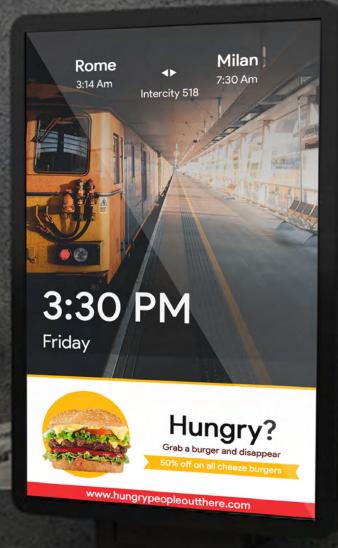
Hexnode Digital Signage Software:

Adding value to your digital signage marketing WHITE PAPER



hexnode

Table of Contents

| Creating digital signage experiences to engage | 1 |
|---|----|
| Why businesses should use digital signages? | 2 |
| Leveraging signages to drive engagement | 3 |
| The solution to delivering timely information anywhere and everywhere | 4 |
| The present and future of the digital signage world is built on Android | 7 |
| Challenges of digital signage management | 7 |
| Hexnode digital signage software | 9 |
| Digital signage: an add on to the kiosk technology | 10 |
| Android digital signage management with Hexnode | 10 |
| What does the future hold? | 12 |
| Bottom line | 13 |

Creating digital experiences to engage

"

"We are moving from a world where computing power was scarce to a place where it now is almost limitless, and where the true scarce commodity is increasingly human attention"

77

- Satya Nadella Chief Executive Officer of Microsoft

In an age of commercial clutter, catching the eyes of customers is becoming progressively difficult as they're more jaded about marketing. Regardless of what kind of business they are involved in, entrepreneurs always need to attract more and more potential customers for their business. Gone are the days when businesses could attain undivided customer attention with just a TV commercial. As businesses came to the realization that the next step in product promotion was digital signages, it marked the beginning of a new era for marketing. The instant adaptability of digital signages gave it a significant attention-grabbing advantage over traditional static signs.

"

"The popularity of digital signages is growing in tandem with technology improvements which makes it a key way to engage, entertain and inform in nearly every place." Digital signages are a great way for businesses to promote themselves and connect with a tech-savvy customer base. The global market for digital signages is booming and is expected to continue growing for several years to come. This surge in digital signages has also underscored a need for solutions that can manage them efficiently and reduce administrative costs associated with their deployment.

Hexnode offers a powerful digital signage solution to help businesses set up, track and secure digital screens throughout their lifecycle. This white paper summarizes key considerations in deploying and managing digital signages, and how Hexnode can help businesses grow with Android-powered digital signage displays.

Why businesses should use digital signages?

Along with the invention of DVDs came the first wave of the digital signage era. DVDs being digital, offered improved benefits over traditional videotapes and retailers switched to DVDs and Blu-ray high-definition disks. Later on, when flat panel displays became more affordable, retailers began to move to the sleeker equipment. Disks were replaced by computer-driven signage players, which is the heart of a digital sign. Content, which was previously been static then became dynamic, centrally controlled and easily updatable.

Once digital signages were introduced, marketing techniques began to improve far beyond displaying an advertisement on a bulky television. Digital signages had a significant impact on attention marketing. The key to grabbing the consumers attention today is to use the right digital signage marketing strategy to bring greater interactivity and personalization to the customer experience.

Leveraging signages to drive engagement



While earlier versions of digital signages were often written off as being too expensive, newer technologies have helped digital signages prove their worth in deeply engaging customers. Signages distributed across multiple locations now take advantage of a centrally controlled platform for device management and timely distribution of content. The major driving factors contributing to the growth of the digital signage market include:

- Affordability: Originally, the pricing model and the operational costs for digital signages were hard to bear for small and medium businesses, but as the industry evolved, innovations drove down the cost. As new management approaches took shape, and older technology components gave way to smarter technology, the huge upfront costs came down significantly.
- Technological improvements: Digital signages offer businesses a more flexible tool to display custom content on video walls, menu boards, touch screens, and interactive kiosks. The hardware is less complex and the software easy to handle.

- Pinpoint promotions: With digital signages, businesses have versatile options to make sure that the targeted customers are getting the right message from the right location and at the right time. The ability to change the display content dynamically helps in tailoring digital signage marketing to the audience's tastes.
- Improved customer experience: Anywhere and everywhere, digital signages are used to provide demonstrations, promotional videos, enabling online shopping and disseminating information to viewers. More importantly, customers have better access to information at the point of decision.
- Influencing buying decision: Takes on an integrated seller-buyer communication strategy by displaying marketing messages persuading customers via discounts and offers.

The solution to delivering timely information anywhere and everywhere



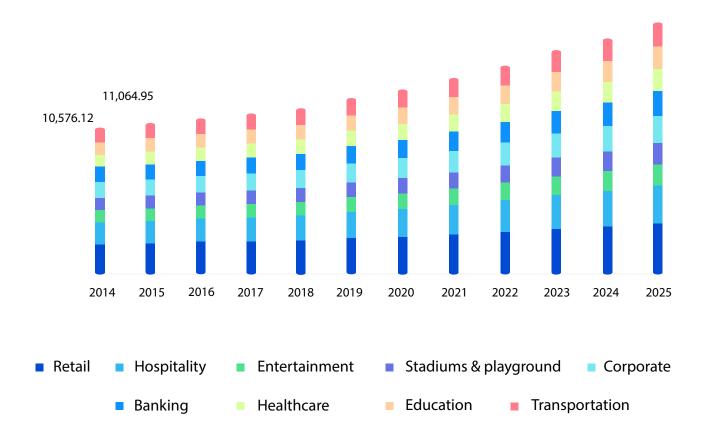
Communication through digital signage is one of the most cutting-edge strategies for marketing in various sectors in our modern technology

landscape. Digital signages have a variety of applications as public displays, commercial displays, and corporate displays. Digital signages are the perfect tools to enrich the in-store experience and drive sales for any business. Today we can find digital signages just about everywhere.

Whether it's in a hotel, shopping mall, corporate lobby, retail store or airport, digital signages continues to evolve by offering more than the traditional static signboards. New advancements in analytics software, signage players and content management engage customers in various fields than never before imagined. We are now embracing those technologies that can invoke customer reaction and gain instant benefits for both the users and marketers. As technology advances, so will digital signage. In fact, current applications of digital signages become outdated once new trends emerge.

Digital signage applications:

- Retail
- Hospitality/Health care
- Entertainment
- Stadiums & Playgrounds
- Corporate signage
- Banking
- Educational signage
- Transport
- Pre-show cinema advertising
- Public spaces
- Control room
- Classroom displays
- Conference room



North American commercial display market size, by application, 2014 - 2025 (USD Million)

Source: Grand View Research

Digital signages can deliver different forms of information:

- Information for the public: Traffic information, directions, news and alerts which helps the general public.
- Information on products: User information for a particular product or service.
- Branding: Tailored messages to raise brand awareness.

- Internal information: Conveying corporate messages and news for employees, students, etc.
- Advertising: Grab customer attraction to promote a product or service.
- Navigation: Interactive roadmaps for dynamic wayfinding.
- Digital menus: Digital menu boards at restaurants and retail stores.
- Entertainment: Video walls or mini-games to garner the user's attention.
- Show local points of interest.

The present and future of the digital signage world is built on Android

As today's digital signages want to leverage mobile technologies as the basis of their solution, they are embracing mobile devices, especially for interactive, outdoor and mobile/portable signages. So, digital signages are not just limited to flat panel LCD displays but also other mobile devices like tablets. For everything from tablets to large displays, Android-based devices exemplify low costs of operation. This has made Android the most popular platform for digital signages.

Challenges of digital signage management

Digital signages have a lot of benefits but implementing a digital signage strategy can be complicated. Operations that involve large scale digital signage deployment requires ongoing management and upkeep. Once deployed, digital signages need to be continually updated with content. Implementation and management of digital signages across different locations involve the undertaking of complex and meticulous tasks which includes:

- Installation challenges: Coordinating the installation of multiple signage systems can be a daunting task. Things get even more complex if to integrate new signage technologies into the system. So, an expert digital signage management is needed for a proper launch.
- Content management: At the head of any digital signage needs a system by which the display content is to be managed. Management can range from periodic updates of display texts to scheduled iteration of videos and audio content.
- Performance monitoring: It is important to ensure that the digital signages are kept healthy and in a proper working condition. This requires a solution that offers continuous and remote monitoring of display and content streams.

Marketers need to approach these challenges in a different manner if they want to cut through all the noise to make a successful business impact. And for this intent, many new management tools are being introduced in the market. While selecting a management tool, there are many factors to be taken into consideration, including the company's needs, signage hardware, content management strategy and so on. The capability to manage and deploy content to as many unique screens and streams possible may vary for different solutions. The key is to choose the right digital signage software solution with all the must-have features for creating, managing and distributing content to a network of digital displays.

Hexnode digital signage software

Hexnode provides an affordable yet state-of-the-art solution to convert Android devices to digital signages. It's scalable with extensive controls for managing networks with thousands of screens from a single platform. Devices powered by Hexnode digital signage software are centrally managed, addressable for target information and enabled to display content in various forms like textual, visual, audio and video. This reduces the total cost of ownership by reducing the following costs:

- Cost of hardware
- Cost of content deployment
- Cost of implementation
- Ongoing support and training

Digital signage: an add on to the kiosk technology



Digital signage technology always overlaps with the kiosk technology. The easiest way to turn a device into a display screen is to lock it down to the kiosk mode preventing any unwanted disruption. The Hexnode kiosk mode focuses on control and security to create a completely locked down interactive digital signage. You can also set up screensavers for the devices in kiosk mode, allowing the device to work as a video/image streaming screen while the device is inactive. This ensures that the inactivity time for a purpose-specific device can be utilized in the most productive way by businesses.

Android digital signage management with Hexnode



The display devices in most cases may be spread over hundreds of locations. So, troubleshooting a device usually requires traveling to those locations

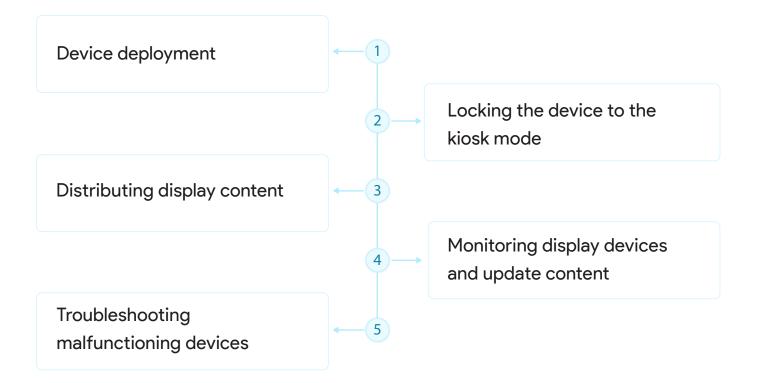
hexnode

which cost your time and money. With Hexnode, the IT team can easily deploy devices and distribute a selected set of images or video playlists to all devices with a few clicks. All common media formats like JPG & PNG for images, MP4 and MKV for videos and MP3 and OGG for audios are supported

The potential benefits of the Hexnode digital signage software include:

- Affordable and secure
- No media players required
- Can be used for a multitude of digital signage applications with unprecedented ease
- Manage remotely over the internet from anywhere
- Fully flexible and scalable
- Content is easy to modify with the specific business purpose
- Remote access to the software allows to easily manage multiple screens, all from one login

Hexnode provides you all the flexibility to choose how the content is displayed for the target audience. For images, display duration and background color can be set, and videos can be customized providing background music and animation effects. As with the most efficient content management solutions in the market, after publication, content can be removed, updated, or rescheduled via Hexnode dashboard, creating a simple, user-friendly system.



What does the future hold?

The most interactive feature for digital signages is the touch screen technology. One of the current trends emerging in the interactive digital signage space is the use of gesture-based technologies. Users can interact with the system by just waving the hand without actually touching the screen. Cameras and voice recognition can be used to help users further. Another recent advancement is social media integration. As the public is more and more addicted to social media, companies have chosen to show their social media channel in real-time when users interact with the signages. An important feature that the industry might strongly adopt in the near future will be the use of IoT and AI. The scene optimized use of IoT and AI digital signages could end up replacing even human interactions. As customers get more and more comfortable with AI a more personalized customer experience isn't far off.

Bottom line

Marketers spend a lot of time thinking about the moments when potential customers make decisions about whether or not to purchase an item or service. Digital signage is the new paradigm of how businesses approach communicating with the customers to motivate this buying decision. Being omnipresent, the digital signage industry is rapidly growing and the pace of change in technology is exponential. As previously outlined, digital signages have a variety of applications as customer-facing and employee-facing devices for branding, advertising, entertainment, influencing buying decisions and improving the end-user experience. Digital signages come with an array of additional benefits over traditional signboards and analog signages, being versatile, attention-grabbing, flexible, focused, dynamic, informative as well as engaging.

Understanding the technical and logistical requirements for successful digital signages is an important area of consideration around the digital signage use. Choosing the right location for screen positioning, interactive content and a robust management solution combines to determine how successful the digital signage approach can be in influencing the business. With the digital signage software from Hexnode, a multitude of display devices could be managed from a central location ensuring quality and consistency of operation. Hexnode makes it easy to dynamically control the display systems and provides simplified content delivery while allowing customizations that brings in serious value to your organization.

"The powerful digital signage software from Hexnode will take the hassle out of display deployment, timely distribution of content and centralized management so businesses get a system that is certified to function smoothly."

With the ever-evolving technological advancements, the digital signage industry is still expanding. Scene optimized distribution and use of IoT and AI can be the future of digital signages. Digital signages will find its application in even more areas as we learn to bend more technologies with it to improve the user experience and overall productivity. As customer attention is more fragmented than ever, businesses will continue embracing digital signages to match and tailor digital experiences to the customer journey.