Immersive Technologies

Augmenting customer experiences by retailers

The pandemic has reshaped entire retail landscape with immense changes. For instance, it forced many retailers to explore alternate paths when stores were closed, limiting the number of visitors to the stores. While change is inevitable, the pandemic has ensured that all of us are better-prepared for any eventuality.

This brings to fore an adage, 'New challenges bring new opportunities.' Specifically, retailers have propelled themselves well into the future by tapping into opportunities such as adopting immersive technologies, thereby accelerating digital shopping by roughly five years as per IBM's 2020 US Retail Index Report. There is an upsurge in demand for artificial reality (AR) applications because of innovative use cases that have been made possible for global brands. The applications of AR for virtual try-ons and furnishing, for instance, have created a huge impact for brands looking to increase their brand value and adoption. During the pandemic, eCommerce took a giant leap - the share of online retail sales has grown to 19.5% in 2021 and is expected to grow to 25% in 2025[1].

This dominance of online shopping is no surprise, given the adoption of technology across the world, further fueled by the pandemic. The interesting fact is that this has become launchpad for many global brands to prove their uniqueness in transforming the customer experience. Immersive technologies have become the choice for many of them to portray their customer connect. Having said this, it is not a straight dovetail joint to hammer on. This means that brands must entice the average consumer on par with the real environment, which brings in a significant amount of investment. The Return on Investment (RoI) may not be immediate, but is needed to survive in the game. Trends indicate that most brands adopt immersive technologies like AR and VR to improve CX. This is substantiated by the Statista report, which projects the market value for AR technology at over $18 billion by 2023.

Embracing the immersion:

The retail landscape is becoming more competitive, forcing players to keep pace. The pandemic is influencing buying behaviour and consumer decisions to an unprecedented extent. FirstInsight reports that consumers restrict themselves from visiting stores, fearing to try-out products in a trial room due to the pandemic. It was further discovered that 80% of women avoided trying beauty products, 68% avoided trying apparels in trial rooms and 61% avoided trying on shoes, citing safety concerns.

Brands are embracing immersive technologies to amalgamate boundaries between channels for their customers. They aspire to offer the same experience to orchestrate the customer journey. They also aim to embed technologies into stores, making the customers feel safe, elevating their experiences, and providing satisfaction of making an in-store purchase. In-store technologies also help them capture more nuanced data with leading insights. Needless to stress on the changes to be made for the future, Retail Dive's bold statement, 'mediocre retail has no future' says it all.

The pre-covid world has already witnessed mPOS systems by Sephora and Nordstrom, integrated self-checkout by Zara and Nike, and QR code adoption by Walmart, Lacoste, and Decathlon. In fact, the mindset of the retailers is to invest in frictionless technologies to be successful in experiential retail. The Retail Dive Survey Report 2020 highlights that 89% of retail executives believe retailers that invest in frictionless store experiences today are more likely to be successful in three years.

The post-covid world is moving forward by harnessing the power of AR and VR to boost their sales. Immersive marketing, product visualization, virtual try-ons, virtual showrooms and VR experiences, and in-store product information and navigation offer more engaging opportunities even without stepping into the physical stores. AR apps increase the chance of instilling confidence in customers, thereby steering them towards a positive buying decision.

The pandemic has also taken retailers off the field for not effectively investing in an online ecosystem with enhanced product listings and cart experience. This also resulted in a huge proportion of products purchased online being sent back as it did not meet the customer's expectations, considering many were forced to purchase online. The US market alone had $428 billion worth of products returned in 2020, impacting the industry and costing $101 billion to manage the situation. The managing cost alone amounts to 25% of the overall worth of the products. This needs an effective and innovative technology intervention as a solution, which can lead to lesser returns. AR and 3D technologies provide a classic platform where users can scrutinize a product to minute details, anytime and anywhere, building more confidence and trust in the process.

With multiple constraints and challenges like investment, technology, preparedness and many considerations like increasing user adoption, changing customer preferences, scope for transformation, what are the key factors influencing the ecosystem of immersive technologies in retail that affect brand adoption?

Strengths:

- Offers differentiated customer experience
- Availability of data and analytics driving decisions
- Scope for unique content and effortless campaigns
- Ability to rapidly embrace innovation
- Improved efficiency through connected devices
- Effective use of manpower and workforce

Weaknesses:

- Less adoption and hesitation to invest in a technology set up
- Perception that AR/VR are more for younger demographics
- Immediate RoI is not certain with no precedent examples
- Requires tech-savvy workforce or training needed for the workforce
- Not many universal use cases across industries

Opportunities:

- Increasing awareness
- Higher conversion rate even in the pandemic
- Success in few segments attracting more adoption
- FAANG companies generating momentum resulting in innovative use cases
- Increased use of wearables across the globe
- Connected capabilities solving pressing problems – e.g., Returns

Threats:

- Fast changing technology (devices) may lead to obsolete investments
- Risk of not having an immediate RoI may kill the evolution of the ecosystem
- Vulnerability to cyber attacks
- Health and wellness concerns with AR/VR devices
- Privacy and regulation issues over approved use of devices

AIM – Appify, Integrate and Manage:

To accelerate strengths and leverage opportunities to mitigate weaknesses/threats, brands must aim for an operating model that not only enables them to embrace these newer technologies, but also helps them become sustainable and profitable. We therefore propose adoption of AIM – Appify, Integrate and Manage.

1. **Appify** – Reusable plug and play platform-based approach, connecting all consumer touchpoints across channels including marketing, product visualization and virtual try-ons.
2. **Integrate** – Complete integration of technologies of augmented and virtual reality, IoT-enabled consumerism, sensor-driven supply chain and connected ecosystem.
3. **Manage** – Maintain and manage the widening of feature-sets including technology upgrades and service offerings.

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Appify

AIM

Manage   Integrate

for

Standardization and Reusability

Appify - Templatized platform-based approach with plug and play features that offer standardization and reusability.

Reach and Compatibility

Integrate - Augment the ecosystem with connected solutions and syndicated asset formats which offers reach and ease of tech compliance/integration

Measurability and Maintenance

Manage - Leverage the connected ecosystem to track and measure outcomes. Iterate and update which offers pace and ease of maintenance

through

- Scalable Architecture
- Automated Prototyping
- Faster Quality Assurance
- Enterprise Syndication

- Integrated Partner Ecosystem
- Ubiquitous Experience
- Uniform Systems
- Data Continuity

- Guided RoI Analysis
- Consistent Reporting
- Quantification of unique immersive interactions

enabling

| Scalable Platform | Accelerated Rollout | Ready reality Ecosystem | Consistent Hyper-connect | Data-led Decisions | Brand lock-in & Conversion |

While the above appear to be a prevalent operating model for brands, a strong investment and technology ecosystem to maintain the pace is required. There are a few real challenges surrounding RoI measurements with limited data to qualify and quantify the tangible/intangible benefits.

However, reports suggest that brands adopt immersive technologies, especially in marketing, product visualization and virtual try-ons etc. When the right technology solution is selected, it is expected that the business challenge is solved and RoI is met in most of the cases. Brands primarily adopt immersive technologies for collaboration because:

■ **AR/VR/XR elevates the visualization experiences and makes the marketplace more dependable**

  ○ 3D product visualizations across web, mobile and social media is in an up-swing, especially in online electronics

■ **Brings in real time 3D positioning and analysis of the product, thus driving right decisions**

  ○ For instance, given that most people are engaged on a remote-working model, **IKEA** offers real-time positioning of real estate items through VR

■ **XR boosts sales and instil confidence, offering consistent customer**

  ○ Recently, **adidas** sold its shoes with the help of AR filters on popular social media platform, Snapchat.

  ○ It has been learnt that 63% of online shoppers entrust AR to have an improved shopping experience in the web. The impact of AR tends to boost customer confidence during purchase. Companies like Blu Dot have seen 81% increase in online sales.

■ **Results in fewer returns**

  ○ **Shopify** reports a 40 percent decrease in returns from 3D visualization

  ○ Macy used in-store VR to reduce returns. The brand was able to reduce returns to <2%, while other brands in the industry sill show 5% to 7% return rates

The global report from Accenture Interactive clearly portrays how companies have shifted their focus to AR/VR and 3D technologies. The prerogative is to employ immersive experiences to drive efficiency. This has led to a boost in consumer confidence in terms of online purchases. There has been an 4% increase across the globe, with the UK alone showing 6% increase, as per the report.

While all these facts clearly indicate that the landscape is definitely changing, below is the summary of the factors influencing the change and their effects.

Retailers expect:

- Cost effectiveness
- High flexibility and Speed
- Ease of Implementation
- Effective metrics for measurement
- Scale and reach
- Stay ahead

Consumers expect:

- Product visualization anytime anywhere
- Product experience before purchase
- Increased confidence to make a purchase
- Customize and personalize anywhere
- 360* awareness before purchase
- Brand connect

Results:

- Extended digital-channel presence and engagement
- Frictionless augmented digital shopping experience
- Diversified delivery mechanisms
- Emerging strategic partnerships across brands
- Virtual "try-before-you-buy" experiences
- Reach beyond scale

Outcomes delivered by Mindtree:

Mindtree, a born digital company, has exhibited strong expertise in delivering immersive experiences to their global clientele. There has been a perception change among customers on DX and an evident shift is seen after the emergence of AR and AI. This opens up doors for sensory and multi-mode reality experiences to transform interactive experiences for end users. The digital heritage and expertise puts Mindtree in a sweet spot to help our clients unlock their business benefits and accelerate value creation with strong user cases.

Immersive solutions designed to serve businesses across industry segments at various stages of the value chain

Prototypes

Sales & Marketing

Customer experience

Training

Service and Operations

Below are a few examples of immersive experiences that Mindtree has been able to deliver for its customers.

Success Story	Examples
Color visualizer app for consumers and professional decorators of a Dutch multinational paints company	**Business Problem:** Consumers go through a complex and emotional journey to complete a paints project. However, many consumers either end up quitting the project or are dissatisfied with the end result due to lack of confident color and product choices. This results in loss of conversion and lack of confidence to take up future projects. **Solution:** • A digital world solution for a physical world problem using AR with advanced computer vision to deliver live virtual paintings of walls, factoring furniture, lighting conditions, shadows and textures to enable confident color and product choices • Commerce integrated with the visualization journey to enable easy conversion **Outcomes:** • 5+ million users across 40+ countries with consistent 4.5 ratings in the app stores • Creating brand lock-in with 2.5x higher conversion rate towards sales
Avatar-based training for a British multinational consumer goods company	**Business Problem:** • Dependency on physical trainers and physical spaces for classroom-based training • Supporting multiple time zones and large customer base • Increased cost for multi-language trainings • Training efficiency **Solution:** Avatar-based interactive training for recurring programs removes dependency on trainers, physical spaces and equipment. Also, there is 24/7 multilingual training support across multiple geos. **Outcomes:** • Faster, cost-effective and better employee engagement
3D Virtual Tour of an Innovation Center for the largest privately held global food corporation	**Business Problem:** With travel and commutations curtailed across the globe, the customer needed to engage with their customers and showcase new product launches. **Solution:** • Implemented a virtual tour that allows users to explore the innovation center in 3D • Locates the user's current position in the facility and provides information about each area • Allow users to interact with food prototypes, visualize new product launches and get an overview of the latest trends **Outcomes:** • Immersive exploration of the facility and products with effective appealing new product launches

While the above success stories speak of Mindtree's expertise in AR/VR, here is an illustration of how the AIM framework propelled our customers to their goals. The AIM framework is overlayed upon the one of the above success stories – 'Color visualizer app for consumers and professional decorators of a Dutch multinational paints company,' highlighting the key measures in each segment clarifies it all.

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- Use of templatized UI / presentation Layer, business logic layer, AR layer, Backend CMS & Data Access layer and Integration Layer to ensure entire solution is highly scalable and can be easily extended to newer markets.

- Use of single platform-based code base resulting in same version of app code base available for all the markets at any given moment.

- The entire app can be easily rendered and customized for newer markets / brands with automated processes and backend CMS portal configurations.

- Flexibility for market stakeholders to enable/disable features with simple toggles and configurations available in backend CMS portal thereby reducing dependency on platform support team.

- The entire AR layer of the app can be used as plug & play feature in Kiosks (in retail stores) and other web interfaces (brand websites).

- Dedicated integration layer including 3rd party abstraction layer to integrate with multiple 3rd party SDKs & APIs and internal systems.

- Automated data synchronization with upstream & downstream systems ensuring app sync all the configurations and data upon each launch.

- Consistent and connected ecosystem with seamless exchange of data across systems to ensure data captured & information delivered is always relevant.

- Collection of user behavior data from multiple channels (App, brand website, search engine, social media platforms like Facebook etc.) based on user consent to enable customized in-app marketing campaigns/notifications.

- Collection of crash analytics and other valuable app usage data to identify areas for further optimization.

- In App user feedback capturing mechanism to understand user sentiments and identifying consumer needs for each market.

- Intuitive user experience providing multiple interaction and immersive touchpoints within the App enabling brand lock-in and higher conversion rate towards sales.

enabling

Scalable plug & play platform

40% faster rollout to markets

Integrated ecosystem with scalable integration touchpoints

Consistent data delivery with every app launch by user

Data-led optimizations leading to 98.46% crash free downloads, 4.5 all time high rating for a key market

Brand lock-in with 2.5x higher conversion rate towards sales

Creating the next normal:

The next normal is bringing in changes to customer requirements that are evolving rapidly. The culmination of technology adoption, changes in consumer behaviour and rapidly shifting user requirements are driving global brands towards the future. Here are key focus areas and some examples of how global brands have adapted them.

Focus Areas	Examples
Emergence of AR/XR-based marketing and communications strategies	Efficient use of metadata content, assets for advertising and campaigns that can be easily shared and discovered across online touchpoints. ▪ AR in commerce is undergoing a disruption with Facebook and Snapchat bringing in more sophistication. ▪ Google is using assets as the weapon in ecommerce sites, thereby integrating with AR and subsequently leading to innovation. This will help retailers derive maximum RoI and leverage new opportunities for brand visibility. ▪ Apple has already embraced AR and VR with enticing use-cases. It is expected that more daily chore use-cases will come up as we go. ▪ 3D and AR-enabled mainstream mobile browsing outrank traditional ecommerce sites and gamification for communication and product launches.
Augmented Shopping - 'try-before-you-buy'	These vary from placing household furnishing items in our home through AR to preview makeup or understand how a pair of eyeglasses would look on us. ▪ Nike uses AI and Computer Vision to offer product recommendations for its mobile users of Nike Fit. ▪ IKEA uses AR-driven app experiences to drive its sales. The AR-enabled app IKEA Place offers its users to test furnish the products in their home space before purchase. This has led to increase in brand popularity and the app has been downloaded 300,000 times in a month, leading to 43% YoY increase in sales.
Virtual Self-Service Stores	The goal is to generate momentum and invite the traffic back to physical stores ▪ Global pop-ups by Burberry to align with the release of its new Olympia handbag collection. These pop-ups delivered an AR experience that animated the Greek Elpis theming modern classicism ▪ The transformational campaign experience by Footlocker using an AR-based 3D digital model generated immense momentum with 1.25 million views in one hour
Emergence of Metaverse	The emergence of metaverse is bound to disrupt how consumers are interacting with brands. The Metaverse ecosystem will bring together AR, VR, blockchain, cryptocurrency, AI and IoT to deliver unparalleled immersive interactions for consumers. The landscape will witness numerous innovative use cases when all brands will adopt the platform. This will generate unimaginable value, potentially leaving behind a boundary blur on the physical world.

What's the future?

The future seems very exciting, given the adoption of 3D, AR, and VR by brands and end consumers. Research indicates that more than 50% of consumers in APAC and Europe favor immersive technologies to influence their purchase. It also shows that the future is all about AR and VR, and that 20% of US' population will adopt the technology, with about 110 million using it monthly for their needs. The world is already moving towards the metaverse - an unimaginable shift. This is fantastic for global brands, given that consumer demands are shifting towards immersive experiences.

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About Mindtree

Mindtree [NSE: MINDTREE] is a global technology consulting and services company that enables enterprises across industries to drive superior competitive advantage, customer experiences and business outcomes by harnessing digital and cloud technologies. A digital transformation partner to more than 260 of the world's most pioneering enterprises, Mindtree brings extensive domain, technology and consulting expertise to help reimagine business models, accelerate innovation and maximize growth. As a socially and environmentally responsible business, Mindtree is focused on growth as well as sustainability in building long-term stakeholder value. Powered by more than 31,900 talented and entrepreneurial professionals across 24 countries, Mindtree — a Larsen & Toubro Group company — is consistently recognized among the best places to work.

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