

# The Neuroscience of Visual Media



**ScreenCloud**

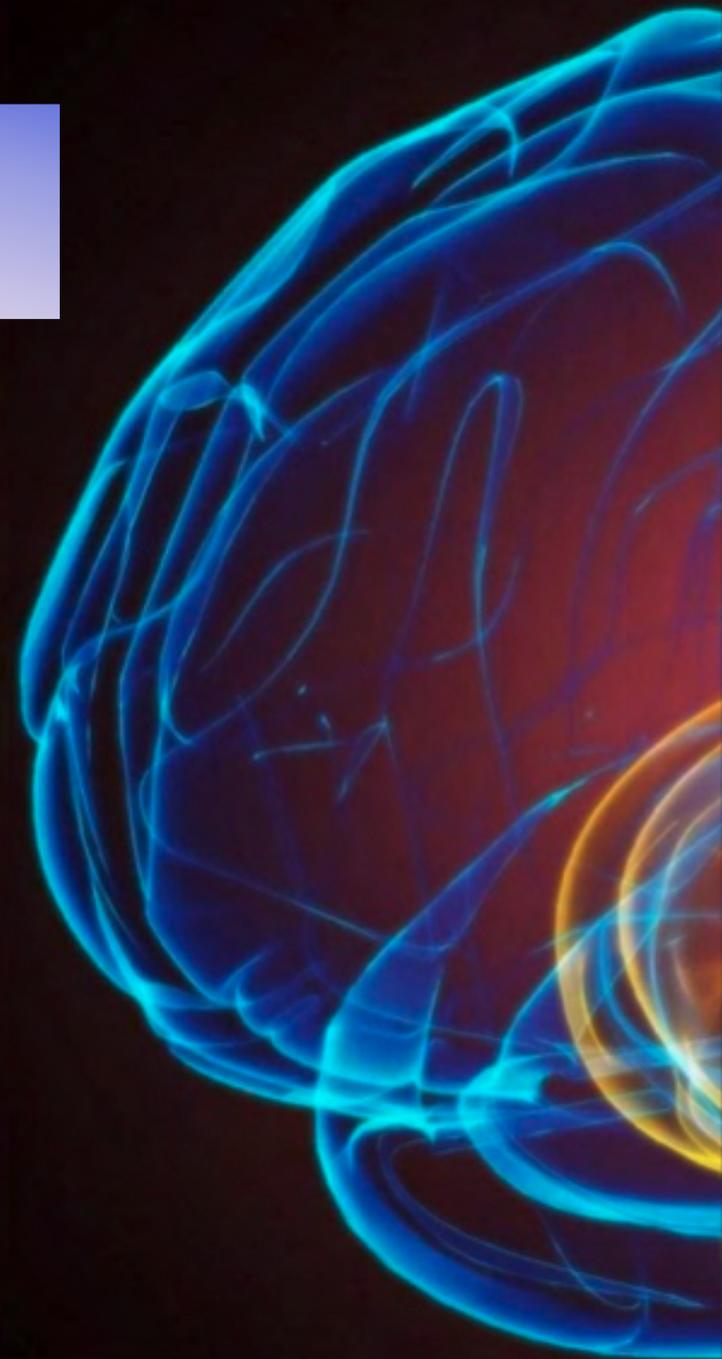
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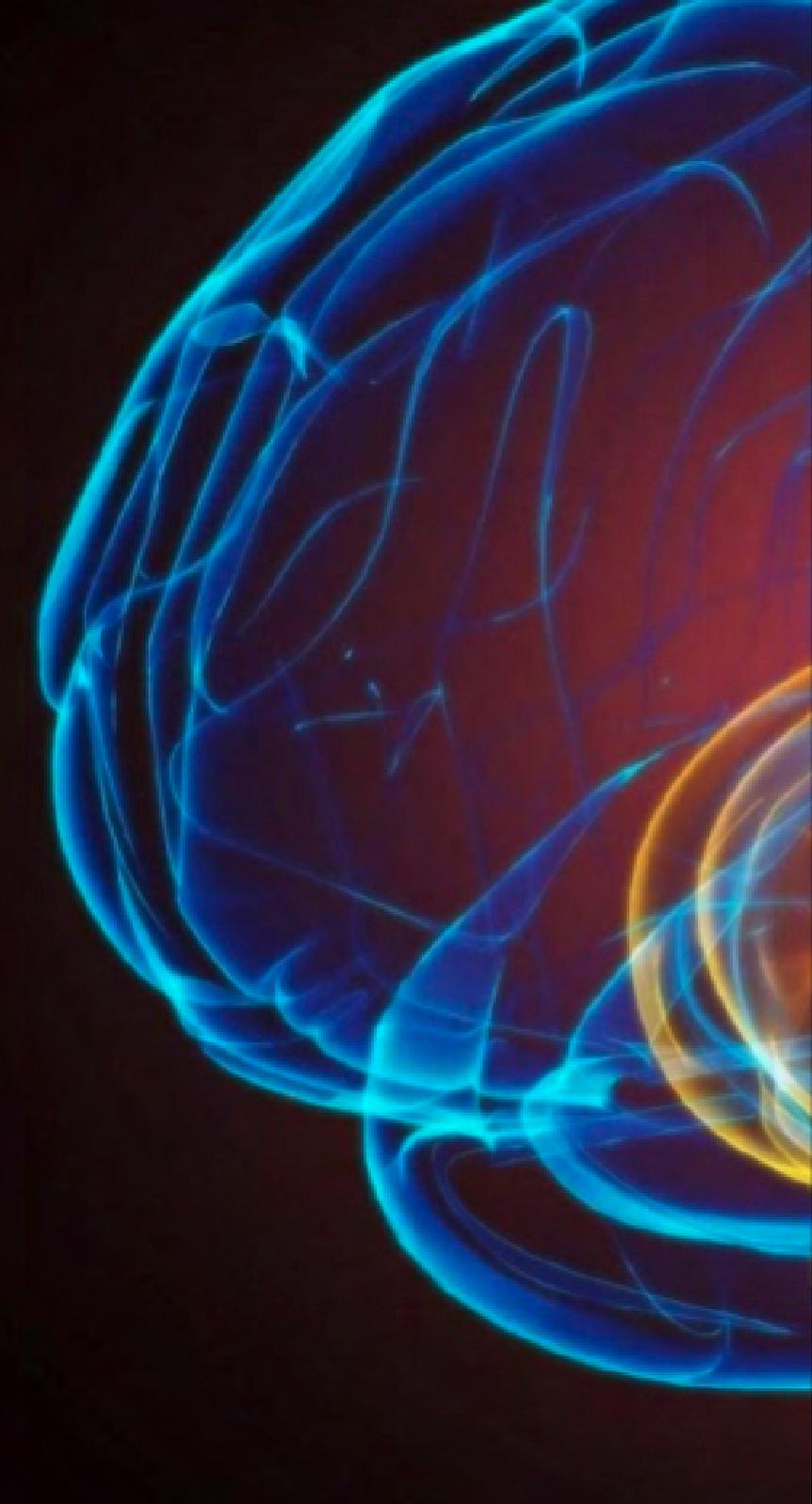


This eBook explores how content across various devices and display sizes is received by your eyes, and how your brain processes and remembers the things you see.

People – including your employees, of course – are visual creatures. Engaging them at work starts with empathy; understanding why and how they crave and process visual content, and where this content is best delivered or signposted (spoiler alert: on screens).

We partnered with University College London experts to build a science-backed business case for including digital signage as part of your internal communications mix.





# A Brief History of Internal Communications

Employee Engagement & Company Performance

While Human Resources (HR) traditionally operated as a 'defensive' function, seeking to command and control; modern practitioners recognise the link between a happy workforce and company performance. Internal communication sits at the core of influencing your workforce's happiness.

‘Engagement’ became the name of the game after the paper ‘From People to Profits, the HR Link to the Service-Profit Chain’ was published in 1990.<sup>1</sup>

The research showed that enhancing employees’ psychological contract with their employer was key to everything from customer retention to boosting sales.

Now, over 50 definitions of employee engagement exist, and HR and Communications professionals across most industries have firm seats at the strategy-setting table.



# Connected Companies

Clear and compelling internal communication not only facilitates a core functional understanding of any company's various moving parts – it keeps its people feeling connected to each other, and to something bigger.

So if HR understands the immense value of engagement, and is able to leverage email and the plethora of connected messaging apps and tools out there... why do so many employees feel detached?

⚠ Over 80% of the world's workforce is deskless. They likely lack a company email address and access to digital devices.<sup>2</sup>

The opportunity to share information and updates or even deliver praise or birthday wishes isn't

equitably provided across the entire workforce. Why should the 20% of desk-based workers have a monopoly on meaningful, wellbeing-enhancing work experiences?

## **Deskless employees require a unique engagement strategy.**

A 2021 whitepaper by Firstup shows only 22% of the global workforce feels engaged at work.<sup>3</sup> This group includes at least some desk-based employees who can be more directly communicated to, but for a variety of reasons, just aren't resonating with the message or narrative.

## **The bottom line**

**Employee engagement demands closer attention, and a stronger focus on the deskless workforce is long overdue.**

# Is Inbox Zero Unattainable?

Traditional digital tools like email can be overwhelming, even for the desk-based 20%. In the Firstup research, nearly three quarters of office employees reported missing out on important company information, yet less than half confirmed they'll open and read emails from internal comms.<sup>4</sup>

Clearly, employees are suffering from the over-reliance on email as the primary channel for digital workforce engagement.

## It's a Sign: Digital Signage is the Answer

The medium is just as important as the message! At ScreenCloud, we're advocates for digital signage becoming the nucleus; the central digital touchpoint for deskless workers.

Screens (that most organizations already have on their walls) enable informative, engaging narratives of all kinds to gain and sustain the desired traction for improving individual and collective outcomes.

**But what should they show?**

# Methodology

The aim of this eBook is to unpack the ways people process visual media. Specifically, our goal is to uncover to what degree varying screen-based devices and display sizes are viewed and processed differently by the eyes and brain.

To inform their research partnership with ScreenCloud, UCL referenced an existing study that saw a company in California swap out email comms with screens across all offices for the duration of the 20 month study.<sup>5</sup>

The status quo was to share information in two ways:

- Via 'send to all' (perceived negatively or as irrelevant)
- Within specific subgroups (which meant some employees missed out on relevant updates)

During the study, anyone could post to the screens, which were placed in common and 'high foot traffic' areas.

Inspired by this study, and leveraging UCL's world-leading neuroscience expertise, we'll now prove that large display screens have an advantage over other means of sharing content.

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# **Workplace Spatial Awareness**

**Establishing the basics:  
How people interact with  
visual media at work**

# Not all visual media are created equal

The physiological properties of the human eye affect how our brains process, analyze and retain visual information.



## How the eye works

When we look at something, light rays pass through the pupil and project onto the surface of the retina. Photoreceptors then convert the light into electrical impulses before sending them to the brain.

What's key for employee engagement is that the stimulation of the visual cortex directly correlates to the display size of the images. This has implications for how effectively differing visual media compete for a share of employee attention.



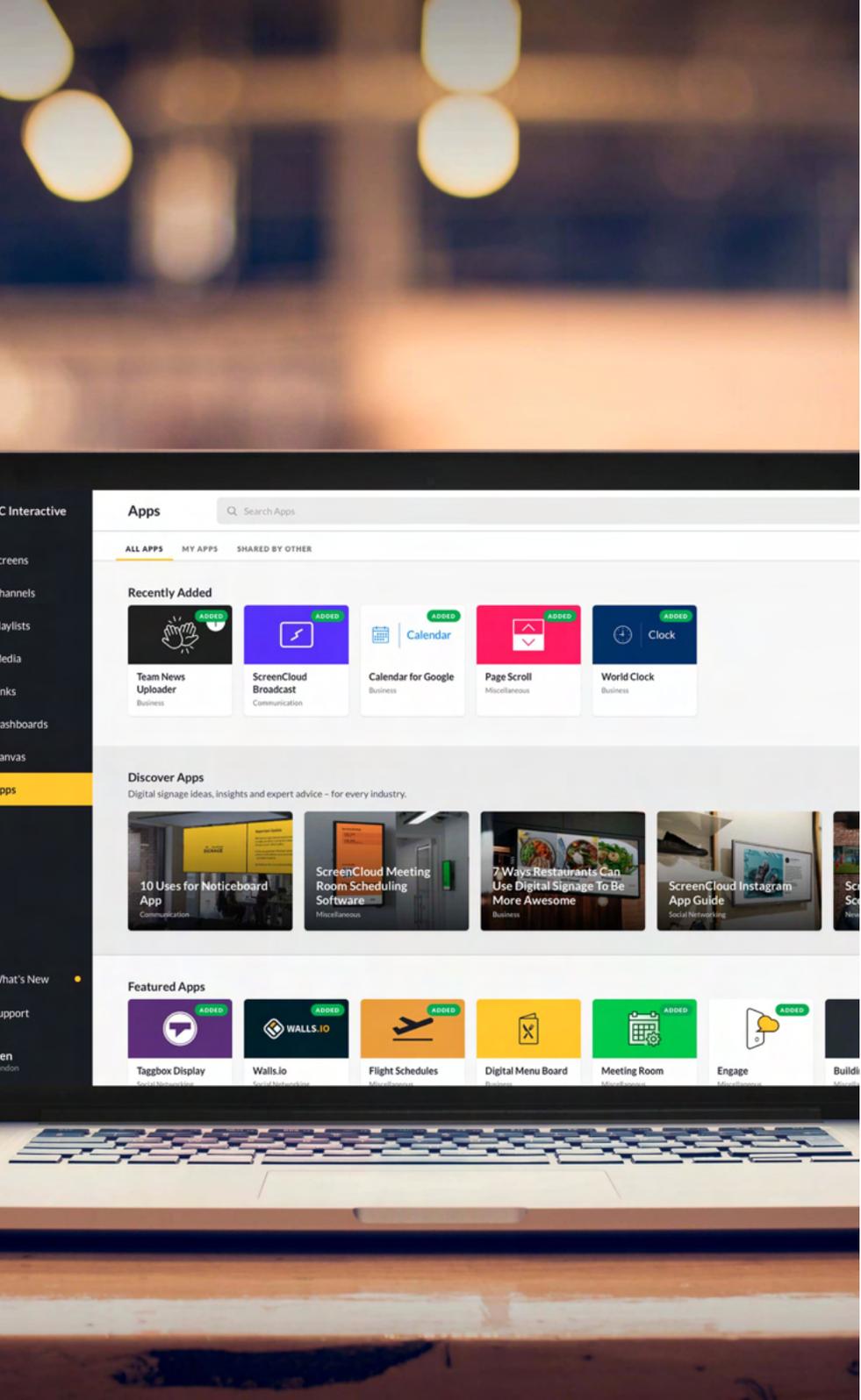
## Easy on the eyes

Our visual attention is focused on eye-catching content, literally.

Elements such as high-contrasting colors, high spatial frequency visuals, and motions and flashes, are all attention-grabbing. This stimulation results from 'bottom up' eye movement; the sort of attention you want to grab for announcements and emergency messaging.

Conversely, 'top down' eye movement stems from intrigue; the type that impacts memory and fixates on content including concepts, words, and/or structured, contextual elements.

⚠️ HR and Comms teams take note – visual media that stimulates both bottom up and/or top down eye movements is the content most likely to be noticed, consumed, and remembered.



## The ‘illusion of depth’

Picture a laptop on your desk, and a screen on the opposite wall of the room. Both fill the same amount of space in your view, but the mounted screen commands the lion’s share of your cognitive energy (regardless of content).

! Digital signage is a powerful medium for attraction and retention (of attention!) in both office and deskless environments.

# Study Highlights

Before we deep dive into our research findings, let's check out some of the most actionable outcomes for HR and Comms. All outcomes are neuroscience-backed!

## **What the neuroscience says:**

**Variations in content and size have different consequences for learning, memory and engagement**

**The brain will devote more visual cortex to processing a larger display than a small screen**

## **What it means for employee engagement**

Content on a digital signage display is more likely to be acknowledged, understood and retained

Curating focal points in working environments dedicated to relaying information should be a key part of your employee engagement strategy

# Why Our Brains Love Screens

Digital signage complements how people store and recall information and stories.

# To be truly memorable, content must be easily encoded and easily retrieved.



## Memory encoding

The act of integrating information into our memory system through automatic or effortful processing.

⚠️ Make sure information is being transmitted effectively. A broad email is unlikely to infiltrate an employee's memory trace.



## Memory Retrieval

The triggering or boosting of employees' memory recollection, or contextual memory, via a sequence of cues that recreate what was experienced when the memory was encoded. The clearer and more specific the cues are re-instantiated, the greater the chance of recall.

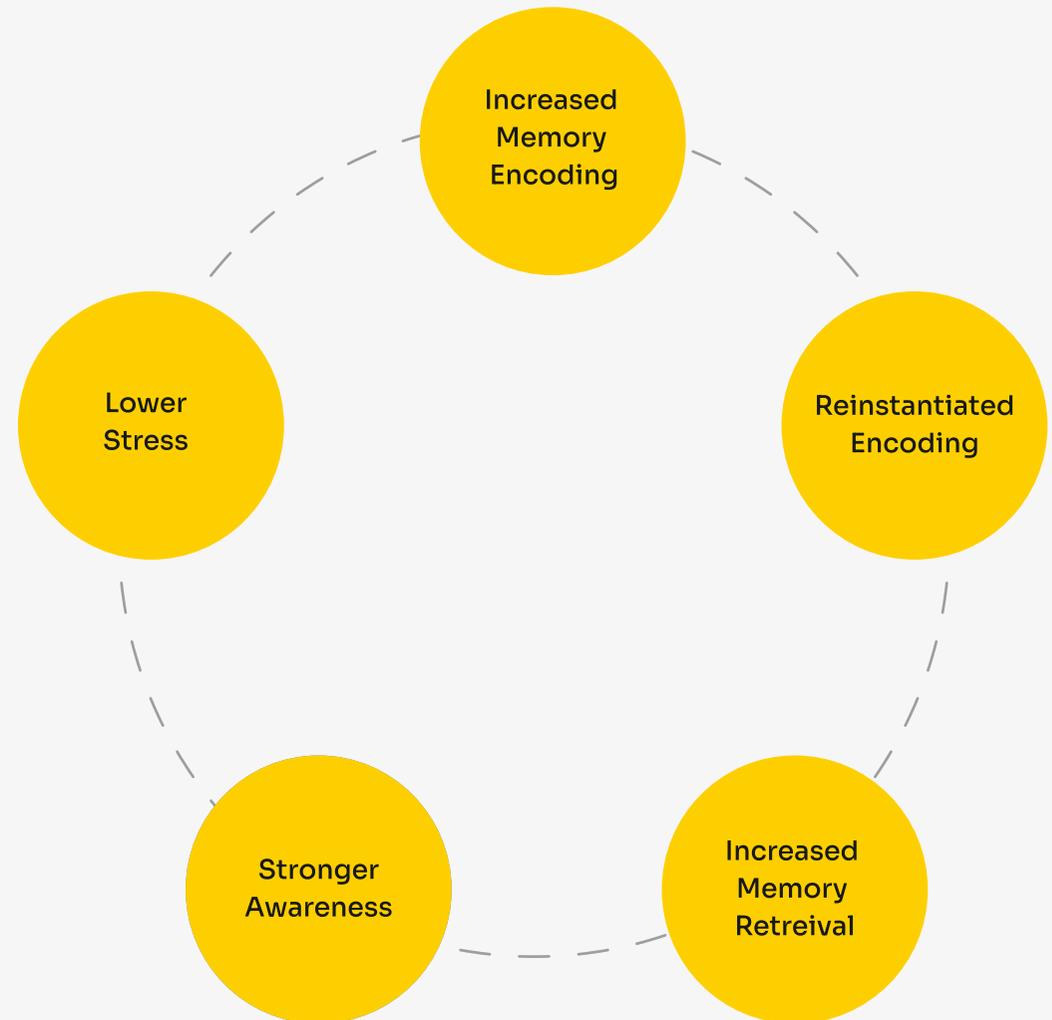
⚠️ Top tip: Displaying curated, repeated information on screens around the workplace with bold, bright visuals will help with memory retrieval.

## Good content keeps memories fresh

The hippocampus – where memories are encoded and retrieved – plays a crucial role in absorbing spatial information, like location, associated with memory.

When employees experience high levels of stress, the hippocampus stops processing memories.

The good news? Well-designed content displayed on screens can have a virtuous cognitive cycle (as seen to the right), reducing the risk of memory loss.



# Passive VS. Interactive Visual Media

Employees process the same information differently at various levels of involvement.

# Interactive may not always be better



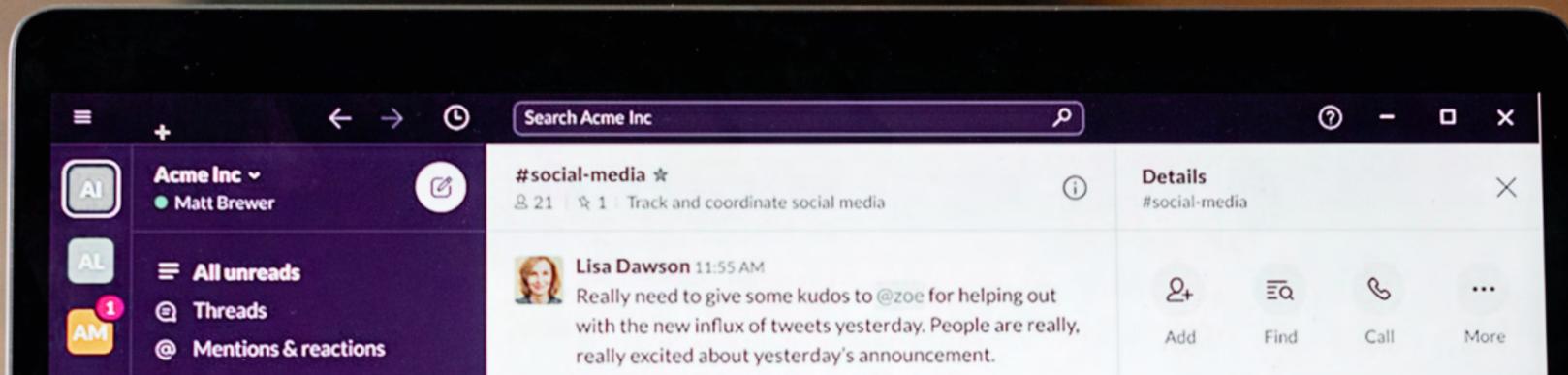
## Passive Media

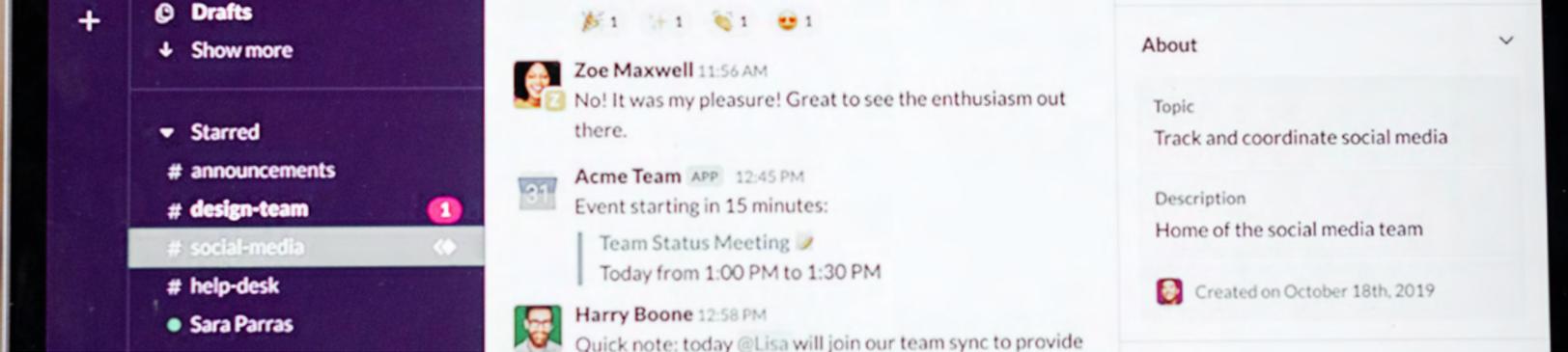
Media displayed in the workplace typically includes things like printed manuals and reports or posters on notice boards (all static). If the type of messaging is purely informative, passive is often the go-to option.



## Interactive media

This demands employee action – e.g. tapping on push notifications or following hyperlinks on a phone or computer. In moderation, it can be a useful way to prompt engagement.





## When employees consume too much interactive media, they may experience:



**Mental strain:** extra information/demands require active engagement and switching between tasks



**Forced multitasking:** negatively impacts cognitive wellbeing and performance

When multitasking, even your best employees' cognitive processing may be up to 40% slower.<sup>6</sup> Moving between emails, Slack, WhatsApp etc. incurs a 'switch cost' and dip in productivity.

⚠️ While other internal comms tools and interactive media play important roles in certain HR use cases, 'overload' is real.

It's possible to reinvigorate the cognitive value and impact of these tools by pairing them with digital signage.

# Seeing the Signs

When it comes to employee engagement, digital signage ticks all the boxes... and more.



In a competitive talent landscape, HR professionals in all industries are concerned about workforce planning. From increasing awareness of promotion or job change opportunities to enabling potential candidate referrals to increasing benefits uptake, effective use of visual media helps fill vacancies quicker and retain high performers.



**Ginni Lisk | VP People, ScreenCloud**

## **ScreenCloud; say it with a screen**

ScreenCloud is designed to maximize the improvements in employee engagement, cognition and recall achievable by digital signage.

It's the medium your organization's message deserves!

To sum up, digital signage with ScreenCloud helps you to:

### **Elevate message cognition**

The illusion of depth means digital signage powerfully attracts viewer attention, elevating the perceived significance of what's on-screen.

Interactive media forces employees to multitask, which causes mental strain. As digital noise increases in the workplace, the 'ambient messaging' of digital signage acts as a focusing agent.

Enhanced attraction and increased focus are a powerful combo!

## **Increase the impact of comms**

Deskless workforces typically don't have access to emails and phones for instant comms, with many company emails or newsletters having poor opening rates. ScreenCloud:

- Eliminates the reliance on email for company comms, ensuring business-critical information is in front of the right people at the right time
- Automates content workflows with screen-ready designs and app integrations, enabling auto-creation or -curation of content across the whole business
- Broadcasts almost any content type imaginable to targeted teams and locations or company-wide, all from a centralized plug-and-play platform that connects with and amplifies the use-case of your favorite worktools

## Enhance performance by connecting screens to existing systems

ScreenCloud supports a wide variety of business needs and goals. Excellent cognition, retention and recollection of information are the building blocks of an engaged workforce, and have a massive impact on organizational performance.

Our screens play nicely with the tools you know and love, and broadcast operational data and insights directly to your team. For example, viewing PowerBI production data on the factory floor or inbound delivery schedules in a regional distribution center.

Learn how to share what's important to every corner of your organization – using dashboards →





**ScreenCloud**

## About ScreenCloud

ScreenCloud is a Software as a Service (SaaS) company that powers digital signage for over 8,500 organizations.

By using the screens on their walls & the content in their systems, ScreenCloud enables the sales, productivity & engagement that keeps businesses thriving.

**Contact Us:** [hello@screencloud.com](mailto:hello@screencloud.com)

Harness the power of digital signage across your workplace and create a more connected workforce.

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