

## View Point



### Enabling Productive Searches for Consumers in a Multi-channel Commerce Environment

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#### Abstract

In multi-channel e-commerce, searches should ideally generate instant and accurate results for consumers seeking products, content or services – across channels. The “perfect” search is elusive due to diverse systems, applications, databases and platforms. To provide consumers the information they need at the first pass, multichannel retailers must take an integrated approach.

This paper provides insights for an integrated multi-channel search strategy and the resulting benefits.

## Search

In a multi-channel e-commerce environment, a consumer's search is more about understanding various products, offerings and services. As technologies, services and platforms proliferate, they, along with new business challenges, make the task of ensuring a personalized experience for consumers, across channels, harder. A consumer's experience can cover several channels - Web, physical stores, call center, catalog, kiosks, email, service offerings, etc. Third party content with links to suppliers, vendors, agencies, and blogs add another dimension.

While popular Internet search engines can direct consumers to appropriate portals, the actual usage and subsequent repeat visits are determined by other factors. These include:

- User-friendliness of the site
- Product search
- Ease of navigation

An integrated approach to searches enables retailers to attract and retain customers. It also helps gather insights to better understand customers for future marketing or loyalty programs.

## Search and the Customer

An E-commerce site search provides prospective customers with the means of finding the product, content or service they are seeking. To help achieve this objective, site search should:

- Provide easy access by being available on each page
- Find the requested results that are accurate, relevant and useful in three clicks or less
- Search in the way visitors think about the product, leaving bread crumbs to find their way back
- Know what is sought from misspelled queries
- Offer up-sell and relevant promotional links
- Sort the results criteria such as price, brand, availability, etc.
- Offer related products or affiliated brands
- Easily refine search on the fly by relevant criteria – size, color, etc.
- Display featured products, brands, best sellers, and sale items in each category
- Provide a personalized experience correlated to similar search patterns
- Correlate requests to site search activity to determine trends and provide product suggestions
- Provide the precise value search results along with products that are immediately above or below the requested price points

The search of the future will provide the consumer with 360-degree visibility – of relevant products, services or content desired with the features listed above – across all channels.

## Enabling Cross-channel Search

Some of the capabilities described above already exist with leading 'e-tailers' and enterprise search providers. However, in the highly complex multi-channel retail landscape it is a different story.

The absence of an integrated suite of applications and master data management strategy prevents a unified search across the enterprise with specific customer facing capabilities.

This lack of integration can be traced to the journey retailers have taken in their expansion to multi-channel commerce. The evolution of multi-channel retailers has been largely driven by new market opportunities and the growth of new channels. This has led to a proliferation of channel-specific commerce applications.

Living on the edge of the enterprise interface with core ERP Suite, these customer facing applications were developed vertically to meet specific channel requirements but lack referential and horizontal integrity.

The data captured and stored through these vertical applications -- naming conventions, product catalogs, customer data, order files, inventory files, transportation files, vendor files, addresses, etc. -- are likely to vary depending on the channel. So,

a crawl across the enterprise will be unable to relate like data identified resulting in inaccurate results.

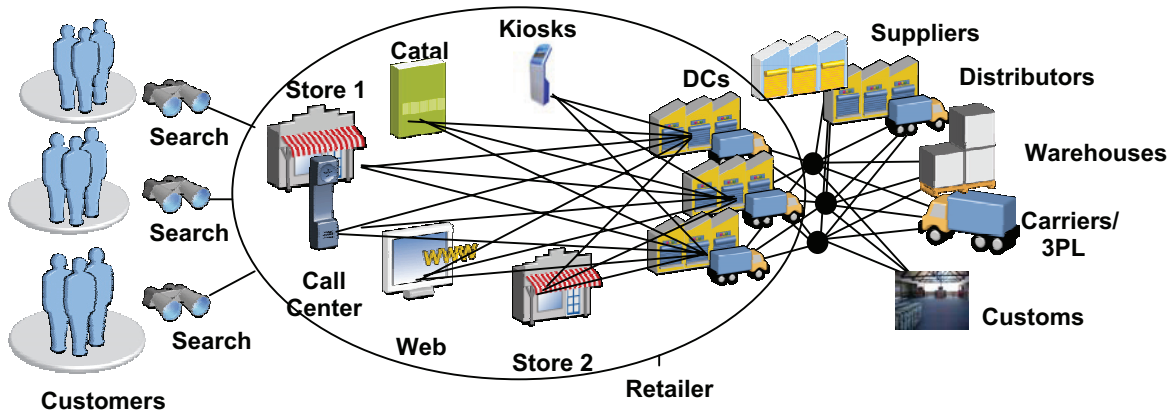


Fig 1.0: Cross-channel search needs an integrated approach

For example - In Fig 2.0, the two shirts shown as different stock-keeping units (SKUs) are identical. This discrepancy is due to their being placed in two separate channels – Web and store – with different names and SKU numbers. Customers searching for a Blue T-shirt XL across their local store and on-line channel will be presented with two different results for the same shirt. Obviously, ordering online and picking up in-store in this scenario is highly unlikely. Moreover, backing up to suppliers and linking forward to carriers to enable tracking across the pipeline would be next to impossible.

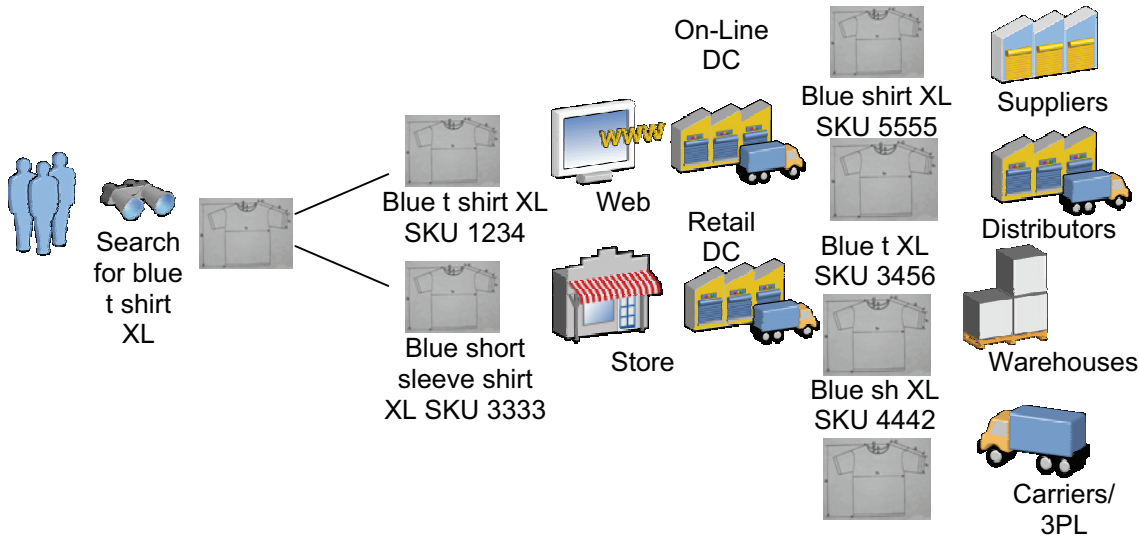


Fig 2.0: Don't lose your shirt due to lack of integration

## What's in it for the Multi-Channel Retailer?

It is evident that consumers want relevant, accurate information from their searches. The value for the retailer lies in the opportunity to satisfy the customer's request, capture a marketing opportunity, make a sale, and learn more about the customer.

If customers perceive value in the integrated set of applications and services, they will reward the retailer through repeat business leading to increased sales and revenue.

The other key benefit is the information trail left by a customer during search. Customers leave clues "in their own words" while searching for a product or service. From these clues, retailers can target merchandise, promotion schemes and information content better to enhance customer-shopping experience.

The meta-tags noted by the search engine also serve to link relevant data thereby giving insights into the customer's mind. This can be achieved by analyzing the text in databases (key data stored from search requests), documents such as email messages and extracted metadata.

Text analytics can identify concepts, names of people, places and things, opinions, and the relationships among them. Together, they can provide valuable insights into customers' buying patterns, shopping trends, fraud, or product return problems. Extending this data mining capability across the multiple-channel enterprise presents an enormous potential.

However, data by itself is of little use. The key is converting it into actionable management reports that present trends or insights visually, enabling operations staff to understand and act accordingly.

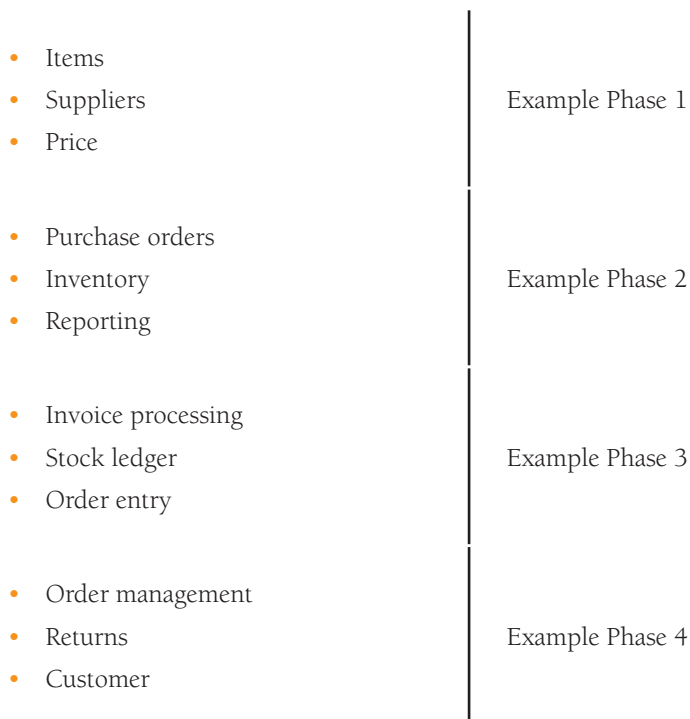
## Infosys Approach

Infosys believes search is a significant part of an integrated set of applications, services and platforms for multi-channel retailing. Infosys' multi-channel practice defines what a unified customer experience represents across channels in the context of each retailer's priorities. These priorities could vary with business strategy, customer value proposition, current capabilities and challenges.

By aligning merchandizing and marketing activities, customer order management, inventory and fulfillment, and reverse logistics across channels, retailers enable cross channel customer activities. This approach aligns the processes involved in laying the foundation for master data management and search activities across channels. Infosys' has developed a repository of reusable artifacts, reference business process templates and technology architectures to support these foundational activities.

The Infosys methodology assesses the impact at the business process, technology architecture, and organization levels. It entails an initial discovery phase to map out the future state business processes followed by a solution definition phase where functional requirements are defined.

A phased implementation of the solution minimizes business risk and is wrapped around developing singular views across all channels:



## Business benefits

The Infosys approach addresses the challenges a retailer faces in developing a long-term business and IT strategy to deliver a multi-channel unified customer experience. Leveraging this approach, the retailer acquires enhanced visibility into inventory and orders and the ability to select the most optimal distribution location to fulfill customer orders.

In addition to multi-taxation, multi-currency and multi-lingual business environment capabilities, the Infosys methodology provides an expanded footprint across functions of procurement, sales order management and inventory management. It also offers significant advantages in terms of data integrity, manageability, and total cost of ownership through a single, integrated order management environment.

By supporting the diversity in the order fulfillment processes across geographies, channels, and product segments, this flexible approach provides customers with a singular view of the retailer's organization, enabling easy access to information and products. For the retailer, it offers valuable insights into the customer's mind by capturing the analytics of browsing and buying patterns.

## Summary

Prioritizing multi-channel alignment efforts is a complex puzzle. Examining the relationship between online purchasing and multi-channel shopping can provide critical clues while prioritizing technology initiatives.

Infosys can help retailers balance the analytical construct with their own research and understanding of how their customers shop across channels. An integrated strategy for search provides shoppers with a unified view of the retailer, across channels, while capturing market trends and consumer insights for the retailer.

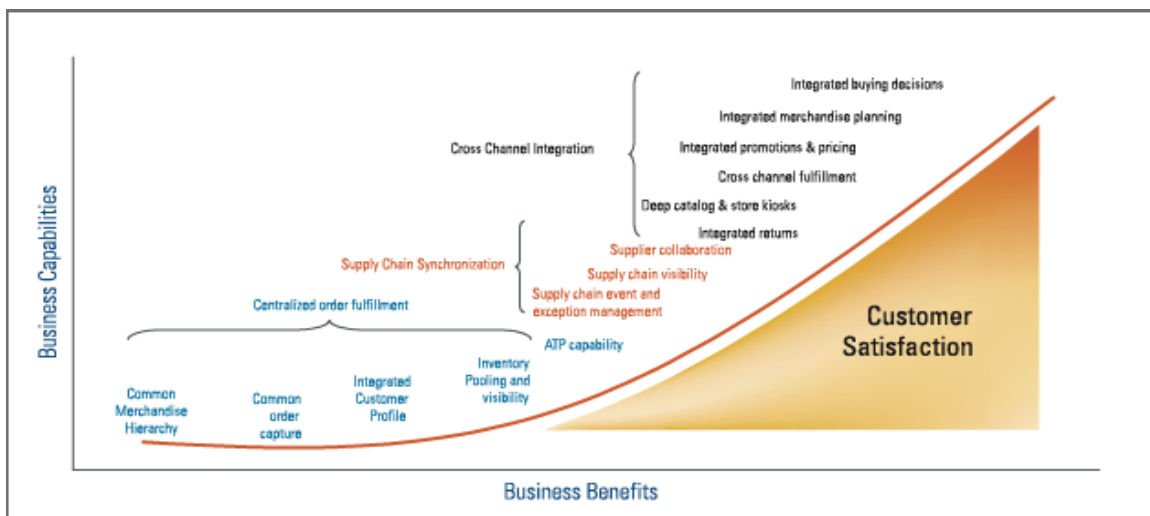


Fig 3.0: Multi-channel Search maturity curve

## About the Author

Arthur (Skip) Schattschneider is a principal consultant with the Infosys multi-channel retailer practice. He has over 30 years experience in consumer package goods supply chains with leadership roles in Information Technology, Engineering, Distribution, and Manufacturing for Fortune 500 companies. He has managed development and rollout of eCommerce, Order Management, Call Center, Warehouse Management and Transportation Management Systems.



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#### About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

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