

SKYKIT[®]

Digital Signage Guide

4

Digital Signage Software: What to Look for

10 Digital Signage
Topics You Need to
Know Before Buying

Sales

sales@skykit.com

Phone

Toll Free: 855.383.4518

Local: 612.260.7327

Address

420 N 5th Street

Minneapolis, MN 55401

www.skykit.com

What to Look For in Digital Signage Software (CMS)

Digital signage CMS (or content management system) is the software that lets users set up what content gets displayed on which screen, and when.



There are CMSs that require you to create and customize content within the CMS, and others that allow you to create content within the wide variety of creative software applications available on the market and then import them into the CMS in a variety of content formats.

There are many CMS options.

Many of them are for niche uses, or specific requirements.

Some are free with many paid additions; some have a subscription-based model. Some are web-based, with content stored on the cloud; some take the form of a downloadable program.

At best, they can enable you to put out gorgeous content and streamline your workflow.

At worst, they can be a labyrinth to use, fail to offer key features, have limited scalability and quickly become outdated.

With so many options, it can be hard to narrow down what makes a CMS a good option, and which CMS is right for you — because let's face it, there are no one size fits all.

In this chapter, *I'll give you some advice about choosing a CMS.*

We'll start with different features to look for: the ones that every good

CMS should offer, vertical-specific features that will make your CMS more useful to you, and features that might matter to you, specifically.

And then we'll wrap up with how to talk with CMS providers to figure out if their product is right for you.

I put together 7 questions you should ask when evaluating digital signage software. It offers a framework to work from no matter what industry you're in.

This PDF takes you step by step through what you should consider. Print it out or download it for reference when the time is right. [Download your PDF here.](#)

Three Things You Want in Your Digital Signage CMS

1. The Basics

There are some features that [any good CMS](#) should have.

Usability

Let's be honest: today's CMSs are much easier to use than early ones. The instruction manuals used to be inches thick, and could take weeks to train users.

Now we're beginning to see CMS with more intuitive user interfaces.

Still, as you may remember from the previous chapter, *difficulty in using CMS is among the top three complaints of digital signage users.* Some poorly designed interfaces make it look like you're writing code.

The interface you use to interact with the CMS (whether on the web, as with a [cloud-based CMS](#), or downloaded to your server, as with a locally-hosted CMS) should be sleek and easy to navigate. The end users, including your content creators and the persons responsible for scheduling that content, should be able to understand it with minimal training.

This is especially essential for small-medium businesses (SMB) which may have fewer personnel resources, unlike at the enterprise level.

Content Creation Methodology

Technology integration improvements now allow you to create your content in the creative tools you already know and love and then place them into your CMS.

If the CMS you are looking at requires creation to be performed within the CMS, the content creation tool should be intuitive to use and support all the [common file types](#).

Unless you are a highly tech-savvy company and want a high degree of customizability, a tool that allows you to drag and drop content to zones would be ideal.

It should be simple to import content from outside programs, such as Google Drive, Microsoft, and Adobe products.

Again, this feature is *extra important* for both SMB and Enterprise. Smaller businesses may also want access to [pre-made templates](#) and a library of high-quality stock images that are free to use in their signage.

See Chapter 8 for tips on how to create compelling digital signage content.

User Controls

The larger your company and the more screens you have, the more people will be involved in managing your digital signage system.

Clearly defining each person's role and access level will alleviate confusion and redundancies. You should be able to assign different users different permissions regarding which functions of the CMS they can access and alter.

Your content creators don't need to be able to schedule that content, if that's not one of their responsibilities.

A quick note: Some software might have limits on the numbers of unique users that can be added.

Know how many you expect to have on the system and ask potential CMS providers how many their software can support.

Content Scheduling

One of the **most basic** and yet **most useful** features of a CMS is the ability to set certain content to go live on specific screens at a specific time.

You should be able to specify exact times.

In select use cases, businesses may be scheduling their content weeks or even months in advance.

There should be a calendar or scheduling feature that makes it easy for you to see what will be on display on a given date.

If your media player caches content (rather than receiving it in a constant stream), you should be able to schedule when your CMS pushes new content to the devices.

That way, you can pick times of low bandwidth demand and avoid internet slowdowns. Best practice is to update devices around 3am local time.

Security

Especially with [cloud-hosted content](#), it's important that the CMS offers *high-end data security* in transit and at rest. This includes encryption and regular security patches to fix previous vulnerabilities.

Of course, you also want to prevent unauthorized users from gaining access to your screens.

Last year, the owners of a digital billboard in Atlanta learned that the hard way. Hackers gained control of the screen over the internet and changed the image to a man's posterior^[56].



As embarrassing as that is, it could have been worse. Security is extra important if your digital signage is integrated with other store systems.

Customers want to know^[57] that your data is secure. *If your security is breached, their trust in you is breached as well.*

Scalability

The service should be able to “grow” with you and accommodate more screens.

If you decide to expand your amount of digital signage or expand your footprint into other countries, it would be pretty frustrating to have to toss the software you already know and understand, and learn another one from the bottom up.

You should also be confident that the CMS provider will continue to support the product over time as your digital signage needs evolve.

Remote Access

You should be able to log into the CMS at any time, from any device. Cloud-based CMS will definitely include this capability, and some on-premise solutions may as well.

The world has gone mobile and having the ability to drive, edit and program content through your phone, tablet or PC is becoming commonplace.

Being able to update or approve content remotely could prove useful in any number of situations.

Perhaps your advertising team sees an opportunity for a limited-time promotion, but the person tasked with approving new content already went

home. Thanks to remote access, she could hop onto any device and make the approval in seconds.

Whether they're on the road or standing in front of the commercial screen they want to change, they should be able to control the content from anywhere.

Customer Support

Once you purchase the CMS, you shouldn't be left to your own devices (pun intended).

Especially with the Software as a Service (SaaS) model, there should be some [basic aids in place](#) to keep your digital signage software running smoothly. The software should be able to update itself in the background without needing your interference. The CMS provider themselves should be hosting regular updates to the software.

Even better: these updates *should not disrupt your signs' functioning.*

Your CMS provider should have a help hotline, or some other straightforward way to contact them for answers and assistance if you encounter difficulties or bugs.

2. Industry-Specific Digital Signage CMS Features

Don't forget: Depending on what vertical you're in, you may prioritize some features over others.

It's wise to look at case studies from your own vertical, so you can understand how your competitors are using their own commercial displays. Staying on top of trends will help you stand out.

Here are examples of important features from three verticals.

Education

While still a relatively small market for digital signage, education is poised to grow by leaps and bounds in upcoming years.



Here's why.

In the United States, the government has big initiatives to close the gap between the haves and have-nots when it comes to digital learning. Technology funding is in place to drive improved learning outcomes and to prepare students for their next phase of life.

Today's kids are “digital natives”^[58]. They've grown up around computers and smartphones. They expect information, attractively embedded in media, to flow quickly and easily to them.

Both at the K-12 and higher education levels, educators are realizing that digital signage is a great way to teach both individuals and whole classes, work collaboratively, and to keep students engaged and get information to them in a way they'll appreciate. Digital signage in education can [serve many purposes](#).

Here are a few.

Safety and Security

As of 2013, *one in three parents of K-12 students feared for their child's safety*^[59] in school.

If you're a parent, you can probably rattle off a laundry list of potential hazards: severe weather, abductions, intruders, and on and on.

With the help of the right hardware and software, digital signage can help ease parents' fears and protect children.

Let's be clear:

Emergency Alert capabilities can be pushed manually or linked to emergency notification services, **which may require third-party software** (rather than being built into the CMS). Check that this software and your CMS are compatible and can work together. Also, determine the cost of adding the feature into your network.

One of the points of vulnerability is during pick-up. Parents and administration alike worry about a child getting into the wrong car. Today, some schools may use license plate and facial-recognition software that works with their CMS to confirm children make it to the right car.

Or they may choose a system like the one recently installed at North Springs Elementary School^[60] in Columbia, S.C.

Picture this.

Each child's guardian receives an RFID-equipped card with their contact information and photo ID.

Upon arrival at the pick-up area, staff scan the card. Then the information is displayed on signs inside, along with instructions for the student to proceed to the pick-up area. It also appears on staff's tablets, ensuring they conduct each child to the right car.

Aside from pick-ups, in education, digital signage often doubles as an emergency alert system.

It's important that any CMS you choose would support these functions, at [extremely high standards of performance](#).

The CMS should also be able to display different information on different screens^[61], since not all areas of the school will take the same evacuation or shelter routes.

In the Classroom

While children at school should be kept safe, they're there to learn. Digital signage has an important place in the classroom, too.

Studies show that overall, regularly

displaying PowerPoint during lecture has no negative impact^[62] on students' final grade outcomes. It may even have a positive effect.

In fact, students prefer lectures that have visual aids. Students who are hard of hearing will appreciate it as well.

Leveraging technology in the classroom as a tool to better educate students is mission critical. It is more than just displaying visuals in a one-to-many format, but rather the key to relevant, up-to-date content by grade in touch or non-touch formats.

It gives access to animated maps, videos, and learning tools that engage students in a collaborative manner. Providing gamification in education and providing both a teaching and learning environment will improve test scores and overall results.

Digital signage can also be used to display announcements, reminders about upcoming assignments, test scores, and more.



If you plan on using digital signage in the classroom, you'll want CMS features such as

- ◊ **User Controls:** Historically the teacher, onsite administration, the district, and the networks IT management have control over the various classroom displays. If not in entirety sometimes by zone. Understanding the CMS user control options and number of user seats available may be important to you when selecting your software partners.
- ◊ **Importing Content:** Most teachers will already have lecture visual aids that should be easy to import into the CMS. And at the K-12 level, there's a lot of content available online that teachers may wish to use. Your CMS should make it easy for them to import this content as well.
- ◊ **Content Scheduling:** Eliminate outdated PA system morning announcements. Announcements can be recorded at any time and paired with visuals, then set to be played at a certain time in the morning.

Wayfinding

New schools are scary.

But today, they're a little less so.

[Mobile wayfinding options](#) are creeping into schools. Now newbies can refer to one of the digital touchscreen kiosks placed strategically around campus or their mobile phones to find their way to the art or music room.

Navigating unknown campus hallways for the first time can be intimidating. But as mobile technology continues to become a huge part of our society, so do mobile solutions.

For such a system to work, you'd need to be able to build GPS based interactive maps in your CMS.

If you plan on including a mobile wayfinding system, your CMS would also need to be compatible with the app you chose and able to send directions to it either in real-time, or as a PDF.

Retail

Retail is the [largest market for digital signage](#), and the potential uses are diverse.

For just one example, take Ford's "The Truth About Trucks" kiosks^[72].

They wanted to give customers a deeper, more interactive look at the F-150's capabilities and options, so they built a kiosk that would allow customers to build their own ideal trucks, compare with competitor's trucks, and more.

The CMS also tracked how often customers visited particular pages so that developers could focus on developing better content for those pages, or redirecting flow so less-seen pages are visited.

But remember, *most kiosk or interactive solutions are not out of the box with a CMS.*

They are custom-development, so expect to pay a fee for both the development and content to get going and remember to budget

upgrades annually.

Here's some other uses, and the CMS features that enable them.

Loss Prevention

In 2014, more than \$32 billion worth of products^[63] and money vanished into the pockets and purses of unscrupulous customers and employees.



That's a lot of shrinkage.

If you're in the retail vertical, you already know how important loss prevention is. But did you realize that digital signage can help?

Yes it can! Many stores show security camera footage on screens to remind shoppers and employees alike that they're being watched. Why not *have these screens contribute to your digital signage network by adding messaging^[64]?*

Short messages welcoming shoppers to the store can catch their eye and remind them that the security cameras are there (while making it harder for them to pinpoint blind spots by interrupting the stream).

Messaging can also encourage shoppers to watch their own belongings and report suspicious behavior to staff.

They'll also help the security footage look less inhospitable. And if you play advertisements as well, it may **help boost sales and offset your shrinkage.**

In back-of-house uses, messaging can discourage internal theft and remind employees of the potentially dire consequences of committing crimes.

In order to make this work, your CMS would need to be able to play live video feeds in the format your security cameras record in, and intersperse the feed with preselected messaging.

Backend Database Integration

Today, stores are realizing they can leverage the data they gather from the Internet of Things and their Enterprise Resource Planning^[65] software into sales... And that digital signage can help.

We mentioned this in the last chapter, but in case you need a refresher, here's how it works.

Software "watches" your inventory, tracking the rates at which items sell.

Then, it uses 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.

These price changes are put into the system automatically. If you use digital price tags^[66], those update themselves, and screens around the store can add automatically generated ads to their content.

Usually, *it's not the CMS that does this, but another piece of software that works with your CMS.* Hadoop, by Intel, is an example of a system that can store, analyze, and use vast quantities of data in real time.

The flexible software^[67] has been used to target individual shoppers with advertisements, and also to analyze POS data to forecast future demand.

Content Localization

Remember, the ability to localize content is one of the [top three reasons](#) cited for installing digital signage.

The reason is clear.

Localizing content means you'll be able to target customers with messaging that's more **relevant** to them. More **personal**. And thus, more **effective**.

Entire stores can be built on the principles of localization.

For example, what if your store was in an area with high numbers of retirees?

Here's how one grocery chain answered^[68].

They decided that their stores in those areas would be designed to serve retirees specifically. They widened their aisles to make them accessible for those needing mobility aids, and stocked many health items and single-serving, easy to prep meals.

In just two years, revenue at one of the remodelled stores doubled.

Localizing the content on your digital signage helps you get some of the same benefits, for much less cost than remodelling your whole store.

Today, digital signage software exists that automatically detects and records the demographic information of people approaching, guessing their age, gender, and race.



This third-party software can then work with your CMS to present content that's likely to appeal based on those factors.

Or, you can take that data and use it to create more effective content.

Aside from that specialized software, here's some other CMS features that will help you localize your content.

- ◇ **User controls:** By assigning

different permissions for certain users, you can put each region or location of a store in charge of part of their own content. This allows them to *take advantage of local events or factors* that the central corporate office wouldn't even know about. For quality control purposes, HQ can retain the ability to approve or reject content.

- ◊ **Widgets:** CMSs often comes with widgets, such as the local weather or [social media feeds](#), that can be dragged and dropped into the content. If a location controls its own social media, that would be a very simple way to present some localized content.

Ad Network Model

As we've been hinting at, one of the biggest digital signage uses in retail is advertising.

Studies show it's far more effective at drawing eyes and motivating action in consumers than traditional signage.

If you plan on [using digital signage as your advertising network](#), what sort of features will you need and want in your CMS?

- ◊ **Granular scheduling** down to store, region, or designated market area (DMA). This will allow you to localize your advertising per region or per store to show local or regionally-relevant content.
- ◊ **Ability to add users**, so you can share content to outside advertisers. They can maintain their content while you retain

publishing and audit rights.

- ◊ **Remote control ability.** You want the ability to turn screens off and on, and adjust volume and brightness levels, without having to fiddle with the device itself. (Bonus: This will keep the controls safe from, say, mischievous teenagers.)
- ◊ Built-in **analytics**, such as ad counts and interaction counts.
- ◊ **Proof of Play**, to document and report for invoicing purposes.

Quick Serve Restaurants

QSRs have many potential uses for digital signage—in fact, they [go together like buns on a burger](#).



Digital Menus

Quick Service Restaurants that utilize indoor and outdoor digital signage see a [5 to 8 percent increase](#) in revenue.

The increase, in part, can be attributed to easy-to-read menus with more food options.

If a digital sign's being used as a menu board, the **most important features** are the ability to **display**

high-quality images and schedule content—especially if you have different breakfast and lunch/dinner menus.

Another essential: **redundancy**.

Perhaps the only advantage of a traditional menu over a digital is that it'll never go blank on you.

No problem! Your CMS can help mitigate that risk.

Say you have a grouping of three screens that act as a menu. If one screen experiences issues, the CMS should be able to distribute its content between the other two.

The CMS should also cache content on your media player so if the Internet goes down and it loses its connection to the cloud, your content will continue to play.

Beacons and Digital Signage

When I say beacon, I mean a [digital transmitter](#) (or tracking device) that communicates with a shopper's smartphone in an effort to improve their shopping experience.

Placed anywhere you deem suitable in your restaurant, the transmitter communicates with a smartphone's Bluetooth and transmits information directly to anyone that has installed the store's app.

Beacons placed near digital menu boards can alert restaurant employees when a loyalty customer has come in.

Specials can come up on those boards that appeal to that customer, giving the establishment the opportunity to personally cater to the customer without saying a word.

Ordering Kiosks

Do you love the convenience of a touchscreen ordering kiosk? Many customers do.

Aside from increased sales, many canny restaurateurs have noticed that buying and maintaining a kiosk costs less than paying the salary of a cashier.

In other words, [kiosks are here to stay](#).

If it's functioning as an ordering kiosk, the CMS should support touch-screen interactivity.

Back of House Uses

Interactivity might be important for back-of-house digital signage being used to train employees as well. Or how about a nightly close shutdown checklist or digital time cards?

You may also want the ability to *integrate with management systems and show metrics* like drive-through efficiency^[69].

If that's your hope, you'll need the CMS to be able to work with whatever other software you're using. Ask your CMS providers to make sure it will.

Advertising

For an example of how QSRs are using digital signage, let's take a peek at Tim Hortons.

This Canadian chain famed for its coffee and donuts not only has digital menus, but their own TV channel, TimsTV. Playing on screens in the dining area, this channel plays news,

entertainment, and ads tailored entirely to the Tim Hortons brand.

Even if your own advertising plans are less elaborate, you can see how using digital signage to advertise can [seriously boost your brand](#).

For advertising, **your CMS needs the ability to support multiple users with different, assigned permissions.**

Many QSRs assign digital signage promotions to their ad agency or management services.

Fact: Being able to allow the ad agency direct access to the relevant parts of your CMS can be a huge time-saver.

3. A Good Fit for You

Ultimately, the best content management system is the one that fits your needs the best.

If you have a specific vision for your digital signage (and you [should definitely have one](#)) then by all means seek out a CMS that can deliver on that vision.

This probably means looking for **specific features.**

Do you need support for specific file types?

Do you want built-in widgets for displaying social media and weather reports?

Here's the catch.

While it's easy to pile up long lists of features you want in your ideal piece of software, eventually you do have to face reality.

Limited budgets mean that some of the most advanced solutions may be out of your reach. *Make sure to sort your desired features by "must-have" and "would be nice."*

Also consider the human side of that equation.

How much time do employees have to devote to creating content? Can you spend hours training them in the new system? Can your IT department spare time to troubleshoot a complicated system?

You may have to sacrifice some features or degrees of customizability in favor of streamlined simplicity.

Finding Your CMS

By this point, you've **developed a thorough profile** of what you want from a content management system.

You know **what features are important to you**—both what you need to have, and what would be nice to have.

Lastly, you also **know your limitations**—your budget, how much time your IT department has to dedicate to troubleshooting the system, how tech savvy the end-users are, and so on.

It's time to start assembling a list of questions to ask software providers and officially begin the search for your CMS.

You should ask about^[70]

- ◇ Any **features** not listed on the software provider's website—especially ones you identified as important during your earlier brainstorming. I.e. scalability, security and speed.
- ◇ **References**—you'll want to talk to some of the provider's other clients to get an idea of how the system has been working for them, and whether the provider was easy to work with. (Keep an eye out for reviews online as well!)
- ◇ **Pricing information**, such as model (purchase, lease, or software as a service) and discounts for large deployments
- ◇ **Support**, such as remote software updates, a help hotline, and training for the system's users
- ◇ **Compatibility** with other hardware and software that you hope to use
- ◇ Ability to **display and create certain types of content**, such as ads, interactive content, social media feeds, and specific file types
- ◇ And **any other relevant questions** you can think of^[73]

It's important to be as thorough as possible when talking to a prospective software provider. After all, there are endless hundreds of options out there—but you're only picking one, which you will hopefully use for years to come.

If your provider overestimates their ability to meet your needs^[71], or the software is lacking in a key feature, *you'll lose money and face the headache of trying to salvage your content and switch to a new CMS.*

As you've been researching features, you've probably run across several pieces of software that appeal to you. That's a good place to start.

Sources

56. [Full Moon: Don't Let This Happen to Your Digital Signage](#) by Christopher Hall, Digital Signage Today
57. [How to Restore Customer's Trust in Data Security](#) by Chloe Green, Information Age
58. [Digital Native](#), Wikipedia
59. [Parents' School Safety Fears Haven't Receded Since Newtown](#) by Jeffrey M. Jones, Gallup
60. [KidGopher Uses Digital Signage to Keep School Kids Safe](#) by Christopher Hall, Digital Signage Today
61. [4 Valuable Digital Signage Applications for School Wireless Networks](#) by Ashley Wainright, Securedge Networks
62. [What Is the Impact of PowerPoint Lectures on Learning? A Brief Review of Research](#) by Linda Cornwell, Hagerstown Community College
63. [Shoplifting, Worker Theft Cost Retailers \\$32 Billion Last Year](#) by Phil Wahba, Fortune
64. [Loss Prevention With Digital Signage](#) by Lyle Bunn, Digital Signage Today
65. [Enterprise Resource Planning](#), Wikipedia
66. [Keeping Up A Competitive \(Shelf\) Edge: Digital Signs and Labels](#), InContext
67. [Ten Common Hadoopable Problems](#), Cloudera
68. [How Europe's Grocers Keep Food Sales Fresh](#) by Marc-Andre Kamel, Nick Greenspan and Rudolf Pritzl; The Wall Street Journal
69. [Digital Signage: Making a Difference Behind the QSR Counter](#) by Sharon Sonesh, Sign Media
70. [Top Questions to Ask Potential Digital Signage Vendors](#), Digital Signage Federation
71. [What to Look For in a Digital Signage CMS](#) by Christopher Hall, Digital Signage Today
72. [Digital Signage Test Driving the Ford F-150 Experience](#) by Nicole Troxell, Digital Signage Today
73. [10 Keys to Better Digital Signage RFPs, For End-Users and Vendors](#) by Dave Haynes, Sixteen:Nine