Digital Signage Decoded:
A Playbook for Enterprise IT Directors

An essential guide for IT leaders looking for a digital signage strategy that's easy to integrate and simple to secure, enabling them to deliver a digital experience that defines the future of their organisation.
While HR, Comms and Operations teams all play a pivotal role in designing the perfect solution to meet workforce needs, no digital signage game plan can get off the ground without the active involvement of IT.

And whereas HR and Communications teams generally see the end goals and benefits associated with digital signage, IT directors see the nuts, bolts and technical legwork needed to get there.

You can also understand their sense of caution when facing such a project. For years, digital signage systems came bundled with a mess of problems that IT was usually left to sweep up. They were difficult to integrate into an existing tech stack. They created security risks and new entry points for cyber attacks. They couldn’t load real-time data or HD displays without crashing, and required a lot of ongoing maintenance.

Fortunately, modern platforms are now far more reliable and far less of a burden on IT teams. Digital signage no longer makes their life more difficult; instead, it eases collaboration between teams and makes it possible for other teams to manage, maintain and customise systems by themselves.

For CTOs and IT leaders, it’s an investment that could have a profound impact on the future growth and resilience of their organisation. Many have already been given a mandate to enable an immersive digital ecosystem that underpins the day-to-day experience of their employees.

If that sounds like your business, this is the ideal playbook for you.
The way we live and work is becoming more digital by the day – though all too often it feels like frontline industries are playing catch up to the rest.

From construction to retail, technology has the potential to underpin employee experiences across almost every frontline workplace. Digital solutions are changing the way employers think about operations and communications, making daily processes more efficient and solving issues that businesses previously brushed under the rug.

IT directors understand that transformation never stops, and their department is responsible for keeping their company at the forefront of its industry. Resisting change isn’t an option, which means being prepared to assess the potential impact of emerging technologies and making sure every investment meets short and long-term needs.

77% of frontline workers believe that good communications technology should be standard.

52% of frontline workers would move to another position for better tools and technology.

Source: Deskless Not Voiceless 2021 Meta
Defining your vision

Every business is different, though for IT the journey always starts by defining the needs of their organisation.

What are the short and long-term objectives for implementing digital signage? Is it to transform internal communication or reinforce training, deliver on-site wayfinding or boost employee engagement? And which are considered priorities?

Close collaboration with HR, Communications and Operations is vital because this understanding of wider goals will help shape IT’s own strategy to deliver them. From there, directors and CTOs can start setting crystal clear goals that are directly connected to business outcomes, while also getting a clearer idea of costs associated with hardware, software, content creation, installation and ongoing maintenance.

All of this is vital to determine total return on investment and the feasibility of a digital signage project from a financial perspective.
Industry leaders understand the importance of sourcing and implementing new technologies that yield competitive advantages wherever possible.

IT directors play a central role in this, finding the right solutions that will enable the rest of their organisation to solve key business challenges. They act as the gatekeepers to system infrastructure, quality assurance and data protection, while also monitoring KPIs and aligning budgets to deliver the best possible performance.

Here's a list of common challenges facing IT directors that we'll be digging further into throughout this guide. Which ones are most relevant to your organisation right now?

- Scaling systems as enterprise grows
- Integrating new tech with existing systems
- Cybersecurity issues
- On-site hardware installation
- Network connectivity
- Ongoing demand for support
Seamless scaling

Scalability is a major consideration when planning digital signage investment, especially in larger enterprise environments. Your hardware and software provisions need to accommodate future growth, additional locations and evolving business needs, otherwise they’ll quickly buckle under the pressure of a growing headcount.

Luckily for IT, the capital expenditure involved to cover a company-wide HD screen network is far more accessible compared to what it was five to ten years ago. The bigger challenge lies in choosing the right SaaS solution to manage the complexities of deploying and scaling digital signage across multiple sites and business units – one that allows for centralised and remote management of users, teams and permissions, while also reducing the overall burden on support teams.

"Reliability is everything when it comes to scaling a digital signage system. Many larger enterprises have already had their fingers burnt by outdated legacy solutions that drain IT’s time and resources with constant downtime, error messages and support tickets. Instead, these enterprises require a system that offers seamless remote access and complete visibility over their entire screen network, with as many real-time diagnostics and recovery options as possible. That’s the key to digital signage success from an IT perspective.”

– Mark McDermott, CEO of ScreenCloud
Cybersecurity and network resilience

Screen networks need to stay fully compliant with evolving data protection legislature, and robust enough in their defences to withstand sophisticated attacks and unexpected breaches. Again, your choice of software goes a long way to ease this burden.

Investing in a software solution that automatically updates whenever a new security patch is available certainly helps to cut the risk of intrusions and keep proprietary data protected. The same goes for establishing secure logins, watertight user permissions, automated data backups and encryption facilities.

IT teams should also be able to spot and resolve security issues from any location, alleviating the need for on-site visits wherever possible. This is where instant notifications prove extremely valuable by flagging up issues and threats to network resilience as they happen.

Learn more about how ScreenCloud can keep your digital signage channels safe and secure at all times with a free demo!
The size and spread of your workforce, the nature of your work environment and the existing hardware you have available all play a role in determining the best approach to implementation. Here are a few key points to consider:

**Hardware requirements.** You’ll need to determine the hardware specifications needed for the digital signage project, including display screens, media players, connectivity options, and mounting solutions. Consider factors such as screen size, resolution, durability, and the suitability for indoor or outdoor work sites.

**Network connectivity and bandwidth.** Evaluate the network infrastructure's capacity to support digital signage. It’s important to test bandwidth requirements to ensure there are no issues with content delivery, system updates and remote management.

**Staff training.** Your software should come with an intuitive, consumer-grade UX that makes it easy for employees and managers to use and update. Even so, some initial training may be required to ensure non-technical staff know how to create and share content.
Integration

Over one-third of frontline workers (37%) use at least five apps and digital tools daily to carry out their jobs.²

However, 39% report that the apps don’t help them in their work, and 27% are frustrated by the amount of apps and lack of user-friendliness.³ Whether workers hate or love them, these figures make it easy to see why smooth integration between relevant applications is such a huge advantage from an IT perspective.

After all, a digital signage system is only as strong as the sources of content it can pull visual information from. And between real-time data dashboards, live inventories, HR and comms systems, training platforms and social media feeds, it’s not uncommon to run into compatibility issues.

Top businesses demand smooth integration across their network architecture as standard. Systems should refresh automatically and give managers the widest range of options to strengthen their digital employee experience, while also offering customisation features to suit your needs as a business.

²Source: State of the UK Frontline Workforce 2023, Quinxy
³Source: State of the UK Frontline Workforce 2023, Quinxy
**Interactivity**

Gone are the days where digital signage was simply a way to flick through a series of static wallpapers. Today’s systems facilitate genuine two-way communication between managers and staff, enhancing user experiences and providing an immersive interface that’s simple to master.

The incorporation of interactive elements, scanning functionality and touchscreens now enables employees to actively engage with displayed content, make selections and access additional information whenever they need to. Features such as QR codes are a prime example, allowing staff to interact directly with digital signage with their mobile devices.

Software capabilities today have advanced to the point where achieving a high level of interactivity requires very little input from IT. In fact, it’s often as simple as plugging in the software and letting the interactive training wizards do the rest.

Yet this is only the beginning. Make sure to read on to find out how AI developments will soon lead to a whole new realm of interactivity across display networks.
The ‘missing operating system for screens’ – ScreenCloud OS

One of the biggest pain points for IT when implementing digital signage is finding the perfect software to power their screens.

The vast majority of OS and hardware pairing options aren’t well-suited for enterprise needs or complex deployments. This quickly leads to problems with performance, regular downtime, security issues and severe limitations for those in the control room.

Many IT managers will also be wary of the lengthy process of installing apps and setting optimal configurations for each and every device across a company-wide network. Finding the right hardware partner to meet our expectations was therefore a crucial factor, which is why we opted for Firefly’s Station P1 Pro media player after extensive testing.

Setup Time Comparison (1 device)

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What makes ScreenCloud OS different?

ScreenCloud OS (SCOS) is a custom, Linux-based operating system we’ve developed to deliver the best digital signage experience. Here are the core benefits that set it apart from other options on the market:

**Designed for enterprises.** SCOS is intentionally designed to be simple to install and cost-effective to deploy across a large network covering multiple work sites. It also automatically updates whenever we upgrade to a new patch.

**Plug and play.** With SCOS, there’s no need for lengthy manual installation processes. Instead, deployment is as simple as plugging in pre-loaded configurations from a USB flash drive.

**Remote device management.** SCOS allows you to stay in control of your entire network of devices, no matter where you are. IT teams can quickly review status, change settings and reboot devices without needing to visit on site locations.

**Performance.** The Station P1 Pro device is powerful enough to play the most demanding Ultra HD and 4k content from virtually any source. It’s equipped with ethernet and high speed WiFi capability, as well as a 32GB cache of media files if ever the connection drops.

Learn more about ScreenCloud OS [here](#)!
The transformative impact of AI

With artificial intelligence comes massive opportunities for digital signage and spatial computing – here are a few key things to look out for.

Right now, screens are predominantly used to broadcast information and support employee experiences by funneling visual content to strategic locations. Web connected displays are already seen as a key cog in communications and data management strategies; though human involvement is still needed to source, share and schedule the right type of content at the right time.

AI interfaces will soon open the door to more sophisticated experiences and advanced interactivity between humans and hardware. As digital signage evolves to gain an even greater understanding of its audience and environment, displays will be able to adapt on the fly and offer highly personalised experiences across an entire organisation with ease.

“AI in digital signage is all about context. Screens that understand who the user is, where they are, what their job is and what’s happening in their work environment will be able to enrich experiences to a whole new level. Face and voice recognition will open up countless ways to interact with screens and bring tech to life in the workplace. Web connected displays will be able to customise and self-correct themselves depending on informational input. And it’s all going to happen sooner than we think.”

– Mark McDermott, CEO of ScreenCloud
The low-hanging fruit

While some aspects of AI will no doubt take time to develop, there are a number of quick wins from which companies should be able to benefit sooner rather than later. Here are a few examples:

**Translations.** Frontline industries often have a diverse workforce demographic that speaks multiple languages. AI can enable quicker, more accurate language translations so that important messages can be understood by 100% of your workforce.

**Facial and voice recognition.** AI-powered facial recognition can be used to automatically identify and display personalised messages to individual staff. For instance, a screen at the entrance of a break room could display rotas, holiday allowances and other information specific to an individual member of staff.

**Resource availability.** Frontline staff in industries like manufacturing and construction may be frequently waiting for equipment, material or other resources to perform certain tasks. AI interfaces can keep staff updated at all times as soon as a resource is available, creating more efficient workflows and resource planning.

**Real-time analytics.** AI algorithms can be used to draw analytics from inventory and delivery management systems to display real-time data dashboards to frontline staff. This type of intelligent content display enhances the relevance of information to targeted teams and individuals.
Deliver top-tier digital transformation with ScreenCloud

We can help your IT team plan and implement a digital signage network of powerful, connected displays with ease – and it doesn’t need to break the bank either.

Get in touch with our friendly team to discuss your challenges and book a quick demo with one of our digital signage experts today. You’ll see for yourself how simple ScreenCloud is to use, as well as the impact it can make across your organisation.