

The Value of Interactive Kiosks for Your Business

Various types of interactive kiosks have been emerging all over the place lately, from the airport to the post office to restaurants. While some people still have no idea how to use self-service terminals and try to avoid them, numerous businesses are leveraging interactive technology based on embedded software development in order to establish effective digital communication with their customers.

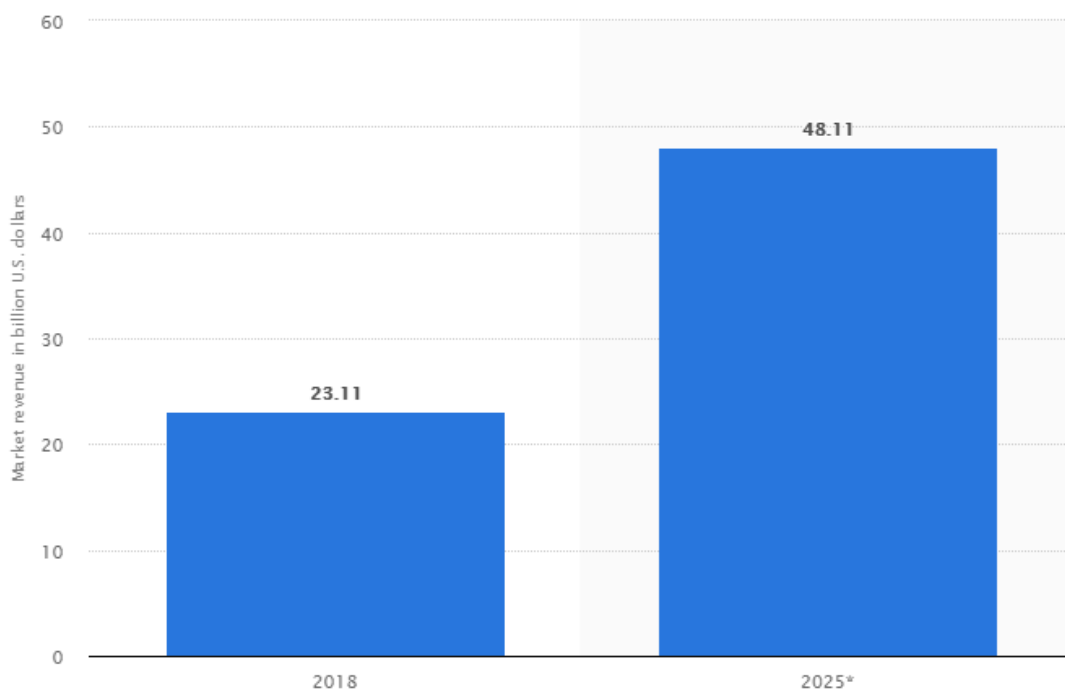
In this article, we've compiled comprehensive information about info-kiosks and self-service systems for you to better understand their functionality, development processes and benefits for companies and users.

Interactive Kiosk Definition

An interactive kiosk is a hardware device with specialized integrated software and an intuitive interface that provides engaging information and enables users to conduct certain transactions. The core feature of such a solution is self-service, meaning that users get the necessary information, product or service whenever they want and independently of others.

The infographic by Statista depicts the size of the global interactive kiosk market, comparing the situation in 2018 and with the prediction for 2025. We can see that the revenue is likely to double during this period, from \$23 billion to \$48 billion, which proves the great potential

Interactive kiosk market revenue worldwide in 2018 and 2025 (in billion US dollars)



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Functions of Interactive Kiosks

People hate queuing, as it basically is a waste of time, but they are forced to stand in lines in various organizations quite often because of the necessity to perform certain activities. For this reason, self-service solutions have been introduced as great time-savers.

Being highly customizable, digital kiosks can act as remote representatives of companies in various sectors, replacing a range of services that are traditionally carried out manually.

Touch-screen kiosks perform the following functions:

- Making payments (via card or cash)
- Providing help information
- Placing orders
- Buying retail goods
- Printing
- Wayfinding
- Advertising
- Providing internet access

Such machines are incredibly helpful for customers and beneficial for companies, especially

Types of Interactive Kiosks

Touch-screen terminals are categorized into five groups depending on their functions.

1. Self-Service Kiosks

Machines belonging to this category enable users to do tasks that are traditionally performed by staff workers. They help users save time by skipping counters. The most popular examples are:

- **Self-service payment terminals** for paying bills and completing other banking transactions
- **Point-of-sale (POS) terminals** at retail locations to pay for purchases
- **Vending machines** where you can buy some goods, e.g. beverages or snacks
- **Self-ticketing machines** for choosing and printing tickets to events
- **Self-ordering machines** for placing orders at restaurants
- **Automated check-ins** to complete boarding procedures, e.g. at the airport
- **Car rental kiosks** to quickly and easily rent a vehicle
- **Online queue systems** for real-time control and management of queues in hospitals, banks, post offices and other organizations

2. Information Kiosks

The main mission of such machines is giving accurate and concise information regarding products and services. The most popular locations for placing information kiosks are:

- **Shopping centers** – to navigate visitors around the stores and promote goods
- **Museums and exhibitions** – to offer visitors to watch videos and presentations about exhibits
- **Healthcare organizations** – to provide information on services, prices, doctors' schedules
- **Government organizations** – to provide information concerning laws, documents, incentives

User experience is crucial for developing high-quality information kiosks, so it's important to create an intuitive user interface and thoroughly prepare content for info-kiosks.

3. Digital Signage

A digital advertising screen is another name for digital signage, and it's all about the promotion of goods and services. The main purpose of such displays is to draw the attention of passersby.

Digital signage systems can be both passive, simply displaying ads, and interactive, allowing users to engage with them. There are advanced modules (including those based on artificial intelligence techniques) that can be integrated with digital screens, adding interesting features to them, for instance:

- The ability to share information from screen to mobile device
- Sharing the internet with users standing near the display, thus attracting larger audiences that can see the content
- Gathering statistical data, e.g. the gender and age of users that pass in front of the screen the amount of time they look at the screen, the busiest time of the day. This data helps companies measure the effectiveness of advertising on digital screens.
- Delivering personalized content depending on the audience standing in front of the screen

4. Wayfinding Kiosks

As the name suggests, such kiosks have to do with geo-location and aim at helping people navigate in the field, detect nearby objects and generate all possible routes from point A to point B. They emerged due to the rapid development of wireless networks, satellite infrastructure, the Internet of Things (IoT) and connected devices.

Such a great ecosystem of technologies enables personalized navigation both outdoors along the roads and indoors within large buildings.

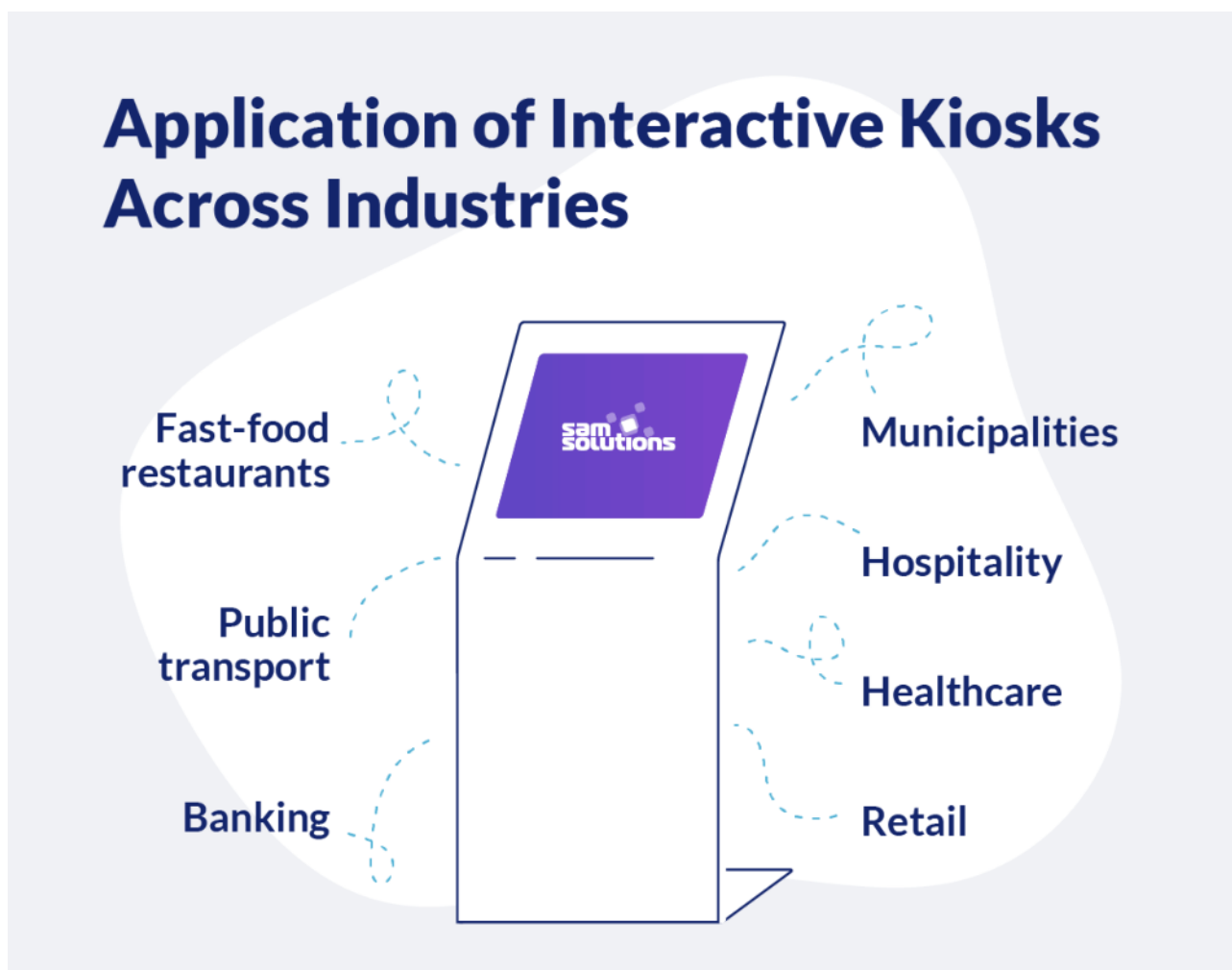
Wayfinding kiosks are integrated with various types of maps and, as a rule, based on 3D modeling.

5. Internet Kiosks

It's obvious that these solutions are used for access to the internet. The service can be either free (in exchange for the customer's mobile number or email that will be used for marketing purposes) or paid (cash or credit cards).

Use Cases Across Industries

Digital kiosks greatly improve customer experience, so companies in nearly every industry can leverage the benefits of these solutions. Here are the top verticals that currently use or actively integrate interactive terminals in their processes.



Healthcare

Interactive terminals are highly popular in hospitals and medical centers for they optimize the interaction between patients and medical staff in a cost-effective way. Via terminals, patients can find the necessary information about services, book an appointment or request a refill, which greatly relieves the workload of administrators and doctors.

In addition, kiosks can help with the orientation in buildings by providing the floor plan (with the ability to print it).

Public Transport

Dozens of terminals are installed in transport hubs – airports, bus and railway stations. The core option they offer for this area is the automation of ticket sales and check-in procedures, which means that a passenger can book a ticket, choose their seat, pay for it in a preferable way and complete the boarding procedure without any assistance.

Banking

Self-service systems are used extensively in financial institutions, offering bank customers to carry out their financial transactions, get printouts and request for a consultation from banking specialists.

Hospitality

At hotels, info-kiosks are big helpers in welcoming visitors from other cities and countries and making their stay comfortable. They offer:

- Quick and easy check-in and check-out
- Precise information about the hotel and the city's infrastructure
- Online booking of services, e.g. car rental

Since hospitality is all about customer satisfaction, self-service kiosks are the best tool for achieving this goal.

Fast-Food Restaurants

The adoption of digital menu boards in quick-service restaurants is overwhelming. What is the reason? Numerous studies prove that modern diners prefer ordering from such boards rather than from cashiers, especially if the line is longer than a couple of people. Visitors hate standing in line, but hungry visitors hate it twice as much. People also say that the availability of an ordering kiosk is among the main criteria for choosing which restaurant to go to. That's why the introduction of kiosks for QSR business owners is the equivalent of staying competitive.

Retail

Interactive terminals in shopping centers serve as a channel for sales, communication and sharing information between sellers and buyers. Their core functions are:

- Informing visitors about special offers and discounts in the stores
- Filtering the stores in the mall according to user criteria (e.g. clothes, food, children's goods)
- Displaying and printing out the map of the shopping center
- Gathering customer feedback

Municipalities

Digital stands and interactive terminals make public information from the authorities available to all residents, including those who don't own a computer or access to the internet. Current news, urban information, instructions on administrative procedures in the form of infographics or video presentations – these types of content can improve the image of the city government and improve their communication with ordinary people.

Digital Kiosk Benefits

Self-service solutions are gaining momentum due to a range of advantages they offer for both users and vendors.

Digital Kiosk Benefits	
For Businesses <ul style="list-style-type: none">• Ability to reach a wider audience• Reduced burden on staff• Increased customer loyalty• Customer insights• Higher revenues	For Customers <ul style="list-style-type: none">• No waiting in the queue• Improved user experience• Saving time• Simplified access to information• Interactive assistance

How to Build an Interactive Kiosk

There are numerous vendors that offer out-of-the-box hardware and software solutions for creating digital interactive kiosks. You can choose the appropriate components, integrate them into one system, configure settings and get your own terminal.

Another option is to develop a custom solution from scratch. It's more complicated, but the output will be perfectly tailored to your business needs. Here is the guide.

1. Concept Development

Before starting a custom project, you should clearly understand the kind of solution you want to get as an output. That's why the initial and the most important step is concept development when you investigate your target audience and decide on the functionality of a future kiosk.

2. Visual Interface Design

Pay special attention to the interface, as it is the fundamental bridge between customers and your company, and poor user experience would lead to failure. To create an intuitive and easy-to-use interface, your UI and UX designers should engage with end-users, presenting them initial sketches, gathering their feedback and developing the final design on the basis of all comments.

3. Hardware

The choice of the hardware should be based on the functionality determined at the concept development stage. There are various providers of frameworks and consoles for info-kiosks on the market now that offer a wide range of components such as:

- QR/barcode scanner
- Printer
- Card reader
- Coin/bill acceptor
- Keyboard
- Video camera
- Motion sensor

For a custom solution, you can combine the needed components in one framework. Find the best interactive kiosk providers of 2019 [here](#).

4. Software

The appropriate application for a kiosk should guarantee the ability to create, update and manage the content remotely. An interactive terminal application can be either cloud-based or deployed on-premise, and may provide the following basic features:

- Internet connection
- Personal data security (authorization, collection and storage of information)
- Touch-screen support
- Restrictions to specific websites
- Usage analysis
- Onsite printing
- Digital signature

As for the technological stack, info-kiosk software can be written for Mac, Windows, Linux, Android and iOS platforms using Java, C#, Python and other programming languages. You may also consider the integration of machine learning algorithms, IoT modules, computer vision and other advanced technologies into your solution for providing extended functionality.

5. Installation

When the integration of hardware and software is completed, it's necessary to conduct a thorough testing process and only then release the product to the public. However, a bug-free interactive terminal is not the only prerequisite for customers to actively use it.

To maximize customer interaction with your solution, it's also highly recommended installing a kiosk in the appropriate location with the high traffic flow of potential users.

6. Support and Maintenance

Deployed self-service solutions require continuous technical support and maintenance. Make sure that hardware and software providers guarantee these services if you want to benefit from your interactive kiosk in the long term.

SaM Solutions' Clients Strive to Improve Customer Experience

Effective digital communication with customers has become one of the key factors in making businesses succeed, which is why self-service digital solutions are on the rise now. Many of our clients are excited about implementing interactive terminals, and our company has already participated as a software provider in several projects connected to virtual kiosk development.

In one case, the customer was challenged to install self-service kiosks in numerous **car rental centers** to help users navigate through offerings, book vehicles and get connected to the support team via built-in voice and video capabilities.

The SaM Solutions team was responsible for developing software with the following capabilities:

- Remote hardware and software monitoring
- Remote firmware updates and software version control
- Content management
- Centralized analytics

Another task was to create a software platform for managing an extensive network of info-kiosks for a group of companies specializing in trade and logistics. The project was based on integrated hardware and software solutions, including the usage of RFID technology, QR/barcode scanners, IP cameras, ticket/receipt printers, proximity sensors and payment terminals.

For catering establishments, our team developed a non-contact electronic payment system that helps speed up service and optimize the process for visitors and employees. The system was based on machine learning and computer vision algorithms and RFID tags.

Key Findings

Digital kiosks allow customers to avoid waiting in long lines, quickly getting products and/or services.

The core value for businesses is improved conversion and increased sales.

Marketing teams can use terminals as additional media resources for advertising purposes.

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