



fractal

# EVERYWHERE, EMBEDDED COMMERCE

**IN 2023**

FUTURES BY FRACTAL | GLOBAL RETAIL - MODULE 2 | JANUARY 2023

# PRIMER

Everywhere commerce is an evolution of multi-channel commerce. Retailers are not only designing experiences for where consumers are present but further for products and services to fit seamlessly into the lives of people instead of the other way around. Many retailers are digitizing several aspects of the shopping journey, from front-end experiences such as discovery to back-end functions like supply chain management. Social media and entertainment platforms are improving their features to turn themselves into marketplaces. As a result, people are shopping while working out, working, driving, traveling.. just about anytime, anywhere.

However, there have been speed-bumps with the adoption of E-commerce. E-commerce did not achieve the expected growth and revenue that was predicted during the pandemic. Retaining consumers has proven to be difficult, with ineffective, high-spend consumer acquisition and increased privacy regulations. Macroeconomic contexts of rising inflation and a recessionary environment are also impacting spending habits.

Amidst these shifts, we envision an opportunity for Everywhere, Embedded Commerce; where buying and purchasing feel more organic to the consumer, as opposed to the intrusion or inconvenience ads can feel like today. With cohesive integration across channels and the presence of hybrid stores, the entire process can be experienced more naturally. In the following pages, retailers can learn about integrating Everywhere, Embedded Commerce into their everyday ops without the upheaval of their existing business model.



**"Now, E-commerce sales are plateauing as shoppers return to physical stores. The share of total shopping that is represented by E-commerce grew from 11.1 percent in 2019 to 14.6 percent in 2020, where it's stayed"**

**-Excerpt from the Washington Post, 2022**

“

Everyone kind of bought into the myth that E-commerce is going to permanently accelerate. But in order for that to happen, you have to have a fundamental change in behavior...

-Andrew Lipsman, Insider Intelligence Analyst for Retail & E-commerce

”

# CONTENTS

*In this document:*

## \* KEY TRENDS

- 1 RETAIL STARTS IN ONE CHANNEL, ENDS IN ANOTHER
- 2 PHYSICAL STORES AS HOTSPOTS FOR EXPERIENCE
- 3 TRANSPARENCY THROUGH INTER-CONNECTEDNESS
- 4 ENGAGEMENT TO GO HAND-IN-HAND WITH EMOTIONS
- 5 MICRO-COMMUNITIES: CHANNEL FOR THE FUTURE

## \* EVERYWHERE, EMBEDDED COMMERCE IN ACTION

## \* BEHIND THE SCENES



# EVOLUTION OF E-COMMERCE

## 1.0: Multi-Channel

The traditional brick-and-mortar gave way to electronic-commerce as retailers set up online businesses. Prominent among these became direct-to-consumer channels (DTC) where businesses could reach out to the consumers directly, removing any middlemen.

1. WARBY PARKER

Find your perfect frames

Good things await you

2. DOLLAR SHAVE CLUB

WELCOME TO YOUR BETTER BATHROOM

SHAVE BUTTER

3. Nike Cuts Out the Middleman

Direct-to-consumer sales as a percentage of Nike's total Nike brand revenue\*

Year	Total direct-to-consumer sales (%)
'10	15.0%
'11	18.0%
'12	20.0%
'13	22.0%
'14	24.0%
'15	26.0%
'16	28.0%
'17	30.0%
'18	32.0%
'19	34.0%
'20	36.0%
'21	38.7%

\* Nike's fiscal year ends May 31  
Source: Nike

In the last ~5 years

## 2.0: Omni-Channel

With everywhere commerce, retailers reached out to consumers wherever they were through various channels: in person, through mobile applications, social media, and voice capabilities. Boundaries between brand outreach, user-generated content, social media platforms, retail stores, and E-commerce stores began to blur.

3. T.J. Maxx Parent Launches Online Platform as Coronavirus Persists

T.J.X Cos. to launch HomeGoods e-commerce platform as shoppers remain reluctant to visit stores in pandemic

4. BED BATH AND BEYOND ADOPTS CURB-SIDE PICK-UP

5. GUCCI UNVEILS IN-APP AR TOOL

Where we're headed

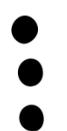
## 3.0: Everywhere, Embedded

Now is the time to go beyond everywhere to everywhere and embedded commerce. Here, products and services will be made discoverable and buyable directly from the source with embedded payment options. Retailers will be able to tap into first-party consumer data to personalize user experiences in the phy-gital world. Physical stores will become hotspots of experience with pop-up stores, digital fitting rooms, magic mirrors, and cashier-less checkouts.

6. SHOPPING ON TIK-TOK

7. BURBERRY X MINECRAFT

8. AMAZON STYLE'S REIMAGINED FITTING ROOMS



# WE STUDIED AND ANALYZED:

Across 3 continents,



800 participants in a behavioral survey



15 interviews with industry experts



6 interdisciplinary workshops mapping the future of Retail



10 in-depth interviews with shoppers



20 store visits & 12 brand audits



# TO DERIVE INSIGHTS, FRAMEWORKS, AND RECOMMENDATIONS FOR RETAIL 2023 & BEYOND

 [Click for process details](#)

**RETAIL STARTS IN ONE CHANNEL, ENDS IN ANOTHER**

How might retailers accurately identify where an individual is physically & cognitively to create cohesive, contextual experiences?

01

**PHYSICAL STORES AS HOTSPOTS FOR EXPERIENCE**

How might retailers reimagine physical spaces to be experiential, functional, brand-reinforcing and purposeful?

02

**TRANSPARENCY THROUGH INTER-CONNECTEDNESS**

How might retailers build visibility, assurance and accountability across touchpoints?

03

**ENGAGEMENT TO GO HAND-IN-HAND WITH EMOTIONS**

How might retailers trace and leverage behavioral markers to create omni-channel presence that maps to dynamic purchase journeys?

04

**MICRO-COMMUNITIES: CHANNEL FOR THE FUTURE**

How might retailers identify, integrate and innovate with core communities?

05

# TRENDS TO OPPORTUNITIES

# 1 KEY TRENDS TO WATCH FOR



Drivers of growth in the world of embedded & experience-led commerce

TREND 1

# RETAIL STARTS IN ONE CHANNEL, ENDS IN ANOTHER

\* Blurred lines between physical and digital

\* Frictionless dip-in-dip out experience

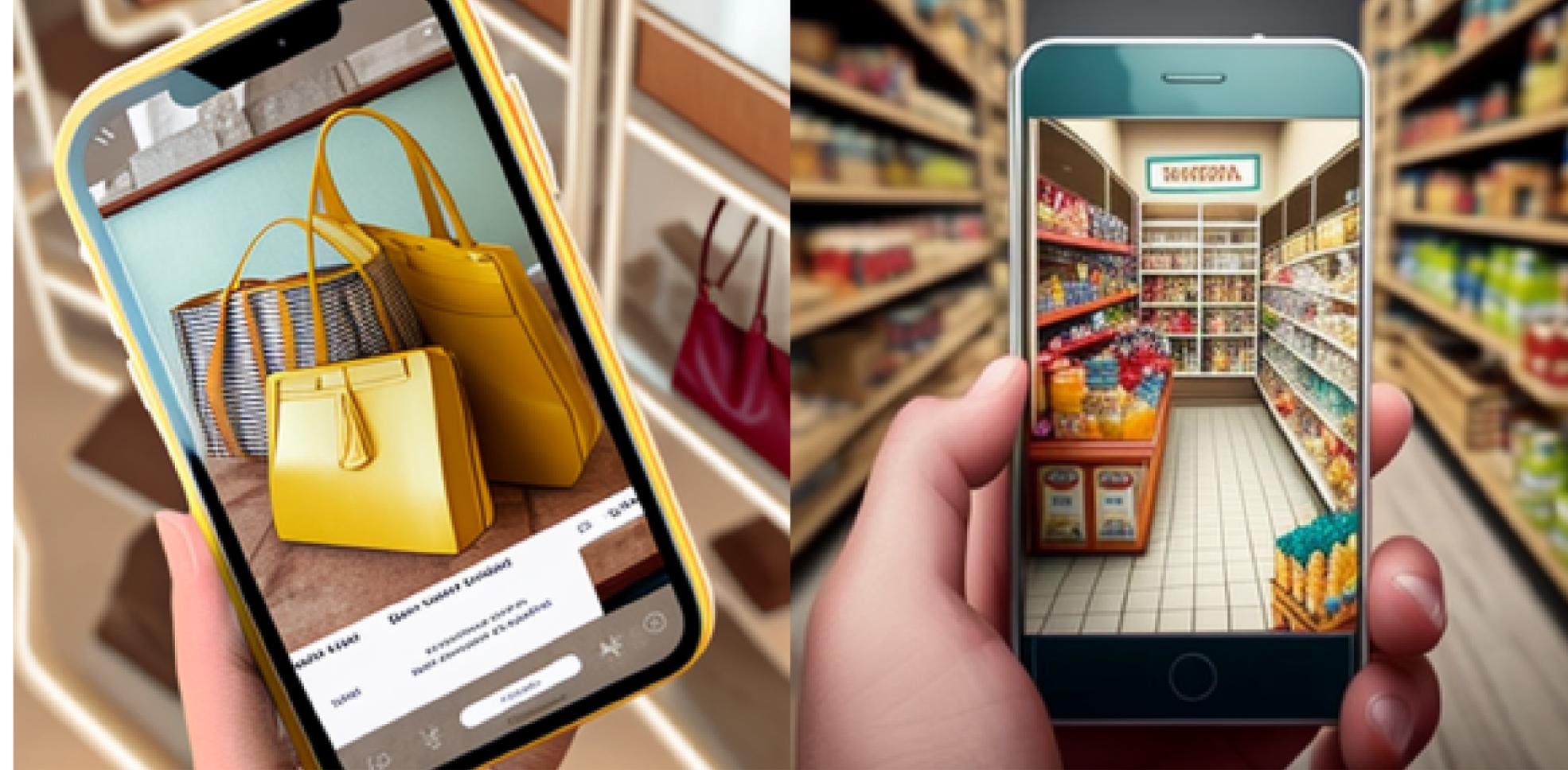


Fig 1.A

## DESCRIPTION

Immersive and embedded experiences are growingly attractive to shoppers; reimagining the physical store can provide a clear path for consumers to smoothly transition from the store to digital channels, and back to their present setting.

- A compelling omni-channel offering is a requirement for survival but just being present isn't enough. Retailers will need to match the expectation consumers have for novel experiences. Novelty can come in the form of high-tech immersion, high-functionality and/or high-connectivity.

# STORIES IN FOCUS



Fig 1.B

## Nordstrom

Nordstrom integrated physical and digital with the launch of online order & pick-up at their stores. They expanded their store fulfillment capability to meet the rising demand for BOPIS\* and curbside pick-up. The company's revenue grew further as it integrated its store, fulfillment centres, and online inventory to create a cohesive experience.



**Nearly 1 out of 5 online merchandise orders placed this holiday season globally were by customers using BOPIS\***  
-Salesforce (2022)

\*Buy Online, Pick Up In-Store



**Starbucks Rakes in \$2.1 Billion in Reward Revenue**  
-Motley Fool (2022)

## Starbucks

Consumers accumulate points when they make purchases with a Starbucks card. Their recent integration with Spotify allows shoppers to view the songs played at Starbucks and to add them to their playlist on their devices. Direct & indirect rewards as a mechanism of relevance.

Fig 1.C



## How Disney Creates A Magical CX With Digital Transformation

Fig 1.D



Fig 1.E

## Disney

My Disney Experience aims to be used for bookings and itineraries; the MagicBand (RFID chip-enabled wristbands) connects functional aspects such as access to theme parks, hotel rooms, fast pass lanes but also for moments of delight while makes purchases.



TREND 2

# PHYSICAL STORES AS HOTSPOTS FOR EXPERIENCE

\* No more retail-only stores

\* Identify and reinforce reason for existence!



Fig 2.A

## DESCRIPTION

Instead of just purchasing products, hybrid retail stores can provide consumers with a comprehensive, all-in-one experience.

- 
- It's important for Retailers to identify and own a strength (read differentiator) rather than trying to do a little of everything. Different consumers would look at a store from different perspectives based on the intention they shop with. Some would want a functional store where they can quickly finish shopping while others might look for embedded experiences.

When in doubt, dominantly functional with a hint of novel is a sound strategy that connects with several consumer segments across categories today.

# STORIES IN FOCUS



Fig 2.B

## Story

Story is a 2,000 sq. ft pop store in Chelsea, New York that reinvents itself every 4-6 weeks. It blends the format of a magazine, exhibition, museum, and retail store with storytelling. Artifacts are selectively hand-picked to create an ever-changing, high social currency experience.



## ••• Barnes and Noble

Having faced setbacks and losses in response to competition from the likes of Amazon, it is preparing for a comeback as more people gravitate towards physical stores, this time bringing the familiar with more contemporary offerings of community spaces & coffeeshops; and leaning into the identity of "the third space".

## Barnes & Noble To Open 30 Stores Next Year As Big-Box Retailers Battle Back

Fig 2.C

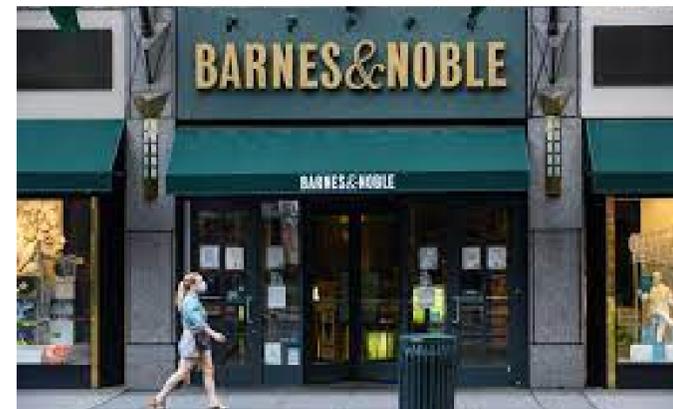


Fig 2.D



A store boom: Retailers in the US have announced 4,432 store openings versus 1,954 closings

- Insider Intelligence (2022)



Fig 2.E

## Paper Source

“—  
Walking into this stationery store is like walking into Pinterest. I love stores like Paper Source, and also Christmas markets Christkind Market such as pottery markets and farmers markets. One wants to buy from such pretty places for it feels so intimate and beautiful

- 27 years, Female

TREND 3

# TRANSPARENCY THROUGH INTER-CONNECTEDNESS ACROSS THE VALUE CHAIN

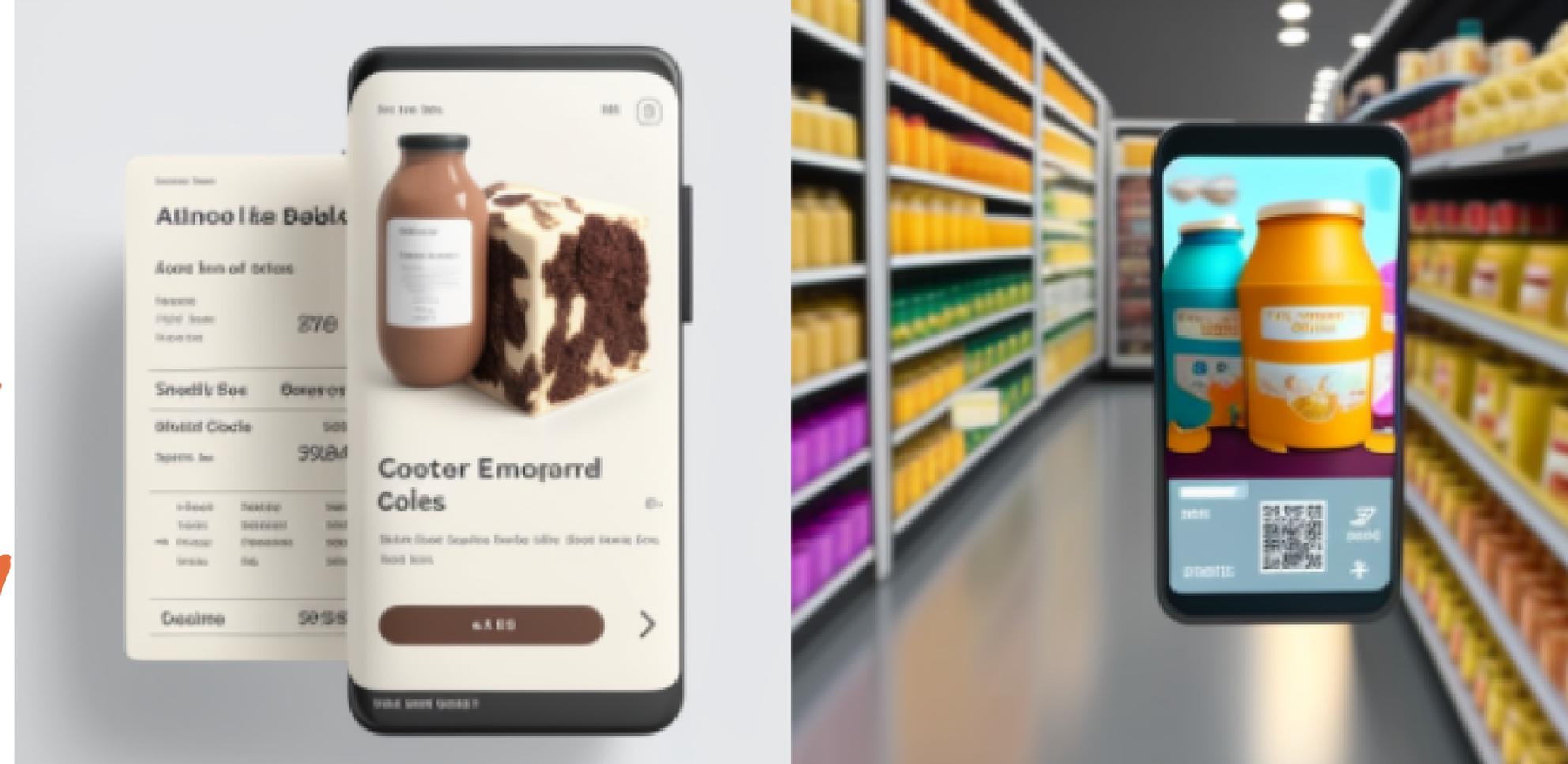


Fig 3.A

\* Single source of truth  
for inventory and orders

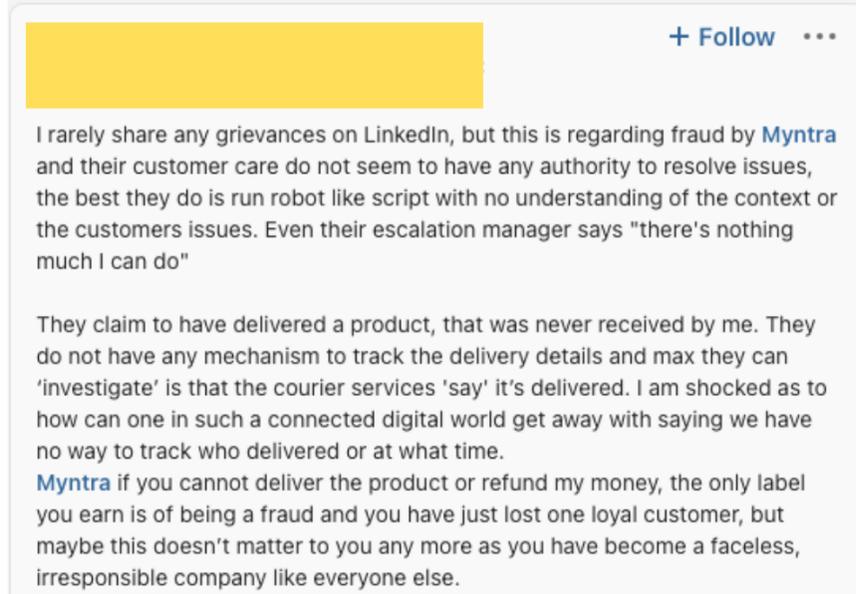
\* Making intangible, behind  
the scenes touchpoints  
more visible

## DESCRIPTION

Retailers will be able to provide transparency and clear communication across all channels by providing information about all inventories on online and physical platforms. Data-driven fulfillment ensures that products are well merchandised, of quality, and ready to meet shopper demand, with relevant, contextual tracking details.

All consumers understand that friction is natural, but don't want their loyalty to be taken for granted. The time between negative experiences and negative media is small. Accountability means owning up to past mistakes and being proactive with ongoing experiences to prevent surface-level customer/employee complaints becoming public trust & reputation crises.

# STORIES IN FOCUS



## Airing grievances on any & all public platforms

Consumers are not shying away, in fact are incentivized and validated to post grievances, big and small on social platforms (LinkedIn as the latest platform of choice despite being a professional network!). Bitter experiences with businesses while often short-lived, are placed in high visibility spaces with the potential for bad PR and lasting collective-digital memory.



**Globally, 54% of people had a more favourable view of brands that responded to customer service questions or complaints on social media.**

-Ledgview Partners (2021)



## Unilever

Unilever was one of the first to commit to greater transparency and transformation. As early as 2018, Unilever announced its push for transparency in influencer marketing, in the larger digital space and its increased capabilities in measuring impact. They publicly provided a list of palm oil suppliers and grievance reports.

### How we're using tech for more transparent, traceable supply chains

Published: 25 November 2022 • Average read time: 4 minutes

Groundbreaking solutions like satellite imaging and artificial intelligence are helping us better understand areas at risk of deforestation and those that have high potential for regeneration.

Fig 3.C



Fig 3.D



Fig 3.E

## LVMH

LVMH has developed blockchain technology to track luxury goods and fight counterfeit sales. Louis Vuitton and Parfums Christian Dior are the amongst the first brands to use LVMH's blockchain platform - 'Aura.'



**Aura, a blockchain consortium has now created more than 15 million digital tokens that connect luxury products to a data portal.**

- Euro News (2022)



TREND 4

# ENGAGEMENT TO GO HAND-IN-HAND WITH EMOTIONS

- \* Purchase decisions driven by context, values & identity
- \* Hidden moments of connection emerge inter-channel



Fig 4.A

## DESCRIPTION

Consumer purchases are driven by context and mental models, behavioral analytics can be used to decode emerging consumer micro-moments. The consumer journey will differ for each category and will be based on not just demographics but psychographics and shifting situational factors.

- 
- 
- If retailers aim to stay relevant in the fast-changing lives of their consumers, they could start by identifying inter-channel moments that matter, as consumers growingly experience physical & digital interchangeably and all at once.

# STORIES IN FOCUS

“  
"In stores, traffic increased nearly 25%. The digital business, traffic to our E-commerce sites and apps globally increased by nearly 50%. This speaks to the strength of our Omni operating model."  
—”

Lululemon CFO Meghan Frank

## Lululemon

Lululemon has a strong social media presence and is one of the pioneers of the athleisure industry. They have an experiential store in Chicago that boasts of many fitness studios and a fuel bar with healthy food and smoothies. There is also space for their consumers to try out gear at different classes (in-context).

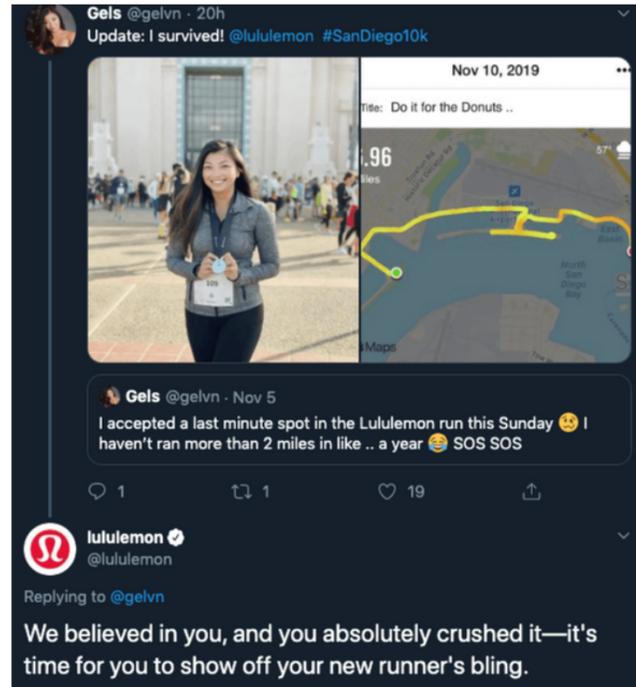


Fig 4.C



## Trader Joe's

Eager-to-help employees in colorful shirts, handwritten signage, limited-run experimental products, glo-cal flavor combinations and curation of products to resemble that of a boutique store among others are some of the ways Trader Joe's remains a shopper favorite.



Fig 4.D

## Ikea

A visit to the IKEA store is deeply immersive with so much for all age groups to see, touch, feel, and experience throughout the store. A cafeteria is intentionally placed in the middle of the shopping journey to give pause. Their planning studios allow shoppers to explore and make informed purchases with consultation, curation and visualization.



**E-commerce share of sales increased from 18% to 30% as IKEA transformed its stores to also serve as fulfillment points, revamped its website, and continued its rollout of the Ikea app**

-Retail Dive (2021)



TREND 5

# MICRO-COMMUNITIES: CHANNEL FOR THE FUTURE

\* Authenticity and Relatability as levers

\* Go-to-community over Go-to-market



Fig 5.A

## DESCRIPTION

Look for opportunities to redefine marketing by identifying, integrating and innovating with niche communities and superfans. Consumers want brands to feel authentic and relatable; to address not just a sense of value but a sense of belonging.

- 
- 
- By curating strong communities with existing consumer sets based on shared identity or interests, retailers will be able to emerge stronger than ever. Creator communities or fan communities foster bonds and have a deep-rooted impact as consumers do for each other what no marketing campaign could - they teach, learn, exchange, empathize and in doing so, create new meaning & utility for products.

# STORIES IN FOCUS

For Harley-Davidson, building a brand community, meant survival



Fig 5.B

## Harley Davidson

Harley Davidson launched the Harley Club which gave exclusive benefits to members such as special insurance coverage, access to events and other riding perks along the way.



Airbnb has roughly 5.6 million active listings in 220 countries, and 60% of its users are millennials.

- The Zebra (2023)

## Airbnb

Airbnb has created successful and strong communities by virtue of converting homes into luxury stays with a personal touch, building relationships and learning about different cultures. The company also started 'Airbnb Experiences' which are activities designed and hosted by locals.



Fig 5.C

How LEGO Used  
Crowdsourcing to Achieve  
21st Century Success

Fig 5.D



Fig 5.E

## Lego

Lego nurtures a product community. Through its Lego Ideas project, it asks fans to submit construction ideas and the selected ones can be found on the shelves. Consumers are not just participants but also co-creators of Lego designs. Lego Ideas has approximately 1.5 million members who have submitted more than 33,000 project concepts. 30 co-created kits have been brought to the shelf so far!



# KEY TRENDS

Trends that go un-leveraged can become threats, turn them into opportunity instead.



## OPPORTUNITIES



- 1 How might retailers accurately identify where an individual is physically & cognitively, to create cohesive, contextual experiences?
- 2 How might retailers reimagine physical spaces to be experiential, functional, brand-reinforcing and purposeful?
- 3 How might retailers build visibility, assurance and accountability across touchpoints?
- 4 How might retailers trace and leverage behavioral markers to create omni-channel presence that maps to dynamic purchase journeys?
- 5 How might retailers identify, integrate and innovate with core communities?

## ILLUSTRATIVE DIRECTIONS TO WIN IN 2023 & BEYOND



### NOW (~1 YEAR)

- Shelf analytics 2.0 using synthetic data
- Behavioral segmentation to decode the purchase journey
- Optimized search engines and user interface

### NEAR (1 TO 3 YEARS)

- Two-way digital communication using AR-VR, 3D techniques
- Contactless transactions & checkout-free stores

### NEXT (3 TO 5 YEARS)

- Implementation of Holograms and Web3
- Gamified research or simulations in the metaverse
- Experience stores & immersive purchase made more commonplace

# 2 EVERYWHERE, EMBEDDED COMMERCE: PLAYBOOK SNAPSHOT



Fractal Futures Toolkit that leverages  
AI with Engineering & Design

# ROLE OF DATA AND AI **IN** EMBEDDED COMMERCE

## CONVERSATIONAL AI IN OMNI-CHANNEL ENGAGEMENT **01**

- Seamless engagement can be created across channels by leveraging AI chatbots, reducing human effort
- Ex. A consumer who is looking for a product on an app can be easily directed to physical stores by communicating availability and offers through a chatbot

## TRANSPARENCY THROUGH SINGLE SOURCE OF TRUTH **02**

- Data orchestration across retail functions should represent one cohesive experience that aims at building consumer trust via transparency
- Robust data strategy and governance can help ensure a smart and efficient supply chain with the implementation of Responsible AI

## RELEVANT AND DEEPLY CURATED CONTENT **03**

- Personalization beyond demographics can help retailers use relevant and appropriate engagement tactics
- Other data points beyond consumer data remain under-leveraged; opportunity to drive communication that is hyper-curated without feeling creepy or intrusive

## INTER-CONNECTEDNESS BETWEEN ONLINE AND OFFLINE CHANNELS **04**

- Efficient search engines on brand websites and a smooth click experience from app to website to aggregator platform is key to creating seamless integration
- Pick-up, exchange and return processed can be further streamlined across channels to reduce friction even after a sale is done

# DRIVING TRANSPARENCY & VISIBILITY WITH AN ALIGNED SOURCE OF TRUTH

Data centralization and AI predictions should represent a cohesive business strategy; can help comply with Responsible AI guidelines

## 01 Use Case-Driven Capabilities

### Visibility and performance management

- KPI dashboards
- Near real-time data
- Search and report

### Predictive alerts

- Business rules-based logic
- Alerts with severity levels
- Key performance “predictors”

### Rapid response

- Optimization analytics
- Simulations & What If scenario planning
- Root cause analysis

### Optimization and E2E orchestration

- Deploying information and action plans
- Execution compliance
- Collaborative execution

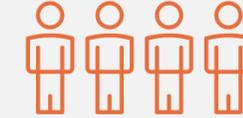
## 02 Integrate predictive modeling with operational execution

### Cross-functional ownership and KPIs

- Cost to serve
- Perfect order
- Net promoter score
- Environmental, social, and governance (ESG) performance
- Order cycle times



AI/Robots



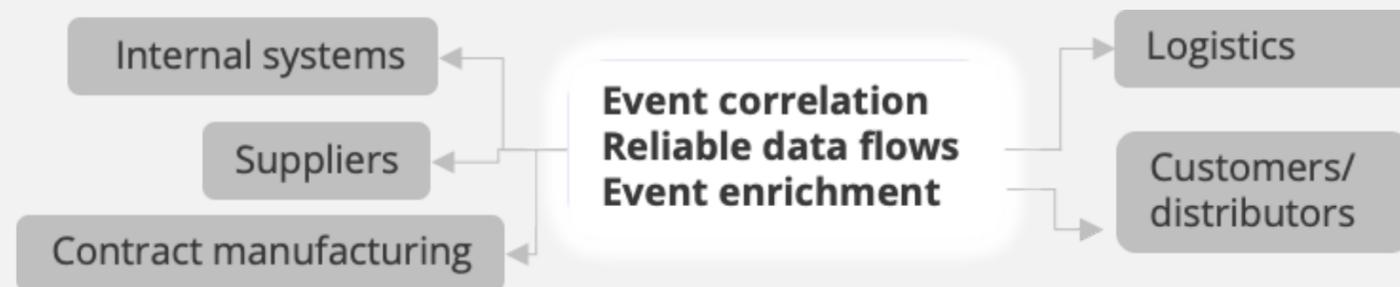
Human



Adaptive

## 03 Robust data strategy and governance

Ingest a wide range of structured and non-structured data within and outside a company



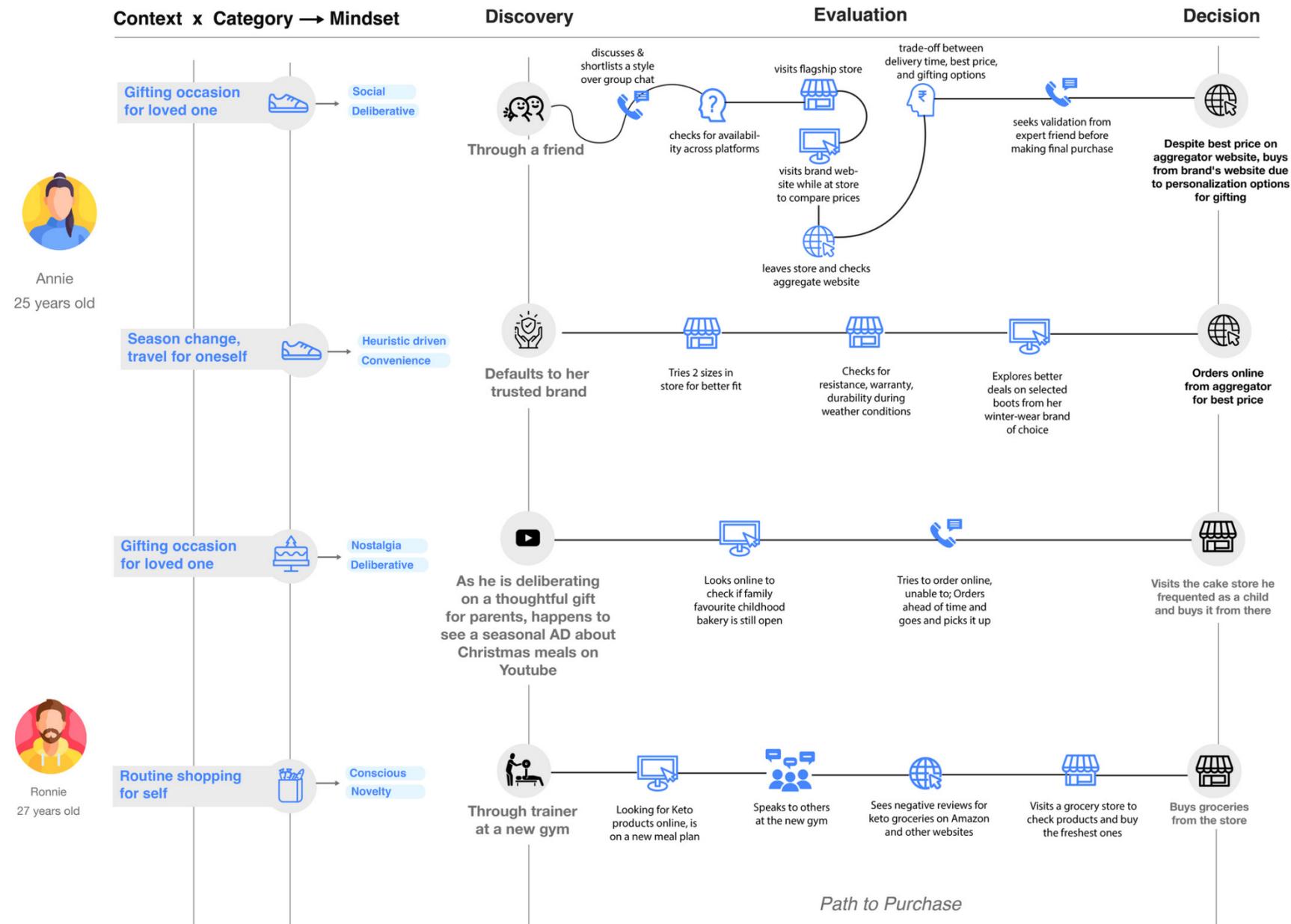
# BEHAVIORAL MARKERS TO CAPTURE DYNAMIC PATHS OF PURCHASE FOR FLUID SEGMENTS IN THE MOMENT

## IMPLICATIONS

- What matters to people changes dynamically; locking them into a wrong path will lead to friction and missed opportunities
- Consumers from the same demographic group can fall into different behavioral segments; the same consumer can operate with different purchase rules
- Path to purchase is driven by Context X Category

## RECOMMENDATIONS

- Run experience audits (ex. video analytics, in-store walk throughs) to unlock hidden moments of delight, discovery and evaluation
- Play to strengths. Leverage a data-driven strategy to decide which channels to own, instead of trying to be present in all
- Step away from traditional routes, cater marketing to merchandising in the naturally primed shopping environments the person is in
- Leave breadcrumbs between the digital and physical
- Assess behavioral indicators at each step in the journey, leverage data to capture emotional markers, decode micro-moments, and adapt offerings



### Illustrative Snapshot of:

- 2 consumers from the same target segment with distinct purchase journeys. Context x category -> Active Mindset
- The same person has a different journey with a different context
- Two people in the same context have a different journey
- Physical & digital co-exist in a messy overlapping way, they are not distinct for consumers anymore



# GET IN TOUCH

*As you craft your way ahead, we would love to engage more deeply in a conversation with you to discuss:*

- Building resilient Retail organizations by powering every human decision in the enterprise
- Leveraging customer analytics spanning across acquisition, engagement, retention, and growth
- Improving the Inventory ROI and profitability by enabling intelligent merchandising decisions across Plan to Sell cycle
- Enabling an insight and demand-driven supply chain by leveraging advanced analytics and intelligent automation
- Helping boost sales, and productivity to reduce costs across every facet of store operations
- Operating in today's 'Data Economy' using a Modern Data Estate

*Questions, thoughts, ideas?*

Let's talk: [Retail@fractal.ai](mailto:Retail@fractal.ai)

 You just finished **Module 2: Everywhere, Embedded Commerce**  
*Thank you for reading!*

*Module 1:*

Navigating to Win in 2023

**UPCOMING MODULES.....** *WHAT'S IN STORE*

*Module 3:*

Retail Health

*Module 4:*

Environmental, Social and Governance (ESG) in Retail

*Module 5:*

Emerging Shopping Missions, Mindsets & Moments

*Module 6:*

Role of Data, AI & Automation in Retail

For more information

Contact  [Retail@fractal.ai](mailto:Retail@fractal.ai)

# BEHIND THE SCENES

PROCESS, TEAM  
AND REFERENCES



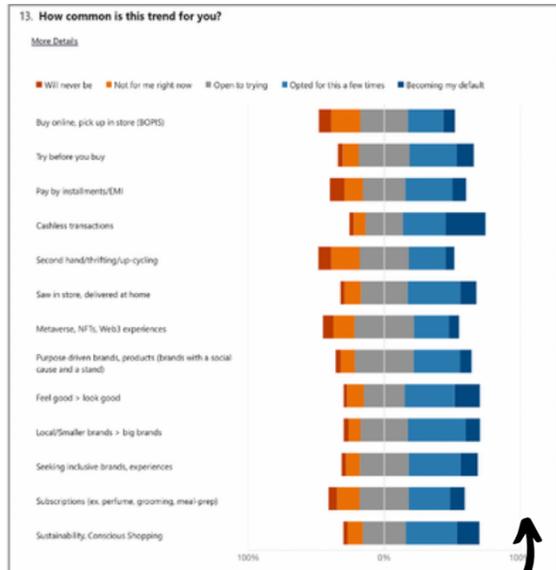
# PROCESS OVERVIEW

*AI meets human insight for Applied Foresight*

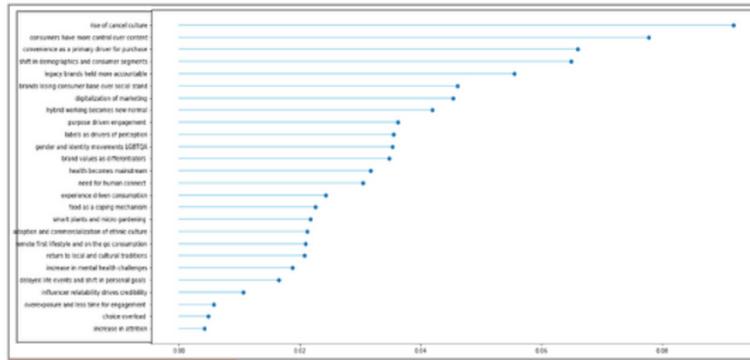


← [Click to see what we studied](#)

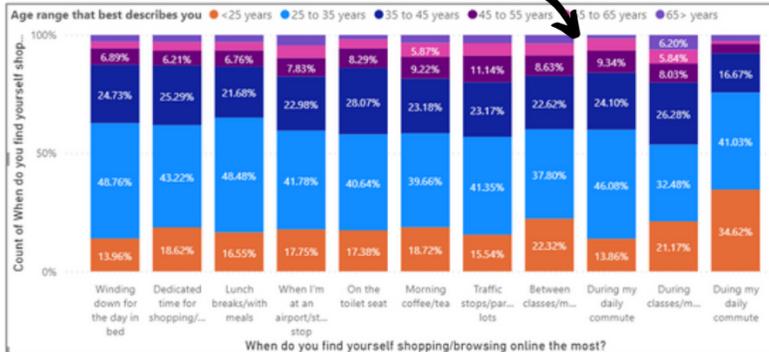
# SIGNAL SCAN, TREND WORKSHOPS AND EMOTIONS UNCOVERED IN A CONSUMER DIPSTICK



Measurement model



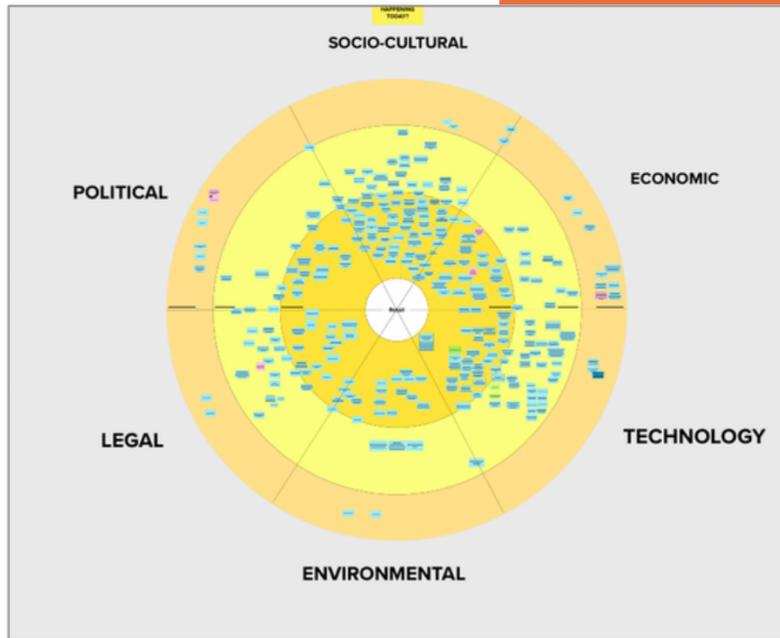
AI models



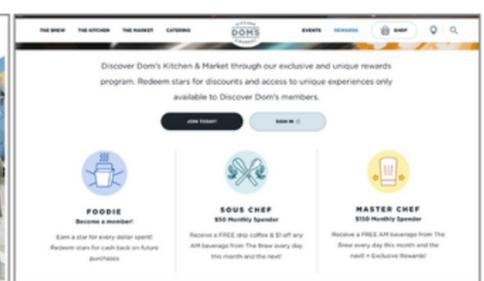
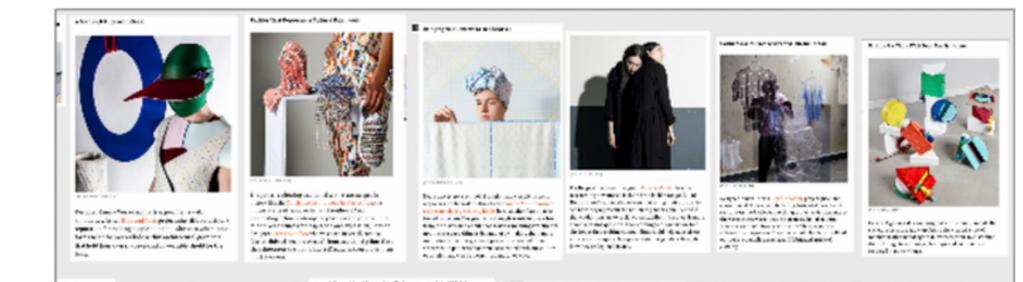
In-person store visits



PESTLE Scan



Hybrid Workshops & Hackathon



# MEET THE TEAM

Sangeetha Chandru: Chief Practice Officer Retail | Analytics & AI

Ann Hintzman: Chief Design Officer | Fractal Experience

Satish Kumar: Principal Consultant | Retail Advisory

Sharada Karmakar: Engagement Manager | Retail AI Strategy & Enablement

Shivani Gupta: Lead Behavior Architect | Fractal Dimension

Ashna Taneja: Decision Science Consultant | Fractal Dimension

Lavanya Julaniya: Senior Design Consultant | Fractal Experience

Gurjyotkaur Bindra: Design Consultant | Fractal Experience

Shagun Parab: Design Consultant | Fractal Dimension

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6. [TikTok shopping](#): Search Engine Journal
7. [Burberry X Minecraft](#): Burberry Website
8. [Amazon's Fitting Room](#): The Verge

- 3.A Midjourney
- 3.B Screenshot of a consumer complaint on LinkedIn
- 3.C [Unilever headline](#): Supertrace
- 3.D [Unilever image](#): Supertrace
- 3.E [LVHM blockchain image](#): LVHM



This icon in the module is a link to the source of the respective statistics

- 1.A Midjourney
- 1.B [Nordstrom curbside pickup](#): Rise News
- 1.C [Starbucks scanner](#): Starbucks Stories and News
- 1.D [Disney Headline](#): The AI Blog
- 1.E [Disney's magic band](#): IBS Intelligence

- 4.A Midjourney
- 4.B [Trader Joe's friendly employees](#): Insider
- 4.C Lululemon's Twitter image
- 4.D IKEA Image: Unsplash website

- 2.A Midjourney
- 2.B [Story Pop-up store](#): SEGD
- 2.C [Barnes and Noble Headline](#): Bisnow
- 2.D [Barnes and Noble image](#): Fortune
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- 5.A Midjourney
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- 5.C [Airbnb app + Airbnb Home](#): Hoterlier India
- 5.D [Lego Headline](#): Crowd Sourcing Week
- 5.E [Lego contest and co-creation](#): The Brother's Brick