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Applying Behavioral Science to Enhance Messaging Through Digital Signage: Insights for the Deskless Workforce

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September 2022

Executive summary

The following report was created by the **Behavioural Science Team at Durham University**, in partnership with **ScreenCloud**. The aim was to explore the psychology underlying the use and effectiveness of digital signage as a means to communicate with **deskless workers**. Organizations are increasingly using screens to communicate with these hard-to-reach employees — on the manufacturing floor or in healthcare, retail, and in various other industries — but there has been little research looking directly at how to effectively engage employees in this way.

The idea of engaging with employees with **video screens and digital signage** around the work environment is a fascinating one, in part because few people have investigated it from a psychological perspective. We know a good deal about the **cognitive processes** that drive decision making, how to influence and *nudge* **behaviors**, and what **motivates and engages people at work**,

but few people have combined these ideas and applied them to the deskless workforce.

The following aims to consolidate existing research across a variety of fields and apply it to the deskless worker context. In this endeavor, we have identified **six key behavioral insights**, based on behavior science and psychological theory, that can help organizations engage their workers. These insights are presented in this report, along with **case studies and recommended best practice** for those looking to effectively engage workers with digital signage.

Broadly, the report concludes that digital screens within organizations have the potential to be a hugely influential way to reach this underserved group of employees. However, not all internal communication is created equal. This report will guide organizations on how to strategically use screens to drive employee engagement.

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Introduction

Organizations know their strategies, their products, and their problems - and they know their workers. They know the importance of employee engagement as a key component of successful strategies and products, and a key part of the solution to their problems.

In a world of work where it's well established that communication is fundamental, understanding not only what we must say, but how / via which medium we say it, is critical to the success of any business. Technology now enables leaders to connect with every worker, at every level, in a way that was simply impossible in the past. For the deskless worker, the ability to channel key messages through digital signage presents the possibility of providing new ways to maintain, foster and grow working cultures within - and importantly, beyond - head office sites.

Services such as ScreenCloud provide the tools to get content to workers in a visually engaging, dynamic way. But is there something in that space between content creation and *delivery* that can enhance the impact of digital messaging even further?

The psychological and behavioral sciences offer some unique insights in this sphere – some subtle, seemingly inconsequential, but potentially highly effective ways of framing messages that can enhance their impact and influence.

In this white paper, we seek to provide some answers to these questions from the perspective of the behavioral sciences, arguing for the benefits of a digital *and* behavioral messaging strategy for the deskless worker, particularly in a manufacturing context. By combining insights from the behavioral sciences with ScreenCloud's technology, we can accentuate the impact of digital messaging and provide an all-round comms solution — merging the *psychological* with the *technological*; the *screen* with the *science*.

In what follows we:

- Draw upon a body of research to explore, evaluate, and recommend behavioral messaging approaches that can enhance employee engagement and are specifically amenable to delivery through digital signage.
- Review key behavioral messaging principles and illustrate how they can be applied to drive employee engagement for the deskless worker, particularly in manufacturing and production settings.

- Argue that companies need to take a behavioral science perspective on internal communications - and that behavioral messaging techniques are specifically applicable to delivery via digital signage.
- Provide a practitioner-oriented explanation of the psychological processes explaining how these messages impact employee engagement, with a particular focus on health and safety, productivity, risk avoidance, and compliance.

Anatomy of the Deskless Worker

Over the past few years, much of the world has undergone substantial changes to how we approach work. The communication technologies that employees make use of have advanced rapidly, the adoption of hybrid and home-working has grown exponentially. More than ever employees are seeking a sense of value, purpose, and engagement from their employers.[1] Yet, despite representing a clear majority of the global workforce, deskless workers are often overlooked.

[1] https://www.gartner.com/en/articles/employees-seek-personal-value-and-purpose-at-work-be-prepared-to-deliver

Who Are the Deskless Workforce?

The *deskless workforce* is composed of employees who do not need to attend (due to the nature of their jobs), or are unable to access, an office environment regularly. While for many employment consists of spending time at a desk, working on company-issued devices like a computer, the reality is that work looks nothing like this for the majority of the workforce.

In industries like healthcare, W2, logistics, construction, retail, and transport, deskless workers are the norm rather than the exception, and constitute a significant proportion of many companies' overall headcount. However, when it comes to understanding and enacting the sort of best practice that drives employee engagement, these workers are critically neglected in both research and practice.

This represents both a missed opportunity and a major area of potential benefit for organizations - fostering a sense of engagement among deskless workers should be viewed as a performance imperative. These digitally detached workers are often responsible for essential tasks that are critical to organizational success, and the value of employee engagement is very well established across various different professions. In fact, engagement has been one of the most prominent topics in management research in the 21st century. It's been linked to employee well-being, employee retention, customer satisfaction, safety culture, and performance[2], to the extent that researchers generally accept that it provides organizations with a tangible competitive advantage.[3]

[2] Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. *International Journal of Management Reviews*, 19(1), 31-53. https://doi.org/10.1111/ijmr.12077
[3] Schneider, B., Yost, A. B., Kropp, A., Kind, C., & Lam, H. (2018). Workforce engagement: What it is, what drives it, and why it matters for organizational performance. *Journal of Organizational Behavior*, 39(4), 462-480. https://doi.org/10.1002/job.2244

What does that competitive advantage look like in practice? Gallup found that companies with top-quartile engagement scores recorded 70% fewer safety incidents than bottom-quartile businesses and reported 20% higher sales and 21% higher profits.[4,5] In an analysis of 7,939 business units across 36 companies published in the prestigious *Journal of Applied Psychology*, researchers established statistically significant relationships between employee engagement and productivity, profit, accidents, turnover, and customer satisfaction.[6] In an large-scale study of hospital staff, researchers found that not only did engagement predict staff safety, wellbeing, and absenteeism, but it also directly predicted patient mortality.[7] Given the strength and extent of this research,

whether it's in manufacturing, healthcare, or any industry, the lack of investment and focus on engaging deskless workers is a startling oversight.

This lack of focus on deskless workers is made doubly frustrating by the fact that this group faces a number of unique engagement challenges. Inflexible schedules and limited paid leave are a threat to work-life balance — some 48% of deskless workers report having considered quitting their job in the past year.[8] Many deskless workers are less likely to have direct contact with their supervisors on a daily basis, and due to lack of access to email or other communication technology, they are even less likely to hear directly from senior leaders.

A recent survey found that 70% of deskless workers reported that improved technology would help them do their jobs better.[9] That these communication limitations should be significantly detrimental to engagement is not surprising; research has shown that senior leaders within an organization have a uniquely important role in fostering employee engagement.[10]

4 Rigoni, R. & Nelson, B., (2016). Engaged Workplaces Are Safer for Employees, *Business Journal*. Retrieved from https://news.gallup.com/businessjournal/191831/engaged-workplaces-safer-employees.aspx.

5 Dagbo, J. & Acuna, S. (2020. Company Culture: Private Equity's Intangible Value Creation Lever, *Workplace*. Retrieved from https://www.gallup.com/workplace/316883/company-culture-private-equity-intangible-value-creation-lever.aspx.

6 Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of Applied Psychology*, 87(2), 268-279,.

7 West, M., & Dawson, J. (2012). *Employee engagement and NHS performance*. London: King's Fund.

8 Quinyx, The State of the Deskless Workforce 2021. Available from: https://www.quinyx.com/deskless-workforce

9 Emergence, The State of Technology for the Deskless Workforce (2020). Available from: https://www.emcap.com/technology-for-the-deskless-workforce-2020/

10 Peus, C. (2011). Money over man versus caring and compassion? Challenges for today's organizations and their leaders. *Journal of Organizational Behavior*, 32(7), 955-960. https://doi.org/10.1002/job.751

These challenges are even more apparent in the manufacturing sector, which accounts for 5% of all workplace injuries and 8% of all workplace fatalities in the United States.[11] However, despite the importance of engagement when considering workplace health and safety, only 25% of manufacturing employees are highly engaged, trailing the national average by 8%. [12]

As a result, voluntary turnover rates in the sector are nearing 30% — the highest they've been in over a decade.[13] And as we've established, a lack of engagement is directly associated with higher turnover, lower productivity, and reduced safety compliance behavior.[13]

11 Retrieved from https://www.cdc.gov/niosh/programs/manuf/risks.html#:~:text=An%20estimated%2013%2C455%2C000%20workers%20in,and%208%25%20of%20workplace%20fatalities.
12 Swift, A. (2017). 5 Keys to Boosting Workplace Culture in Manufacturing, *Business Journal*. Retrieved from https://news.gallup.com/businessjournal/218549/keys-boosting-workplace-culture-manufacturing.aspx
13 Bureau of Labor Statistics, Job Openings and Labor Turnover - July 2022. Retrieved from chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.bls.gov/news.release/pdf/jolts.pdf
14 Hu, X., Griffin, M., Yeo, G., Kanse, L., Hodkiewicz, M., & Parkes, K. (2018). A new look at compliance with work procedures: An engagement perspective. *Safety Science*, 105, 46-54. https://doi.org/10.1016/j.ssci.2018.01.019

The Role of Behavioral Science

Given this lacking focus on employee engagement levels within the deskless workforce, and considering the long-established evidence of the clear performance benefits it provides, there's a strong imperative for companies to invest in this area. However, the lack of research and focus on this segment of workers has led to a lack of documented best practice — *How do we increase engagement among deskless workers?* In addressing this important question, the field of behavioral science can offer companies a great deal of valuable guidance.

Behavioral science has had a prominent influence across many areas of society in recent years. The fundamental idea in the field is that by understanding the psychological processes that underlie human decision making, one can effectively enable people to better reach their goals. This approach has been indispensable in designing effective public health and sustainability campaigns, but also in working toward more productive and engaged workforces.

We can draw some particularly important guidance from the Behavioral Insights Team in the UK, aka the 'Nudge Unit'. When attempting to influence attitudes and behavior, they suggest making it **Easy**, **Attractive**, **Social**, and **Timely** (EAST).[15] This simple framework has informed thousands of nudges and behavioral change programs and is relevant for informing the design of digital content to engage employees. This is a good starting point when considering any sort of internal communication to influence employee attitudes and behaviors.

As with most corporate communications — and especially with digital signage — companies will only have a very short window of opportunity to influence their employees' behavior.

15 Behavioural Insights Team (2014). EAST: Four simple ways to apply behavioural insights. *Behavioural Insight Team*, London.

Make it **Easy**	**Make it** **Attractive**	**Make it** **Social**	**Make it** **Timely**
Allowing people to 'go with the flow' by removing or reducing effort, steps, choices, to make action simple and effortless	Presenting benefits in a way that maximizes perceived value. This includes increasing the salience of your offer	Harnessing social / peer 'pressure' by showing desired behaviours are supported by others in a social group and encouraging shared commitments	Prompting when people are likely to be most receptive and structuring / phasing benefits to make them more immediate

Time and attention are limited, and employees may not have the capacity to stop what they're doing and carefully read complex messages. This is doubly true with deskless workers.
As they move around the factory floor, or the hospital, or the warehouse throughout the day, often in strenuous jobs that require their undivided attention, companies may have only a few precious seconds to engage and influence these employees in that moment.

Hence, applying the principles of behavioral science to digital signage in the workplace — using our understanding of psychology to effectively and efficiently engage and influence employees — is a hugely promising approach to increase productivity and profits.

The Essence of Engagement

How organizations connect with, and thereafter engage, their workforce is increasingly seen as a pivotal part of running a successful organization. Even the best business strategy will fail without the right relationships in place between management, the organization, and its workers. For the many 'deskless' workers with no access to company email or messaging tools like Slack or MS Teams, this communication can be achieved through digital signage.

How can we most effectively engage workers who have little interaction or use for email and may only fleetingly view a screen on their way to or from the factory floor, canteen, or restroom?

By leveraging insights from behavioral research on what makes messages memorable, engaging, and impactful, we aim to provide a clear, compelling, and distinctive set of recommendations for organizations seeking to maximize the value of digital signage for their work cultures. To start, let's drill down to fundamental human motives.

The human brain has evolved, at its most basic level, to do one thing: Ensure *survival*. To do this, it needs to construct a model of the world that is stable, coherent, and most importantly, *predictable*.

This need to create a predictable model of our world is an innate drive, evolved and honed through the course of human history. For instance, being able to predict which animals we can eat, and which animals would eat us, meant that our ancestors could navigate the world safely and live long enough, and be healthy enough, to pass on their genes. After basic physiological needs – air, water, food, sleep, sex – the psychological need for stability, structure and security is pivotal to predicting behavior. Consider the major life goals we strive toward: financial security, safety, health. There is an extensive global

industry devoted to providing insurance in all these areas. Achieving this stability, structure and security is arguably the single most important drive we have,[16] and doing so effectively and efficiently is fundamental.[17]

With this in mind, it is easy to understand why effective communication is central to organizational culture: Effective communication makes people feel part of a larger support structure, it connects them to each other and creates a sense of collective identity; it provides a clear set of norms, rules, and values to guide behavior. It informs, and it removes uncertainty.

So, what then enhances the effectiveness of messaging, and crucially, what makes messaging relevant to individual workers' sense of commitment to the company rules, culture, and values? Below we discuss six tips, tricks, and recommendations for enhancing the impact ofdigital messaging based on the core motives of the human social brain.

Relevant Research:
Social Exchange Theory

Human behaviour involves a complex cost-benefit analysis — we consciously or unconsciously weigh the risks and rewards of each action. This includes decisions at work.

- *Is complying with this safety protocol worth it?*
- *Should I put in that extra 10% effort to meet a deadline?*
- *Should I report an unsafe situation?*

Companies can use digital signage to tip the scales by demonstrating that certain behaviours are recognized and appreciated.

Source: (Cropanzano & Mitchell, 2005)

16 Crisp, R. J. (20XX). The Social Brain: How Diversity Made Modern Mind.
17 Fiske, S. T. and S. E. Taylor: 1991, Social Cognition. (Random House, New York)

Behavioral Messaging: Best Practices for Enhancing Engagement

The following is split into six key behavioral insights that are the most relevant to understanding how digital signage can influence and increase engagement among employees. Each section reviews a key concept from the behavioral sciences, shares some relevant evidence from research and case studies, and explores how the concept applies to digital signage.

Processing Fluency:
Go with the Flow

Framing:
Everything is Relative

Avoiding Abstraction:
Create a Clear 'Script' for Behaviors

The Just World Bias:
Understanding Consequences

It's the Norm:
Strength in Numbers

Us vs. Them:
Bridging the Divide

As discussed above, our brains value efficiency: We seek out information that is easy to process and fits with our existing knowledge, and we avoid complex information that may be difficult to process or make us question our existing beliefs. [18] Well-framed messages are easy for people to understand and remember.

Alternatively, we tend to avoid putting in the cognitive effort to process complex, convoluted, or hard to understand messages. At a fundamental level, messages that we 'get' right away make us feel safe and secure in our understanding of the world. This is because the sensation that comes with high processing fluency is how our social brains detect safety and security: it's that feeling of familiarity, and as an evolutionary rule of thumb, this is highly adaptive.

This need for processing fluency operates at the most basic level: we even have a broad tendency to dislike shapes or numbers that seem out of place or sequence. [19]

Research on processing fluency has been applied to marketing, to business names, and to finance. [20] Appeals that are high in '*processing fluency*' play to the core of what our brains are trying to achieve. Messaging that enables processing fluency are better remembered, make people feel more positively, and are more likely to be perceived as true. [21]

18 Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, 2(2), 175-220. https://doi.org/10.1037/1089-2680.2.2.175

19 Rubin, M., Paolini, S., & Crisp, R. J., (2010). A processing fluency explanation of bias against migrants. *Journal of Experimental Social Psychology*. 46: 21-28. doi:10.1016/j.jesp.2009.09.006.[20] Schwarz, N. (2004).

20 "Metacognitive Experiences in Consumer Judgment and Decision Making". *Journal of Consumer Psychology*, 14, 332–348.

21 Reber, R., Winkielman, P., & Schwarz, N. (1998). "Effects of Perceptual Fluency on Affective Judgments". *Psychological Science*, 9, 45–48.

Importantly, delivering messages in a consistent and easily processed way will over time allow you to convey a wider variety of messages effectively. If the context remains consistent (i.e., the fonts, colors, layouts, images, etc.), processing fluency can remain high — even if the content of the message itself changes — allowing employees to engage with more complex messages when necessary (e.g., important safety announcements).

With digital signage, companies may be advised to stick to the messages and images that are familiar (at least in their style of delivery) to employees. Our brains have evolved to seek safety, stability, and efficiency, so we're unconsciously drawn to, and receptive toward, messages that feel familiar to us and are easiest to process. Companies should take advantage of our psychological understanding of these cognitive processes to deliver messages that are engaging and effective.

Relevant Research:
Repeated Exposure

Marketing professionals have long observed that being exposed a brand's advertising multiple times (*repeated exposure*) improves attitudes toward the brand. However, Janiszewski and Meyvis (2001) show that this actually relates to *processing fluency*. Because they're already familiar with the brand or its product, people can process the advert more efficiently, which in turn makes them more receptive to it.

By designing messaging to be easily processed in the first place, we can achieve the same result without the need for endless repetition, which can lead to information fatigue.

👍 Best practices

- Using **less text** and **larger, simpler fonts**
- Using **alliteration** or **rhyme** to create memorable messages (e.g., NHS Blood and Transplant created a very successful campaign to promote blood donation with the alliterative/rhyming hashtag *"Make a #DatetoDonate"*)
- **Align text and images** — Sustainability announcements on a green background, health and safety information using familiar, safety-related imagery (See *Example in Practice* on following page)
- **Focused use of numbers** (e.g., Present only one statistic at a time to avoid increasing processing complexity)
- **Use as few words as possible** — Use a traffic light system (red = stop, yellow = caution, etc.) or other familiar imagery in place of words

This Covid-19 messaging from the UK government is a great example of processing fluency. Minimal text, simple language, and the colours are intuitively familiar (same as a UK ambulance). People unconsciously register that the message is safety-related and urgent.

In Summary:

- Easy to process communication is viewed more positively
- Easy to remember statements are more likely to be perceived as true
- Easy to read statements have a greater impact on attitudes
- Process fluency gives the impression of familiarity and cohesion with our existing beliefs
- Time-pressed deskless workers may therefore be more likely to process simple, familiar, and consistent messaging, which in turn makes it more likely to influence their behavior

Of course, effective communication is down to more than just how the content is presented in design terms. The same information can be interpreted differently depending on how it's framed. For example, people tend to be overly influenced by the *first thing they see* such that it changes the interpretation of subsequent information. This '*primacy effect*' can produce some seemingly irrational behaviors. For instance, in one of the earliest studies of social bias in the 1950s, participants were provided six attributes and asked to make a judgement about a person.[22] One group was given these attributes in this order: *intelligent, industrious, impulsive, critical, stubborn, envious.*

A second group was given the same list but in the opposite order: *envious, stubborn, critical, impulsive, industrious, intelligent.* If people always follow rational, logical processes then the impression formed should be identical in both cases - but it was not. The group given the second list were much less positive than the first. In the first case 'Intelligent' was weighted more, in the second 'Envious' was weighted more. Numerous studies have confirmed the operation of this priming or framing effect and helped us understand how it works. It's not simply that people forget or don't notice the later information. Rather how the later information is perceived changes: 'stubborn' can be seen as a positive quality following 'industrious' but a negative quality following 'envious'.

22 Asch, S. E. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology*, 41, 258–290.

19

Another common and influential consideration is whether to frame information in terms of loss or gain. Which sounds healthier: a frozen yoghurt that's 20% fat or one that's 80% fat-free...? A good deal of research tells us that losses tend to be felt more strongly than gains.[23] However, workplace communication that's entirely focused on risk and loss is unlikely to have a positive effect on employee morale! As such, balance is critical, and matching the framing to the desired outcome is key so as to drive the intended associated behaviors and responses. The simplest way to approach this is to decide whether your goal is *promotion or prevention* focused. Is the outcome you're hoping to achieve focused on growth or development? Do you want your employees to do something more often? Are you hoping to increase commitment and engagement? Then a more positive, gain frame makes sense. However, if your desired outcome is oriented around safety or compliance, a loss frame may be the answer.[24] Humans are risk averse by default, so framing your message in a way that highlights personally relevant risks / potential losses may be the most effective approach.

Example in Practice

Countries around the world have created advertisements depicting graphic car crashes, like the one above from Northern Ireland in 2010. They effectively use a loss framing by highlighting what meaningful things the offender may lose (driver's license, freedom, or their life). This is an effective approach for a mandatory safety/compliance issue like safe driving - where a prevention focus is essential.

23 Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263–292.
24 Cesario, J., Corker, K. S., & Jelinek, S. (2013). A self-regulatory framework for message framing. *Journal of Experimental Social Psychology*, 49(2), 238-249.
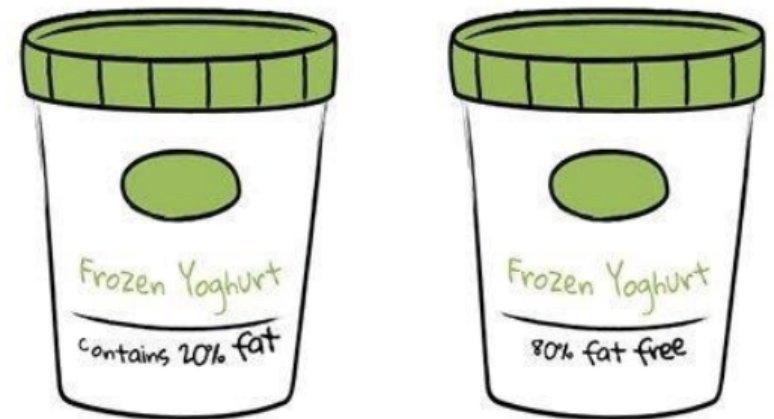
👍 **Best practices**

1. **Take advantage of the primacy effect** — share the most important information first / at the top of the screen
2. **Consider either a loss or gain frame.**
   A 90% success rate sounds much better than a 10% failure rate. Change the framing depending on the message you want to convey

   a. Losses tend to be more influential than gains in our decision making.
   A loss frame may be the best choice for communication related to compliance or safety, whereas a gain frame may be a better choice for growth or development related messages

To navigate a complex world, the human brain relies on what psychologists call *schemas*. These represent a sort of mental script we can follow when we encounter any given situation. We carry these scripts around with us – they adhere to the same basic principles as outlined for framing effects, but they are more detailed and complex, stored in memory, and activated when we encounter specific situations in our everyday life that trigger them. Scripts are, in essence, behavioral routines that we've learned as 'actors' in our social worlds. Think of all the scripts that kick in during daily life: driving, going to the supermarket, cooking a meal from a well-memorized recipe. Next time you see traffic creating a pathway to let an ambulance through, think about what is happening – everyone in every car knows precisely what they need to do in that situation. It is a socially shared script that kicks in in response to a specific environmental cue (the ambulance siren).

We rely on scripts all the time - they help us cope with uncertainty and provide a readily accessible guide to how we should behave. Uncertainty inhibits action (and goes against everything the social brain is trying to do to establish a stable, predictable world), so giving people new behavioral scripts - clear, memorable steps to go through — makes it more likely they will perform the intended behavior even when they are faced with competing demands for their time (e.g., busy, hungry, tired, stressed…). For the deskless worker, an example might be avoiding abstract health and safety messages such as simply 'stay safe' (which is a warning) and instead providing step by step actions that should be taken (which is an enabler of autonomy) – ideally at a specific time of day, at a specific place (and even better in partnership with specific co-workers – see Norms section to follow).

Example in Practice
Scripting

Consider the message that's commonly seen on digital highway signs around the world: "Tiredness Kills. Take a Break". This is an example of providing a **clear, unambiguous, and concrete behavioral script**.

Perhaps you've also encountered a radar speed gun that displays a smiley face when you're under the speed limit or a frowning face when you're over. This is even more concrete. **People instantly recognize facial expressions of approval or disapproval.** This instantly conveys that one should either continue or stop doing what they're doing. There's even an element of social norming too: the "faces" convey an emotional judgement in a way that simple text instructions can't. Further, this **eliminates potential language barriers**.

Consider using emojis or similar approaches to convey emotion along with important health and safety information.

👍 **Best practices**

- Break information down into **step-by-step guidance**
- Each step should be narrowly focused and **easy to visualise, remember, and achieve**
- Use **specific and concrete language**

Consider the famous "Smokey Bear" campaign from the U.S. Forest Service (see image below). In the first poster, we see a clear visual of an intended action (pouring water on a fire). Further, it provides specific and measurable benefit that will result from this action (90% reduction in forest fires). In the second poster, we see a powerful example of processing fluency, discussed earlier in the report. By alluding to the famous World War 2 Uncle

Sam recruiting posters ("I want YOU for U.S. Army"), the Smokey poster conveys (possibly unconsciously) a sense of duty, service, and action that many would associate with the military. This relates clearly to the behavior the poster is aiming to influence. In the third poster, the image clearly conveys a specific and concrete loss (destroyed forest, homeless animals). The same core safety message — "Only YOU can prevent forest fires" — is repeated consistently across each poster (repeated exposure). One might even argue that the outdoorsy, workman-like, blue jean-wearing, shovel-carrying Smokey could be viewed as a role model (in spite of him being a bear, of course!) — creating a powerful social norm. This campaign was well before its time and a tour de force of behavioral science-based visual messaging. Its lasting power illustrates perfectly just how powerful signage can be when influencing safety-related behaviors, at work or otherwise.

In Summary:

Messaging should be **specific** and relevant to **individuals**. Abstract arguments and generic features aren't remembered nearly as well as **concrete benefits** and **specific actions**. What specific steps should employees follow? How will this benefit them personally? The above analysis suggests that putting concrete numbers on the benefits that are specific to individuals' local environments is likely to be an effective persuasive approach.

Peoples' behavior is constantly influenced by *social norms*. These norms represent values, actions, and expectations that are implicitly and explicitly established by individuals, groups, and societies. Again, it comes back to our social brains trying to efficiently make sense of a complex world — we can rely on social norms to guide us through a variety of situations without a huge amount of cognitive processing. Fitting in is just cognitively easier. Social norms draw on our in-built desire to be included.[25] Because social norms are

so essential, they are also one of the most effective ways to influence behavior.[26] From childhood through old age, we observe what those around us are doing to guide our own behavior. Social norms influence our health and safety behaviors (like handwashing).[27] They can also make people act more sustainably,[28] reduce gendered violence,[29] and even pay their taxes on time.[30]

And of course, all these ideas are easily applicable to organizations and employees.

When people talk about 'workplace culture', what they're really talking about is a set of social norms that guide employees' behavior (workplaces are, after all, societies of sorts). However, norms can guide behavior on the interpersonal level as well — we tend to seek out leaders and role models we admire or with whom we connect personally. These individuals can stimulate similar behaviors, as can the simple knowledge that other people are behaving in a particular socially / morally desirable way.

25 Baumeister, R. F., & Leary, M. R. (2017). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Interpersonal Development*, 57-89.27 Reynolds, K. J. (2019). Social norms and how they impact behaviour. *Nature Human Behaviour*, 3(1), 14-15.

26 Reynolds, K. J. (2019). Social norms and how they impact behaviour. *Nature Human Behaviour*, 3(1), 14-15.

27 Dickie, R., Rasmussen, S., Cain, R., Williams, L., & MacKay, W. (2018). The effects of perceived social norms on handwashing behaviour in students. *Psychology, Health & Medicine*, 23(2), 154-159.

28 Sparkman, G., & Walton, G. M. (2017). Dynamic norms promote sustainable behavior, even if it is counternormative. *Psychological Science*, 28(11), 1663-1674.

29 Lemay Jr, E. P., O'Brien, K. M., Kearney, M. S., Sauber, E. W., & Venaglia, R. B. (2019). Using conformity to enhance willingness to intervene in dating violence: A Theory of Planned Behavior analysis. *Psychology of Violence*, 9(4), 400.

30 Hallsworth, M., List, J. A., Metcalfe, R. D., & Vlaev, I. (2017). The behavioralist as tax collector: Using natural field experiments to enhance tax compliance. Journal of Public Economics, 148, 14-31.

Examples of how social norms can simulate action include:

- **Provide relatable and/or admired role models**
- Provide **descriptive norms** describing the number of other people carrying out the behavior
- Highlight **dynamic trends** (e.g., "A *growing* number of people …")
- Positively frame the information by emphasizing **contextually high numbers** (e.g., "98% of employees wear proper personal protective equipment"), the **relevance** of those others (e.g., your family and friends) and **immediacy** (e.g., people in *your team*)

One thing you could do to increase the effectiveness of internal communications is provide a wider range of individuals described. Identification with the "**model**" (i.e., person featured in the message) is an incredibly powerful way to create social influence.[31]

Best Practice

Provide visual examples of individuals who workers view as *similar to themselves* demonstrating a desirable behavior or attitude. As an added benefit, social norms can be easily demonstrated on digital signage without written text, which can be beneficial if employees have different levels of language proficiency.

Personalization & Self-Relevance

When leveraging social norms in digital messaging, it's essential to make the message as personal and relevant as possible to the employees you're targeting. For example, a trial at a major bank in the UK found that employees were significantly more likely to donate to charity if an email request from the CEO included their name (as opposed to "Dear Colleague").[31]

31 Abrams, D., Wetherell, M., Cochrane, S., Hogg, M. A. & Turner, J. C. Knowing what to think by knowing who you are: self-categorization and the nature of norm formation, conformity and group polarization. *British Journal of Social Psychology*. 29, 97–119.
32 Team, B. I. (2013). Applying behavioural insights to charitable giving. London: Cabinet Office.

This very small element of personalization (seeing your own name on the screen) makes the social norm suggested by the role model (the CEO) that much more powerful. In another great example, including a handwritten post-it note on envelopes sent out by the Revenue Commissioners in Ireland more than doubled the response rate.[33] There are many other examples where simple, low-effort personalization like this influenced norms and behavior.

🔍 Relevant Research:
Social Norms

Rushton and Campbell (1977) conducted a study where they asked participants to interact with a friendly woman, who was actually an actor. They were asked to complete an unrelated task together. Then, as the participant and the actor left the lab together, they were asked if they would make a pledge to donate blood. When the actor was asked first and signed up to give blood, 67% of participants also agreed. In contrast, when the participant was asked first, only 25% agreed to give blood.

Lesson: Even witnessing a near-total stranger do something can heavily influence our behaviour. **Social norms are immensely powerful!**

33 Hernandez, M., Jamison, J., Korczyc, E., Mazar, N., & Sormani, R. (2017). Applying Behavioral Insights to Improve Tax Collection.

Of course, digital signage can't address every employee individually. However, there are many ways in which visual messages on screens could be personalized and made more relevant to targeted employees. For example, one might tailor messages to cohorts based on their location, or to smaller teams or business units, and in doing so be sure to specify that the message is intended for that group — such targeted approaches should be more effective at establishing norms than a one size fits all approach. This also highlights the value of intermingling more social announcements like birthdays, anniversaries, promotions, or other forms of peer recognition.

In a sense, when thinking about how powerful a social norm might be, it's useful to consider applying a lightbulb analogy. You might increase the *number* (more bulbs = brighter), the *strength* (higher wattage = brighter) and or the *proximity* (closer to the wall = brighter).

For example:

1. Consistent and continuous communication (a great strength of digital signage) should enhance influence — with a large **number** of screens conveying the same message, the influence potential of the social norm will be magnified.

2. Respected role models (i.e., the CEO, another interaction that's made possible by digital signage) can have an outsized influence — because they are a senior figure with authority in the organization, the **strength** of the norm will be stronger.

3. Local team leaders can effectively influence social norms within their teams — they're closer to their team members (in the literal sense, but also in terms of professional status), so their influence should be stronger due to its **proximity**.

🔍 **Example in Practice**
Attentional Spotlight

One of the reasons social norms are so powerful in changing behavior is because of **normative influence** – the awareness that others are viewing our behavior and may disapprove if we violate expectations. This is **highly relevant to health and safety**: We all know we *should* adhere to heathy and safety rules, but when we're busy or tired or don't think anyone's watching, our motivation to conform might waver.

Engineering firm Ramboll trialed placing small mirrors at construction entrances with the message, "Who is responsible for safety today?" at the new headquarters for Carlsberg Group in Copenhagen. The mirrors **turned the workers' "attentional spotlight" onto themselves** — they viewed themselves from someone else's perspective. This motivates us to conform to important group norms. **Zero accidents occurred** on site duration the project.

The same effect could be achieved by showing images of team members or colleagues on screens. By **personalizing H&S messaging** in this way, it becomes a social norm rather than just an instruction.

Source: Construction News

Of course, there are many potential ways an organization could use digital signage to convey a social norm. By focusing on maximizing the **number, strength, and proximity** of the message or the messenger, companies can maximize their influence.

Most people think that good things happen to good people and bad things happen to bad people.
This basic belief in a 'just world' is the direct result of the social brain's imperative to reduce uncertainty and create a model that is predictable and maximizes survival chances (in an evolutionary sense). Importantly, most people also think they are good (the 'better than average' effect). [33] This means that when people consider actions that may have negative consequences for them (e.g., health and safety violations, absenteeism, procrastination, bullying, etc.), they may be less likely to feel that the consequences will ever apply to them, because they see themselves as inherently good (and thus, deserving of good things). Even with communication and clear messaging, they may still be less inclined to think they'll suffer any consequences — e.g., *"that stuff happens to other people, but not to me"*.

Because we understand the mechanism underlying this effect, we can effectively reverse it. By ensuring we frame the message to ensure identification with the actions/role models featured, we can grab attention and facilitate engagement. This is because if you're looking at someone who you think is similar to you, and bad things are happening to them, this means (in a just world) those bad things *could* happen to you.

34 Zell, E., Strickhouser, J. E., Sedikides, C., & Alicke, M. D. (2020). The better-than-average effect in comparative self-evaluation: A comprehensive review and meta-analysis. *Psychological Bulletin*, 146(2), 118-149.

👍 **Best practices**

- Include images of people (i.e., role models) who are **similar to the people you want to influence** — *"If the consequences are relevant to this person, they could be relevant to me."*
- **Build empathy** among colleagues promoting birthdays, anniversaries, and other informal accomplishments. Research shows that **empathy can reduce the just-world attitude** that "bad things happen to bad people."

There's an element of **cognitive dissonance** here too. When other people commit these infractions, they deserve the punishment. But when I do it, there must be a good reason.

Our 'social brain' is that part of us that helps with forming and maintaining social relationships. We use our social brain all the time, whether it's interacting with our family and friends, driving to work, playing sport, or teaching a class. It helps us navigate our social world, determine friend from foe, and avoid awkward situations.

Crucially, it's also that part of us that determines how we interact with colleagues at work. Our social brains organize and compartmentalize the world into boxes, categories, and silos to create meaning and structure and reduce uncertainty. On the one hand, this is exactly what the brain is designed to do: simplify, clarify, and classify the processing of (huge amounts of) social information. This helps us create engaging messaging in a working context. People crave inclusion into a salient social grouping and the certainty this brings.[35]

So how do we approach this fundamental aspect of human behavior from an employee engagement perspective?

Well, engaged employees trust their organization and their colleagues. Think back to the concept of *Social Exchange Theory* we covered earlier — companies can establish a sort of psychological contract with employees, where employees trust that their employer will act in a certain way toward them, and they will respond in kind. This underpins what within the HR profession is referred to as the 'psychological contract' employers have with their employees.[36]

35 Tajfel, H., & Turner, J. C. (2004). The social identity theory of intergroup behavior. *Political Psychology* (pp. 276-293). Psychology Press.
36 Goler, L., Gale, J., Harrington, B., & Grant, A. (2018). The 3 things employees really want: Career, community, cause. *Harvard Business Review*, 20. Retrieved from https://hbr.org/2018/02/people-want-3-things-from-work-but-most-companies-are-built-around-only-one

With trust as the goal, companies can work toward developing a **shared identity** with their employees. What do we stand for, both as individuals and as a collective? To do this, companies can focus their internal communication on highlighting **common causes** that everyone is working toward, together.

So, companies can use screens to deliver individualized content (depending on location, job type etc. as referred to previously) and they can use screens to cultivate a culture of collective engagement where everyone shares the responsibility to promote productivity, compliance, and reliability.

Research has shown that in a range of different contexts another way to enhance a sense of trust and community engagement is to elicit *perspective-taking*. Common organizational approaches to building perspective taking are cross-training [37] (where employees spend some time training / working with a different team or business unit) or increasing manager contact, where senior team members join other employees 'on the floor', so to speak.

👍 **Best practices**

- Use collective language to **create a shared identity** — More "us" and "we", less "they" and "you".
- Be conscious of cultural differences to **avoid creating subgroups** or alienating certain groups of employees. Take time to understand cultural differences within the target population (surveys, focus groups), and **use images to convey information** when possible, to avoid language challenges.

[37] Marks, M. A., Sabella, M. J., Burke, C. S., & Zaccaro, S. J. (2002). The impact of cross-training on team effectiveness. *Journal of Applied Psychology*, 87(1), 3.

While these approaches are effective, they can also be costly and inefficient. Digital screens provide an excellent opportunity to replicate these strategies more efficiently.

For example, sharing messages from employees who work within other teams can be a great way to enable perspective taking and create a sense of collective identity. Imagine a hospital setting, for example: the hospital might put an image of a nurse on the screen, thanking surgeons for submitting their charts in the appropriate format.

While taking only a few seconds to read, this may prompt doctors to take the perspective of the nurses. It could also help create a shared identity, where everyone on the ward is working together toward the goal of effective patient care. An example like this could be applied in nearly any context — digital signage makes perspective-taking simple to nudge, and research has demonstrated that perspective-taking can increase employee positive attitudes, leadership, and innovation,[38] while reducing bullying and sexism.[39]

Screens also provide a great opportunity to make employees feel closer to senior leaders in the organization. Including pictures of a CEO or Director, along with a simple message or quote, can facilitate vicarious contact that has been been shown to promote organizational identification and engagement.

[38] Grant, A. M., & Berry, J. W. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective taking, and creativity. *Academy of Management Journal*, 54(1), 73-96.

[39] Mendoza, S. A., Skorinko, J. L., Martin, S. A., & Martone, L. E. (2019). The effects of perspective taking implementing intentions on employee evaluations and hostile sexism. *Personnel Assessment and Decisions*, 5(2), 7.

Finally, one key takeaway from the idea of perspective-taking is that digital transformation in HR and internal communications initiatives shouldn't just be about the messages you want to convey — it's equally important to take the perspective of employees and think about the messages they want to hear. Trust is absolutely essential to everything we've discussed so far. Leaders must put themselves in their employees' along with a simple message or quote, can facilitate vicarious contact that has been been shown to promote organizational identification and engagement.[40]

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communications initiatives shouldn't just be about the messages you want to convey — it's equally important to take the perspective of employees and think about the messages they want to hear. Trust is absolutely essential to everything we've discussed so far. Leaders must put themselves in their employees' shoes to understand what messages and imagery will resonate with them.

User generated content, or 'bottom up' requests for internal communications content can strengthen the psychological contract between employee and employer, which can in turn create a more engaged, committed, and productive workforce.

[40] Meleady, R., & Crisp, R. J. (2017). Take it to the top: Imagined interactions with leaders elevates organizational identification. *The Leadership Quarterly*, 28(5), 621-638.

Relevant Research:
Imagined Contact and
Organisational Identification

In a 2017 study published in Leadership Quarterly, Dr Rose Meleady and Prof Richard Crisp demonstrated **that even just imagining a positive interaction with an organisational leader increased organisational identification** among employees.

In a follow-up study, participants who reported identifying more strongly with an organisation were **more likely to take part in voluntary extra-role behaviours** that were beneficial to the organization — exactly what you'd expect from an engaged and committed employee.

Example in Practice
Find the Right Messenger

The impact of messages can vary widely based on our feelings toward the sender. Do we trust them? Love them? Identify with them?

Behavioral science consultancy Spoon Agency worked with global construction company Skanska. They developed an effective safety compliance campaign using short films of employees' children, parents, or partners expressing to them how important it was for them to return home safe each day. Employees were then given stickers for their helmets with similar messages from their own loved ones.

Digital screens offer a solution to present similarly **personalized messages from high-impact messengers** in various contexts.

Source: Manufacturing Management

Conclusion

By understanding the underlying psychology that applies, and following established behavioral insights, digital signage may provide a uniquely effective way to reach deskless workers.

As evidenced in various other contexts, a range of relatively small scale but targeted behavioral 'nudges' can prove highly effective at influencing behavior. In some sense, digital screens in the workplace are an ideal way to deliver this nudging behavioral influence.

When it comes to overt updates and important 'short window' communications, screens can reach people where they are with the urgent updates they need. When thinking about longer-term, culturally embedded HR and internal communications strategies, screens also have

great potential to deliver content in a way that increases the chances of having sustainable impact on employee engagement.

In this report, we have proposed a range of behavioral tools to maximize attention, engagement, and compliance. It is important to note that these insights are not 'tricking' people into doing something they don't want to do; rather, they work to *mitigate the behavioral barriers* (e.g., tiredness, stress, haste, uncertainty) that might otherwise prevent us from achieving our goals. This is why there are so many well-documented success stories based on behavioral science in public policy areas such as environmentalism (recycling), health (exercise), and financial planning (retirement savings). These are all things that people want to do but find difficult because of the stresses and pressures of everyday life.

The same thought process applies to engaging employees using digital signage. Employees want to be happy, healthy, safe, and engaged at work. Who wouldn't?! There's no real downside to being more productive and more committed to their companies, either. Following health and safety guidance costs them nothing. By employing behavioral insights to create effective digital messaging, particularly for deskless workers, we can break through the behavioral barriers that prevent companies from realizing the goal of a more engaged workforce.

The past successes of these approaches demonstrate the huge impact that can be achieved through the application of research and principles gleaned from behavioral science. At its most striking, the addition of as little as one or two words (or a single image) in a communication can effect transformative change on the impact of that communication. This is why we believe that adapting principles from behavioral science to enable such change will be increasingly key to creating successful businesses, with engaged workforces at their core.