Windows Embedded

What Are Your Devices Telling You? How to Leverage Your Intelligent Systems to Improve Customer Service and Increase Sales

Contents

Brought to you compliments of:

Microsoft

Introduction

Keeping customers satisfied and coming back to do more business has never been more challenging for companies. Consumers expect fast, efficient and high-quality service, whether they are buying a new home appliance, opening a bank account, getting a checkup at the doctor's office or purchasing a new insurance policy.

Market research shows that consumers today have become far more discerning and are not as willing to tolerate lower levels of service. Rather than remaining loyal customers, they're more likely to take their business elsewhere if services are not up to their expectations.

At the same time, there has been dramatic upheaval in a number of industries in recent years, creating a much greater level of competition. For example, brick-and-mortar retail stores now have to compete with a multitude of online sites that sell the same merchandise — often at lower prices.

To learn more visit
www.unlockintelligence.com

Windows Embedded

In light of these market trends, enterprises need to find new, innovative ways to harness information in order to provide better customer service and a more exhilarating experience for consumers.

Emerging technology trends such as intelligent systems, including offerings powered by Microsoft's Windows Embedded, can drive improved service and experiences and help companies strengthen their relationships with customers so they will want to come back to do more business.

These types of systems are in use all around us today, with retail and hospitality/travel companies already seeing significant benefits from deployments.

According to research firm IDC, the market for intelligent systems will grow substantially in the next few years, from 800 million units today to more than 2.3 billion by 2015. Shipments of embedded devices are already exceeding cell phone and PC shipments, and IDC expects the market for intelligent systems to reach $520 billion by 2015.

Organizations that ignore the emergence of intelligent systems risk losing out on a huge opportunity to better serve their customers, attract new clients and increase their revenue streams. Technology and business leaders must learn about the opportunities for their organizations and then educate other business leaders in their enterprises about the potential value of intelligent systems.

Demands of Today's Business Environment

Providing excellent customer service and satisfaction is typically high on the list of goals companies are looking to achieve. And if it's not high on the priority list, it certainly should be.

Industry research shows that customers are becoming much more discerning about the services they receive from companies, and that they are open to dropping one provider for a competitor whenever they're not receiving the level of services they desire.

For example, in the 2012 Accenture Global Consumer Survey, which queried 10,000 consumers in 27 countries, two-thirds of respondents said they switched companies as a result of poor customer service. Imagine if six out of every 10 of your customers left you for a competitor. What sort of impact would that have on your business?

Here are some other telling statistics:

- The proportion of consumers who switched suppliers for any reason between 2010 and 2011 increased in eight of the 10 industries covered in Accenture's study.
- Only 23% of the consumers surveyed by Accenture considered themselves "very loyal" to their providers, and 24% said they had no loyalty at all.
- About 10% of customers in 2012 indicated that they had switched their primary banking institution during the past year to a new provider, according to a 2012 report on the banking industry by global marketing information services company J.D. Power and Associates. Consumer backlash against bank fees coupled with poor service and unmet customer expectations fueled the increase in defection rates among customers of large, regional and midsize banks, the report says.

To learn more visit
www.unlockintelligence.com

Windows Embedded

Clearly, companies have to go out of their way today to ensure that they're doing all they can to best serve their customers. That includes easing the process of buying goods and services, making returns and getting answers to questions. When customers have to wait in long lines in retail stores, are bombarded with information about products that they're not the least bit interested in, or are scheduled for the wrong type of medical service, they get aggravated. Customers might even choose to stop doing business with a company or going to a healthcare facility that has subjected them to these types of negative experiences.

Consumers in today's fast-paced environment are often in a hurry, and they are likely to be happier when they get quality service quickly and effectively. Anyone who has gone shopping during a busy time such as the holiday season knows what it's like to have to wait in a long line to buy an item or to search in vain for a salesperson to get information about a certain product.

Competition is fierce in many industries, and companies need to gain an edge wherever they can. For example, in retail, traditional merchandisers have to compete with online retailers such as Amazon, which provide conveniences such as the ability to shop from home. Stores and other businesses, such as restaurants and hotels, need to find creative new ways to lure customers and provide them with an enjoyable and memorable enough experience that they will want to return.

Banks, insurance companies and other financial services firms also must look for ways to set themselves apart from their competitors, by offering more personal, customized services that make customers feel as if their patronage is acknowledged and appreciated.

In addition to providing a superior customer experience, companies need to sell more products and services in order to boost their profitability. Upselling, cross-selling and being more efficient with their sales and marketing campaigns are some of the ways they can do this. For example, they can aim particular products and services at the people who are most likely to be interested in buying them.

Intelligent Systems: A Smart Way to Leverage Data

Technology is available today that can dramatically enhance the way companies deliver experiences and services to their customers. A multitude of smart, connected devices are already having a big impact on consumers' lives, and there is a shift under way from smart devices to this new trend of intelligent systems.

While there are a number of definitions of these systems, at the most basic level, an intelligent system encompasses smart devices that capture data and send it to a server, where the data is analyzed and turned into valuable business insight for the organization. Intelligent systems are currently at work all around us and have become such a routine part of our daily lives that many people take them for granted. Some common examples include the ATMs present in many banks and shopping areas, the self-checkout terminals found in many grocery chains and other retail establishments, and digital signs used for advertising and promotions in shopping malls and airports.

These devices, and many others like them, are increasingly becoming connected to other devices, servers and analytics software to become the new intelligent systems that create richer and more valuable insights than ever for organizations.

To learn more visit
www.unlockintelligence.com

Windows Embedded

And as new types of devices are constantly being invented and deployed, the emergence and use of these devices will no doubt increase as the technology components become ever more powerful and as organizations discover the benefits these intelligent systems can deliver to their customers and business.

Technology such as Windows Embedded extends the power of the Windows operating system and the cloud to these sophisticated devices that fuel intelligent systems. Consisting of operating systems, tools, and systems and services, the Windows Embedded family of solutions allows organizations to improve the services they are delivering to customers and realize tangible, real-time benefits through anytime, anywhere access to executable data.

Much of this intelligent systems technology is not new; Microsoft has been providing these types of embedded solutions for several years. But for many enterprises, the deployment of intelligent systems is a new concept, and the emergence of the cloud and more powerful processors in recent years has greatly helped to enhance the capabilities and business value of these systems.

The systems are becoming increasingly sophisticated and able to deliver ever more granular information to business users to help them provide more highly customized services to clients.

Forrester Examines ROI for Windows Embedded

In January 2012, Microsoft commissioned Forrester Research to examine the total economic impact and potential return on investment (ROI) that enterprise retailers might realize by deploying Windows Embedded operating systems in their front-of-store retail devices as well as their back-of-store operations and management devices. These include point-of-sale systems, informational kiosks, self-service checkouts, digital signage, handheld terminals, and other related devices and systems.

The study was based on input from seven Microsoft retail customers with varied environments and needs. It used a financial model of an organization's typical experience with Windows Embedded over a three-year period, examining the costs, benefits, risks and flexibility of using the operating systems for embedded devices in a retail environment.

Based on interviews with the retailers, Forrester constructed a Total Economic Impact framework and an associated ROI analysis to show the areas financially affected.

Overall, the study found that the investment in Windows Embedded provided a positive ROI of 48%, with a payback in about 17 months.

"For enterprise retailers, the inherent value of an intelligent system that uses Windows Embedded technology is that it can capture, track and manage the data that is collected on the devices," the Forrester report notes. "They can then use that data to make better decisions as well as to glean deep insight and business intelligence. Intelligent systems represent what many expect will be the future of business."

To learn more visit
www.unlockintelligence.com

Windows Embedded

Success Stories: Retail, Hospitality and Healthcare Show the Way

Companies in industries such as retail, hospitality/travel, manufacturing and healthcare are using intelligent systems today to provide enhanced customer service and experiences. The following are examples of how this technology has made a big difference at these businesses.

To improve profitability and customer service, Las Vegas-based **Carl's Jr.**, a quick-service restaurant chain with more than 1,200 locations worldwide, wanted to upgrade its point-of-service solution with an intelligent system that connects local POS devices with the corporate network. It also needed to have centralized tools that would support business growth.

The company's management understood that customers want to come into a restaurant, order their food and be served quickly — so any technology that would enhance and speed up the service process would provide value.

To meet its goals, Carl's Jr. deployed a POS system based on PAR EverServ QSR POS software running on the Windows Embedded POSReady operating system and the Microsoft .NET Framework.

PAR EverServ QSR runs with Microsoft SQL Server data management software on four PAR EverServ 6000 POS terminals in each restaurant. Sales and employee data is sent from the terminals to a back-office SQL Server database running on the Windows 7 Professional operating system.

This gives the company an end-to-end solution that helps it serve customers faster and gain better control of food and labor costs. Carl's Jr. has also eased management and business expansion with cloud-based reporting and administration tools.

The new reporting capability with the solution enables managers to look at daily inventory of food items and see when employees signed in and out of shifts. Since each store has different operating parameters based on weekly sales, it's important for them to be able to see that information in detail.

The solution gives managers Internet access to current sales, inventory and workforce information. The company's central office uses another tool, PAR EverServ Enterprise Configuration Manager, to update software, menu items, prices and coupons across multiple locations.

As a result of the technology deployment, **Carl's Jr. has improved profitability and business insight, enhanced customer service, and eased business expansion and management.**

Hilton Hotels, a leading global hospitality company with more than 500,000 rooms at 3,000 properties in 74 countries and territories, was looking to reduce call center space requirements and the costs associated with taking reservations.

The company wanted to restart a work-at-home agent program that had been stalled because of technical support issues. Hilton understood that the work-at-home program for its call center staff could both increase its quality of customer service and decrease its call center costs. It realized that the flexibility of working at home would appeal to a larger and more diverse pool of job applicants, including stay-at-home mothers, retirees, teachers on summer break and people with physical disabilities.

Hilton Reservations also saw a work-at-home program as an opportunity to reduce its number of call center locations, which would result in savings on real estate, power, natural resources and other physical support costs.

To learn more visit
www.unlockintelligence.com

Windows Embedded

The company outfitted more than 650 call center agents working at home with a solution anchored by a Wyse thin client device built on Windows Embedded technology, Internet Explorer, a Netgear firewall and a Citrix Presentation Server running on Terminal Services from Windows Server.

Agents can work from anywhere within a metropolitan area where Hilton Reservations has a phone switch. They turn on the Wyse thin client, log into the virtual private network and connect to Hilton's automatic call distributor, which manages incoming calls and handles the calls based on the number called and an associated database of instructions.

The Windows Embedded technology and Wyse thin clients delivered several business benefits to Hilton Reservations, including cost savings and better quality customer service. **Hilton is saving money on call center real estate, computer equipment, power, server licenses, technical support, per-hour agent rates and full-time employee overhead.**

Hilton Reservations also gained the flexibility to expand or decrease workforce hours as needed, and broadened its reach to employ the most qualified agents to deliver the highest quality service to customers.

SMG, a world leader in venue management, marketing and development with 220 facilities worldwide, wanted to boost profits at the 8,000-seat Sioux Falls Arena in South Dakota by replacing aging cash registers and menu boards.

At the indoor sports and entertainment venue — home to the Sioux Falls SkyForce NBA Development League team, the Sioux Falls Stampede USHL hockey team and the Sioux Falls Storm UIF indoor football team — food and beverage sales are a significant part of the event business, accounting for nearly 10% of revenue at concerts and other live events.

In the past, the arena used a simple "cash to draw" POS system that had no real automation capabilities. Integrated credit card processing wasn't supported, making sales cash-only. Furthermore, there were no ties to back-office POS systems for inventory control and reporting. And the traditional static menu boards required physical labor each time a price or menu item changed. Everything was processed manually, which resulted in inefficiencies and unnecessary cost expenditures.

To upgrade the technology, the company hired Dakota Retail Technologies, a value-added reseller specializing in POS solutions for the retail and hospitality industries. Dakota Retail put together a solution based on Touch Dynamic's Breeze All-in-One POS devices running Windows Embedded POSReady.

To create a custom inventory control application for the Sioux Falls Arena, Dakota Retail found a third-party developer with a development team experienced in Windows Embedded technology, Microsoft Visual Studio and the .NET Framework.

The POS solution from Dakota Retail, Touch Dynamic and Microsoft provides the Sioux Falls Arena with several benefits. Windows Embedded technology enabled Dakota Retail to give the arena a complete turnkey point-of-service solution that encompassed not just POS hardware and software, but also digital menu boards that are directly integrated to the POS system and wireless handheld terminals for mobile order entry and credit card processing.

The arena achieved ROI for the new POS system through both increased sales and higher profitability. **Revenue is higher because of the integrated credit card processing, better signage and mobile payment terminals. Higher profitability comes from real-time monitoring of purchasing activity to better understand the buying habits of customers.**

To learn more visit
www.unlockintelligence.com

Windows Embedded

Hillcrest Family Health Center in Waco, Texas, a network of 12 family and specialty medical clinics, needed a better way to manage hundreds of computing devices. Adding to the burden on IT resources was a multi-site electronic health record (EHR) system that required frequent patches and fixes, making support costly and time consuming.

The EHR system required that each clinic have its own SQL database running on a server, which needed administration on a regular basis. Hillcrest needed to find a way to run updates and perform maintenance on machines without touching them.

The organization hired Roby Solutions, a local systems integrator, which proposed a solution using Wyse thin clients running Windows Embedded Standard to connect to Windows Server 2008 R2 running Microsoft Hyper-V Virtualization.

Now the center's IT resources are centralized for easier management, and users can connect to their personalized, dedicated desktop devices from anywhere. Hillcrest has reduced bandwidth infrastructure costs by about 35%.

Other business benefits include easier audits for HIPAA compliance, reduced support and bandwidth costs, and new service options for patients because clinics don't have to shut down on weekends for EHR software updates anymore.

The organization achieved cost savings from productivity gains due to increased uptime, as well as ROI due to less time being spent on servicing desktops.

South Jersey Healthcare, a Vineland, N.J.-based nonprofit healthcare system that includes hospitals, community clinics and multiple specialized services, wanted to improve patient care by providing easier access to information maintained in multiple systems, including medical records, pharmaceutical inventory and billing.

The healthcare system was using a labor-intensive medication distribution model to share medication order data, often resulting in patients having to wait as long as two hours for medication.

New regulatory requirements also put pressure on the healthcare system to improve data flow. The American Recovery and Reinvestment Act of 2009 included provisions for healthcare providers as part of the economic stimulus package. In addition, the Health Information Technology for Economic and Clinical Health (HITECH) Act, also called "Meaningful Use," requires healthcare providers to improve patient care by adopting EHR technology.

South Jersey Healthcare hoped that by sharing data better electronically, it could improve workflow and cut costs.

To improve efficiency, the healthcare system replaced manual processes with an automated dispensing system from Omnicell that runs on the Windows Embedded Standard 7 operating system. The dispensing system with Windows Embedded offered South Jersey Healthcare multiple advantages, including easy interoperability with device drivers and applications. The platform is also one of the few automated dispensing systems to earn EHR certification, an important consideration in meeting Meaningful Use requirements.

Because the solution shares information across multiple applications and devices, medical staffers have greater visibility into patient care and more control of their workflow. By using the automated solution, the pharmacy has **cut delivery time for patient medication from as long as two hours to just 18 minutes.**

In addition, South Jersey Healthcare can more easily meet EHR regulatory requirements, improve inventory control and simplify IT management. **The organization reduced its medication inventory from $505,000 to $340,000.**

To learn more visit
www.unlockintelligence.com

Windows Embedded

The above examples are excellent illustrations of how intelligent systems can be successfully applied to particular industries. But these technology solutions can deliver value and help companies to provide better customer experiences in a broad range of sectors, including manufacturing, banking and financial services, government and higher education.

In fact, any organization that deals with customers or constituents can potentially benefit from these systems and the data and analytics they leverage. The successful deployments described in these examples can serve as proof points that this technology does indeed work and can be used in innovative ways in a variety of industries.

IT Must Take the Lead, With Support from Business Leaders

Intelligent systems are technology solutions, so IT leaders must drive the move toward their implementation within their organizations. In recent years, CIOs and other IT executives have taken on a much greater role as business leaders, and intelligent systems deployment is a prime example of how technology initiatives can help meet business goals.

Gartner has noted that the changing shape of IT is causing CIOs to question the role of IT in the organization and the part they will play in it. This is especially true as enterprises confront global economic uncertainty, changing market dynamics and cultural discontinuities created by technological innovation, the research firm said.

We are seeing "the emergence of a new generation of CIOs, one that aims not so much to 'run' IT as to ensure that the business achieves strategic value from the use of technology," Gartner has said. "Although this isn't an entirely new development, the extent of the change is growing, and a tipping point will be reached in the next five years."

Because intelligent systems have such a direct impact on the business, IT executives need to work closely with business leaders in areas such as marketing, sales, customer service, distribution, purchasing, product development, human resources and other disciplines to determine how intelligent systems can best be deployed and used in their organizations.

Who gets involved and to what extent depends on the type of organization. For example, in healthcare, doctors and nurses might provide valuable insights on how intelligent systems can improve services. In retail, sales and inventory management will likely play a critical role.

In some cases, the emergence of intelligent systems will lead to process changes at organizations, so input from business leaders and users must be part of the discussion. Companies will need to provide appropriate training so that employees can use these new systems optimally and minimize business disruptions.

From an IT infrastructure standpoint, many organizations have already made a big investment in the technology they will need in order to leverage intelligent systems, such as databases and analytics, so they will not need to invest in a lot of new IT infrastructure solutions. They just need to add new devices that can leverage smart systems.

To learn more visit
www.unlockintelligence.com

Windows Embedded

To get started with an intelligent systems strategy, IT executives should thoroughly research the opportunities and available technology solutions — leveraging resources such as case studies and white papers — and share this knowledge with other decision-makers.

They should then work with business leaders to develop a formal plan outlining their organization's goals for deploying intelligent systems wherever it makes business sense to do so.

Summary and Conclusion

Organizations have an enormous amount of data at their disposal today, and by leveraging intelligent systems, they can use this information to improve customer service as well as boost profitability.

Intelligent systems represent the intersection of technology, business and society, as well as the physical and digital worlds, bringing to life the concept of the "Internet of Things" that industry experts have been talking about for several years.

Intelligent systems offer boundless possibilities for enterprises to gather and use information to better understand customer behavior and as a result better serve their customers. Embedded solutions such as intelligent systems can extend enterprise software and cloud services out to commonly used devices.

With pervasive network connectivity in place today, and the emergence of cloud services and low-cost, high-power microchips, embedded devices can now be part of a broader IT infrastructure and exchange real-time data with customers as never before.

There are two main ways organizations can innovate via intelligent systems. One is by using the systems to gather and harness data in new ways, and the other is by delivering exciting new experiences for customers, employees and business partners.

For organizations looking to gain an edge in a fiercely competitive market, intelligent systems offer much potential. Companies that don't take advantage of the technology risk squandering a huge opportunity. Those that deploy intelligent systems in new and innovative ways give themselves an opportunity to be highly relevant to customers and to become the market leaders of tomorrow.

About Windows Embedded

Windows Embedded extends the power of Windows and the cloud to intelligent systems. Encompassing operating systems, tools, and systems and services, Windows Embedded enables enterprises to generate tangible, real-time benefits with anytime, anywhere access to executable data. Microsoft entered the embedded marketplace over 15 years ago and continues to lead the evolution toward intelligent systems with an extensive suite of technologies for enterprises across a variety of industries. Visit www.unlockintelligence.com for more information.

To learn more visit
www.unlockintelligence.com