

White Paper



Harnessing the Power of Web 2.0 in Online Retail

Part I: An overview of Web 2.0 adoption in Retail

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Abstract

Traditional retailers with a growing online presence as well as pure-play online retailers are all coping with similar challenges in the face of competitive pressures: the need to differentiate themselves, expand reach to the consumer, improve conversion, and sustain customer loyalty.

This paper is the first of two parts. This paper reveals how Web 2.0 – the next generation of open standards Web technologies and frameworks – can help retailers find answers to some of these pressing needs.

In [Part II](#) we discuss an implementation roadmap for the Web 2.0 principles and technologies that retailers can choose.

Scenario

Scene 2007: In the office of James G., Director IT Services of OurRetail, one of the largest retailers in the world. Online sales, growing at a healthy pace, contribute a large chunk of total sales for OurRetail. James G. is meeting with Julia K, OurRetail's Vice President of Marketing.

James G

I have just gone through this customer satisfaction survey report on our online customers. The figures don't seem to be very encouraging. Less than a third of our customers have reported satisfaction with their online purchase experience.

Julia K

I know, I read the report a while ago and was surprised. We have one of the best designed websites that is focused on being user-friendly. It can take on the competitors' websites any day.

James G

But a large chunk of our online consumers do not feel that the user experience on our website is very different from any of our competitors. They shop at our website for the lower prices and not for the experience. I am not sure if this advantage is sustainable in the long run.

Julia K

I think we need to find ways to differentiate our user experience, expand our reach, increase conversion and sustain loyalty. We need to do something about our website.

James G

I am getting these vibes more and more often from our online consumers. Considering the importance of online sales to our business, it is imperative for us to get our website in shape.

A large number of retailers with significant online presence are grappling with issues such as those faced by James G. This paper provides insights into how retailers can harness the power of Web 2.0 to resolve some of these issues. In addition to discussing areas in online retail where Web 2.0 can make a significant impact, it includes Infosys' analysis of the state of readiness of various retailers to embrace Web 2.0

Online retail scenario

Online sales in the US have reached US\$ 202 billion and are expected to grow at a CAGR of 14% up to 2010¹. At the same time, increasing numbers of consumers dissatisfied with their online experience are indicating a shift back to offline shopping. Only 26 per cent of consumers report satisfaction with their online purchases as compared to 70 per cent who report satisfaction with their offline buying experience.¹

With online sales poised for strong growth and likely to grow into a significant chunk of total retail business, retailers are seeking answers to issues such as differentiating user experience on the website, increasing reach to the consumer, improving conversion rates on the website, sustaining consumer loyalty, etc. In several such areas, emerging Web principles like Web 2.0 can make a significant difference.

¹ Source: *Online Retailers Face A Tough Road Ahead*; by Carrie A. Johnson and Sucharita Mulpuru; Forrester Research; April 10, 2006

Web 2.0 in Retail

Web 2.0, which refers to the adoption of open technologies and architectural frameworks to facilitate participative computing, has the potential to make a significant impact in online retail by addressing some key retail challenges.

Infosys believes that the three parameters of Content, Collaboration and Commerce capture the essence of Web 2.0 in retail. Table 1 lists various sub-parameters within these three broad parameters which form the backbone of any Web 2.0 implementation in retail.

Content parameters	Collaboration parameters	Commerce parameters
<ul style="list-style-type: none"> • Unique user experiences (RIA driven) • Dynamic user help (peer-to-peer or central) • Data Feeds (RSS/ATOM/XML/JS) • Podcasts/ Vodcasts • Search (Semantic) • Aggregation Mechanisms (Mashups) 	<ul style="list-style-type: none"> • Customer peer-to-peer network, Collective Intelligence (Blogs, Wikis, Discussion forums, User Reviews, Tagging, etc.) • Collaborative product customizations 	<ul style="list-style-type: none"> • End user product customizations • Contextual shopping help (Live agent chat) • Voice based shopping help (VoIP) • Comparison shopping (across brands, end user recommendations)

Table 1: Parameters capturing Web 2.0 implementation in retail

Each of the sub-parameters is a technology tool or a framework to help provide solutions to some issues that online retailers face. Some of the possible solutions are summarized below:

- **RIA** (Rich Internet Applications) based technologies like Ajax or Flex can significantly improve user experience in an online store by making it more interactive and engaging. A user need not go through the frustrating experience of waiting for page refreshes and can have near desktop kind of experience on a web site that she can customize based on her needs. Flex provides a means to presenting product information such as product image, description, usage, etc. in a much more user-friendly form enhancing overall customer experience.
- **RSS feeds** can be leveraged by online retailers to effectively expand their reach. These are subscription-based data feeds. Once a customer chooses to receive data feeds, the feed reader will automatically fetch content from the source. This ensures that the customer always receives the latest content links even though she may not be visiting the online retail store. Communicating the launch of new products, promotions, category specific promotions, store openings, pushing book titles, abstracts, text, and even multimedia links can be some ways in which RSS feeds can add value. Instead of conventional push driven marketing through online ads, RSS feeds can become the medium of future for pull driven marketing – with consumer consent.
- **Podcasts** as well as video casts are an effective means of communicating product features, usage, comparison, etc., to the customer enhancing the shopping experience.
- **Semantic search** can enable the retailer to show search results of related, associated, or complementary products or services, thereby leveraging up-selling as well as cross-selling opportunities. This can help increase conversion and improve user experience.
- **Mashups** are new services created with content from multiple sources (exposed using APIS, Web Feeds, Web Services, etc). Data sources can be the retailer's proprietary data combined with third party data via a public interface or Web feeds (e.g., RSS or Atom). Mashups can improve the user experience on a website by providing simple solutions to some of the problems that online retailers face:
 - Today, implementing 'store locator' functionality, where a retailer wants to provide map-based directions, means that an online retailer needs to tie up with a specialized service provider. Mashups can provide an effective solution to this. Housingmaps (www.housingmaps.com), an online realty firm, provides information to its users on houses available on rent or for sale in a locality. It shows the exact location of the house on a map effectively using maps provided by Google Maps in combination with information provided by Craigslist. Retailers can take a similar approach to implementing a 'store locator'.

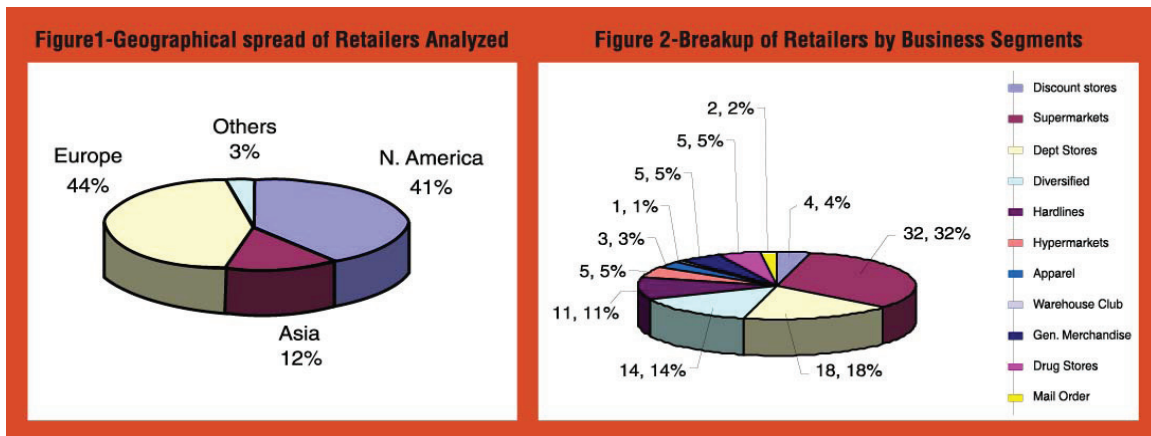
- For order tracking post-shipment, retail websites usually direct the consumer to their carrier's website to check the status of the order. The customer's experience with a carrier's website may not be consistent with that of the retailer's website, leading to potentially poor shopping experience. Instead, the same information can be packaged and provided more effectively on the retailer's website using Mashups.
- **User collaboration** across the web is common amongst consumers using a variety of applications such as Blogs, Wikis, Podcasts, Reviews, etc. Retailers can leverage the power of collaboration, network effect and collective intelligence to build consumer communities around their products. These communities can aid retailers by contributing, tagging, and developing content such as product reviews. Content tagging by consumer communities can prove a vital tool for improving the search capabilities of an online retail site. Community ratings of product can significantly improve the comfort with which a consumer shops online. Marketers can devise specific messages targeted at these communities to help increase conversion. Discussion forums that allow consumers to chat with other customers along with the retailer's representatives can be leveraged while designing new products/services. Further, retailers can pass on such information to their suppliers for more effective planning, forecasting and replenishment. This collaborative product customization could be end-user driven or community-driven based on the number of users interacting with the retailer.
- **Live agent chat** can be a useful functionality to have, particularly if the customer is making an involved purchase online (usually with medium to high value purchases). The live agent can help clear the doubts of the customer as well as answer her questions thereby making the shopping experience much more involved. VoIP-based support is all about taking the live chat agent to the next level with voice support. This is usually powered by an application such as Skype.

Clearly, with these tools and frameworks, Web 2.0 could be the trump card for retailers with an online presence in their race to differentiate user experience, increase reach to consumer, maximize conversion, and sustain consumer loyalty.

However, the potential of Web 2.0 has not been harnessed by most retailers. A recent Infosys study shows retailers have a long way to go to embrace Web 2.0 principles.

How Retail e-commerce websites fare on Web 2.0 readiness

The Infosys study analyzed the quality of online shopping experience (for both, conventional retailers having an online presence as well as pure play online retailers). For the research, primary data collection was based on website analysis. The study analyzed the shopping websites of the top 100 retailers primarily across North America, Europe and Asia (Refer Figures 1 & 2).



(Source: Infosys industry analysis)

Fig. 1 & 2: Retailers analyzed by geographic spread and business segment

Retailers' ecommerce websites were analyzed on various sub-parameters across Content, Commerce and Collaboration (refer Table 1) and awarded scores on a Likert scale of 1 – 5 to gauge their readiness for Web 2.0 implementation.

The study shows that even the top retailers are a long way from incorporating the principles of Web 2.0. Some findings are listed below:

Findings on content-based parameters:

- Unique user experiences (RIA driven)
 - Traditional retailers have been slow in adopting RIA-based interfaces. Early adopters include Gap and L L Bean. Nike stores also incorporate RIA features. Pure online players have been more aggressive in adopting RIA. They include retailers such as Panic, Etsy, etc.
- Dynamic user help (peer-to-peer or central)
 - Dynamic user help goes beyond static FAQs and contains customer query drill downs to a very granular level. Among pure online retailers, Amazon has the best dynamic user help. Many retailers have this feature, albeit at a rudimentary level, mainly in the form of static FAQs.
- Data Feeds (RSS/ATOM/XML/JS)
 - Retailers such as Tesco, Amazon, Sainsbury's, and HMV are effectively using data feeds to announce the launch of new products, promotions, store openings, etc. Other retailers are still to realize the importance of data feeds and the role these can play in expanding reach to consumer.
- Podcasts/ Vodcasts
 - Early adopters include retailers such as HMV which is using video casts on its website and Sainsbury's which has cooking ideas as videos for its consumers.
- Semantic Search
 - None of the retailers are using semantic search on their websites.
- Aggregation Mechanisms (Mashups)
 - The Infosys study revealed that retailers are not utilizing the power and opportunity that Mashups offer. Websites such as Flickr, Google, Ebay, and Amazon have been publishing API (Application Programming Interfaces) that allow access to their services but none of the retailers is utilizing these to create Mashups.

Findings on collaboration-based parameters:

- Customer peer-to-peer network, collective intelligence (Blogs, Wikis, Discussion forums, User Reviews, Tagging)
 - Players like Amazon and eBay provide forums such as Wikis, Reviews, etc., which allow customers to make better purchase decisions based on peer group comments. Other retailers are lagging far behind in effectively using these technologies.
- Collaborative product customizations
 - These are product customization forums involving multiple end customers. The power of such forums is still not leveraged by any of the retailers that we studied.

Observations on commerce-based parameters:

- End-user product customizations
 - These are product customizations forums involving a single end customer. Retailers such as Nike, Zazzle, Etsy, offer this functionality. Other retailers need to do a lot of catching up to realize its power.
- Comparison shopping
 - Comparison shopping across brands belonging to the same product category can be supported by user reviews and feedback. Amazon uses this functionality to great effect.
- Contextual shopping help (Live agent chat)
 - Players such as Nordstrom and QVC are amongst the few who offer a live agent chat on their websites. Most of the others are yet to realize the benefits associated with this.
- VoIP
 - eBay is one of the few players offering this service to bring together buyers and sellers.

Conclusion

The Infosys study shows that a few retailers like Amazon have taken the lead in pioneering the effective use of Web 2.0. Others need to play catch-up to leverage its power. Treading the path of differentiating user experience, increasing reach to consumer, maximizing conversion, and sustaining consumer loyalty using Web 2.0 is easier said than done. There lurk risks associated with any such implementation such as some business benefits are easily quantifiable while others may be less tangible. Moreover, there remain concerns such as those over the security of Ajax-based Web pages. To successfully implement Web 2.0, it is important to separate the wheat from the chaff using the best of Web 2.0 technologies, tools, frameworks, and principles. The choice must be based on each retailer's specific needs to reap the benefits in the long run.

Infosys' Multi-Channel Commerce solution supports all aspects of retailers' ecommerce needs from in-house development and SaaS-based hosting and basic ecommerce functionalities to end-to-end Web 2.0 implementation and support.

About the Authors

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