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# Retail Agility:

*Catalyst to Successful Retailing  
in the 21st Century*

Prepared by ThoughtWorks, Inc.  
Retail Industry Practice

## Executive Summary

Success for retailers in the next few years is going to be defined by “Retail Agility”, the ability to take advantage of the emergence of a plethora of new markets, channels, products and customer segments which shows no signs of abating. The rapid expansion of sales and marketing channels—more social commerce, gaming commerce, and mobile to name just a few—will continue. At the same time, customers will prefer to patronize retailers who provide an integrated but distinct experience across channels.

Those businesses emerging as high performers will recognize and be able to leverage the power of multiple channels while providing a seamless experience regardless of channel or touchpoint. Newer channels provide a number of challenges to retailers, such as new or immature business models, and a high rate of technology refresh. Rapid change requires retailers to balance channel implementation, capability implementation and technology refresh to achieve profit-sustaining returns.

Successful retailers will be characterized by agility in technology deployment and business processes, because new investments in this fast-moving landscape require fast time-to-value. Organizations with business processes and IT architectures that do not promote rapid uptake and successful integration of new technologies need to upgrade their capabilities.

The IT application portfolio needs to support multiple brands, geographies and channels, and allow common leverage while having flexibility to support differing processes. Retail data elements that enable a seamless experience need to be identified and leveraged across channels.

Emerging techniques such as continuous design, continuous delivery, and Guerrilla SOA, can help businesses achieve retail agility and thrive.

## Strategic trends affecting retail technology

Today's retail landscape is undergoing significant change with numerous factors impacting the industry simultaneously. Technology innovation is moving at a pace that businesses are hard-pressed to keep up with. The early 2000s witnessed the online revolution with commerce being enabled through the web. Web usage along with advances in customer service and technology occasioned rapid growth of e-commerce. A majority of traditional brick and mortar retailers have been left with no option but to embrace the online medium. Rapid evolution of mobile commerce and social commerce in the past couple of years has led to retailers either currently or planning to utilize these channels. Already leaders are adopting gaming

commerce, marketplaces, and googleTV commerce to name a few channels. The list of channels that can be utilized to drive revenues is increasing at an exponential pace and retailers need to be able to embrace these technologies.

### Emergent channels

Retail commerce is being reborn. New channels are rapidly getting added - from the traditional store, catalog, TV home shopping, e-commerce, call center based to newer channels such as mobile, fCommerce, marketplaces, Google TV - the list continues to grow. Earlier, retailers operated multiple channels (store, e-commerce, call center, etc.) as independent operations to engage customers and fulfill customer demand. Then firms took this multi-channel model and evolved into a cross-channel experience which let the customer use different channels to make returns, avail themselves of additional services, accrue loyalty points, etc. regardless of the channel through which the purchase was made.

Industry research estimates that 67% of U.S. customers are multi-channel shoppers and they generate 20-25% more profit than the average customer. Additionally, nearly 40% of retail sales will be influenced by the web and cross-channel in 2012. Aberdeen Group data reveals that 58% of retailers surveyed have had a cross-channel initiative in place for at least one year. And a recent industry survey points to the rapid rise of the importance to consumers of the new touchpoints:

#### Consumers decrease time with traditional touchpoints...

##### Stores/branches:

43% of all US retail sales are influenced by the Web.

##### Call centers:

Preference by US online adults to receive customer support via the phone has fallen from 32% in 2007 to 29% today.

##### TV:

- US online adults now report that they spend equal amounts of time—13 hours a week—watching TV and being online.
- TV viewership has increased only 5% from 2005 to 2010.

##### Other media:

- 79% of US online adults read print magazines, down from 84% in 2007.
- The percent of US online adults reading print newspapers has fallen from 81% in 2007 to 73% today.

\* Location Based Services

#### ...and increase engagement with newer, emerging ones:

##### The Web:

- 83% of all US adults are broadband users.
- 58% of US online adults prefer to research a product online, up from 43% in 2007.
- Household adoption of online bill payment on banking sites will grow 37% from 2009 to 2014.

##### Mobile:

- 17% of all US adults have smartphones.
- 45% of US adults (18 to 24) planned on using smartphones to research products and bargain hunt during the 2010 Christmas season.
- 80% of smartphone owners use the Internet via their phones at least once per month.

##### Social networks and LBSes:

- 16% of US online adults with cell phones access social sites through a mobile device at least monthly.
- Shopkick has 1 million check-ins per day and 750,000 users, 10% of whom access once per day.

##### Tablets:

10.3 million US adults will own tablets in 2010, rising to 82 million in 2015.

##### Other emerging touchpoints:

- 43.2 million homes will have connected TVs by 2015.
- eBook spending will nearly triple between 2010 and 2015.

Source: Forrester report – Era of Agile commerce

Customers are eager to utilize newer devices and mechanisms to connect, engage and transact with retailers from anywhere, across touch points. Consumers are more comfortable with technology and are more demanding than ever before, especially younger shoppers. They are increasingly connected and access information through various sources to make purchase decisions and conduct transactions. New, richer, experiences like shopping via googleTV, selecting and purchasing a product by pressing a button on a remote control, reflect the way in which the Internet, video and social media are converging.

Gesture-based shopping is another great example of how some retailers are engaging with customers in the store to provide a personalized and interactive shopping experience. In-store, gesture-based browsing can influence the consumer at the point they make the purchase decision. It can help simplify complex buying decisions where the consumer needs to pick and choose options to configure a product. Retailers who offer gesture-based browsing can provide their entire online catalog, providing more choice, while taking up less space for inventory.

According to a survey conducted by IBM, the Internet and in-store kiosks remain the most popular shopping options: 75 percent of all consumers are willing to shop on a retailer's website, while 39 percent are willing to use in-store kiosks—a year-on-year increase of 10 percent for the past 3 years. Interest in digital TV-based shopping (media convergence) and mobile technologies is climbing even faster.

### Demand for robust customer experience across channels

In parallel, customers increasingly expect and are able to shop where they want, how they want and when they want—such as within social media, online games, or searching for nearby goods on a mobile phone—web browsing and store visits are just two more channels now.

We've seen the advent of the term multi-channel retailing quickly moving on to cross-channel experience. Now, retailers should move to support a true omni-channel experience, where shopping is truly ubiquitous and the consumer has a choice of touchpoints and devices to interact with the retailer. To gain the customer's loyalty and share of wallet, a seamless omni-channel experience is becoming a key competitive advantage.

Following are the key motivators for retailers to deliver a richer customer experience:

**1. Rich information empowers customers:** Customers are seeking information parity across channels. Customers are more likely to rely on a retailer who they know provides information related to products, pricing, promotions, availability, etc. consistently at all touch points. For instance, a customer seeking to buy a camera online wants to review the technical specification, readily compare its features with other cameras and get all the necessary information to make a purchase decision. However, not all of this is usually possible for an in-store customer. A kiosk with access to the retailer's online catalogue could provide a level of access to information comparable to online browsing. A customer who happens to be in the store and sees an interesting product, and doesn't have to leave to find out more information, will be more likely to purchase on the spot. It is important for CIOs to create a software architecture that can provide information parity and visibility.

**2. Seamless shopping experience across channels:** Today's customers are starting their shopping in one channel, and completing it in another. They need a cross-channel shopping experience that is seamless. For instance, store locator and store inventory at the website, buy online and pickup or return at stores, etc. Customers prefer retailers with robust cross-channel mechanisms for ease and convenience of moving from online to physical or between online channels.

**3. Social experience across channels:** Social media have become an integral part of people's lives. Customers want to make it a part of their shopping experience as well, by letting their social circle know what they like or don't like, what they are considering buying, what they have bought and what they think about it. This social experience needs to be enabled across channels.

**4. Integrated customer engagement management:** Customers provide feedback and advocacy through various media – in stores, online, using the call center, and via chatter on social media networks. Retailers need to be able to accumulate, consolidate and make sense of this information to define and implement a consistent customer engagement model across channels. Frameworks that can govern this integrated view are required to enhance customer loyalty and conversion.

## Obstacles to Retail Agility

The consumer shift towards preference for new channels means retailers are facing demands to adopt fast-changing new capabilities or risk being left behind. Many if not most established retailers, though, will have to overcome structural obstacles that hinder delivery of a true, seamless, omni-channel shopping experience. These are outlined below. In the following section, we examine the best ways for CIOs to help their organizations reduce or remove these barriers.

**1. Lack of business models for emerging channels:** Most of the new channels such as mobile, googleTV etc. are in their evolutionary stages. There is no pre-defined roadmap or guidelines based on which retailers can layout their plans for rolling out these new channels. Retailers are still puzzled over what capabilities they need to build for the new channels and the level of investments they should be making.

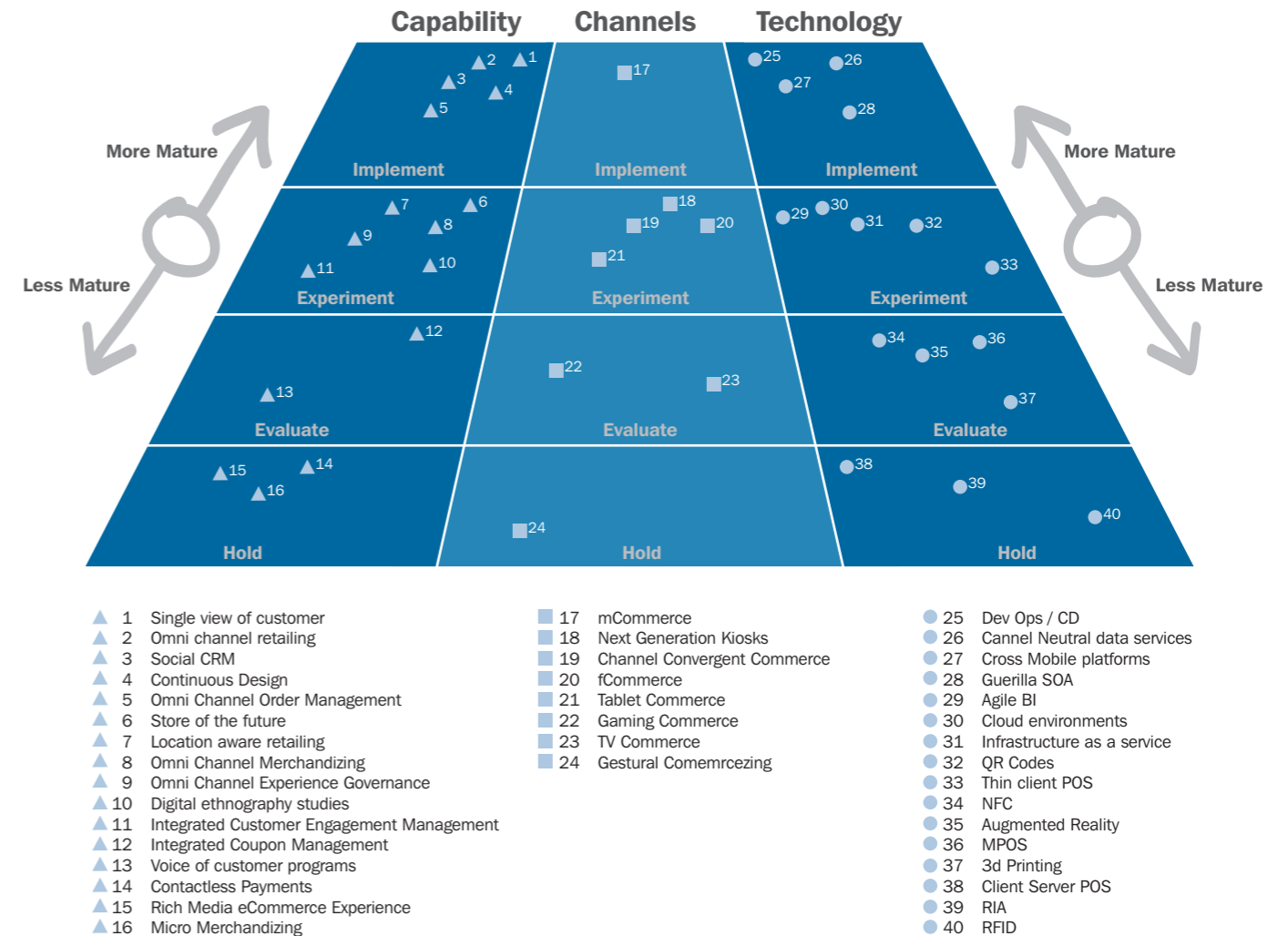
**2. Siloed applications:** Typically retailers have a large portfolio of back-end applications that address different business processes such as order fulfillment and visibility, PO to inventory, store systems, merchandizing applications etc. The legacy applications currently implemented by retailers were built to serve a single channel. Thus IT organizations are finding it increasingly difficult to extend these applications to replicate

the "Order-to-Cash" process for newer channels. A number of key retail elements such as customers, orders, inventory, products, pricing etc. are owned by each channel of operation. For example, it is crucial for retailers to create a single view of a customer across channels so that they can - recognize customers, deliver a more personalized experience, make targeted promotions and reward them. Most of these elements are currently siloed by channel specific applications. A clear strategy is required to enable these channel neutral elements to be made available. Customer experience and satisfaction are driven in equal parts by providing visibility of these elements as much as by the user interfaces.

**3. Inability to deploy new technology rapidly:** Retailers typically have an 8-month project cycle (from about February until the holiday code freeze) to implement new projects. Lack of sufficient organizational knowledge, process and infrastructure to allow continuous delivery, and lack of rapid but robust development mechanisms handicap retailers from making use of new technology in short timeframes. On top of this, retailers do not have an environment to learn, adopt and pilot newer technologies faster, allowing them to test the market with their concepts before placing larger bets.

**4. Rapid refresh cycles:** Most of the newer channels are based on the digital medium and keep evolving at a rapid pace. As technology evolves in these channels, a richer experience needs to be delivered to keep customers engaged and coming back. However retailers find it difficult to adapt to the changing technological scenario and respond fast enough to take advantage. Due to the rapidity of change, it is imperative for retailers to not get "locked into" a vendor package while leveraging these newer technologies.

**5. Retail organizational structure:** Most retailers have different business units for different channels such as store, e-commerce, and the like. Implementing a cross-channel strategy necessitates all these business units to collaborate and implement process and applications that facilitate omni-channel retailing. However the pay-offs of cross-channel retailing might be higher for certain business units than others. For instance, enabling customers to buy online and return at store might improve customer experience but increase operation overheads for the store. This can lead to lack of commitment and focus to invest in cross-channel initiatives by some business units. Additionally, retailers need a clear strategy for several processes such as pricing and returns management during their cross-channel journey. This requires clear and focused collaboration between multiple business units.



## Retail Agility Spotlight

To help retailers navigate the opportunities posed by newer channels and heightened customer expectations, ThoughtWorks' Retail Agility Spotlight provides a reference on maturity of channels and sequence of their implementation, capabilities that needs to be considered and technology advances that can be leveraged.

Though retailers continue to invest in optimizing their supply chain and merchandizing systems, these have not been considered as part of this analysis. The focus is purely on those aspects that retailers need to be agile on and react rapidly to changing market conditions.

We've classified the spotlight along three dimensions: capability, channels and technology. As technology and business leaders work through strategic planning processes to address new revenue, growth and innovation, the spotlight should be a reference point.

The data points are evaluated based on their maturity for implementation and implicit value delivered to the retailer. The evaluation framework consists of four segments:

- **Implement:** We feel strongly that the industry should be adopting these items. We use them when appropriate on our projects.



- **Experiment:** Worth pursuing. It is important to understand how to build up this capability. Enterprises should try this technology on a project that can handle the risk.
- **Evaluate:** Worth exploring with the goal of understanding how it will affect your enterprise.
- **Hold:** Proceed with caution.

## Capability

**Single view of customer.** With near-instant access to information, customers are well informed, quick to abandon one retailer for another that can maximize their personal value. Understanding customer needs and interacting with them on a one-on-one basis across multiple channels has become an imperative. Thus having a *single view of the customer*, regardless of the channel or touch point is becoming a necessity. If armed with complete, accurate information about each of them, you can respond to their individual needs and preferences in a timely, relevant manner.

**Omni-channel retailing.** Today's consumers want to interact with brands in a consistent manner that is channel independent, yet optimized for that particular interaction. For retailers to provide an omni-channel experience, there needs to be consistent representation of key retail elements such as customer, orders, inventory, products, prices, and promotions across all channels. Variance in each channel allows the retailer to provide a unique experience that leverages its inherent strengths.

**Social CRM** for customer service has the potential to bring new and dynamic methods for improving customer service, and in doing so is creating opportunities for retailers. Social networks are a consumer-driven technology and are evolving more rapidly than most others that touch the customer service center. The most common use cases for social CRM are service customer feedback, Community peer-peer support, idea management, market research, product launch and brand reputation management.

**Continuous Design.** It is imperative for retailers to offer a unique experience in each channel to differentiate themselves from competition. Continuous design provides a method of creating compelling user experiences in a rapid iterative manner that allows the retailer to differentiate their brand.

## Channels

**Mobile commerce** is easily outpacing other retail channels as the fastest growing and with only one way to go: up. What's also interesting is that for every one mobile transaction, the store locator is used 63 times. This presents a huge opportunity for retailers to drive traffic and footfalls into the store. Retailers can now send highly relevant messages and offers through their branded rich app directly to their customers, based on their location.

## Technology

**Dev Ops / Continuous Delivery.** To achieve retail agility, the system administrator role is where the most critical organizational change must occur, because it will become a gateway between development and production. The behavioral change is potentially steep, as it requires adoption of agile thinking and methodologies. Improving the interactions and relationship between development and IT operations gives us more effective delivery and production systems that are more stable and maintainable. Creating a DevOps culture requires attention to team organization, work practices, reporting lines, and incentives - leading to joint responsibility for faster and safer delivery.

**Channel neutral data services.** Retailers are increasingly paying closer attention to the customer data to analyze consumer behavior. Consumer behavior is not the only reason to start maintaining enterprise data in a better way. *Master Data Management* is an approach of holistically identifying enterprise-wide key entities and maintaining them in a centralized manner irrespective of the channel.

**Cross mobile applications.** Choosing what mobile platforms to support continues to be a vexing problem for developers both big and small. Supporting one platform can be difficult enough, but now developers not only have multiple operating systems to consider, but multiple device types as well. iPhone and iPad apps can be packaged together, but both require separate experiences and views. One of the ways to alleviate this pain is to adopt an HTML 5-centric approach in building a *cross mobile application* as many developers are increasingly doing.

**Guerilla SOA** is the iterative, lightweight, and rapid approach to establishing enterprise architecture. Focusing on business capabilities, a mixed team of technologists and business stakeholders map out a current set of processes and capabilities along with their respective owners. From the business-aligned model developed by that exercise, a candidate Service-Oriented Architecture is produced. Architectures produced through this technique tend to be lean. The architecture is fit for purpose today, and adaptable for unanticipated needs tomorrow because they are business—rather than simply technology—aligned.

## Achieving Retail Agility

Retailers need to address factors that prevent them from rapidly capitalizing on the rise of the new channels and the opening of new markets that we are witnessing. Successful retailers will transform themselves in terms of both organization and technology along the lines of what we are calling Retail Agility.

**Retail Agility** requires both business processes and an IT architecture that facilitate rapid adjustments to market demands and quick time to value for technology investments—far faster than the typical eight months or longer—with greater predictability and quality. As retail businesses seek to adopt agile practices, there is a clear need for specific enablers. Key markers are:

1. Business intelligence that governs the feedback loop allowing businesses to optimize their operations.
2. Infrastructure that allows rapid development and deployment of new capabilities.
3. Techniques that allow businesses to quickly implement, learn and fine-tune on a continuous basis.
4. Systems that support multiple geographies, brands and channels.
5. An IT application portfolio consisting of flexible, malleable services to allow multiple channels to leverage them using slightly different business processes.

CIOs can use ThoughtWorks' Retail Agility Spotlight to help their organizations target the most beneficial initiatives in terms of process capabilities, new technologies, and channels.

## About our Retail Practice

ThoughtWorks' Retail practice is focused on delivering agility to retailers. We have worked with retailers in scaling their business, differentiating from competitors with superior user experience design, deploying to new channels such as social and mobile commerce, creating unified cross-channel experiences, and rapidly enabling new channels while optimizing business operations.

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