

Intelligent Framework Helps Retail Level the Playing Field

The Intel® Intelligent Systems Framework provides a common platform for connecting cross-channel touch points, simplifying retail's ability to meet—and exceed—customer expectations



The Intel® Intelligent Systems Framework simplifies the development and deployment of the responsive, connected store, enabling retailers to deliver new and engaging brand experiences, drive operational efficiencies, and increase revenue.

Introduction

The competitive landscape for retailers is rapidly shifting in the wake of constant technology innovations and changing customer expectations. Today's consumers know what they want, and that includes control over when and how they interact with a brand. Using PCs, tablets, and smartphones, they regularly engage with web sites, email offers, and social media—at home, on the go, or in a store—to find and review products, compare prices, and make purchases.

Seamless integration of the customer experience across all channels and touch points is known as omni-channel retailing, a holistic approach for maintaining relevance, responsiveness, and market share in today's multi-channel world.

According to Jose Avalos, Director of Visual Retail for Intel, implementation of the retail omni-channel revolves around two words: intelligence and connection. That is, the integration of intelligent devices (i.e., with microprocessors inside) and network connectivity.¹

But deploying such a platform can be challenging because the systems and devices that power and support the retail environment are not always intelligent and often not connected.

To simplify the design and deployment of the retail omni-channel, Intel has introduced the Intel® Intelligent Systems Framework², a solid foundation that:

- Addresses issues surrounding the connecting, managing, and securing of systems and devices in a consistent and scalable manner.
- Reduces operational overhead, inefficiencies, and costs.
- Empowers marketers with shopper analytics that can help improve the customer experience and increase revenue.

Increased Complexity

Savvy retailers know that omni-channel retailing is the clear direction to take for today's technologically minded consumers. According to the Retail Systems Research (RSR) 2012 survey, 38 percent of retailers consider cross-channel shoppers to be more profitable than single-channel shoppers, and 55 percent cite the lack of an omni-channel as their main sales inhibitor.³

But an effective omni-channel implementation has a lot of moving parts and requires machine-to-machine connectivity on a much larger scale than before. For example, inventory and

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warehouse systems must communicate with each other and also integrate with in-store and online pricing and points-of-sale systems which, in turn, are coordinated with targeted sales and marketing campaigns.

Additionally, omni-channel solutions must deliver measurable value where it counts: increased revenues, increased operational efficiencies, and optimal data security, all tied together through the overall IT infrastructure.

Each component introduces additional hardware and software to implement, integrate, secure, and manage. Further adding to the lengthy list of retail challenges has been the growth of omni-channel solutions and solutions providers, yet no common foundation—no set of guidelines—for retailers to refer to. The result is that many retailers have either put off implementation or have used the hunt-and-peck method to solve their most pressing business issues.

Simplifying the Solution: the Intel® Intelligent Systems Framework

The Intel Intelligent Systems Framework provides a common platform—a roadmap of recipes—for connecting hardware and software, and for delivering tools for analytics, security, and manageability (see Figure 1). Using it as a guideline, IT professionals, system designers, and system integrators can more easily design and implement a scalable omni-channel solution that best fits their business needs, including:

- Fast and cost-effective development of interoperable solutions.
- Scalability and investment protection, making system changes and expansions easier due to the common platform.
- Delivery of immediate value via critical applications including analytics, security, and manageability.

Now let's see what the framework consists of, what its benefits are, and how it works.

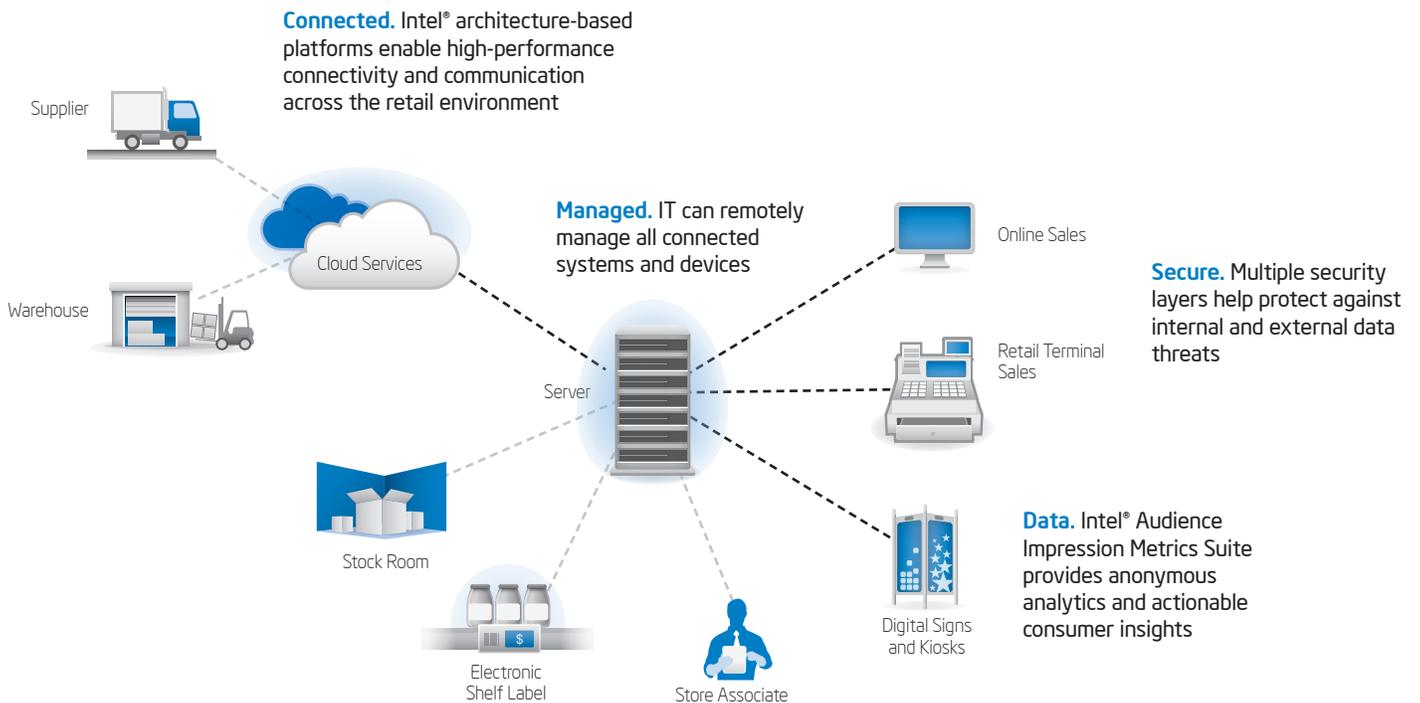


Figure 1. The connected and seamless shopping experience spans online, on-the-go, and in-store environments. The Intel® Intelligent Systems Framework provides a common, scalable platform for connecting hardware and software and also delivering tools for analytics, security, and manageability.

Key Components

The Intel Intelligent Systems Framework is based on Intel® architecture and uses a wide range of proven Intel® processors and technologies. Specifically:

- The platform is built using systems and devices based on Intel® Xeon® processors, Intel® Core™ processors, and Intel® Atom™ processors.
- Remote management is enabled using Intel® vPro™ technology⁴ and the functions provided by Intel® Active Management Technology (Intel® AMT),⁵ making it possible to remotely manage, monitor, and repair thousands of systems and devices, reducing headcount and eliminating costly service calls.
- Intel® Audience Impression Metrics Suite (Intel® AIM Suite) empowers marketers with anonymous shopper analytics that can uncover valuable consumer insights and trends, help improve marketing strategies, and increase sales.
- System security and integrity are safeguarded through McAfee capabilities that are designed to address the full range of internal and external threats including viruses and malware, content graffiti, identity and account theft, system compromise, data theft, and provisioning/updating.

Additionally, Intel is assembling an ecosystem of system vendors, ISVs, system integrators, and cloud-to-device services that build on the Intelligent Systems Framework, each supporting solutions that enable seamless integration of retail systems, data centers, and the cloud.

Companies currently supporting one or more of the Intelligent Systems Framework solutions include Advantech, Arrow Electronics, Avnet, Axeda, Dell, Digi International, Eurotech, Kontron, McAfee, Portwell, WebHouse, and Wind River.

Retail Benefits

By leveraging the common-platform structure of the Intel Intelligent Systems Framework, retailers can better implement their business-critical infrastructure and begin realizing the performance gains of the omni-channel. Table 1 lists specific marketing and IT benefits.

The Intel Intelligent Systems Framework in Action

Several retailers are implementing omni-channel solutions based on the Intel Intelligent Systems Framework. Examples are:

- **Global Signage and Advertising.** Media-Saturn Group, Europe’s largest electronics retailer, has deployed a global in-store TV network comprised of 220,000 screens in more than 900 stores in 16 countries. Intel AMT capabilities make it possible to

exercise centralized control over what content appears in each store, as well as maintenance and diagnostics of the screens, kiosks, tablets, and media players.⁶

- **In-Store Immersion and Inventory.** Suning, the leading electronics chain in China, has deployed an in-store digital shopping kiosk that uses Intel AIM Suite analytics to present different marketing messages based on the age and gender of the customer. At the same time, the system analyzes information from the customers’ behavior in order to stock the right products. McAfee software provides multiple layers of protection against data loss and unauthorized access.⁷
- **Showrooming Stopper and Social Connection.** A large French retailer is addressing the challenge of how to deliver tactile product engagement for a wide variety of bulky appliances—refrigerators, washers, dryers, etc.—without the expense and floor space required to stock a multitude of models. Using multi-panel, interactive digital signage, consumers are able to view multi-dimensional views of products and compare features, then order the item directly from the manufacturer. In addition, the in-store displays can include QR codes, SMS text messages, or short URLs so consumers can sign in to web sites using their smartphones or other mobile devices.⁸

Table 1. Benefits of Intel® Intelligent Systems Framework

BENEFITS TO THE CMO	BENEFITS TO THE CIO
<p>Seamless shopping experience – Customers can engage across all channels, and targeted promotions can peak interest, create a more personalized shopping experience, and increase in-store sales.</p>	<p>Reliable infrastructure – Platforms are based on proven Intel architecture, providing robust, reliable, powerful, and scalable support to business systems.</p>
<p>Reduced inventory distortion – Integration of back- and front-end inventory systems enables real-time, strategic pricing and promotions and reduces revenue losses from out-of-stocks and overstocks.</p>	<p>Security and system integrity – Intel Intelligent Systems Framework addresses key security concerns that are a byproduct of increased intelligent devices, including credit card theft, virus/malware, data theft, and provisioning/updating.</p>
<p>Cross-channel customer behavior – Collection of relevant customer information can be used to expand and improve the shopping experience, increasing loyalty, affinity, and sales.</p>	<p>Easy system manageability – Manageability features, such as remote access and single console access, make the entire system easier and less expensive to manage.</p>
<p>Real-time data analytics – Systems such as the Intel® Audience Impression Metrics Suite with Anonymous Viewer Analytics provide real-time targeted optimization of the user experience.</p>	<p>Managing unpredictable system demand – Manageability and other features of Intel Intelligent Systems Framework lower costs while addressing maintenance and other IT concerns.</p>

Summary

Despite the enormous technology-fueled changes inherent in today's retail landscape, consumers will continue to reward retailers who meet their needs and deliver on their expectations. For brick-and-mortar retailers, the challenge is how to quickly and cost-effectively harness these technologies and realize the performance gains of omni-channel implementation.

Intel is helping retailers simplify the process and meet their goals with the Intel Intelligent Systems Framework, a common platform that can help retailers quickly create new shopping environments that are engaging and immersive to customers, all the while delivering analytics, manageability, and security to retailers, which contribute to the bottom line.

For the more information on Intel retail solutions, visit www.intel.com/retailsolutions.

¹ Avalos, Jose. *Creating the Information-Rich Store: The Intelligent Systems Revolution in Retail*. Platt Research Institute's Journal of Retail Analytics, volume IX, Issue 1, First Quarter 2013. www.plattretailinstitute.org/JRA

² Intel. *Intel Intelligent Systems Framework*. 2012. www.intel.com/content/www/us/en/embedded/intelligent-systems-framework.html

³ Retail Information System (RIS) News, 2011 *Shopper Experience Study*, June 2011. <http://risnews.edgl.com/retail-research>

⁴ Intel® Active Management Technology requires activation and a system with a corporate network connection, an Intel® AMT-enabled chipset, network hardware and software. For notebooks, Intel AMT may be unavailable or limited over a host OS-based VPN, when connecting wirelessly, on battery power, sleeping, hibernating or powered off. Results dependent upon hardware, setup and configuration. For more information, visit [Intel® Active Management Technology](http://www.intel.com/technology/vpro).

⁵ Intel® vPro™ Technology is sophisticated and requires setup and activation. Availability of features and results will depend upon the setup and configuration of your hardware, software and IT environment. To learn more visit: www.intel.com/technology/vpro.

⁶ Intel. *Intelligent In-Store Digital Experience Solution*. 2012. www.intel.com/content/www/us/en/retail/intelligent-in-store-digital-experience-solution-blueprint.html

⁷ Intel. *Intelligent Consumer Product Introduction Solution*. 2012. www.intel.com/content/www/us/en/retail/intelligent-consumer-product-introduction-solution-blueprint.html

⁸ Intel. *Intelligent Shopping Solution Expands Access to Product Inventory*. 2012. http://downloads.deusm.com/digitalcanvasretail/Intelligent_Shopping_Solution_Expands_Access_to_Product_Inventory.pdf

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