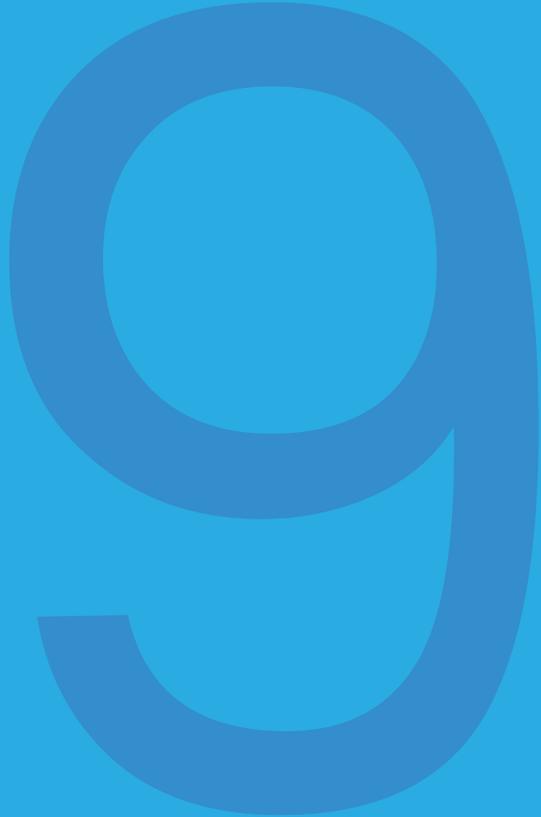


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Digital Signage Guide

10 Digital Signage
Topics You Need to
Know Before Buying



Installing & Rolling Out Digital Signage

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Installing and Rolling Out Digital Signage

While the retail sector currently makes up the largest part of the digital signage industry, it's widely adopted in food service, transportation, financial services and education.

You've also been seeing some promising statistics on the success of digital signage, and the fact that the industry has a [CAGR of nearly 9%](#) is encouraging as well.

You might be considering rolling out digital signage. After all, it seems to be bringing great results for others, and since prices for digital signage systems have been steadily dropping, it seems like the time is right and it's an easy way to get a return on your investment.

However, you can't just get any old screen, slap it up at random, and expect to rake in the dough. They aren't a magical revenue-generating charm.

Even if your aim isn't advertisement, you still have information you want to communicate.

If the screens aren't doing the best job to communicate that information that they possibly can, they may not offer much advantage over [traditional signage](#) in getting your point across.

That said, studies still show that up to 43% of traditional paper-based signage used in campaigns or for promotions *is never installed*, so at least the digital signage has a 100% compliance advantage when it comes to installation.

You must put serious thought into your strategy for installing digital signage in order to maximize its usefulness and accessibility to your audience.

Case in point: You need to choose the right digital display to install based on the placement and environment in your store. A retail sign near a window may require a semi-outdoor display that will have higher brightness to counter the direct sun light?

Of course, the problems can start long before your digital signage is even

fully installed. Without a fully planned strategy, *costly trial and error can make your expenses quickly balloon* above your budget.

In this chapter, we'll walk you through the digital signage rollout planning process and give you an idea of what to expect along the way. [Get your PDF here.](#)

What Goes Into Creating a Rollout Strategy?

In order to form a smooth rollout strategy, you'll need to take a **big-picture look** at your intentions for your digital signage, decide who you're going to work with, and plan each aspect of your signage.

Then you can start working on figuring out how to get it into place.

A Purpose

Your purpose in installing digital signage will inform all of your other decisions about it. So it's important to clearly define it, right from the start.

The more familiar you are with your digital signage needs, the better your partners will be able to collaborate with you and realize them.

Who is going to see the signs? Are they outward-facing and primarily intended for paying customers or students? Are they inward-facing and meant to communicate with employees?

What are the signs intended to communicate? Is the primary purpose advertisement? Is it something highly specific, like the aforementioned price tags? Are they a [wayfinding resource](#)? Will they be presenting data, displaying schedules, or sharing internal memos?

Where will they be located—inside or outside?

How do you define success? What does a healthy ROI look like for you, and how will you be evaluating it? (Turn back to Chapter 2 for help planning this.)

You should be able to sum up your purpose and goals for the signage in a few short sentences. This will help your partner determine the best placement of the signage during the site survey which will ultimately make installation a much easier process.

A Partner (Or Partners)

Don't worry, you're not on your own. For all but the most basic digital signage, it's wise to work with system integrator, VAR, or reseller to assist in defining the best possible rollout strategy based on your individual needs. Some digital signage companies may offer these services via a third party as part of a holistic solution.

Your partner should have *experience with the type of signage you plan on deploying*, and be able to answer your

questions to your satisfaction.

They should be able to *connect you with past clients*, to discuss their overall experience and talk about their deployment.

They should also have a *robust network of expert partners*, such as installation partners and OEMs, who can work together and with you to make the best decisions about your signage.

If you're bringing in any additional partners of your own, for example, you may be working directly with a designer. Based on your deployment you may want the content creators to have conversation with the CMS provider directly and the system integrator to ensure everyone is on the same page.

Let's have an example of how a healthy network of partners can contribute to a better digital signage experience for all.

When a tourism center in Montreal, Canada wanted to deploy a digital signage system that would bring an immersive, interactive, video-based experience to its visitors, they brought several partners on right from the beginning^[142].

Displaying the video in a way that would maximize its impact was key. After the video producers had created the concept, they shared it with the integrator.

Based on the nature of the content, and the angle and location the tourism center wanted to mount the screens at, the integrator was able to recommend the exact screen that

would best show the content off.

A Plan

Haste makes waste! You're not ready to deploy your digital signage until you've planned each aspect.

This planning will also help as you budget for the project.

Most of the items in this section are covered more comprehensively in other sections, so we'll touch lightly on each. Think of it more as a checklist and a reminder of what to consider as you plan each.

The Components

Of course, you'll have to select all the components of your digital signage system in advance.

Your partners may be able to recommend components that will fit your needs and budget.

Media Player

How do you intend to update the content on your screens?

Gone are the days when you had to plug in a VHS player.

Now, you can [update content wirelessly and instantly](#), using a device [like a Chromebox](#) to stream content from the Cloud.

Something like an electronic price tag is probably RF-equipped. There are wired options as well.

Also recall that there are all-in-one choices, which integrate a media player and a screen into a single device.

For deep looks at media player options, check out chapters 5 and 7.

Display Screen

For a professional installation at an enterprise, or even SMB, you will want **commercial-grade display**.

Advantages of a **commercial display include**

- ◊ A three to five year commercial warranty
- ◊ Serious durability, with 60,000+ duty hours and the ability to stay on all day long
- ◊ Commercial grade components, including conformal coated circuit boards, that can survive dust, heat, and humidity
- ◊ Convection cooling—no noisy, bulky fans
- ◊ Anti-glare glass and ambient light sensors for increased readability from any angle



And much more. When choosing a screen, make sure to consider the amount of ambient light in the room and what sort of environmental factors (high heat? rain?) it'll have to endure.

Turn back to Chapter 5 for much more information about types of screens, and ask your partners for advice in choosing the screen (and to

see if they can get you a good deal). See “The Placement,” below, for more about locating a screen and how that affects screen choice.

Content Management System

As you know by now, content is everything. Your screens aren't there to hang like empty picture frames, after all.

Your CMS is the software infrastructure that allows you to bring content to those display screens.

Choosing one with the [features you need](#) will save you endless headaches in the future and help you use your signage to its full potential.

We cover CMS in-depth in Chapter 4, including features that are important for specific verticals, but here's a quick reminder of the elements you *need* in your CMS.

- ◊ Support of the content file types you intend to use.
- ◊ Compatibility with other software you plan on integrating with your digital signage, such as Enterprise Resource Planning (ERP) software.
- ◊ User accessibility from any device, and the ability to set granular permissions for different users.
- ◊ Strong security features, like firewalls and encryption.
- ◊ High scalability, so that when you're ready to expand your digital signage system, you can do it without difficulty—even if you're going from ten signs to a hundred.

- ◊ And of course, the features that have to do with the content itself. You should be able to create content in the CMS itself, or use familiar programs to create content and easily upload it to the CMS. You should be able to schedule content to appear at certain dates or certain times. You should also be able to choose which content appears on which screens. The CMS should make content localization simple.
- ◊ Built-in widgets for weather, news, or [social media feeds](#). If those fit the purpose of your digital signage, it's much easier to use a built-in widget rather than trying to code your own.

You'll need to decide between a CMS that “lives” in the cloud or one that runs from your own servers.

[We recommend a cloud-based CMS](#) with offline capabilities for most purposes. Why?

First, **it's worry-free**.

You aren't responsible for the cost and trouble of maintaining the servers. Security and software updates are managed by the CMS provider and downloaded automatically. In fact, the provider's security system is probably far more robust than any you could muster.

Second, **it guarantees easy access**.

Since it's on the cloud, you don't have to be at the site of the servers to add content or modify scheduling. Just like you can log into your Google Drive account from any computer, tablet, or [smartphone](#), you can access cloud-based CMS from anywhere.

Third, **it ensures scalability.**

You may have to purchase additional server space and software licenses, but you *won't* have to worry about physically buying and installing additional servers to accommodate increased resource needs when growing your system.

There are certain situations when hosting your content and managing your devices using on-site server banks might make sense.

For example, Healthcare. Although one can argue that a public cloud may be more secure than that of an On-Prem solution, select industries such as Healthcare have additional steps required of CMS providers working in the cloud to ensure data security.

Mounting

The mounting positions the screen at a location and angle where it can do its job best.

◊ **Wall:**

- » **Flush:** The simplest type of mount. These position your screen on the wall so its back is parallel to the wall. You might find these in hallways or behind a welcome desk.
- » **Tilt:** This type mounts your screen at an angle. It might be useful if your screen is located above eye level, such as with a

[digital menu board.](#)

- » **Articulating:** Articulating mounts place a screen at the end of an arm so the angle and direction it's facing can be changed.
- ◊ **Ceiling:** Rather than hanging from the wall, some screens dangle from above thanks to ceiling mounts. I've encountered them at airports—at the gates, there are often ceiling-mounted TVs playing the news.



◊ **Floor Stands:**

- » **Pedestal:** Pedestal mounts rise from the floor. In a large space with walls that are far away, and [especially with interactive screens](#), these can be practical.
- » **Kiosk:** A kiosk [encloses your sign in a casing](#), for aesthetic purposes or to protect it from the elements. They often cost more than basic mounts and may be built out of premium materials to provide visual appeal and greater protection for the hardware inside. They're often designed for specific

purposes. The screen and the enclosure may come as a “package deal,” but sometimes they can be purchased separately.



- ◊ **Specialty mounts:** This isn't a discrete category. Specialty mounts can take the shape of other types of mounts, but they're built with highly specific purposes and environments in mind. They may use specialized materials, like antimicrobial plastic for a kiosk in a hospital. Or, an articulating counter mount in a retail location.

The Infrastructure

You may be adding your digital signage to an existing wifi or you may be running new Cat6 cabling. The use case, connectivity quality, content type, etc... are all determining factors for mapping your infrastructure need for digital signage. If you aren't streaming all your content over wifi, you'll need a robust cabling infrastructure^[143].

Work closely with your vendors to design a cabling system that you won't regret later when you want to add additional screens.

For example, in K12 education in the US, most schools have the bandwidth of an average house, but have up to 200 students online. In a scenario such as this, the system integrator would want to select a CMS that could download or code bundle content during offline hours and then store it on the player device for use later to avoid fighting for bandwidth during busy school hours.

The Placement



Indoor, Outdoor, or Semi-Outdoor?

Don't forget:

Indoor, semi-outdoor, and [outdoor screens](#) are very different from one another, each with special technology specific to its intended environment.

Commercial **indoor screens** might have dust-repellent casing, scratch-proof screens, heavy duty components, ability to be on 24/7, a cooling system, and more.

A **semi-outdoor screen** is indoors, but still exposed to direct/indirect sunlight. The LED semi-outdoor screens usually produce less light because there's natural light in the room. They'll usually have many of the

same other features as commercial indoor screens.

Outdoor screens have special casing and specifications on how much light is omitted so you can still read it in direct sunlight.

They can continue working in extreme heat, cold, wind, etc... though outdoor screens still have limits to their operational temperature ranges, so make sure to check how much heat and cold it'll have to endure at your location.

They may have waterproof coatings on their components and extra-tough glass to stand up to vandals and environmental forces.

Height and Distance?

This is another obvious one, but you still need to think about it, of course: Where will you be putting your displays?

You want to position your screen somewhere it will be seen by the maximum number of people to whom it would be relevant, [at a place where it will be relevant](#). This, of course, ties back to your purpose in installing the displays.

For example, if you had [wayfinding kiosks](#), you wouldn't bury them deep in the heart of your mall—you'd position one at each entrance, and perhaps a couple at intersections of wings of the mall and the food court.

Watch the paths people take through your building and where their eyes are already glancing to determine high-exposure locations. Avoid odd corners and dead ends where people rarely look or wander.

Be sure to take into consideration the ADA height recommendations when placing interactive kiosks within your environment.

Angle

Depending on type of screen and location, you may need to angle the screen. LCD screens become less legible when viewed at an angle, so if you have one mounted high on a wall you might want to tilt it downwards.

Angle can also be addressed by selecting the appropriate screen. If you are in a call center and the viewing angle is not height related but side-view, viewability can be addressed by installing a brighter sign with higher contrast levels.

Light Exposure

Consider the ambient light at the location the device(s) will be installed. As discussed, different types of displays have different maximum outputs. You should also consider possible sources of glare, like nearby windows or spot lighting.

What Questions Should You Ask?

How Big is the Rollout and What is the Footprint?

I know, it's a pretty basic question, but your partners will want to know, and so should you.

Are you looking at three signs in a single location, or 900 signs at 100 locations scattered across the United States?

As you'd expect, rollout for a large number of signs and locations will be more involved than a smaller deployment. Pulling together a heat map by zip code will help to determine logistical planning and rollout partner selection.

Consider one small step: the actual, physical installation of the signs. Just the signs. You may be relying on local contractors to do that. If each of your hundred locations are in different cities, it would be recommended to work with an installation partner that has either staff or contract headcount that can service a project with sites in numerous cities. Keep in mind that rollouts that cross borders into other countries may require procurement within the given countries to ensure that the hardware warranty is covered within the region. It will also cut down in shipping expense and exporting paperwork. The larger the rollout, the more structured your planning must be.

Rather than leaving it up to the IT department in each location (which will lead to slight differences between locations and overwhelmed departments), you'll want project supervisors at the regional and national level, some kind of centralized planning team, and possibly more^[144].

Plus, there needs to be a clear line of communication between the individual locations and the planning team. Floor plans and internet availability might vary between locations, for example.

What's the Timeframe?

Develop a timeline for deploying your digital signage, based on your own

needs, but also information gathered from your potential partners and others in your industry about the timeline of similar projects.

Make sure to factor in time needed to choose components, make a plan for maintaining content, and create the first batch of content. Get regular reports from the team or teams involved in deploying the signage to make sure the project is on track.

You know the adage about how, out of good, fast, and cheap, you can pick two?

That's also true when installing digital signage.

While rushing through planning and installation is possible, it's costly. Not just in money needed to pay those designing and installing your system, but in mistakes and oversights that will need to be corrected later.

Do I Have the Necessary Resources?

Electric

You need to be able to power your signs and players.

Will your locations require significant rewiring in order to accomplish that? Are you likely to overload your circuit breakers? What kind of surge protection is in place?

Internet

According to a recent study of major banks using digital signage (typically in retail banking), *16 percent had [difficulties providing sufficient bandwidth](#) for their systems.*

If you're using the Internet or local VPN to stream your content, you may run into issues with your ISP, who often

limit the amount of bandwidth each customer can use.

Learn your required bandwidth in advance, and get in contact with your ISP to see if your current plan can handle it.

Larger files require more bandwidth to stream.

Standard resolution video takes about 40 MB/minute, whereas high resolution footage (1080i) requires a whopping 140 MB/minute. Your content type the media player selected is key to support the highest quality content for your audience. For example: a media player with 16 gigs will be able to hold the equivalent to about 4 full length movies.

You may wish to invest in a private leased line connection which will allow you to monitor data flow and allocate bandwidth as necessary to high-demand links. This may also increase your data transfer rate, meaning smoother streaming.

Good news! If you're using **local playback**, bandwidth will be less of an issue.

Local playback means that instead of the media player receiving a constant stream of content, the content is received only once and then cached on the media player for playback.

Most enterprise-level CMS will be able to schedule these content downloads for off-hours when the demand for bandwidth is low.

Manpower

Unless you're a true one-person show, you won't be the only one responsible for your digital signage.

Get your team excited about the new opportunities digital signage provides. You'll want **total buy-in and participation at every level** to ensure success.

And I really mean at every level.

If the person at the customer service desk in one location decides that your advertising is too obnoxious to put up with for a whole shift, they might covertly mute or turn off the screen. That's potentially ad revenue lost, or customer confusion generated.

Additionally, recognize that while installing a digital signage network can bring benefits, requires support in the strategy, design, deployment, maintenance and so on.

If you don't have enough manpower resources to allocate you'll end up with stressed employees and subpar content.

Providing sufficient training for those involved in the project and investing in user-friendly CMS will cut down on the difficulties in this area.

You may wish to allocate part of your budget for **paying an experienced person** to manage your digital signage.

Depending on the size of your network this may be a Content Champion/Manager, a graphic designer, and an IT support member for each location if running an on-premise network. Staffing models will vary by size of network, content requirements, and number of screens.

If it saves untrained and overworked employees from spending frustrating and fruitless hours troubleshooting simple problems, it may be worth it.

What are the Details?

As you work out your plan, make sure to assemble all of the information in one place.

You should have a master list that includes:

- ◇ The exact **location** each of your signs will go
- ◇ The **angle and direction** it'll be mounted to face
- ◇ The **model of the mount** itself
- ◇ The **model of each screen** (and its size and any other relevant details)
- ◇ The **type of content** each screen will play
- ◇ The **type of media players** you'll be using and how they'll connect to the screens (velcroed to the

back, hidden in the ceiling, or cabled to a media room 25 ft. or more away)

Aside from that, you should also record the rollout schedule, an itemized budget, your plan for maintaining the signs, and your strategy for producing their content.

Do I Want To Do a Trial Run?

The answer is probably "it depends."

For large, multi-location deployments, it's wise to do a trial run in a select number of locations. You should also pre-define what the definition of a successful pilot is. Once the trial period is over, how is success going to be measured? The number of smiles? Sales? No downtime? You decide, but know the answer prior to the test or it's not worth doing the test.

Any flaws in your planning should show themselves quickly when the project goes from paper to real life.

Plus, it's a great opportunity to get feedback:

- ◇ From your employees, about how easy the signage is to maintain and control, or whether the content is obnoxious
- ◇ From your partners and vendors, about how to make the process of deploying go more smoothly at other locations
- ◇ From the customers, about what they like and don't. Are the speakers too quiet? Is the screen hard to read? Is the touchscreen interface tricky to navigate? Is the advertising too intrusive?

And the above bullets might be your measurement of success! Make sure to apply the definition of success you designed as part of your purpose statement. You may have to adjust your goals.

Try to pick locations where the audience is representative of your average customer.

To Wrap Up

Are you reeling a little from the many things to consider?

I'd encourage you to **think about your purpose** in installing a digital signage system. As we've seen, it'll inform your strategy and decisions in most of the other areas.

With a solid purpose in mind, and good information about your options (found here in this guide, gathered from your provider, or read elsewhere on one of the many Internet resources), the rest should fall into line.

Enjoy your effective signage!

Sources

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