Twelve Transformational Digital Retail Technologies Explained (Part 1)

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TR TT THE RETAIL THINKTANK

Innovation by Retailers for Retailers

➢ Will these 12 emerging technologies transform retailing?

You decide!

Twelve Transformational Digital Retail Technologies Explained (Part 1)

1. **The Interface Explosion**
2. **Responsive Web Design**
3. **Open A.P.I. Platforms**
4. **Cloud Computing**
5. **Big Data**
6. **Mobile Payments**
7. Augmented Reality
8. Geofencing
9. Beacons
10. 3-D Printing
11. The Internet of Things
12. Bitcoins

1. The Interface Explosion:

- ➢ **Keyboard and mouse as primary interface are nearing the end of their lifecycle**

- ➢ Tablets, smartphones, game consoles, in-car: all represent a shift to **natural human interfaces**

- ➢ **Voice** will become the most sought out interface between the consumer and his or her technology

- ➢ Many retailers report 50% of "mobile" traffic is through tablets

- ➢ Tablet compensates for size weakness of smartphones

- ➢ **Tablet enables lifestyle merchandising through rich imagery and experiential navigation**

Retailers have to adapt experiences to leverage these interfaces

2. Responsive Web Design – What is it? :

- ➤ **Design approach** aimed at crafting sites to provide an **optimal and consistent viewing experience** with a minimum of resizing, panning, and scrolling **across a wide range of devices**
- ➤ Allows for same site and content regardless of device
- ➤ Single code base / single set of URL's (make changes once)
- ➤ Less expensive to maintain than multiple sites
- ➤ Flexible grids / Breakpoints by screen size

2. Responsive Web Design (RWD) today:

- ➢ Can help improve search engine optimization
- ➢ Allows for a single content management system
- ➢ Designers can now take a "mobile first" approach
- ➢ Originally deployed for creative sites and blogs, but not retail
- ➢ Only 8% of Top 500 ecommerce sites have fully adapted Responsive Design
- ➢ Still early for best practices to follow by retail merchants

2. Native Mobile apps vs. Responsive Web Design:

- ➢ **Mobile Specific Site Advantages**
  - o Faster load / lighter weight
  - o Quicker to execute: 3rd party template solutions have existed for several years

- ➢ **Mobile Specific Site Disadvantages**
  - o Re-directs needed for each page (e.g., ½ of emails are opened on mobile devices)
  - o Creation and maintenance of duplicate content
  - o Google SEO penalizes bad or missing redirects

2. Native Mobile apps vs. Responsive Web Design (RWD):

- ➤ **RWD Site Disadvantages**
  - ○ Expensive for large sites (similar to re-platforming)
  - ○ Many retailers have already recently re-platformed
  - ○ Can slow down site (if starting point is a desk top design)
  - ○ Technical skill set is still scarce in retail IT shops
    - ✓ Complexity of designing strong experiences in Responsive
  - ○ Difficult to A/B test vs. mobile specific site testing and desktop specific site testing
  - ○ Tablet experience often better than smartphone experience in Responsive

2. Responsive Web Design : QVC Case Study

- o In 2013, QVC/ Liberty Media ranked #5 in ecommerce sales and #3 in Mobile Commerce (behind only Apple and Amazon)
- o QVC launched Responsive Web Design in November, 2013
    - Taking a step-by-step approach starting with **checkout**
- o Why Responsive? QVC wanted a comprehensive in-house solution for fast implementations
- o They recognized that 33% on online sales were already occurring through mobile devices
- o It is still too soon to draw conclusions on results

2. Responsive Web Design: Other Case Studies

o Tommy Hilfiger was first major brand or retailer to go Responsive (Q1 of 2013)

o Gap announced a major investment in responsive design across all of its sites (April, 2014)

3. Open API Platforms: Why needed?

➤ The proliferation of devices and of interfaces makes it imperative to share development beyond the IT department

➤ Opening up of the product catalog enables innovative business models and "mash-ups" to be created by independent and partner developers
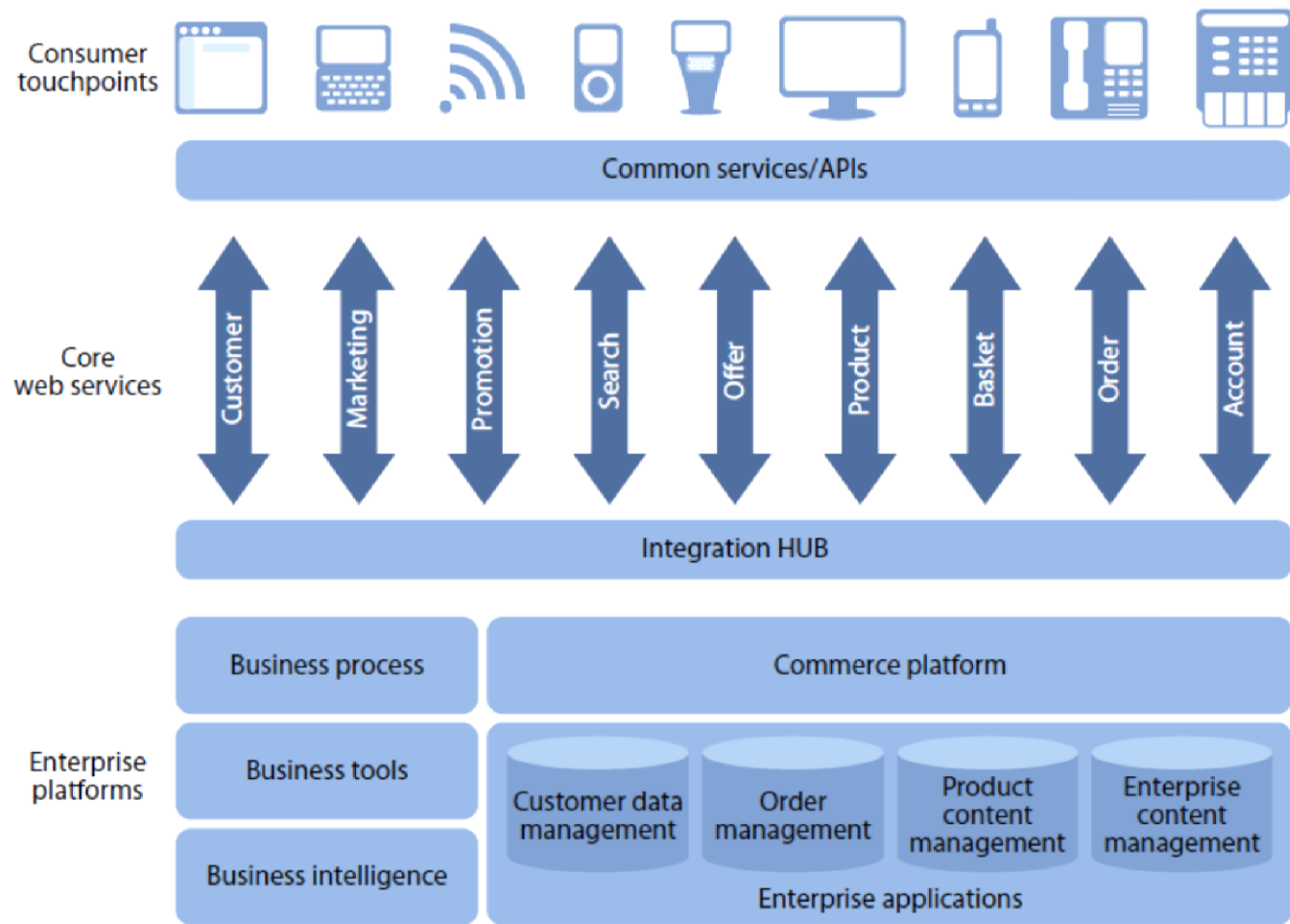
*API common example: Google maps: For a few pennies per click,
any retailer or restaurant add mapping capability to their store locator…*

API = web services carved out of enterprise systems

Figure 5 The Commerce Ecosystem Evolves To Support A Multitude Of Touchpoints

Consumer touchpoints

Common services/APIs

Core web services: Customer, Marketing, Promotion, Search, Offer, Product, Basket, Order, Account

Integration HUB

Enterprise platforms: Business process, Commerce platform, Business tools, Business intelligence, Customer data management, Order management, Product content management, Enterprise content management, Enterprise applications

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Source: Forrester Research, Inc.

4. Cloud Computing:

➢ For CIO:

  o architecture moves from rigid physical servers to software-like flexible systems

➢ For CEO:

  o from capital expenditure budget for IT resources to on-demand virtual computing

➢ For small to mid-size retailers:

  o Removes capacity constraints: equalizes the playing field … scalability

➢ For the Consumer:

  o The personal cloud. Data consistency across personal devices

5. Big Data:

➢ The amount of **consumer data is so large and complex** that it requires increasingly complex management **tools to optimize the potential benefits**

➢ According to McKinsey, if retailers could full optimize big data, They'd see **60% increase in operating margins**

➢ **Integration of data** from many sources is challenge

➢ Transaction data, web browsing data, customer data, product data, location data, demographic data, social data, etc.

Infographic: Retailer's guide to Big Data

6. Mobile Payments:

➤ Mobile will *eventually* fuel conversion to a cashless economy **(But when ??)**

➤ U.S. behind other markets like Japan in consumer use of mobile payments

➤ Mobile payments will connect consumers' smartphones with POS, digital signage, kiosks, etc.

➤ Only 25% of consumers are even somewhat interested today

➤ Mobile payments this year forecasted to be $1Billion

➤ Expected to be $58 Billion by 2017

6. Mobile Payments:

➢ Competing mobile wallet technologies will slow down adaption.

➢ **NFC (Near Field Communication)** embraced by Google (**Google Wallet**) Already in some Sprint phones (roll-out coming soon)

➢ **Isis,** a joint venture of AT&T, Verizon, and T-Mobile is also embracing **NFC** (roll-out coming soon)

➢ **MCX (Merchant Customer Exchange)** is a consortia of retailers: Wal-Mart, Best Buy, Target, 7-Eleven, CVS, Lowe's, Sears, and others

  o Developing a mobile app for nearly all smartphones
  o CVS pulls Apple Pay so as not to conflict with consortia goals

➢ **Paypal** has been testing an app for mobile payments

➢ **Square** already available in Starbucks, but not a lot of tractions overall

➢ **Visa** and **MasterCard** each have their own mobile payment apps

➢ Android devices from Samsung equipped with NFC chip

➢ Apple **had not** embraced NFC chip or any of these initiatives until now

➢ ***Standards will continue to be an issue: Hardware (chip), Carriers, POS***

6. Mobile Payments:

➤ Will Apple Pay be the game changer?

- o Now available on new iphones and ipads

- o Does now contain an NFC chip

- o Hundreds of banks on board.

- o Timing is right as consumers lack confidence in traditional card security at retail stores

- o **Built in customer base… millions of registered iTunes accounts**

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Have any of these six impacted your retail business?
Are you investing or plan to invest in any of these Technologies?
Interested in sharing a case study?
We are here to assist and advise.

Contact rlast @theretailthinktank.com for comments, Feedback or additional information about TRTT

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- ➢ Watch for Part 2 in March, exclusively in The Retail Think Tank **"Insights"**

THE RETAIL THINKTANK

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