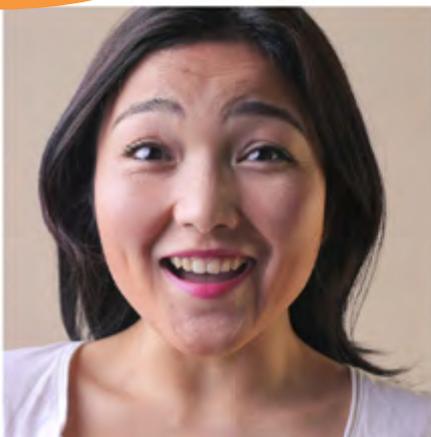
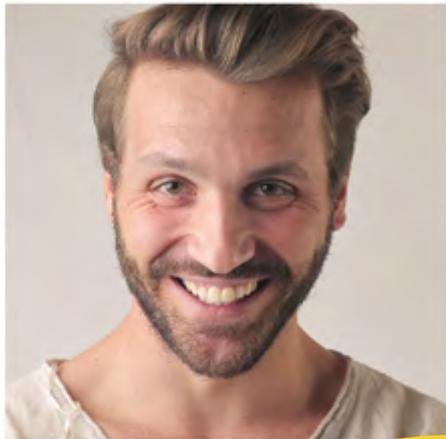




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**Personalization 2.0**  
Real Time, Contextual,  
and Intent Driven

*Not all clicks are equal and not all dwell times imply a purchase. Let's check out these two scenarios.*

## **Scenario 1**

Beth has an interview coming up and she wants to look her best. She has no time to visit a store and checks into her favorite retailer app. As she browses through formal wear collections, she sees recommendations on trending collections. She places an order for a pin-striped suit.

## **Scenario 2**

While waiting for her friend to arrive for a luncheon date, Sarah opens her favorite retailer app on her mobile. Few minutes into random clicking through various product categories, she is bombarded with recommendations and she leaves disconcerted.

Say hello to the hedonistic browsers, for whom the joy of browsing through the endless aisle far outweighs the joy of making a purchase. These unique breed of shoppers are leaving retailers in a tizzy, making context-aware, intent-driven personalization the new imperative in delivering superior customer experiences.



## Real-Time Personalization: Still a Moving Target

Despite expanding budgets on acquiring leads, massive ad campaigns, and investments in personalization capabilities across channels, retailers are struggling to earn loyalty and drive customer lifetime value (CLV) due to disconnected customer targeting. According to a Forrester survey, 42% of retailers cited the inability to track a targeted customer through their cross-channel journey as a challenge.<sup>1</sup> For example, despite spending several hundred dollars in online purchases, customers are still treated as new customers when they visit the store.

Yet another challenge is the element of novelty in human behavior. Changes in customer behavior render the insights and predictions based on historical interactions for just-in-the-moment personalized experiences futile. All the meticulously collected data and insights fall flat when the customer shows up in a new channel or comes with a different shopping mission.

Customers are offered recommendations based on past purchases without an understanding of context or intent leading to missed opportunities. Interestingly, 40% of all the baby product buyers are households without kids.<sup>2</sup> When a customer is in a digital channel or in a physical store, their intention to purchase is not always explicit. They may be just browsing or looking for inspiration or considering a purchase later. Retailers can



improve consumer engagement and drive loyalty if they serve based on where the customer is in the decision journey and by understanding their immediate needs.

## Contextual, Intent-Driven Experiences: The New Imperative

Personalization is as much about retailers stepping back and allowing the shopper to soak in vicarious micro-moments uninterrupted as it is about pushing offers at the right time. While most retailers agree personalization is a prime driver to acquire, engage, and retain customers, winning the personalization game requires going beyond decoding a customer's just-in-the-moment intent. For example, attributing the same intent to a habitual browser and an impulsive purchaser by decoding the search terms may defy the 1:1 personalization rule.

What retailers need to have is a deep understanding of each customer's long-term preferences captured through different episodes across the omnichannel journey. Balancing short-term intent with long term preferences is the secret sauce to orchestrating personalized customer experiences at scale.

<sup>1</sup> NRF, "The State of Retailing Online 2019" (published March 11, 2019), accessed November 2020, [https://cdn.nrf.com/sites/default/files/2019-03/StateOfRetailingOnline%202019\\_Omnichannel\\_Marketing\\_And%20Personalization\\_030719.pdf](https://cdn.nrf.com/sites/default/files/2019-03/StateOfRetailingOnline%202019_Omnichannel_Marketing_And%20Personalization_030719.pdf)

<sup>2</sup> Think With Google, "Why consumer intent is more powerful than demographics" (published December 2015), accessed November 2020, <https://www.thinkwithgoogle.com/consumer-insights/consumer-trends/why-consumer-intent-more-powerful-than-demographics/>

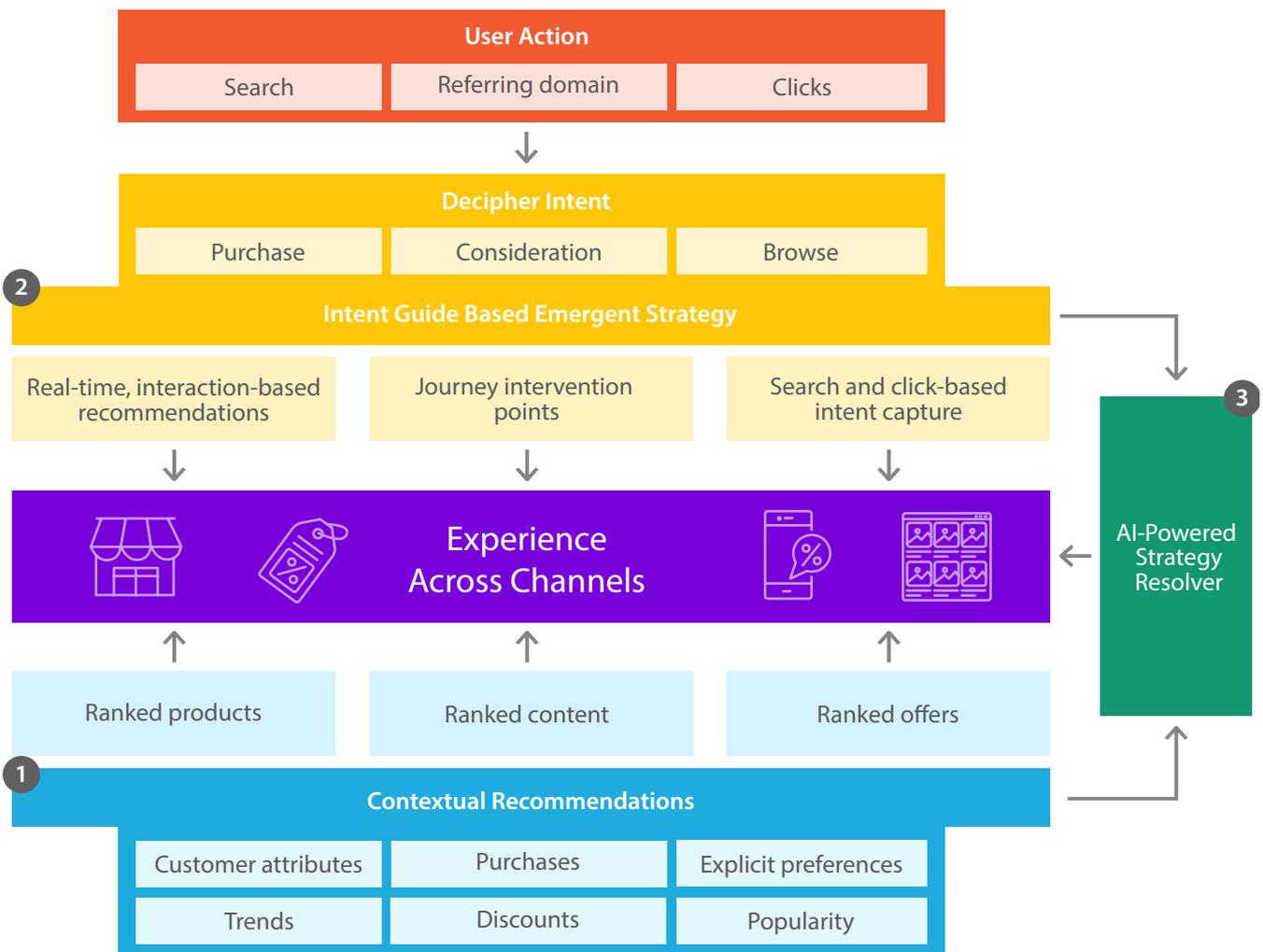
# Framework for Driving Contextual, Intent-Driven Personalization

According to IDC, a leading market intelligence firm, the lifetime value of omnichannel buyers is 30% higher than a single channel buyer.<sup>3</sup> This makes gathering data across the omnichannel journey a business imperative for retailers looking to enhance the CLV of every customer.

A customer’s implicit needs may keep evolving and are manifested through clicks, filters, and searches. Long-term patterns of individual customer preferences may also evolve due to individual and social nudges. These behavioral shifts need to

be factored while building the customer context. Understanding a customer’s most recent interaction along with the sequence of occurrence and time-awareness gives a better insight as compared to an interaction that happened much earlier.

Discerning when to isolate short-term intents from long-term behavioral patterns and when to amalgamate them requires an algorithm-based framework (refer figure).



AI-based framework for driving contextual, intent-based personalization

<sup>3</sup> Instapage, "How to Create the Perfect Omnichannel Marketing Strategy" (published July 1, 2020), accessed November 2020, <https://instapage.com/blog/what-is-omnichannel-marketing>



The AI-driven personalization framework is supported by three components that leverage a deep understanding of online behaviors through cues captured from various data sources.

### **1. Contextual Recommendations**

Leverages insights based on trends, popularity, and existing discounts. It then aggregates long-term customer behaviors and matches it with customer interest to generate a ranked list of offers, products, and content that the customer is likely to engage with.

### **2. Intent Guide Based Emergent Strategy**

Leverages insights from the current session by processing multitude of user actions such as click patterns, sequence of products browsed, search terms used, and dwell time. It then decodes the customer's primary intent—browse, make a purchase, or gather information—and the affiliation for a specific brand or variant. The intent guide helps identify the right intervention point by matching the intent with the customer

journeys in real time. It uses algorithmic hooks to deliver real-time, interaction-based recommendations on products, content, and offers.

### **3. AI-Powered Strategy Resolver**

Leverages both contextual recommendations and intent guide-based emergent strategy to provide the optimal experience for every customer. For an anonymous user, the resolver gives a higher score to the insights from the intent guide than to the results coming from the long-term preferences algorithms. For a known user, the resolver evaluates both long-term patterns and short-term intent, and customizes the experience by dynamically balancing both the scores. It helps to enhance the user experience as the results get increasingly contextualized as more information becomes available in real time.

The example cited below illustrates how the AI-powered strategy resolver balances customer intent and long-term preferences and behaviors to deliver an enhanced experience.

1. Karen is a long-term customer with a popular retailer and most of her purchases are from the home décor and casual wear categories.
2. She checks into the retailer's app on a weekend. The contextual recommendation component presents a series of pleated midi skirts that are trending and displays results that includes Karen's favorite brands. She wishlists a satin midi skirt.
3. She then remembers her friend Meg is visiting her and wants to gift something nice for her two-year-old baby. She searches for plaid rompers for baby girls.



4. Based on the keywords used, the intent guide predicts intent as purchase. A range of rompers with special discounts optimized for the intent to purchase is recommended by the real-time, interaction-based recommender and she completes purchase.
5. Karen visits the retailer app the next day. The AI strategy resolver evaluates Karen's long-term purchase behavior patterns and short-term intent in real time and gives a higher score to the former. From the contextual recommendations component, it leverages insights on the latest seasonal trends and pushes recommendations on scented candles and Christmas décor.

A modular design for driving intent-based personalization helps address the unique business needs of retailers. In the example, Karen who purchased the rompers for her friend's baby is happy that she is not bombarded with recommendations for other baby products.

For a retailer whose customer base is predominantly loyalty-based, weightages for long-term preferences will be higher as compared to a retailer who receives new customers due to aggressive campaigning. In the latter case, significant focus will be on the short-term intent guide to tailor the experience.



# CONCLUSION

Having intent as a backbone for customer engagement and breaking operating silos by algorithmically architecting a holistic, integrated recommendation system will be the next frontier in personalization. This will bolster retailers' customer retention strategies and help them realize their vision of orchestrating personalized journeys for each customer.

It would do well for retailers to focus more on retaining the customer through meaningful engagement than losing a sale. When done right, intent-driven personalization holds the promise of reduced customer churn, upshift in the customer base from anonymous users to loyal customers, reduction in page exits, and less cart abandonments.

## ABOUT THE AUTHOR



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Syed has over 15 years of experience working with global retailers in marketing and supply chain engagements. In his current role as a domain consultant for TCS Optunique™, he is focussed at solving complex business challenges in CX strategy and omnichannel personalization using machine learning and AI.



## About TCS Retail

TCS Retail partners with over 100 global retailers, driving their growth and digital transformation journeys. We are solving their toughest challenges by harnessing our deep consulting and technology expertise, amplified by strategic investments in products and platforms and research partnerships with top universities; a co-innovation ecosystem of over 3,000 startups; and Nucleus, our in-house innovation lab.

Retailers worldwide are adopting the TCS Algo Retail™ framework, a playbook for integrating data and algorithms across the retail value chain, thereby unlocking exponential value. Our solutions and offerings leverage the combinatorial power of new-age technologies to make businesses intelligent, responsive, and agile. TCS' portfolio of innovative products and platforms include AI-powered retail optimization suite TCS Optumera™, unified commerce platform TCS OmniStore™, and AI-powered enterprise personalization solution TCS Optunique™. With a global team of 40,000 associates, we are powering the growth and transformation journeys of leading retailers worldwide.

## Contact

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## About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world's largest businesses in their transformation journeys for over 50 years. TCS offers a consulting-led, cognitive powered, integrated portfolio of business, technology and engineering services and solutions. This is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 4,43,000 of the world's best-trained consultants in 46 countries. The company generated consolidated revenues of US \$22 billion in the fiscal year ended March 31, 2020 and is listed on the BSE (formerly Bombay Stock Exchange) and the NSE (National Stock Exchange) in India. TCS' proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the Dow Jones Sustainability Index (DJSI), MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

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