KIOSKS ARE HERE—ARE YOU READY?
What You Need to Know to Get Started with Kiosks

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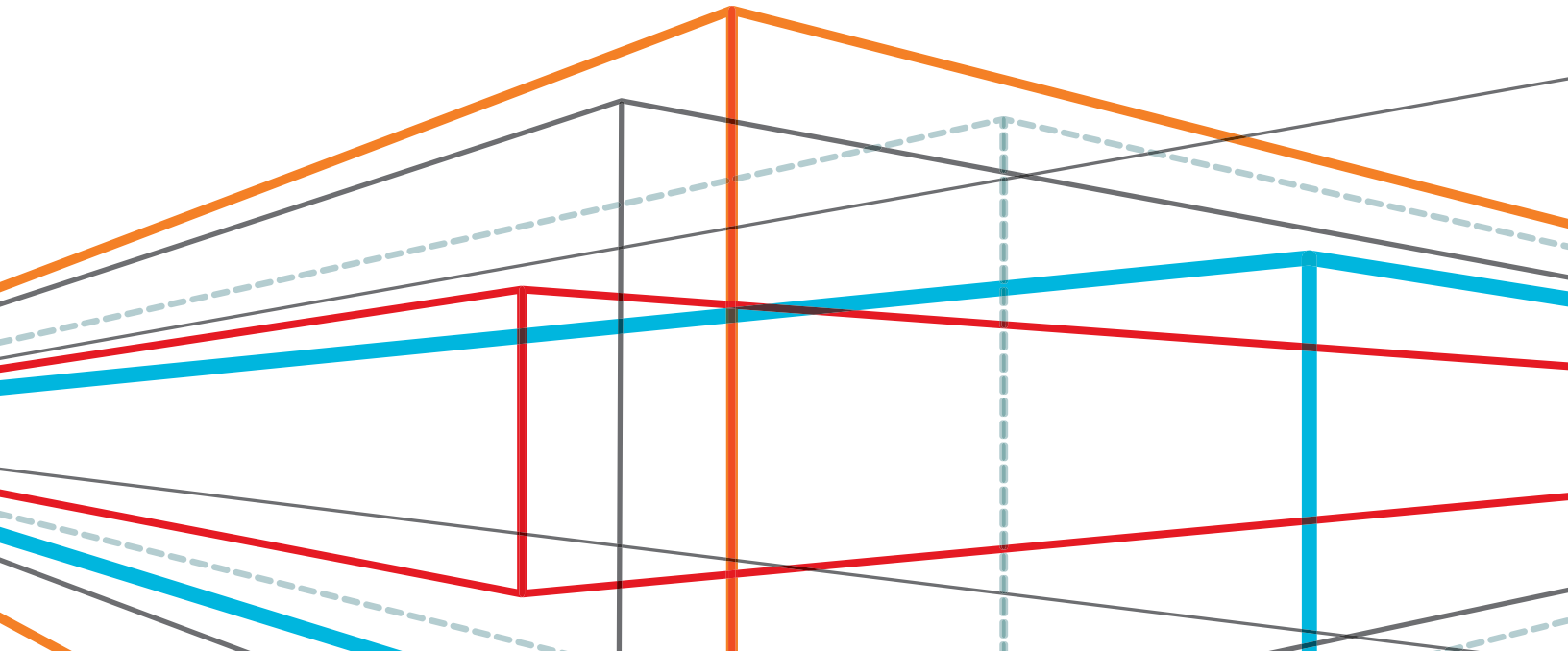


EXECUTIVE SUMMARY

For several years running there have been an average of more than 125 new self-service kiosks installed every day in North America, according to some estimates. Retailers who for years wondered if kiosks were right for their operations are increasingly answering yes. Why is a new kiosk coming online approximately every 11 minutes? Because kiosks have proven to be highly effective tools for making customers happy and improving operations—88 percent of best-in-class operators improved customer satisfaction with kiosk systems, 63 percent improved customer conversion, and 100 percent reduced labor costs[1]. Overall, retailers who implemented kiosks improved customer satisfaction by an average of 58 percent.

Although overall adoption is growing fast, the process for developing and rolling out kiosk systems for individual retailers is not. It typically takes at least one year for a kiosk project to go from planning to implementation. To maximize value, most kiosk applications should integrate with existing in-store systems. This takes time because kiosk applications and development environments are often very different from legacy retail applications and require different skill sets to develop.

There are also different requirements for the kiosk equipment itself. Employees who run point-of-sale (POS) systems and handheld computers receive much more training than the customers who will use kiosks. When a POS problem develops, a store associate is right there to perform troubleshooting or at least alert a manager. In contrast, unless intelligent alert and management functions are built into the kiosk, equipment hiccups at kiosks may go undetected for hours, keeping kiosks out of service and frustrating customers the whole time—the opposite of the intended effect. Reliability and the user interface are crucial to kiosk success.

This white paper highlights some of the leading issues retailers must consider when deciding whether to deploy kiosk systems. It provides an overview of what to expect during the planning and development process, covers the pros and cons of developing kiosk applications in-house or using independent software vendors (ISVs), highlights important design considerations, explains how component features relate to reliability, and identifies the resources and skill sets needed to develop, integrate and maintain kiosk systems.

ONE SIZE DOES NOT FIT ALL

Kiosk solutions are increasingly common, but they are almost always custom. Retailers rarely have the luxury of buying an off-the-shelf kiosk application. A major reason is because the kiosk design, user interface and application must all be carefully developed to support specific business goals. Kiosks can be used to improve customer convenience, drive incremental sales increases or reduce labor requirements, but a single system is seldom called upon to do all these things.

Sometimes the most targeted kiosk solutions are the most effective. For example, Zebra Technologies worked with a client that wanted to improve its coupon use rate, which fluctuated between 0.5 and 1.0 percent. The customer was very clear about what it wanted to accomplish, and the kiosk system was designed accordingly. The client worked with a kiosk developer highly experienced in the retail segment, who was able to successfully integrate the kiosk application with the retailer's existing loyalty program. The result: Coupon use rates increased to more than 7 percent, which was successful in its own right and also contributed strongly to the retailer's other customer loyalty initiatives.

In many projects, organizations either do not have the specialized development and integration skills to develop kiosk systems or are unwilling to tie up their own IT staff on the project. Ongoing application

[1] "Killer Kiosks: Reinventing the Customer" Aberdeen Group, July 2007.

support and development are lesser concerns because kiosk solutions tend to be very stable after they are implemented and do not usually require frequent updates and programming changes.

When kiosk initiatives are considered, some of the first and most important questions organizations must answer to determine their readiness are:

- Who will design and write the application?
- Can existing systems for customer loyalty, POS, inventory management, etc., integrate with a new, third-party kiosk system?
- Who will design and build the kiosks?
- Who will be responsible for tech support, software maintenance and hardware repairs?
- How will kiosks be promoted to customers?
- What will we do to train customers and encourage adoption?
- How much time and resources will be required to train staff on the kiosks?
- Will there be staff or union resistance to implementing kiosks?
- What do we need to do to get employee buy-in?
- How much staff time will be needed for routine maintenance and troubleshooting?

The answers to these questions will go a long way towards determining a retailer's readiness to undertake a kiosk initiative. The following sections provide insight into these topics to help retailers develop their own appropriate strategies for developing, deploying and maintaining kiosk solutions.

DEVELOPMENT CONSIDERATIONS

When determining development needs and capabilities, it is helpful to break the project into three categories:

- Software development and integration
- Hardware design, including component selection
- Daily operational requirements plus regular maintenance and support

In practice, retailers usually customize the software for their kiosk application. Off-the-shelf software is only used in about one out of five kiosk projects, and even then it is often customized, according to 2008 research[2]. Large companies are more likely to handle development in house, but even large firms frequently use ISVs because of the time and expertise required. Integration necessarily involves in-house personnel, but outside firms can do much of the work. Kiosk design and construction is almost always contracted to an outside provider. There is more variation in how maintenance and application support responsibilities are handled. Software and hardware support can each be contracted separately. As with the initial development, companies are more likely to contract for hardware maintenance. Software maintenance and additional application is also often contracted to the ISV, but it is not uncommon for retailers to bring these activities in-house after the initial application development and deployment.

Software

The application itself plays the biggest role in determining the success of a kiosk initiative. As noted, customers typically receive minimal instruction on how to use a kiosk system—with the guidance often coming from the kiosk itself—so the interface must be very intuitive and appeal to users with a broad range of computer skills.

It is much easier to develop effective, easy-to-use applications when there are clear goals driving the kiosk initiative. Kiosk ISVs tend to specialize in the field and are not IT generalists. They excel at identifying the features, transaction options, screen designs, multimedia features and user input options that support specific business objectives, such as improving revenue by increasing complementary-item sales, reducing average wait times through self-checkout options, brand enhancement, driving Web traffic, improving staff productivity, or capturing more customer information through opt-in promotions. All these can be done with kiosks, but that does not mean they all should be done in every kiosk solution.

[2] "Kiosks and Interactive Technology, Seventh Edition." Summit Research Associates, 2008.

Experience also helps prevent kiosks from becoming islands of automation that leave IT staffers with a standalone, proprietary system to support. Kiosk software development requires specific talents for graphic user interface (GUI) and transaction development, but the kiosk system should still support the back-office systems and corporate IT standards to which it will be integrated. Kiosk applications can be created with common and familiar application development tools, so there should be no fundamental obstacles to integrating kiosk and back-office systems. An effective approach for retailers is to use an ISV to develop the customer-facing kiosk application and to work collaboratively for integration with legacy enterprise systems.

Kiosks are often networked (either by cable or wireless) and many applications are Web-based, which enables centralized management and synchronization between central information systems and remote kiosks. IT staffs will probably possess the skills needed to support networked and Web-based systems, but companies should take care to ensure the kiosk can support remote management for hardware and software maintenance and troubleshooting.

As with any retail system, security is a concern. Kiosk network connections and Web access provide entry points for hackers. Kiosks must support enterprise security standards and are subject to PCI regulations.

Kiosk software must meet all these requirements, but above all it has to be reliable. Kiosks are usually used so customers do not need to work with a store associate to complete transactions or get the information they want. That means there is no store associate standing ready to resolve any problems that may arise with the kiosk. Improving customer satisfaction is the top driver for new kiosk applications. Customers will not be satisfied if the kiosk crashes or runs so slowly that it does not save time or improve convenience. Software is an important component to providing reliability, but the kiosk design and components used are the most important factors.

Kiosk Design and Component Selection

Retailers rarely design and build their own kiosks. Instead, they provide input on the desired functionality and aesthetics to specialized developers to design a product that optimizes performance, power usage, space efficiency and reliability. Each project calls for its own blend of kiosk form and function.

Kiosks do, however, make use of commercially available components, principally displays and printers. Reliability and proven success in the kiosk environment should be the guiding factors when evaluating and specifying these components. Solution providers typically make recommendations or have preferred vendors and products they work with, and there is often an ample range of choices within a component vendor's product family.

The typical consumer may think there are only two types of kiosk displays: touch screen and display only. These are the general categories, but there are numerous technology variations and product options within them. Displays vary in their resolution, expected lifespan, sensitivity to touch, allowable temperature range, power requirements, resistance to scratching and cracking, readability in different lighting conditions, viewing angles, and many other variables.

Printers provide perhaps the most features, options and performance capabilities to choose from. Printer design and features contribute directly to reliability and support requirements. For example, the larger the media capacity, the less often paper has to be replaced, which reduces the chances that a customer will be inconvenienced because the kiosk is out of paper. Larger media capacities also promote better labor efficiency because less staff time is required to load media. Kiosks and printers that are designed to provide easy access for media loading enable more labor efficiency than models that take longer to service.

Decisions made during the design process will impact the time and effort required for successful ongoing operation. Media capacity is just one of many easily overlooked design considerations that contribute to reliability and efficiency. These factors are explored in more depth in the following section.

ONGOING OPERATIONAL CONSIDERATIONS

Until now, this paper has given readers a sense of what they will need to consider to develop a kiosk solution. This section sets the expectations for support and maintaining reliability after the system is in place. As with development, both hardware and software maintenance can be outsourced or handled in house. However, routine maintenance is unavoidable—paper needs to be changed, screens need to be cleaned, and store associates cannot wait for outside service providers every time they are faced with questions from customers.

Other than occasional screen cleaning, in-store staff will not need to service kiosk displays to support operations. Most staff interactions with the kiosk will be with the printer, so it is important to look more closely at printer performance characteristics and features.

Direct thermal is the dominant print technology used in kiosks and other unattended printing operations because it is extremely reliable. Direct thermal printers require no moving parts to create an image. They do not use toner or ribbons, and thus do not experience the ink spills or ribbon jams and tears that cause downtime. Direct thermal printers print by applying heat to coated paper, which turns dark where the heat is applied. Paper is the only consumable, so thermal printers are restocked much less often than printers that also require ink cartridges to be replenished.

Loading paper is not the most productive use of store associates' time, but it is necessary. However, checking printers only to find they do not need more paper is an unnecessary waste of time. Unattended kiosk printers should have the ability to send an alert that paper is running low so they can be managed proactively to minimize unplanned downtime. Management features for networked printers enable the devices to automatically send messages to pagers, cell phones or e-mail addresses. This functionality is typically used to communicate low paper or paper jam alerts to store associates and managers. Some printers have more sophisticated remote management capabilities so IT support personnel can troubleshoot printers, load new label and receipt formats, change settings, update wireless security and install new software from their desktops without touching the printer.

All printers are susceptible to paper jams, but there are features available to reduce the risk. For example, many paper jams occur when customers try to pull out receipts that are still printing. Printers that do not present the paper to the customer until the printing is finished, or automatically cut the printed output, eliminate this risk. Printers can also include pull sensors that adjust the media tension in response to tugs and tears to reduce stress on components.

These are just a few examples of how component features impact kiosk performance, total cost of ownership and the customer experience. They also illustrate some of the numerous details that need to be considered when planning kiosk projects.

CONCLUSION

Kiosks are used to improve customer satisfaction or to improve staff productivity and reduce operating costs, so during the development process retailers must do all they can to optimize the user friendliness, reliability and total cost of ownership of their kiosks. Doing so requires careful consideration of myriad details and decisions and frequently involves working with specialized solution providers. This paper provides the background needed to begin discussions with kiosk developers.

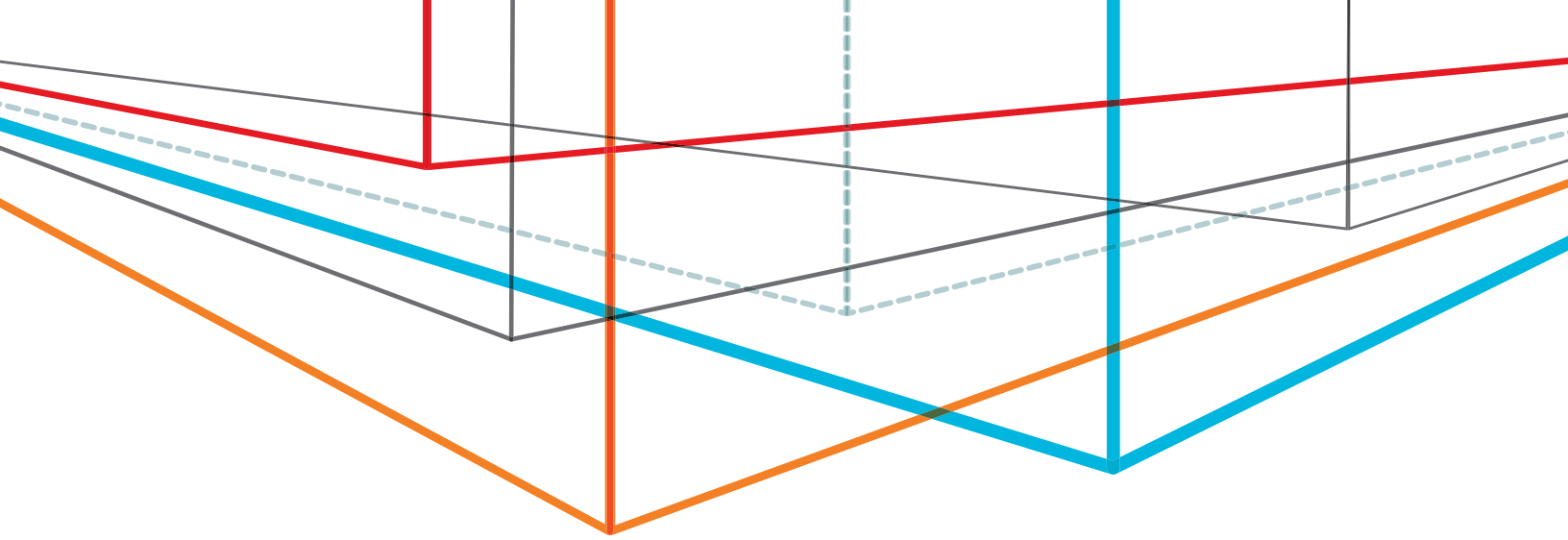
Kiosk projects can be challenging, but many retailers have met the challenge—several new kiosks likely came online in the time it has taken to review this white paper. These retailers prepared themselves to enhance their operations with kiosks, and they are enjoying improved customer satisfaction, higher sales and lower costs because of it. Usage data shows that customers are more ready and willing to use kiosks than ever before, so retailers should be too.

Zebra Technologies and its channel partners work with customers to develop kiosk solutions that meet their specific business goals and performance requirements. Zebra® printers are inside thousands of kiosks used worldwide for retail, hospitality, ticketing, ordering and other applications. Zebra kiosk receipt and ticket printers are built for tough printing environments where reliability, durability, minimal maintenance and ease of use are critical.

A global leader respected for innovation and reliability, Zebra offers technologies that illuminate organizations' operational events involving their assets, people and transactions, allowing them to see opportunities to create new value. We call it the Visible Value Chain.

Zebra's extensive portfolio of marking and printing technologies, including barcode, RFID, GPS and sensoring, turns the physical into the digital to give operational events a virtual voice. This enables organizations to know in real-time the location, condition, timing and accuracy of the events occurring throughout their value chain. Once the events are seen, organizations can create new value from what is already there.

For more information about Zebra's solutions, visit www.zebra.com.



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