

# SKYKIT<sup>®</sup>

## Digital Signage Guide

# 10

# Digital Signage Trends

10 Digital Signage  
Topics You Need to  
Know Before Buying

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# Keep Up with Digital Signage Trends

If you're old enough to remember the first lunar landing, you're old enough to have witnessed the entire development of the digital signage industry—and what an incredible rise it's been.

Back in the seventies, long before the arrival of the modern Internet, enterprising shop owners played VCR tapes on televisions to attract customers. Of course, all content had to be prerecorded, not to mention rewind once you reached the end of the tape.

Today, however, is another era. With the industry's rapid growth and the continued accumulation of promising data about the usefulness of digital signage<sup>[145]</sup>, you might even call it a golden era.

Recent years have seen the arrival of crazy technologies like glasses-free 3D signs, interactive digital personal assistants, and absurdly high-resolution 8K LED displays<sup>[146]</sup>.

But *not every exciting new gimmick is widely adopted in the market*. And in a rapidly evolving industry like digital signage, it's vital to stay on top of emerging trends to keep your approach fresh.

**In this chapter, we'll teach you how to tell a trend from a gimmick, and give you an insider's perspective of what today's trends really are (so you can hop on while they're still fresh!). [Get your PDF here.](#)**

## How Do You Spot a Trend?

*The digital signage industry has always been ahead of its time.*

Here's what I mean by that.

If you read coverage of major digital signage trade shows, like Digital Signage Expo, you may see any number of technologies labelled as trends, because multiple companies

featured them in displays.

But *that doesn't mean those technologies are true digital signage trends!* It just means they're trendy to show off at trade shows.

Think virtual concierges, for example<sup>[146]</sup>. They've popped up multiple times in digital signage trade shows. But have you ever seen one out in the real world?

Much of the futuristic tech exhibited at trade shows is just that: futuristic. Speculative. While it's cool to see what technology is capable of, it's unproven.

It typically takes a number of years between a technology's debut in the trade show and true market penetration. This has been true from the earliest days of the digital signage industry.

Plasma screens came into use in digital signage because they were easier to ship, store, and set up in trade shows than the previously used CRTs<sup>[10]</sup>. It took a while longer before retail and other industries adopted plasma screens.

Sure, holograms might be the next big thing. If you have the money to spend and want to bet on a technology in hopes of keeping up with the bleeding edge of digital signage tech, more power to you.

But most corporations and individuals don't have the funds to risk. Most want to be on-trend, without taking on an unpredictable level of financial risk.

### **To find real trends, you have to watch the market.**

Be aware of what technologies are actually being adopted in your vertical.

Watch digital signage news and industry blog sites, such as Digital Signage Today and Sixteen:Nine.

Set up a Google alert using [key terms](#) like “vertical name” + “digital signage” to spot the latest big rollouts.

During your preliminary research period when planning digital signage, ask digital signage providers what's really selling.

Don't just gravitate toward whatever looks flashy.

## **The 12 Hottest Trends in Digital Signage**

### **1. Interactivity**

Digital signs are inherently more attention-grabbing than a traditional static sign. Thanks to recent technologies, digital signs can be even more engaging to customers and viewers—in fact, they can be

interactive, I'm not just talking about interactivity via a touch screen, but turning viewing into a personal experience.

*Retailers, especially, have a strong interest in increasing impressions made, and this year will doubtless see increased efforts to [include interactive elements](#) in digital signs.*

One major area: the use of beacons, particularly Bluetooth Low Energy-enabled ones. Beacons detect the proximity of people with the right app installed on their smartphone and broadcast their identity to the app.

The app then queries a server which sends personalized information back for the user. This could be something like a coupon.

If you want a more in-depth explanation, [check out this article on beacon technology](#).



*But what if you add a digital display to the mix?* A customer could walk into your store and be greeted by name on a screen, or offered targeted advertising based on their shopping history with you.

Interactive projectors are another big possibility here. Customers can play simple games, and so much more.

Interactivity is a major element of wayfinding stations as well.

Interactive kiosks are big, too. Let customers browse digital catalogs, learn more details, and view different color and size options on items. A “compare items” option, which displays specs side-by-side, can be especially useful.

*Putting this information at customers' fingertips empowers them to make a more informed decision.* It also frees up your staff to provide hospitality and complete other tasks, rather than just reciting information.

Plus, it gives you more opportunities to upsell: the kiosk can suggest other related items and optional features, or be used for advertising when not actively being browsed by a customer.

### **2. Facial Detection and Characterization Software**

Facial recognition sounds a little “Big Brother is watching,” doesn't it?

But we're not talking about software that can recognize individuals. That would be a little creepy, and would probably make your customers concerned for their privacy.

Rather, [facial recognition](#) is part of the larger trend for leveraging data to tailor ads to specific audiences and maximizing their effectiveness.

**Facial detection software** recognizes and focuses on the faces of people who pass and pause in front of the sign.

Then, **facial characterization software** makes a guess at the age, gender, and racial demographic of the user and takes note of the content they viewed, how closely they approached the sign, and how long they spent watching<sup>[147]</sup>.

You can then take that data and learn how well your signage is doing in reaching your customers, and tweak your content accordingly.

For example, if it became clear that your Millennial-aged customers preferred video content to static pictures, and this is the demographic you were hoping to target, perhaps it would be time to invest more time in producing videos.



Again, *the data of individuals isn't saved, only collected in aggregate.* Your customers' privacy is preserved.

There's even facial recognition software to help signs recognize the gender and age of viewers and display appealing content for their demographic<sup>[148]</sup>.

### 3. RFID Tags

RFID tags use electromagnetic fields to track and identify tiny tags

embedded in objects<sup>[149]</sup>.

Ever taken your pet to be microchipped? That tiny transponder inside your pooch is an RFID tag.

But RFID readers in digital signage aren't there to read Fido's address. Instead, they're being considered for a whole variety of applications. For example: You can now RFID chip products such as perfumes, layer demographic information collected via facial recognition as discussed above and then have visuals and messaging appear on the display targeting the appropriate demographics.

#### Retail

RFID tags can be used on items [like high-end clothing](#).

Bringing an item near a kiosk, or into a virtual changing room (see #7 below) can trigger signage to pull up information about the item, to showcase upsell or cross selling of accessories, jewelry, or shoes, and maybe even let you virtually try it on!

RFID tags can also be used to **track stock and prevent shrinkage**. A great use case for tracking stock in for shoes. Many times the box is misplaced or put back with the wrong shoe run. Chipped boxes let associates know exactly where the item is in the back room.

If all items in a store are equipped with RFID tags, you know where each item is, exactly how many of an item have been sold and how many are left.

#### Hospitality

The Hyatt Regency Chicago embedded RFID chips in guests' card keys<sup>[150]</sup>.



When a guest checks in, information about the guest (such as if they're at the hotel to attend a particular conference) is stored in the system.

If a guest approaches a sign, the RFID reader in the sign detects the key card, retrieves guest characteristics from the server, and displays relevant information. For example, it could direct the guest to the next conference event, or pull up a customized itinerary.

### 4. Social media

In 2016, it would barely be an exaggeration to say that everyone's on social media.

With 74 percent of all adults on the Internet and 81 percent of all small and medium businesses<sup>[151]</sup> in America using at least one social network, odds are that both your customers and competitors are making use of the medium.

Social media is a great way to drive customer interaction and loyalty, and it will be even bigger than ever this year<sup>[152]</sup>. It's time to [bring it to your digital signage networks](#).

It's possible to introduce social media interaction in a big, flashy way.

In 2015, Coca Cola launched its “What’s In a Name” campaign<sup>[153]</sup>. If you tweeted your first name at Coke with the hashtag #CokeMyName, Coke’s giant Times Square digital billboard would display a fun fact about your name within two minutes.

In a different phase, tweeting your name to the soft drink would trigger the billboard to display a one-sentence story about you.

A webcam set up across the road would snap a picture of the billboard, and Coke then tweeted it back to the original person. (That way, even people not physically present at Times Square could participate.)

The campaign was a media hit, and people from all over the world participated.

**However, you don’t have to get that elaborate with your integration.**

Thank goodness, because Times Square billboards can cost \$1.1 million to \$4 million a year to lease<sup>[154]</sup>.

Many CMS include simple widgets for social media. Simply dropping it into place and logging in with your social media account will allow you to display your Twitter, Facebook, Instagram or other feed on your digital signage.

Want to make it interactive?

Create a hashtag for your viewers to use, and promote it on your signage. When customers share using that hashtag, retweet or share selected posts into your own feed. Then they’ll be able to see their own words on your signage.

It’ll help your viewers connect with your brand on a more personal level, but don’t worry, filters and pre-approvals will keep the negative or tacky messaging off your signs.

## 5. Mobile integration

[Mobile integration](#) is closely tied to both interactivity and social media.

As of 2015, a full 68 percent of US adults owned a smartphone or tablet<sup>[155]</sup>. People are ever-more accustomed to interacting with the world through the filter of their small screen.

The near future should see retailers, in particular, looking for new ways to take advantage of that with digital signage.

For example, a digital sign might display a QR code for a customer to scan in order to receive a special offer. Be aware, however, that QR codes are losing popularity, and scanners tend to be men<sup>[156]</sup>.

Consider including the option to simply text the offer to the customer’s mobile phone, rather than scanning.

This year, screens which can read Apple Pay-enabled phones<sup>[157]</sup> for ultra-convenient payment will debut on the U.S. market. All a buyer would need to do is hold their phone against the screen for a few moments.



Mobile integration is also important in **wayfinding**.

A [wayfinding kiosk](#) is already a great way to help people find their way through a rambling mall or labyrinthine office complex.

But many people find it difficult to memorize multi-step directions. Especially if they’re already in a rush.

Nowadays, some wayfinding kiosks allow people to send step-by-step directions straight to their phone. I’ve personally spotted this option on offer at Chicago O’Hare airport.

Even banks are getting in on the mobile integration action. And I do mean action.

In 2015, the National Bank of Canada celebrated the Rogers Cup tennis tournament by letting customers play tennis using their smartphones<sup>[158]</sup>. Here’s how it worked.

A customer scanned a QR code, then entered the three-digit code on the digital signage screen. This synched their phone to the screen. The software powering the experience used the phone’s motion detection capabilities.

By swinging their phone, a customer could try to nail the perfect tennis serve.

Completing the game allowed customers to enter a giveaway for Rogers Cup tickets.

## 6. Ultra-HD displays

8K displays like the one displayed at this year’s Digital Signage Expo are going to be out of most people’s price range for a long time.

But there's another uber-crisp option that, this year and in coming years, should be a more realistic option than ever before.

4K displays have *four times as many pixels per square inch* than full-HD, 1080p screens. They also offer high dynamic range and excellent color fidelity.

When first introduced, these screens were absurdly overpriced<sup>[159]</sup> and seen as a mere gimmick. How much difference could a few more pixels really make?

Over the course of 2015, an increase in options available (thanks to OEMs picking up on 4K as a high-potential market) led to an **abrupt drop in prices**, and a rise in the availability of high-quality features made 4K displays an attractive and affordable option<sup>[160]</sup>.

In fact, with a bit of luck, you could snag a giant 60-inch display for as low as \$800.

Too pricey?

Consider *tiling a number of smaller screens* in order to achieve a similar effect for much less dough.

Your [content management software](#) can help you synchronize the content in a pleasing way.

A recent study suggests that the Ultra-HD panel market (which includes all screens) will grow \$44.4 billion by 2024. The digital signage market segment will help propel that growth, with a projected compound annual growth rate (CAGR) of 11.7 percent<sup>[161]</sup>.

You should be seeing them pop up in the hospitality and retail sector, especially in industries where presenting a sleek and high-class image is essential.

## 7. Digital Mirrors

Digital mirrors work by using rear or edge projection to superimpose images onto a mirror.

The concept of a digital mirror has been around since the mid-2000's or so. They've served as a fun publicity-grabbing advertising campaign centerpiece for everyone from Pepsi to sporting venues.

While they still make up a small sector of the digital signage market, they have the potential to really break through in upcoming years (and not in the seven-years-bad-luck way!).

One reason: *the actual software and hardware powering digital mirrors has improved*. Early displays were limited by dim images and restricted viewing angles, not to mention lag when trying to make adjustments to an image in realtime.

Recent offerings from the likes of Samsung have addressed these problems. Powerful software and processors allow digital mirrors to manipulate 3D models (like clothes) in real time.

Another reason: There are more ways to integrate digital mirrors with other

tech strategies.

Retailers such as Macy's have had great success in marrying digital mirrors and social media with campaigns like Magic Fitting Room<sup>[162]</sup>.

These [touchscreen mirrors](#) allowed shoppers to choose clothing, which would then be superimposed over the shopper's image.

*Customers could even alter the color or size of each item with a couple swipes.*

The shopper could then share the outfit to social media to get their friends' input.

RFID tags (see #3) can be attached to clothing so that the items are automatically pulled up on screen—no need to make manual selections.

Motion sensors suggest another potential use.

Digital mirrors can be used to display messaging (say in a restroom or at a cosmetics counter).

Then, when someone moves close enough, the **motion sensors can trigger and clear the advertising** so the mirror can be used.

## 8. ePaper

ePaper is a relative newcomer to the digital signage market, but it shows significant promise in retail applications.

You've probably seen ePaper in use in e-readers before. The screens have a matte finish and aren't illuminated.

For the scientifically curious, here's how they work<sup>[163]</sup>:

Most are classified as electrophoretic displays. Inside the screen, tiny microcapsules are filled with dark-colored oil and electrically charged white particles.

Electric fields either send the particles to the front of the capsule (turning the microcapsule white to the viewer) or the back (turning it black).

These displays are generally **limited to black-and-white or grayscale**, and are **usually small—think e-reader or price tag sized**, however a number of companies are developing and testing color readers.

Larger sizes are very expensive.

They have a relatively low refresh rate, so they wouldn't be good for showing video.

However, they can maintain a fixed image on their screen without consuming any energy—*some can last up to three years* on a single battery pack. They are high-contrast, impervious to ambient light; and unobtrusive.

Because they can be updated instantly, they could be an ideal substitute for something like price tags or conference room schedules.

Plus, they have a clean, minimalist look.

*ePaper could give the opportunity to swim against the “flashier! More colorful!” current and distinguish yourself*, while still gaining the advantages of digital signage over traditional.

## 9. Indoor LED

We're not talking about outdoor LED billboards here.

This year should see an increase in prevalence in [LED screens](#) indoors.

Industry insiders are predicting that this year will bring a flood of *affordable indoor LED options* to the market, thanks to recent acquisitions by giants such as Samsung, and traditional display manufacturers expanding their product lines.

This will mean not only better prices, but a greater variety of sizes and shapes. Get excited, because LED screens have a wide variety of advantages.

LED screens can be almost any shape and size, even wrapping around pillars. They can also be incredibly thin. Some models are only a few millimeters deep. There are also bezel-less options.

They're energy-efficient and long-lasting: perfect for creating eye-catching displays without bloating your energy bill.

LED screens are sharp and crisp.

Not only that, but they offer incredibly rich colors, and, thanks to the ability to dim individual LEDs to lower light output levels, greater contrast levels than traditional LCD screens<sup>[165]</sup>.

## 10. Indoor Video Walls

Indoor video walls aren't exactly new tech. They've been on the scene since the eighties. Here's the thing, though: they've stayed hot. They still stand out and make an impression.

Well, how could they fail to? It's a whole wall of synchronized displays.

A tiled video wall will typically **cost less than a single screen of**

**comparable size**, and they offer a greater variety of configuration options for oddly shaped spaces or for displaying content with unusual aspect ratios.



Today's tech makes it easier to deploy an awesome video wall than ever.

When video walls first debuted in the eighties, the great challenge was synchronizing the content on the screens. Those wishing to use them had two options: One, use computer processors to split and synch the signal—which, in those early days of computing, were prohibitively expensive.

Or, two, contract a video production company to divide up the content in advance, load the content onto LaserDiscs, and then play the discs on separate players attached to each TV.

Today, *splitting a signal among multiple screens is simple*.

The screens don't even have to make up one single picture: you can have zoned content.

(Don't get too wild, though—if you have too much going on at once, your viewers will be overwhelmed.)

The other big challenge to video walls is dealing with bezels—the strips of plastic or metal that frame the screen. While they're pretty unobtrusive if a sign is by itself, bezels get obvious when they're cutting right through your content.

There are a number of bezel-less, or very nearly bezel-less, options out there, in a variety of sizes.

### 11. 3D

If you're like me, you might think of 3D as too absurdly futuristic to actually stick.

Some types of 3D displays, like holograms, simply aren't practical to implement, due to high costs, limits in image quality, and sensitivity to light levels and viewing angle.

That isn't to say that digital signage companies aren't dabbling. In the Netherlands last year, a graphics design agency turned its focus to 3D holographic display cases<sup>[166]</sup>. They'll be promoting them for use in everything from advertising in malls to use as showpieces at trade shows.

Widespread adoption, however, is unlikely.



But consider this.

VR is breaking into the mainstream with Google Cardboard, Samsung Gear, and the much-hyped Oculus Rift. Glasses-free 3D entertainment is available in the form of the Nintendo 3Ds and, very soon, 3D televisions<sup>[167]</sup>.

It's even made its way into the digital signage sector.

Norway's fifth-largest company installed an entire autostereoscopic (that is, 3D without the use of special glasses) video wall in its operational center last year<sup>[168]</sup>. The wall is over 10 feet wide and eight feet tall, and is essentially the first of its kind.

While wide adoption of 3D tech in digital signage might be a way off, it's not too soon to start thinking about how you can use it. Virtual tours? Product demos<sup>[169]</sup>? The possibilities are pretty cool.

Sure, right now, it's more of a gimmick... but it's a gimmick with a lot of potential. *Early adopters should keep their eye on 3D tech.*

Whether it becomes mainstream or if it remains in the "cool toys" category, time will tell.

### 12. Digital signs everywhere!

Is it a cop-out to call digital signage itself a digital signage trend?

Well, maybe a little bit.

But I'd argue that filling new niches and finding a place in new verticals has been a "trend" in digital signage ever since it first came into use.

Think about it. At its inception, digital signage was relegated to replaying

runway shows at retail outlets. Then the banking industry picked them up... and casinos... And now they're absolutely everywhere.

With the market growing steadily, it shouldn't come as a surprise that this indicates more digital signage, everywhere, for everyone.

You'll be seeing more digital signs in [restaurants](#), in retail locations, in offices, [in schools](#) (2,000 universities installed digital signage networks in 2011, and that number has continued to grow)...

*And you'll be seeing them used for an increasingly wide variety of communication and interaction purposes.*

#### New Applications

For example, in 2015 McDonald's introduced a new custom burger option at select west coast stores before bringing them to locations across the nation<sup>[170]</sup>.

What makes it unique? Digital signage. Customers choose buns, meat, and toppings using a [touch-screen kiosk](#) and pick their creation up at the counter.

Just the other day, I nearly had a heart attack when a digital endcap chocolate display at a store whispered "Indulge yourself" in a sultry voice just as I walked past.

A college I visited recently had an LED stock ticker on the wall in the business department.

### Integration

Integration is everything today. Not only will you see digital signage in new applications, you'll see it in new combinations.

Digital signage can now be part of a [complex, multi-part system](#) involving multiple pieces of hardware and software working together to deliver a result.



At a drive-through, software can measure how many customers per hour are served, and the number can be displayed by digital signage on the wall, beside a target number.

At schools, digital signage can be linked with third-party emergency notification services and be used as an alert system during emergencies.

In retail, software like Hadoop by Intel can be used to “watch” your inventory, tracking the rates at which items sell.

Then, *it can use algorithms to figure out which items to promote* and adjusts prices accordingly. Items that are in high demand may increase in price slightly, and items that are overstocked may go on sale.

Really, the options are limited only by your imagination (and budget).

No matter who you are and what kind of business or other operation you have, there's some way for you to make digital signage work for you. Be on the lookout for new ways to make use of it and the unique advantages it offers.

You may end up setting a trend of your own.

## To Sum Up...

It can be hard to predict the future, especially in an industry like digital signage, which is characterized by rapid growth and quickly evolving technologies.

However, we can guess with some certainty that the biggest trends of today are focused on integration of digital signage.

Rather than an afterthought or a separate effort, it's going to become more deeply linked to all aspects of connecting with and serving customers.

It'll be used for more diverse purposes and linked up to social media.

This increased immersiveness will be aided by emerging and increasingly widely available tech like high-resolution LCD and LED screens.

It's an exciting time in the digital signage industry. A good time for you to [start planning!](#)

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