I love that these shoes are made from recycled materials too, and they fit my feet perfectly. Also, the designs on the backs of the shoes are very high quality."

pact
"I love pact I buy from them regularly the customer service is great along with the clothes they're sustainable and ethical but at a great product price."

Product Aspect	Sustainable Fashion	Natural Fabrics	Bio Textiles
Quality	32%	39%	38%
Design	16%	15%	18%
Price	15%	15%	10%
Recommendation	8%	9%	8%
Variety	7%	6%	6%
Delivery Process	5%	2%	6%
Order Process	4%	2%	4%
Promotions/Discounts	3%	3%	3%
Digital Experience	3%	4%	1%
Value For Money	2%	2%	2%

■ Sustainable Fashion
■ Natural Fabrics
■ Bio Textiles

N: 17.560 positive mentions of product attributes in connection with Sustainable Fashion

*Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics

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WHEN PEOPLE TALK ABOUT BIO-BASED TEXTILES, PRICE IS THEIR PRIMARY SOURCE OF COMPLAINTS

What product aspects people criticize when they discuss Sustainable Fashion

Negative Comments on Product Aspects in connection with Sustainable Fashion overall, Natural Fabrics and Bio-based Textiles
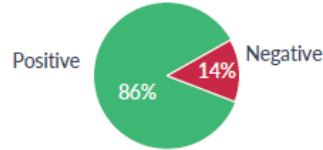

Price — 39% / 36% / 33%

"I've been trying to make more sustainable fashion choices however it is very expensive and not size inclusive."

Quality — 15% / 16% / 16%

Design — 8% / 11% / 11%

Variety — 7% / 9% / 6%

Order Process — 6% / 4% / 8%

"I ordered my trainers online 1 week ago and I still haven't received them. When I try to track the package using the reference number provided, I get a message to say it's sitting in France waiting to be dispatched (3 days ago). Will I ever receive the trainers?"

Product Availability — 5% / 6% / 7%

Delivery Process — 5% / 2% / 5%

Promotions/Discounts — 3% / 2% / 5%

Refund — 3% / 6% / 1%

Recommendation — 2% / 1% / 3%

■ Sustainable Fashion
■ Natural Fabrics
■ Bio Textiles

N: 5.808 negative mentions of product attributes in connection with Sustainable Fashion

*Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics

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WHEN PEOPLE TALK ABOUT PRICE/VALUE OF SUSTAINABLE FASHION, THEY COMPLAINT ABOUT THEIR HIGH PRICES

Price/Value Deep Dive

Positive Sentiment Word Cloud

AFFORDABLE PRICE
WORTH THE MONEY   IS CHEAPER
WELL PRICED CHEAPESTINEXPENSIVE
COST EFFECTIVE WORTH THE PRICE   AND VALUE
LESS EXPENSIVE   WORTH IT
GOOD PRICE   MUCH CHEAPER
FAIR PRICE   BARGAIN
GOOD VALUE CHEAP LOWER PRICE
FREE OF CHARGE   DECENT PRICES
AFFORDABLE CHEAPER THAN
A STEAL
GREAT VALUE GOOD VALUE FOR MONEY
REASONABLY PRICED   GOOD PRICES
REASONABLE PRICE
WORTH EVERY PENNY
TRANSPARENT PRICING

Positive 53% 47% Negative

Negative Sentiment Word Cloud

NOT WORTH THE MONEY
MOST EXPENSIVE
HIGH PRICE VERY CHEAP
VERY EXPENSIVE   PRICY
TOO EXPENSIVE   COSTLY
A LOT OF MONEY   SO EXPENSIVE TO PAY MORE
NOT CHEAP PRICEY   PRETTY EXPENSIVE
OVERPRICED
EXPENSIVE
MORE EXPENSIVE PRICIER
NOT WORTH THE PRICE
ARE EXPENSIVE   CAN'T AFFORD   BIT EXPENSIVE
TOO MUCH MONEY MORE AFFORDABLE QUITE EXPENSIVE
OVER PRICED NOT WORTH IT
REALLY EXPENSIVE WASTE OF MONEY
SUPER EXPENSIVE

Value   Price

In total, 12.953 mentions of price/value were identified & analyzed

WHEN PEOPLE TALK ABOUT THE QUALITY OF SUSTAINABLE FASHION, THEY EMPHASIZE THE COMFORT OF THE PRODUCTS

Quality Deep Dive

In total, 25.737 mentions of quality were identified & analyzed

5. CONSUMER SEGMENTS

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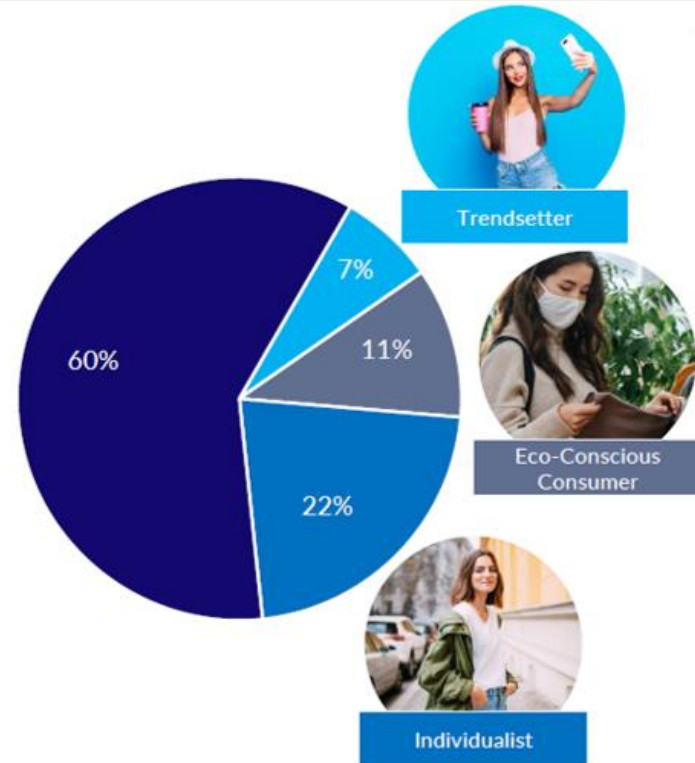# ALLOCATION OF SEGMENTED PROFILES IS BASED ON DEEP-LEARNING CLUSTERING

Segment overview (1 / 4)

MAINSTREAM

General
- Emotional
- Subjective

Details
- Focus on their feeling & experience, when making decisions
- Follow the trends in Sustainable Fashion, incl. Slow Fashion trend
- Mainly discuss service and quality

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ALLOCATION OF SEGMENTED PROFILES IS BASED ON DEEP-LEARNING CLUSTERING

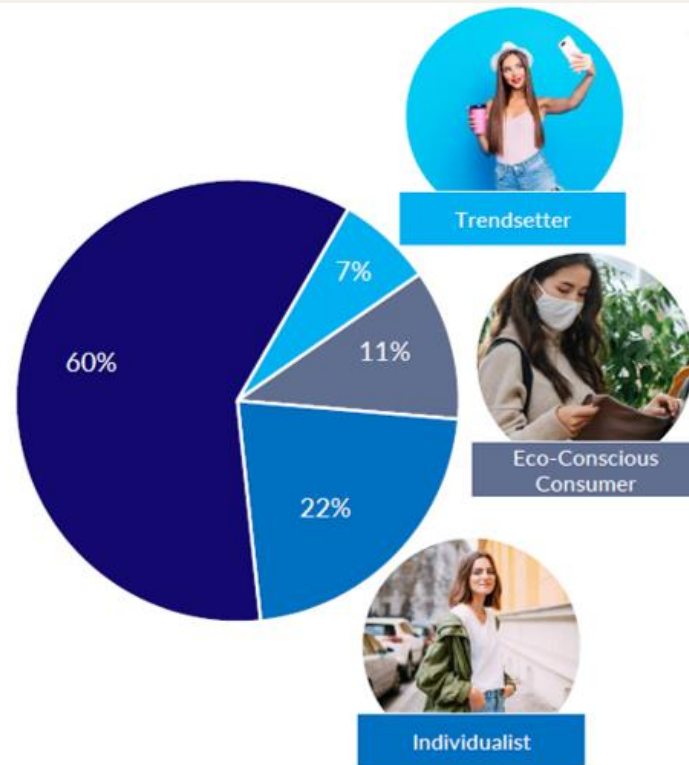*Segment overview (2 / 4)*

INDIVIDUALIST

General

- Rational
- Subjective
- Own experience matters

Mainstream

Details

- Decisions are made often by rational arguments & own experiences
- When buying clothes, care about quality
- Interested in natural fabrics and vegan leather

Trendsetter

7%

11%

Eco-Conscious Consumer

60%

22%

Individualist

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ALLOCATION OF SEGMENTED PROFILES IS BASED ON DEEP-LEARNING CLUSTERING
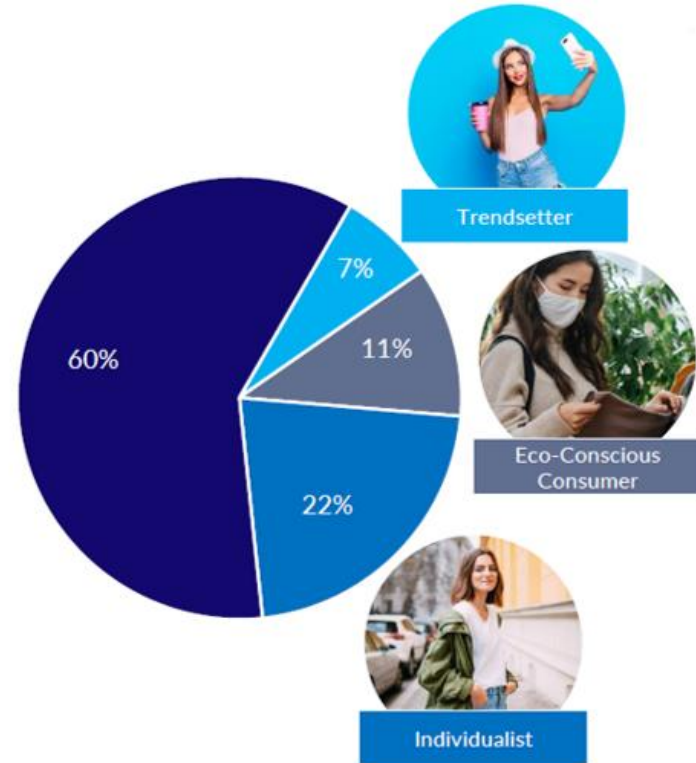
Segment overview (3 / 4)

ECO-CONSCIOUS CONSUMER

General
- Rational
- Fact-oriented

Details
- Rational decision makers, which highly care about environment
- Most actively discuss Bio-Textiles

Mainstream

Trendsetter

Eco-Conscious Consumer

Individualist

60%

7%

11%

22%

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ALLOCATION OF SEGMENTED PROFILES IS BASED ON DEEP-LEARNING CLUSTERING
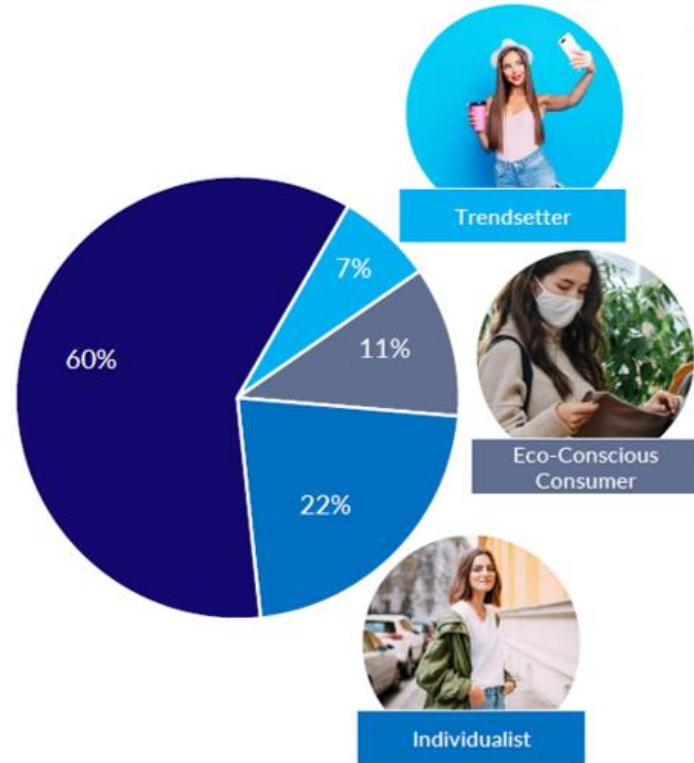
Segment overview (4 / 4)

TRENDSETTER
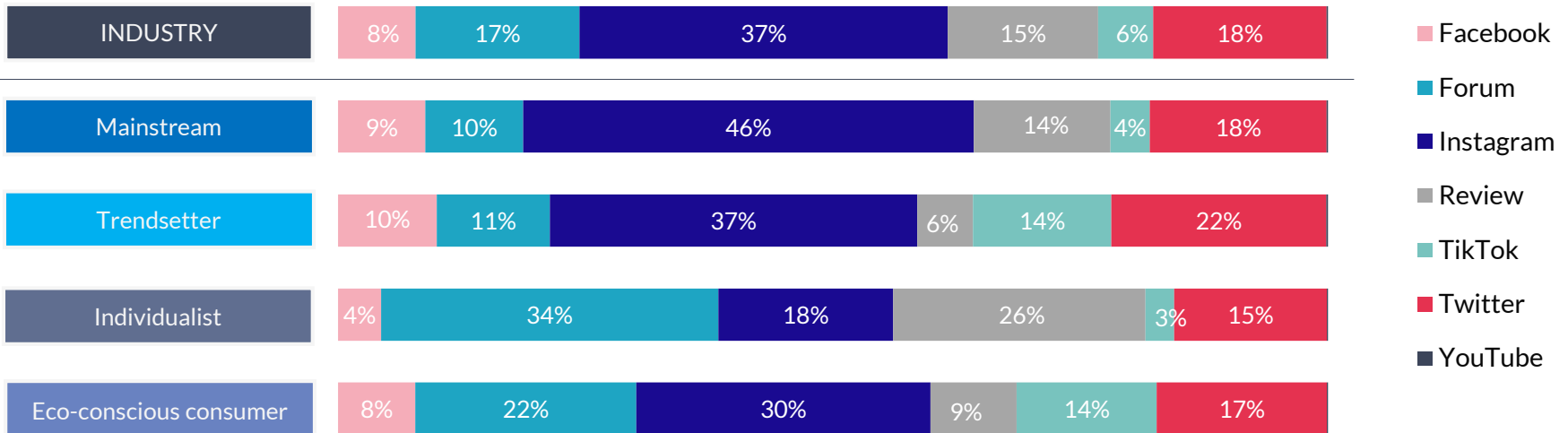
General
- Emotional
- Action-Seeking

Details
- Emotional decision makers
- Heavy users of social media
- Post content on fashion and style (in particular, ethical fashion)

Mainstream

Trendsetter

Eco-Conscious Consumer

7%

11%

60%

22%

Individualist

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MAINSTREAM AND TRENDSETTERS ARE MAINLY INSTAGRAM USERS. TREND-SETTERS ARE ALSO HIGHLY REPRESENTED ON FACEBOOK, TIKTOK AND TWITTER

Channel distribution per segment

Distribution of sources per segment

Segment	Facebook	Forum	Instagram	Review	TikTok	Twitter
INDUSTRY	8%	17%	37%	15%	6%	18%
Mainstream	9%	10%	46%	14%	4%	18%
Trendsetter	10%	11%	37%	6%	14%	22%
Individualist	4%	34%	18%	26%	3%	15%
Eco-conscious consumer	8%	22%	30%	9%	14%	17%

Legend:
- Facebook
- Forum
- Instagram
- Review
- TikTok
- Twitter
- YouTube

N: 274.571 Conversations between 01/01/2019-16/06/2022

ECO-CONSCIOUS CONSUMERS ARE CLEARLY LEADING IN TERMS OF BIOTEX DISCUSSIONS

Fashion theme per segment

Distribution of themes per segment
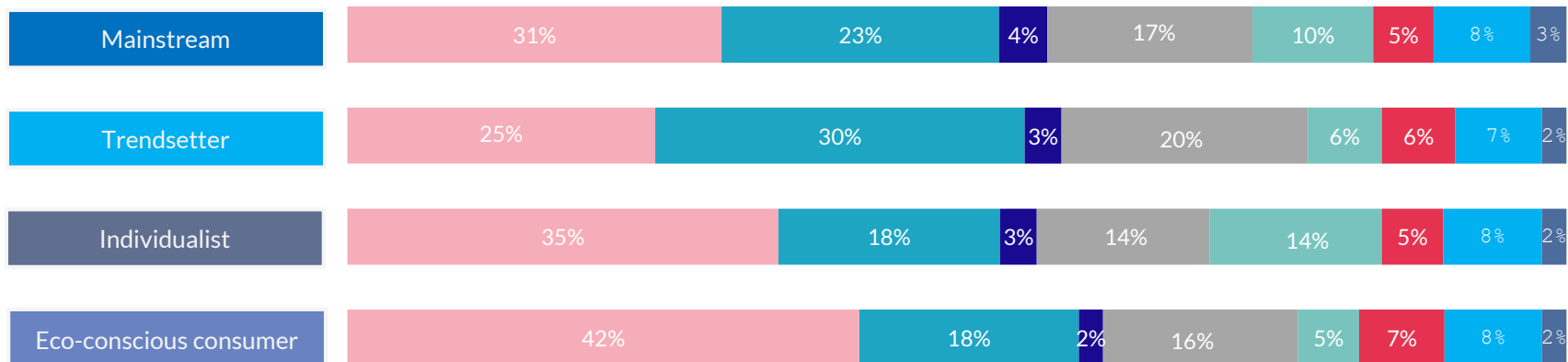
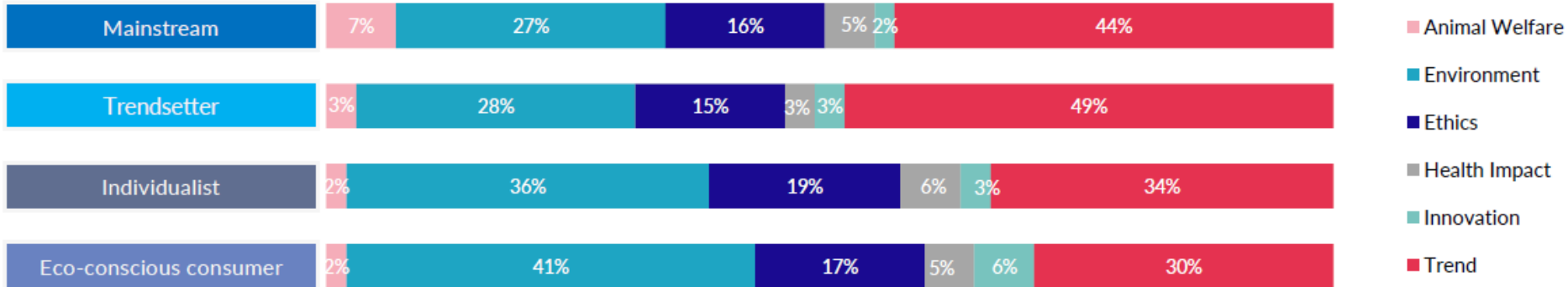| Segment	Bio-based Textiles	Ethical Fashion	Fair Fashion	General Sustainable Fashion	Natural Fabrics	Organic Fashion	Recycled Fashion	Support Local
Mainstream	31%	23%	4%	17%	10%	5%	8%	3%
Trendsetter	25%	30%	3%	20%	6%	6%	7%	2%
Individualist	35%	18%	3%	14%	14%	5%	8%	2%
Eco-conscious consumer	42%	18%	2%	16%	5%	7%	8%	2%

■ Bio-based Textiles   ■ Ethical Fashion   ■ Fair Fashion   ■ General Sustainable Fashion   ■ Natural Fabrics   ■ Organic Fashion   ■ Recycled Fashion   ■ Support Local

In total, 59.394 mentions of Sustainable Fashion topics were identified & analyzed   *Mentions of Bio-Based Textiles incl. Vegan Leather, Mushroom Leather and Algae Fabrics

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ECO-CONSCIOUS CONSUMER IS THE SEGMENT WHICH CARES MOST ABOUT THE ENVIRONMENT

Motivation per segment

Distribution motivation comments per segment

Segment	Animal Welfare	Environment	Ethics	Health Impact	Innovation	Trend
Mainstream	7%	27%	16%	5%	2%	44%
Trendsetter	3%	28%	15%	3%	3%	49%
Individualist	2%	36%	19%	6%	3%	34%
Eco-conscious consumer	2%	41%	17%	5%	6%	30%

In total, 73.954 mentions of motivations were identified & analyzed

# IF WE LOOK AT ALL TOPICS OF SUSTAINABLE FASHION, WE SEE THAT MAINSTREAM VALUES SERVICE

Topic drivers per segment

Mainstream

Topic	%
General Service	10%
Quality	9%
Design	8%
Trend	8%
Delivery Process	7%
Order Process	5%
Approach	5%
Environment	5%
Price	5%
Communication	4%

Trendsetter

Topic	%
Trend	11%
General Service	8%
Communication	7%
Environment	6%
Ethical Fashion	6%
Design	5%
General Sustainable Fashion	4%
Checkout/Payment	4%
Bio-Based Textiles	4%
Approach	4%

Individualist

Topic	%
Quality	7%
Design	7%
Price	7%
General Service	7%
Environment	6%
Trend	6%
Delivery Process	6%
Communication	5%
Order Process	5%
Variety	4%

Eco-conscious consumer

Topic	%
Environment	10%
Bio-Based Textiles	9%
Trend	7%
Design	6%
General Service	5%
Ethical Fashion	5%
General Sustainable Fashion	5%
Price	4%
Ethics	4%
Communication	4%

In total, 658.856 mentions of topics were identified & analyzed

MAINSTREAM AND TRENDSETTERS HIGHLY CARE ABOUT SERVICE, WHILE THE INDIVIDUALISTS OFTEN MENTION QUALITY AND PRICE
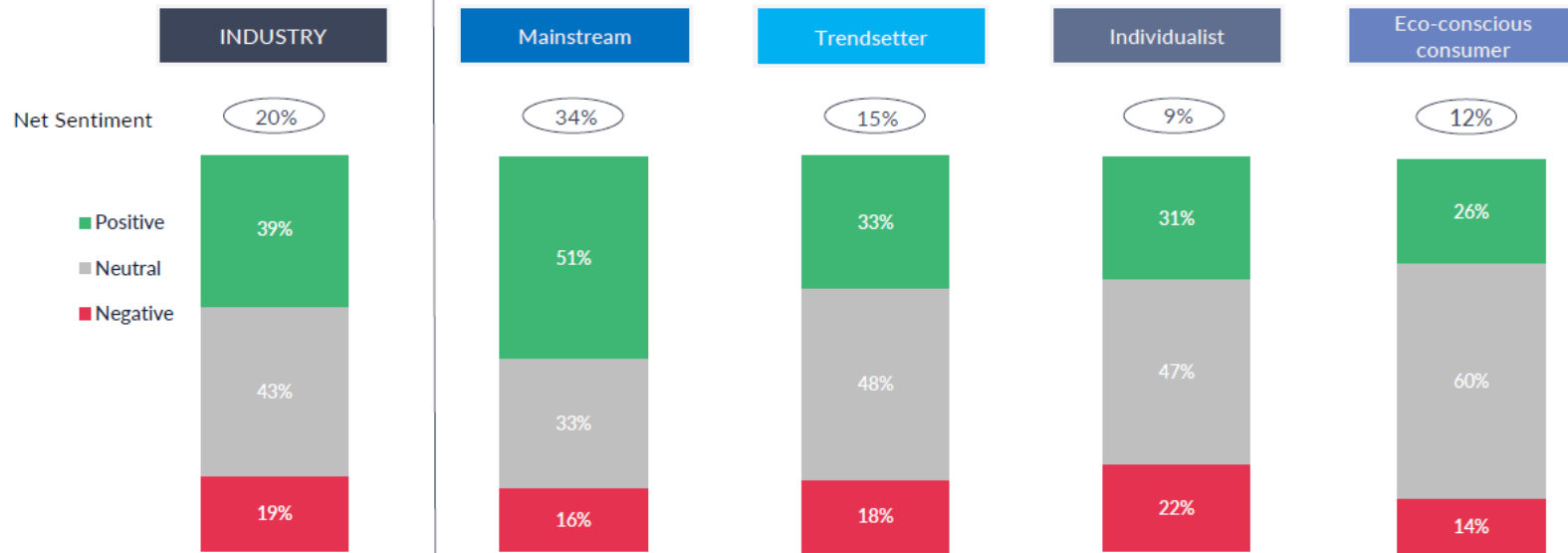
Product aspects and service per segment
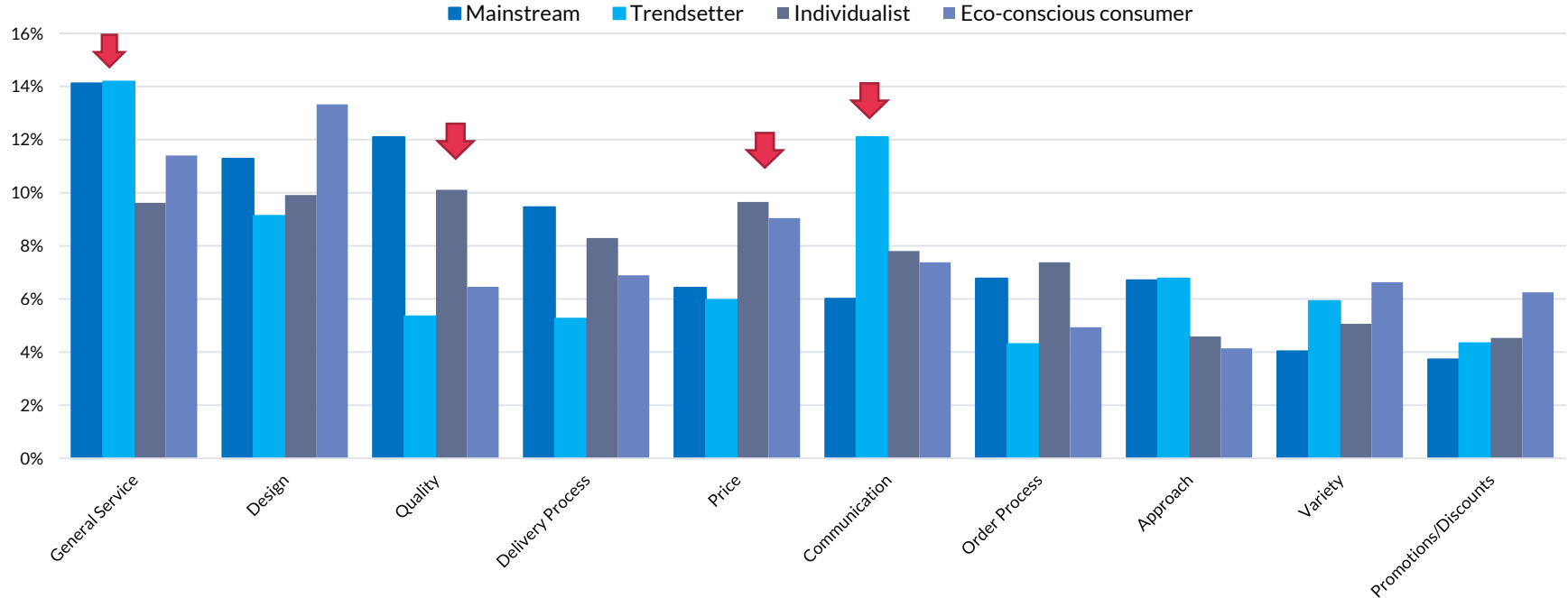
In total, 379:285 mentions of product aspects and service were identified & analyzed

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MAINSTREAM HAS BY FAR THE BEST NET SENTIMENT COMPARED TO OTHER SEGMENTS, WHILE INDIVIDUALISTS ARE THE MOST CRITICAL CONSUMERS

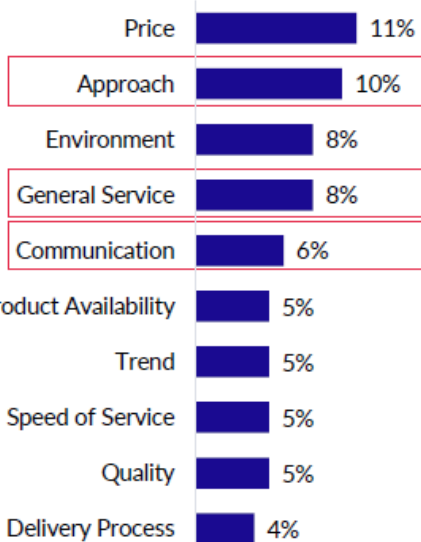*Sentiment per segment*

Discussion Sentiment, % of total messages

	INDUSTRY	Mainstream	Trendsetter	Individualist	Eco-conscious consumer
Net Sentiment	20%	34%	15%	9%	12%
Positive	39%	51%	33%	31%	26%
Neutral	43%	33%	48%	47%	60%
Negative	19%	16%	18%	22%	14%

In total, 658:856 mentions of themes were identified & analyzed

AMONG ALL TOPICS, MAINSTREAM AND TRENDSETTERS EXPRESS MOST COMPLAINTS ABOUT CUSTOMER SERVICE, ITS APPROACH AND COMMUNICATION

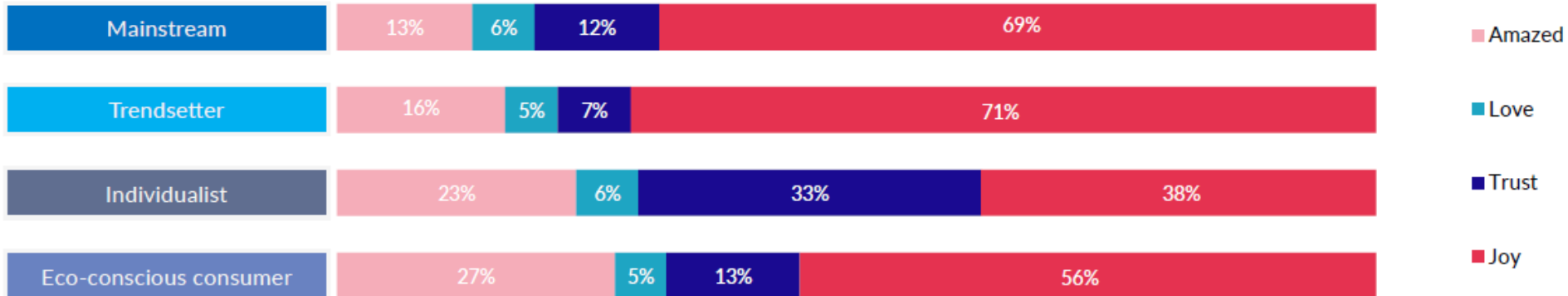*Negative comments for each segment*

Mainstream		Trendsetter		Individualist		Eco-conscious consumer	
Price	11%	Communication	13%	Price	13%	Environment	22%
Approach	10%	Approach	11%	Environment	12%	Price	8%
Environment	8%	Environment	9%	Communication	7%	Ethics	7%
General Service	8%	General Service	8%	Quality	6%	Product Availability	5%
Communication	6%	Price	7%	Approach	6%	Communication	5%
Product Availability	5%	Ethics	5%	General Service	6%	Approach	5%
Trend	5%	Trend	4%	Delivery Process	6%	General Service	4%
Speed of Service	5%	Variety	4%	Speed of Service	4%	Ethical Fashion	4%
Quality	5%	Quality	4%	Ethics	4%	Quality	4%
Delivery Process	4%	Product Availability	4%	Product Availability	3%	General Sustainable Fashion	3%

In total, 125:182 negative mentions were identified & analyzed

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THE MAIN POSITIVE EMOTION EXPRESSED BY THE MAINSTREAM AND TRENDSETTERS IS JOY, WHEN THEY WRITE ABOUT SUSTAINABLE FASHION TREND

Emotional drivers for sustainable fashion per segment

Distribution of emotional drivers per segment

Segment	Amazed	Love	Trust	Joy
Mainstream	13%	6%	12%	69%
Trendsetter	16%	5%	7%	71%
Individualist	23%	6%	33%	38%
Eco-conscious consumer	27%	5%	13%	56%

Legend:
- Amazed
- Love
- Trust
- Joy

N: 9.660 emotional conversations between 01/01/2019-16/06/2022

THE SUSTAINABLE & BIO-BASED SOCIAL MEDIA INSIGHTS DASHBOARD

- To display the results of the social media analysis in a comprehensible manner, a **dashboard containing all results** was created.

- The dashboard allows different kinds of **filter options**, so that the results can be looked into in a more granular way than looking at them statically.

- The dashboard is **updated with new input data on a daily basis** until November 30th, 2022.

- In the dashboard, viewers get an overview over **fashion trends, motivations behind sustainable and bio-based products, important product attributes of sustainable and bio-based products, sentiment deep dive, important brands leading the sustainable fashion movement and consumer segments.**

TREND

BIOTEXFUTURE

PERIOD

01.01.2019 — 16.06.2022

Level of Analysis
Alle

Fashion trend
Alle

Source
Alle

Product category
Alle

Segment
Alle

Sentiment
Alle

Brand
Alle

LEVEL OF ANALYSIS
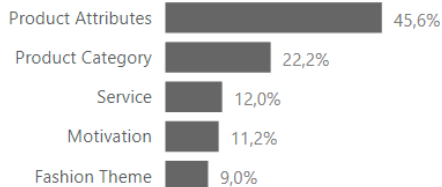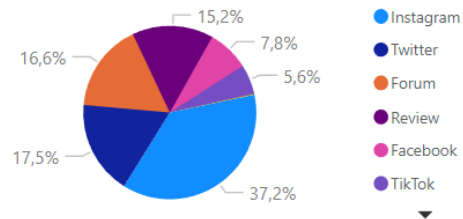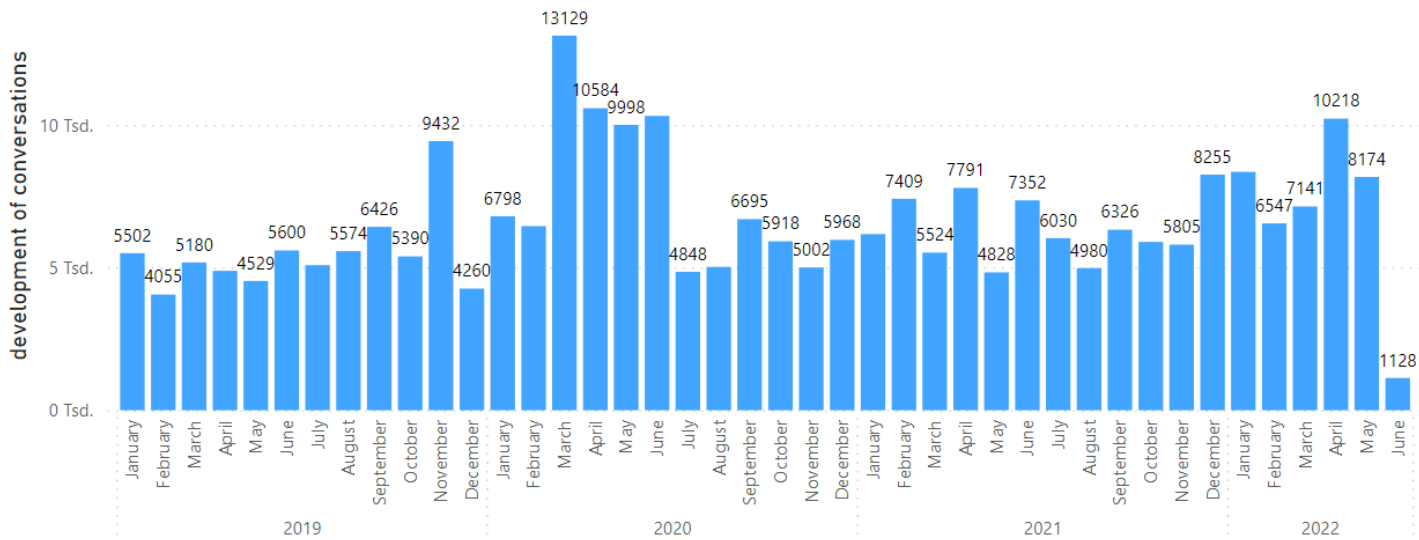
Product Attributes	45,6%
Product Category	22,2%
Service	12,0%
Motivation	11,2%
Fashion Theme	9,0%

SOURCES

- Instagram — 37,2%
- Twitter — 17,5%
- Forum — 16,6%
- Review — 15,2%
- Facebook — 7,8%
- TikTok — 5,6%

274571
#CONVERSATIONS

development of conversations

2019: 5502, 4055, 5180, 4529, 5600, 5574, 6426, 5390, 9432, 4260
2020: 6798, 13129, 10584, 9998, 4848, 6695, 5918, 5002, 5968
2021: 7409, 5524, 7791, 4828, 7352, 6030, 4980, 6326, 5805, 8255
2022: 6547, 7141, 10218, 8174, 1128

| TREND | FASHION TRENDS | MOTIVATION | PRODUCT ATTRIBUTES | SENTIMENT DEEP DIVE | BRANDS | SEGMENTS | COMPARISON |

OUTLOOK & IMPLICATIONS

WITH OUR RESEARCH, WE HELP ANSWER THE QUESTION HOW THE DIFFUSION OF BIO-BASED PRODUCTS CAN BE ACHIEVED

Next, together with our partners we will develop…

1. Target-group oriented communication and marketing concepts

2. Product variations according to each consumer segment

3. Different distribution strategies and channels

4. Pricing strategies for different consumer segments

MARKETING CONCEPTS TARGETING THE MAINSTREAM AND TRENDSETTER SHOULD FOCUS ON EMOTIONS AND SERVICE QUALITY

1. Target-group oriented communication and marketing concepts

MAIN-STREAM
- Focus on emotions (particularly joy)
- Communicate high quality and high service level
- Stress experiences made with the product / customer journey

ECO-CON-SCIOUS
- Focus on facts
- Joy & amazement as emotional drivers
- Communicate positive influence on the environment
- Stress rational facts & design options

INDI-VIDUA-LIST
- Focus on rational arguments
- Building trust is important
- Communicate high quality and positive influence on the environment
- Stress experiences made with the product & materials (e.g. vegan leather)

TREND-SETTER
- Focus on action-seeking content
- Communicate social factors of sustainable fashion
- Stress high service quality & trends

FOR TRENDSETTERS CELEBRITY-FEATURED VARIATIONS AND CUSTOMISED PRODUCT LINES ARE A POSSIBILITY

2. Product variatons according to each consumer segment

MAIN-STREAM
- Following trends
- High quality
- Innovative, creative, stylish variations
- Breathable materials

ECO-CON-SCIOUS
- Different design options (i.e. colours)
- Second hand, renewable variations

INDI-VIDUA-LIST
- Focus on rational arguments
- High material quality (vegan leather)
- Eco-friendly, healthy, durable variations
- Possibility to customise products

TREND-SETTER
- Product lines featured by celebrities / influencers
- Possibility to customise products

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INSTAGRAM AS A MAIN CHANNEL FOR ALMOST ALL CUSTOMER SEGMENTS, WHEREBY INDIVIDUALISTS ARE ACTIVE IN FORUMS

3. Different distribution strategies and channels

MAIN-STREAM
- Main channel: Instagram (almost 50 %)
- Stores as offline alternative: so customers can feel the fabrics → own experience matters

ECO-CON-SCIOUS
- Main channel: Instagram
- Forums are also very important to discuss subjects on ecofriendly-/sustainable fashion

INDI-VIDUA-LIST
- Very active in forums to communicate their experiences
- Rely heavily on products reviews

TREND-SETTER
- Active on Instagram & Twitter
- Communication with others is key (posting thoughts on the product, liking videos/pictures)
- Followers of eco-conscious accounts

PRICING STRATEGIES HAVE TO CONSIDER THE PRICE-SENSIBILITY OF EACH CUSTOMER SEGMENT

4. Pricing strategies for different customer segments

MAIN-STREAM

- Price sensitive
- Importance of quality
- Promotion / bundle pricing
- Penetration pricing (starting with lower prices to gain market share)

ECO-CON-SCIOUS

- Dynamic pricing (seasonal changes)

INDI-VIDUA-LIST

- Price sensitive
- Importance of quality
- Psychological pricing

TREND-SETTER

- Charging higher prices for special (featured) product lines

THANK YOU FOR YOUR KIND ATTENTION

FOR FURTHER INFORMATION ON BIOTEXFUTURE CONTACT

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Bundesministerium
für Bildung
und Forschung

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