In today’s highly competitive restaurant industry, seamless adoption of new technology is essential to lowering costs and boosting productivity. Restaurants of all types and sizes are seeking ways to increase the volume of transactions, acquire more customers, and enhance efficiency. On top of these challenges, restaurants need to increase the speed and quality of service in order to foster guest loyalty.

Each part of the guest experience is critical. The sooner a staff member can make first contact, the better the customer will feel about the engagement. The quicker an order can be accurately communicated to the kitchen, the faster the customer’s food will be ready. Also, the better informed employees are about menu updates, specials, and availability changes, the smoother the customer experience will be.

Oracle MICROS, Microsoft, and Intel have put together the ingredients for successfully meeting these challenges, using the right combination of point-of-sale (POS) software, operating system, tablets, and processors. The resulting solution, featuring MICROS Simphony® 2.x, empowers employees to improve the guest experience and gives food and beverage operations a competitive edge, whether they have just a few locations or hundreds. This guide briefly walks the reader through the “why” and “how” of the solution, including business advantages, hardware and software considerations, and deployment.
Elevating the engagement

The need to increase efficiency while enhancing the customer experience becomes increasingly crucial as a business grows. For example, at quick-service restaurants, growing popularity can lead to longer queues as walk-up customers stand in line to place their orders. At full-service restaurants, overall wait times can increase to the point of customer frustration during peak hours, putting an operation’s reputation at risk. Quality and consistency are essential to maintaining brand value as a business expands.

For example, wait staffs often face challenges in order-taking and customer/table management. As lines grow longer and dining rooms become busier, employees often have difficulty balancing time pressures with the need to engage customers in a welcoming manner, provide information about menu items, make suggestions, and otherwise contribute to a positive experience. Managers may have difficulty in rapidly shifting staff to cover the busiest areas.

In addition, time is lost and customers form negative impressions when staff members are forced to return to the table because an ordered item is no longer available. Staff must have up-to-the-minute information about shortages so they can make alternative suggestions. Communication between wait staff and the kitchen can also suffer due to time pressures, resulting in mistakes and incorrect orders.
To address these challenges, restaurants need to take the customer experience to a new level, increasing order accuracy and untethering technology so it can be used flexibly at the point of service. With the right technology, as shown in Figure 1, staff members can be free to move where they are needed for table service or in-store line busting, taking orders and accurately transmitting them back to the kitchen or order counter. Attendants can move outside for patio service or a catered event, and even take orders from drive-through customers waiting in line during peak hours. Technology can also help staff better engage the customer and stay informed of the latest menu changes.

![Figure 1. Application of mobile point-of-sale in a restaurant](image-url)
Deploying the right POS solution is the key to meeting efficiency and customer experience challenges. Organizations can transform the customer experience by leveraging the MICROS Simphony 2.x POS solution with mTablets* (E-Series) at tables, counters, or drive-through windows. Wireless connectivity through Wi-Fi allows employees to substantially increase their productivity. Adopting a software-as-a-service (SaaS) model eliminates the costs of adding, maintaining, and supporting new POS application servers to accommodate geographical expansion.

Restaurants can now reduce customer wait times, increase employee productivity, and support business growth with a next-generation solution that blends the mobility of tablets with all the enterprise-grade capabilities offered by MICROS POS software.

This solution gives users the simple, lightweight device they want, while providing the security and manageability IT professionals need. Even for restaurants that have an older MICROS POS system in place, upgrading to the latest software and tablets provides a powerful new tool not available with previous technology.

The MICROS Simphony software and Windows* powered mTablet are easy to use, making the order process go faster. Employees appreciate the Windows touch-screen interface as they have become accustomed to touch technology from their personal mobile devices. At the same time, the MICROS Simphony cloud delivery model provides access to the enterprise architecture and manageability required for efficient multi-unit operations.
As shown in Figure 2, MICROS provides an end-to-end solution at the restaurant location, with various mTablets (E-Series) connected to the MICROS cloud via a local network. Mobile devices include small 8-inch mTablets for the wait staff and larger 11-inch base-mounted mTablets for workers with assigned stations but who also benefit from occasional mobility. All systems remain connected to a local server for device management while the MICROS cloud can simultaneously serve additional restaurant locations.

Figure 2. MICROS end-to-end POS solution
MICROS Simphony 2.x
MICROS Simphony 2.x is the premier enterprise-enabled POS solution featuring unprecedented customer engagement capabilities and mobile and web-based management and reporting. Flexible and scalable, this cloud-based solution can grow as a business develops, supporting thousands of tablets and providing a single solution with vast integration capabilities.

MICROS mTablet E-Series
Ideal for running Simphony 2.x, the MICROS mTablet E-Series is lightweight and versatile, offering a bright 8- or 11-inch HD liquid crystal display that showcases the modern look and feel of Windows 8.1 “live tiles” and fully customized restaurant content. The 11-inch version with optional MICROS mStation* base is shown in Figure 3.

Microsoft Windows Embedded 8.1 Industry
Windows Embedded 8.1 Industry* edition provides a highly efficient platform for MICROS POS with a compelling user interface, powerful application support, security, and manageability. In addition to the full capabilities of Windows 8.1, Windows Embedded 8.1 Industry offers increased flexibility and enhanced lockdown capabilities.

Intel® Atom™ processor
Designed specifically for the latest Windows 8.1 tablets, the Intel® Atom™ processor Z3700 Series delivers excellent performance with four processing cores and Intel® HD Graphics with Intel® Clear Video HD Technology. The energy-efficient system-on-chip (SoC) design helps conserve battery power and enables thin and light designs.
Tables in service

As described earlier, the mTablet E-Series is available in two form factors. The 8-inch model provides an on-the-go system for table wait staff, in a size that can be carried in an apron, jacket, or pants pocket. Because the tablets must have a continuous connection through Wi-Fi, conserving battery life while delivering all-day performance is a challenge. Each tablet must last through one or more work shifts. The Intel Atom processor enables the ultra-mobile form factor and long battery life of the mTablet and delivers the responsiveness required by a graphic-intensive, modern mobile POS system. Performance is crucial in this use case as the waiter or waitress should be able to quickly present menu highlights to clientele and enter the order faster than writing it by hand. The tablet must process the data in real time and upload to the cloud for instant presentation to the kitchen staff.

The 11-inch version of the mTablet doubles as both a mobile platform when needed and as a stationary POS system using the MICROS mStation base. Used on the go, the larger screen allows workers to share and discuss any aspect of the workflow with a manager or co-worker. The same Intel Atom processor used in the 8-inch device keeps the 11-inch version thin and light as well. While the 11-inch version consumes more power with a larger screen, it also has a larger battery. In base mode, the 11-inch mTablet enables hands-free data look-ups or one-hand interaction, such as wait staff updating an order on the fly while carrying food or drink, or kitchen staff analyzing an order while cooking. The mStation base also permits operators to connect peripheral devices such as cash drawers and customer-facing displays. This means the mounted tablet can also function in a host station or payment station.

The number of tablets required per restaurant depends on staff size. For example, an average table service restaurant might have two 11-inch mTablets with mStations, one on the floor and one in the kitchen, plus a dozen 8-inch mTablets for customer-facing wait staff and managers. MICROS can work with each individual restaurant to define the right hardware mix.

The Intel Atom processor enables ultra-mobile form factors and long battery life.
MICROS also provides card-swiping payment sleeves for both the 8- and 11-inch tablets. The sleeves fit into cradles in the MICROS mTablet charging station with space to simultaneously recharge up to 16 mobile tablets at a time. Unlike chargers that depend on easily damaged pins, the MICROS charging bay holds the tablets using a robust cradle design that doesn’t require any wires to be connected to the tablets. There is no need for the restaurant to manage multiple power adapters and USB cords.

Protecting business information and meeting Payment Card Industry Data Security Standard (PCI-DSS) requirements are essential for POS. These systems are PCI-DSS certified and ready for point-to-point encryption with tokenization or Europay®, MasterCard®, and Visa® (EMV). Hardware-enhanced Intel® security technologies, such as Intel® Platform Trust Technology, come together with Windows and Simphony to offer robust enterprise protection.

Connectivity is also paramount in this use case, but many restaurants already have Wi-Fi in place. MICROS experts can survey restaurant sites to ensure proper coverage and configuration. To accommodate increased wireless traffic, MICROS may recommend setting up a closed Wi-Fi network for employees and a public Wi-Fi network intended for customer use.

MICROS provides payment sleeves and charging stations for the mTablet E-Series.
**MICROS Simphony 2.x**

No longer are POS systems just for ringing up sales. The MICROS Simphony 2.x point-of-sale application provides unprecedented image quality and functionality in a POS system, empowering wait staff at each step of the customer engagement. This empowerment is enabled through the new Engagement Feature, which provides visually stimulating app experiences and advanced capabilities such as customizable “tiles” to help inform diners and sell food items. For example, attendants can delight customers with appealing on-screen photos of featured items and specials before taking their order, as seen in Figure 4.

![Figure 4. MICROS Simphony 2.x Engagement Feature](Image)
The attractive interface can be used to present not only menu selections, but other information likely to be of value to customers—such as the day’s weather forecast or nearby visitor attractions. Employees can get around easily on the tablet with a simple swipe or tap on the touch screen. Logical, efficient screen flows take the employee swiftly through the ordering and payment process (see User Experience on page 13). MICROS can customize the interface with the restaurant’s name, logo and color palette.

As an order is submitted with the touch of a button on the tablet screen, the item shows up automatically on the kitchen display. Table management information is also updated automatically for the seating staff. Sales information is updated in real time and is continuously available to managers. In addition to empowering workers, MICROS Simphony also empowers management with a suite of store-level and above-store tools (see the Solution Alternatives section on page 18).

The restaurant business does not need to worry about maintaining the Simphony 2.x application or investing in new application server infrastructure as the business grows. Simphony is delivered to the restaurant on a SaaS basis from the MICROS cloud, and any patches or fixes are quickly completed by MICROS. For example, menu items can be updated and then the system can be locked to ensure the changes stay in place.

Highly scalable, Simphony 2.x can be used for just a few sites or thousands—across time zones or even continents—and with a vast number of certified interfaces to third-party products, best-in-class connectivity of systems is assured. Resiliency built into the MICROS Simphony software allows seamless continuation of business operations in the event of a network failure.
Microsoft Windows for Mobile POS
Windows Embedded 8.1 Industry is foundational to the mTablet/Simphony POS solution. First, the Windows 8.1 “live tile” user interface was highly leveraged in the design of the Simphony Engagement Feature. Second, the embedded version of Windows is more secure, with the ability to lock down the OS, resulting in safe and predictable workflow functions. Managers can create rules to allow or deny applications from running and specify which users can run specific applications. Also, Microsoft Windows Embedded 8.1 Industry allows the longest supported life cycle of any Microsoft operating system, providing stability and helping reduce IT costs.

Finally, Windows Embedded 8.1 Industry delivers all the compatibility and manageability advantages of a standard PC. Any application that runs in a Windows environment can run on the tablets. For example, if the business uses Microsoft Exchange*, the tablets can be configured so employees see their corporate email at the start of their shift. Businesses can use standard x86-based antivirus and anti-malware solutions for enterprise security. Wait staff can also access key Internet sites to uplift the engagement, such as pulling up the web site of a nearby theatre to verify start times and assure diners they will have their meal in time to make the show. The PC compatibility story also extends to hardware such as printers, scanners, and card readers as Windows Embedded also includes robust driver support for PC peripherals.

Windows Embedded 8.1 Industry allows mTablets to easily integrate into the restaurant’s existing IT infrastructure alongside Windows PCs and servers. The tablets can be remotely managed with any number of off-the-shelf tools to conduct Windows updates, data backups, and more. For example, tablets can be joined to an existing Microsoft Active Directory* domain and managed with Active Directory group policies just like regular IT assets. In all, this version of Microsoft Windows makes the mTablet easy to manage and deploy while delivering a common experience across various devices within the restaurant environment.
Helping food servers work better and faster

Using the MICROS Simphony 2.x interface, restaurant employees can increase their productivity and stay connected to the tasks that comprise their workday. The customizable Simphony workflow is designed to move employees intuitively from one step of the ordering process to the next.

For example, a waiter taking drink orders would tap on the bar menu, seeing a series of drink category buttons on the right side of the screen. Tapping on a category button brings up more detail. For example, if an attendant taps “Red Wine,” the names of all red wine selections offered by the restaurant are displayed as shown in Figure 5. All other drink categories would work the same way.

![Simphony screen displaying red wine selections](image-url)
Selecting the “Food” tab at the top brings up right-side navigation with buttons for dining room categories—including appetizers, soups, salads, entrees, desserts, and daily specials—each with its own next level of detailed options and all items one tap away from order placement. Each tap of a menu item consequently adds the item and its cost to the running total as shown in Figure 6. Simphony then sends the order to the bar and kitchen consoles while the waiter keeps the check open until ordering is completed.

![Simphony screen with food categories and running total](image)

**Figure 6.** Simphony screen with food categories and running total
Finally, Simphony can integrate multiple payment options—including cash, services such as PayPal*, and credit cards—that function in concert with the payment sleeve described earlier. A finalized transaction example is shown in Figure 7. The entire Simphony order process is marked by accuracy and speed and results in a better experience for both the waiter and the customer.

**Figure 7.** Simphony screen showing credit card transaction
Comprehensive deployment services

MICROS provides complete services for helping organizations deploy and customize Simphony 2.x and integrate it into a restaurant or any food and beverage environment. With MICROS hosting Simphony 2.x from the cloud, on-site infrastructure and maintenance are reduced. The cloud delivery model also simplifies adding new functionality after the initial installation.

Deployment of a fully hosted MICROS Simphony solution with the new touch screen mTablets takes approximately two weeks depending on the size of the organization. Milestones for Simphony deployment typically include the following, but can be changed to meet the customer’s needs:

1. **Handoff to project management:** MICROS transitions the deployment from sales to project management, passing along the customer’s goals for enhanced capabilities and innovations ranging from special screen flows to customized reports to menu management.

2. **Site survey:** The MICROS team performs data and information collection using a site survey, resulting in a tactical overview of the restaurant site and installation requirements. Survey information includes:
   - Installed customer server and network infrastructure
   - Wired and wireless infrastructure requirements
   - Number of restaurants, POS stations, and tablets
   - Logistics and training schedule

3. **Configuration:** The MICROS team builds the Engagement Feature screen flow based on the restaurant’s menu information and previous conversations.

MICROS specialists perform all of the administrative work needed for system configuration, and input the restaurant’s data manually to provide maximum flexibility in meeting each customer’s specific needs. Once data is on the MICROS cloud, it feeds each tablet. The restaurant IT team does not need to input data or write any code at this stage. For future reference, the user interface is customizable using off-the-shelf third-party application programming interfaces (APIs) such as Microsoft Silverlight*.
4. **Validation:** MICROS and customer staff interact to check the work, ensuring it meets the customer’s expectations.

5. **Implementation:** Hardware and software property-level implementation and integration are performed in conjunction with the restaurant IT team, and a pre-production evaluation is conducted before the implementation goes into the cloud-based production database.

   Depending on their in-house resources and experience, customers are encouraged to take as big a role as they would like at this stage, and MICROS works with the restaurant IT team to transfer knowledge and help them become self-sufficient as early as possible.

6. **Staff training:** Restaurant staff training is conducted for food servers and site managers before the solution goes live so they can be comfortable and confident with their new capabilities.

7. **“Go live” execution:** This milestone can include dismantling an older system or swapping out one solution for another, and is typically performed late at night or early in the morning to avoid disrupting restaurant operations.

   The restaurant has complete control of the solution once it is deployed.
**Executive Summary**

**Use Case**

**Proposed Solution**

**Featured Products**

**Hardware Considerations**

**Software Considerations**

**User Experience**

**Solution Deployment**

**Solution Alternatives**

**Business Advantage**

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**Restaurant Manager Tablet**

The Simphony solution empowers not only the food server but also the restaurant owner or manager. Integrated front-office, back-office, and web-based solutions are designed to optimize and streamline workflows, improve customer service, and increase the bottom line. A “manager’s hub,” shown in Figure 8, enables authorized personnel to manage restaurant wait lists while tracking and managing such metrics as sales and costs, inventory orders, and labor utilization in real time. It also acts as a hub for security cameras.

The capabilities of the manager’s hub provide business intelligence to corporate, regional, and local store managers, enabling better-informed decisions based on real-time customer and operational insights. Businesses also have the option to build guest loyalty programs with MICROS iCare® support.

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**Figure 8.** MICROS Simphony manager’s hub
Customer Engagement Tablet

For the customer, MICROS tablets running Simphony can be tethered to tables and made available for guests who want to view daily specials, request tablet service, look up movie times, or check sports scores as they wait for staff to engage them or for their food to arrive. Figure 9 shows a screen shot of a customer engagement tablet. The return on investment for putting a tablet at every dining room table can be measured in guest satisfaction, repeat visits, and personal recommendations.

Figure 9. Customer engagement tablet
**Scaling to the broader hospitality industry**

The MICROS Simphony solution is a great fit for any hospitality environment where a service-oriented organization desires to improve operational efficiency and customer engagement by modernizing its workforce. The food and beverage category extends beyond restaurants and into bars, sports arenas, events, and conferences. However, MICROS Simphony can also be modified to support any menu-driven service model, not just food and beverage. Examples include hotel management, amusement parks, and cruise ships, where the mTablet can be used to manage room reservations, event scheduling, mobile transactions for entertainment add-ons, and so forth. MICROS is ready to support customers in designing a hospitality solution for any business.

**Alternative solutions from MICROS**

For customers who want to locally manage their own client-server infrastructure, MICROS offers Simphony 1.x. In addition, restaurants with existing MICROS RES3700* POS systems already in use at their locations can augment their system capabilities and add new mobile capacities with Simphony and mTablets.

MICROS is ready to support customers in designing a hospitality solution for any business.
Delivering on the mobile POS promise

For the first time in the hospitality industry, a collaboration of technology led by Oracle MICROS makes it possible to introduce the right form factor, battery life, and full-featured user interface on a single mobile device optimized for the food and beverage industry.

Key business benefits include:

- **An immersive user experience.** A familiar, intuitive, and interactive device experience through user-friendly applications, a fast Intel® processor, and touch-enabled interactions speed service and elevate the customer engagement.

- **Increased competitive edge.** Increased employee mobility and enhanced POS capabilities can reduce wait times by 30 to 40 percent for customers to receive their food, boosting sales, giving the business a competitive edge, and enabling the business to expand with confidence.¹

- **Streamlined processes.** By moving to touch screens and electronic documents for processes ranging from ordering and payment to menu and table management, the company can reduce costs and increase profitability.
For more information

To learn more about MICROS and this solution, visit:
www.micros.com
www.mtablet.micros.com

For more about Windows 8.1 Embedded, visit:
www.microsoft.com/windowsembedded

To learn more about Intel Atom processors, visit:
www.intel.com/content/www/us/enprocessors