

## Position Paper

# Digital Signage in Government

## How Digital Signs Improve Experiences, Spread Messaging

### Welcoming Screens

Digital signage and interactive screen technology are now routinely built into the “customer journey” of people who use government service centers of all stripes.

Screens are there to keep people in waiting rooms informed about their place in line, as well as raise awareness for new services being offered and any changes in long-standing policies.

It’s the most visible evidence of digital signage in government, but represents just a sliver of what’s possible, and what’s being done, with digital signage in government settings – at all levels, and across all types of venues and circumstances.

This paper looks at how digital signage is helping government agencies better communicate with the public, and behind the scenes for workers and business partners. It also looks at the importance of security and data protection for connected digital signs.

### Many Levels, Many Agencies, Many Characteristics

Government may seem very monolithic, but the activities, services and communications needs of one tier of government – like small cities and towns – can be very different from those at state and national levels. At the national level, how the human services wings of government operate, and what they need, is very different from the various branches of the military.

In short – they may all be government, but their needs, and how they do things, vary greatly, and therefore use digital signage in equally varied ways.

However, in the context of the visual messaging that digital signage is all about, there are two core constituencies:

- **Customer-facing screens** for citizens who pay for and require services, in services centers or public spaces;
- **Internal communications screens** for the people who deliver services, whether that’s managing highway systems, issuing license plates or patrolling borders.

Many government offices don’t look or operate much differently from offices in the private sector, so how they use digital signage is very much the same. But there are aspects of



government-driven digital signage that are unique and important to the day-to-day workings of organizations.

### Everyday Screens

Let’s look at what we see everyday, that maybe isn’t regarded as digital signage, but certainly is ...

**Status Boards** – Most major airports<sup>1</sup> and rail transport hubs are operated by government agencies. Arrivals, departures and gate/track information displays are fundamental to what they do. By integrating with other systems, the departure gate/track screens are getting smarter and more useful – communicating items like airplane seat upgrades and standby request status, destination weather and even boarding procedures.

We’re starting to see status messaging used on subway systems and even local transit routes, with information steadily synchronized with Internet of Things-driven management systems that can estimate when a bus or subway rail car will arrive, based on things like global positioning and traffic speeds. No more leaning and staring down the tracks to see if a train is coming!

Most local and regional governments have open-data policies that enable third parties to ingest, use and display real-time data for their own information needs. It’s effectively free, real-time content that on large public screens answers questions and helps the general public make more informed decisions.

**Waiting Areas** – Government services are increasingly going online, or being offered through self-directed interactive kiosks, but a lot of services still require people to come to a services center or some other form of government office, and then wait. Queue management systems are the modern equivalent of “taking a number” – but offer more capabilities and create some order, by doing things like sorting people by their needs. Increasingly, these systems have migrated from simple LED number signs to digital signage displays that not only show who is being served, and the upcoming numbers, but also informational messages that take advantage of the “dwell time” that people have in wait areas.

## Smart New Screens

Government agencies have long been accustomed to using data sets for status screens, but a combination of technology advancements have made it possible to use screens to provide a vast range of information for government purposes.

Low-cost sensors and wireless connectivity allow the steady update of everything from icing conditions on bridges to moisture levels in farm fields. Inexpensive storage is allowing huge amounts of data to be archived. Software advances and the platforms using them make the structuring, presenting and sharing of data on digital signage (and online) far easier.

Finally, web browser technologies now make it possible to easily “ingest” available data in real time, and present things like dynamic charts and graphics that change on the fly, as the data changes.

What that all delivers, in practical terms, are data-driven visual dashboards for government agencies, and in some cases, for the general public.

Here are some ideas on how that can play out:

**Policing** – Camera-based sensors, and other kinds of sensors, generate data that is translated to graphics that can show anything from developing traffic issues to the state of crowds building in public areas after a big concert or sports event. Instead of eyeballed estimates, sensors deliver counts and heat maps. Real-time visual cues in command centers help police departments make informed decisions about where to position or redeploy resources. Screens are also used to alert first responders of incidents in the field.<sup>2</sup>

**Logistics and Supplies** – Real-time data from management systems helps government services understand things like the state of supplies and available resources – translating what might be on a set of spreadsheets on a computer to status charts that everyone who needs to know – both management and line workers – can see on digital signage screens around a facility.

**Promotion** – Tourism authorities – typically funded by different levels of government – increasingly use digital signage<sup>3</sup> and interactive displays at visitor centers to promote destinations in the area, and enable people to do things like plan trips.

**Smart cities** – Smart cities are about many things, but one of the most visible aspects of smart city initiatives has been digital displays in public spaces offering a variety of capabilities. Often funded by outdoor advertising companies, these screens on

sidewalks and in public plazas usually pair digital ad posters with other capabilities like free WiFi, charging stations or digital directories for local services. Some are linked with emergency services to allow for instant messaging on screens in the event of situations that risk public safety.

Smart city initiatives are not just about advertising, though. One of the most clever and useful smart city initiatives uses LED digital signs mounted around the narrow streets of Montreal, Canada’s oldest districts – making motorists aware, in near real-time, of the availability of parking in nearby garages.<sup>4</sup> Free of advertising, the scores of screens exist to reduce urban congestion and car idling.

**Performance** – Data from management systems in government offices is being translated into charting that shows how organizations are performing against goals and demands – from processing applications to handling inbound calls. Business communicators have repeatedly learned through surveys that a key to workplace satisfaction is ensuring staff know what’s going on and how they’re doing. One recent survey found more than half of workplace employees considered staff communication very important.<sup>5</sup>

**Information and Motivation** – As in the private sector, emails from bosses don’t reliably get opened, and posters and message boards in breakrooms don’t always get read. One of the most effective ways to get messages across to government staffers – no matter the level or branch – are ubiquitous screens positioned in places they can’t be missed. Communicators use them for everything from holiday notices and benefits changes, to celebrating promotions, birthdays, retirements and achievements.

## Locking Screens Down

A digital sign used in government services – from the military and policing to utilities and health care – may tie into or have some sort of connective tissue to sensitive information that hackers want. Digital signage for government therefore needs to be more secure than other, more conventional use cases.

Media players and smart playback devices like system-on-chip equipped signage displays will almost certainly require Common Criteria (<https://www.commoncriteriaportal.org/>) certification – a global standard for privacy protection. Ideally, a smart display, for example, would have Common Criteria approval and technologies in place that allow sensitive data to move safely around networks and devices.

## Ensuring Ease Of Install, Flexibility

WiFi has matured through successive generations, and the benefits of time and experience, to a point that it is safe, secure and reliable for connecting digital signage networks – including those used for government purposes.

WiFi provides a few key items:

- Time and cost savings: Deploying networks happens more rapidly, and with lowered labor costs, when network cabling is no longer required

- Flexibility and reliability: The lack of cabling allows screens to be placed where they're best suited, and not just where network cables are available. Smart screens with built-in WiFi – once a rarity – reduce one of the most common and costly maintenance costs: external connectivity devices that fail, and cables that come loose or disconnect.

## Getting Started

If your government agency or department is just starting to examine digital signage options, here are some things to consider:

**Process and Requirements** – Different levels of government have varying rules and processes for procuring services and technologies. You will want to establish how that works, including the types of companies that are approved to deliver government services.

You also need to establish IT requirements. Most digital signage content management solutions are cloud-based, and the IT teams overseeing network and overall IT security may stipulate service delivery has to be done inside agency firewalls, which may rule out some or many software options.

Also keep in mind the commercial versus consumer displays, or Duty Cycle of signage displays. Consumer screens are being purchased for commercial applications, and that's not the best idea. A few points to consider:

- Most consumer warranties are void if used in a commercial application
- Commercial displays come in 7/16 and 7/24 hour duty cycle

- Commercial displays typically have longer production cycles to ensure replacement functionality is compatible
- Commercial displays are more secure with IR remote and control button lockout features

**Establish and Answer the 5 Ws: Why, What, When, Where and Who** – The Why question is the big one to nail down, but this process of posing and answering basic questions nicely enforces some discipline on your planning and thinking.

What are the main day-to-day challenges of the agency? Is it managing waiting areas? Communicating timely updates? Informing staff?

Once you have a sense of needs and objectives, whatever they may be ...

**Observe** – Visit some other government departments and agencies that match your scale and operating style to see what they are doing. Go with a skeptical point of view. Just because a facility does things a certain way doesn't mean it's the right way, for your facility. What you see may inspire you, or reinforce what not to do.

**Audit Your Data** – Knowing your overall objectives, find out what internal or partner agency data is available and can be used to improve and possibly automate some communications. Signage driven by dynamic data can be hyper-relevant, and using templates that update without human intervention can massively reduce resource requirements.

**Research** – There is no shortage of good information online about government-driven digital signage – with tips on what to do, and stories of smart, real-world applications. Fire up your browser and start reading!

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## Learn more about Digital Signage in Government.

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## Footnotes

1. <https://www.emirates247.com/business/dubai-airports-rolls-out-region-s-first-cloud-based-flight-information-display-solution-2018-05-23-1.669588>
2. <https://www.firstarriving.com/digital-dashboards-fire-ems-police/>; <https://www.link.nyc>
3. <https://www.fourwindsinteractive.com/blog/four-ways-the-travel-and-tourism-industry-can-take-advantage-of-digital-signage>
4. <https://www.sixteen-nine.net/2018/08/09/spotted-smart-city-digital-signage-in-montreal-thats-genuinely-smart>
5. <https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/pages/2017-job-satisfaction-and-engagement-doors-of-opportunity-are-open.aspx>
6. <https://www.commoncriteriaportal.org/>

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