RADICAL RETAIL REPORT

TRENDWATCH 2023

NEXER

CONTENT

RADICAL RETAIL IN A BANI-WORLD

Multiple crises of different kinds in parallel with technological development have pushed the retail arena to transform greatly during the last years. World Economic Forum has coined the term "polycrisis" to describe how different crises today interact and create a compound effect, and the term BANI (brittle, anxious, non-linear, incomprehensible) is increasingly used to describe the state of the world. During the pandemic, physical retail went through huge challenges that induced many profound challenges. For example, curbside pickup was introduced, delivery networks were built out and many retailers drastically decreased their physical store space. At the same time, global value chains were challenged, and retailers had to start questioning how resilient their operations are.

Simultaneously, big shifts are happening in the digital sphere. The internet is going through a paradigm shift towards the metaverse and Web3, which has the potential to fundamentally change the structure and user experience of the internet. Users are becoming more and more critical towards explicit advertising, and algorithms are changing in a way that makes it increasingly difficult to "buy transactions". And maybe most revolutionising, the development in generative AI is changing the playing field in ways that we can not yet imagine.

It is clear that retailers have to re-evaluate the logic by which they exist and operate in the digital realm. The challenges do not seem to end there. IMF predicts that one third of economies globally will be in recession during 2023, the pressure from climate change induced uncertainties are increasing and geopolitical instabilities seem to persist for a while.

The time of cheap labour, raw material and energy is over, and there is a high probability that venture capital will become more restrictive in helping to sustain unprofitable businesses. In cities, real estate companies are increasing rents at a pace that makes it hard for many retailers to manage.

What is the future of commerce that will be born in the trenches of these challenging years? The Radical Retail Trendwatch 2023 takes off from last year's insights, updates the five major shifts in the current retail transformation, reviews the hottest technological development and explores what business concepts to keep an eye on towards the future.

Happy reading.

Lars Kry, CEO, Nexer Group

THE REPORT IN 3 MINUTES

Radical Retail is a report series that follows the development in retail with a technology focus. Nexer Group and Kairos Future are working together with experts to distil the most important insights about the current trends in retail and what they might mean for the future. The report series is meant to act as a practical guide for any retailer that wants to better navigate towards the future.

THE INSIGHTS, IN ESSENCE

In short summary, there are three main paradoxes that will be inherent to the global retail arena towards the future:

1. **Global efficiency vs Niche exclusivity**. Global aggregation of information, transparent tracking of value chains, big ecosystems, super apps that aggregate all possible product and service categories stand in contrast to niche internet cultures, communities fuelled by exclusivity and attractive "vibes", as well as aversion to advertising and mainstream platforms.

2. **Technological embeddedness vs Human involvement**. AI that optimises decisions, blockchain that embeds trust in technology, and technologies that practically runs a store by itself, stand in contrast to how humanness is seen as the key to connect with local contexts and to build attractive communities around brands.

3. **Back to nature vs Dopamine highs**. Focus on generativity, resource efficiency and institutionalisation of nature's sake stand in contrast to the focus on producing dopamine-inducing experiences in virtual worlds and hitting that sweet spot of exactly what a consumer desires.

In accordance with the nature of paradoxes, success is found in the integration between the two poles. Towards the future, retailers will need to create long term strategies that include both poles of the paradoxes as well as ways to balance them that are right for the particular actor. The other option is to just ask Chat GPT what to do.

1 FIVE SHIFTS REDEFINING RETAIL – WHAT'S NEW?

This section revisits the five shifts that were identified in the 2022 report. For each shift, we zoom in on selected sub-trends that are particularly relevant to keep track of in 2023, and provide key takeaways for retailers to consider in their strategic work.

- Regenerative Retail: Nature's sake is being integrated in business models, actors are experimenting with decentralising value flows to build resilience, sustainability measuring is getting better and brands are integrating secondhand selling in their traditional business.
- Phygital Experiences subtrends: Retailers offer their customers multisensory experiences that integrate with lifestyles, e-commerce sites are being complemented with virtual 3D stores, retail and social media are merging, store automation is scaling up and retailers focus on connecting to local contexts through human connection.
- RADICAL Retail: Staff in stores and warehouses are becoming increasingly cyborg-like, physical stores are soon fully sensocratic environments, and digital twin technology helps retailers with design of stores and predictions for operation.
- Mytopian Retail: Niche is the new norm, brands are becoming culture, NFTs are used to bundle cultural access and traditional retailers approach Web3 in Web2.5-fashion.
- The Great Data Chaos: Third party cookies are dead, the open internet is becoming a dark forest of bots and clickbaits, people retract to gate-keeper communities, and generative AI has the potential to change everything.

2 RETAIL TECH ROADMAP 2023

Based on expert interviews and insights from the Radical Retail Advisory Board, we have identified three areas in technological development that retailers better keep up with.

- *Radical Logistics*: Logistics are becoming increasingly autonomous and AI-powered. Experts estimate this development to have a very high impact on how retail develops the coming decade.
- *The AI Break Through*: AI is levelling up, and the exponential development will have a profound impact on retail.
- *Virtual Worlding*: Virtual worlds that develop towards the vision of the metaverse and digital twins that simulate physical reality are impacting both customer experiences and operations.
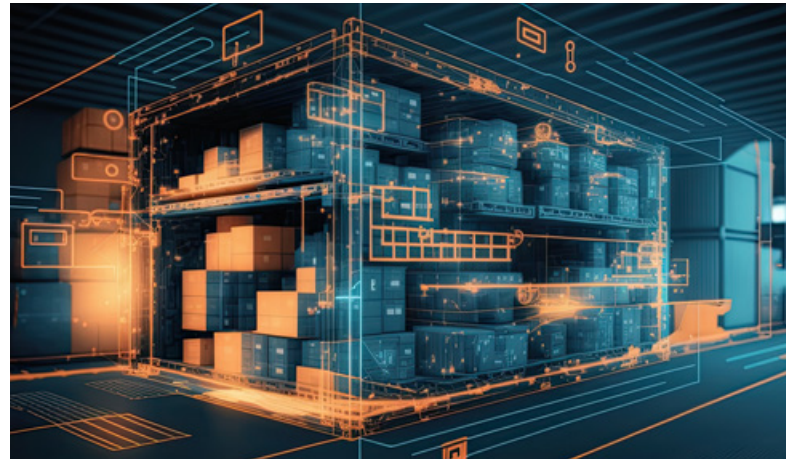
3 23 TECHNOLOGIES SHAPING RETAIL TOWARDS 2035

We provide an overview of 23 technologies that already are or are expected to be key to the transformation of retail over the next ten to fifteen years.

4 THE FUTURE OF RETAIL BUSINESS IN THE THIRD RETAIL REVOLUTION

Today, we are in the middle of the third retail revolution, characterised by automation, social involvement, and embeddedness. This transition comes with changes to what business concepts are successful to reach and involve consumers.

In essence, the Radical Retail Advisory Board's evaluation indicates that the most impactful development in business concepts for the future will happen in three streams:
1) decentralised concepts that connect peers for value exchange,
2) concepts that enable a strong narration, for example brand-owned spaces where brands can own and shape the customer experience, and
3) models that embed shopping in daily life and activities, such as subscription and in-game selling.

SPACESHIP ECONOMY IN THE MAKING

Although some retailers, in the name of meeting assumed consumer demands, are building far from sustainable business models, others are taking great leaps towards more sustainable, even regenerative, concepts. Regenerative retail is a vision and a goal, and an increasing amount of retailers are turning their eyes towards it.

Retailers sit as a key link between producers and consumers, and have a big impact on how production and consumption patterns evolve. They therefore have a central role in contributing to sustainable development. In retail and consumer culture today, we can identify two contrasting movements: On the one hand, there is a movement towards more reckless resource usage in the name of satisfying (and fuelling!) shoppers' demands for instant access to trendy products. On the other hand, a stark discourse and some first movers are fiercely promoting new ways of doing business to create a more healthy interaction between retail and environmental and social systems – even creating a regenerative dynamic.

In this section of the report, we are highlighting the most relevant trends 2023 in regenerative retailing and related domains. Regenerative businesses aim to go beyond sustainability by actively seeking to restore and regenerate natural resources and social systems. In the term regenerative, you find the word "generative". And this is key. See, being generative means having a business model that by its own inertia keeps generating positive impacts on the planet.

INSTITUTIONALISING NATURE'S SAKE

To create the mentioned generativity, the inbuilt reward dynamics in the system must be designed to support such outcomes. The chase for short-term profit and growth are often counter forces to the move towards regenerative retail. Hence several companies have applied measures to create other motivational systems.
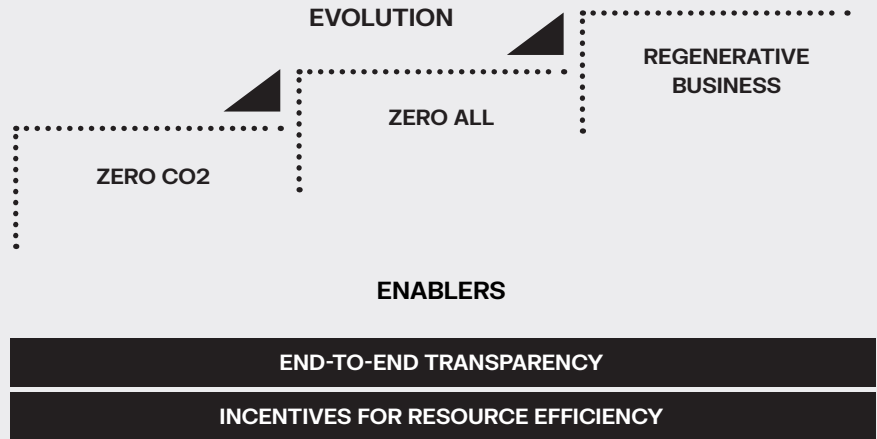
Probably the most famous example is outdoor clothing and gear company **Patagonia**. The founder Yvon Chouinard gave away all his shares in the company to a trust that will use future profits to combat climate change.[4] *"Earth is now our only shareholder. Instead of 'going public', you could say we're 'going purpose'. Instead of extracting value from nature and transforming it into wealth for investors, we'll use the wealth Patagonia creates to protect the source of all wealth"*, Yvon Chouinard, founder, Patagonia.

The current unpredictable geopolitical landscape poses numerous uncertainties for trade. However, we are hopeful for improvement and that we consequently will see more global collaborations in terms of logistics, production, data-sharing and more. These collaborations could yield significant gains in resource efficiency, paving the way for a more interconnected and sustainable future.

Susanne Holmsäter, Country Lead, Shopify

TOWARDS REGENERATIVE RETAIL

DRIVERS

CLIMATE CHANGE INDUCED UNCERTAINTIES

INVESTOR PRESSURE

REGULATIONS

EMPLOYEE PRESSURE

CONSUMER PRESSURE

EVOLUTION

ZERO CO2

ZERO ALL

REGENERATIVE BUSINESS

ENABLERS

END-TO-END TRANSPARENCY

INCENTIVES FOR RESOURCE EFFICIENCY

Five main drivers push retailers towards a transition that starts with eliminating CO2 emissions, continues with eliminating all harmful impact to finally becoming a regenerative business that contributes positively to ecological and social systems. The transition is enabled by making businesses' impact visible and designing systems that incentivize resource efficiency and regeneration.

Beauty product company **Faith in Nature**, has chosen another way to internalise nature's perspective. They have appointed an eco-lawyer a seat in the company's board. The person has the same voting right as the other board members but is only accountable to nature.

The idea of social ventures or B-corps is not new or original, but there seems to be a surge in interest in how to truly internalise the values of nature and social causes. The future will certainly hold experiments about how to do this in an efficient and effective way, to close the gap between organisations and their contexts.

DECENTRALISE FOR RESILIENCE

The World Economic Forum points out that regenerative businesses often apply systems thinking and take a "glocal" approach – they are combining global scale with local solutions.[5] The COVID-pandemic and the recent geopolitical instabilities in Russia-Ukraine have both highlighted the fragility that our globally connected, centrally governed, value chains entail. Consequently, businesses are increasingly seeking to build in more resilience in their ecosystems by decentralising value flows and building more locally anchored solutions. These moves can contribute to more resilience because they are not reliant on the function of a single node in the system.

The Seam and **Sojo** are services that connect clothing owners with local makers and craftsmen that can help repair or alter clothing, jewellery and accessories. **Net-a-porter** and **Ganni** are two brands that have partnered with these services. The setup becomes resilient since having many

local contributors distributes risk, it decreases transport since customers can find a maker close to their home, and contributes to economic activity in local communities.

The grocery retailer **Tesco** (UK) has introduced Tesco Exchange, known as "Tesco Tinder", a surplus marketplace where suppliers can sell or donate excess stock between one another. On the platform, suppliers can both advertise stock for sale, post requests and enter into sales agreements. One farmer's waste can be an important commodity to another, and by connecting the suppliers directly, the system as a whole becomes more resilient. In that way, both waste and costs can be reduced, benefitting both the planet and consumers' wallets.

> The future of retail production will be more consumer driven, it will be based on real consumer demand, which promotes sustainability.
>
> Patrik Körberg, Business Developer at Axfood

MEASURING SUSTAINABILITY

"What gets measured gets improved" is a common saying in management. Could this be true for sustainability in retail? To get an understanding of how the sustainability impact of products can be assessed in practice, we interviewed Johanna Eriksson, Chief of Staff at HowGood, a SaaS company that has the world's largest database on food product sustainability.

CAN YOU EXPLAIN HOW HOWGOOD'S SOLUTION WORKS?

We have a team of data scientists and agricultural experts that collects and analyzes life cycle assessments and leading research from 600 accredited data sources and certifications. The type of information collected can for instance be the total CO2 output throughout the life cycle of the product. This way, we have developed the world's largest food product and ingredient sustainability database. With information from our clients regarding which ingredients a food product contains, we can provide information on the impact of that product in terms of CO2 output, water usage, and biodiversity but also social factors like the risk of forced labour and animal welfare.

WHAT ARE THE USE CASES FOR HOWGOOD'S SOLUTION FOR RETAILERS?

Generally, there are three use cases. The first is sustainability reporting. With climate and ESG reporting becoming mandatory, our platform can be used for that. Second is sustainable innovation. This means if a retailer has made a commitment to reduce the carbon footprint of their products by say 30%, our data helps them work with their suppliers to find lower-impact ingredients, sourcing locations, and agricultural certifications. The last use case is marketing and public claims. If a retailer wants to drive sales of sustainable products, they can add carbon footprint labels to their products and avoid greenwashing by using our fully-vetted ingredient data.

WHAT AREA DO YOU SEE AS HAVING THE BIGGEST POTENTIAL FOR CREATING CHANGE WITHIN FOOD SUSTAINABILITY?

I have seen great positive effects of regulations and global standards for measuring impact. Regulations, like the EU's corporate sustainability reporting directive, means companies will be required to understand and report their impact. And global standards, like the Greenhouse Gas Protocol and the Science-Based Targets Initiative, ensures everyone is measuring in the same way. So the market is delivering the solutions, but it is within this shared framework that adds rigour and transparency.

IN TEN YEARS FROM NOW, WHAT DO YOU THINK IS THE GREATEST DIFFERENCE COMPARED WITH TODAY?

I would like to see global impact accounting principles for climate, nature, and human rights. A CEO today worries about their quarterly earnings report because we have global principles for financial accounting. The CEO knows that those numbers will be scrutinized. We need that for everything that matters in the world. For retailers, the next ten years will be a journey towards detailed impact accounting of the products they sell. Today it's so hard for retailers to trace their impact back to their suppliers and further upstream. But the data exists to adjust ingredients, sourcing locations, and agricultural practices to achieve climate targets. The question isn't can we, but will we?

TRACKING FOR SUSTAINABILITY

Tracking, traceability and transparency are often highlighted as enablers to sustainable development. We asked logistics expert Anders Urhed to comment on the future of tracking and traceability in value chains.

WHAT IS THE FUTURE OF TRACEABILITY IN RETAIL VALUE CHAINS?

In order to get what we want from traceability and recycling, all items will need to have an ID already from production, so that you can track it through its entire life cycle. That is something I think will be standard in the future. And a technology that seems suitable for this is blockchain, in particular blockchains that are not owned by specific companies. I believe that future consumers will want to own the digital information that is attached to a product, so that they can ensure that they can re-sell the product with the accompanying information. This will be an important factor in enabling a circular economy.

EXPLAIN FURTHER YOUR VISION OF HOW PRODUCT IDS COULD ENABLE A SECONDHAND MARKET

Individuals could have NFTs in their digital wallet for everything that they own that has a value on a secondary market. Then they can just display to the world what they want to offer others to purchase from them. The person becomes a shop themselves, and just needs a platform that can display their "inventory" to others. Paired with individuals' wish lists of things they want to buy, it could create a powerful match-making system.

SECONDHAND STRENGTHENS THE BRAND

A major shift over the last years is that brands are no longer viewing secondhand as competition, instead they are embracing secondhand sales as part of their business, maybe even as a way to strengthen the brand. This movement has taken off in the last 18 months – in the US, among the 100 fashion brands that have the most items listed in their secondhand stores, 72 were launched in 2022 or 2023.[6]

Even the ultra fast fashion company **SHEIN** is launching a platform for re-selling, that can be reached through the SHEIN app. It is currently only live in the US, but the plan is to launch globally during 2023.[7] **Selfridges** has set the goal to have 45% of transactions coming from circular products and services by 2030. The company's initiative Reselfridges houses models like refill, repair and secondhand.[8]

Luxury brands in particular have reason to take control over how consumers experience their products. On a P2P secondhand market, a consumer could photograph the product in an ugly environment and ship it in an old cereal box – behaviour that may negatively impact the experience of the the product and the brand. Moreover, authenticating used products is a challenge. Karin Dillie, VP of partnerships at **Recurate**, a tech startup that helps brands launch resale programs, says *"My understanding is that all of them are...watching [resale] very closely"*, referring to luxury brands. *"They are beginning to lay the foundation within their products by doing things like integrating digital ID so that they can then engage in this".*[9]

Luxury watch brand **Rolex** takes the opportunity to reframe secondhand purchase as coming with a story – watches worn by connoisseurs. Possibly they launched their secondhand initiative Bucherer Certified Pre-Owned to combat a nasty grey market, but still, that a luxury brand takes a stand and frames resell in this way is a signal that something is changing in brands' approach.

Welcome to a new movement. Authenticated by experts, worn by connoisseurs, the world of pre-owned luxury watches is taking off. Bucherer Certified Pre-Owned puts the opportunity to own a classic watch within reach and whether you're buying for keeps or looking to trade, we offer a constantly evolving roster of high-demand pieces to explore. From worn-once icons to top-tier rarities, every pre-owned watch comes with a story – as for what comes next, that's over to you. Description on Rolex' Bucherer Certified Pre-Owned website.

Arne B Andersson, Senior e-commmerce advisor, is however sceptical to brands managing the re-sell operations themselves: *"I believe in secondhand marketplaces rather than brands managing it themselves. Because it is a completely different process and it will be too expensive"*. But third party solutions that can facilitate for brands are beginning to emerge. **Trove** has developed a "re-commerce operating system" that integrates with brands' existing channels. The company's services include both systems for inventory management and a white-lable webshop solution. Brands like **lululemon**, **Allbirds** and **Patagonia** are working with Trove, and are running their sites lululemon Like New, Allbirds ReRun and Patagonia Worn Wear with Trove's solutions.

Some are predicting NFTs to support the development of secondhand markets.[10] A physical product could be accompanied by an NFT, and a digital product could "be" one. The NFT can then verify the product's authenticity, contain information about its production and the stories of its previous owners.

KEY TAKEAWAYS FOR RETAILERS TOWARDS 2035

- Consumers, legislators, employees and investors will increasingly push for regenerative perspectives and business models, as well as end-to-end transparency, in order to track scope 1, 2 and 3 CO2 and other ESG footprints. What is your plan to track the impact of your business activity?
- Have you considered how the incentive structure of your organisation promotes or inhibits regenerativity? What can you do to upgrade the logic by which you work?
- Resource efficient business models, such as secondhand, will become mainstream in large parts of retail. What is your plan for business model innovation to promote more resource efficiency?
- Regenerative ambitions and manifestations will increasingly be necessary to secure brand value; not embracing regenerative practices will become a brand risk. What is your plan for making your business model contribute to a positive impact in the world?
- Putting data to work, with the help of AI, will be central to creating resource efficient operations and predicting demand. Do you have the right data and analytics competence to make your business zero waste?
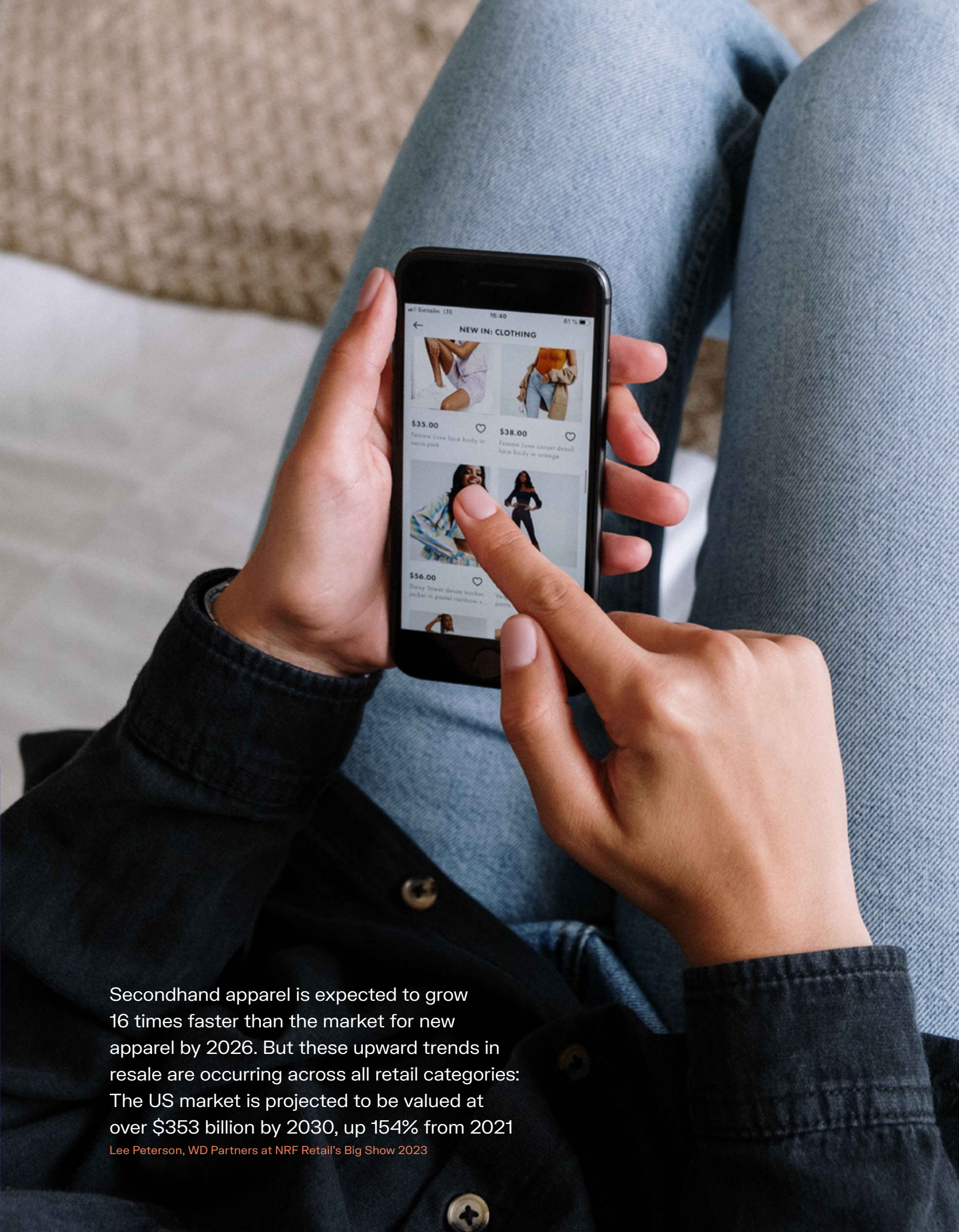
Secondhand apparel is expected to grow
16 times faster than the market for new
apparel by 2026. But these upward trends in
resale are occurring across all retail categories:
The US market is projected to be valued at
over $353 billion by 2030, up 154% from 2021

Lee Peterson, WD Partners at NRF Retail's Big Show 2023

MULTIMODAL EXPERIENCE ENHANCEMENT

In the new world of retail, reality is no longer either physical or digital. Retailers have to embrace the fact that it is both – the world that they share with their customers is phygital. And signals tell us that retailers are starting to really lean into this phygital reality.
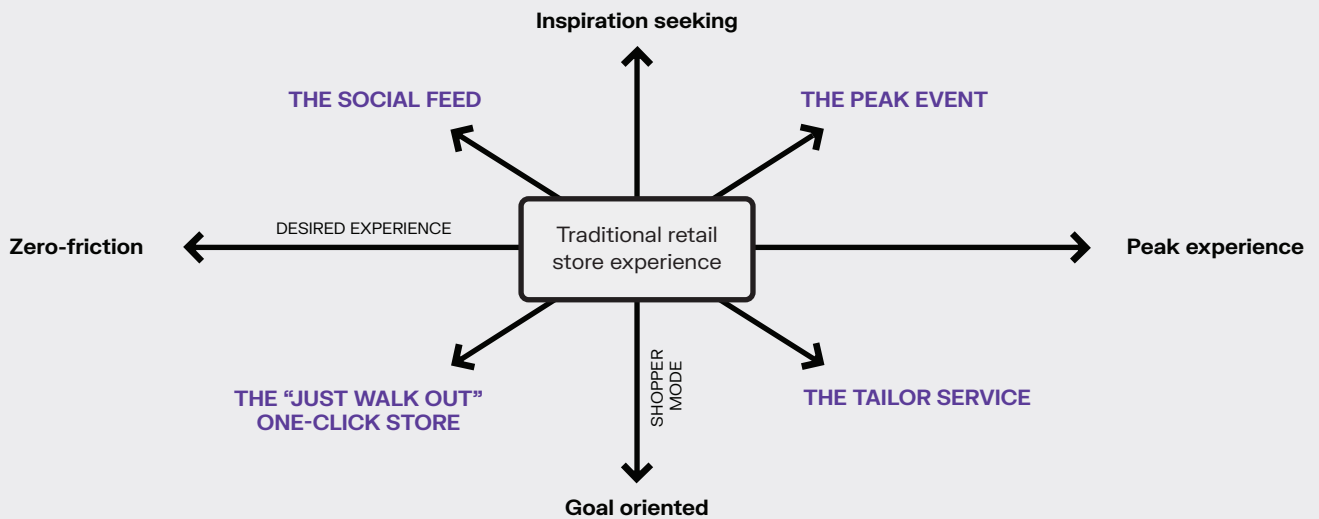
As the border between the digital and the physical continues to blur, new opportunities and challenges arise. The new reality requires us to see physical and digital channels as part of the same system. At the same time, they are distinctly different and support the customer experience in different ways. We need to hold the complexity that there is both a phygital reality where the physical store and the digital channels work together to create a whole, and that physical and digital channels are distinctly different in their character.

For example, physical and digital are supportive in the sense that brands get on average 37% more web traffic the quarter after opening a new physical store, and the channels can also contribute with complementary elements in the same purchase journey.[11] On the other hand, a physical shop is bound to a geographic location and better anchor in the local community and societal context, whereas a digital experience is geographically independent and can be geared towards a global tribe. In that sense physical and digital are different in their nature. Keep this paradox conscious when reading the coming sections, which present the latest trends and examples within the four archetypal shopping experiences presented by the model to the right.

By 2035, we will have AR glasses that give you more information about a product you are looking at, and for example enable you to compare the price with other sellers. We will be able to get assistance remotely via these glasses, possibly from an AI assistant. Ambient intelligence embedded into all of our experiences

Marcus Olsson, Director of Partnerships, Varjo

FOUR ARCHETYPAL PHYGITAL SHOPPING EXPERIENCES FOR THE FUTURE

Inspiration seeking

THE SOCIAL FEED　　　　　**THE PEAK EVENT**

Zero-friction ←　DESIRED EXPERIENCE　| Traditional retail store experience |　→ **Peak experience**

SHOPPER MODE

THE "JUST WALK OUT" ONE-CLICK STORE　　　　**THE TAILOR SERVICE**

Goal oriented

The shopping experience is diverging to meet shoppers in different modes: Inspiration seeking or goal oriented as well as desire for zero-friction or peak experiences. This creates four archetypal shopping experiences.

THE PEAK EVENT – MULTISENSORY LIFESTYLE INTEGRATION

Exciting and captivating experiences aimed at building relationship and brand awareness rather than directly driving conversion, often involving both inspiring impressions and community engagement.

When it comes to developing Peak event experiences, brands are exploring the new possibilities that immersive technology brings in combination with integrating with consumer lifestyles. The combination of the two elements is potent – a memorable experience that seamlessly feels like part of a lifestyle that the consumer has already embraced.

　"By 2035, we will be able to have overwhelming VR/XR experiences that give consumers a deeper connection to the brand. Not necessarily functional and utilitarian, but more focused on giving a very premium cinematic showroom experience", Marcus Olsson, Director of Partnerships, Varjo.

　WOW Madrid is a shopping destination whose interior design is created by multi-disciplinary studio External Reference, who say that they are "breaking the boundaries between architecture, art, and digital tools". The shopping mall is 5 500 square metres and eight floors, and will have a temporary, rotating and sometimes exclusive range of products. It will include leisure spaces such as e-gaming, a cooking school, gym and instagrammer studio.[12] In this way, the space is set up to become an integrated part of consumers' lifestyle, and its approach to create artsy hi-tech spaces creates a true multisensory experience.

Towards the future, accessibility is an aspect that retailers will have to consider when creating these peak experiences. Accessibility to physical spaces for everyone has been on the agenda for a long time. But as of today, only websites of public sector organisations are concerned with formal regulations about how they need to be accessible for everyone. However, that is about to change: In 2025, the European Accessibility Act (Directive 2019/882) will be implemented, and it means that all e-commerces in the EU will have to adhere to accessibility standards.[13] This upgrade will make shopping easier for almost one in five Europeans who have disabilities, including many older people, and individuals with a temporary impairment – a large number of people![14] The Silktide Index, an organisation that evaluates website accessibility based on compliance with the globally recognised standard WCAG, has found that grocery stores and fashion retail are some of the worst performing website categories, indicating that upgrading accessibility is something many retailers will be busy with in the coming years.[15]

> The physical shop will increasingly become a showroom for brands to create signature experiences. The more practical and administrative parts of the purchase journey will be managed digitally
>
> Louise Hobroh, Enterprise Segment Marketing Manager, Axis Communications

THE SOCIAL FEED – FULL CIRCLE RETAIL-SOCIAL MEDIA MERGE

The social feed experience serves the consumer individualised, shoppable inspiration on a silver plate. A present example is how Instagram has made it possible for consumers to journey exceptionally smoothly from scrolling for inspiration to check-out.

In the early history of social media, the activity on the platforms was human social interaction, organically spread. People status-updated about doing laundry or eating sushi, and eventually the first internet native memes were born. Brands and platforms alike saw the value in these spaces, and solutions to reap benefits of the social activity were developed. The means to effectively reach consumers were refined, and we saw the birth of paid ads networks, influencer marketing and co-creative campaigns meant to go viral and catch consumer attention. Today, the development has reached a point where brands are creating campaigns that are exclusive to social media. For example, in February 2023, **Benefit Cosmetics** launched a skin-care collection with exclusive pre-sale on TikTok. And consumers are happy about the development: More than seven out of ten like the convenience of instantly purchasing products where they're browsing, and nine in ten people buy from brands they follow on social media.[16, 17]

In reverse, brands have picked up on the logic of social media platforms and integrated it on their own sites. Fashion brand **NAKD** was early to use photos taken by their community to showcase products on their site, and in December 2022, **Amazon** announced that they will bring a TikTok-like shopping experience to their app. User generated content lets brands utilise the value of individuals' creativity as well as social and cultural capital, and integrating logics such as a feed with short video clips helps with catching users' attention.

So, retail has crept into social, and social media logics are found in retail spaces. But the development is not stopping there. In 2022, we saw product ideas being innovated on social platforms, picked up by brands and finally manufactured and sold to consumers. During the pandemic, a mini-pancake-cereal-trend started on TikTok and tutorial videos got millions of views. **Belgian Boys** picked up on the trend, and have created a product based on it. They position it as a "less messy version of the TikTok recipe".[18]

It is clear that digital places and purposes are blending more and more. The fact that almost 40% of Gen Z use TikTok and Instagram for search over Google, strengthens this picture.[19] Going forward, we might see more digital places that are true hybrids and where you cannot figure out if it is fundamentally a "shop" or a social media platform.
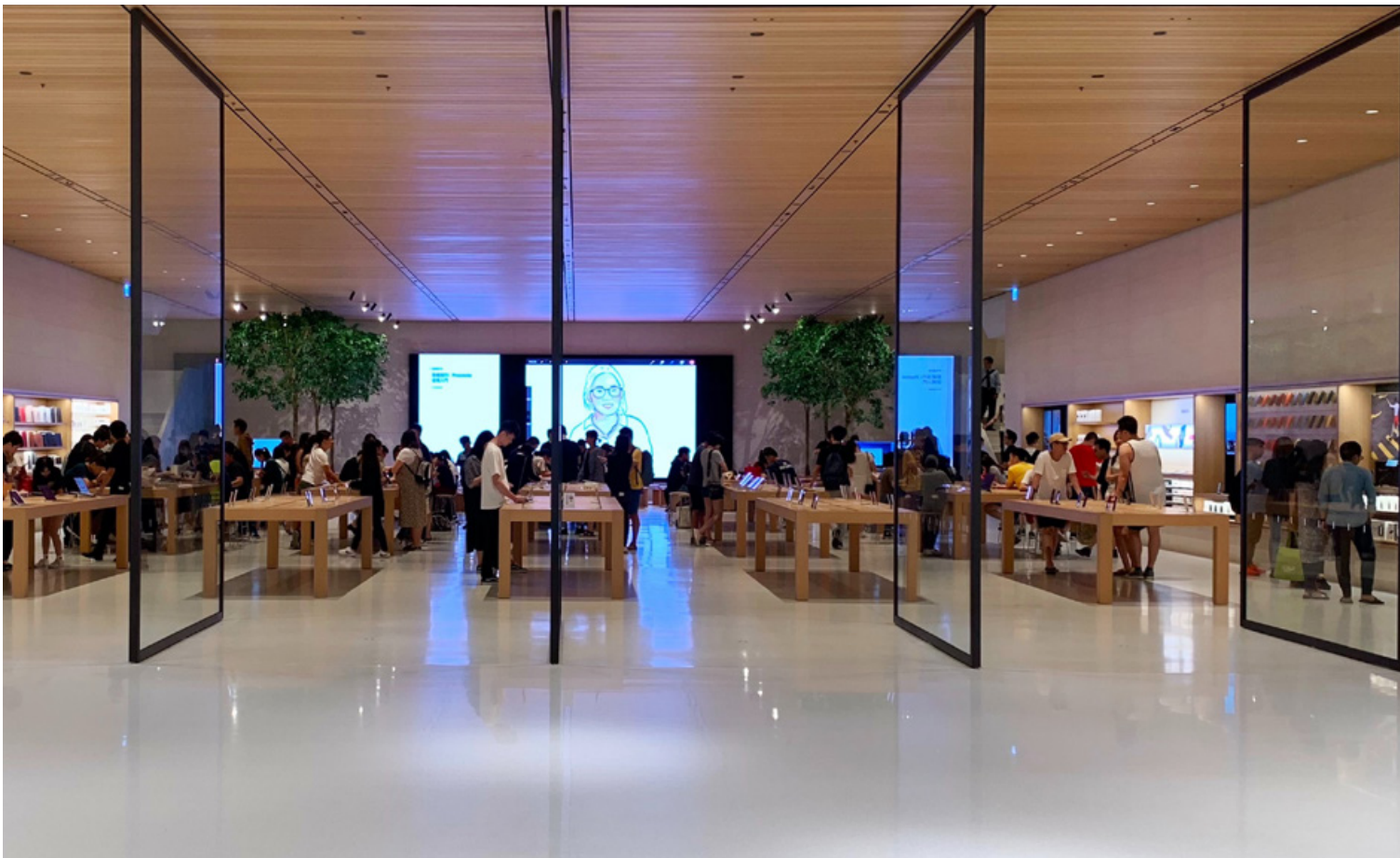
THE JUST-WALK-OUT/ONE-CLICK STORE
– SCALING UP

Shopping experiences that minimise all possible friction, in physical and digital environments alike. Less clicks or movements. E-commerces has for long known the importance of designing smooth processes and today also physical stores have solutions like just-walk-out technology that makes the journey smooth for the customer.

The current space where most is happening with regards to friction-free shopping is in physical shops. For several years, shops have experimented with modules and small scale prototypes that test friction minimising technology. For example face recognition for smooth checkout, or shopping carts that register what items it is loaded with. But 2022 was the year when large scale examples manifested.

Amazon Fresh states the following on their website: *"Amazon Fresh is a new grocery store designed from the ground up to offer a seamless grocery shopping experience, whether customers are shopping in store or online"*.[20] In their store in Oceanside, New York, customers check in and out by scanning their palm, and payment happens automatically. Nearly 6 000 cameras and sensors on every shelf keep track of what the customer is doing and what items they pick up.

A big upside with this concept is the decrease in thefts. With cameras tracking customers' every move, it becomes almost impossible to steal. However, time is still needed to evaluate the return on the large investments needed to put the necessary technological systems in place. But now we know that large-scale almost full store automation is possible in practice.

I think there is a strength in combining the fully automated store experience with extensive human service. Because different customers have different needs

Erika Wredberg, Chief Retail Officer, Lyko

Unmanned modules or complete stores make it possible to put together store concepts that can give customers the service they desire where they want it

Meta Persdotter, CEO, Coop Butiker och Stormarknader

THE TAILOR SERVICE – PHYSICAL LOCALISATION THROUGH HUMAN CONNECTION

The tailor service experience helps the customer make the right purchase decision, while providing a captivating shopping experience. This can include both interacting with knowledgeable staff and/or smart digital fitting technologies.

In a world where we can easily access global culture and products, the geographically local and physically intimate becomes exclusive. At the 2023 NRF Retail's Big Show, many retailers talked about the polarity that we mentioned in last year's report: global simplicity versus local adaptations. Global retailers need to create structures that scale easily across geographical borders, and at the same time be anchored in local contexts and meet local conditions. A perspective of this challenge that seems to be a hot topic in the retail community right now is the importance of integrating shops with geographically local communities.

Flipflop brand **Havaianas**' CEO Roberto Funari expressed at the 2023 NRF conference that localisation of the Havaianas brand happens 1) through the staff and 2) through locally adapted marketing and communication. He highlighted the value of the front line employees, and emphasised how important they are in creating connections between the brand and their customers.

An interesting **Nike** store is situated in Williamsburg, New York. The shop has aesthetics that blend into the local neighbourhood and it is painted in bright colours that match the local vibe. Inside the store there is a billboard that presents the store employees with personal, quirky descriptions, and there is a board that gathers customer feedback on notes. Once per week, a running training group starts from the store. The store has done a solid job in integrating with the neighbourhood.

All in all, the store employees seem to be incredibly important to achieve a sense of localisation. It is through the staff that the brand can make human connections locally, and through culture building create the sense that the shop has a soul. Sammy Walton, head of Product Evangelism at Quinyx, expresses that the role of the shop staff is changing, for example, in stores with just-walk out-technology, humans are no longer manning the till, but they are doing an important job in connecting with customers in other ways.

The global war for competence that is currently full blown of course impacts retailers and makes this challenge even harder. In a 2022 survey by Shopify, covering 900 commerce businesses in 14 countries, 69% of surveyed brands say that they have difficulties finding and retaining talent and 67% say they're short-staffed as a result.[21]

> When a lot of retail is moving into digital realms, there will be a re-evaluation of what physical shops shall be used for. What is the unique value that is brought by a physical space?
>
> Tomas Bendz, CEO, Around the Corner

KEY TAKEAWAYS FOR RETAILERS TOWARDS 2035

- Technologies such as VR and AR create possibilities for extraordinary shopping experiences. How can you go beyond the limits of physical reality and enhance shopping experiences in a way that will captivate your customers?
- Retail and social media are increasingly merging, and how retailers act in the retail/social media space is changing to reflect that. How can you harvest inspiration and take inspiration from logics on social media platforms?

- Accessibility requirements on digital spaces will increase. Are you prepared to meet the European Accessibility Act (Directive 2019/882) that will be implemented in 2025?
- Increasingly, brands are navigating a polarity between global structures and local presence. How are you enabling your frontline staff to creatively meet local conditions?
- Technology that minimises friction is improving and being applied extensively in retail. Where can you go one step further in reducing friction for your customers?

THE VIRTUAL 3D STORE

It seems like many retailers' first step towards the metaverse is a 3D store connected to their traditional e-commerce site. For perspectives on this development, we interviewed Neha Singh, founder and CEO of Obsess, a company that builds 3D stores that can integrate with traditional e-commerce sites.

TELL US ABOUT OBSESS' MISSION, WHAT ARE YOU CREATING AND WHY?

Obsess was created to transform traditional e-commerce from a tedious and often frustrating undertaking involving a 2D grid of thumbnail photos into an immersive, highly engaging and visually rich 3D experience. Brands and retailers with brick-and-mortar presences needed a way to offer the same memorable, interactive experiences online as they offered in their physical stores. To stand out in today's competitive e-commerce space, brands have to modernise their offerings and build experiences that are designed to engage customers and hold their attention.

ACCORDING TO YOU, WHAT ARE THE MAIN BENEFITS THAT A VIRTUAL STORE IS ADDING TO A TRADITIONAL E-COMMERCE?

Immersive virtual experiences enable brands to set themselves apart from the competition by offering unique, fully branded and creative shopping experiences that allow customers to immerse themselves in the brand as they discover, learn about and purchase the brand's products. Obsess gives brands complete control over their aesthetics, as well as enables them to test and learn in the virtual space by providing a full analytics suite with data about their virtual store's performance.

WHAT ARE THE NEXT STEPS IN TECHNOLOGICAL DEVELOPMENT WITHIN VIRTUAL STORES?

In the coming year, we'll be very focused on creating more personalisation within our virtual stores. We'll also be extending our capabilities for live events and guided shopping. More personalisation and social shopping opportunities will enable a more sticky experience for consumers, and ultimately better their connections to brands.

WHAT WITHIN COMMERCE TODAY ARE YOU MOST EXCITED ABOUT?

Changes to privacy/third-party cookie policies have made gathering and leveraging first-party data crucial for brands to understand consumer shopping behaviours. These changes have left brands without one of the best tools they had to target specific audiences with specific messages and personalise the entire online journey. In a virtual store, brands can collect detailed, first-party data on consumer behaviour, which helps them understand their customers and in extension optimise both their virtual experiences and offer in general.

IF YOU WERE TRANSPORTED TO 2035, WHAT IS MOST DIFFERENT IN SHOPPING EXPERIENCES COMPARED WITH TODAY?

Consumers will likely have the potential to shop seamlessly across digital platforms and physical store environments – giving them the freedom to shop however, wherever and whenever they prefer. It is important for retailers to think about how their physical and digital spaces can work together, allowing the consumer to have a consistent and seamless experience. I also expect VR technology to be fully mature by then, enabling a more physically comfortable virtual shopping experience facilitated by less cumbersome and bulky hardware.

ANYTHING ELSE THAT YOU WOULD LIKE TO SAY WITH REGARDS TO THE FUTURE OF COMMERCE?

Younger millennial and Gen Z consumers, who have grown up with video games and esports, expect to be able to interact with brands and products wherever they go online. Obsess conducted a proprietary survey, which found that nearly 75% of Gen Z shoppers have purchased a digital item within a videogame and that 60% of these young shoppers think that brands should sell their products on virtual platforms.

TAKING OFF AT AN ACCELERATING PACE

Retail is going RADICAL – Robotized, Automated, Data-driven, Individualised, Crowdsourced, AI-powered and Lean. Retail has always been about logistics, about data, about optimising the underlying machinery, and now that "retail machinery" is switching gears and becoming a new type of organism, increasingly powered by algorithms and optimised for resource efficiency.

"Towards the future, I think we will replace a lot of store operations with robots and AI, and we will see automation on a broad scale in logistics. In logistics, we will probably also see collaborations between companies, to together create more efficient flows". Louise Hobroh, Enterprise Segment Marketing Manager, Axis Communications

In the 2022 Radical retail report, we framed the acronym RADICAL. In this year's report we focus on how technology that erases the boundaries between physical reality and digital representations is leveraging the operations of physical stores. The more our physical environments become connected, the more precise digital representations can be created, which in turn can support decision making and strategic development.

CYBORG WORKERS ON THE MOVE

"The most promising uses of AI will not involve computers replacing people, but rather, people and computers working together—as "superminds"—to do both cognitive and physical tasks that could not be done before", state Thomas Malone, Daniela Rus, and Robert Laubacher in a research brief on the future of work for Massachusetts Institute of Technology, 2020.[22] The vision of human-machine superminds has been well on its way for decades, with people increasingly merging with their laptops and smartphones to create cyborg units. An "employee" today is rarely a human without any technological tools – practically all professional practices are sociomaterial, since technology of different kinds are inherent to them.

With new technologies that blur the line between the physical and the digital, such as AR and digital twins, the cyborg characteristics of workers are taken to the next level. At NRF Retail's Big Show 2023, many actors showed wearables with software that connect to the store's inventory data and can give real-time instructions to frontline workers. For example, both **Zebra** and **Google** showcased setups that include glasses that display tasks and instructions in the worker's field of view, and small computers that can be worn on a finger or a forearm.

The algorithms in these tools help workers reduce complexity and prioritise tasks. A warehouse worker can get instructions on the shortest route between items in the same order, and a storefront worker can get instructions on what products need restocking first on the shelves. In that sense, the human's labour is reduced to be manual, a reverse trend from what has been going on in the labour market during the last century. The evolving dynamic puts the algorithm at the top of the hierarchy, which calls for reflection around what it means when humans start taking orders from machines.

All the robot-hype and visions of humanoid robots working in stores seems to be partly replaced with real implementations of technology that rather support humans in doing their job tasks.
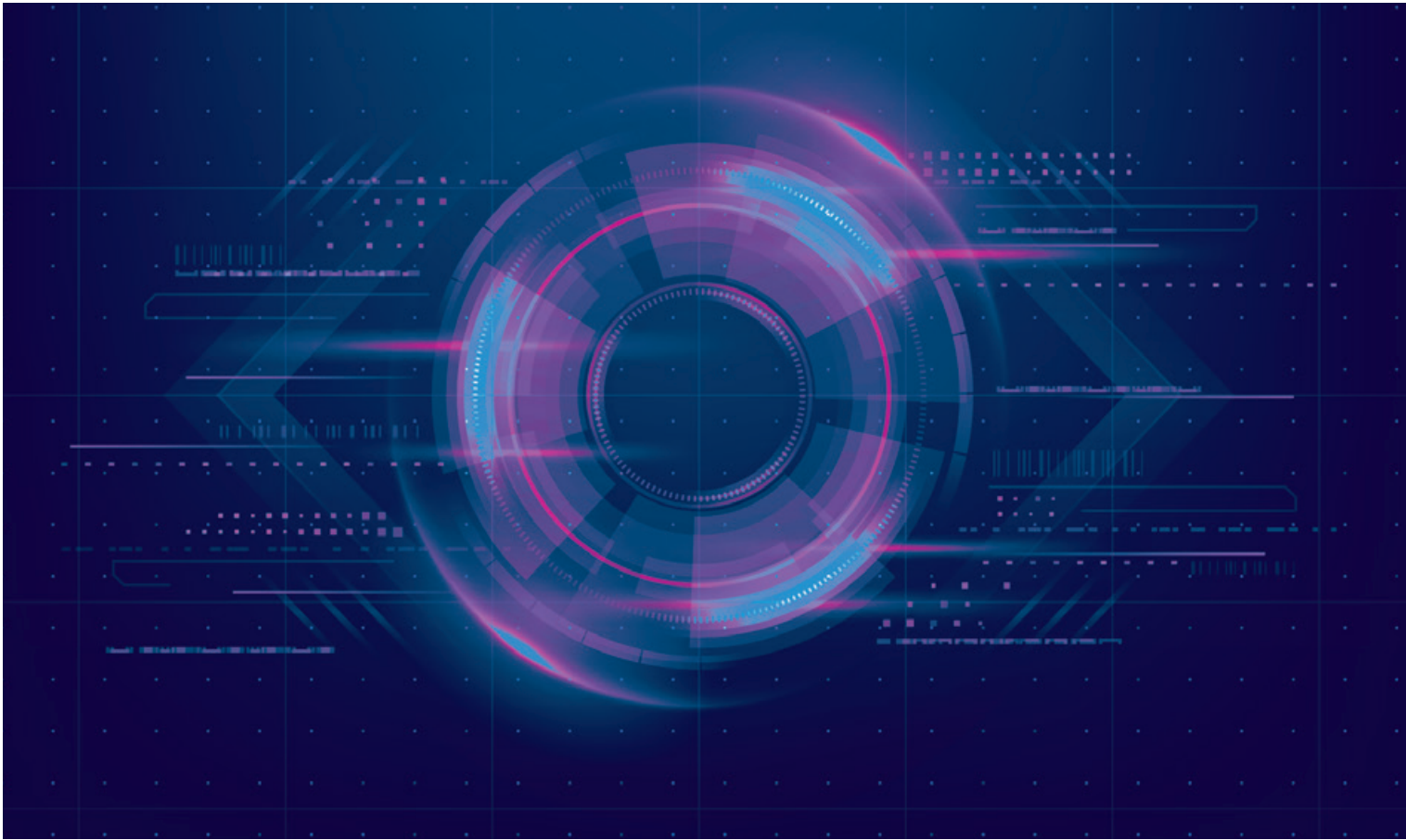
THE SENSOCRATIC STORE IS HERE TO STAY

Already last year's report covered how physical stores are becoming increasingly "self-aware". Sensors are placed everywhere to identify customers, register how they move and identify what products they interact with. In this way, stores "know" when products are out of stock on the shelf, and a customer's basket is already known when the person approaches checkout.

Amazon Fresh stores are prime examples of manifestations of this trend. One grocery store can have as many as 6 000 cameras to identify how customers move, and each shelf has sensors that note when a product is removed.

A specific technology that was showcased extensively on NRF Retail's Big Show 2023, by **Google** among others, is cameras that monitor inventory on shelves and signal the staff when products are out of stock or misplaced.

When stores become sensocratic, the competences required from store workers change. Firstly, the sensocratic store combined with the technology introduced in the section about cyborg workers, makes it possible for the decision making to be managed almost exclusively by algorithms. Second, the systems that manage the store will require IT-competence for maintenance. It seems like the required competence will shift from decision making about inventory to manual labour and maintaining systems. However, if the implementations of more

sensors and algorithmic management deliver the promised efficiency gains, it should also leave frontline workers more space to interact with and connect with customers.

A natural question is whether customers will care about being tracked during their store visits. Nina Jelver, Head of Security at Svensk Handel, thinks that, actually, consumers might start appreciating the cameras and sensors, because they improve safety. *"I think we will need more cameras in physical stores going forward, because crimes have skyrocketed and I think we will need increasing amounts of surveillance. But of course we still need to care for personal integrity"*.

The challenge is that rather extensive systems need to be implemented to receive gains, and the systems will need maintenance and require a new type of competence for the retailers.

DIGITAL RETAIL TWINS – SOON THE NEW NORMAL

In the sensocratic store, and with 5G networks, access to real time data has never been easier. One area of use for this new gold mine of real time data is so-called digital twins – simulations of real life objects. The advantage with digital twins over classic simulation is real time data input and scalability, which brings great potential in many industries. It is also a growing industry, which according to the research firm MarketsAndMarkets is set to grow at the impressive pace of 60.5% annually to 73.5 billion USD by 2027.[23]

Digital twins have so far had most of its success in the manufacturing industry, feeding real time data from machinery and production lines to calculate maintenance schedules and production capacity. But digital twin technology presents new opportunities also for retail – throughout the whole supply chain. A retail digital twin can help optimise store operations, support the designing of store layouts and product flows, and simplify collaborations with partners.

In the future, mapping individual customers with the help of sensors and purchase data will allow for predictive models to be built for different customer segments. Simulating supply chain disruptions based on real time data will allow for scenario planning and increased resilience. Digital twins of retail spaces will also allow for testing of changes to layout and pricing without having to physically change anything in stores. Steven Mclean, CEO, ReadySet, states that one of the big value propositions for retailers with digital twins in connection to stores is the predictive analysis that can be conducted. Being able to use historic data and simulation to test multiple ideas and evaluate which will perform best has a great deal of upside. This also reduces the risk when launching new changes.

Several major retailers have already started to experiment with digital twin technology. The American store **Lowes** recently partnered with **NVIDIA** to create a replica of their store to showcase their interactions with AR and AI technology.[24] **Kroger** also has a similar partnership with NVIDIA, in which they are using data from Kroger's 2800 stores to gain insights for logistics and customer experience.[25] There are however challenges to implementing this technology. The upfront investment needed to make it functional and scalable is high, and there is a potential that consumers might be wary of being tracked in-store and having their privacy infringed. Striking a balance between useful data collection and protecting data privacy will be important in this regard.

> Today, virtual worlds are a lot about replicating the physical in the digital, but towards the future we will see a development towards creating experiences that are only possible in virtual reality.
>
> Tomas Bendz, CEO, Around the Corner

KEY TAKEAWAYS FOR RETAILERS TOWARDS 2035

- With AR and wearables, workers will become even more cyborg-like, collaborating with smart systems that can assist them in their work. How can the employees in your business be supported by smart and wearable technology?

- Digital twins will change how we interact with physical reality. Do you have the systems in place to visualise your operations in a way that provides actionable insights?

- To manage increased complexity, retailers need to identify the crucial indicators that create useful and comprehensive performance overviews and quickly reveal anomalies. Do you have a "war room" equipped to steer your RADICAL business?

- Physical stores and digital environments alike are becoming "self-aware" thanks to sensor- and camera technology. How are you integrating such technology in a way that it serves both analytics purposes and makes customers feel safe rather than monitored?
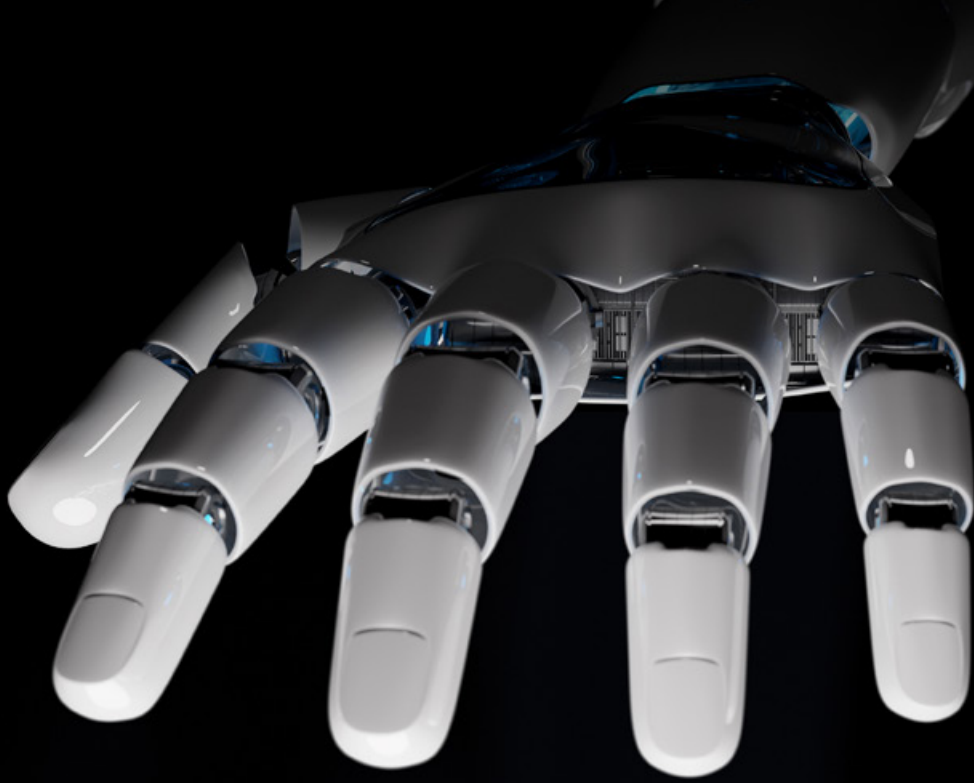
NICHE CULTURE CENTRISM

Historically, we went shopping. We still do, but today the marketplace is often coming to us, and we are increasingly involved in the production of and communication around products. Mytopian retail is simply different from traditional ditto – it is co-creative, niche based and culture-first – and it is rapidly changing the name of the retail game.

The shift towards Mytopian Retail means that brands have to put more effort into developing the "vibes" that will attract people to their creative field. In a sense, the discourse around marketing has changed from "know your customer" to "tap into a community". This change signals that the consumer is not a passive receiver, but an important co-producer and ally in developing the brand.

 "Communities have always been important to humans, and the new digital era enables people to come together in new ways to co-create, co-buy and create different kinds of status markers. It will become increasingly important for retailers to understand what communities to tap into and how. The main difference from what we previously have defined as target groups and the communities we are talking about now is that communities will understand their own value and possibility to influence, they are not a passive audience", John Karsberg, Head of Strategy and Insights, WorkShop

 This transition in retail parallels a general trend on the internet towards more decentralised activity, where the term Web3 is used to describe how blockchain based technology and solutions are changing the premises of digital activity. Web3 comes with visions of a more democratic internet, with decentralised data ownership and fair rewards for creativity. But there are polarised opinions about Web3's potential:

"Some people religiously think about it, others [think] it's a scam and don't get it" says John Wu, President of Ava Labs, a Web3 company.[26] The truth is probably found somewhere in between those opinions. In retail, more and more companies are experimenting with different Web3-related strategies. The most common strategy today is using tokens and NFTs to engage communities and create digital scarcity.

In 2035, we have moved from having the purchasing department decide what products shall be in the assortment, to start in the sales channels and with what consumers actually want to buy. It will be a shift that among other things will entail a change in the internal structures in retail companies.

Linda Widengård, Business Director, Grebban
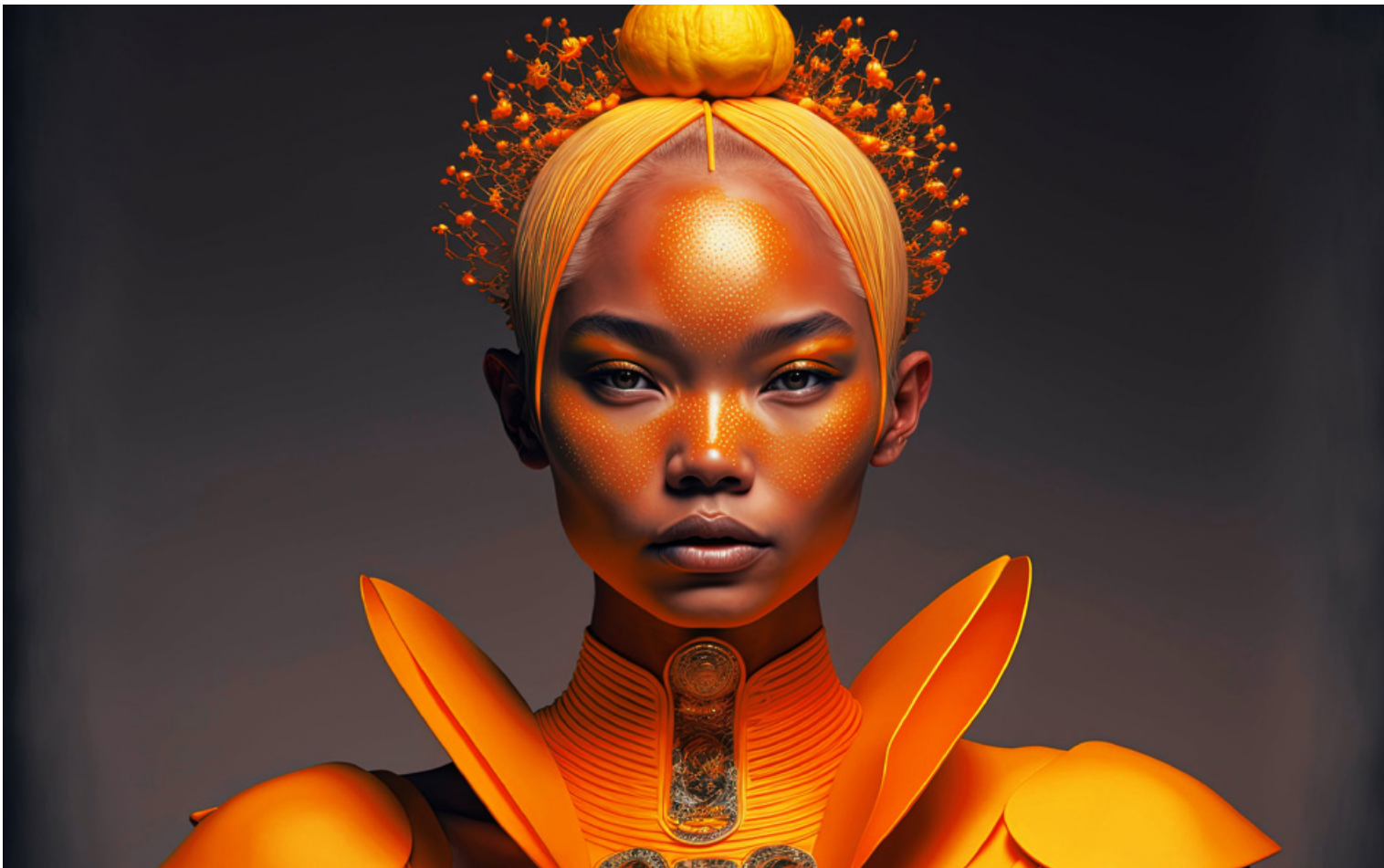
NICHE IS THE NEW NORM

91% of 18-25 year olds in the US say that there is no such thing as mainstream popculture anymore.[27] Rather, young people find and hang out in niche communities, whose multiplicity is driven by the fact that the digital sphere is expanding indefinitely and becomes home to a myriad of subcultures.

Jean-Paul Sartre stated already in 1943 that *"Thus to the extent that I appear to myself as creating objects by the sole relation of appropriation, these objects are myself. The pen and the pipe, the clothing, the desk, the house – are myself. The totality of my possessions reflects the totality of my being. I am what I have."* In extension, our possessions become a means for us to express identity. That means that what we often call consumption, is actually a form of production – identity production. Embracing the main stance in social psychology, that all identities are social, we understand that the acquisition of a new possession – be it physical, digital, rental or whatever – is a means to express belonging to a social group.[28]

Combine the insight that consumption is social identity production with the insight that niche is the new norm. Brands that ride the wave of this thesis aim to integrate with, or create their own, niche communities that can become a force in driving interest for their products. Ana Andjelic, Chief Brand Officer at Esprit, and respected thinker within sociology and branding, has coined the term "DJ model of growth", to describe how brands, through key collaborations can gain credibility in attractive social groups. The brand "mixes" itself into the subcultures it wants to be part of.[29] The challenge for brands going forward will be to keep up with the ever changing social landscape on the internet that their customers are part of, and constantly integrate with new memes and phenomena.

There is a paradox in that it requires big data to be small and local. Large amounts of data enables you to become very precise in your insights in developing a local or niche concept.

Jens Lanvin, Strategic Advisor

NFTS BUNDLE CULTURAL ACCESS

Consumer trend agency Trendwatching states: *"We're shifting from an era where brands exist to sell products, to one where brands are designed to be culture – the culture is now the product"*. A signal that is new on our radar is the use of NFTs as a means to bundle cultural elements. Instead of selling products as single artefacts, NFTs can act as a way to gather products and access to different contexts and sell them together.

For example, owning an NFT from the **M3TALOVE** collection by Brand New Vision (BNV), a Web3 fashion company, Weinsanto, a Parisian fashion designer and LIGHTSUM, the K-Pop girl band, gives owners:

- A digital outfit
- Access to LIGHTSUM's metaverse concert
- Emojis with LIGHTSUM's dance moves
- Access to BNV's Discord
- The chance to win a virtual meeting with LIGHTSUM or front row seats to a future house of Weinsanto fashion show, followed by a backstage designer meet and greet experience
- Possibility to earn FA$H creds that can be used across BNV's ecosystem

Altogether, buying the NFT is buying a multifaceted piece of niche culture, and an effective way to strengthen an expression of belonging to the social group that identifies with that culture. Customer journeys are becoming increasingly centered around the consumer, rather than taking place in a place or space where supply is aggregated. And in line with the intensified network dynamic, the store (online and physical) as a place for assortment display is losing potence, as consumers increasingly complete their whole purchase journey on social platforms where they are presented with inspiration and offers based on the feeds they have curated themselves. Instagram and other social spaces have developed features that enables the whole purchasing journey on the social platform: products can be tagged in photos and the items paid for in Instagram's own checkout. In that way consumers can make a purchase without even entering a "store". Retail is increasingly created around the customer, who in the future will have access to products and brand experiences wherever and whenever they want thanks to extended reality technology.

> Money in some form has been the dominating currency to represent success and value, but in the future it seems like we will increasingly value other currencies like attention and time.
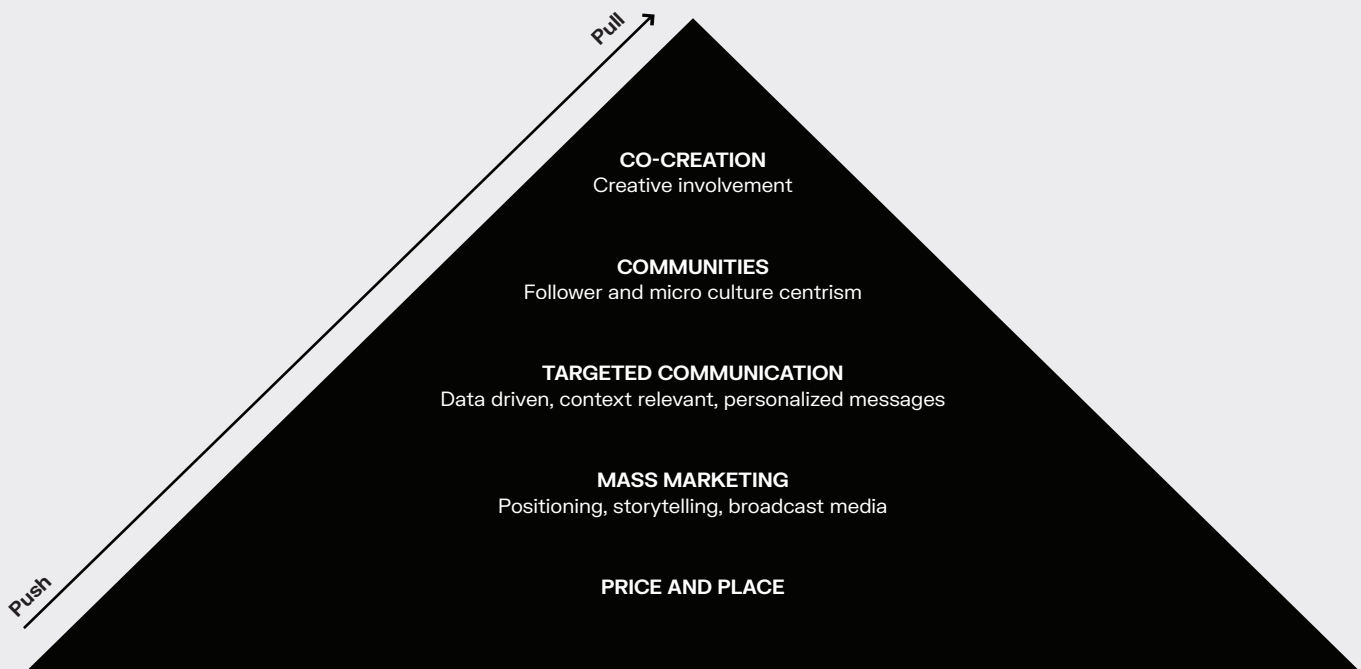>
> John Karsberg, Head of Strategy and Insights, WorkShop

> I want to raise awareness that it is still important to consider older generations – they might not be interested in NFTs or the metaverse. And they are still very strong groups in terms of spending
>
> Sandra Planeta, Founder and CEO, Planeta Design

KEY TAKEAWAYS FOR RETAILERS TOWARDS 2035

- Mainstream is dead and niche is the new norm. But to benefit from the niche you need to be part of it. What are your customers' niches, and how are you acting to become part of them?
- Culture is becoming the product, and brands are increasingly designed to be culture. At least in some segments of retail. Is that relevant for you, and if so, how are you adapting to it?

- NFTs are increasingly becoming part of the cultural retail universe. What parts of your strategy could be enhanced by NFT technology?
- More purchases will happen as part of activities and life in virtual worlds, or the metaverse. What competences are you acquiring now to prepare for establishing a solid metaverse presence?

Pull ↗

CO-CREATION
Creative involvement

COMMUNITIES
Follower and micro culture centrism

TARGETED COMMUNICATION
Data driven, context relevant, personalized messages

MASS MARKETING
Positioning, storytelling, broadcast media

PRICE AND PLACE

Push

Retailers are moving up the marketing pyramid. To succeed in the world of Mytopian retail, brands need to integrate the top layers of the pyramid and create a pull that draws consumers in to become co-producers.

"WEB2.5" – IN BETWEEN THE OLD AND THE NEW WORLD

The blockchain ecosystem, or Web3, has undergone three periods of exponential growth: the ICO-boom of 2017, the DeFi-summer of 2020 and the NFT-boom of 2021. The last one, where NFT-trade rose from 340 million USD in 2020 to 11 300 million USD in 2021, really caught on in retail and brought NFTs to the general consumer. But the brands that have adopted this logic have not gone "full Web3" with all the decentralisation that would mean. Rather they are adding Web3 assets like NFTs to their Web2/traditional infrastructure. This trend has given rise to the expression Web2.5.[30]

Many fashion brands, non the least in the luxury segment, have started to sell digital products as NFTs, or "phygital" ones where a physical product is accompanied by a digital NFT. **Gucci, Prada, Yves Saint Laurent, Burberry, Givenchy…** to only mention a few who have adopted this strategy. One driving force to sell NFT products is to establish a metaverse presence. Several of the mentioned brands have opened stores in virtual worlds, and by selling their products as NFTs, they create scarcity and collectibility in the same way as in the physical world.

Many brands are also exploring NFTs and Web3 organising as a way to create loyalty and consumer engagement. **Nike** has for example launched .SWOOSH, a platform that will be a place for their community to co-create with the brand and be rewarded in Web3 currencies.

Shopify has decided to support these endeavours and

Push and pull marketing have become so different from each other in how they function, and it is pull marketing that retailers need to focus on today

Moon-Suck Song, CEO & Co-Founder, Panagora

launched a plug-and-play web3 solution, that allows brands to design, mint and sell NFTs that run on the Avalanche blockchain through their platform. The tokens can then be sold in Shopify stores, and the end user does not even need to have a crypto wallet to make a purchase.[31] *"[Web 2.5] is really just about using [blockchain] as an avenue to build community,"* said John Lee, the head of blockchain at Shopify, during his Money 20/20 panel titled "Token-Gated Commerce Is What's Next For Brand Loyalty."[32]

Another use case for NFTs is as an access pass. **Spotify** has created token gated playlists, where holders of specific NFTs can listen to curated music. Overlord, a Web3 gaming company, has initiated a collaboration with Spotify. Holders of their lizard-themed Creepz NFT can access a community-curated "Invasion" playlist.[33]

In this way, brands experiment with the opportunities that Web3 brings, but without major changes to their business models, and consumers get onboarded into the Web3 world through interfaces they are used to.

THIS IS, PERHAPS, THE END OF THE BEGINNING

The digital world is in for a paradigm shift. Web3, the metaverse and generative AI together will probably change the internet so profoundly that we cannot imagine what is to come. And since the digital and physical realms are becoming increasingly intertwined, this shift will impact our lives and retailers' operations on many levels.

For more than a decade, we have lived in an era when the internet has been dominated by a few big actors that have created ecosystems that surround the user and capitalise on insights about them. The Web3 movement is a counterforce to this state, with its vision of decentralisation, borderless blockchains and user ownership. But, tech giants are not giving up control easily, and presently a new struggle on generative AI-dominance is on the rise, with **Open AI**, **Microsoft**, **Google**, **Alphabet** and **Baidu** in the ring. At the same time, nations are taking increasing control over their digital spheres, creating geographical fences around sub-parts of the internet, raising restrictions on how data is gathered and used and putting demands on AI transparency. In fact, data and AI has rapidly become a geopolitical battle field. How this battle will play out is still very uncertain.

The content on the internet is also changing. Anyone can be a content creator with the new tools that do the manual work for you, be it text, images, voice, software code or video. And generative AI will soon make it impossible to know what is human or non-human activity.

Whether they want to or not, retailers will have to navigate these changes. They better carefully follow the developments in the digital world, and also understand that what they do with their online presence is part of shaping the new digital paradigm.

THE DEATH OF THIRD-PARTY COOKIES
In 2020, Google announced that they are ending support for third-party cookies in Google Chrome by early 2022 (now delayed until 2024 the earliest).[34] This is a big deal since Chrome is the last major web browser to allow third-party

cookies and has 65.7% of the browser market share.[35] Google's move is part of a trend that makes online data collection harder. Beyond the third party cookie ban, the implementation of GDPR in the EU and CPRA in California is forcing actors within their respective regions to change their approaches. Gartner estimates that by the end of 2024 75% of the world population will have its data protected by legislations similar to GDPR.[36]

That data becomes more difficult to get hold of and use might come with a significant increase in expenses for retailers. Marketers predict that they will have to increase spending by 5% to 25% to meet the new conditions.[37] Customer acquisition cost and the cost for advertising views will rise, meaning marketers will need to have a variety of creative approaches for reaching potential customers.

The coming years, retailers will have to explore new approaches for their targeted marketing, such as contextual advertising where ads spaces are filled with relevant ads based on keywords scanned from the web page users are on. Publishers can also sell user data to advertisers based on a standard called seller defined audiences. This alternative uses anonymised collected data based on demographic, purchase intent and interests based on first party data.[38]

A parallel path for retailers might be to not go out and hunt for attention, but instead increase their pull-factor. This can be done by producing different forms of content and engaging communities that build a momentum that consumers are drawn to.

Susanne Holmsäter, Country Lead, Shopify, suggests that a way to tackle the increased difficulties in acquiring new

THE 6 ASPECTS OF THE TECH AND DATA BATTLE
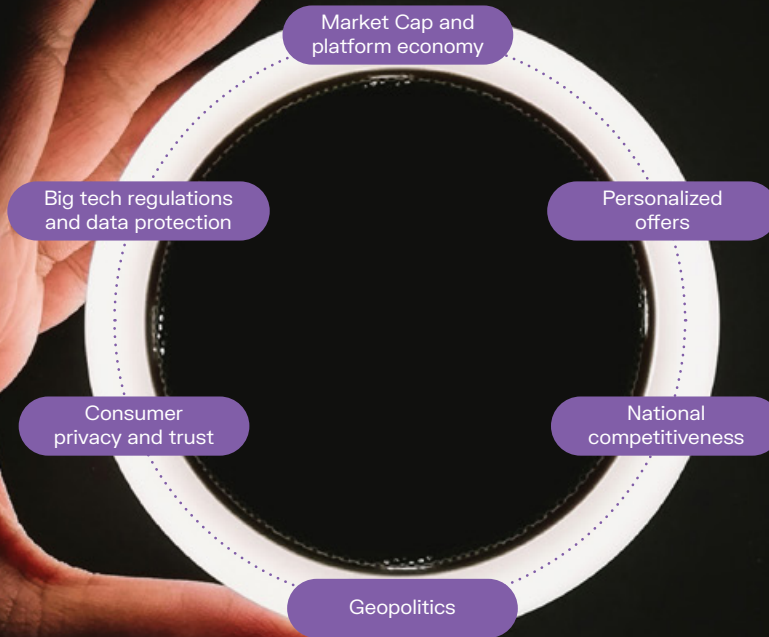
The data war is complex, with different agents promoting their individual agendas – governments, big tech, retailers and consumers all have desires that sometimes align and sometimes are in conflict.
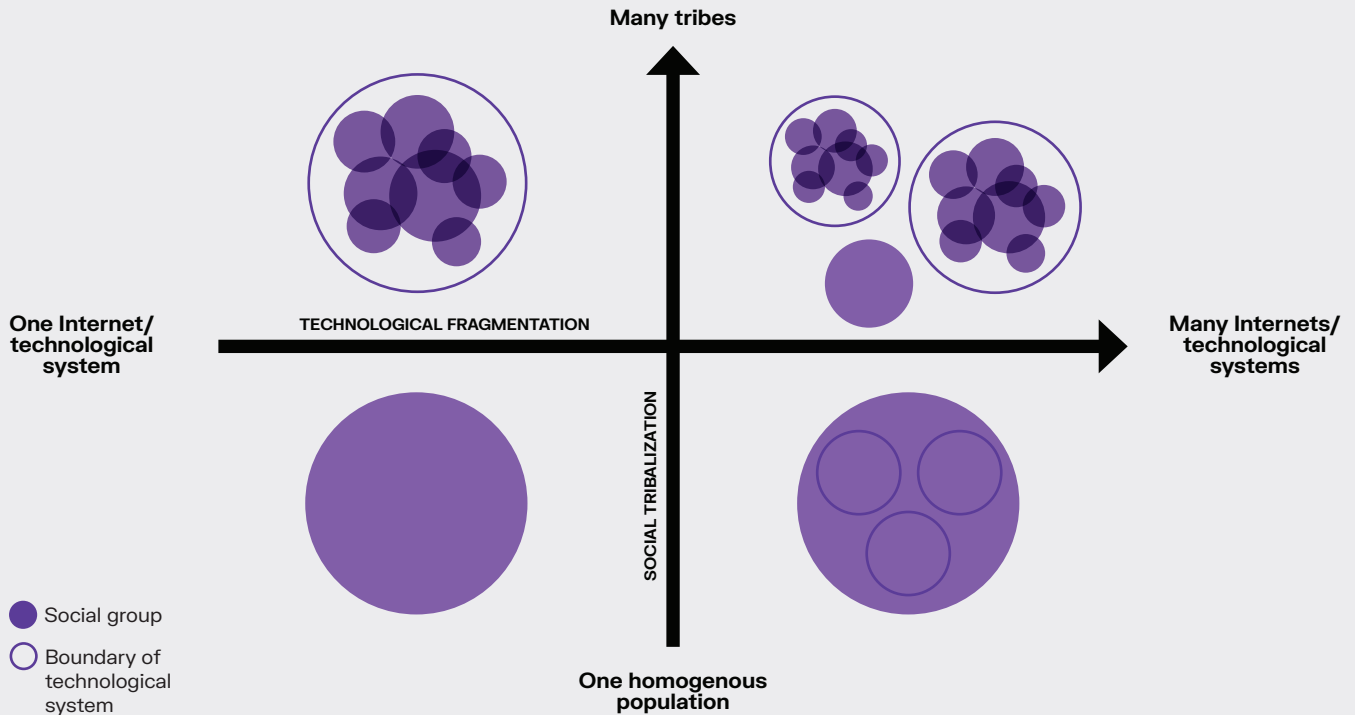
customers is to dig deeper into the existing customer base: *"The absence of third-party cookies presents a challenge as customer acquisition costs rise, making it harder to navigate the marketing landscape. Ask yourself: What untapped potential do I have in the existing customer base and what possibilities are there for new markets?"*

One thing is sure, actors with extensive first-party data on their customers will have an upper hand compared to their competition. These actors will be able to build better models and produce more accurate and relevant advertisements to potential customers.[39] Radical Retail's Advisory Board highlighted that access to first party data also can be a business opportunity for some actors. Large retailers with extensive first party data and platforms that host attractive user activity will have an opportunity to sell advertising space. Whether digital or physical, the advertising space can be sold to others who can benefit from the insights based on large sets of first hand customer data. Is the advertising machinery just moving from Google to other platforms? What secondary consequences can such a move entail?

With increased costs to acquire customers through the current main digital channels, like Google's and Meta's media networks, online-native brands will start opening physical shops. Because that will be an, in comparison, cost-effective way to both reach consumers and a possibility to set a stage for customers to create shareable content that then will market the brand "for free" through the customers' channels

Moon-Suck Song, CEO & Co-Founder, Panagora

SCENARIOS FOR INTERNET FRAGMENTATION

Many tribes

One Internet/ technological system

TECHNOLOGICAL FRAGMENTATION

Many Internets/ technological systems

SOCIAL TRIBALIZATION

One homogenous population

● Social group

○ Boundary of technological system

Trends are indicating that we are heading towards the upper right quadrant in the above illustration, with an internet that is increasingly fragmented by technological standards as well as by social groups.

GENERATIVE AI
– A REVOLUTION IN THE MAKING

Generative AI refers to a type of artificial intelligence technology that can generate new content, such as images, videos, text, and music, that are similar in style, structure, and patterns as the examples it has been trained on. This type of AI uses machine learning algorithms to analyse large data sets, identify patterns and generate new data by filling in the missing gaps. Generative AI is used in a variety of applications, including content creation, virtual assistants, chatbots, creative writing, gaming, and art. Applications that have gained extensive attention are **Open AI's Chat GPT** and **Dall-E**.

"By making processing of large amounts of information more efficient, generative AI has the potential to be a great time saver for retailers", Erika Wredberg, Chief Retail Officer, Lyko.

For retail, generative AI has the potential to provide value in or transform several areas, by for example:

- helping customers find products faster through **conversational product search** on websites
- improving **consumer insight** by automated analysis of consumer reviews and customer interaction
- **accelerating innovation**, based on consumer insight, by auto-generated ideas
- making effective **product recommendations**, when trained on purchase behaviour
- creating **product descriptions** based on images, or quickly standardise product descriptions submitted by suppliers to a multi-brand marketplace
- creating **personalised product images**, placing products in a specific consumer's context
- creating completely **personalised transaction flows**, where a whole website or virtual environment adapts to the individual visitor

Imagine the possibilities when generative AI fully makes its way into virtual spaces. Immersive experiences can be fully customised for each individual. We are already on our way there: avatar creation service **Ready Player Me** has integrated Dall-E, a text-to-image solution in their service. A text prompt created by a user is sent from Ready Player Me to Dall-E, an AI generated image is sent back and Ready Player Me applies it to generate 3D wearables. The avatar with an outfit created from a text-prompt can then be used in a multitude of virtual worlds.[40] Linda Pimmeshofer, Strategic Advisor Retail, describes a future vision of this development: *"As a consumer, you might be able to describe to an AI a skirt that you would like to own, the AI will draw it up and you can adjust the sketch in conversation with the AI, and then you can order your skirt to be produced"*.

The development of generative AI is only in the first inning, and still it can already provide substantial value. Many agree that we are in for an exponential ride that most certainly will take us places we can not yet imagine.

In a 10-year time I believe generative AI will be useful for conjuring 3D objects in XR. Generative AI for 3D will likely be able to create a lot of realistic content for future 3D worlds

Marcus Olsson, Director of Partnerships, Varjo

WILL WE ALL END UP IN THE DARK FOREST?

What we know for sure is that the internet of tomorrow will be very different. In last year's report we concluded that the internet seems to become increasingly fragmented. Radical Retail's delphi panel held the viewpoint that towards 2030, the internet will become more fragmented based on technology, geography, culture/interests and social class (see image on page 28). How will this multidimensional fragmentation manifest?

The model to the right is inspired by designer and anthropologist Maggie Appleton's illustrations of Venkatesh Rao's and Yancey Strickler's theories about the internet's development and describes a partly current, partly future scenario of the internet. It proposes one way to understand the fragmentation of the internet in a nuanced way.

> Millennials are ageing out of the Internet. I don't mean we can't use it anymore or that we don't belong here … but that the internet that we built and used for the last 15 years is not the internet that we are on anymore

Kate Lindsay in WGSN STEPIC Drivers 2025

Open and public spaces of the internet are becoming increasingly dominated by bots, data scavengers and click-baits. Spaces that seem alive, but at a closer look are rather dead when it comes to genuine human activity. Below this layer, the "cosy web" is found. Here people are gathering in gatekept communities and chat groups. Mediums like Discord, Telegram and What'sApp offer safe hideouts. *"These are all spaces where depressurised conversation is possible because of their non-indexed, non-optimised, and non-gamified environments."*,[42] Yancey Strickler.

All the layers are entangled with the cryptoweb, blockchain enabled solutions for transactions and governance. In the dark web, cryptocurrencies are used for payments, in the cosy web, Web3 communities are using it for community tokens, and in the dark forest of the clear web, brands are building hype by creating NFT-products.

"The internet is increasingly becoming a reflection of the world at large, with all its differences and dissonances. It is a difference from the first utopian visions about the internet as a free and democratic space. Possibly we can still end up in that direction, but I think we will have many years ahead when the internet will become darker and darker", Jens Lanvin, Strategic Advisor

How shall retailers navigate such a future? With open spaces that become increasingly deprived of genuine human activity, buying classical ad-space becomes a less attractive means to get attention. The report has already touched upon the importance of becoming part of relevant sub-cultures and communities, and this scenario is strengthening that hypothesis. On the other hand, many such communities seem to be valued by their members just because they are free of actors with commercial interests. Retailers certainly have a challenge in developing strategies to draw attention to themselves without being part of creating a dark forest where no human wants to enter.

> People are no longer just afraid to miss out on what is going on online, they feel as much resistance to log on. Consumer trend forecaster WSGN uses the expression that individuals are moving from FOMO to FOLO, from Fear Of Missing Out to Fear Of Logging On AND Off.[41]

KEY TAKEAWAYS FOR RETAILERS TOWARDS 2035

- The internet is indeed becoming something very different from what it once was. How are you preparing for a more fragmented internet? Have you made your scenario planning for the future of the internet?

- If humans will give up the open internet for closed circles in the "cosy web", how will that affect your business? And what is your strategy for such a scenario?

- With the death of third party cookies, it is becoming crucial to own your data. What measures are you taking to generate your own data that provide valuable insights?

- Generative AI is changing the game in many ways. How are you keeping updated on opportunities and long-term trends? What is your AI strategy?
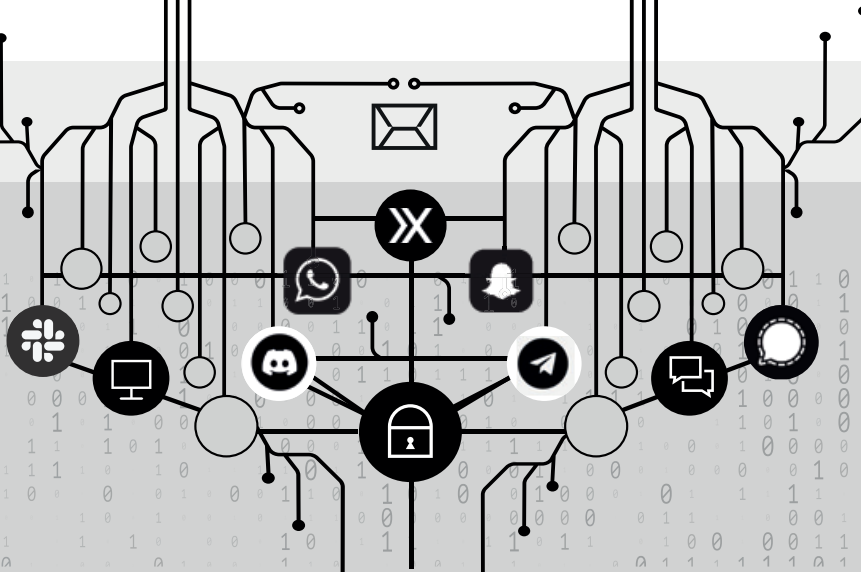
DARK FOREST OF THE CLEAR WEB
Inhabited by data scavengers, adtech marketers, and trolls. Enter with caution.

DIGITAL GARDENS
Email, newsletters and RSS feeds.

COZY WEB
Gatekeeper-protected communities comprised of like-minded people who gather around niche interests. Run through chat streams like Discord, Slack, Telegram, WhatsApp, Signal etc.

ONION ROUTERS
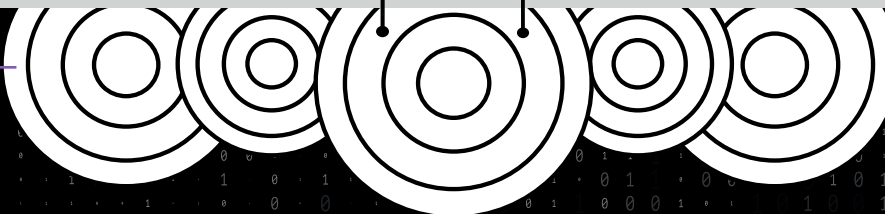
THE CRYPTOWEB
Blockchain enabled transaction networks and organisations (DAOs).

DARK WEB
Internet undergrowht and decomposing morals.

Image inspired by illustration made by Maggie Appleton,[43] based on theories by Yancey Strickler and Venkatesh Rao.

RETAIL TECH ROADMAP 2023

Technological innovation is at the core of change in the retail industry, and therefore imperative to keep track of to understand what the future might hold. Therefore, we are together with experts continually assessing what technologies to keep an eye on and why.

RECAP FROM RETAIL TECH ROADMAP 2022

In last year's report, we laid the groundwork for navigating the technology landscape that shapes the retail industry. With the help of Promising Retail Delphi Panel and Radical Retail Advisory Board, we identified 19 technologies of interest and themes of change on three horizons.

Horizon 1: Retail backend automation was predicted to be just around the corner, with real time order tracking, in-store movement tracking and purchasing and sourcing all hitting the industry around 2025.

Horizon 2: Further on the horizon were robots in various fashions, including service robots, autonomous delivery vehicles and self-served physical stores. Our experts believed these technologies would be common at the latest in 2030.

Horizon 3: Finally, on the farthest horizon around 2050, our experts spotted collaborative robots and crypto payments.

This year's assessment of the state and future of retail tech is based on an international trend scan and the input from Radical Retail Advisory Board. The list of technologies from 2022 has been updated to include five new technologies: digital twins, RFID, predictive logistics, biometric payment and algorithmic management/wearables for store workers. The full list of technologies can be found on page 35.

After a year of post pandemic state, geopolitical instability and metaverse-hype, our experts have new glasses when looking at the future of retail tech. In general, this year's Radical Retail Advisory Board assessed the breakthrough of technologies to lay further into the future than the expert groups estimated last year. Possibly the more conservative stance is a reflection of the uncertain state in the world. Nevertheless, three themes emerged as considered to have particularly disruptive potential, and to be important for retailers to keep an eye on, and keep up with, the coming years.

THREE HOT
TECH TOPICS 2023

1. RADICAL LOGISTICS

Technologies

- Predictive logistics
- Autonomous logistics
- Autonomous delivery vehicles

Although assessed to be more than 10 years from mainstream adoption, the technology cluster *RADICAL Logistics* is estimated to have a very high impact on retail. Autonomous vehicles, algorithmic decision making in logistics and even predictive systems have the potential to revolutionise operational efficiency.

Anders Urhed, ProFlow, looks ahead and predicts that we will see a development where, thanks to data aggregation, logistics becomes more geographically decentralised and predictive. *"A trend in China, which I think will spread, is Offline to Online, O2O, where physical stores are displaying their inventory on an app. This creates a super app for shopping in a specific area. You can buy everything you need, products and services, through the same platform. This means that supply and demand data from a geographical area is aggregated. Based on the data, stores can optimise their assortment, and logistics becomes decentralised in the sense that warehousing of products is moving closer to the customer. What is difficult here is the planning of flows, and that is where AI probably will play a role, and create the possibilities for predictivity."*

Arne Andersson, Senior e-commmerce advisor, confirms the image that retailers are still quite far from predictive logistics, but that the current conditions in the economy might force them to develop such skills: *"I think that big parts of retail still are really bad at making predictions. But now they are more or less forced to it, considering the recession. Before it has been possible to focus on growth, growth, growth. Never mind how much inventory we have, just order big batches and sell it with discounted prices if we have to. Now they have to get better at prognoses and predictivity."*

2. THE AI BREAK THROUGH

- Generative AI
- AI powered customer interaction

Over the last year ChatGTP and other generative AI services have swept the world. Discussions about what jobs will be left when AI takes over have increased dramatically and no industry is left unaffected. Retail is no exception. As AI breaks onto the retail scene it has the potential to disrupt the whole retail supply chain. The Radial Retail Advisory Board agreed that this development is profound, and that retailers have to start experimenting now. AI is both driving the future of operational excellence and resource efficiency in supply chains, as well as the next level of customer interaction.

"We have a "know-me" generation out there that is used to how TikTok and Spotify works, and retail needs to start using AI to mimic that logic and give consumers personalised offers and recommendations in the moment when they are ready to buy", Linda Pimmeshofer, Strategic Advisor Retail.

3. VIRTUAL WORLDING

- Metaverse
- Digital twins
- Extended reality

The border between the virtual and physical is blurring, and we seem to be standing on the brink of an era where virtual worlds will be offering both captivating experiences and a means to improve operations through digital twin technology. Our experts agreed that although the direction of development seems clear, we are only in the first inning and initiatives should be taken with caution.

"We are still in an experimental phase [with the metaverse], so I would say Hold your horses and don't spend all your money there, at least not now when there is no money. I believe in the development, but we are not there yet. There is still some friction, and if there is something you want to avoid in e-commerce it is friction". Arne Andersson, Senior e-commmerce advisor.

LOOKING AHEAD

The identified tech topics are strong in themselves, but when they are considered in interaction, they trigger images of the future that are wildly different from today. Imagine when generative AI can in real-time create personalised virtual worlds for customers to experience, or when AI-based predictive systems can steer a fleet of autonomous vehicles to be located where demand will emerge and the fleet is monitored through a digital twin. These images represent new paradigms in both customer experience and operations, and established retailers better start thinking about how they will enter this new reality (literally), to not be out-competed by disruptors that are native in the new paradigm.

23

TECHNOLOGIES
FOR THE FUTURE OF RETAIL

1. GENERATIVE AI
2. NON-FUNGIBLE TOKENS (NFTS)
3. EXTENDED REALITY
4. METAVERSE
5. 5G
6. 6G
7. IN-STORE MOVEMENT TRACKING
8. REAL TIME RECOMMENDATIONS
9. AI-POWERED CUSTOMER INTERACTION
10. SERVICE ROBOTS
11. ROBOT SHOPS
12. JUST WALK OUT TECHNOLOGY
13. CRYPTOCURRENCIES
14. AUTONOMOUS LOGISTICS
15. AUTONOMOUS DELIVERY VEHICLES
16. 3D-PRINTING
17. SUPPLY CHAIN VERIFICATION
18. SMART GLASSES
19. DIGITAL TWINS
20. RFID
21. PREDICTIVE LOGISTICS
22. BIOMETRIC PAYMENT
23. ALGORITHMIC MANAGEMENT & WEARABLES FOR STORE WORKERS

GENERATIVE AI

Text, images, audio and even video can now be produced by using different AI solutions. Thanks to rapid development within the field retailers as well as consumers can already experience this first hand. New skills such as prompting might soon be a standard within marketing and communication jobs, and product development as well as any strategic decision making will soon be AI supported.

2030

By 2030, at least 30% of retailers will use AI to generate content (Promising Retail Delphi Panel).

NON-FUNGIBLE TOKENS (NFTS)

Using blockchain technology, digital (and physical) assets can be authenticated thanks to verification via NFTs. Retailers have taken notice of this and have amongst other things started selling virtual collections and collectibles.

EXTENDED REALITY

Extended Reality (XR) refers to all types of real and virtual combined environments. It can be completely new worlds in virtual reality (VR) or digital elements in the physical world thanks to augmented reality (AR).

METAVERSE

The "metaverse" refers to a vision of a future internet consisting of connected, real-time, 3D virtual worlds. Connected online worlds populated with companies and people will create new value ecosystems.

5G

5G mobile networks will soon be standard for wireless connectivity. With this comes new capabilities such as low latency and higher data transfer rates. These circumstances will be necessary for a more data-driven and interconnected world.

6G

Research has already begun on 6G technology. 6G will be an important component for a world where the digital and physical will be more blended. A world where senses more than the visual might be captured and presented in the digital.

IN-STORE MOVEMENT TRACKING

Optimising the in store experience for customers will be important for profitability and the continued existence of physical retail. By using a variety of sensors to gather data on customer behaviour retailers will get the prerequisites needed for a deeper understanding of the customer journey.

61%

of North American retail see "potential value in technology that tracks shoppers as they walk through the store" (+10% from previous year.)[40]

REAL TIME RECOMMENDATIONS

E-commerce companies are constantly improving their skills in providing a more personalised experience for their customers. By using real time product recommendations they can provide a friction free path-to-purchase whilst increasing their conversion rate.

AI-POWERED CUSTOMER INTERACTION

Generative AI technology is giving a new boost to chat bots and automated customer service. With improvements to language and contextual understanding AI-powered customer interaction will most certainly increase. Customers will be able to chat or even talk with a personalised AI that might have the ability to act and help.
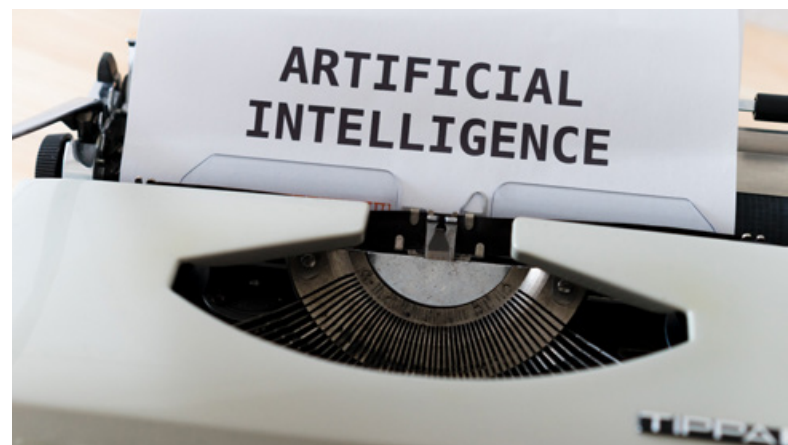
SERVICE ROBOTS

Robots are becoming increasingly smarter and capable of interacting with humans. Service robots will be able to take over tasks such as food serving, guidance in stores and household cleaning. Future technological advancements will make robots capable of tackling more complex tasks.
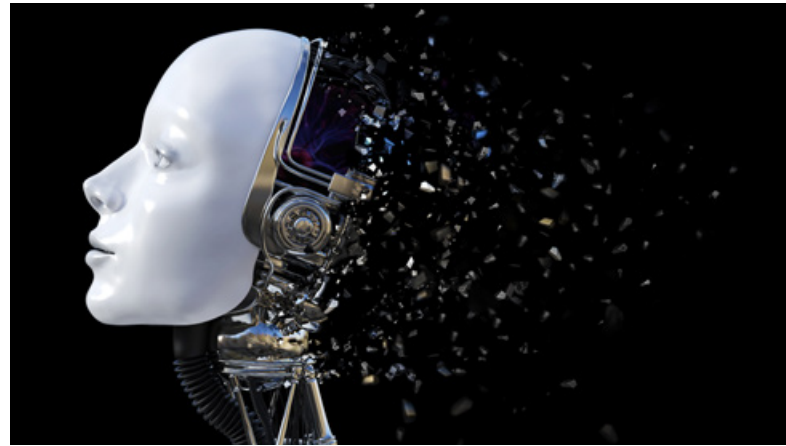

ROBOT SHOPS

Robot shops are unmanned or partially unmanned stores built on technology which enables them to be open 24/7 without human staff present. Customers complete all the steps in the purchasing process by themselves. It is a growing concept in rural areas where labour shortages/costs make it difficult to run stores.

JUST WALK OUT TECHNOLOGY

Using cameras and other sensors, just walk out technology literally enables customers to walk in, pick a product and then walk out. By integrating recognition of individuals, payment solutions and sensory shelves, the customer journey becomes extremely friction free.

CRYPTOCURRENCIES

Cryptocurrencies are decentralised digital currencies that have no geographical restrictions. Cryptocurrencies have had a growth in users and value making it attractive for retailers as a new channel for payment.

AUTONOMOUS LOGISTICS

Autonomous logistics refers to a supply chain system with no or minimal human involvement. By using autonomous vehicles and machine to machine communication, the whole logistics system can be optimised.

AUTONOMOUS DELIVERY VEHICLES

Last mile delivery is one of the largest challenges facing retailers. One, at least partial, solution for this is autonomous delivery vehicles. Whether it is ground based delivery robots or drones, autonomous vehicles can reduce waiting times for customers and cut down on delivery costs for retailers.

3D-PRINTING

3D-printing enables the creation of three-dimensional objects based on digital models, leading to a more flexible way for customers to consume goods and potentially shifting the traditional supply chain in retail. As 3D-printers become more affordable, consumers can enjoy greater self-sufficiency, printing spare parts on demand, and personalised products to their desired size and specifications.
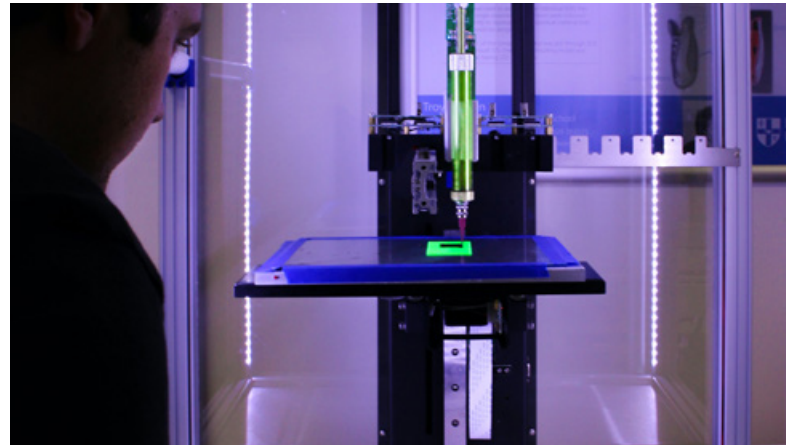
85%

of Promising Retail Delphi Panel agree that before 2030, the majority of large retailers have implemented technical solutions for tracking the ESG (environmental, social and governance) footprint throughout the value chain.

SUPPLY CHAIN VERIFICATION

Supply chain verification is being driven by demands for greater transparency from both consumers and regulations. It allows for the tracking of products from production to disposal, with information connected to measures such as CO_2 emissions. Supply chain verification is becoming increasingly important for creating trust, whether for sustainability or ownership purposes. Blockchain technology is by many held as a promising tool to create reliable registers.

SMART GLASSES

Smart glasses enable users to interact with digital content in the physical world, creating a new immersive experience. With the implementation of 5G and 6G, the technology will benefit from faster connectivity and cloud-based data processing, enabling the glasses to be similar in size and fit as regular glasses. Widespread adoption of smart glasses could completely transform the retail industry, changing the meaning of products and the ways brands can display content to consumers.
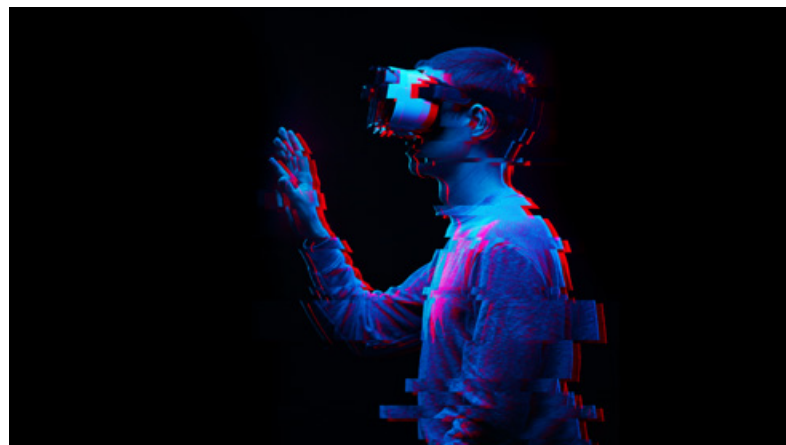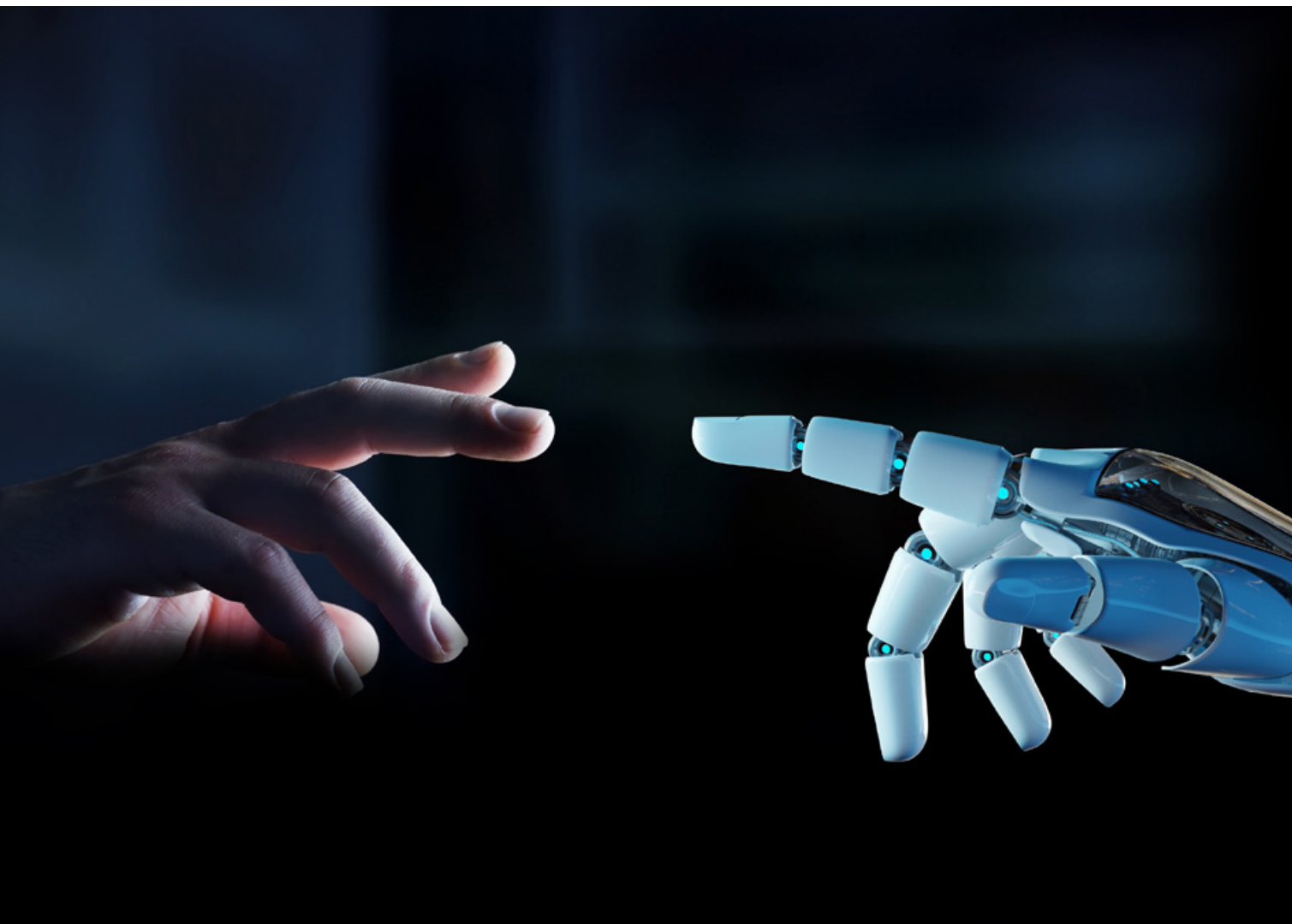
DIGITAL TWINS

Digital twins are simulations of real world objects. Digital twins have so far had most of its success in the manufacturing industry, feeding real time data from machinery and production lines to calculate maintenance schedules and production capacity. But digital twin technology is no longer limited to the aforementioned industry. This new technology presents new opportunities for retail throughout the whole supply chain. A retail digital twin can help optimise store operations, support the designing of store layouts and product flows, and simplify collaborations with partners.

In physical retail, understanding consumer behaviour is key for optimising several parameters related to the store space. Shelf planning, sales and limited stocks are just a few examples of parameters retailers have to think about. Using digital twins gives the possibility of combining simulation with real time data. This can help in scenario planning such as supply chain disruptions (Read more about digital twins on page 20).

25%

The digital twin market is projected to grow with over 25% CAGR from 2023 to 2032.[44]

RFID

Radio-frequency identification (RFID) is a technology that allows for precise, real time tracking of tags that can be placed on a variety of goods. RFID consists of three main components. The aforementioned tags, reader hardware and software to process and identify the data stored on the tags. A recent development is the improvement of passive tags. Passive tags do not need a battery, allowing for a cheaper and more convenient way of tagging individual items. Another major advancement is that during the past decade the average cost of a tag has fallen 80% to roughly 0.04 USD.[45]

These advancements in RFID technology present a great opportunity for retailers. By being able to track individual items retailers can enhance store operations through data driven decisions. By tracking items when picked up, retailers can also track in-store movement patterns. RFID can also be used for contactless payment where you can just walk through an area with RFID readers which note what items you have and can take payment from a connected account instantly. When it comes to inventory management one great advantage of RFID is that it does not require line of sight for the tag to be identified. This means that warehouses with tall shelves still can track items without needing to be at the same height.

PREDICTIVE LOGISTICS

Predictive logistics uses data analytics and machine learning algorithms to forecast demand and optimise supply chain processes, from production to delivery. By analysing data such as historical sales, weather patterns and online behaviour, retailers can make more accurate predictions, reduce costs and increase efficiency. Predictive logistics also helps retailers to anticipate supply chain disruptions, such as weather events or transportation delays, and respond proactively to minimise the impact. A study by Ericsson found that 6 out of 10 companies plan to start shipping pre-emptively within the next 3-5 years.[46]

One key challenge that needs to be tackled for predictive logistics to become reality is transparency. Information sharing between competitors will need to expand across multiple actors from warehouses to shipping companies and much more. Coinciding with this, a new standard for data sharing will be needed, because right now multiple data standards make integration and collaboration hard. Finally, the technological prerequisites needed for predictive logistics include aforementioned technologies such as RFID, supply chain verification, 5G and AI technologies.

6 OUT OF 10

A study by Ericsson found that 6 out of 10 companies plan to start shipping pre-emptively within the next 3-5 years.

BIOMETRIC PAYMENT

Biometric payment in retail refers to the use of biometric authentication, such as fingerprints or facial recognition, to make secure and convenient payments. By eliminating the need for cash, cards, or PINs, biometric payment systems offer a fast and secure checkout experience for customers. Biometric payment has come far in some markets. Facial recognition for payments was used by 495 million Chinese users in 2021.[47] According to Goode Intelligence the total market for biometric payments is expected to reach $5.8T and 3B users by 2026.[48] This corresponds well to a study conducted by Visa showing that 86% of Americans are interested in using biometrics to verify their identity or make payments.[49] There are however challenges with biometric payments including concerns about privacy and risks of data leaks. In particular facial recognition uses unique features of oneself that could be captured without one's consent.

86%

86% of Americans are interested in using biometrics to verify their identity or make payments.

ALGORITHMIC MANAGEMENT & WEARABLES FOR STORE WORKERS

While robotics companies are working towards humanoid robots, humans still have an essential role in the retail supply chain. At the same time data has never been more readily available. Parallel to this workers are increasingly getting fitted with wearables that both instruct and collect data so that tasks and workflows can be optimised.

Retail store workers are not the only ones who will be affected by algorithmic management. Real time data and advanced forecasting changes the role of the retail store manager from an administrative role to one with more focus on increasing profitability and getting the best out of a limited amount of workers and store space. Customer rating systems that gather feedback on the in-store experience can be connected to the workers that are working on a given day, giving insight into what combination of teams work best together. On the back end, wearables are increasing

productivity by giving real time packing instructions. Enhancements such as exoskeletons and augmented vision can alleviate workload in warehouses. It can also enhance safety by monitoring different health indicators such as heart rate, back position and attentiveness. Combining data from the two ends of the retail supply chain will give a rich data source for optimising logistics.

There are however risks associated with algorithmic management in connection with wearables. Surveillance and loss of decision making takes away the ability of workers to use their personal judgement in a given situation. With customer sourced rating systems there is also a risk of reinforcing societal biases and discrimination. Finally, automated decisions through algorithmic management poses a challenge for retailers in providing accountability and transparency in the decision making process.

90%

Adoption of wearable operations tech is predicted to reach 90% by 2028, in logistics, retail and manufacturing.[50]

THE FUTURE OF RETAIL BUSINESS IN THE THIRD RETAIL REVOLUTION

The history of retail business is intertwined with the history of civilization. Already 10 000 years ago, people started gathering in temporary markets to trade goods they were not able to produce themselves. Since then, the way we trade has undergone two revolutions. The first shift made retail's institutions more permanent – from temporary markets to permanent shops. The second transition entailed that commerce became even more available and pervasive to Western culture and life.

Today, we are in the middle of the third retail revolution, characterised by automation, social involvement, and embeddedness. Shoppers and communities are increasingly becoming co-creators, and the physical world is merging with the digita. This shift is happening in parallel with a dire need to adapt practices to the limits of life and resources of our planet.

With the third retail revolution comes changes in what business concepts are successful to reach and involve consumers. The map to the right shows business concepts that connect retailers and consumers, or consumers with each other, to exchange value. Retailers or platforms can use one or several of the concepts in the map to build their model for how value can be exchanged in their channels. The categories on the x-axis (Enabler, Aggregator, Curator, Narrator) originate from the 2022 Radical Retail report, in which we identified the different roles actors take in the retail ecosystem (see image at the bottom of page 49).

When the Radical Retail Advisory Board evaluated what business concept in the map to keep an eye on for the future, they settled on P2P online marketplaces, P2P online sharing/renting, Online single brand store (including secondhand), Subscription models and Metaverse & in-game selling. These concepts were considered most important, and in the coming section they are discussed and their drivers and challenges are mapped.

In essence, the Radical Retail Advisory Board's evaluation is indicating that the most impactful development in business concepts for the future will happen in three streams:
1) decentralised concepts that connect peers for value exchange,
2) concepts that enable a strong narration, for example brand-owned spaces where brands can own and shape the customer experience, and
3) models that embed shopping in daily life and activities, such as subscription and in-game selling.

In the future, both digital and physical interfaces to customers will remain. The digital will stand for the convenient and personalised, and the physical will be experiences where we want human connection and to touch and feel products

Linda Pimmeshofer, Strategic Advisor

B2C & C2C CONCEPTS
Online/physical is defined based on where the purchase decision takes place

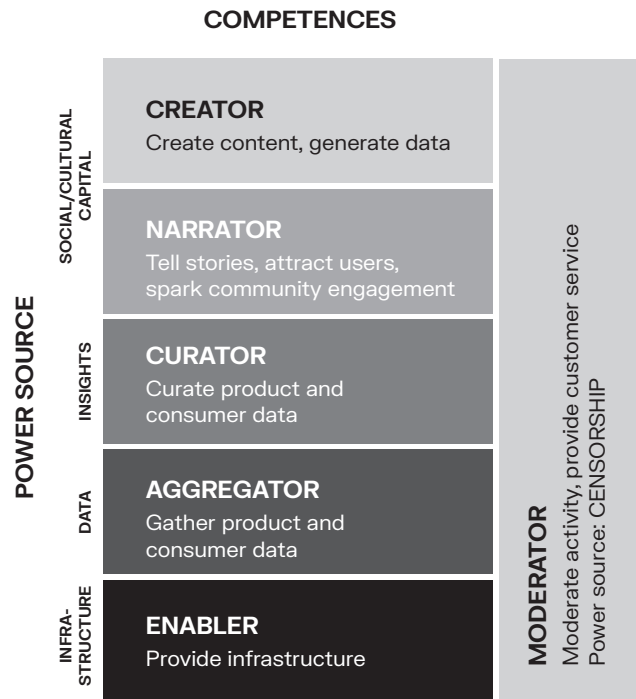|	ENABLER	AGGREGATOR	CURATOR	NARRATOR		ALTERNATIVE ACCESS MODELS	NEW CHANNEL STRATEGIES
ONLINE STORE	**D2C ONLINE MARKETPLACE** Examples: Pinduoduo, Stadium Connect	**MULTI BRAND ONLINE SHOP** Examples: Amazon, Footway	**CURATED ONLINE MULTI BRAND SHOPS** Examples: Hive, Rusta	**ONLINE SINGLE BRAND STORE**		**RENTAL** Examples: Rent the runway	**SOCIAL VIRTUAL (3D) SHOP**
	P2P ONLINE MARKETPLACE Examples: Blocket, Popswap, Tradera, Etsy	**MULTI BRAND ONLINE SECONDHAND SHOP** Examples: Sellpy	**CURATED ONLINE MULTI BRAND SECONDHAND SHOP** Examples: The RealReal	**SINGLE BRAND ONLINE SECOND-HAND SHOP** Examples: Allbirds ReRun, Patagonia Worn Wear		**SUBSCRIPTION** Examples: Birchbox, Hello Fresh	**NON-SOCIAL VIRTUAL (3D) SHOP**
	P2P ONLINE SHARING/ RENTING Examples: Hygglo					**MEMBERSHIP STORES** Examples: Costco, Singular Society	**METAVERSE STORE**
							IN-GAME SELLING
PHYSICAL STORE	**PHYSICAL MARKETS/ POP-UP AREAS/SHOP IN SHOP**	**MULTI BRAND PHYSICAL SHOPS** Examples: ICA, Bauhaus	**CURATED PHYSICAL MULTI BRAND SHOPS** Examples: Natur-komapaniet, Rusta	**PHYSICAL SINGLE BRAND STORE**		**NFT-BASED ACCESS** Examples: Gucci, Nike	**SOCIAL MEDIA SELLING**
		MULTI BRAND PHYSICAL SECONDHAND SHOP Examples: Myrorna	**CURATED PHYSICAL MULTI BRAND SECONDHAND SHOP** Examples: Arkivet, Beyond Retro	**PHYSICAL SINGLE BRAND SECONDHAND STORE**			**INFLUENCER SELLING**

The map shows business concepts that connect retailers and consumers, or consumers with each other, to exchange value. Retailers or platforms can use one or several of the concepts in the map to build their model for how value can be exchanged in their channels.

In 2035, physical retail will be so small that it will have to collaborate with other parties to get foot traffic. I am convinced that we will see a combination of culture and retail take place in city development

Jens Lanvin, Strategic Advisor

Towards the future, we will see fewer and larger retail chains that absorb smaller actors. But at the same time I think it is a trend in retail becoming more locally anchored, with local assortments, connection to local suppliers, and support for the local community

Meta Persdotter, CEO, Coop Butiker och Stormarknader

COMPETENCES

POWER SOURCE

SOCIAL/CULTURAL CAPITAL	**CREATOR** Create content, generate data	**MODERATOR** Moderate activity, provide customer service Power source: CENSORSHIP
	NARRATOR Tell stories, attract users, spark community engagement	
INSIGHTS	**CURATOR** Curate product and consumer data	
DATA	**AGGREGATOR** Gather product and consumer data	
INFRA-STRUCTURE	**ENABLER** Provide infrastructure	

A complete retail value offering can be created when actors come together to provide all the competences in the model above.

P2P ONLINE MARKETPLACES

DEFINITION

Online platforms where individuals buy and sell items between one another. The goods can both be things that the individual has created and things that they have previously purchased. Examples are Blocket, Tradera and Etsy.

WHY IS THE CONCEPT INTERESTING?

In general, the global growth rate of P2P marketplaces is around 15%.[51] Evidently, consumers are motivated to engage on such platforms. Status symbols are changing from owning the newest and most expensive products to creativity and a unique self-expression, and there is an increased interest in crafts – TikTok and Youtube are overflowing with "Do-It-Your-self-videos" in an abundance of categories. Buying on P2P platforms invites consumers to actively be part of creating and improving what they own. It can also be a way to be kind to both wallet and planet.

DRIVERS AND ENABLERS

- Macro level uncertainties motivate more decentralised resilience and self sufficiency
- Economic uncertainty pushes households to seek cheaper alternatives, such as buying secondhand
- Shift in status symbols, from owing new shiny things to being creative and having a unique self expression
- Increased interest in crafts and DIY
- Development in digital verification techniques, review formats and blockchain technology facilitate trust between buyers and sellers that connect online

CHALLENGES

- Creating trust between buyers and sellers in a P2P network
- Integrating new demands on producers to take responsibility for the whole product life cycle
- Finding the right balance between decentralisation and central responsibility from the platform

P2P ONLINE SHARING/RENTING

DEFINITION

Online platforms where individuals share and rent items between one another. Hygglo and Gomore are two examples.

WHY IS THE CONCEPT INTERESTING?

Today, the potential network effects of online platforms are so big that it makes sense to connect even the most niche interests. The times when we had to rely on our neighbours or friends for borrowing what we need are long gone. The P2P online sharing/renting platform can become a geographically independent collective, through which peers can sync up and share resources between one another. Moreover, in uncertain economic times, renting might be an attractive alternative to making investments in more expensive things.

DRIVERS AND ENABLERS

- Network effects of the internet create rewards from gathering people on digital platforms to share items
- Current economic uncertainties might prevent people from making larger investments in things
- Consumers are increasingly concerned with sustainability and resource efficiency
- Changing norms around ownership
- Development in digital verification techniques, review formats and blockchain technology facilitate trust between buyers and sellers that connect online

CHALLENGES

- Creating trust between lenders and borrowers in a P2P network
- Finding the right balance of decentralisation and central responsibility from the platform
- Creating resource efficient shipping solutions within networks that are geographically dispersed

ONLINE SINGLE BRAND STORE (INCLUDING SECONDHAND)

DEFINITION

An online shop where a brand sells their own products, can be both new and secondhand.

WHY IS THE CONCEPT INTERESTING?

Trendwatching states: *"We're shifting from an era where brands exist to sell products, to one where brands are designed to be culture – the culture is now the product"*. Hence the value in shiny newly produced goods are decreasing compared to a compelling brand story and interesting cultural elements. It is becoming increasingly important for brands to express what they stand for and build a magnetic story. Therefore, they need spaces that they own and where they can create a brand-congruent experience. The development towards more immersive digital environments will facilitate the development of compelling and innovative experiences.

DRIVERS AND ENABLERS

- Increased focus on brand's story, vibes and magnetism
- New possibilities to create captivating experiences, in virtual worlds for example
- A trend of brands integrating secondhand sales with their traditional business model

CHALLENGES

- Attracting consumers to brands' own spaces on the ever expanding internet
- Competing for attention with multi brand platforms

SUBSCRIPTION MODELS

DEFINITION

Consumers sign up to receive products or services in predetermined intervals or based on triggers. Examples are Birchbox and Hello Fresh.

WHY IS THE CONCEPT INTERESTING?

Both consumers and retailers have incentives to use or implement subscription models. Consumers may want to reduce the energy consumed by carrying out routine purchases, or the effort to seek inspiration. Retailers get a predictable income and a regular touchpoint with their customers. Possessions connected to an IoT (Internet of Things) network create possibilities for trigger based subscriptions, like refills of products that are about to run out. Moreover, during the last decade, products that come with continuous possibilities for digital updates have become more common – users get regular notifications with offers to update everything from their car to the apps on their phone.

DRIVERS AND ENABLERS

- For retailers to create predictability in income streams
- For retailers to create continuous touchpoints to consumers
- Consumers desire to decrease time and energy spent on both routine purchases and inspiration seeking
- IoT technology enables trigger based subscriptions

CHALLENGES

- Consumers may have a "mental budget" of how much they want to spend on subscriptions, and it might decrease in uncertain economic times
- For retailers to promise a certain price over an extended period of time, if resource prices are increasing

METAVERSE AND IN-GAME SELLING

DEFINITION
Sales of goods, digital or physical, in games and virtual worlds.

WHY IS THE CONCEPT INTERESTING?
During 2022, there was a big hype around the vision of metaverse, and many brands made their ways into virtual worlds and games to create unique brand experiences and get closer to their target audiences. Much is pointing towards that digital identities are becoming increasingly important for individuals' self image. For example, 65% of 16-25 year olds have spent money on virtual items in games.[52] And the global metaverse market size is projected to grow from $61.8 billion in 2022 to $426.9 billion by 2027, representing a Compound Annual Growth Rate of 47.2%.[53] Moreover, virtual worlds can be a test bed for new products. A new invention can be tested towards a customer audience in a virtual world first to gather feedback and evaluate its potential to be successful if produced as a physical product.

DRIVERS AND ENABLERS

- Hype and general interest in the metaverse
- Digital identity and appearance is becoming increasingly important for consumers, especially for a young audience
- Virtual environments come with endless possibilities for creating experiences
- Possibility to experiment and develop products digitally first
- Co-creation and community building in virtual worlds, potentially supported by Web3 tech such as NFTs

CHALLENGES

- Uncertainties with regards to how "the metaverse" will develop
- Unclear what virtual worlds or standards will dominate, and hence difficult to know where to invest

75%

Nearly 75% of global business decision makers believe that interacting
with customers in the metaverse will become commonplace.[54]

RETAIL TOWARDS 2035

We are indeed heading towards an exciting future in retail. Fundamental changes in business models driven by new technology and demands for regenerativity, blurring of digital and physical and a changing internet terrain.

RADICAL RETAIL ADVISORY BOARD'S ANSWERS TO: "WHAT WILL BE MOST DIFFERENT IN RETAIL 2035?"

- From push to pull. Production is significantly more based on real demand, both in terms of models and volumes. Inspiration for new products is gathered from the crowd and/or niche communities.
- From value chain to network. Value production happens in network-like structures, where supply and demand can originate from several nodes, and the same node can be both a supplier and a buyer. Production is more decentralised and happens more locally.
- Cross-company collaboration. Data is shared between companies to get global efficiency gains and sustainability benefits. Transports and shipping are coordinated between companies and even across industries. Collaborations that once were regarded as unconventional are now commonplace.
- Polycrisis adaptation. Successful companies can handle a BANI (Brittle, Anxious, Non-linear, Incomprehensible) world and have strategies to make them prepared to handle "black swans".
- New world regulations. Regulations are vastly different to account for the development in AI and data-driven insight work.
- Next level personalisation. Communication, experiences and products are all more personalised, thanks to AI that can both generate insights about consumers and produce content. The consumer no longer has to actively search for products, AI is tailoring a feed for the consumer.
- Crowdsourcing. The organisational boundaries around retail organisations are dissolving and retailers are engaging with a broad and always changing network with different actors and competences.
- Automation as default. Automation is a hygiene factor, and most of the operations are automated thanks to new robotisation and AI.

IN SUMMARY, THREE PARADOXES WILL BE INHERENT TO THE GLOBAL RETAIL ARENA TOWARDS THE FUTURE.

Summing up these insights and the rest of the insights from the report, we arrive at an image that there are three main paradoxes that will be inherent to the global retail arena towards the future:

4. Global efficiency vs Niche exclusivity. Global aggregation of information, transparent tracking of value chains, big ecosystems, super apps that aggregate all possible product and service categories stand in contrast to niche internet cultures, communities fuelled by exclusivity and attractive "vibes", as well as aversion to advertising and mainstream platforms.

5. Technological embeddedness vs Human involvement. AI that optimises decisions, blockchain that embeds trust in technology, and technologies that practically runs a store by itself, stand in contrast to how humanness is seen as the key to connect with local contexts and to build attractive communities around brands.

6. Back to nature vs Dopamine highs. Focus on generativity, resource efficiency and institutionalisation of nature's sake stand in contrast to the focus on producing dopamine-inducing experiences in virtual worlds and hitting that sweet spot in exactly what a consumer desires.

In accordance with the nature of paradoxes, success is found in the integration between the two poles. Towards the future, retailers will need to create long term strategies that include both poles of the paradoxes as well as ways to balance them that are right for the particular actor. The other option is to just ask Chat GPT what to do.

ABOUT NEXER

Nexer is a global tech company with strong roots in the Swedish heritage of entrepreneurship and innovation. In a world gone digital, we keep our customers one step ahead. Some of the world's largest and most demanding businesses rely on our dedication and expertise within digital transformation, artificial intelligence, IT and R&D. We secure their progress by exploring cutting-edge tech, pushing ourselves to innovate, and sharing our skills within strategy, technology and communication.

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