

Verizon Enterprise Solutions

Retail Vertical – 2012 Tablet Trends & Best Practices



RETAIL

Create immersive, multi-channel customer experiences to strengthen brands and increase sales.

VERIZON SOLUTIONS



◀ BACK

▶ FEEDBACK

▶ ANNOTATIONS



Verizon Enterprise Solutions

Retail Vertical – 2012 Tablet Trends & Best Practices



In today's omni-channel retail world there's just one rule: there are no rules. The store has to be open 24/7. As we all know, despite the gloomy economic conditions of the last two years there has been recession-defying growth in the use of high-end smart phones and tablets capable of supporting advanced shopping experiences. The latter are changing retail profoundly. Perhaps it shouldn't be surprising: driven by the iPad, tablets offer the same portability as a smartphone plus extended screen space, which can be used to accommodate richer, more compelling mobile shopping creative propositions.

This increase in smart phone up-take has driven a commensurate explosion in mobile applications usage. Prompted by the resounding popularity of mobile applications, stores for the many mobile operating platforms and devices, many consumers have already happily taken to downloading retail apps onto their devices.

In this paper we'll look at why and how this revolution is happening, charting the history of relevance of mobile and in particular the tablet segment. We'll show that despite the fact that the tablet market, as we all understand it, is barely two years old, there are signs that consumers are starting to show category-specific device preferences with clear preferences in the key retail sectors of a user base keen to take the tablets.

THE MOBILE EVOLUTION

If it's a truism that there's nothing much that is totally new, it's certainly true that there's nothing particularly new about the usage of mobile devices in retail applications. In fact, retailers have been using mobile devices for over 25 years in their stores and distribution centers. These early solutions were hardened commercial mobile devices that ranged in price from a now eye-watering \$3,000 to as much as \$6,000 apiece. In many cases they were purpose build for the application and provided limited ability for retailers to develop custom applications.

Despite what was an evolution in such devices, it was, inevitably perhaps not until January 27 2010, when Apple unveiled the iPad that the whole mobile landscape changed. Today Apple devices dominate the high end mobile smartphone and tablet market. Users now want to communicate, get information, be entertained, and shop whenever and wherever they are, often all at the same time.

CHANGING THE GAME IN RETAIL

The face of retail is changing. Mobile technology that seamlessly integrates across all selling platforms can deliver on the much-vaunted promise of the Omni-Channel. Consumers want an extensive selection of products available through multiple channels, forcing businesses to streamline and work more efficiently than ever to make their profit margins. Customer adoption of mobile

Verizon Enterprise Solutions

Retail Vertical – 2012 Tablet Trends & Best Practices

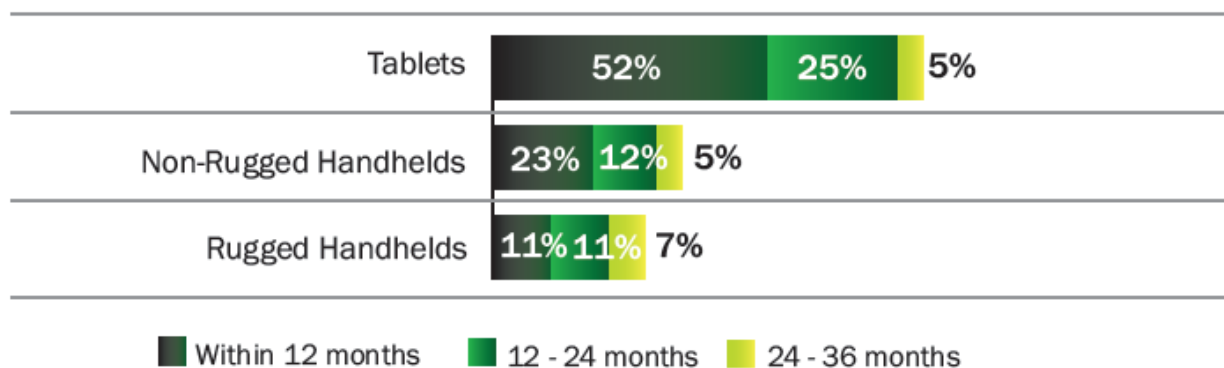


technology is driving retailers to catch up or risk losing their customers to the competition. As they see use in retail applications, mobile devices in retail are serious game changers.

Firstly they are enabling retailers to rethink how their sales associates interact with customers, evolving their roles to focus more on delivering a relevant and differentiated customer experience—something that an online channel will never be able to deliver. Retailers also regard mobile devices as a replacement for the traditional stationary point of sale (POS) suite. Wi-Fi technology in the hands of store associates opens up for the entire store to become the point of sale and will replace fixed checkout aisles and cash registers.

Without doubt 2011 was the year retailers conducted proof of concept pilots with the iPad and other brands of consumer and enterprise grade hand held mobile devices and many analysts forecast that 2012 will emerge as the year of mobile deployment. Indeed a RIS-IHL Jan 2012 Store Systems Study found 77% of respondents cited tablets as a top priority in the next 24 months.

Store Associate Mobility Plans



Source - RIS-IHL Jan 2012 Store Systems Study

THE PLATFORM ISSUE

New form factors, mobile applications, and intelligent network services have radically changed the mobile experience, which in turn has increased user's expectations. It is vital given such dynamics that retailers follow consumer's preferences for mobile platforms. There is a consensus among market analyst that iOS is the preferred operating system; Android in second place though growing faster than iOS; versions of Microsoft Windows are in third place; the much troubled Blackberry and much rated Kindle for retail enterprise solutions follow some distance behind.

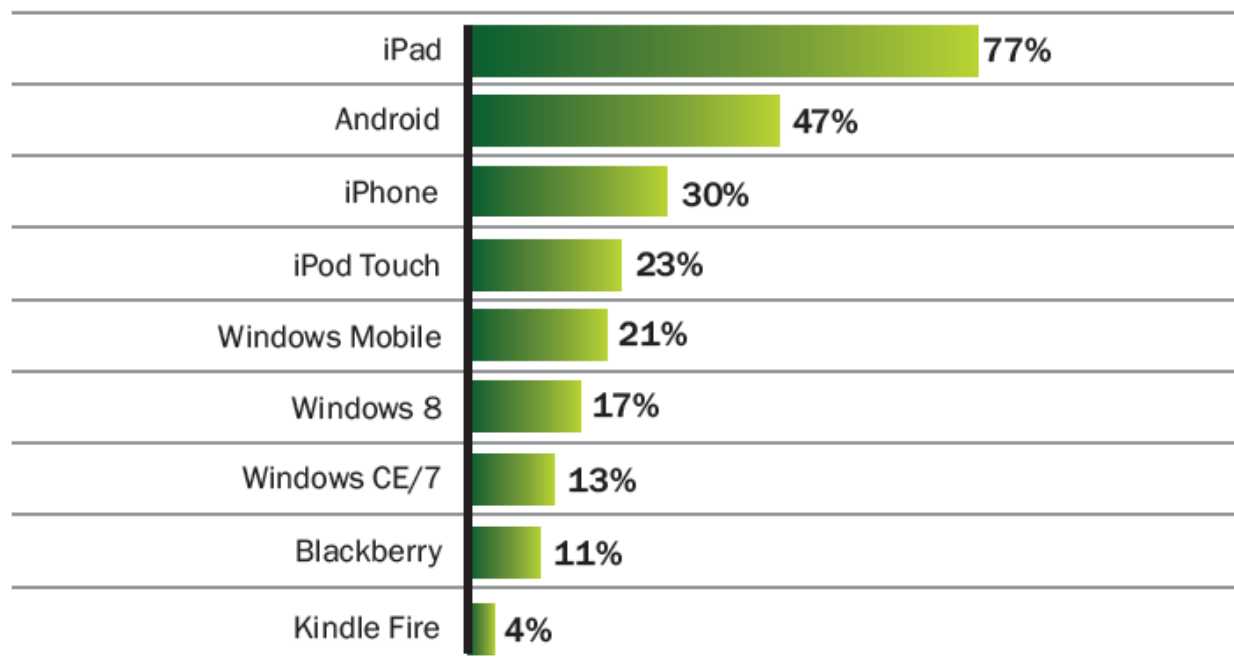
Verizon Enterprise Solutions

Retail Vertical – 2012 Tablet Trends & Best Practices



RIS-IHL Jan 2012 Store Systems Study found that iPad and Android are the top mobile platforms under consideration with iPhone and iPod Touch coming in at number 3 and 4.

Mobile Platforms Under Consideration



Source - RIS-IHL Jan 2012 Store Systems Study

But even though there is at present this degree of diversity, there are some who worry that Apple may lock out other tablet makers from the tablet boom in retail.

According to the November 2011 Yankee Group report "[This Holiday Season, Mobile Tops The List](#)") tablets such as Apple's iPad were the second most popular device on consumer shopping lists for the 2011 holidays. And no wonder; according to the analyst's "[2011 US Consumer Survey, December](#)", more than 16 percent of U.S. consumers now own at least one tablet, and that figure is growing at an average of 1.5 percent a month. Yankee Group predicts that more than 17 million tablets were shipped to U.S. consumers in 2011 and that the U.S. installed base will near 40 million by the end of 2012.

And perhaps we should not be surprised that tablet usage has totally taken off within retail: a tablet offers the same portability as a smartphone plus extended screen space, which can be used to accommodate richer, more compelling mobile shopping creative propositions. Moreover there are signs that consumers are starting to show category-specific device preferences even though the tablet market is barely two years old.

In a January 2012 survey from on-demand rich media merchandising platform Zmags, slightly more than half (53 percent) of electronics shoppers expressed a preference to use a tablet. Toy shoppers displayed the next highest preference for tablet shopping (39 percent), followed by clothing shoppers (37 percent) and travel shoppers (26 percent). Furthermore the survey found that for the 2011 holiday season, 87 percent of tablet owners said they would do their holiday shopping using their tablets with another 49 expect to shop more on their tablet throughout 2012.

Multiple Use Cases for Tablets In-Store

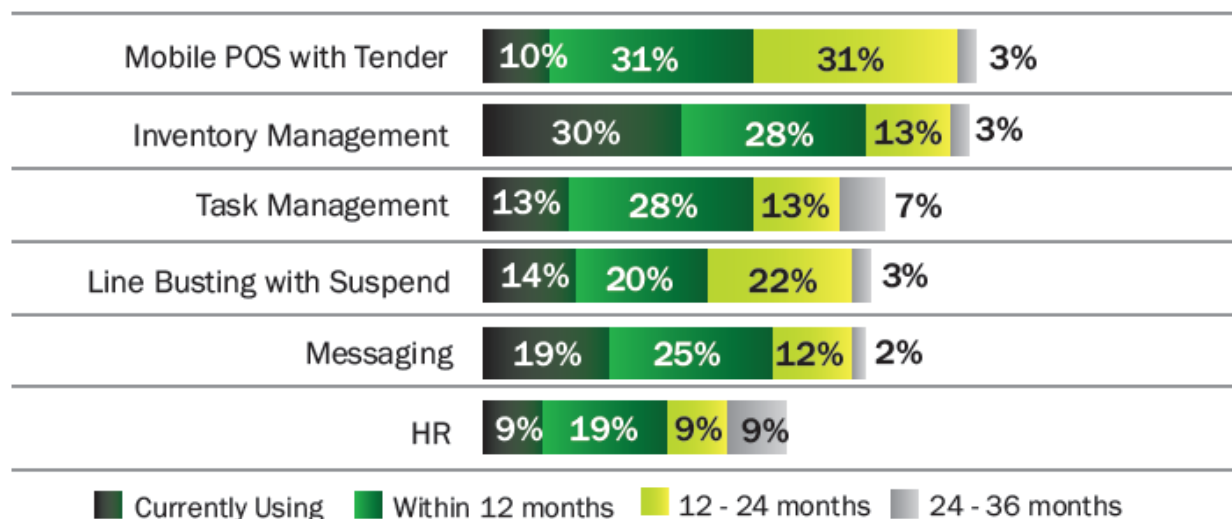
Given such an enthusiasm for tablets among consumers, it would seem that it is imperative that retailers factor services based around the devices into their business plans to address customer needs. It's equally as important to do this for internal business reasons.

No matter what type of in-store technology investments that you may have made in the past, investments in tablets may prove to be one of the more versatile devices when it comes to in-store usage.

Again on the nothing is new basis, Mobile POS is not a novelty to retail— before 2009 it was known as Lane Busting—but the RIS-IHL 2012 study found 10% of retailers are currently using Mobile POS solutions. Mobile Inventory Management again is not new to retail and such solutions encompass inventory counts, DSD, receiving, replenishment, price changes and other functions. According to the aforementioned RIS survey, 30% of retailers are currently using Mobile Inventory Management solutions.

But what should your priorities be regarding applications on tablets in the next 12 to 24 months? According to the RIS-IHL Jan 2012 store systems study; your store associate mobility plans in the next 36 months should take account of the following:

Store Associate Mobility Plans



Source - RIS-IHL Jan 2012 Store Systems Study

Tablet Best Practices

1. **Executive Alignment** – is mandatory for a retailer to achieve their Omni-Channel aka “buy anywhere, fulfill anywhere” vision. While funding for in-store technology typically comes from the stores division the design and development of these new mobile solutions requires not just cross-functional collaboration, but an unprecedented alignment between, e-Commerce, m-Commerce, store operations, merchandising, marketing, supply chain and corporate IT.
2. **Breakdown Channel Silos** – requires a redesign of revenue accounting applied to cross-channel sales. Today, only 15% of retailers credit stores for web orders picked up in-store, and only 11% of sales associates receive commission for these sales, despite the critical role they play in fulfilling the customer experience according to Forrester’s February 7, 2012 “The Digitization Of The In-Store Experience” report.
3. **Cross-Channel Integration** – of m-Commerce with e-Commerce and POS services is a top store systems priority. Store executives need to work with their e-Commerce team to develop cloud based solutions that provide real-time access to the e-Commerce platform and POS system for inventory data, pricing, promotions, product content, customer profiles, user-generated content and recommendations.

4. **Evaluate Commercial Solutions** – from the vendor community. 2012 NRF Big Show in NYC showed cased 50+ POS and e-Commerce vendors bolstering their product portfolios with the launch of mobile POS solutions and support for other in-store applications. This year's show set all time high attendance records with over 25,500 attendees.
5. **Partner** – with service providers to develop strategy and implementation plans. Few retailers have the IT resources or user experience expertise to develop sales associate tools and next-generation in-store experiences in-house. They must partner with a commerce service provider to envision, design, and implement these experiences.
6. **Limit Platforms** – corporate IT will find it difficult to deliver and support a consistent set of business apps on the full range of iOS, Android 2.x, Android 3.0, WebOS, Windows 7 and RIM operating systems that various tablets run on. IT should select one (or a manageable number), ensure commonly used business applications run on it, and inform employees that only business applications running on that specific type of device are supported.
7. **Security Architecture** – All devices, regardless of manufacturer or underlying operating system, should be locked down to restrict misuse from employees and enforce corporate security policies and strategies including:
 - a. **Secure Access**: every user should be authenticated based on role
 - b. **Monitor Usage**: track and monitor usage by individual users and app
 - c. **Restrict Web Access**: to only internal apps and approved public apps
 - d. **Encryption**: of all stored and transmitted data
 - e. **Remote Wipe**: to protect customer and corporate data stored on the device encase device is lost or compromised
 - f. **Restrict Data**: stored on device. Ensure sensitive data is accessible to tablet users but not reside on the device
 - g. **Architecture**: that can easily offload security-related processing to a gateway device or cloud service
8. **Network Architecture** – includes automatic failover and recovery between wired and wireless networks. This is essential for customer facing apps like mobile POS.
9. **App Architecture** – is based on a SOA (Service Oriented Architecture) to reduce TCO. [ARTS](#) the technical standards division of NRF, has developed blueprints and technical reports that provide the retail industry with an end-state, implementation depiction of the best SOA and Mobile practices for retail. Refer to [ARTS SOA Blueprint for Retail](#) and [Mobile Blueprint for Retail](#). In 2nd qtr of 2012 ARTS will release a Mobile Integration Whitepaper that defines a comprehensive mobile application interface and contains a list of use cases where the ARTS standards are used to enhance interoperability & capabilities in mobile. It details an integration package for mobile application of couponing, purchases and returns, payments and item look-up using existing ARTS standards.
10. **Push Updates** – lowers the ongoing costs of supporting in-store mobile devices. Corporate IT has to be able to push software and application updates to their in-store devices wirelessly.

11. **Battery life** – and controlling OS and app updates is a major factor. Recently Waste Management outfitted about 20 trucks of its trucks with 7-inch touch-screen tablets which it loaded with software for route and pickup instructions. Night before the pilot went live Waste Management's telecom carrier sent an update to the tablet's OS. The change meant the on-board charging system no longer worked with the tablets so they would run out of power while crews were on the road.
12. **Private AAP Store** – Retailers should consider a private app store instead of using Apple's App Store or Android's Market for controlling updates. It can take a week to 10 days for Apple to approve an app change. Also Apple doesn't provide an iOS or iPad product road map the way enterprise IT vendors usually do, making it harder for retail CIO's to plan their long-term strategies. Android developer Google isn't necessarily more in tune to business needs than Apple is. But because Android is an open source operating system, tablet makers who adopt it have the freedom to make changes.
13. **MDM (Mobile Device Management)** – allows retailers to manage their in-store device inventory. Misplaced devices can be easily located in the store through audio alerts, allowing the sales associate who has misplaced their handset to find it again, while GPS tracking allows the retrieval of stolen devices, and, if required, remote wiping can protect confidential corporate data.
14. **Native Apps** – is currently preferred versus WEB app because HTML currently lacks the ability to work offline or take advantage of a tablet's features like the camera, GPS or the tablet's graphics capability. HTML 5 is behind but catching up. HTML technology should be considerably more attractive 12 months from now. However, there is still a significant drawback to be addressed in the form of code security, but this too may not be an insurmountable obstacle and progress may be made on improving this in 2012.
15. **Retail Centric Sleds** – add credit card swiping, infrared bar code scanning, and extended battery life to the existing hardware arsenal. These sleds also double as a rugged case, protecting the devices from the inevitable drops, bumps, and other abuse they encounter in a store environment.
16. **Develop Interoperable Flexible Architecture** – Fixed POS system Achilles heel has always been its lack of flexibility and upgradeability. Next generation of in-store technologies will evolve at an alarmingly face pace. Hardware, software, and integration infrastructure architecture must support remote updates, scalability and the flexibility to support new hardware capabilities such as EMV and NFC as adoption of these technologies mature.

Native versus WEB Apps

Mobile devices, principally smartphones and tablets, have established themselves as part and parcel of everyday life, with a commensurate ramping up of apps on them and the phrase 'there's an app for that' has entered common currency. What this has meant is that many stores have concentrated their mobile efforts on an app play, with browser-based shopping a lesser priority. In the retail sphere though, one size doesn't fit all and there isn't just one way that people want to buy using their tablets. Indeed there's huge demand for web browser based retail and is something that you should consider.

For tablets, native apps are currently preferred versus a web approach because HTML currently lacks the ability to work offline or take advantage of the devices' features like the camera, GPS or the tablet's graphics capability. HTML 5 is though but catching up and the technology should be considerably more attractive 12 months from now. There is still a significant drawback to be addressed in the form of code security, but this too may not be an insurmountable obstacle and progress may be made on improving this in 2012.

Looking forward, it may well be the case that hybrids will emerge whereby native apps' code gets data from a Web app and looks as if it is optimized for a particular device; such an approach would lower development costs. You could also change the data an app user receives without going through the Apple approval process of an app store repository—such as Apple's App Store or Android's Market—since the native code stays the same and the changes happen on the back end.

You should also consider offering your own private app store instead of using a proprietary repository for controlling updates. With some proprietary stores it can take a considerable amount of time to have app changes approved and there may also be questions to ponder based around the subject of your product road map. That is, how well does the proprietary store align itself with your objectives?

THE COMPLETE NETWORK FOR RETAIL

When people are in the mood to spend they expect to be able to do so wherever they are, whenever they want to do so. And from whatever device they want to use. The same goes for your business: you need to be able to sell wherever customers are and from anywhere and from whatever devices you need to use.

When you provision your network, or consider your future network needs, bear in mind that you will need to be able to securely extend your business's network over both a wired and wireless infrastructure to connect all of your associates and workers wherever they are. Addressing this need is a private IP network, where your personnel can gain consistent and secure access to the corporate network automatically accessing the data and resources they need anywhere.

The wired element of the private IP network should be an MPLS-based framework; the wireless element should be based on, if available a 4G network such as LTE with 3D fallbacks. In addition you should deploy dynamic mobile network routing to give you the ability to manage devices behind a wireless router. This could be particularly advantageous if you are serving multiple devices at remote sites using cellular connectivity. If you do employ vending kiosks or other sales devices, the private IP network allows you to have M2M capability with better security and network performance. Moreover a properly configured private IP network will give you exclusive seamless failover between fixed and wireless networks with no costly human intervention.

BYOD Trend

One important development with the potential to impact the evolution of the enterprise tablet market in general and of tablet adoption is the bring-your-own device (BYOD) trend.

BYOD is a subset and natural consequence of the broader phenomenon of the consumerization of IT, whereby technologies debut in the consumer market and then move into the corporate world. Retailer adoption of BYOD is driven partly by the potential for lower capex achieved by letting employees buy and use their own tablets, smartphones, and so on for business purposes, and partly by the need, on the part of management, to appeal to employees and position the company as a forward-thinking entity where it is desirable to work.

However BYOD has risks that retailers need to carefully evaluate. Primary risk is security related to customer's information and privacy. It's only a matter time before BYOD would be hacked exposing a retailer's customer information to fraudulent usage. I can't see how Mobile POS on BYOD devices could ever be PCI compliant. Clienteling another popular associate app has the same risk.

Secondary risk is cost related to IT supporting multiple devices and their operating systems. Retailers need to understand the TCO for mobile apps running on BYOD. While BYOD lowers capex it increases operating costs.

Employee labor management apps such as work schedules, schedule confirmation, check-in, check-out, task assignments, task status, task completion would be appropriate apps for BYOD.

CONCLUSION

The retail industry is rapidly evolving. Today's consumer demands that you explore solutions that give them instant access to products and services that will shape their buying decisions making the purchase process easier. Consumers will be challenging you to adapt to the ways they live and shop today. Supported by emerging technologies, that is by tapping into tablets, consumers will be more focused than ever on price and convenience.

To succeed in 2012, retailers must understand how their customers prefer to interact with them, figure out how to present a consistent merchandising and transactional experience across customers' preferred touch points and optimize content to maximize the revenue potential of their preferred channels and devices, such as indeed tablets.

Verizon Enterprise Solutions

Retail Vertical – 2012 Tablet Trends & Best Practices



Your consumers have increasingly high expectations for mobile in general and their demand will outpace the ability of most retailers to deliver solutions. Mobile is increasingly becoming the cement between stores and web sites. Yet simply providing support for mobile is not enough: the mobile experience, like all of those that go to make up the omni-channel presence has to provide a stickiness that keeps shoppers in one location long enough to stay and buy. In other words, the omni-channel store, as increasingly accessed by tablets, has to be good looking, easy to walk through, compelling enough to stay in, and with easy purchasing. Just like the best shops have always been.