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Reimagining intelligent merchandising

in a post-COVID world

Executive Summary

Merchandising has always been at the core of retailing because the heart of the retail business involves product selection, availability, pricing, procurement, and placement. Modern-day merchandising processes can no longer operate in organizational or technology silos, requiring complex orchestration across all core processes such as financial and assortment planning, space management, allocation, pricing, replenishment, and supply chain/logistics. As retailers today remain product and channel-centric, the silos within the organization prevent the type of collaboration required to provide customers a unified experience.

The complexity of legacy system applications has driven inefficiencies in today's merchandising organizations, where the burden of low value-added work is relatively high. Merchants spent approximately two-thirds of their time gathering data, managing exceptions, putting out fires, and participating in meetings to syndicate with colleagues. Only one-third of their time is spent on critical strategy and analytics or insights.

Foundational and core technologies need enhancement to support the AI-led insights-driven approach necessary for next-generation merchandising work. As the COVID-19 pandemic hit retailers hard, the challenges faced by merchandisers have amplified by 2X or 3X. The current crisis has brought about some drastic shifts in merchandising practices, processes, and user patterns.

Though cost-cutting is necessary, retailers should look for transformation and growth opportunities. This white paper addresses how niche and emerging technologies can help retailers manage their merchandising function to emerge better positioned for the future.

Impact of COVID across the merchandising cycle

The COVID-19 pandemic has resulted in a fundamental shift in consumer buying behavior. As a result, there is an enormous pressure on the merchandising function to redesign existing merchandising plans, build the right assortments, and assign the right vendors to deliver goods on time to adapt to the new customer buying behavior.

Let us look at how COVID has impacted the various stages of the merchandising cycle and the new challenges faced by the merchandising function in each of these stages.

Merchandising cycle

Trading/Sales cycle
⌄
Customer strategy
⌄
Product design
⌄
Range planning
⌄
Buying and sourcing
⌄
New product launch
⌄
Supply chain

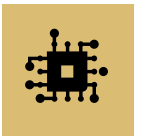# Customer strategy

Shift in customer preferences

Customer focus is now on affordability as they cut down on non-essential spending. The scarcity of products made customers switch to new brands/stores. The switch in preferences is likely to stay permanent. There is also more emphasis on sustainability and the ecological impact of purchases - sustainability credentials will regain consumers' trust after the discounting season

Product design

Altered design, development, and sample verification

Product workshops have moved to virtual meetings. Design, review, and sample verification are challenging in the absence of physical sampling processes as merchandisers and designers no longer collaborate with vendors in the same room. Today, the entire sampling process takes place over video conferences and Zoom calls.

Range planning

Lack of agility to respond to changing assortments

As physical store channels shut down during lockdown and demand signals skewed toward digital channels, planners need to continuously rebalance the assortment to be curated and localized for specific store/channel/touchpoint.

Buying and sourcing

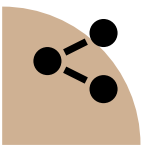## Lockdowns disrupted the entire global value chain

With the supply chain disruption and many vendors shutting down their business entirely, getting access to tier-I and tier-II suppliers for sourcing goods has become a significant challenge for merchandisers and procurement teams. In these difficult times, the key challenges faced by merchandisers to source goods are minimizing inventory build-up and securing future supply from alternative sources. Rapid onboarding of new vendors from alternate sources in a continuously shrinking product lifecycle adds to the complexity.

New product launch
Continuous data enrichment

Remote work has added to the challenges in enriching product attributes, digital assets, and content. New asset creation and continuous updates on existing digital assets have become challenging without consistent infrastructure.

Supply chain
Inventory misalignment

Global disruption and store shutdowns have led to high residual inventories from the spring/summer collection and heavy discounting. The value of excess inventory from the spring/summer 2020 collection is estimated at €140 billion to €160 billion worldwide. Clearing this excess stock is challenging but essential to ensure liquidity and make room for new items, especially when the promotions have been virtually irrelevant to consumer baskets over the past few months.

Sales cycle
Skewed sales volumes

While stores have started to open up and establish physical distancing norms, there is enough uncertainty about the future mix of digital vs. physical channels due to skewed sales. Virtual merchandising is also no longer the same in the physical store environment. Customers are wary of using trial rooms and trying out products, especially in the cosmetic, apparel, and fashion segments.

Limited cost
optimization avenues

Alternate sourcing strategies and sourcing supply have led to higher sourcing and shipping costs. There is also a considerable inventory buildup in distribution centers (DCs) and stores, requiring heavy discounting, affecting the liquidity positions, and eroding profit margins.

Role of AI and intelligence in tackling challenges and the future of merchandising

Many trends in the post-COVID world will become the "new normal" where digital, artificial intelligence (AI), and analytics play an essential role. AI must function as the nervous system, serving as a foundation for retail adaptation strategies, providing intelligence, automation, and augmentation of the human workforce. These tools will help merchants unlock new growth areas by leveraging more intelligent tools and data-driven decisions to make forward-looking predictions.

Product design and development phase
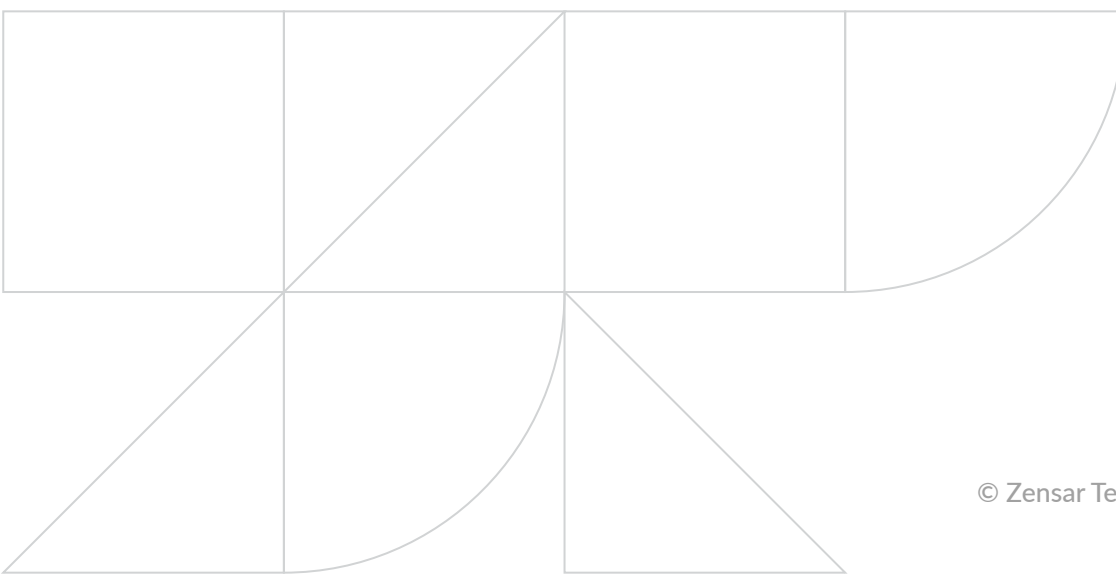
Digital prototyping

Where retailers have digitized product lifecycle management, 3D rendering is used for product design, prototyping, and virtual sampling. Virtual samples replace physical samples, and 3D printing is used to create product samples in niche segments like footwear, jewelry, accessories like bags, etc. By creating digital 3D renderings of garments and materials, few prominent retailers sell products to merchants with images rather than physical samples. Leveraging this digital technology, retailers can hold virtual meetings and engage everyone simultaneously to complete the line review process in one meeting to save weeks of the go-to-market cycle.

Life cycle modeling

AI can deliver insights to engage with customers before producing items to determine whether they perform well, optimal price entry points, optimal selling period, anticipated length and expected selling margin.

Customer insights

AI can track macro trends in the market that will influence customer wants and needs. It is possible to track competitors' data on their e-commerce sites, human intelligence gathering, and track news articles and social media.

New product launch and continuous data enrichment

Digital product attributing

Using AI and deep learning for digital image recognition to identify unique product attributes from images.

Connected PIM

Cohesive and connected product information management (PIM) systems and digital asset management tools complement product data and digital assets associated with it. Robust workflow engines integrated with PIM/master data tools will initiate workflow processes.

Assortment planning

Intelligent virtual store design (IVSD)

Uses scientific space-planning techniques, including system-generated recommendations, to enhance the effectiveness of store-specific spatial assignment of fixtures, services, categories, and merchandise in a physical store. These applications leverage advanced analytics, data visualization, algorithms, image recognition, augmented reality (AR), virtual reality (VR), and mobile delivery to improve the performance of each category and support visual merchandising success. 3D visualization creates an immersive planning experience that supports attractive visual merchandising.

Assortment recommendation engine

Suggests changes by evaluating incremental changes in sales by stock-keeping unit (SKU) and color choice. AI is applied to identify the substitutability effect of every product offered for sale. For example, how much of an item's demand will be lost if the item is removed from the assortment versus transferred to a similar product.

Merchandising

Contextual real-time pricing

The retailer's ability to leverage AI to manage and adjust prices for customers in real-time across all channels, based on a wide variety of considerations, including competitive pricing, promotional cadence, customer loyalty, and item availability.

Demand forecasting

AI and machine learning-led demand forecasting, inventory replenishment, and markdowns to improve forecast quality by measuring forecast deviation using actual demand at stock keeping unit (SKU)/location-level granularity.

Merchandising algorithms

Leveraging complex data, advanced analytics, and algorithms to make large and small merchandising decisions with greater accuracy and precision, such as driving more footfall to stores by positioning destination merchandise or pushing non-selling store items to online channels to make room for new inventory.
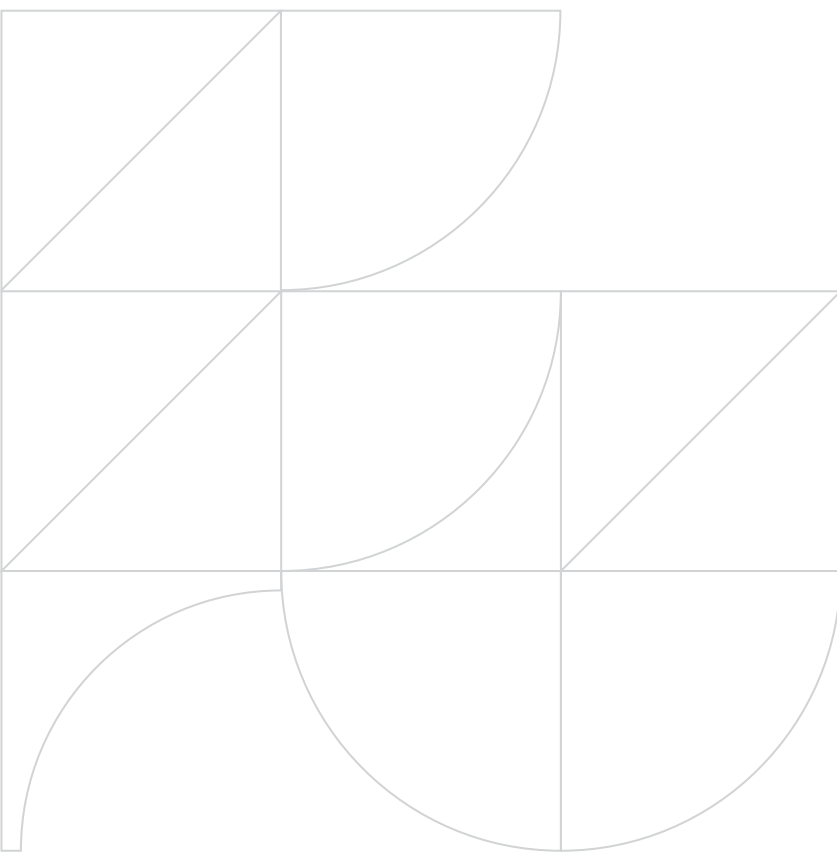
Visual merchandising in stores

Smart kiosks

Self-help kiosks that allow touch-free gesture-based catalog search, browsing, and self-checkout. Face recognition for login and using gestures to enter payment authentication.

AR mirrors

Fitting room challenges can be resolved by using smart mirrors to bring an entire product catalog into the fitting room for fashion and department stores to enhance the in-store customer experience. An AI-powered interactive mirror can recommend matching items based on body type, fabric preferences, and products customers have tried in the fitting room.

Conclusion

Modern-day merchandising requires complex orchestration across all core retail business functions such as financial and assortment planning, space management, allocation, pricing, replenishment, and supply chain/logistics. As retailers today remain product and channel-centric, the silos within the organization prevent the type of collaboration required to provide customers a unified experience.

The pandemic has further exposed the vulnerabilities within the foundational and core technologies and accelerated the need to enhance the overall retail ecosystems and drive digital transformation. Retailers need to evaluate innovative technologies, processes and business models to respond to these challenges.
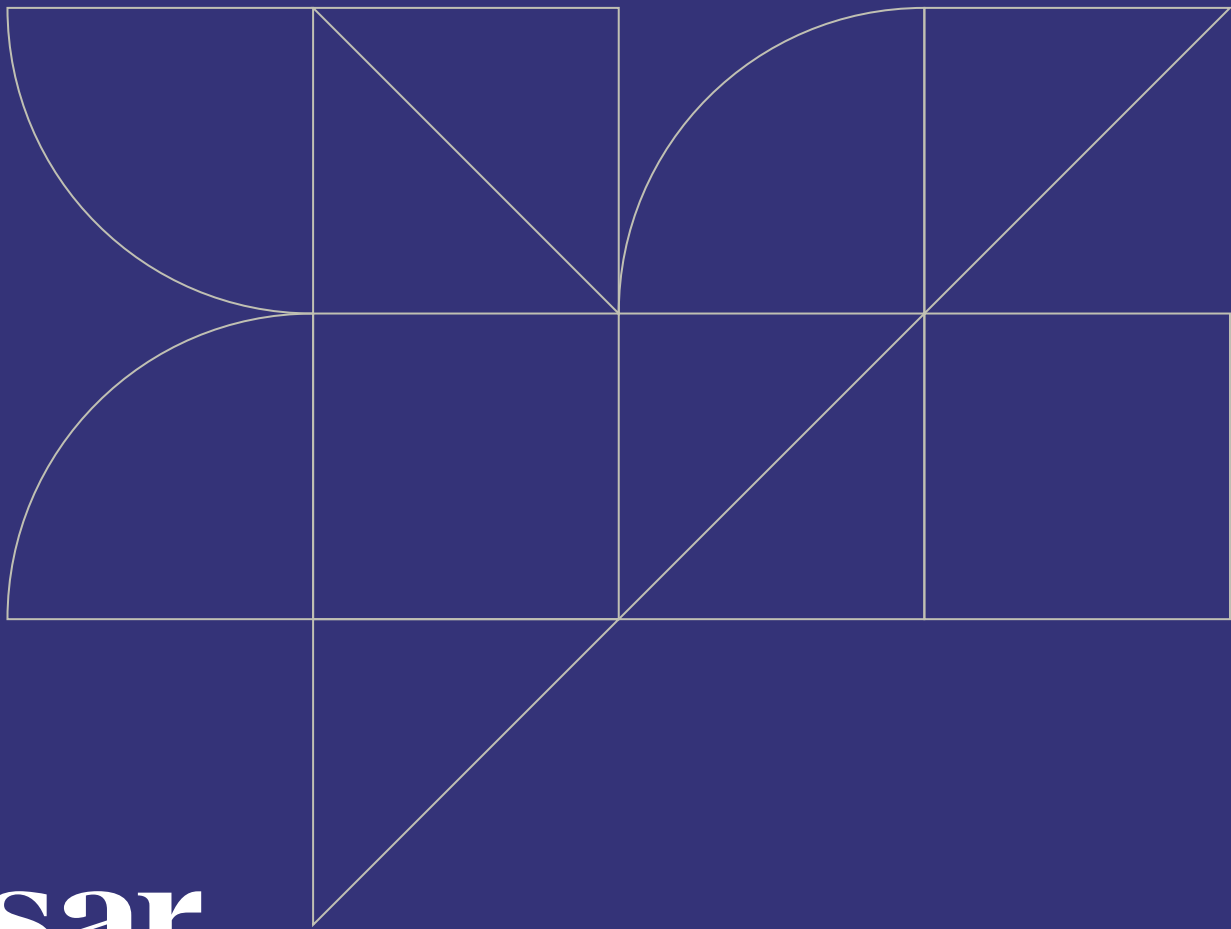
The need of the hour is to adopt a customer centric approach that can influence collaboration with suppliers, supported by a high-quality customer data foundation and deployment of technology to leverage data insights and intelligent automation. This can help merchandising processes to create segment specific assortments, pricing and promotions to drive an effective compelling customer experience

Technology evaluation for Merchandising must provide agility and efficiency in key priority areas such as:

• Enabling an agile and effective assortment planning and execution

• Proactively anticipating and responding to demand signals

• Cost optimization in procurement and inventory management processes

• Enhancing the merchant experience, and allow effective cross functional collaboration

About the author

Arroon Arunachalaiah works as a Product Leader in the digital supply chain space for the retail and consumer services industry vertical at Zensar Technologies. He has over 20 years of experience handling multidimensional roles across product management, business consulting, and digital transformation. He has worked with several global retailers helping them in solution design, package evaluation, and transforming their businesses.

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